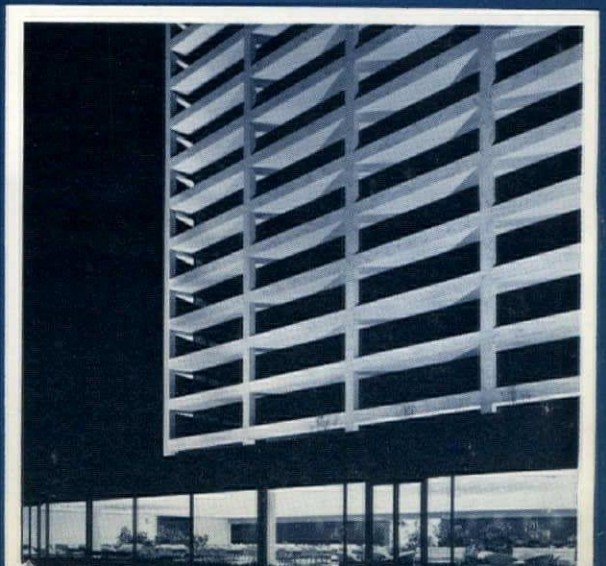
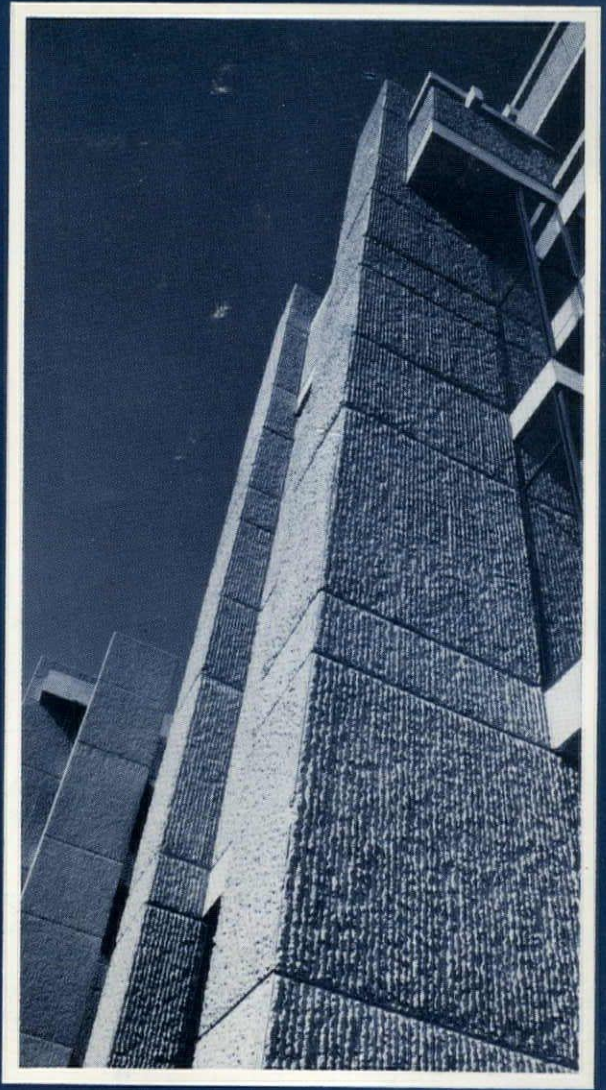




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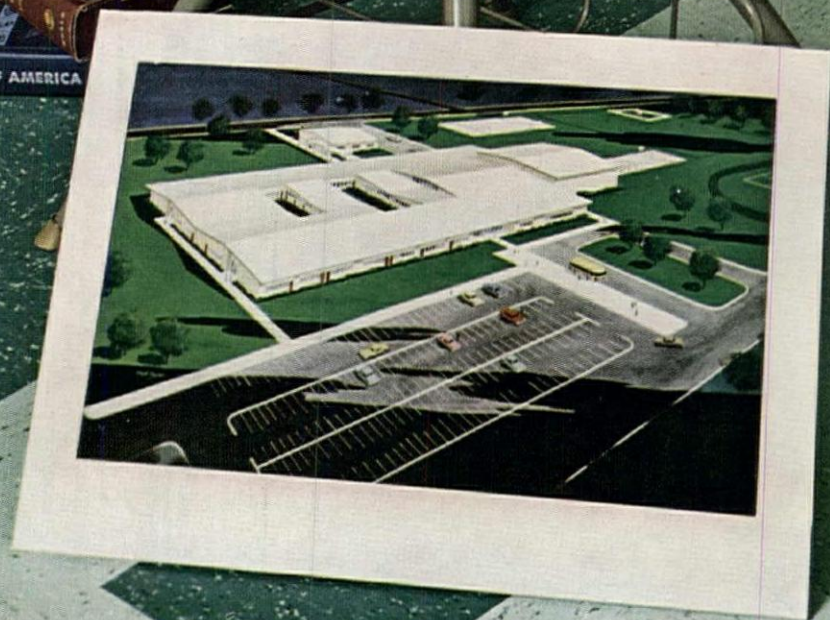
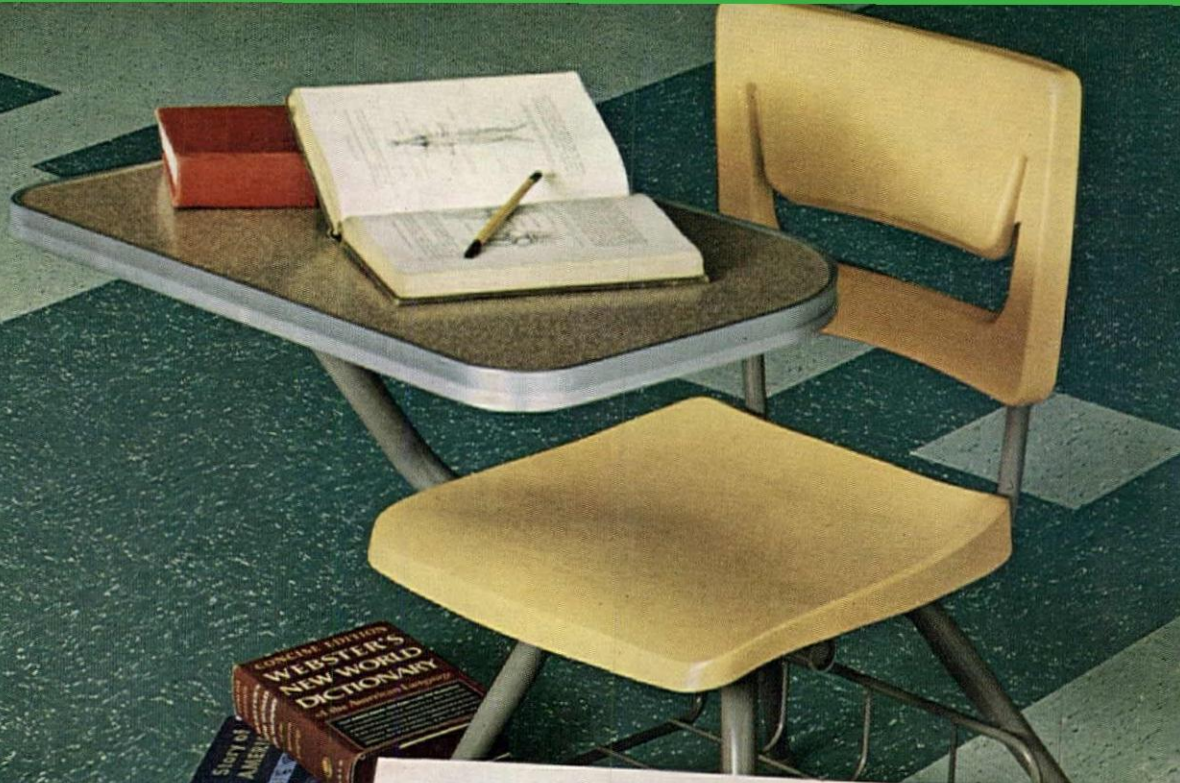
Journal

JULY 1964



1964 AIA Honor Awards

Installation:
Robert Stuart Junior High
School, Twin Falls, Idaho
Architect: Nat J. Adams
and Associates, Boise
Floor shown: V-815 San
Marino, V-817 Adriatic



Creative styling: an inherent quality of Azrock floors. When the problem is to combine easy maintenance with coordinated design, floors of Azrock vinyl asbestos tile* provide the right solution. Students at Robert Stuart Junior High School in Twin Falls, Idaho are served by floors of Azrock 800 Series — the resilient flooring with unique color-chip patterning through the thickness of the tile — ideal for heavy-traffic areas. For styling and performance, specify Azrock 800 Series.

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Consult Sweet's Catalog or write for samples, Azrock Floor Products Division, Uvalde Rock Asphalt Company, 594A Frost Building, San Antonio, Texas
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Journal

JULY 1964
VOLUME XLII NO 1

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Opinions expressed by contributors are not necessarily those of AIA

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COVER: To whet your appetite for our twenty-one pages of AIA Honor Awards winners (see p 21), we show detail shots of this year's top four

Coming in
the August
AIA Journal

The 1964 Convention

The entire issue will be devoted to a recap of the St Louis proceedings: the professional program, including discussion periods, the business sessions and related events.

Highlights from St Louis

Meanwhile, we offer this capsule report of the 96th convention—total registration, 2,500; corporate members, nearly 1,000—which is winding up its affairs as we go to press.

ELECTIONS: The new slate of officers consists of Arthur Gould Odell Jr, FAIA, Charlotte, NC, President; Morris Ketchum Jr, FAIA, New York City, First Vice President and President-Designate; Rex W. Allen, San Francisco, William W. Eshbach FAIA, Philadelphia, and Hugh Stubbins FAIA, Cambridge, Mass, Vice Presidents; Oswald H. Thorson, Waterloo, Iowa, Secretary; and Robert F. Hastings FAIA, Detroit, Treasurer (completing a two-year term).

The College of Fellows elected G. Holmes Perkins, FAIA, Dean of the University of Pennsylvania School of Fine Arts, as its new Chancellor.

BUSINESS SESSIONS: The delegates defeated the no-citizenship requirement for corporate membership, but approved a resolution which allows the Executive Committee or the Board of Directors to waive the citizenship requirement "when fairness and the best interests of the Institute would best be served by so doing." Also approved: the revised Standards of Professional Practice.

PROFESSIONAL PROGRAM: Senator Harrison Williams of New Jersey was unable to address the convention, due to the necessity of remaining in Washington to vote on the Civil Rights Bill. But the other speakers who explored the theme of "The City Visible and Invisible" drew large numbers throughout the three sessions. And 450 convention-goers attended the five workshops on the final afternoon.



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How wood windows can help you achieve flexibility in design

The past twenty years have reflected the changing mood of America's taste in home design. New ideas in living have triggered new ideas in architecture, and vice versa. The trend towards functional design, without sacrifice of practical and aesthetic considerations will undoubtedly continue.

This has posed problems to architects, confronted often with the frustrating necessity of specifying existing components. In many cases a desired effect or feature has had to give way to accommodate a fixed measurement, or to accept a standardized part.

How can wood windows help?

Wood windows possess not only the virtue of functional utility and traditional acceptance, but complete *flexibility*. This flexibility relates not only to size and shape but also to design.

There are literally *hundreds* of styles and sizes available, permitting almost unlimited expression of total home design. Virtually any architectural consideration can easily be accommodated with wood windows, because, in a sense every wood window is a *custom* window.

Wood windows — a small consideration, perhaps, in your total picture — but decidedly a helpful one.

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The Editor's Page

... on which you will read only what the Editor currently thinks—not Institute opinions or policies

The President Speaks

We have all been aware of the late President Kennedy's great interest in the physical appearance of his country, as are we all. But President Johnson had said nothing to indicate that he was going to follow Mr Kennedy's lead in such matters. On top of that, the Pennsylvania Avenue Council's report seemed to have been held back. However, all that is cleared up now: The President has spoken and the Council has reported (see p 10). Following are excerpts from the President's "Great Society" address at the University of Michigan on May 22:

I want to talk to you today about three places where we can begin to build the Great Society—in our cities, in our countryside and in our classrooms. Many of you will live to see the day, perhaps fifty years from now, when there will be four hundred million Americans; four-fifths of them in urban areas. In the remainder of this century urban population will double, city land will double, and we will have to build homes, highways and facilities equal to all those built since this country was first settled. So in the next forty years we must rebuild the entire urban United States.

Aristotle said, "Men come together in cities in order to live, but they remain together in order to live the good life."

It is harder and harder to live the good life in American cities today. The catalog of ills is long: There is the decay of the centers and the despoiling of the suburbs. There is not enough housing for our people or transportation for our traffic. Open land is vanishing and old landmarks are violated. Worst of all, expansion is eroding the precious and time-honored values of community with neighbors and communion with nature. The loss of these values breeds loneliness and boredom and indifference. Our society will never be great until our cities are great. Today the frontier of imagination and innovation is inside those cities, and not beyond their borders. New experiments are already going on. It will be the task of your generation to make the American city a place where future generations will come, not only to live but to live the good life.

A second place where we begin to build the Great Society is in our countryside. We have always prided ourselves on being not only America the strong and America the free, but America the beautiful. Today that beauty is in danger. The water we drink, the food we eat, the very air that we breathe, are threatened with pollution. Our parks are overcrowded. Our seashores overburdened. Green fields and dense forests are disappearing.

A few years ago we were greatly concerned about the Ugly American. Today we must act to prevent an Ugly America.

For once the battle is lost, once our natural splendor is destroyed, it can never be recaptured. And once man can no longer walk with beauty or wonder at nature, his spirit will wither and his sustenance be wasted.

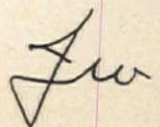
A third place to build the Great Society is in the classrooms of America. There your children's lives will be shaped. Our society will not be great until every young mind is set free to scan the farthest reaches of thought and imagination. We are still far from that goal. Today, eight million adult Americans—more than the entire population of Michigan—have not finished five years of school. Nearly twenty million have not finished eight years of school. Nearly fifty-four million—more than one-quarter of all America—have not even finished high school.

Each year more than 100,000 high school graduates, with proved ability, do not enter college because they cannot afford it. And if we cannot educate today's youth, what will we do in 1970 when elementary school enrollment will be five million greater than 1960? High school enrollment will rise by five million; college enrollment will increase by more than three million. In many places, classrooms are overcrowded and curricula are outdated. Most of our qualified teachers are underpaid, and many of our paid teachers are unqualified. So we must give every child a place to sit and a teacher to learn from. Poverty must not be a bar to learning, and learning must offer an escape from poverty.

But more classrooms and more teachers are not enough. We must seek an educational system which grows in excellence as it grows in size. This means better training for our teachers. It means preparing youth to enjoy their hours of leisure as well as their hours of labor. It means exploring new techniques of teaching, to find new ways to stimulate the love of learning and the capacity for creation.

These are three of the central issues of the Great Society. While our government has many programs directed at those issues, I do not pretend that we have the full answer to those problems. But I do promise this: We are going to assemble the best thought and the broadest knowledge from all over the world to find those answers for America. I intend to establish working groups to prepare a series of White House conferences and meetings on the cities, on natural beauty, on the quality of education and on other emerging challenges. And from these meetings and from this inspiration and from these studies we will begin to set our course toward the Great Society.

Here ends the relevant portion of President Johnson's memorable address. May it mark the opening of a new phase in our national life and national opportunity—and maybe this President too will push for a Department of Urban Affairs, as did his predecessor!



Specs call for fireproofing?



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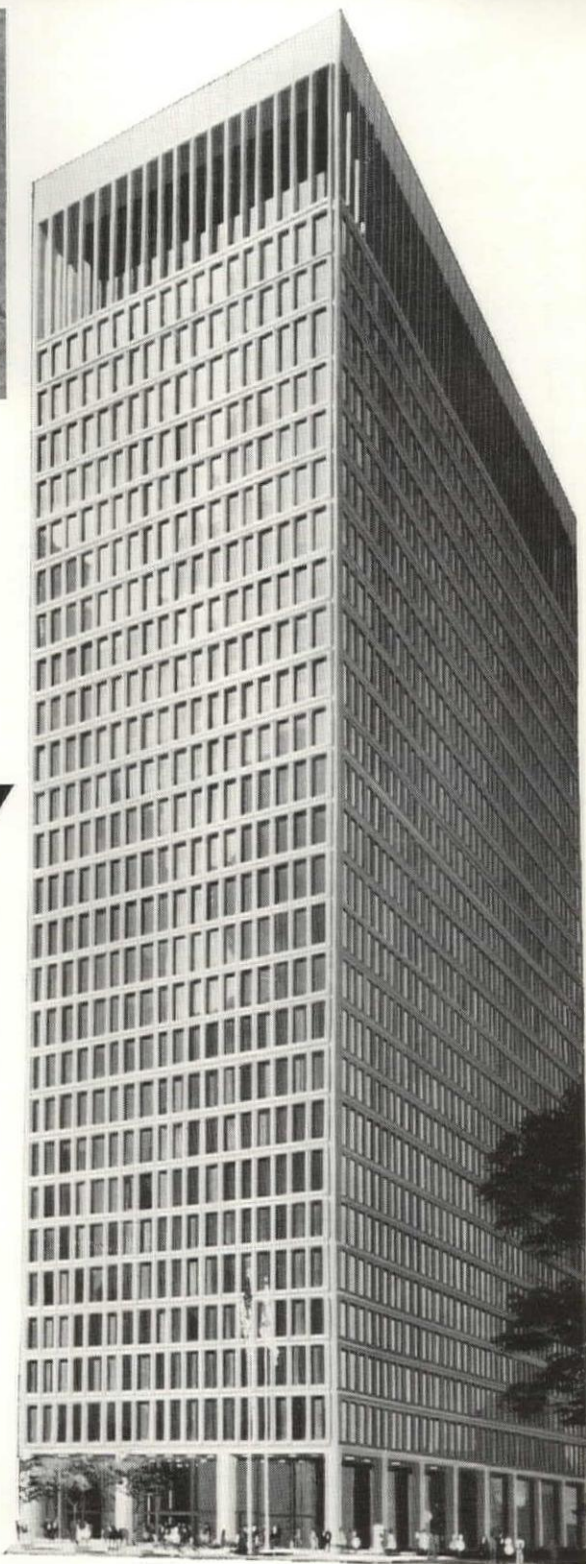
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The architect chose Luminaire primarily for its cost advantage, and because it provides the striking appearance and dramatic lighting he wanted for a showroom of new automobiles.

There were other reasons, too. Luminaire delivers uniform, draft-free air. Each 50" module is its own light and air-distribution source. All components are available from one supplier. Installation is fast. Maintenance is virtually nil: air movement through the ceiling makes it, in effect, self-cleaning.

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Horizontal ceiling panels allow the system's adaptation to any size or shape room. At Magic City Ford, the system is installed on different planes to conform to the shape of steel frames. Because it can accommodate ceiling-high partitions, the system offers limitless layout flexibility. Further design variation is possible with the new B-48 modification. (This system achieves an open, folded-plate effect; creates continuous bands of light.) For complete information on both systems, write to Armstrong, 4207 Sage St., Lancaster, Pa.

Magic City Ford Corporation, Roanoke, Virginia.

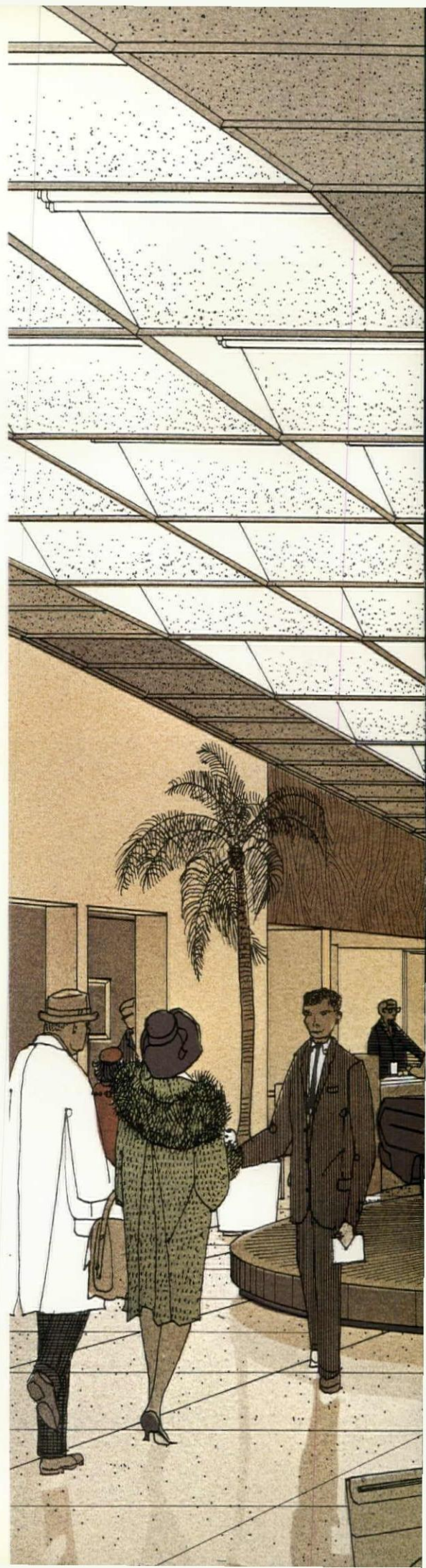
President: Mr. Harry G. Johnson, Roanoke, Virginia.

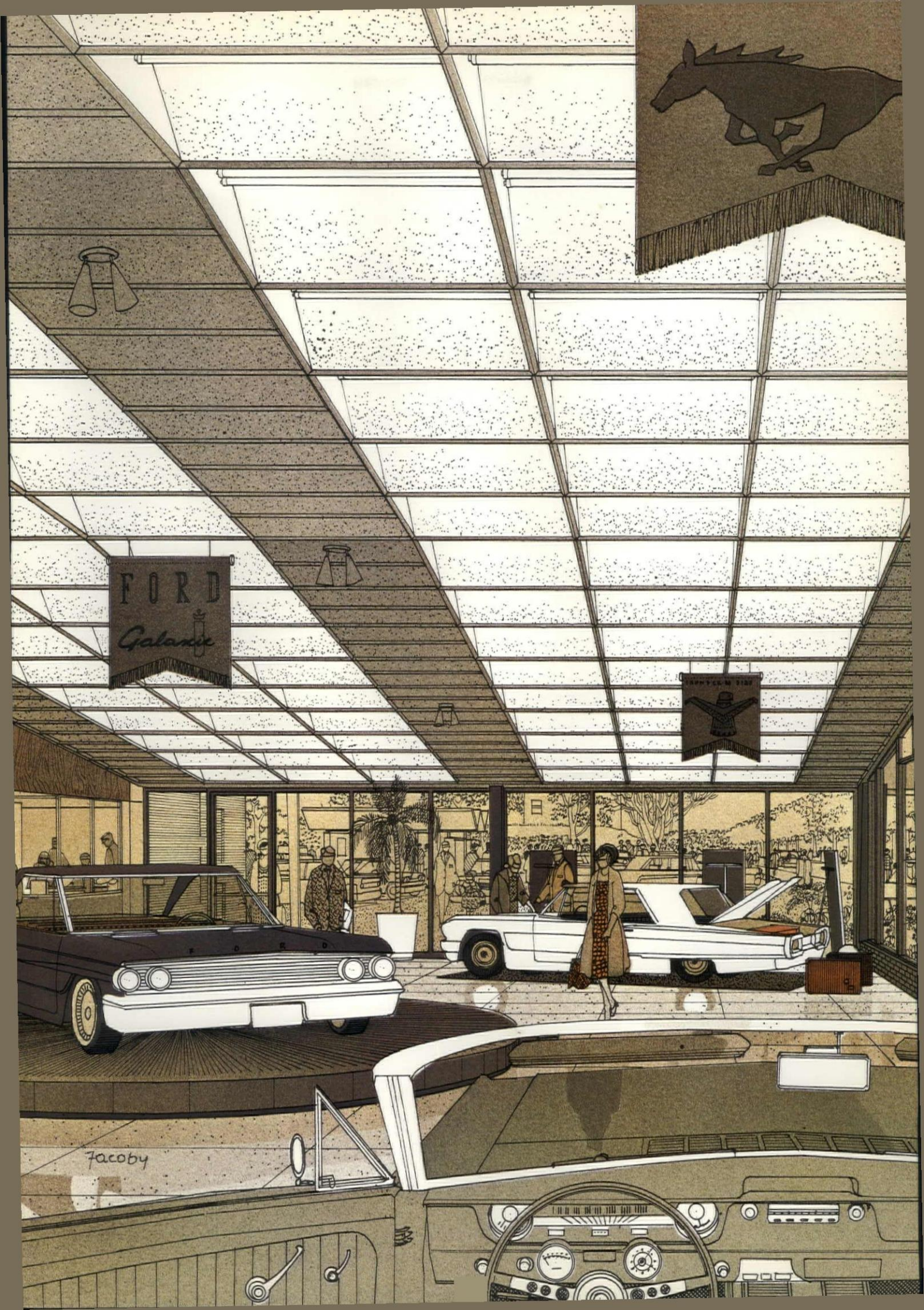
Architect: J. Garry Clay, A.I.A., Roanoke, Virginia.

General Contractor: J. M. Turner & Co., Inc., Roanoke, Virginia.

Ceiling Systems Contractor: Shields, Inc., Roanoke, Virginia.

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Octagon Observer

News and commentary from Headquarters and afield

PLANNING / Pennsylvania Avenue, at Last

The grand plan for Pennsylvania Avenue, upon which the President's Council has been laboring for eighteen months, was finally released for publication May 31—and it is a stunner. In its own words:

The Avenue, as the nation's ceremonial way, should have a special character:

A boulevard deep in trees, with a rich pavement like a welcoming carpet, its broad sidewalks stepped up in three stages like a grandstand designed for viewing parades and celebrations for the guests of the Republic and for participating in the triumphs and tragedies of the American people.

The Avenue should do honor to its lofty destinations:

An Avenue looking squarely toward the great dome of the Capitol, leading unmistakably to the foot of it, arriving there in a spacious plaza, alongside a reflecting pool in which by day and night the dome would be mirrored. . . . An Avenue climaxed at the other end by a great National Square opening vistas to a splendid new White House Gate, to be flanked on its left by a wall of trees and on its right by the graceful Treasury colonnade, all this made visible from far down the Avenue. The square of which the Gate forms the terminal side is to be a true square—not another park but a popular gathering place truly urban and truly national.

The Council realized from the beginning that the desired result could not be obtained simply by developing a facade for the north side of the Avenue—it was a far more complex problem than that. Obviously it would necessitate extending its plan into the areas backing up the Avenue frontage, particularly to the north—which the Council courageously did not hesitate to do.

Model illustrates four new or revised open spaces



Following are a few of the major accomplishments of the plan as proposed by the Council:

- It creates a proper focus at the Capitol end, with a stepped walkway leading from the terminal circle up the hill to the Capitol
- It improves the setting for the Capitol from the Mall vista by introducing a huge reflecting pool, which is over the proposed freeway tunnel
- It opens up a vista to the north to the old City Hall and the handsome red brick Pension Building



Proposed reflecting pool transverse to the Mall

- It vastly improves and encloses the sprawling intersection at Constitution Avenue, by passing Constitution under Pennsylvania, thus also creating a proper setting for the street front of the National Gallery
- Throughout the entire course of the Avenue, it eliminates dozens of awkward little triangles, loops and quadrangles formed by L'Enfant's diagonals
- It creates a minor transverse axis across the Mall, giving proper emphasis to the monumental Archives Building and an approach to the old Robert Mills Patent Office, which will soon become the National Portrait Gallery; this also serves to tie the Pennsylvania Avenue zone to the downtown retail core
- It creates the space for the National Square by demolishing two blocks of existing buildings, including two hotels, two major office buildings and the city's only full-size conventional legitimate theater—it is hoped, of course, that these facilities will be replaced in the new northern triangle area
- Since the White House cannot be seen from the Avenue, the Treasury Building is in effect brought forward to substitute for it visually, forming the north side of a new formal forecourt to the White House, approached through a new ceremonial gate on the west side of the Square
- It creates a new northern triangle of Federal, District and private buildings, interspersed with plazas and courts; E Street is depressed completely for through traffic with pedestrian ways over it, F and G Streets are for pedestrians only
- It calls for the completion of the Federal Triangle and the formal landscaping of its Grand Plaza
- It provides for parking 10,000 cars under the entire northern triangle, the National Square and the Grand Plaza.

All this formation and much more is set forth in a very handsome 10¼"x12¼" two-color illustrated clothbound book, which may be purchased by mail by sending \$3.75 to the Government Printing Office, Washington 25, DC.

Cont'd on p 70

THIS ENTIRELY
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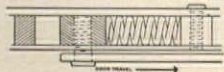
At almost full open, the arm engages a spring in the shock absorber mounted to the soffit plate. Opening momentum is absorbed.



(2) Stops the door



As the spring in the shock absorber is compressed, the door is stopped. There's no shock to the door, hinges or Uni-trol.



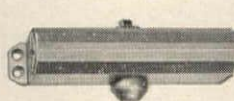
(3) Holds the door open



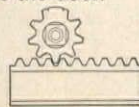
Spring loaded hardened steel ball in the holding mechanism is engaged by a recess in the Uni-trol fore-arm. The door is held open.



(4) Closes the door



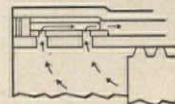
When released a dependable Norton spring-loaded rack-and-pinion mechanism supplies power to close the door.



(5) Regulates closing and latch speeds



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A Tribute to Ned

EDITOR, *AIA Journal*:

As one who has the privilege of honorary membership of the AIA may I be allowed to pay my small tribute to the memory of my old friend Ned Purves. We had the opportunity of meeting on several occasions both in Washington and London and were in frequent correspondence over the years when he was Executive Director of the AIA and I was Secretary of the RIBA. He was always completely helpful and understanding whenever I sought his advice and guidance. Many of the problems affecting architects and architectural institutions are common to both sides of the Atlantic, and from time to time we exchanged our experiences and thoughts to the mutual advantages of both our memberships—(or so I like to think).

Ned was a delightful host and I valued his friendship very highly. It is sad that he did not live longer to enjoy his retirement from the cares of office which he fulfilled with such distinction.

CYRIL D. SPRAGG, HON ARIBA, HON AIA
Ashford, Middlesex, England

Designing for Safety

EDITOR, *AIA Journal*:

Since the article by Lyndon Welch AIA in the January issue regarding responsibility for safety merely poses the problem, I conclude you are interested in opinions.

We cannot clearly define all facets of our lives. We cannot draw a clear line of demarcation which locates a separate area of responsibility for the architect, the builder, the building department and the individual. To be most objective, the last named is really the most responsible. A tissue-paper structure will not burn if extreme caution is practiced but a rip-roaring fire can be started in a so-called fireproof structure by someone who likes to smoke in bed.

Each instance has to be judged on the basis of its merits. Owners and builders have a tendency to provide the absolute minimum required by law. I designed a two-story motel with an outside staircase on one end of the corridor. The owner-builder adamantly refused to put it in and got the building department to approve it without the stairs leaving a dead-end corridor which, in my opinion, was unsafe. New York City will require the fireproofing of steel which suburban codes do not insist upon. To get a local client to fireproof such steel when not required is a hopeless task.

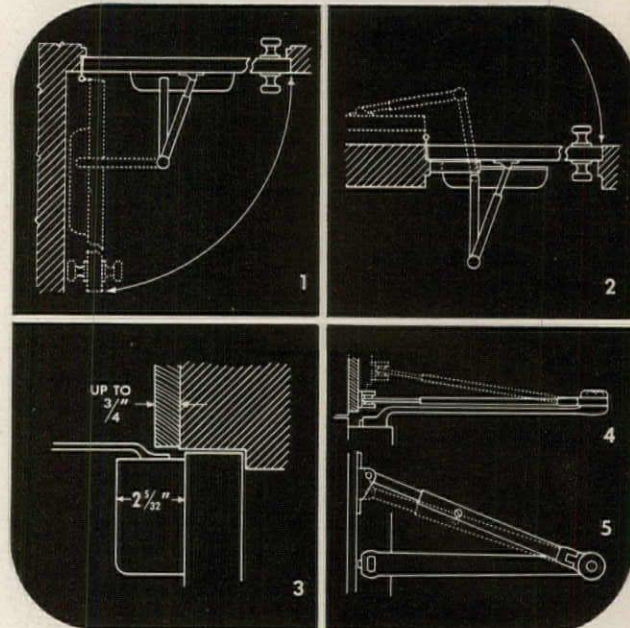
From the above instances it is obvious that you would have to judge each case on its own merits. For his own protection the architect should avoid all designs which are obviously sources of danger.

LEON ROSENTHAL AIA
Babylon, NY

Application Details

for Series 4010 SMOOTHIE® door closer
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(See diagrams below)

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- 3 Arm of "Smoothie" is formed to avoid conflict with almost any trim
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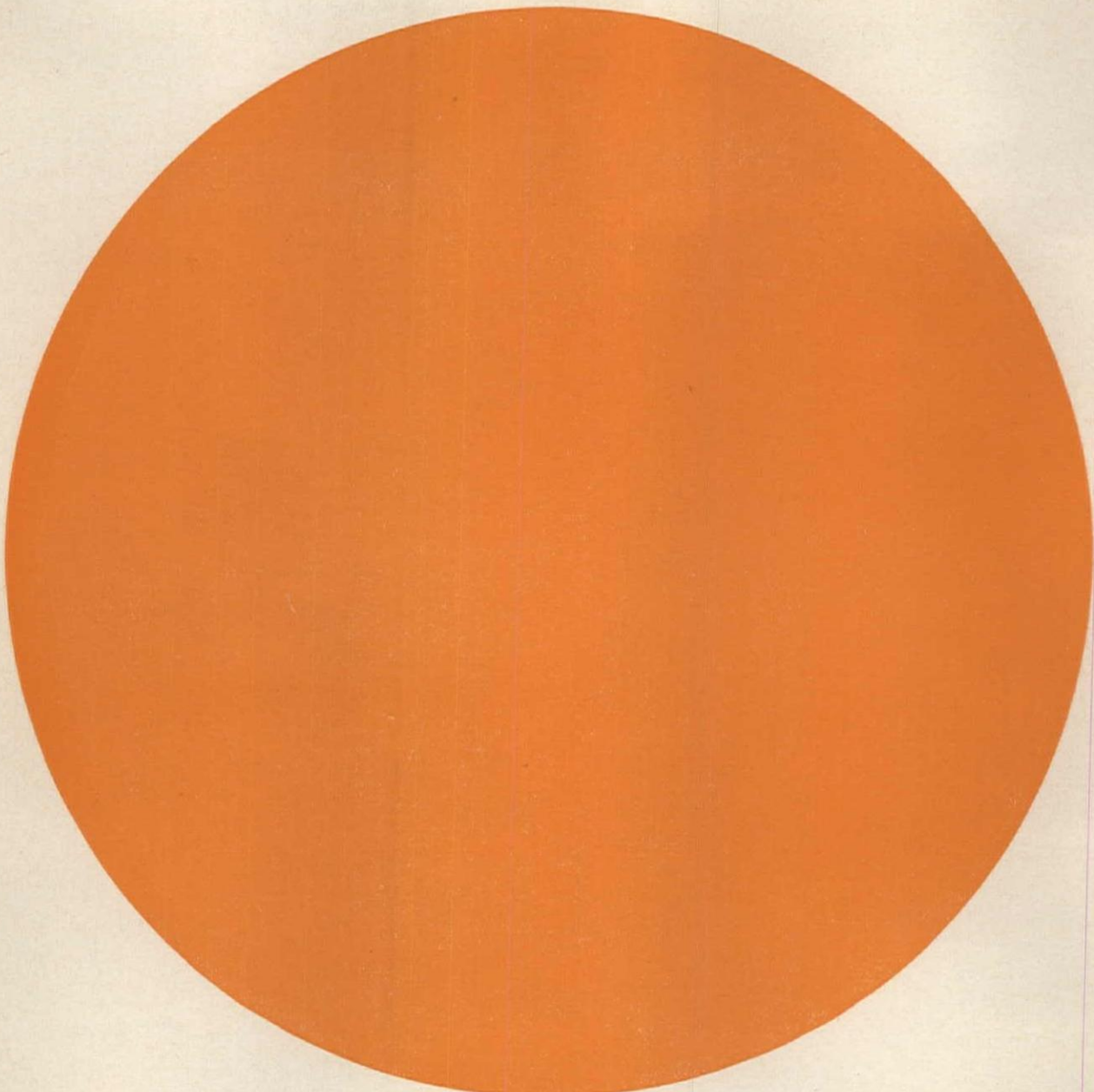
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Indianapolis Motor Speedway Motel
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Application Details on Opposite Page



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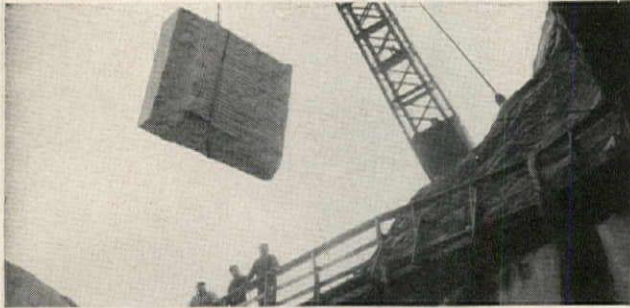
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Regular Plate Glass	1/4"	200	88	.93
(For Comparison)	3/8"	190	87	.87
	1/2"	180	85	.83
Solargray®	1/4"	150	42	.67
	3/8"	130	28	.58
	1/2"	115	19	.50
Solarbronze®	1/4"	150	51	.67
	3/8"	130	38	.58
	1/2"	115	29	.50
Solex®	1/4"	150	75	.67
	3/8"	130	64	.58
GLARE REDUCING				
Clear Sheet Glass	7/32"		89	.96
Graylite™ 31	1/8"		31	.78
Graylite 61	3/16"		61	.91
Graylite 56	7/32"		56	.88
Graylite 14	7/32"		14	.67
Graylite 52	1/4"		52	.85
HIGH PERFORMANCE (Insulating, Heat and Glare Reducing)				
All Twindow products have a U factor of .6				
Clear Twindow®		170	77	.80
LHR™ Clear Twindow		120	43	.55
LHR Solargray Twindow		90	22	.40
LHR Solarbronze Twindow		90	25	.40
LHR Solex Twindow		90	32	.40
Solargray Twindow		115	37	.54
Solarbronze Twindow		115	45	.54
Solex Twindow		115	65	.54

MONTCLAIR DANBY GOES TO YALE

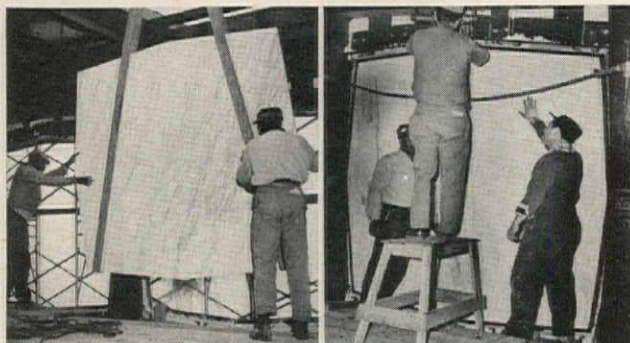
for the Beinecke Rare Book
and Manuscript Library



Outsize blocks of marble were taken from our Danby quarry for this installation. 250 slabs with random, non-matched veining were specified by architects Skidmore, Owings & Merrill.



Sawn to thickness, then cut and shaped to 7' 11" at the wide points, each slab was hone finished on both sides to 1/4" and shipped, ready to install.



General contractors George A. Fuller Company developed a safe, accurate and rapid method of installation. The panels were lowered through the open roof down inside the structure, framed in neoprene gaskets, then swung into place.

For more information about other unique Vermont marbles, consult our nearest office. All our marbles, domestic and foreign, are U.S. finished for trueness to specification and delivery on time. The Vermont Marble Company invites all inquiries concerning the design, use and installation of marble and granite, and we welcome the opportunity to give complete technical assistance whenever possible.

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URBANISMS

*A regular column by our specialist
on Urban Programs, Robert J. Piper AIA*

Three Urban Postulates—1964

The 1964 Housing and Community Development Act contains, along with other things, provisions in three general categories that are of particular interest at this point in the evolution of urban America. These provisions can be categorized as Relocation Housing, Metropolitan Development and Education for Public Administration.

The bill, by proposing certain actions in these areas, emphasizes problems that will not go away short of legislative attention on, first the Federal level, and secondly the State and local level. These problems are so clearly evident and their solution so demanding they may be postulated for consideration and comment.

Relocation Housing

We can no longer separate the design and construction requirements of property condemnation from the social and humane considerations of family displacement. The physical rebuilding of our cities would be impossible without condemnation; likewise the social rebuilding of our communities is not possible without respect for the inviolate nature of man's family and home.

Postulate: All urban public works projects must provide for subsidized housing for those displaced individuals unable to provide satisfactory rehousing for themselves.

Thus, in every urban renewal appropriation, every highway allocation and all similar projects where people are dislocated, there must be certain funds reserved for relocation housing. In turn, this means that some social or public housing will accompany every public works project. Government could respond to this requirement in a number of ways: It could build or purchase public housing units in a manner similar to existing PHA programs; it could issue rent certificates in lieu of producing these units; it could make grants or low-interest construction loans to nonprofit low-income housing cooperatives; or it could join with private developers in a cooperative project not much different from present urban renewal procedures. The 1964 Housing Bill does not contain these rehousing actions; it provides for certain payments for relocation, but these can not be expected to answer the real problem of relocation.

Metro Development

If, for some reason, we had to set out today to form a new political-governmental structure for this nation, our concept would doubtlessly include a

metropolitan unit of local government in addition to several states (or regions, perhaps?), the Federal complex and any units devised for essentially rural areas. We have good reason to set out right now to create such an ideal structure. The political economy of our metro areas is a Kafka-like mixture of localisms that increasingly traps each of us in a maze of dead-end public and semi-public institutions.

Postulate: Our urban political-governmental system must evolve a metro administrative unit to replace existing forms of local government that lack the range of concern or authority adequate to respond to the requirements of the contemporary metropolitan area.

The stimulus for this evolution must be supra-metro; in the minds of most observers this means the Federal government. The 1964 Housing Bill makes a start in this direction by providing, mostly through state and local governments:

- Advance acquisition of open land by local municipalities
- Planning and constructing public facilities thereon
- Planning assistance for metropolitan area or regions including new communities
- Mortgage insurance for private construction of new communities and subdivisions

Urban America dare not wait longer for national action on this overwhelming domestic concern—the problems of metro government. Time will not solve these problems either, but dedicated Federal-local cooperation will. May this gentle proposal prove to be a seedbed for such cooperation.

Education for Public Administration

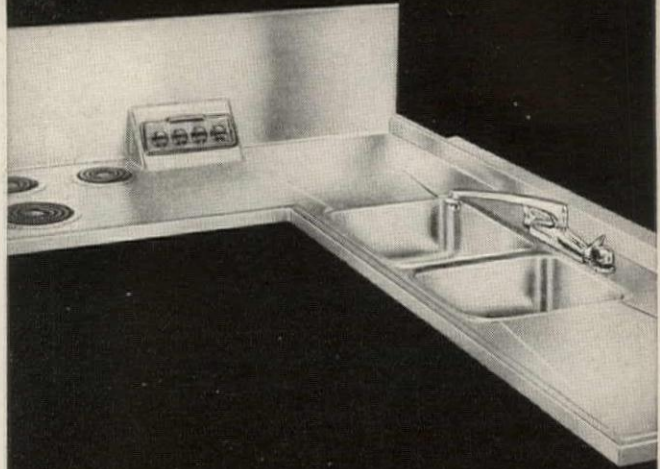
The growing sophistication and availability of municipal engineering affects our smallest urban municipalities—even the tiniest bedroom community may have a pumphouse and water distribution system, building controls, health and licensing ordinances and many other public administration tools of political refinement and technical excellence. They require sympathetic application and interpretation by trained public servants.

Postulate: Career urban public administrators must be available to serve all metro area municipalities regardless of population size or budget limitations.

The 1964 Housing Bill provides for matching grants, to be made to states in cooperation with their public and private educational centers, for training career public administrators and for research into those skills required for community development—from codes to urban transportation.

These candidates could often be trained close to home, at local junior colleges and the smaller universities of the region, so they could return to their native locales to make careers of town engineering or village management. These positions no longer can be served by the retired craftsman or tradesman in the community, but require personnel trained in all phases of local government. ■

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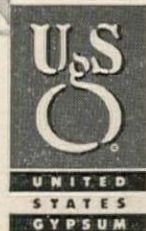
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A · I · A

Journal

The 1964 AIA Honor Awards

*Winners in the 1964
AIA Honor Awards Program,
which were publicly
announced for the first time
at the convention
in St Louis,
are presented on the
following twenty pages*

The Report of the Jury

THE MEMBERS OF THE JURY for the 1964 Honor Awards Program were faced with selecting the most significant designs from 439 submissions. These included fine examples of nearly every building type. After a careful and thoughtful review of each submission by each member of the Jury, more than seventy projects were considered of such superior quality that they were analyzed and discussed individually by the entire Jury. The general high quality of this year's submissions speaks well for the profession and made the ultimate selection very difficult.

Each of the final sixteen projects receiving awards exhibits a basic characteristic: a simple, strong and imaginative expression of a concept, resulting in a unified whole. Each reflects a self-imposed discipline by the architect, evident in his use of structure, his selection of materials, his responsiveness to the terrain, and his considered regard for the place of a building within a group.

The Jury was gratified to find that so many of the award-winning projects reflected the architect's involvement with the environment extending beyond the individual building, beyond the immediate group of which it is a part, and on into the yet larger environment of the city as a whole. In this way the architect is demonstrating effectively the significance of his unique contribution as a responsible designer concerned with environment as a three-dimensional reality composed of natural form and space, enhanced and completed by man-made form and space.

It will be noted that each selection lacks architectural clichés, avoids complicated and tortured structural effects, abhors the use of too many different materials, and unmistakably reflects the function and purpose for which the project was designed.

The Jury was pleased to find that in the awarded designs the architect had obtained character in the building by light and shadow, by the structure and material used, and not by inappropriate ornament or structural gymnastics.

Although many good examples of schools and churches were received, the Jury did not believe that they exhibited the same superior quality in design and expression that they found in many other categories. There appears to be an architectural dilemma in the sheer size of the buildings now required for many schools, resulting in a lack of warmth, scale and in a somewhat inhuman expression of their intended use. The examples of religious architecture seemed in too many cases to exhibit the architect's desire to express himself, with a forced use of indifferent sculpture and glass, and bizarre structural shapes. The real problem here may be an unclear idea of the role and place of religion in our present society.

The Jury was concerned with examples of fine architecture at any scale, and awards were given to very small, as well as to very large projects. While no new architectural directions are indicated by the selections, the best solutions were simple, direct expressions of the structure, materials and purpose.

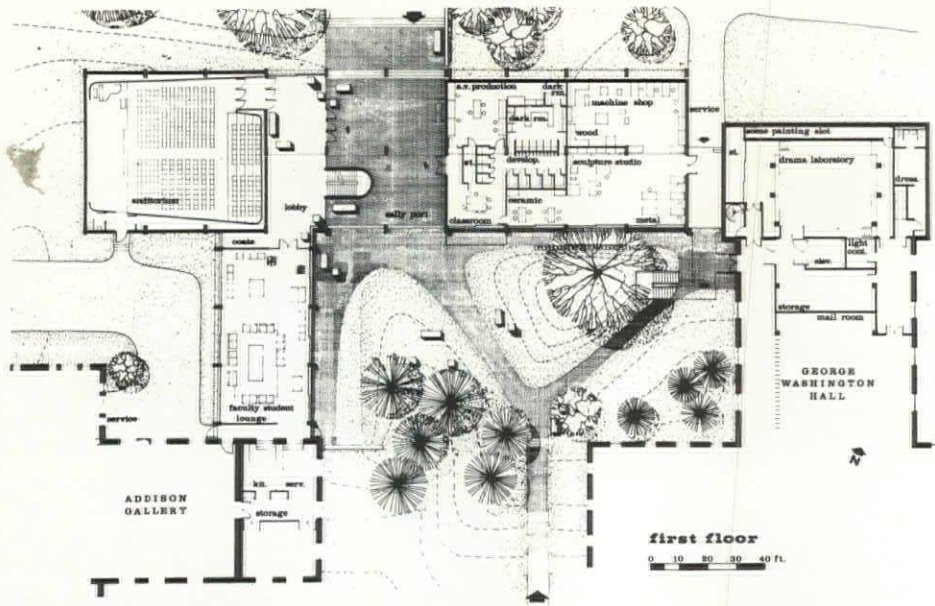
CHARLES M. NES, JR, FAIA, *Chairman*

CHARLES A. BLESSING FAIA

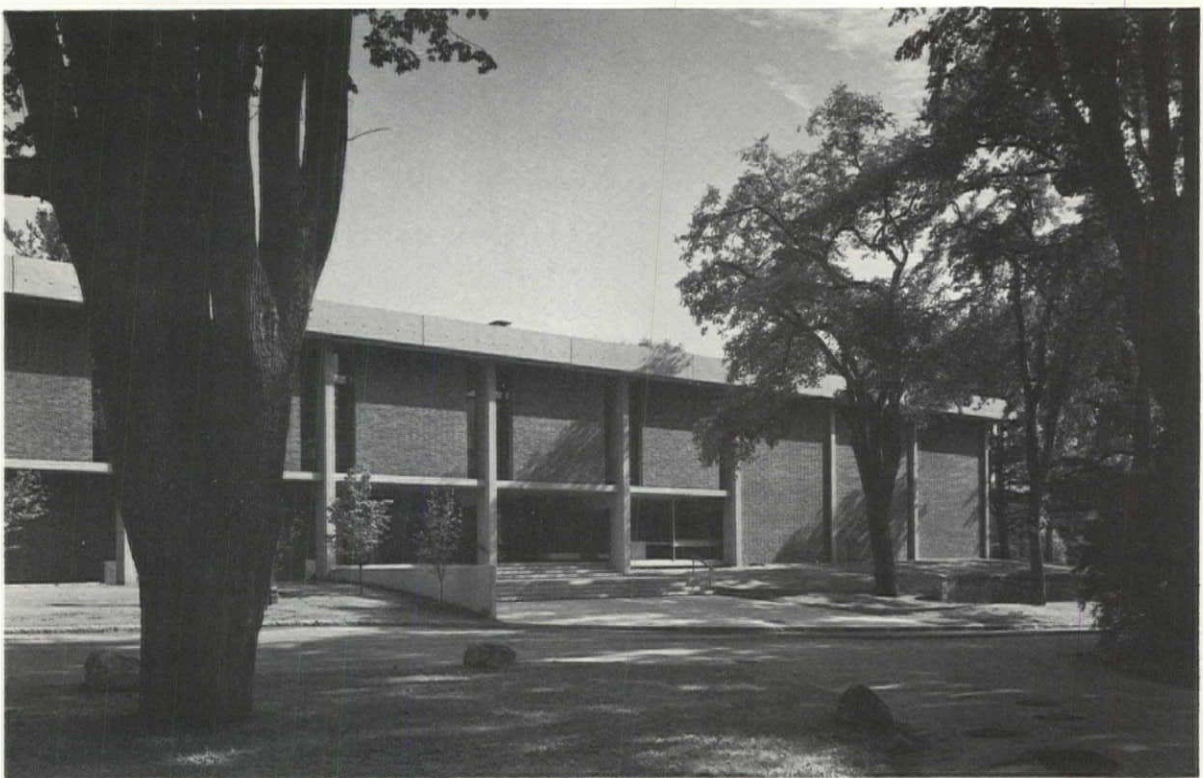
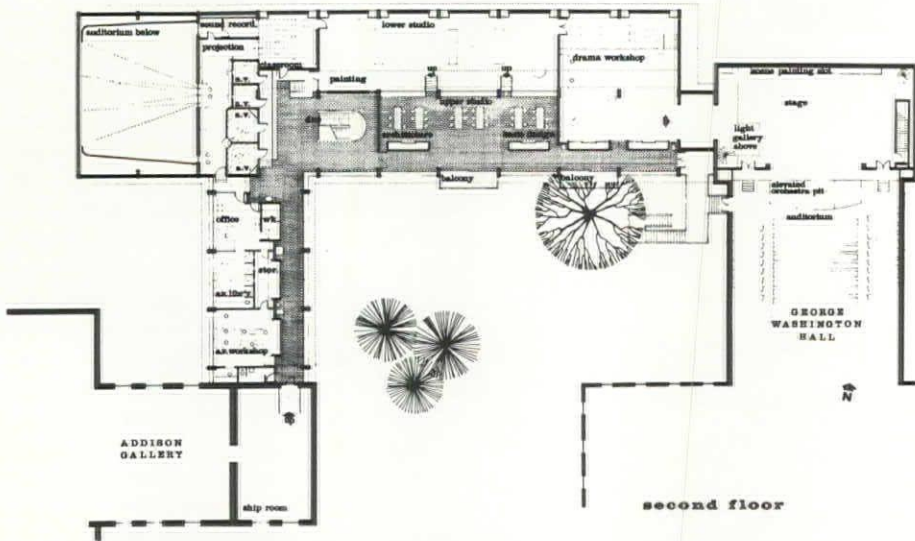
ELIOT F. NOYES FAIA

MARK G. HAMPTON AIA

GYO OBATA AIA



*first
honor*



The Architects Collaborative

Partner-in-Charge: Benjamin Thompson AIA

Project

Arts & Communication Center
and Science Building
Phillips Academy
Andover, Massachusetts

Structural Engineers

LeMessurier & Associates

Mechanical Engineers

Francis Associates

Acoustical Engineers

Bolt, Beranek & Newman

Theater Consultant

George Isenour

General Contractor

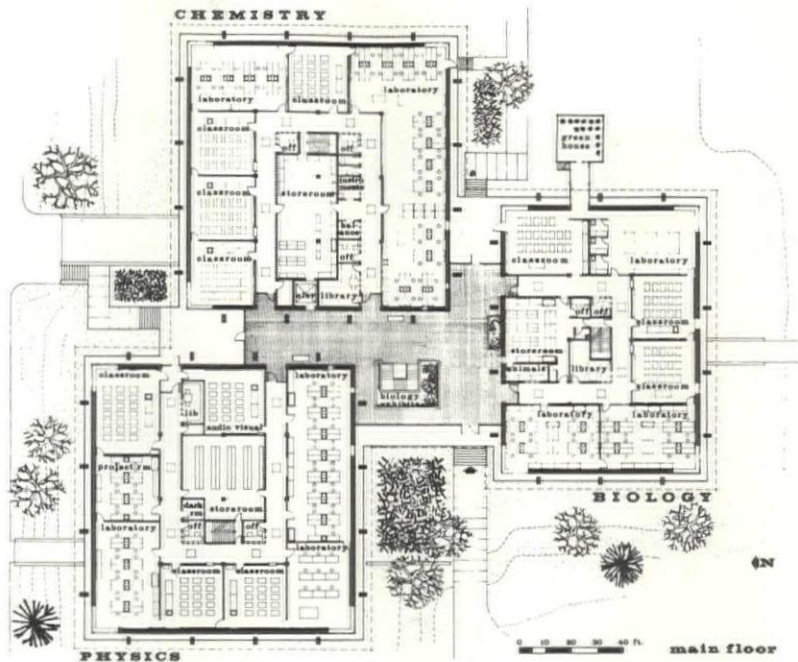
George A. Fuller Company

Photos

Ezra Stoller Associates

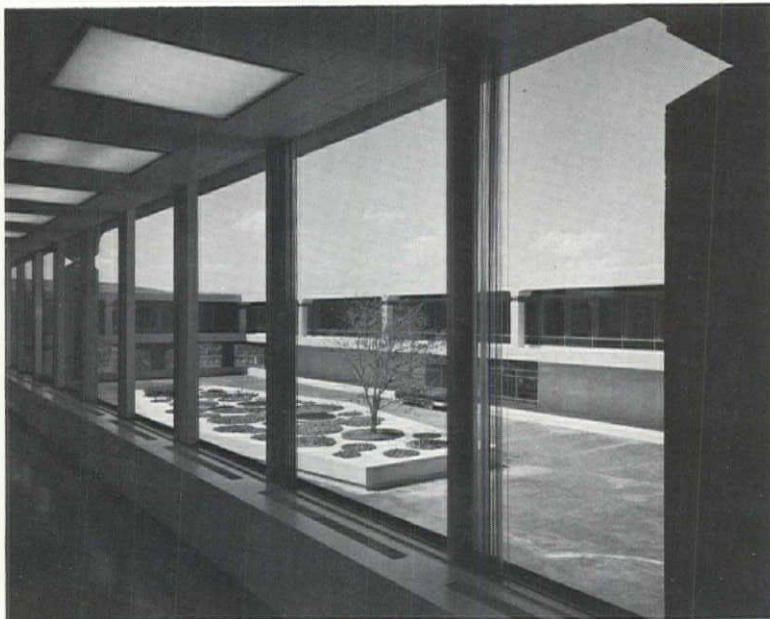
Jury Comment

A rich embodiment of the cultural heart of a campus. These two buildings are completely modern, yet totally compatible with the other buildings on the campus. The imaginative use of materials and structure has produced pleasant, workable, warm and friendly spaces. Both buildings are straightforward expressions of their function and construction



Skidmore, Owings & Merrill

New York



Project

Emhart Manufacturing Company
Headquarters Building
Bloomfield, Connecticut

Structural Engineers

Paul Weidlinger
Weiskopf & Pickworth

General Contractor

George A. Fuller Company

Photos

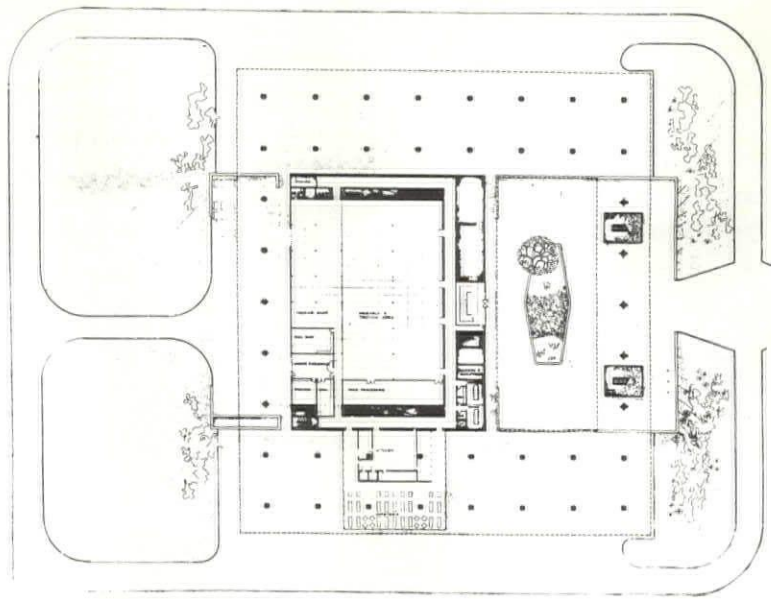
Ezra Stoller Associates

Jury Comment

A dignified, inspiring building floating serenely on its site. The visual problem of parking is ingeniously solved so that the building and the surrounding areas are not disfigured. The plan is a simple, logical and direct solution of an office building

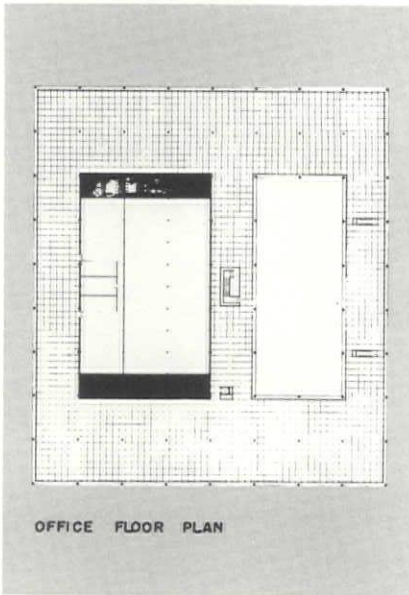


*first
honor*

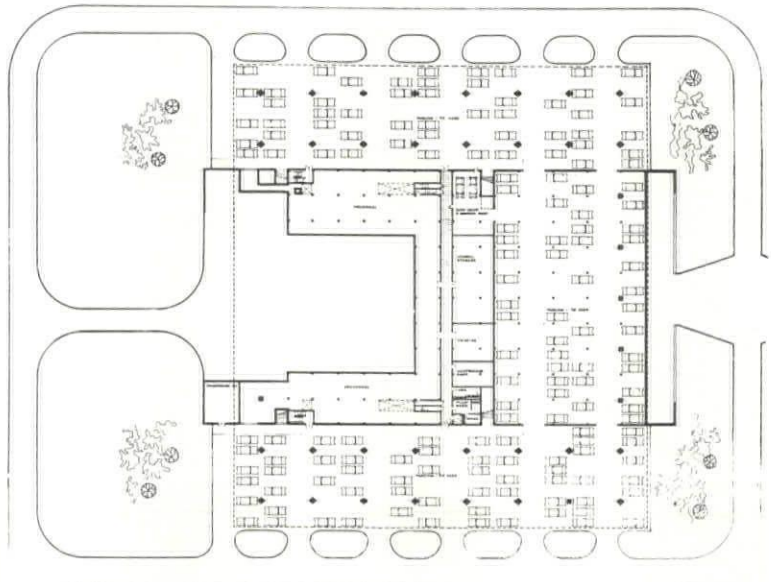


0 40 80 120 160 200

GROUND FLOOR PLAN



OFFICE FLOOR PLAN

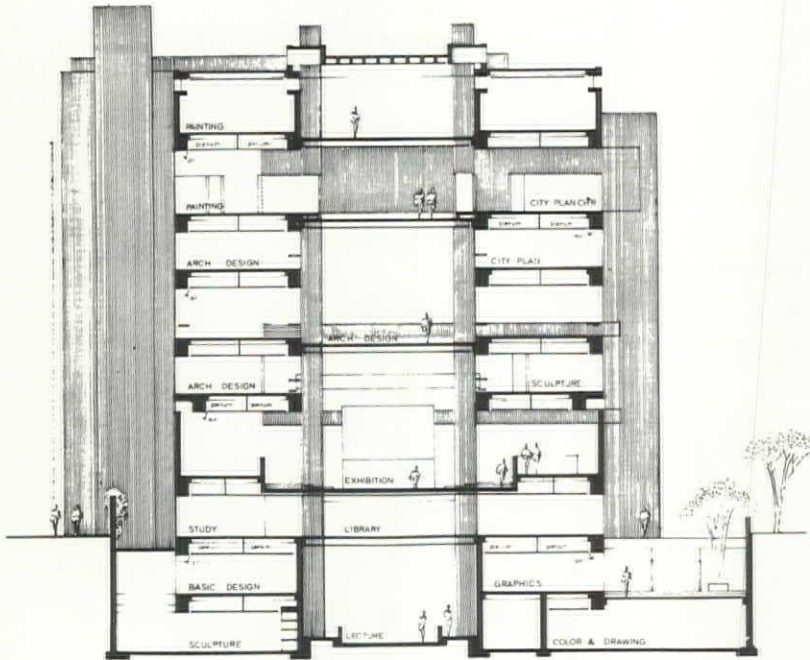


BASEMENT FLOOR PLAN



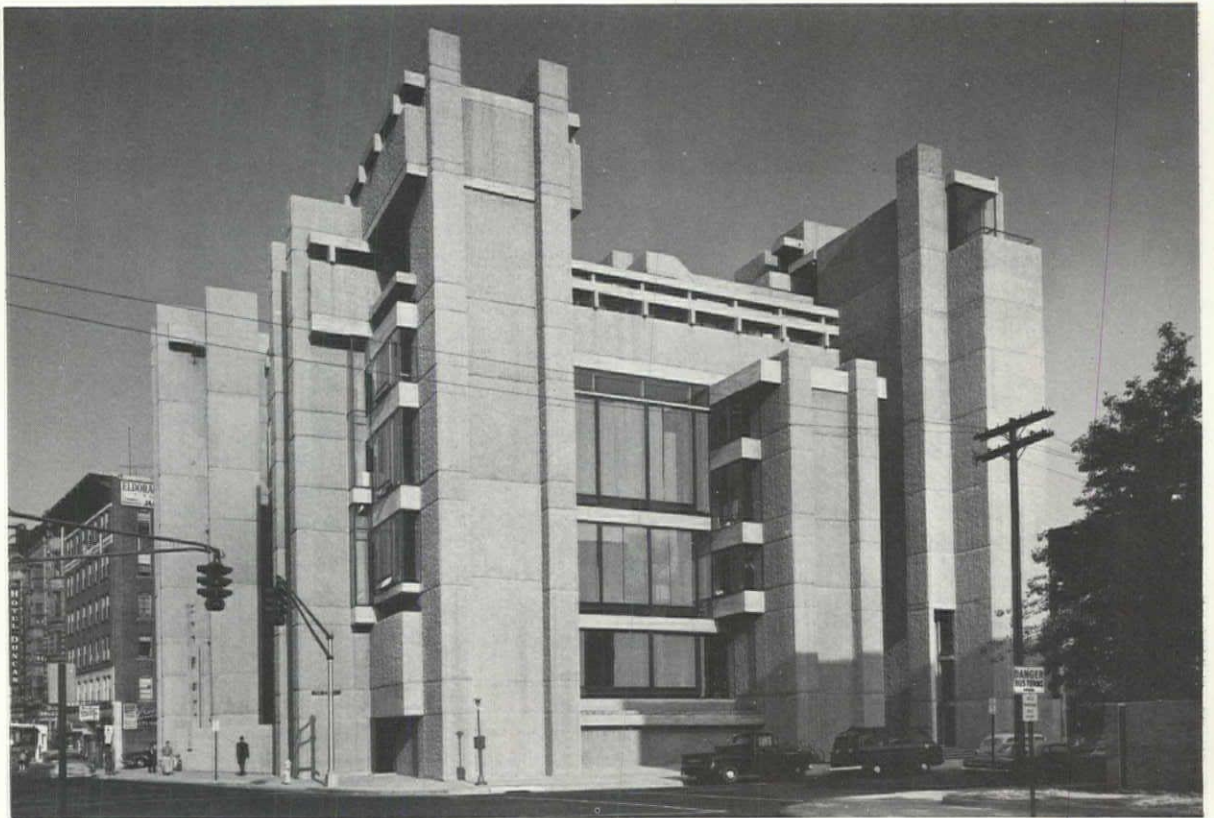


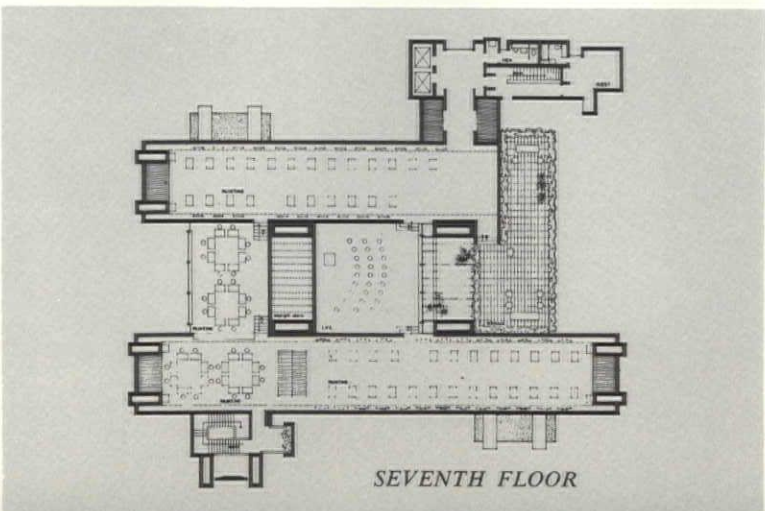
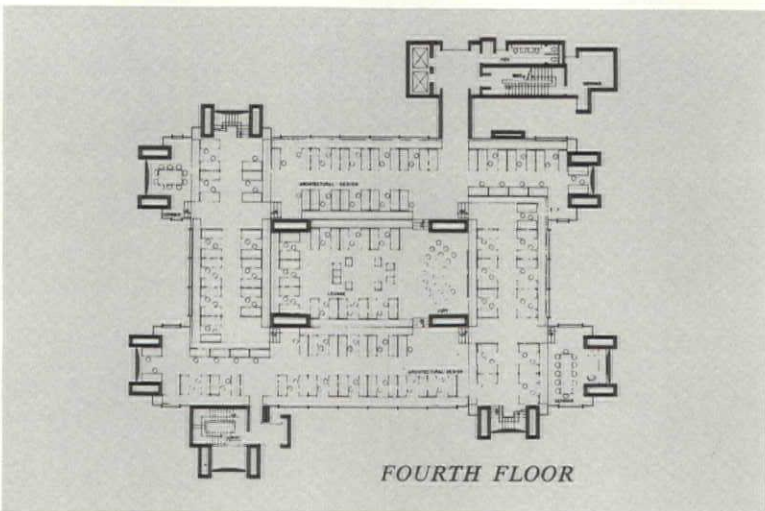
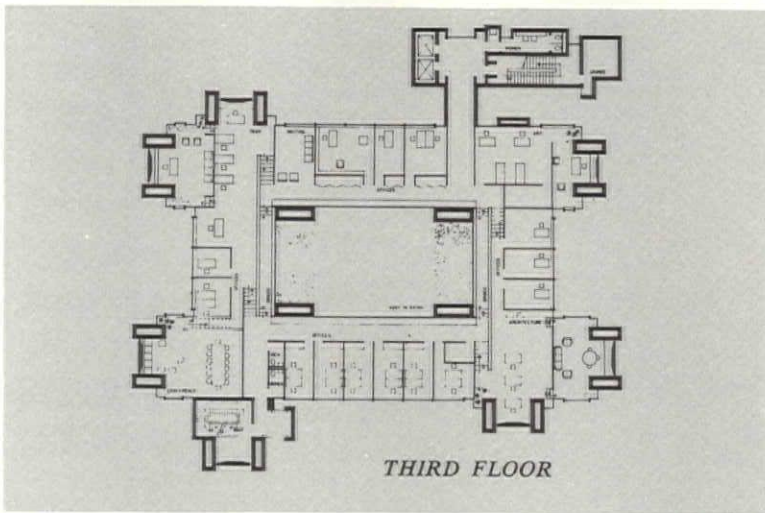
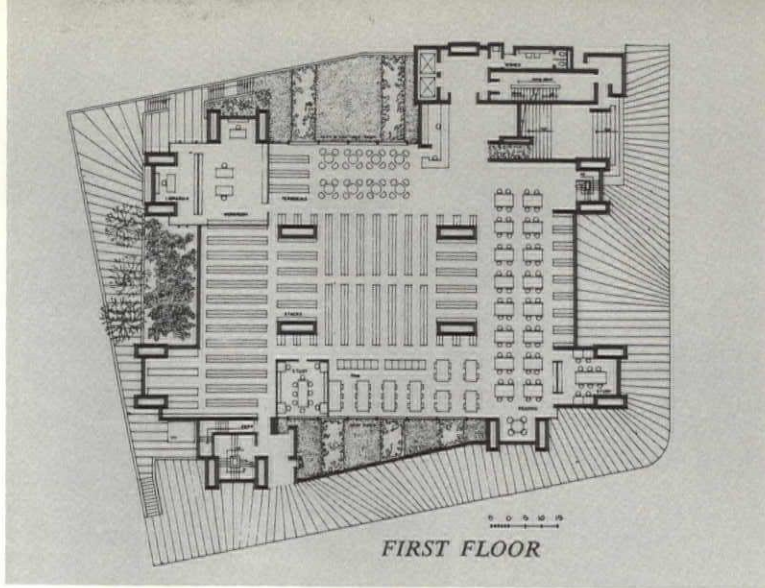
Paul Rudolph AIA



Project
School of Art & Architecture
Yale University
New Haven
Structural Engineer
Henry A. Pfisterer
Mechanical Engineers
vanZelm, Heywood & Shadford
General Contractor
George B. H. Macomber Company
Photos

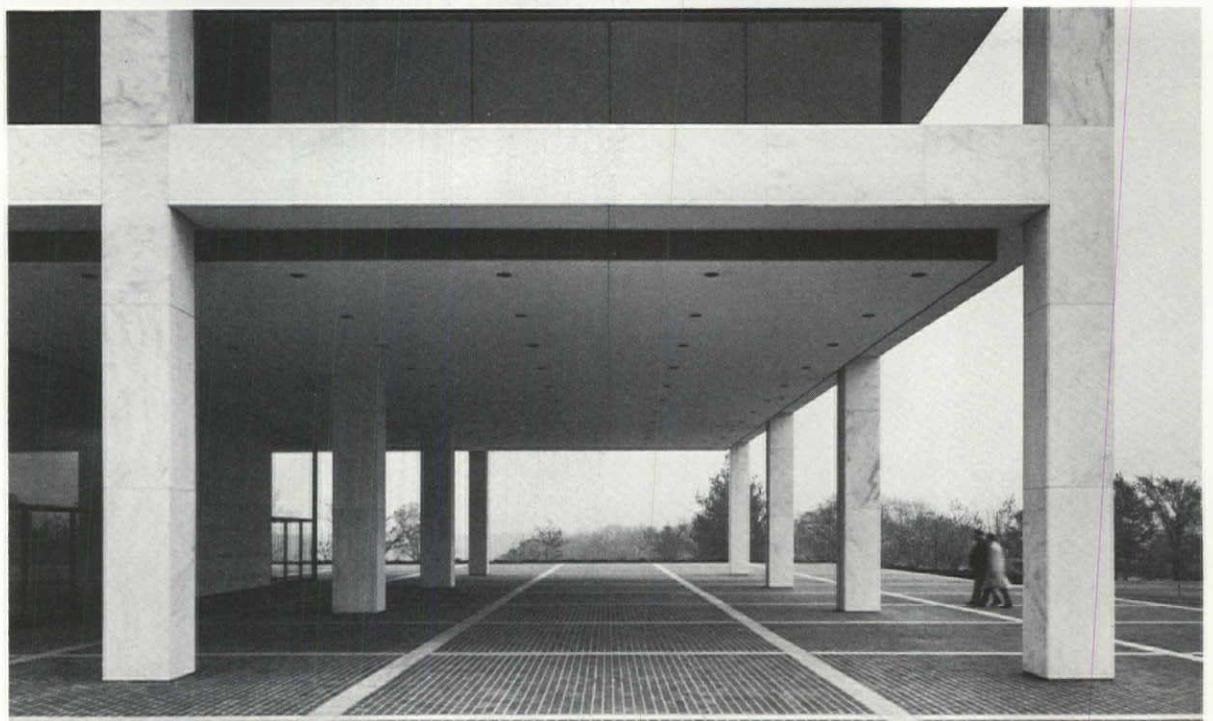
Jury Comment
A brilliant personal expression. This interior achieves a great variety of spatial experience. The exterior is compelling, dominant and well adapted to its site. The building's great character is achieved with a strong but simple palette of materials







*first
honor*



Skidmore, Owings & Merrill

Chicago

Project

BMA Tower
Kansas City, Missouri

Owner

Business Men's Assurance Company
Mechanical and Electrical Engineers
Black & Veatch

General Contractor

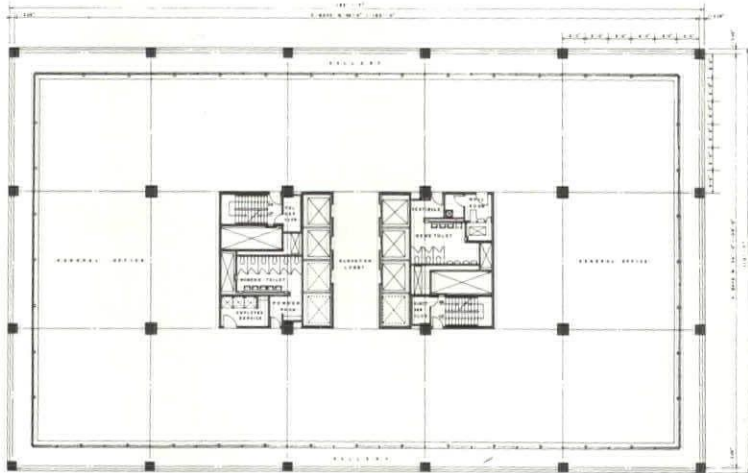
Winn-Senter Construction Company

Photos

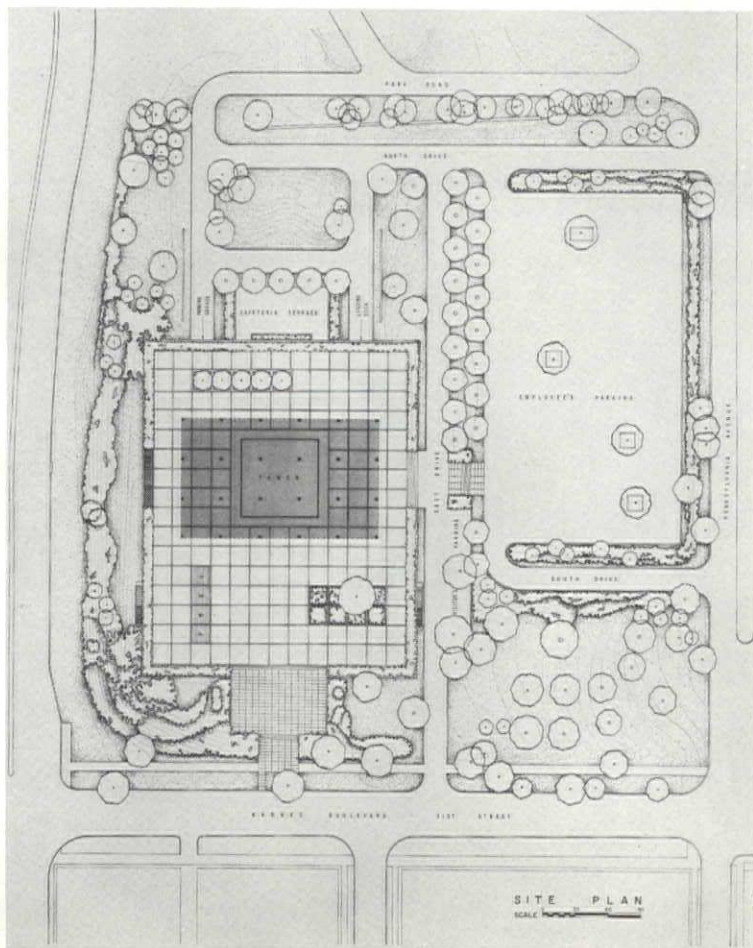
Ezra Stoller Associates

Jury Comment

An honest building, shorn of all unessentials in its expression. The structure and function of the building are clearly and simply stated. Visual interest is obtained through the use of light and shadow rather than through decoration



TYPICAL PLAN





merit

Mann & Harrover

Project

*Memphis Metropolitan Airport
Memphis*

Structural Engineers

S. S. Kenworthy & Associates

Mechanical and Electrical Engineers

Allen & Hoshall

Graphics Designers

Architectural Graphics Associates

General Contractor

J. A. Jones Construction Company

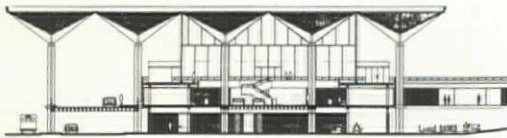
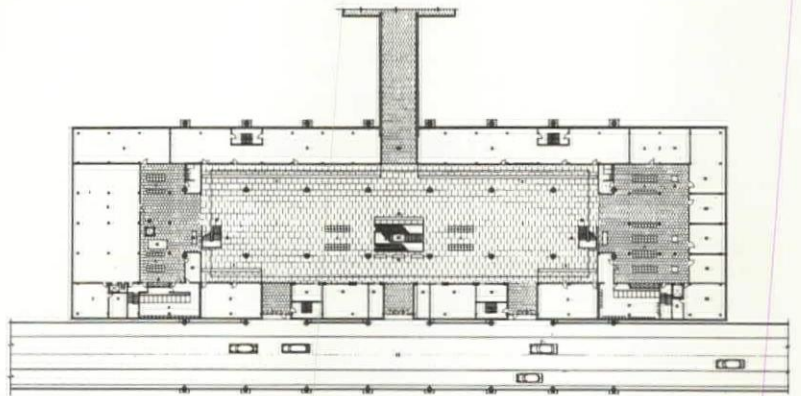
Photos

Bill Engdahl of Hedrich-Blessing

API Photographers

Jury Comment

A graceful, dramatic gateway to a city in the air age. The airport is visually exciting to approach and to be in, without being exhibitionistic. The handsome interior is well planned so that users can locate all the various areas easily and quickly





Paul Rudolph AIA

Project

Temple Street Parking Garage
New Haven

Owner

City of New Haven

Structural Engineer

Henry A. Pfisterer

General Contractor

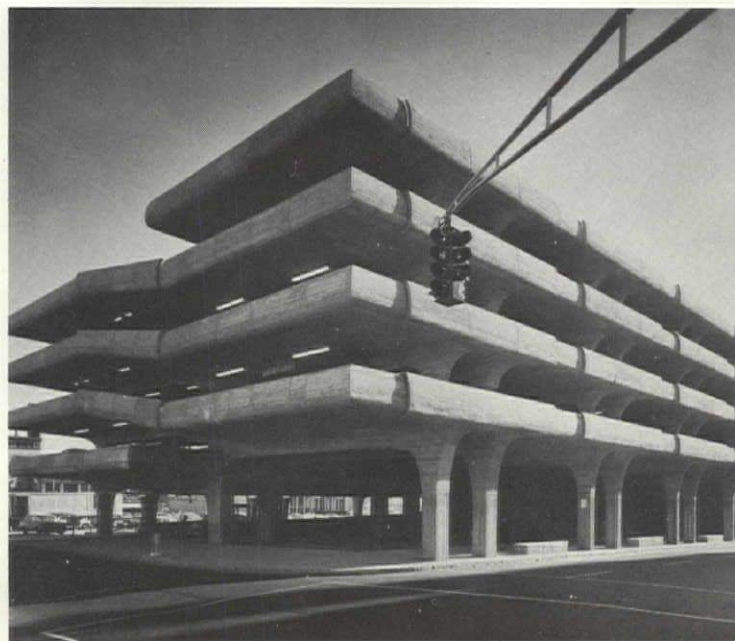
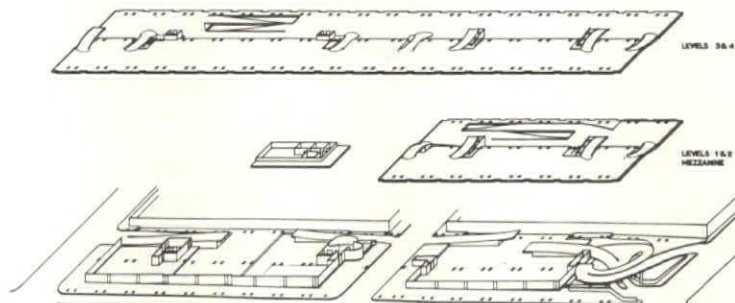
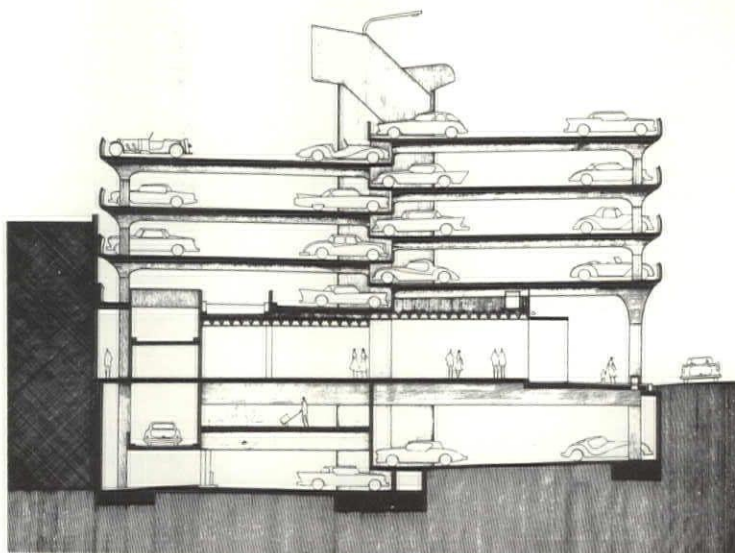
Fusco-Amatruda Company

Photos

Ezra Stoller Associates

Jury Comment

A powerful expression of one of the new building types of our times. This bold, highly sculptural structure makes a strong statement in a city. The use of textured concrete throughout, as a continuous flowing material, is highly effective





Vincent G. Kling FAIA

Project

Molecular Electronics Division
Westinghouse Electric Corporation
Anne Arundel County, Maryland

Structural Engineers

Allabach & Rennis

Mechanical Engineer

Charles S. Leopold

General Contractor

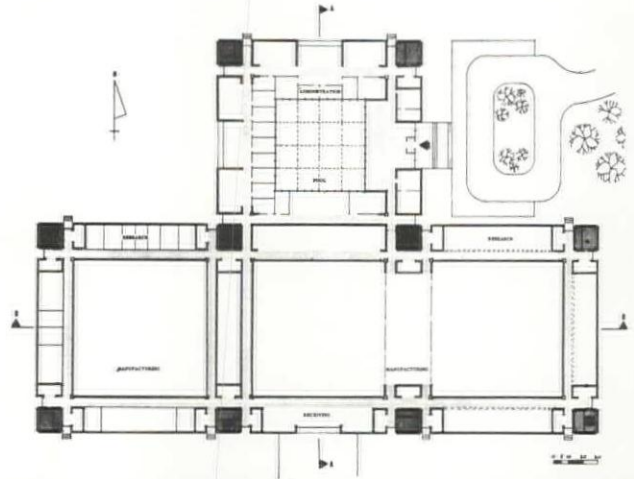
Kirby & McGuire, Inc

Photos

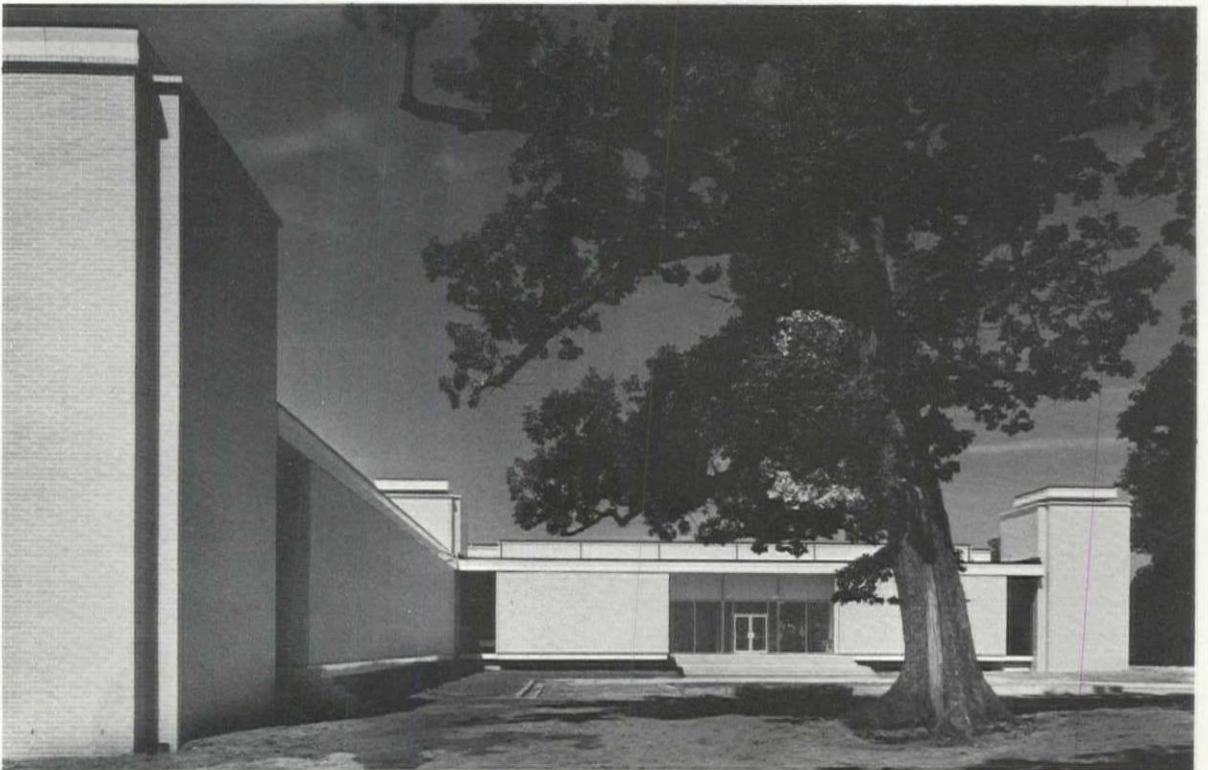
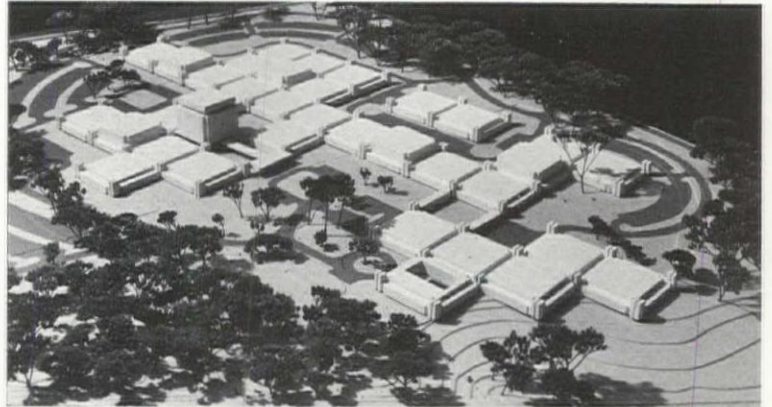
Lawrence S. Williams, Inc

Jury Comment

A precise, well-planned solution to a project demanding flexibility and future growth. Modular units can be added indefinitely without harming the exterior consistency. This building exemplifies the principal that an exterior should be a logical outcome of the internal needs



Right: Maximum Ultimate Development





Kelly & Gruzen

Project

Horizon House

Fort Lee, New Jersey

Owner and General Contractor

Tishman Realty & Construction Company, Inc

Structural Engineers

Farkas & Barron

Mechanical Engineers

Cosentini Associates

Landscape Architect

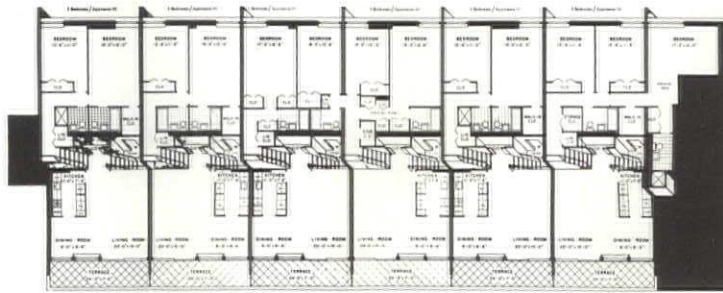
Michael Burris

Photos

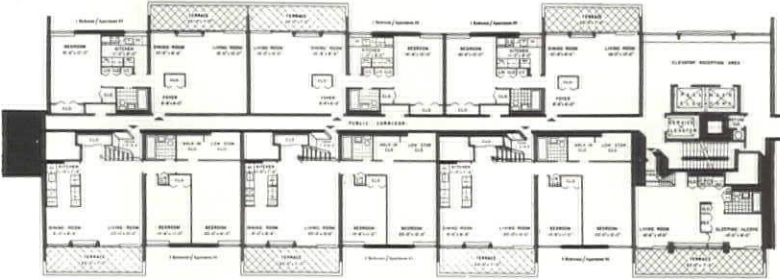
Ritchie Productions, Inc

Jury Comment

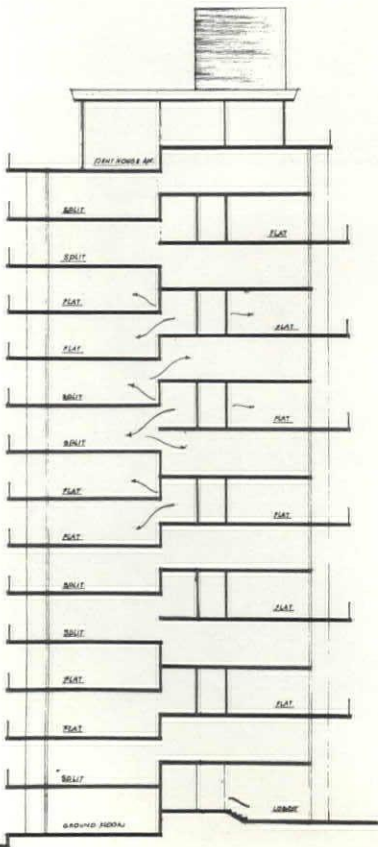
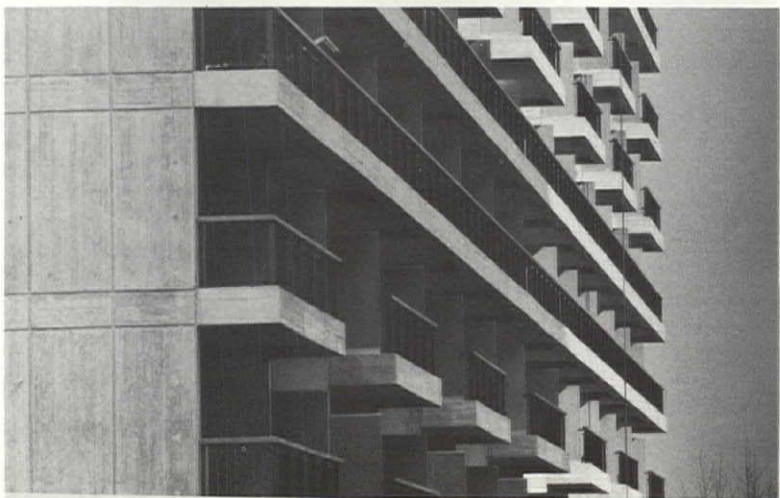
Proof that massive apartment buildings can make a valuable contribution to the urban scene. The imposing appearance of these buildings befits their exposed setting overlooking the Hudson River and Manhattan. The split-level arrangement of the apartment rooms ingeniously gives two orientations to each apartment



Typical Up Split Level



Typical Up Bi-level and Single Level





Marquis & Stoller

Project

St Francis Square
San Francisco

Owner

ILWU-PMA Pension Fund Corp

Structural Engineer

Eric Elsesser

Mechanical and Electrical Engineer

K. S. Oliphant

Landscape Architects

Lawrence Halprin & Associates

General Contractor

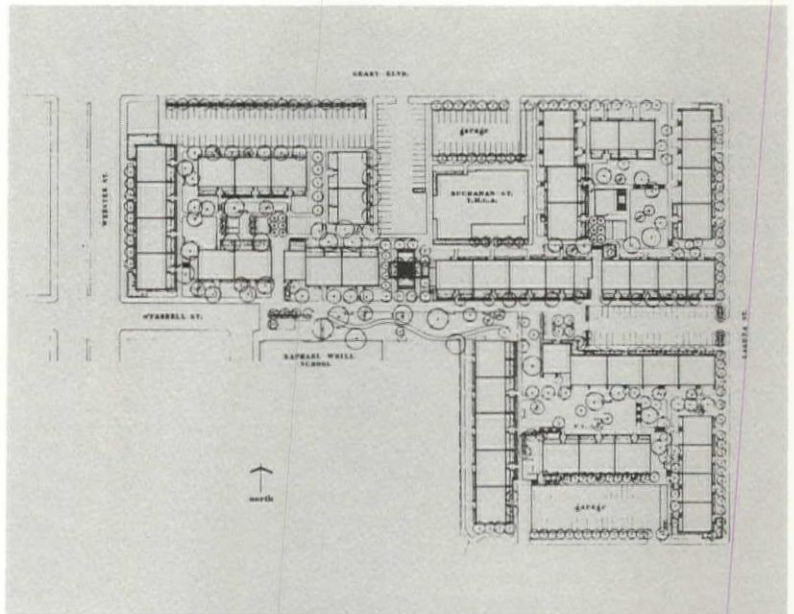
Jack Baskin

Photos

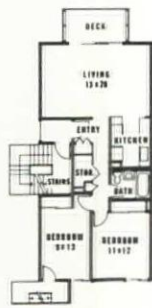
Karl H. Riek

Jury Comment

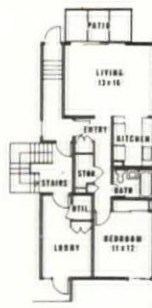
A successful example of a low-cost urban redevelopment project. The scale is human and the residential quality is warmly achieved. The buildings relate well to each other, violating neither the freedom nor the privacy of their occupants



THREE BEDROOM
1050 SQ. FT.



TWO BEDROOM
840 SQ. FT.



ONE BEDROOM
550 SQ. FT.





Charles DuBose FAIA

(Site planning and basic design of over-all project)

and Emery Roth & Sons, Associated Architects; Fulmer & Bowers;
Kahn & Jacobs; Carson, Lundin & Shaw; Curtis & Davis, Associated Architects

Project

*Constitution Plaza
Hartford*

Lighting Consultant

Richard Kelly

Landscape Architects

Sasaki, Walker & Associates

General Contractor

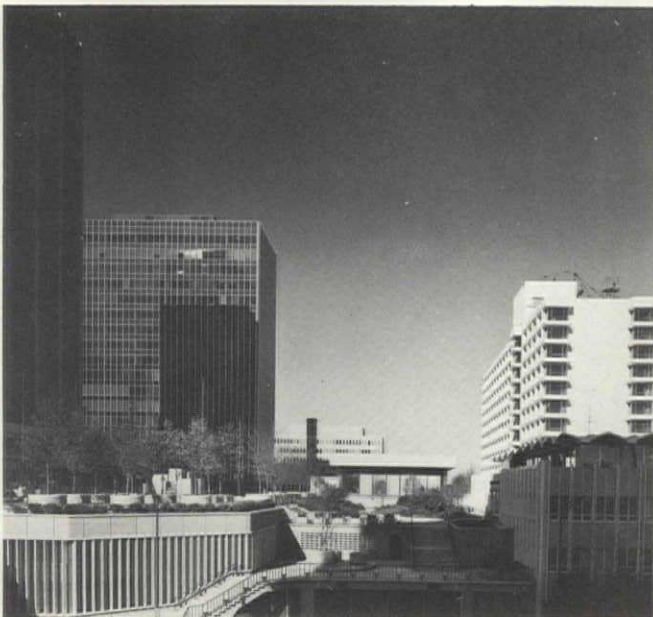
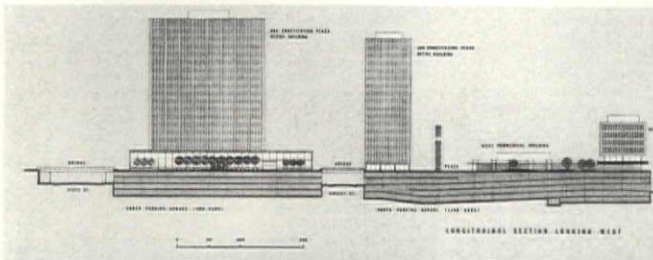
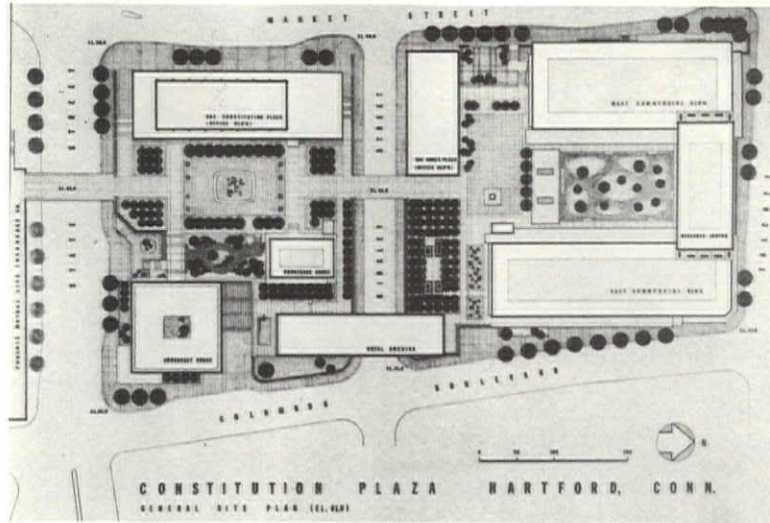
F. H. McGraw & Company

Photos

Joseph W. Molitor

Jury Comment

An exciting breakthrough in architectural organization of a large group of commercial buildings surrounding a pedestrian mall. The result is a highly successful combination of many design elements which restore an old part of a city and make it handsome, efficient and unified in large and small details. The landscaping contributes greatly to the total concept. Parking is where it should be—out of sight





Skidmore, Owings & Merrill

San Francisco

Project

Carmel Valley Manor
Carmel Valley, California

Owner

Northern California Congregational
Homes

Landscape Architects

Sasaki, Walker & Associates

General Contractor

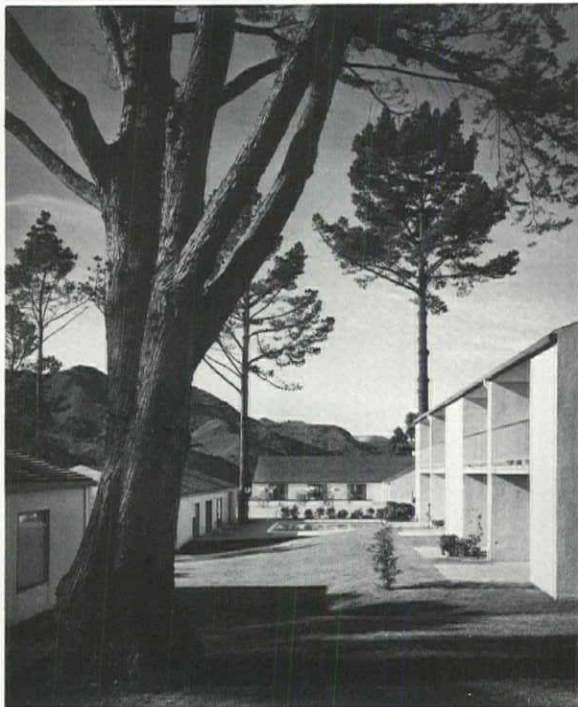
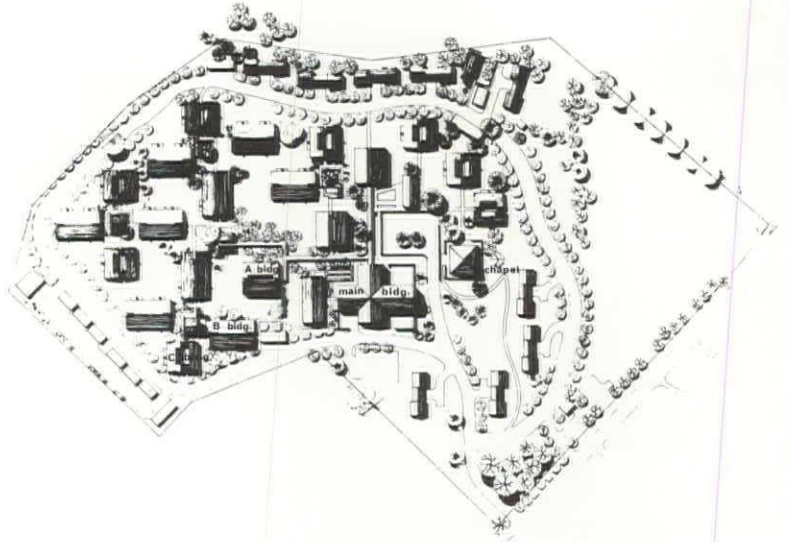
Williams & Burrows

Photos

Morley Baer

Jury Comment

A refreshing accomplishment, as beautiful and human in scale as a medieval village. The buildings, displaying perfect harmony with the beautiful setting, provide a relaxing and intriguing atmosphere for retirement. The siting of the buildings creates friendly, restful and intimate spaces





Harrison & Abramovitz

Project

Assembly Hall
University of Illinois
Urbana

Structural Engineers

Ammann & Whitney

Mechanical Engineers

Syska & Hennessy

Acoustical Engineers

Bolt, Beranek & Newman

Lighting Consultant

Abe H. Feder

Landscape Architects

Clarke & Rapuano

General Contractor

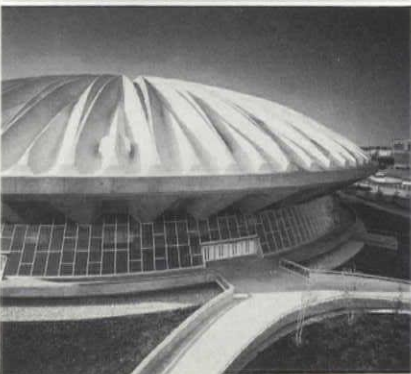
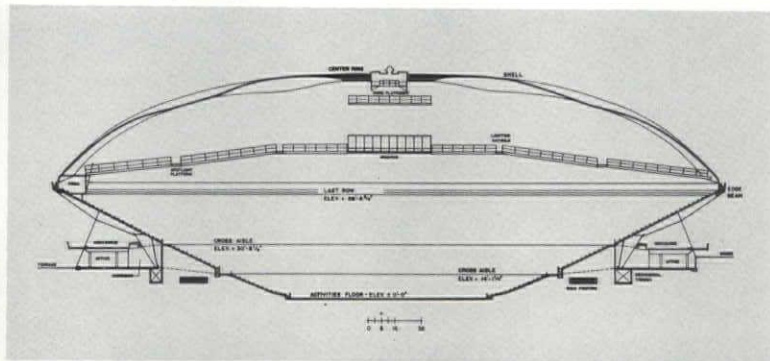
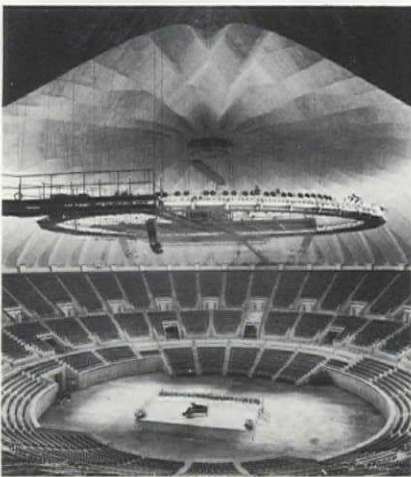
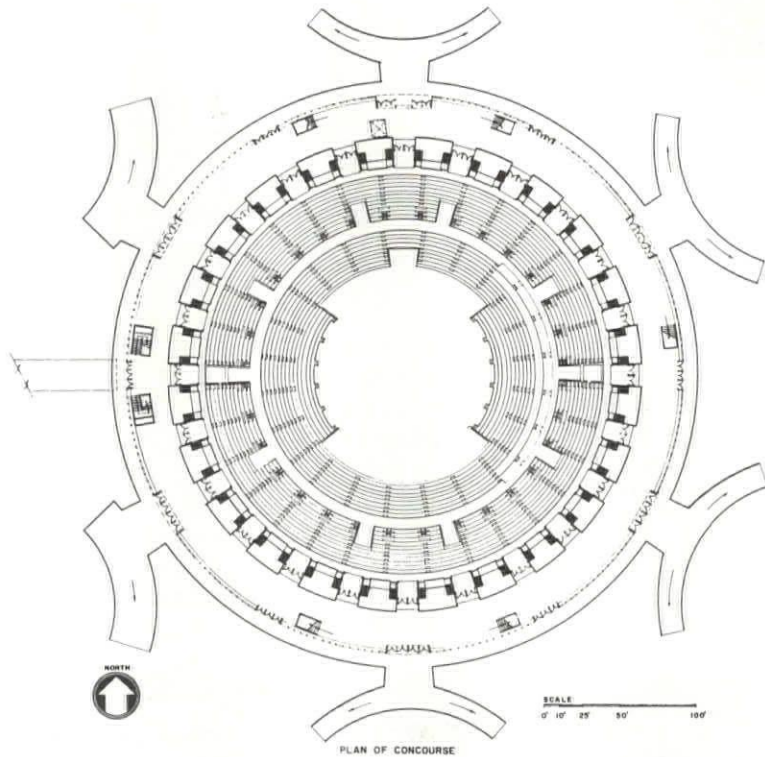
Felmley-Dickerson Company

Photos

Ezra Stoller Associates

Jury Comment

A dramatic visual focus for a campus. The function of this building is clearly evident in its strong, handsome form. The structure is used well to give the interior space its exciting character

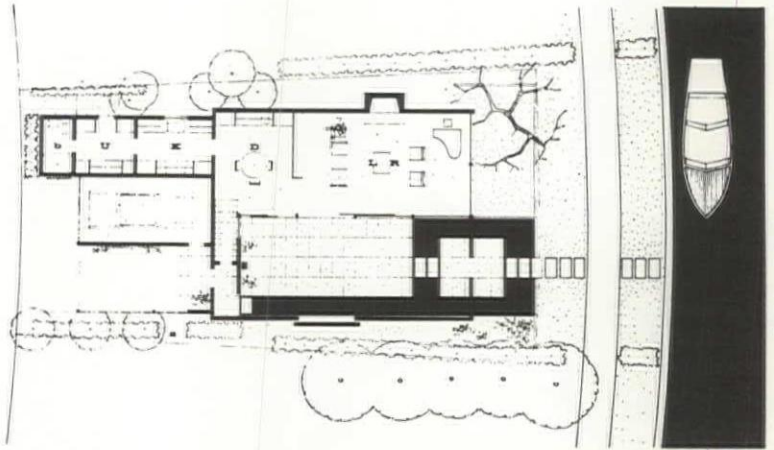




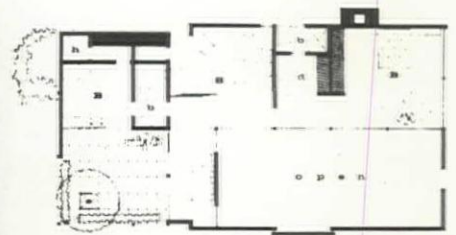
Killingsworth, Brady, Smith & Associate

Project
Case Study House No 25
for Arts & Architecture Magazine
Long Beach
Owner
Edward Frank
General Contractor
Stromberg & Son
Photos
Julius Shulman

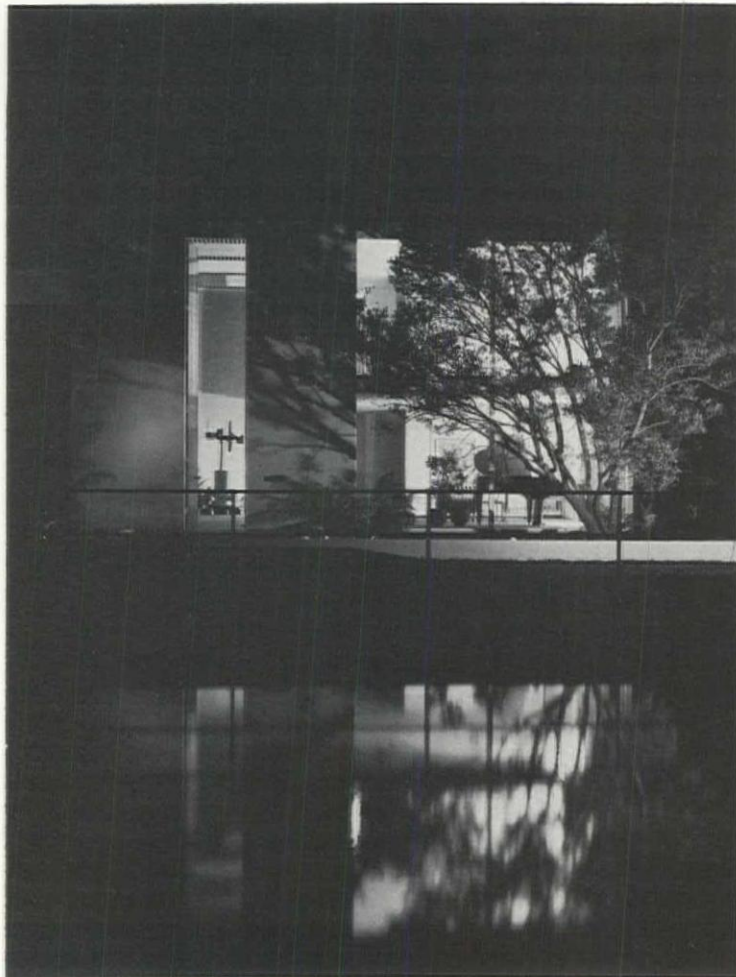
Jury Comment
An elegant, small house which makes space count to the maximum. The second floor and living and dining rooms open visually on the two-story central entrance. A sophisticated environment is achieved with simplicity of material and detail. The highly restricted site is imaginatively handled



FIRST FLOOR



SECOND FLOOR





George Nemeny AIA

Project

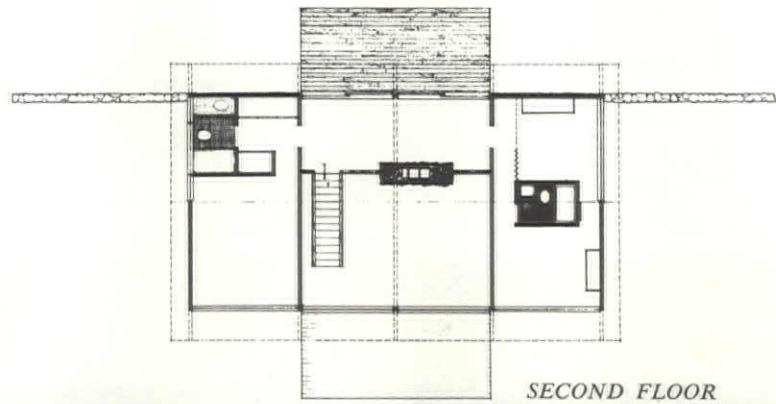
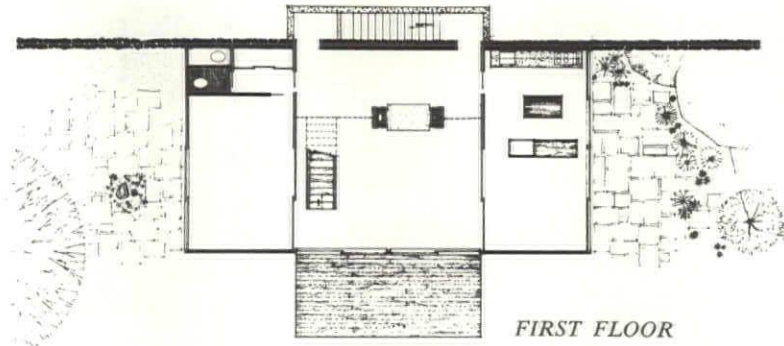
*Ray Favata House
Dobbs Ferry, New York*

Photos

Maris-Ezra Stoller Associates

Jury Comment

A disarmingly direct solution resulting in an honest, straightforward residence. This is an unpretentious house, displaying great restraint, with no frills or tricks. The materials are handsomely used and excellently detailed





Ulrich Franzen AIA

Project

*New Plant for Helen Whiting, Inc
Pleasantville, New York*

Landscape Architects

Ulrich Franzen & Associates

General Contractor

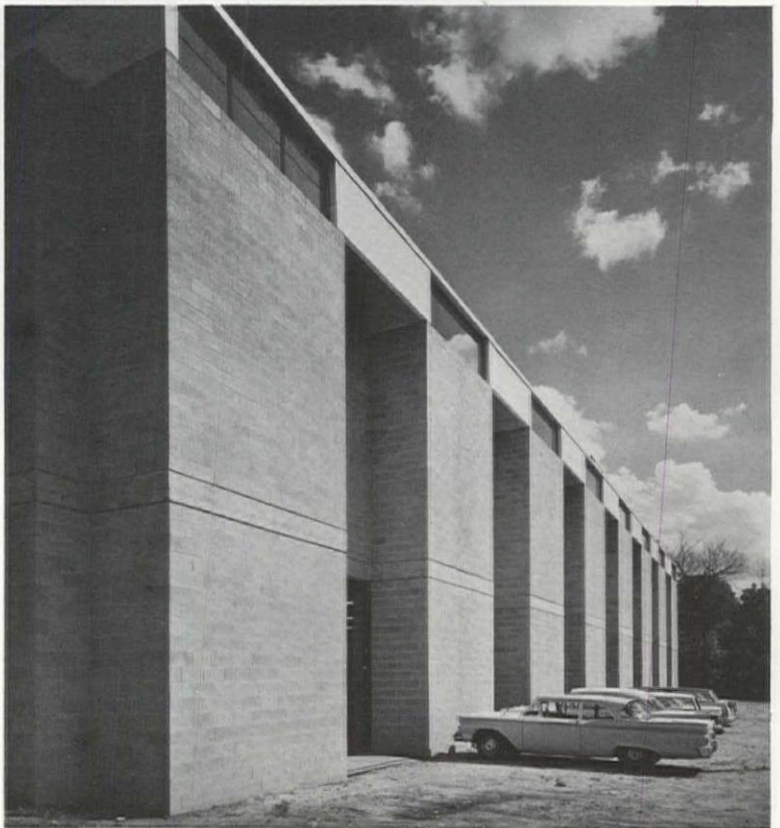
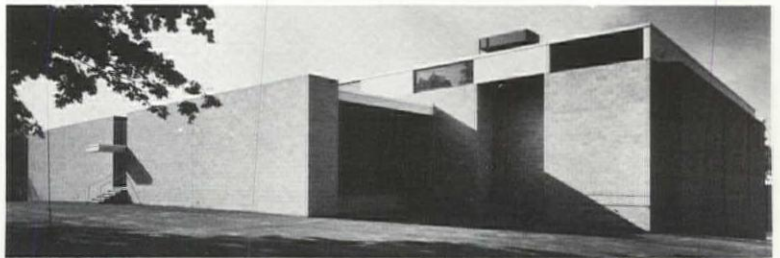
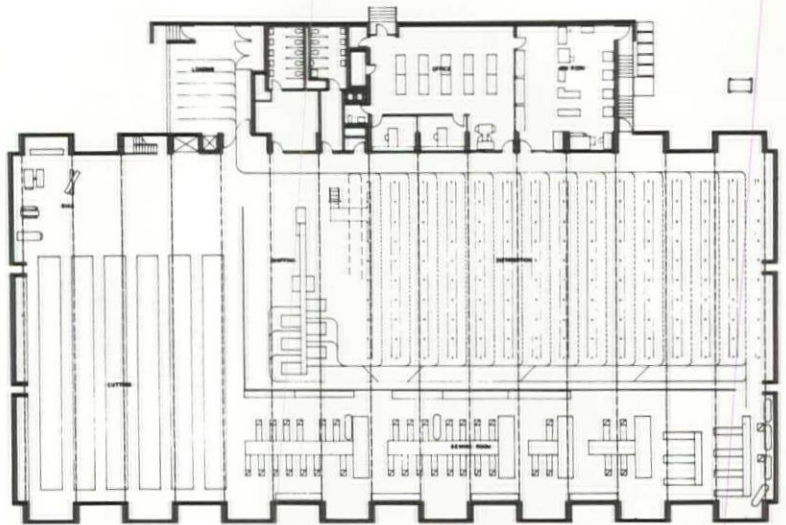
James A. Jennings

Photos

Ezra Stoller Associates

Jury Comment

A skillful use of minimum means to achieve an appropriate result in a building type which is commonly offensive. This building suggests that factories can be architecturally successful. Its dignified, handsome exterior displays striking simplicity in material and structure





Tarapata-MacMahon Associates, Inc

Project

*Central Plaza Development
Canton, Ohio*

Owner

*Central Canton Development
Association*

Landscape Architects

Johnson, Johnson & Roy, Inc

General Contractor

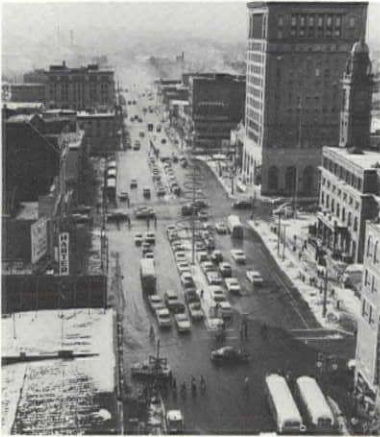
*Melbourne Brothers Construction
Company*

Jury Comment

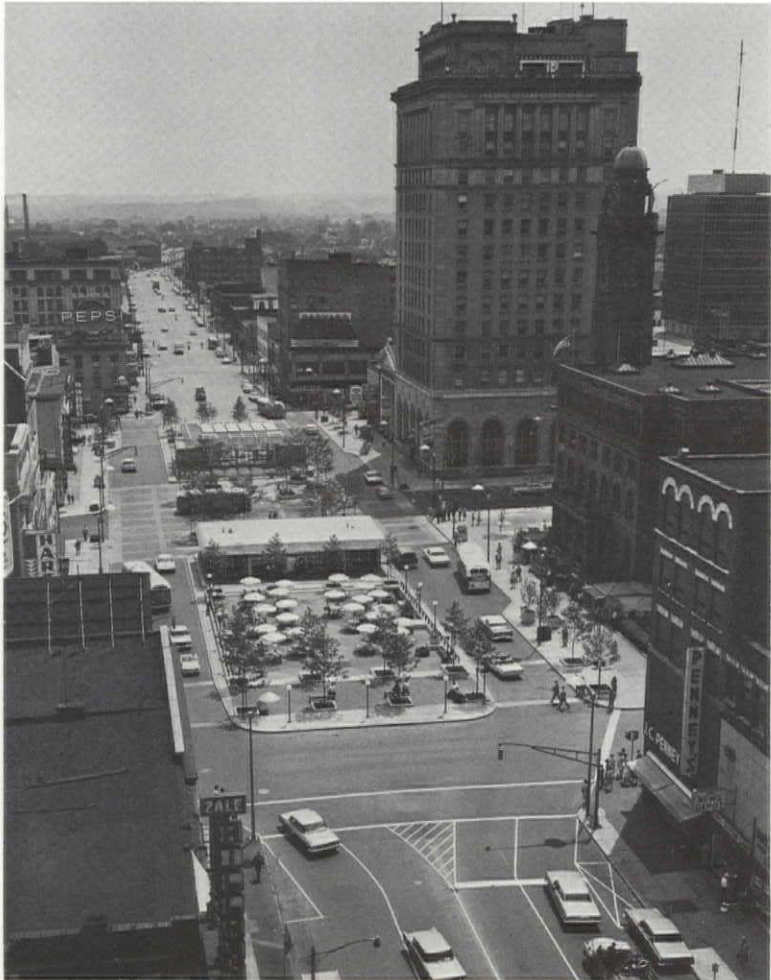
*A creative, inexpensive demonstra-
tion of how a typical main street can
be transformed into an exciting,
human environment. This project is
a rare example of a central plaza
designed for people in the heart of
an automobile-infested city. It
should serve to encourage other
cities to imitate its example*



Before



After



Town and Gown—A New Dimension

*Three papers from a seminar at the
New England Regional Conference AIA last October*

THE INSTITUTION AND THE CITY

O. ROBERT SIMHA
Planning Officer

Massachusetts Institute of Technology

OUR SOCIETY creates only a few enduring institutions such as public buildings, churches, universities. There are few because the history and character of our society reveal a powerful concern for change and adjustment, a desire to clear away the old for the new. There are, as a result, only a handful of things which are built to last.

The university is one institution that is created from the outset with the notion that continuity and performance is expected. The community that established Harvard University in 1636 or MIT in 1861 assumed that their efforts would be carried on and future generations would add to what they had already started.

Why is the continuity of the university so compelling? It is perhaps because, as almost nothing else, it is at once the repository of existing experience and knowledge, the source to which we look for new knowledge, and the maintainer of a tradition of scholastic excellence and intellectual aspiration. The university has played in the past, and will surely play in the future, a critical role in the intellectual and physical development of our society. We are deeply involved in the former and are at the threshold of the latter today.

In the city the university has always had a special role. Even in its small beginnings it has had a pervasive influence on the character of the urban environment. Today as many institutions grow in size and scope we are suddenly aware that they are major employers, consumers and developers. We are also aware that this expansion is a function of the

forces at work within the institutions which are pursuing new issues and problems and constantly pressing the frontiers of knowledge as well as their own physical enclosures.

Much of this activity implies physical expansion, and large as many of our institutions are, some will need to expand further. This expansion will not be limited to special geographic areas; the projected expansion of the institutions in the Boston area is negligible when compared to the estimated building needs for higher education nationally over the next decade. It has been estimated that all of the existing physical plants of colleges and universities will have to be reproduced in the next ten years just to keep up with the expected demand. A 100 per cent increase of the nation's physical resources for higher education may seem like another one of those incomprehensible statistics that we have all undoubtedly become inured to. The issue which cannot be overlooked, however, is that as developers of these facilities, the colleges and universities of this country will be making one of the most significant contributions to building, architecture and planning that we have ever known.

In anticipation of the effort required, some institutions have established agencies within their own administrative structures to insure that the job to be done is guided, at least in part, by those whose skills are oriented toward dealing with problems on a scale that is commensurate with the task to be accomplished, a scale that has rarely been tackled in this country. These problems include the articulation of long-range educational goals, the resultant physical requirements, building programming and the design of the great sections of the city that are occupied by the institution.

This kind of planning and development requires a high degree of competence at all scales and is by no means an academic exercise. It is reality such as we have rarely seen. The identification of objectives and the marshaling of resources has already begun;

the conscious pursuit of these objectives in their physical form is already apparent as you drive down the banks of the Charles River—though this, let me assure you, is only the spring crocuses peeping through the snow. The universities in the Boston area will be spending fifteen to twenty million dollars annually for new construction during the next decade. The results of all this activity will be the subject of much discussion between the city and the university. New relationships must be defined hopefully with patience and intelligence. Recognition of areas of mutual interest and areas of conflict is a task that must be undertaken if the institution and the city are to make the most of their mutual resources and opportunities. Underlying these labors there must be an awareness that the institution and the city will remain partners in an enterprise that transcends any immediate political or physical issue. Each has an investment in the other which must be fully appreciated if each is to make its appropriate contribution to the proper development of the community and the institution. The participation of the community in this effort is a vital one. In many cases this participation will be critical, particularly where the resources of urban renewal can be brought to bear on the expansion requirements of the institution. Where the participation and support of the community is lacking, the achievement of the institution's educational goals can often be frustrated, postponed or badly disfigured.

The emerging experience will reveal, I suspect, that as the institutions pursue the achievement of their academic goals they will develop a greater cognizance of traffic and transportation problems, of their impact as users of land, and concurrently of their influence on the community's tax resources.

With respect to the tax resources of the community there will, I believe, be many opportunities open to expanding institutions to balance the effects of academic expansion with non-academic activities that can contribute to the city's economic health. Technology Square in Cambridge is just such an effort where MIT, concerned with both the character of its environment and the needs of the community, elected to sponsor a project which is beneficial to the institution and at the same time will make a considerable contribution to the tax resources of the community. When completed, Technology Square will be among the first ten taxpayers in the city of Cambridge.

All of these things, the millions of square feet of academic space, the non-academic and ancillary facilities fulfilling as they do quantitative objectives, will take their final form in buildings and space. For this reason we must be concerned with the qualitative objectives that should guide the development of the institution. If properly planned, designed and developed, the buildings and their environment can represent a standard of excellence that will perhaps serve as a yardstick for all other activity in the city.

The responsibility of the leadership in our universities for the fulfillment of the educational, quantitative and qualitative goals in their development

programs is a great one. They have in a number of cases recognized the gravity of the responsibility by creating planning agencies to help guide the planning and physical development process of their universities or institutions. These agencies, charged with the development of an over-all physical context for new facilities, will require from the design professions a participation that is founded on a much greater understanding than is now prevalent in our educational objectives and programs.

The problems that will be set forth for the designers and architects will require a considerable change in the current notion of what is an appropriate design solution. The clichés of this or any other generation will not do. There must be a greater appreciation of the scale that will be involved in university growth and development. The expanding urban institution will occupy large sections of the city, and the design of its various elements must be conceived as part of a larger scheme to be developed over many years. Each part must contribute to the unity of the whole esthetically as well as functionally, otherwise we will foster a collection of gimmickry that will reveal to generations to come the shallowness of our skills.

The challenge presented to the design community by the expected growth of institutions and universities requires that it muster and train architects who have well-grounded intellectual and social values, a sense of history, quality, imagination and inventiveness.

It will be these things that must be present if we are to win the respect of this and future generations. It is a challenge that we cannot afford to miss.

THE INSTITUTION AS RESPONSIBLE CLIENT

EDWARD S. GRUSON
*Assistant to the Dean
Harvard Medical School*

IT IS MY INTENT to bring into focus one of the major implications of the proliferation of planning offices such as we have today. It appears that a new relationship is being developed between the architect and the client—the client for our purposes being a large, multi-faceted, complex, urban institution. Let me use as a point of departure the often-made remark that the education of the architect is such as to prepare him to do some things extremely well but at the expense, perhaps naturally, of some things that are left either undone or done perhaps not as well as we should like.

The traditional architect-client relationship will not work in the context of the major urban institution. Generally, once a contract is signed, the responsible firm assigns one or two of its members to work with the client to develop a program, the consequences of which will lead to a design. Very often

a busy firm can afford to provide senior personnel only in an advisory or supervisory capacity, delegating the day-by-day or week-by-week work with the client to its less experienced staff. In the process the staff, provided that the building is complex or requires considerable technological knowledge or innovation, undergoes a process of education and a process of familiarization with the activities to be undertaken within the building or within the campus.

It seems that for the responsible institution this is an inefficient and uneconomic method of preparing for the construction of new buildings on new campuses. Therefore, I believe over the next decade you will find more and more often that as architects you will be working with, and indeed your success will depend on your capacity to work with, members of planning offices. Let me suggest two of the reasons why the modern urban institution, be it technological institute, university or large medical center, is extremely complex. First, it is difficult to comprehend over a short period, and second, it is political. The cost of educating a firm of architects, or indeed over a period of time several firms of architects, is just too expensive in dollars and time for such an institution to accept. On the staffs of these institutions I believe, therefore, you will find architects whose job it will be to work in intimate association day-by-day with individual members of faculty or professional staffs, and part of whose job will be to gain the confidence of these people who form the "client" in order that such people can talk intimately with *their* representatives.

Given the expenditures over the next few years by urban institutions in the United States, it appears to me that it would be patently irresponsible for a complex institution not to prepare itself in this fashion. The institution must rationalize its growth in terms not only of students and faculty and buildings, but also in terms of communication and transportation of people, goods and ideas. To do this, only a resident staff can devote the energy and time to weave a pattern of development of significance to the present and the future in time, and to the institution and the city in space.

Now what does a planning office do? Primarily, as I have mentioned, it sits with the faculty or professional staff and discusses their present and their future, their present ideas and what they would like to be. In a sense it acts in the capacity of a translator of educational or medical technological ideas into programs of a physical form. In order to fulfill its role, the staff must prepare either schematic or preliminary sketches in order that the faculty men, the people who form the client, understand and see where their ideas lead them in terms of space. These schematic or preliminary designs must take physical form and can be of varying degrees of detail, but they must represent a sophisticated expression in physical terms of the faculty's ideas.

It is during this process, which may take considerable periods of time, that the resident staff is able to provide a service and a support which a wise architectural firm cannot afford to offer and which the institution cannot afford to purchase. It is far

easier for us to throw away sketches made on brown tracing paper than it is for you to continually return and continually go back to your offices to try and try again. The planning office acts as translator as well after the architect is chosen; it works with the firm finally selected to design the building or buildings. You will find that when you are approached for the commission, often one of the criteria for selection will be your ability to work with the resident staff in whom, by the time you are chosen, the administration and the faculty of the institution will have a great deal of trust and confidence. In turn you will find the resident staff reviewing with you and with the client proposals, sketches, etc. The resident staff will form an intimate association with you and a bridge for you. The support of the bridge will be the work that has gone on prior to architectural selection and the program the resident staff has helped to prepare and from which you will be expected to create.

In this sense you will find a more responsive and more intelligent client than you may have heretofore encountered. Often the brief to the architect is too simple or too vague. I recall hearing of one instance where the entire program for a commission consisted of the directive to design a university for 12,000 students, and that is all. The architect was left on his own to develop for this institution its entire philosophy. Equally as bad is the program or brief consisting of pages and pages of generalizations, some space requirements, but saying relatively little—like that famous examination question which asks the student to describe the universe in an hour and a half and give four examples. You can only benefit from a more sophisticated approach.

Nor do I believe that the profession should be concerned about architects, other than those receiving the commission, preparing the schematic or preliminary sketches. This is not a restraint but perhaps an incentive. The schematics or preliminaries should be looked at as one method of defining and solving the problems which most concern the client. There may indeed be many solutions equally as valid, but at least you will have a criterion against which you must measure alternatives. I repeat that this should not create concern within the architectural profession since the work undertaken for such purposes is prepared by a responsible architect who is resident on the staff rather than contractually related to the institution. In such a system it matters not whether the responsible office is a planning office or an architectural office. It appears to me that the essential role of the architect is maintained and clarified. The problems which the architect is asked to solve are better defined because they rest on more fundamental work undertaken in order to prepare the client for architectural services.

You are aware from your own experience and considerable attendant publicity that institutions of higher learning and hospitals over the next decade will be spending literally hundreds of millions of dollars on facilities. It is certainly in the best interest of the client and the architect that these funds be spent in the most effective manner. I intentionally

use the phrase "effective manner" rather than "economic manner" because I concur with the architect in my belief that the institution has a greater responsibility to the community than merely to construct an economic but esthetically unattractive building. For this reason I believe that planning offices such as ours and the architectural profession share joint aspirations, and I conceive my responsibility as one of assisting to the fullest extent the architect, rather than in any way constraining his role.

THE ARCHITECTURAL DIMENSION

HERMANN H. FIELD AIA
*Director, Planning Office
Tufts-New England Medical Center*

MR SIMHA SPOKE of the new dimension in the relationship of the urban institution and its surrounding city. Mr Gruson discussed specifically the device of the institution-based planning process and its relation to the architect. In turn I would like to focus on implications coming out of both for a broader concept of architectural involvement in total environmental planning.

Dominant characteristics of the institutional setting are continuity and permanence. These have to co-exist with adaptability to accelerating change and a proliferation of shifting areas of activity. The creation of the physical environment for this requires an approach both more comprehensive and more specialized than can possibly be found within the narrow traditional architect-client relationship. Thus it becomes an interesting testing area for a resolution of these inadequacies.

Institutional planning and design are likely to become one of the most important expressions of our urban society in the decades ahead, demanding the highest degree of professional responsibility and competence. Unfortunately, today the opportunity is missed more often than not because of failure of the profession to understand the scope of the problem and its tendency to use tools that have little relation to it. This is not just a peculiarity of the architect alone. A person like myself exposed daily to problems of medical care cannot fail to see parallels in the glaring inconsistencies between the traditional doctor-patient relationship and the social implications of our present level of medical technology. What is impressive in our case is that our professional organization, the AIA, is out in the forefront of exploring the new needs and searching for ways to meet them, an enlightenment hardly characteristic of the official body of the medical profession. In this respect the *AIA Journal* is especially to be commended for its many presentations on this urgent need for reorientation.

From a design point of view the urban educational and medical-care setting has three dimensions

which are particularly at the heart of many of the new problems confronting the architect. The first is in the spatial realm; the second is in time; the third is scientific-technological.

Let's look first at the spatial dimension. The institution in the urban setting has become an increasingly complex social organism, a semi-autonomous microcosm of its city macrocosm. As such in its spatial form, it stands at the opposite end from the cellophane-wrapped prestige-type headquarters plunked as an isolated entity into an unrelated setting on which it turns its back. Its elements do not lend themselves to being packaged within the simple concept of a one-shot building or a series of such finalized entities. This is because the core of our problem lies primarily in inter-relationships. These are open-ended, in flux and immensely diverse. The urban institution demands a human, personal scale to reflect its social purpose and organization, its increasing image as a core community function. Thus it cannot dissociate itself from its surroundings. Quite the contrary, it must become an expression of community continuity at every level, a direct manifestation of urban design itself.

And what does this dimension of urban continuity imply for the architect? It means that whether he is involved in an individual building or a group, his design must strengthen the links with the surrounding urban fabric in a whole hierarchy of relationships if it is to be good architecture. Ideally there should be no sharp edge or divide, the institution and its particular urban setting fingering into each other in a kind of synapsis. This, for example, is one of our basic objectives in the emerging new concept for the Tufts-New England Medical Center. Our concern is not just in the internal disposition and spatial organization of a complex of medical care and education systems. Our design framework must at the same time create a new urban cohesiveness, an incitement to strengthen ties between the life of our institution and its reconstituted downtown neighborhood. It is being sought on a great many levels as in active participation in the urban renewal process, in using our project to unscramble the pedestrian-vehicular conflict and providing a new setting for each, in designing for natural activity mixers, for an interplay of scales of buildings and open spaces to express a total neighborhood texture. This can only be achieved by living with these tasks on a continuing basis which cannot be provided by the attitudes and economic limitations of a quicky program and design operation. Such limitations not only shortchange the institution and its urban context, but the practitioner who has set himself an impossible task.

The second characteristic dimension is time. Whatever we do as architects to the institutional setting is an intervention in midstream in a long growth process including past, present and future. The very pace of the scientific revolution which tends to confront us with runaway change demands a much greater sensitivity to a particular heritage in growth. In it lies one of the reassurances of the permanence of our culture. Again this can only come from a

broad comprehension of the valid threads of this continuity with the past. A superficial application can only lead to sentimental romanticism, and we manage to create more than enough of this.

Unfortunately, the dominant note is linked with the present. That is our own time when we are living, designing, immortalizing. Judgments tend to be present-oriented as are the available funds. The temptation is strong for immediate short-range self-assertion. However, in institutional design as in that of the larger urban environment we are not dealing with a finite whole to be completed in finite time but rather with a complicated process of phasing. Whatever we do at any particular moment while being architecturally committed must be open-ended as well, in no way restricting the institution's capacity for continual self-renewal. It must be part of a carefully structured framework for change rooted in a deep sense of identity. Again the design process for this must draw on much more comprehensive resources than our profession has been trained and prepared to provide.

Finally, there is the scientific-technological dimension, the imperative Mr Gruson has emphasized in his discussion of the responsible client. For the architect it means participation at various levels in a fascinating and challenging multi-disciplined operation. For example, as part of our studies at the Tufts-New England Medical Center we have a government-sponsored project for research into a new design approach to pediatric hospital facilities. Its key staff consists of a PhD in social anthropology, an architectural designer and a sociologist under the joint direction of the Assistant Pediatrician in Chief and the Planning Director. An integral part of the resources of this study is our entire pediatric unit, the Boston Floating Hospital for Infants and Children, serving as laboratory on a day-to-day involvement with full participation of its staff. Similarly in the larger over-all planning problems of the Medical Center itself, a less formalized continuous interchange has developed in which the physician, the educator, the administrator, the researcher and the spatially-oriented professional are reexamining together the systems and subsystems of which an institution such as ours is made up. Often it is a search in new areas. Always it is future-oriented, using past standards only as a point of reference, not as a building block. There is much trial and error, but as a by-product also new methodologies, more scientific and rational, less intuitive. It is a kind of generic programming in depth, with the spatial design implication built in at every stage. It also includes prototypical architectural interpretations as part of the formulation of objectives and program, which in turn become the highly sophisticated resource material for the architect to draw on in his final solution. The key to ultimate quality in this process lies in the spatial design implications being an integral part of it from the start—not simply an icing smeared on top at the end.

What then are some of the conclusions I would draw for architectural training and activity from observations on the institutional area made very briefly

by my two colleagues and myself? While all three of us are involved in a common approach to resolving the institution's development needs—ie, through the intermediary of a continuing internal planning process—it would be dogmatic indeed to assert that this is the one and only way of approaching the institution's architectural goals. All I can say is that it seems one logical answer and appears ideally suited to the specific institutions concerned. Beyond doubt, however, it is one expression of a much more comprehensive approach to which the profession must become attuned if its abilities are to be used effectively. Whether such comprehensive service on a continuing basis happens from within as part of the institution or as service from a firm organized specifically to provide this from outside to a client will depend on individual factors on both sides. In the case of the built-in institutional planning service, the mechanism for orderly transition to the executing architect becomes a crucial factor. Ideally it should provide for a collaborative machinery without confronting the architect with frozen concepts. In the case of the comprehensive external service, the question arises whether the ultimate design ability sought for will necessarily be found under the same roof with the analytical competences required of the stages leading up to the architectural solution.

What is clear beyond doubt is that the objectives of architectural training should have a range of facets aside from the central traditional one of technical training for private individual practice. By default architects are left outside much of the shaping of our environmental thinking on the analytical and research level when their contribution could be a major one. It seems to me that our schools should include specific training in these directions and should themselves become research centers in the environmental field. An example in one particular area is the Harvard-MIT Joint Center for Urban Studies. It is striking how minuscule the financial input in architecturally-oriented research is in our academic institutions, compared to the multimillion-dollar investments in the medical and other disciplines. Surely the physical environmental quality is an integral part of a nation's health.

As in connection with medical education, in our profession there should be more emphasis on developing the exploring mind equipped with thought disciplines that will make the architect at home in the midst of change, rather than teaching solutions. He must be oriented to search rather than becoming a repeater of standards, self-made or otherwise.

The important thing to remember—whether the architect's role happens to be that of contract architect or of consultant or of provider of a comprehensive service or of institutional planner or researcher—is that his effectiveness will be sorely limited unless he can see himself as part of a multi-discipline operation, and by his training and inclination give more than lip service to this total approach. Certainly, the new dimensions bearing down upon us in institutional planning and design put this condition squarely before the profession. ■

A Guide for Planning Unitarian Universalist Church Buildings

H. WALTER DAMON AIA

Commission on Architectural Design
Robert L. Durham FAIA, Chairman

Committee on Religious Buildings
Kenneth E. Richardson AIA, Chairman



The fourteenth in a series of reports prepared by the AIA Committee on Religious Buildings intended to serve as guides for the architect faced with planning a building for a religious faith other than his own

AMERICAN UNITARIANS AND UNIVERSALISTS find the sources of their thinking and theology in the early Christians, the Gnostics and others who espoused universal salvation and God's unity, and historically in the Anabaptists, the Unitarian movement in Transylvania, the German mystical universalists, the anti-Calvinists and other of the so-called heretical wing of Christianity. The present denomination is basically American, founded by many of the independent thinkers of the eighteenth century who were establishing the new nation.

Unitarian

Members of the liberal wing of the Congregational Church in eastern Massachusetts who asked only to join a covenant in that church and never to subscribe to a creed were branded as Unitarian while still within the Congregational membership. The first organized church to turn to Unitarianism as a body, however, was not a Congregational church but the Episcopal King's Chapel in Boston in 1796. A split with Congregationalism came in 1805, and the name Unitarian was finally accepted in 1815. A missionary and publication society known as the American Unitarian Association was formed in 1825, and with it began an activity looking forward to the formation of a separate denomination. A national conference was established in 1865. Thomas Jefferson, William Ellery Channing, Theodore Parker, and Ralph Waldo Emerson were among the earlier Americans to give substance to the Unitarian movement.

Universalist

John Murray, a Wesleyan evangelist excommunicated from the Whitefield Tabernacle in London for advocating Universalist teachings, arrived in New

Jersey in 1770, served as a chaplain in Washington's army and preached up and down the Atlantic Coast. He advocated the salvation of all men through Christ, and ministered to the first Universalist parish at Gloucester, Massachusetts, organized in 1779. Universalists met at Philadelphia in 1790 to draft a declaration of faith and a plan of church government, which was adopted by a group of New England Universalists in 1794.

In 1805, Hosea Ballou gave the Universalists their first consistent and complete philosophy in his book "Treatise on Atonement." He rejected the theories of total depravity, endless punishment in hell, the Trinity and the miracles. Man was potentially good, said Ballou, and capable of perfectibility.

The meaning of atonement he found not in bloody sacrifice to appease the divine wrath, but in the heroic sacrifice of Jesus, who was not God, but a Son of the eternal and universal God revealing the love of God and anxious to win all men to that love. It was an open Unitarian-Universalist statement of theology which deeply influenced American Universalism. Ballou made another lasting contribution with his insistence that the base of Christian fellowship lay not in creeds but in mutual good faith and good will. From this principle came two consistent aspects: a broad, liberal latitudinarianism in theology and a universal concern for all people. George DeBenneville and Benjamin Rush were other early contributors to early Universalist thought.

The Unitarian Universalist Association

The Unitarian and Universalist Churches and Fellowships merged to form the Unitarian Universalist Association in 1961. This new body continues the broad philosophy of the two denominations. This is expressed in Article II, Section 2, "Purposes and Obligations" of the Constitution included below, and in the reports of six Study Commissions in a paperback entitled "The Free Church in a Changing World." In the 1963-64 yearbook, there are listed

1,094 societies in the combined Unitarian Universalist Association consisting of 694 churches and 400 lay fellowships (small informal groups), comprising 257,432 in churches and lay fellowships.

Basic Beliefs

The position of the Unitarian Universalist Association is stated in the following quotation:

"Our churches are distinguished from others not so much by the rejection of all tradition, as by the fact that we do not regard anything in any tradition as sacred simply because people immersed in that tradition believe it to be sacred. We do not believe that any particular tradition may claim our allegiance to the exclusion of all others. We do not assume in advance that truth may come only from one source and not from any other; from this prophet but not from that. Our ideal is an openness that does not exclude anything that may be illuminating—from the Old Testament to today's newspaper. We seek to approach all possible sources of truth with the same inquiring and searching mind. We are ready to receive new truth from whencesoever it may come. We are prepared to break with every orthodoxy including our own.

"One of the most distinctive aspects of our movement is our acceptance of open questions. We do not claim to be the only church to hold this view, but we find our identity in the degree to which we insist that the spirit must be unfettered in all its expressions. This principle can be stated negatively: that truth cannot be reduced to a creed. But it can also be stated positively: that ours is a church in which creedal matters are purposely kept open. We formulate our convictions as clearly as we can, but we regard our formulation as neither closed nor complete. . . . We have set at the heart of our church, not a creed or a statement of faith, but the principle that theological questions shall be kept open. We, therefore, have no creed and can have none."

The Unitarian Universalist Association seeks:

- 1) To strengthen one another in a free and disciplined search for truth as the foundation of our religious fellowship
- 2) To cherish and spread the universal truths taught by the great prophets and teachers of humanity in every age and tradition, immemorially summarized in the Judeo-Christian heritage as love to God and love to man
- 3) To affirm, defend and promote the supreme worth of every human personality, the dignity of man and the use of the democratic method in human relationships
- 4) To implement our vision of one world by striving for a world community founded on ideals of brotherhood, justice and peace
- 5) To serve the needs of member churches and fellowships, to organize new churches and fellowships, and to extend and strengthen liberal religion
- 6) To encourage cooperation with men of good will in every land.

Historically marked by their interest in applying the scientific method in religion and by their efforts to apply religious principles in the social realm, the Unitarian Universalists have been in the forefront of the fight for temperance, humane treatment for

prisoners and ex-prisoners, civil rights, the abolition of slavery, and in relations between labor and capital.

Church Government and Sequence of Authority

The organization is congregational in principle and democratic in operation. Churches and fellowships are grouped in districts and are united in the Unitarian Universalist Association and in an international association for the purposes of fellowship, counsel and promotion of mutual interest. A general assembly meets annually to elect a board of trustees composed of twenty members; it also elects a president as chief executive officer, a moderator, a secretary and two vice-moderators (four-year terms). Various committees and departments administer the united work of the denomination. The departments: Publications, Ministry, Extension, Education, Adult Programs and World Churches. There are approximately twenty district offices. Affiliated organizations include the Women's Federation, the Unitarian Universalist Service Committee, Liberal Religious Youth (High School), Student Religious Liberal (College Program), the Layman's League and the Unitarian Universalist Fellowship for Social Justice.

Membership in the Unitarian Universalist Association is voluntary on the part of the individual parishes. Outside of a broad sympathy for the work of the denomination, there is no requirement on the part of member churches except for the following functional item quoted from the Constitution (Article III, Section 4):

Voting rights of delegates require that the congregation represented:

- 1) Make a financial contribution to the Association
- 2) Conduct regular religious services
- 3) Maintain a regularly constituted organization with adequate records of membership, with elected officers and with provisions for annual meetings of members
- 4) Furnish the Association with required reports on church statistics and activities.

Representation and voting rights at meetings of the Association derive from lay and ministerial delegates of the member churches (parishes). In each case delegates are selected according to the bylaws and customs of their sponsoring churches or organizations; the number of delegates allowed each society is determined by numerical membership, with no group having less than two delegates. The Association serves the needs of member churches, and helps organize new churches to extend and strengthen liberal religion.

Congregational polity is based upon these principles:

- 1) That a local congregation is a complete church with all of the powers of a church
- 2) That its being and powers rest upon the free, deliberate consent of the individual members
- 3) That all business shall be conducted within the church in accordance with accepted rules of order. Because congregationalism rests upon free individual consent, it requires disciplined individuals to make it work. They covenant to abide by the rules, but they

reserve the right to criticize both the rules and the authority that enforces them. They may even change the structure of that authority itself.

Buildings

The church has no mandatory planning requirements. The pulpit may dominate a platform. There may be a table, used mostly for a candlestick and flowers (communion is observed in some churches). The choir may be in a transept, on a platform or in a choir balcony. Musical records are being used experimentally to create atmosphere in the worship service. There is a need for multiple-use space for a variety of activities: A coffee hour is customary after the service; parish dinners are important to the fellowship of the church. A fireplace may enhance a discussion area.

Facilities for religious education are important. There are few children's chapels, but there is a large emphasis on children's worship and religious education. Provision is required for various types of creative work, including painting, dancing, drama and music. Youth and adult education may involve both meeting and discussion rooms. Kitchenettes may be needed to serve refreshments.

In addition to the above there are offices, library, workrooms, storage areas, etc. Provisions should be made for cribs and toddlers.

The Arts in Relation to Buildings

A very helpful study on the relation of religious architecture to the other arts is contained in the report of the Church's Commission No IV on Religion and the Arts. The Commission seeks to help its congregations see the need of emotion and reason to feed on each other for the fullest attainment, and to feel how the greatest arts have given voice to the

highest and deepest regions of man's aspirations attainable through his religion.

The report indicates "some degree of artistic renaissance is taking place in some Unitarian and Universalist congregations and it was equally clear that others feel the importance of the arts and the forms of worship are overstressed in relation to our total religious life. . . . Art is perhaps the least susceptible to creation by committee and the most dependent upon the resources and training of the individual person or group. Our aim is to encourage a continuing advance in what we feel is tentatively begun among the free churches."

Glossary

Fellowships are small informal groups in communities where there is no organized Unitarian Universalist Church. They meet for study and discussion, and sometimes use taped sermons, etc. Some of these grow into churches.

Bibliography

"The Free Church in a Changing World," (The Reports of the Commissions to the Denomination)

"Why I Am a Unitarian," Jack Mendelsohn

"Today's Children and Yesterday's Heritage," Sophia L. Fahs

For these and other books and pamphlets on the history and meaning of the Unitarian and Universalist religious movements, write to 25 Beacon St, Boston, Mass, 02108.

The Commission on Religion and the Arts has assembled several slide series and prepared a script to go with them, giving some initial information and orientation in the realm of church architecture. For this series and its accompanying script, write to the Commission, at the same address. ■

AMERICAN LANDMARKS CELEBRATION

At a meeting in Washington on June 2, members of the American Landmarks Celebration Steering Committee came from all over the country to plan the nationwide celebration of UNESCO's International Campaign for Monuments which opened in Paris the same day. After morning and afternoon sessions, the Committee was entertained at a reception at Decatur House by the Co-Chairmen of the Celebration, Secretary of the Interior Udall and Gordon Gray, Chairman of the Board of the National Trust for Historic Preservation, which is sponsoring the celebration in the US. President and Mrs Johnson sent their greetings in a message conveyed directly from the White House, saying in part: "Among the most cherished of a nation's treasures are the monuments of its past. Scenes of triumph or disaster, memorials to great men or great thoughts, supreme technical or artistic achievements, simple reflections of an earlier culture are all significant. Each contributes to the historic texture of society."

The fifty-five members of the Committee are drawn from all professions, industries and associa-

tions. It is interesting to note that the group includes AIA's Chairman of the Committee on Preservation of Historic Buildings, Robert C. Gaede; SAH President H. Allen Brooks; ASLA Executive Director Lynn M. F. Harriss; AFL-CIO President George Meany; Assistant Secretary of Labor Daniel P. Moynihan; Mary Small of the National Capital Planning Commission, representing AIP; producer-promoter-Cultural Adviser to the President, Roger Stevens and HHFA Administrator Robert C. Weaver.

Running from July 1 through November, the Celebration envisages a variety of events, local and national, to stimulate interest and pride in our national heritage, supported by professional and business associations. AIA preservation officers throughout the country will be involved in sponsoring local programs and coordinating the activities with schools, historical societies and the press. Architects who wish to play an active role in this significant program can obtain further details from Mr Gaede at 1200 Keith Building, Cleveland, Ohio 44115.

Frank Lloyd Wright Drawings in the AIA Archives

KARL KAMRATH FAIA

ONE HUNDRED FORTY-FOUR 18"x24" negative photostats of the original working drawings of thirteen of the seventeen Frank Lloyd Wright projects approved by the AIA Board at the 1960 New Orleans convention to be retained and restored for posterity have been received at the Octagon from Karl Kamrath FAIA, for permanent placement in the AIA archive vaults.

Mr Kamrath, a member of the AIA Committee on Preservation of Historic Buildings, has worked closely the past three-and-one-half years with William Wesley Peters, Mr Wright's son-in-law and chief architect of Taliesin Associated Architects, with the approval of Mrs Wright, to painstakingly gather together the original tracings of these thirteen famous Wright-designed buildings from the Taliesin vaults and have them carefully photostated and delivered to the Octagon.

The AIA Board approved the expenditure of an amount sufficient to cover the necessary research and photostat printing of these 144 sheets. Mrs Wright, however, requested that the two Taliesins not be printed. The tracings of two other projects, the Johnson Wax Administration Building and the famous Robie House, have not yet been found, but

if and when they are, Mr Peters will forward photostats of them to the Octagon. As far as Mr Kamrath knows, actual reproductions of Mr Wright's working drawings have never before become available nor exhibited. Many of the photostats show Wright's freehand sketches and notes changing or clarifying the original tracings. For the benefit of the AIA membership, the Octagon may from time to time place these photostats on exhibition, or make arrangements to have positive prints available for architectural educational purposes.

An acknowledgment of unusual credit is due Mrs Wright, Wesley Peters and the Taliesin Associated Architects for their thoughtful cooperation in supplying these invaluable documents. Each photostat contains a label indexing the drawing, indicating the type of original and medium of drafting on paper or cloth, and the size of the original sheet.

The original AIA committee responsible for the official list of Wright projects was the Frank Lloyd Wright Memorial Committee, consisting of Alden B. Dow FAIA, Edward D. Stone FAIA (later L. Morgan Yost FAIA) and Karl Kamrath FAIA as Chairman. In May 1960, Mr Kamrath and Mr Yost made a trip to Taliesin at Spring Green to discuss this project with the Taliesin group, obtaining their cooperation in the project.

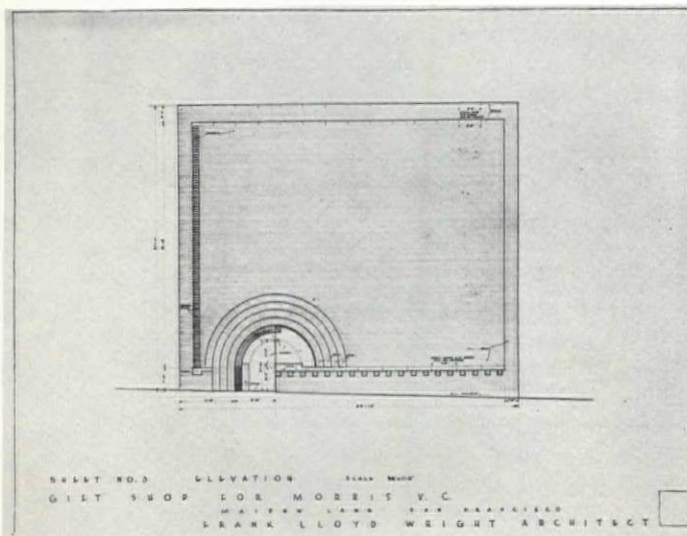
The thirteen projects represented by the 144 photostats are as follows:

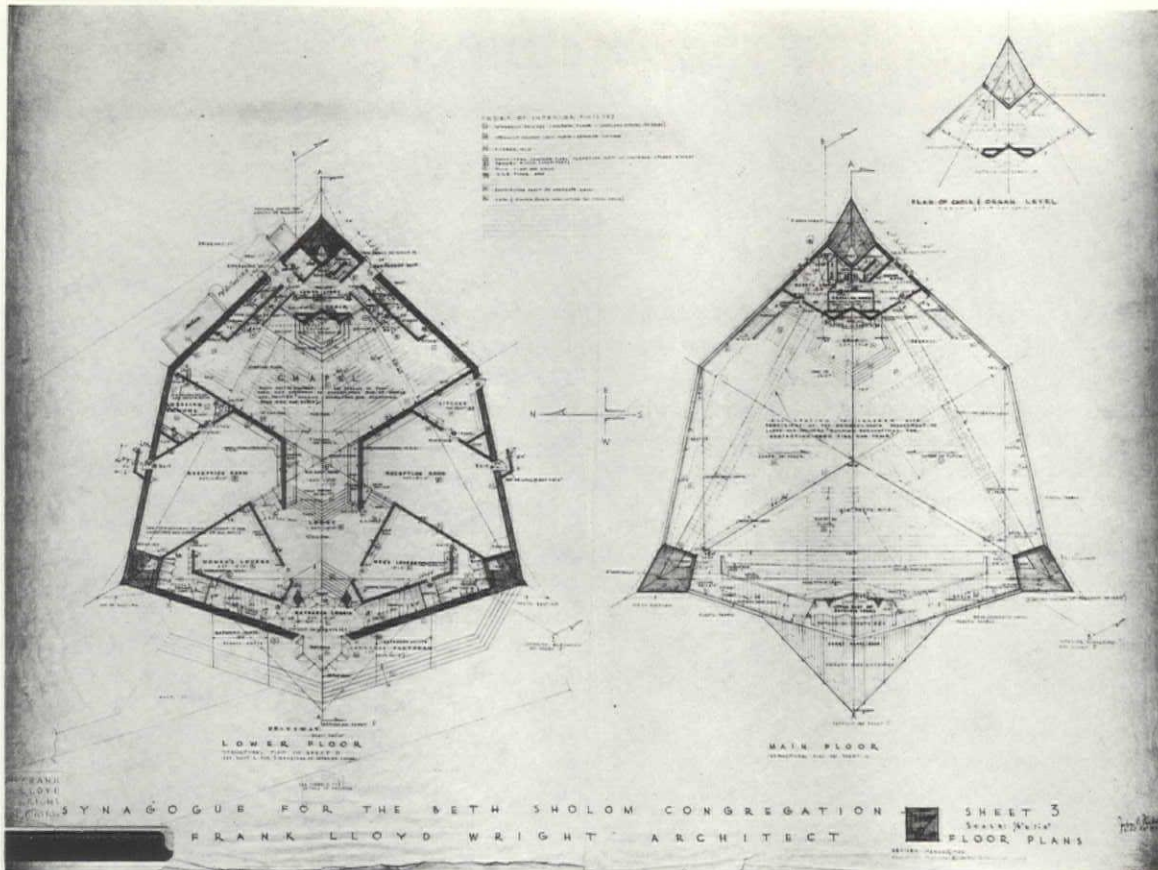
- 1 Frank Lloyd Wright Oak Park House (1892) 4 sheets
- 2 Winslow House (1893) 9 sheets
- 3 Willits House (1902) 8 sheets
- 4 Unity Temple (1906) 8 sheets
- 5 Barnsdall House (1917) 11 sheets
- 6 Kaufman House (1936) 13 sheets
- 7 Hanna House (1937) 10 sheets
- 8 V. C. Morris Store (1949) 6 sheets
- 9 Unitarian Church (1949) 11 sheets
- 10 Price Tower (1953) 17 sheets
- 11 Guggenheim Museum (1957) 20 sheets
- 12 Beth Sholom Synagogue (1956) 12 sheets
- 13 S. C. Johnson Tower (1947) 15 sheets

Unavailable at present:

- Robie House (1909)
- S. C. Johnson Administration Building (1937)

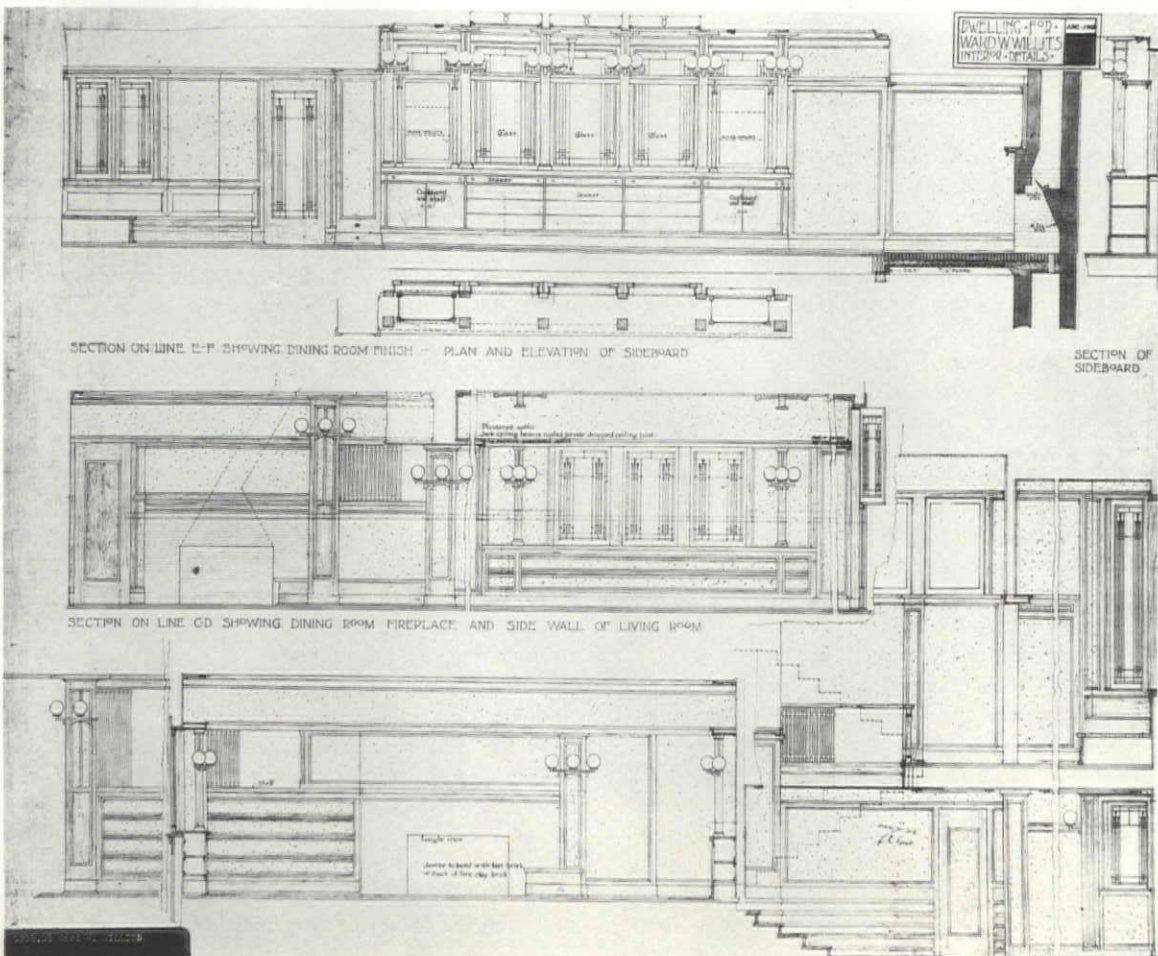
Gift Shop for V. C. Morris





Synagogue for the Beth Shalom Congregation

Dwelling for Ward W. Willits



Lien Laws and the Architect

RICHARD L. TULLY AIA

ONE OF THE MOST IMPORTANT DUTIES of any architect is the administration of payments for the construction of a project.

The contract documents and the agreement with the owner define these responsibilities. Among them is the requirement that satisfactory evidence be submitted that all labor and material bills are paid. This is done because of the right of lien that exists.

What is a lien and how does it affect the contract? In Baldwin's Ohio Revised Code the definition of a lien is as follows:

A right to possess and retain property until some charge attaching to it is paid or discharged. A right of one man to retain that which is in his possession belonging to another until certain demands of him, the person in possession, are satisfied.

In essence, a lien constitutes a claim against property. Generally speaking, a person who performs labor or supplies materials on a construction project has a lien against the real property for the amount of the payment due him. The holder of the lien after pursuing the proper legal procedures may force a sale in order to satisfy his lien. Frequently, the owner of the property pays the claim to protect his property even though he may have previously made what he thought was a payment. In general, a mortgage placed on the property before construction is begun constitutes a first lien, which has priority over the mechanics' liens. If the mortgage is placed after construction is complete, it is normally junior to the mechanics' liens. Ordinarily, all mechanics' liens must be satisfied or waived before a mortgage can be placed on property after construction.

Lien laws vary from state to state. This has prevented The American Institute of Architects from producing standard waivers of lien for use in connection with other contract documents. State or chapter organizations can render a service to their members by having a committee study and report on the provisions of their own state law.

This was done by the Architects Society of Ohio and it is believed that this study has proved beneficial to its members. In the meantime, there are certain general recommendations and conclusions which are presented here for consideration.

In the AIA Documents, the architect is defined as the agent of the owner. The AIA Documents say that evidence satisfactory to the architect must be presented before final payments are made. His duties are described in his agreement and are accepted by custom and practice. However, difficult questions sometimes arise regarding the extent of the architect's duties with respect to the authorization of payments. The tendency in these times, in case of

trouble, is for legal actions to name as defendants everyone who is in any way connected with a project. The architect may thus become enmeshed in these problems. Architects are not lawyers. Therefore, the first and most important advice that may be given is that each architect should consult his attorney and receive his advice on the proper course of conduct with respect to matters involving the authorization of payments and the lien laws.

Second, the architect should state in his specifications that *all* payments be made in accordance with state laws, citing the applicable section of the law.

Third, the AIA agreements provide that the owner furnish all necessary legal services with respect to the construction contract. As the agent of the owner the architect is entitled to the benefit of these services. He should forward drafts of the documents, particularly specifications, to the owner and request that they be reviewed by the owner's counsel. He should further request that the owner give his approval. The architect should recommend that the owner's attorney draw up construction contracts or, in the case of standard forms, give approval.

The final recommendation is that the architects should give far more publicity to the protections that labor, subcontractors, and materialmen have when they are working under the direction of an architect. Under today's conditions most labor is paid promptly. The non-payments involve subcontractors and materialmen. What frequently occurs is as follows:

The contractor has a number of jobs, some not under architectural supervision. The contractor receives payments on the architect-directed jobs, but not on the others. He pays his suppliers without identifying the payment. Suddenly the supplier realizes that he has overextended credit. If the lien rights have expired on some jobs, then he seeks action on those where they still exist. This may involve the architect's job. All subcontractors and materialmen should check the provisions of the contract documents with reference to payment. They should insist on being paid in accordance with the documents and that the contractor identify all payments. Finally, if they are not paid they should promptly notify the architect.

In summary, the architect should have a clear understanding of the lien laws gained by discussion with his attorney, should advise the owner of his understanding and receive the procedure to follow from the owner's attorney and should approve payments only if the requirements of the lien law are met, the owner's instructions followed, or the certificate of approval is accompanied by a statement placing upon the owner responsibility for compliance. ■

Budgeting the Architect's Fee for Basic Services

ROBERT J. PIPER AIA

Commission on Professional Practice
Daniel Schwartzman FAIA, Chairman

Committee on Office Procedures
Dean F. Hilfinger AIA, Chairman



WHAT WILL BE an architect's cost of rendering professional services on a particular project? How many dollars should he budget to cover cost of schematics? Of specifications? Of consultants? What will remain as the principal's share for his responsibility, participation and availability of organization? As the practitioner considers such fee-budgeting questions at the beginning of each project, he reviews his direct and indirect costs on past projects, determines the available fee on the project at hand and adopts a discipline toward the services to be provided thereto under the owner-architect agreement.

Fees, services, and costs vary region to region and firm to firm, but some observations on budgeting available fees for the cost of services can be made due to common practices found throughout the profession. For instance, architectural firms regularly engaging consultants for structural, mechanical, electrical and landscaping design find that 30% to 40% of the gross design fee is absorbed by this work, leaving 60% to 70% of the gross fee available for the architect's services.

A second generalized practice is to group the architect's basic services under five phases. The AIA

standard forms of agreement between owner and architect (AIA Documents B131 and B311) describe these services and stipulate the portion of the architect's total compensation due at each phase:

Phase of Service	A	B
	Architect's Fee as a Cumulation of His Total Fee	Architect's Fee as a Portion of His Total Fee
Schematic design	15%	15%
Design development	35%	20%
Construction document	75%	40%
Receipt of bids	80%	5%
Construction	100%	20%

The percentages in the second column can be a budget of services as well as of compensation; in other words 20% of the architect's services might be rendered during the design development phase.

A third practice indicates that *indirect costs* or overhead generally equal *direct costs* or technical salaries: the ratio of indirect:direct expenses is 1:1.

Fourthly, architects seek generally to retain 20% to 33.33% of the gross fee as the *principal's*

TABLE 1 Figures shown are illustrative only and are subject to local conditions

Where all engineering services are performed within the architect's office; and where the principal's share (PS) is to be 20% or the multiple of direct expense (MDE) is to be 2½.

Phase of Service	A	B	C	D	D1	D2	D3
	Fee for Phase as Cumulation of Total Fee (%)	Fee for Phase as Portion of Total Fee (%)	Engineer's Portion of Fee for This Phase (%)	Architect's Portion of Fee for This Phase (%)	Portion of Architect's Fee for Direct Expense (%)	Portion of Architect's Fee for Indirect Expense (%)	Portion of Architect's Fee for Principal's Share (%)
1) Schematic design	15	15	0	15	6	6	3
2) Design development	35	20	0	20	8	8	4
3) Construction documents	75	40	0	40	(see breakdown below)		
General drawings		18	0	18	7.2	7.2	3.6
Structural drawings		6	0	6	2.4	2.4	1.2
Mechanical drawings		12	0	12	4.8	4.8	2.4
Specifications		4	0	4	1.6	1.6	0.8
4) Receipt of bids	80	5	0	5	2	2	1
5) Construction phase	100	20	0	20	(see breakdown below)		
Office		10	0	10	4	4	2
Field		10	0	10	4	4	2

TABLE 2

Figures shown are illustrative only and are subject to local conditions

Where all engineering services are performed by consultants and 1/3 of the architect's fee is initially budgeted for this purpose; and where the principal's share (PS) is to be 20% or the multiple of direct expense (MDE) is to be 2 1/2.

Phase of Service	A Fee for Phase as Cumulation of Total Fee (%)	B Fee for Phase as Portion of Total Fee (%)	C Engineer's Portion of Fee for This Phase (%)	D Architect's Portion of Fee for This Phase (%)	D1 Portion of Architect's Fee for Direct Expense (%)	D2 Portion of Architect's Fee for Indirect Expense (%)	D3 Portion of Architect's Fee for Principal's Share (%)
1) Schematic design	15	15	5	10	4	4	2
2) Design development	35	20	6.67	13.33	5.33	5.33	2.66
3) Construction documents	75	40	13.33	26.67	(see breakdown below)		
General drawings		18	0	18	7.2	7.2	3.6
Structural drawings		6	4	2	0.8	0.8	0.4
Mechanical drawings		12	8	4	1.6	1.6	0.8
Specifications		4	1.33	2.67	1.07	1.07	0.53
4) Receipt of bids	80	5	1.67	3.33	1.33	1.33	0.67
5) Construction phase	100	20	6.67	13.33	(see breakdown below)		
Office		10	3.33	6.67	2.67	2.67	1.33
Field		10	3.33	6.67	2.67	2.67	1.33

share for their responsibility, participation and availability of organization. A principal's share (PS) of 20% results in a direct:indirect:PS ratio of 1:1:1.5 or a multiple of direct expense (MDE) of 2 1/2. A PS of 33.33% gives a parallel ratio of 1:1:1 or a MDE of 3.

With these generalizations in mind note Tables 1 and 2. These tables indicate how the gross fee can be broken down into components available for direct costs, indirect costs and principal's share for each phase of the work. Table 1 applies to those offices that do their own engineering; Table 2 to those offices that retain engineering consultants. Each table contains percentage figures covering direct, indirect and PS fee components that apply to the 20% PS or MDE of 2 1/2 discussed above. Similar tabular values could be worked out for any desired PS or MDE. The following examples illustrate how these figures may be used for budgeting services.

Illustration 1. Determine the portion of the gross fee that is available and should be budgeted for preparation of mechanical working drawings, if:

- The project cost is \$1,000,000
- The professional fee is 6%, or \$60,000
- The architect's office does its own engineering

Table 1 indicates that 12% of the gross fee should be available for preparation of mechanical working drawings and should be proportioned as follows:

- Direct costs = 4.8% × \$60,000 = \$2,880
 - Indirect costs = 4.8% × \$60,000 = \$2,880
 - Principal's share = 2.4% × \$60,000 = \$1,440
- $\frac{12.0\%}{\text{Total}} \times \$60,000 = \$7,200$

Technical salaries may run from \$25 to \$30 per man-day in which case the phase will require:

$$\frac{\text{Direct costs}}{\text{Technical salaries}} = \frac{\$2,880}{\$30/\text{day}} = 96 \text{ man-days}$$

Illustration 2. Using the cited example, determine what portion of the gross fee should be available and budgeted for the architect's coordination of mechanical working drawings if:

- Engineering work is done by the consultant, rather than by the architect.

Table 2 indicates that 4% of the gross fee should be available for the architect's coordination of mechanical working drawings prepared by consultants, and that this amount should be proportioned as follows:

- Direct costs = 1.60% × \$60,000 = \$960
 - Indirect costs = 1.60% × \$60,000 = \$960
 - Principal's share = .80% × \$60,000 = \$480
- $4.00\% \times \$60,000 = \$2,400$

Thus, this phase will require:

$$\frac{\$960}{\$30/\text{man-day}} = 32 \text{ man-days}$$

It is to be noted that the above figures are employed here for illustrative purposes only. Each practitioner will find, from his own experience, the desired balance between portions of the total fee earned and due for each phase of the work. The value of the figures used here is in their demonstration of the budgeting system that can be developed from AIA Document B131 or similar agreement form that organizes the architect's services into phases and assigns certain percentage values to each.

Neither the architectural profession nor the AIA has any policy, other than that indicated in AIA Document B131, on the amount of architect's fee to be budgeted for basic services. Nor is any policy implied by the above materials. The Committee on Office Procedures welcomes comments on its studies. These should be addressed to the Director, Professional Practice Programs, The American Institute of Architects, 1735 New York Avenue, NW, Washington, DC 20006. ■



Vitality Means Growth

THIS IS THE YEAR when the AIA is beginning to act purposefully on the matter of growth in its membership.

The idea of doing something to accelerate growth is decidedly new in the Institute. For years the attitude toward this aspect of organization strength has been to "let nature take its course." Each Annual Board Report has shown a steady increase at a rate of about 4.8 per cent per year since 1954.

This "normal" growth has taken place without special stimulus, however, in a period of great building activity and corresponding numerical growth in the profession. In studying the growth question, the Board observed that the Institute's membership remains at about the same ratio with respect to the total number of registered architects. This means that the number of architects *not* in the AIA is also increasing.

This observation prompted many questions. How many registered architects are there in the United States? How many are duplications through multi-state registrations? How many of these are practitioners? How many employed by architects? How many otherwise employed? How many non-AIA members would join the AIA with a little encouragement on the part of the Institute?

The question of numbers has been answered by the survey of the profession (a supplementary dues project). The data is being forwarded to the chapters.

Much more important is the philosophy of the Institute on membership. Not very long ago (and still in some chapters) the principal interest was in having members who are *practitioners* who have *already demonstrated* their adherence to the Institute's standards of ethics. This is something less than the principle enunciated by the Committee on Structure that every registered architect who agrees to abide by the ethical code should be invited to join the Institute. The full import of this sweeping change in principle is understandable when we look at changes taking place in the profession itself.

The design-oriented students of yesterday hoped to practice—to create architecture. Of course, some of them, even after registration, found their niches in employment as architectural staff men, in education, government, or elsewhere in the building industry. The idea of practice as the ultimate achievement

carried over into the philosophy of Institute membership, resulting in a very high percentage of practitioners in the AIA.

Now we foresee a future full of many promises for architectural graduates. Modern concepts of architectural education will produce architects—a *building* profession—with a broader fundamental base and greater variety of special skills. These graduates will be in greater demand, not only in practice but throughout the building industry and in the growing fields of building research, product and systems development, new fields of building education and publications. Will it not be better for architecture to have architects in these jobs than men from another profession? Architecture needs them, the Institute needs them and they will need the Institute. Actually (though some chapters seem not to realize it) our *existing* rules permit the membership of registered architects employed in the building industry as long as they are *not* in contracting or serving as employees of unregistered individuals or firms which hold themselves forth to the public as architects.

The Commission on the Professional Society is charged with the responsibility for promulgating a membership-growth program compatible with our concepts of an expanding ethical profession of architecture.

The Commission cannot, of course, do the job alone. The actual implementation of growth must take place at the chapter level. This means that the membership as a whole must be of one mind on a subject on which opinions have previously differed widely. How to create this singleness of concept and purpose is a task in itself in an organization of more than 16,000 members.

The right arm for a movement of this kind was created this year when the Committee on State and Chapter Organization was enlarged to include the presidents of fifty state organizations and the District of Columbia. The right hand for the movement will be the chapter officers. Both of these groups were acquainted with the membership-growth program at their meetings at the convention.

The strongest possible profession of architecture will be one represented by one strongest possible and most fully representative professional society—the AIA. We need not permit the fragmentation that has occurred in other professions if we mould our concepts of membership to today's needs. W.H.S.

Book Reviews

Senses of Animals and Men. Lorus J. and Margery Milne. New York, Atheneum, 1962; 306 pp illus 5½" x 9½" \$6.95

One of the most completely fascinating books—these wonderfully aware people share their "exciting sense of discovery" with the reader in disarmingly and deceptively simple style. Their range is tremendous over Aristotle's common five senses and some so exotic that they hint at mysteries we have not yet conceived.

This reviewer was particularly pleased to find authoritative confirmation of his lecture-statements for several years in the following words: ". . . By observing the capabilities of other members of the animal kingdom, we come to realize that a human being has far more possibilities than are utilized. We neglect ever so many of our senses in concentrating on the five most conspicuous ones. . . ."

Even the most outlandish and least human of animal or insect senses may (through simulation in electronic circuitry or in chemistry) yield man some operational or analytical tools of great significance.

Any architect concerned with the enrichment of esthetic experience, through the effects of his work, will profit from the careful (and pleasurable) reading of this book and will want it for continuing reference.

ERIC PAWLEY AIA

Building Codes—For Community Development and Construction Progress. Washington, DC, US Chamber of Commerce, 1963. 20 pp 5½" x 8½" 50¢ (1 to 9 copies)

In twenty short pages of clear, legible type, this booklet describes the function of the building code, identifies the characteristics of a good one, banishes the notion of a Federal code, shows advantages of adopting a model code and outlines a community action program for code modernization. It is remarkable that it does so much so well, in so few words.

A brief foreword establishes the theme of the discourse. "Archaic laws . . . provide an especially formidable barrier to building construction. And building construction is the largest single activity requiring private investment funds . . . outgrown building codes form a drag on the economic growth of a community—and, inevitably, on the general economic growth of the nation."

The booklet defines a building code as "a collection of minimum legal requirements, the purpose of

which is the protection of the safety, health and general welfare of persons in and about buildings. The typical building code covers requirements for construction, alteration, demolition, maintenance, repair, use of public property and other activities involving buildings and certain other structures. . . . Other public ordinances which have generally similar purposes are zoning regulations, housing and occupancy codes and fire codes."

Two items are of particular interest to the architect in these statements. First, even though the discussion is directed toward building codes alone, the pernicious effects of archaism and obsolescence in the "other public ordinances" are frequently just as serious. Second, the emphasis is on the safety, health and general welfare of *persons*, in contrast to regulations devised primarily to prevent or limit damage to *buildings*.

Under the heading, "The Importance of Building Codes," the major functions of building codes are described as follows: "They form a basis for understanding between builder and buyer that the structure is in conformity with good and accepted practice. Even more important, building codes form a basis for the continuing understanding between the community and each individual occupant or builder as to what constitutes acceptable structures which are not regarded as a hazard to the people of the area."

The tacit assumption in these statements is that conformity with the code is sufficient in all cases to guarantee a good building and a safe building. This is obviously incorrect. Even the best-conceived building code cannot foresee every possible hazard that may need to be considered in the design, construction and use of a building. Moreover, a safe building is not a "good" building unless it is well suited to its use, its site and its surroundings, and is distinguished in its form, inter-relation of spaces and use of materials.

A building code is the means whereby a community expresses its concern and its responsibility for the safety of persons in and about buildings. It is a guide for the architect, a standard for the builder and a tool for the building inspector. Each must use it in the light of its basic objective; none must abandon the use of good judgment and common sense in applying its provisions.

The booklet makes a strong plea for local administration of building codes, noting that at the state level, usually, "building regulation is divided among many different agencies. Health departments, education departments and labor departments, as well as fire marshals and state building commissioners, may have some jurisdiction over buildings. Plans for new construction must be submitted to many agencies; numerous administrators and their staffs make and enforce rules; fees may have to be paid to a multiplicity of state agencies; and a building project must be inspected by representatives of these agencies." At a yet higher level, a Federal code "would compound the problems which arise because of the multiplicity of codes." On the other hand, a municipality can obtain a modern building

code simply and inexpensively through adoption, by reference, of one of the model building codes.

There are four model code organizations, the Building Officials Conference of America, Inc, operating from Chicago; the International Conference of Building Officials, Pasadena, California; the National Board of Fire Underwriters, New York City; and the Southern Building Code Congress, Birmingham, Alabama. Four model codes are probably not too many in view of the size and regional differences of our country, and there are definite advantages in the competition between them to be the best and most up-to-date. The AIA considers each of the four codes satisfactory for adoption by any locality which needs to modernize its building code.

The booklet offers seven criteria to be met by a building code, which are well worth quoting in toto. Building codes must:

1) *Place a major emphasis on functional performance requirements.* Acceptability of building materials and methods should be determined on basis of their ability to pass objective tests, such as those for strength, wind-resistance, fire-safety and durability. Code provisions should relate to specific materials and methods only if acceptable performance requirements have not been developed. Determinations of adequacy of performance requirements should be made by qualified, impartial agencies.

2) *Contain provisions for achieving both periodic modernization and desirable stability of code provisions.* Building codes must be neither stagnant nor capricious. Their provisions must represent a fundamental and well-recognized stability, but they must also provide a mechanism to expedite use of recognized advances in construction materials and techniques.

3) *Be uniform with respect to local geographic areas.* Codes of local governments in close proximity should be sufficiently uniform that they do not encourage construction in one jurisdiction and discourage the same construction in another jurisdiction. The greatest benefits from building codes are derived when cities and their surrounding communities agree on and adopt the same code.

4) *Contribute to uniformity of building regulations, among varying levels of government within the same locality.*

5) *Contain provisions for efficient administration.* The building code administrator should be given adequate discretion to authorize the use of new materials and methods of construction upon presentation of evidence of compliance with performance requirements of the code. The governmental agency charged with administering the code must be well staffed with qualified personnel.

6) *Provide remedies for all who might be aggrieved.* Building codes should provide for a board of appeals or standards with authority to vary or modify code provisions covering the manner of construction or materials when such variations are in the public interest or would avoid injustices. The full use of such procedures, available to owners and builders and to manufacturers or suppliers, can be

a major factor in bringing building efficiencies and economies to the public at large.

7) *Be economical to develop and administer.* The local governments' cost for the development and publication of codes should be reasonable. Code administrators should have ready access to latest code information at minimum cost. Full advantage should be taken of available information from national organizations and authorities.

LYNDON WELCH AIA

Mosaics: Principles and Practice. Joseph Young. New York, Reinhold Publishing Corp, 1963. 128 pp illus 10½" x 8" \$6.50

The author, as the jacket points out, "has played a leading role in the revival of architectural mosaic murals in America and is widely known for his monumental murals in civic, religious and educational buildings throughout the nation." It could very well be added that he has made a significant contribution to the integration of art and architecture, especially in his home base of California, and his mural for the Los Angeles Police Facilities Building has become one of the best-known examples of architect-commissioned art in the US.

Although Mr Young's volume is a revised and enlarged edition of his earlier book "Course in Making Mosaics," this is not a textbook in the ordinary sense. With more than 200 photographs, eight in full color, it will serve as a useful and interesting guide to the architect who is considering the incorporation of mosaics and similar art pieces in his own work.

R.E.K.

Program Evaluation and Review Technique. Federal Electric Corp. New York, John Wiley and Sons, Inc, 1963. 145 pp illus 5¾" x 9" \$3.95 (paperback)

This book contains a new approach to a new concept. The new approach is programmed evaluation; the new concept is PERT—Program Evaluation and Review Technique. It is designed to give the reader a basic knowledge he will need to use the technique. He will be introduced to basic rules and regulations of PERT, learn how to apply these rules and regulations. "You will not become an operations research analyst, but you will become a project analyst. You will not become a Wizard of Oz, but you will learn how to make sound and logical decisions through PERT."

Schedule, Cost and Profit Control with PERT: A Comprehensive Guide for Program Management. Robert W. Miller. New York, McGraw-Hill, 1963. 222 pp 62 illus 5½" x 8¾" \$8.50

This book covers the entire field of PERT management systems as they have evolved up to the present. PERT represents a revolutionary and rapidly growing field of management techniques concerned with the planning and control complex, "one-time-through" programs. The author covers the management system problem from early developments leading up to the establishment of PERT and CPM and discusses the relation of PERT to incentive contracting. ■

Sound and Space

WARREN BRODEY MD

A Washington psychiatrist who has been working with the blind finds a field for architectural research which should throw light upon the effect of spaces upon people

MOST ARCHITECTS would like to design a building that not only looks beautiful to the eye, but also sounds beautiful to the ear. Pleasing all the senses is important. But ordinary sounds are so familiar we are not accustomed to being aware how profoundly they affect us. "There is something just right about this space" may include acoustical characteristics for which we have, as yet, few words.

How does one break through what was so familiar as to be unmentioned, taken for granted and technically ignored? A visit abroad, a child's naïve question, a foreigner's insight—people who don't share our conventions can help us pay attention to what we have learned to ignore.

Our cities roar with noise we do not hear except on a tape recording. But mere suppression of bad sound, either loudness or jarring tones, does not create beauty. The sound of spaces once could not be technically designed. It could not be recorded. New refinements in materials, in tools, in what we can do encourages the reopening of a broadened awareness of new ways of designing our sensory environment so it will work with us.

Our capacity to design the responses of our environment is increased. The interior of a space capsule is a token of our skill in extending human environment design to optimize human sensory efficiency. But how can we break through the basic conventions of what it was "natural" to ignore because nothing could be done? How can we discover the new everyday questions about commonplace matters which our technology can easily answer, once asked?

The study of new kinds of foreigners—those foreign to our sensory conventions—is one way of breaking through. For three years now I have met bimonthly with a small group of blind people. The architecture of the sound world as they perceive it has particularly drawn my attention. The world they experience is often unlabeled with language

and outside ordinary attention. They make us aware of something we have learned to ignore—the *sound* of spaces.

Acoustical Architecture

Blind people live in a world of sound. They see the distance with sound; they can use touch only within the radius of their arms. They use radiant heat and smell as additional sources of information. Their world is different.

People who have an unusual sensory skill can tell us, with new perspective, about the world that we live in. They can show us our world in terms of their building blocks.

A group of blind people is a natural resource if one wishes to locate skill at hearing. The world as seen with the ears can be made available by using the blind man as our guide; then, using his observations we can examine the nature of our own blindness to sound.

A blind man is familiar with the echo of his footsteps as they rebound from the boundaries of his room from walls and draperies, from rug and ceiling. He knows where an obstacle has interfered with this rebound. He knows the room where higher frequencies resonate and breath sounds seem more rasping. The sound of your breathing is one way the blind man knows you and where you are in relation to the objects of the room. He listens to hear sound as it is altered by the response of the physical environment. The different sound behavior of one space in contrast to another provides the blind man with an image of where he is.

If the blind man were a sound camera he could show us details of sound we know only by intuition. Let us proceed from his observations, as yet crudely measured, to our own observations of architectural sound.

Most clients are only aware that some spaces feel good. Others bother them. This difference is

customarily attributed by architects to the visual space. It is only attributed to acoustics when they are grossly distorted—or when there is music or public speaking or noise dampening to be considered. Shaping the experience of space by manipulating its sound is something more positive than this.

“Acoustical architecture” takes us beyond the measurement of materials and their effect on sound—to the science of how living people use their respective senses in different environments. All architecture is extending this way. The study of man-environment systems as an information unit is a modern way of thinking. This approach includes in architecture the technical study of man’s senses as inseparable from what is available to be sensed. Architecture can stretch a man’s use of his sensory skill. Color awareness for example is enhanced by using color. Good environmental design teaches the client to enjoy sense activities previously left unused.

Mood and Shapes in Sound

Blind people tell in vivid detail how some rooms have a kind of sound that is exciting and yet not too sharp; while other rooms have a sound that is soothing and yet not dull. I am aware that they measure sound in a way I have not learned. They talk of and remember the sound in a room as if they were talking of color.

The sighted know that the sound qualities of a room carry different moods. The room with hard plaster or cinderblock accentuates the higher tones, and this, as the blind point out, can increase fatigue by making everyone sound as if they were speaking sharply. A thickly carpeted and acoustically tiled room can make a board meeting fall dead. Contagious enthusiasm is wet-blanketed by a dead sounding space which is also virtually large. The gaiety of a hotel ballroom requires the right kind of sound—just the right bounce. A visually small room can be stretched to a critical point by giving it large-room acoustics. After this point it becomes uncomfortable. Incongruity of the environmental responsiveness to different sensory modes, sight, sound or smell can be upsetting—it also can be used. How long people sit in a restaurant, how quickly they eat, how much they drink, is a function of sound as well as of other factors.

Sense the shape of a room before and after acoustical tile has been installed. This will give you a clear idea of how shape and acoustics are inter-related. The acoustically tiled ceiling drops down to give a more intimate or closed-in space, one in which you feel like intimate talking. Of course this effect is accentuated or diminished depending on the physical dimension and color and texture as well. New computers will soon allow these functional relationships to be analyzed into simple equations.

The human factor is more nearly constant as more of the human senses and their corresponding environmental variables are included together in equations. Overlooking the effects of sound may be costly if one needs to predict human responses to a given space. The prediction which does not consider sound will be more random. You can dismiss

this error as simply human variation, but this is costly. Computer prediction is for the near future.

For the present let us review everyday experience which can be tested by everyday experiments. Let us seek out new questions. Check this out with many people: What happens to the shape of the room when wall drapes are drawn or open? Try it first with eyes closed, then open. You will be caught by the experience into devising more exploratory tests. You can find that without changing the measured dimensions, a space can be shaped as an experience not only by color and texture but also by the characteristic responses to sound.

Acoustical Rooms

A visually open area can be divided by changing the acoustics of one part of its space. This change may be in no way visually evident. But its effect will remain, and strangely, people will find themselves grouping and functioning differently as soon as they cross from one acoustical “room” to another. These rooms have clear boundaries: Listen to your own voice sharply change as you cross the sound wall in a room which has been only partially acoustically tiled. Once aware of this change in acoustics, instead of taking it for granted, new potential for designing spaces is revealed.

The acoustical room—a volume of air with different acoustical characteristics from its environment—may have no visual walls, yet it organizes space nevertheless.

A blind person will stop suddenly as he hits the wall of an acoustical room. To him it is as real as a sudden change in illumination to the sighted. Test out the effect of an acoustical room on your own senses.

If you will walk a few feet into your office, then turn and walk out again, snapping your fingers or humming or talking to create a constant sound and keeping your ears at attention, you will notice the acoustical wall where the line of your sound breaks and your sound returns with a different tone.

Acoustical rooms designed to fit their function are valued. The client may have no idea what it is that makes it so good. Ladies declare, for example, that they look different in different lighting—they care about lighting. The architect varies his lighting in terms of the functions for which he designs. He changes the visual message emitted by faces by changing their setting and the kind of light available for the faces to shadow and reflect. He changes the visual person by modulating his visual context. The design of the acoustical space can likewise change the context and quality of voices. The architect by his design changes the kind of auditory message exchange most appropriate to the space he has created. This happens even without intention; it is inevitable even if neglected.

We have few words and few scales for measurement of these kinds of characteristics. But there is no space which has not an effect on sound.

The acoustical design of a house can make a family happy or miserable. Some dining rooms make children’s voices pleasant—some convert their chat-

ter to screeching. This is not simply a matter of deadening the children's sounds. An architect whose ear is as trained as his eyes can anticipate the echo chamber that he provides with the sound spaces he designs.

There are many energy sources of the sound in a room. Windows are conduits that feed in information. Windows, according to blind people, are not simply places where heat streams in or is drawn out. Windows are ears which admit sound from the outside world. These sounds bring the outdoors into the room and enlarge the space. When well mixed, outdoor sounds provide a background which facilitates attention. This is important in a school or a library. Some people prefer the silence of a library to maintain their attention at a task like reading; but then the sounds of footsteps become enormous. Most people like a general background of noise which will fuse motors, voices and other interferences into a neutral background of sound. This background is apt to be supplied by sound coming through windows. A well-mixed background sound gently illuminates the walls of the space and resonates the air.

Human Orientation

Man must constantly locate himself in the air, just as a fish does in the water. We use our senses to locate ourselves relative to our environment. Air is not dismissed as invisible by the blind. Like percussion waves in water, air carries sound.

The sound that comes through the windows, my blind subjects say, helps them orient themselves. The current of sound, like light, shadows furniture. Like light it bounces from each surface or is absorbed by it. Each material has different light and sound reflecting properties. The spectrum of frequencies being selectively absorbed or reflected adds detail to the sound image.

For the blind the obstacle-finding usefulness of sound spreading from the window or from footsteps or beamed with the breath depends on what the blind subjects call the room's "sound glare."

The blind man finds some spaces easy to navigate; some spaces like a strongly-currented rocky seashore reflect sound so that it bounces and interferes with itself, building whirlpools and eddies. This room is tiring.

The sound of your voice as it returns to your ear is a servo or feedback loop. This part of the energy returning serves as a corrective control. You automatically vary your voice as you move about to keep it relatively constant to your ear. This is automatic—but too much corrective work is fatiguing.

When the sound image coincides with the touch image and sight image, the space is experienced differently from when these don't coincide. Poor orienting conditions make it more difficult for the blind man to know where anything is located. These conditions also make life uncomfortable to sighted persons who cannot easily know what is happening behind them without looking. Much of our 360-degree vision—our early warning system—is by earsight. In some situations perceptually uncomfortable

spaces may be useful. Can we design them that way on purpose?

The senses do not operate separately; they exponentially reinforce each other. The variation in pattern between what they perceive is important to our judgments. A man's visual size, his detail, his heat radiation, the sound of his voice—all are a part of predicting his distance and the rate of his movement. The driver looking ahead on the roadway uses the sound of a car coming alongside as one warning system. Some houses behave badly and pop people into visual view without warning one's hearing of their approach; other thin-walled houses bring people's sounds into auditory view when there is no meaning to the sound contact. A corridor which resonates footsteps the way a blind man likes allows the sighted person to look directly at the face of his walking companion and give attention without fear of walking blindly.

Reclaiming Sensory Potentials

Technical instrumentation for reclaiming the sensibilities we have learned to deny is being designed. Meanwhile, you can enjoy an awareness of the fun of exploring the sound world you have forgotten. You will not likely be as expert at first as the blind. Before we were taught at school to ignore so much that was not in our lessons, we all played with sound. Blind children find delight in playing with the harmonics which resonate the volume of air in a particular room. They also know which kind of sound will bounce back off the walls with a sonar-like echo. All children are space musicians. To blind children, their school building is primarily a sound instrument. They love to bounce high-pitched sound up in a corner and angle the beams as if they were playing billiards. Blind men have told me that this play develops into their way of determining the height of a ceiling. If humans use their own sound as one orienting mechanism, it is not surprising that acoustical treatment will appear to change the height of a ceiling as it is reckoned by the auditory sense.

All the senses are mixed into a general impression which gives the "feel" of a space. Now we must devise systems of measurement so we can predict and design what will be sensed.

Man, with his progress, has earned the right to expect that scientists and architects will learn about his sensory system so that they can enhance his functioning even beyond the extent that he is now able to demand. Well-designed architecture can enhance man's awareness of his sensory skills. To receive this kind of compliment is a significant achievement. Man has become accommodated to sensory insults which bring more strain into his life than is necessary; he needs his energy to improve the quality of his life.

The architect and researcher together can go far beyond what is presently conceived as the optimal limits in providing for human comfort.

Man's "earsight" as an instrument of his effective functioning serves as a focus for one possible area of research. There is new and rich territory here, waiting for those with the knowledge, insight and enthusiasm to explore it. ■

AIA Architect-Researcher's Conference

*Benjamin H. Evans AIA, Director of Research Programs
Marilyn Ludwig, Assistant Editor—Technical, AIA Journal*

*This conference at AIA Headquarters on April 27-28
was sponsored by the Committee on Research for Architecture and
financed by your supplemental dues*

"WHAT CAN YOU DO with an art that must be based on knowledge, where the knowledge is expanding very rapidly, is very cumbersome, very tricky, and where the artist cannot expect to know all that is available?" This question and others like it were being asked at a rapid rate by a group of America's outstanding architect-researchers. "Who is to take the leadership in the development and synthesis of much-needed new concepts in the environmental and behavioral sciences?"

List of Participants

BYRON BLOOMFIELD *University of Wisconsin*
ROBERT DIETZ *University of Washington*
EZRA EHRENKRANTZ *SCSD*
ALAN GREEN *Rensselaer Polytechnic Institute*
RUDY JONES *U of Illinois (Small Homes Council)*
SAMI HASSID *University of California*
BURNHAM KELLY *Cornell University*
NORMAN TURNER *Southwest Research Institute*
ROBERTSON WARD *Private Practice, Chicago*
HAROLD HAUF *University of Southern California*
TED LARSON *University of Michigan*
STEWART BARRADALE *Weyerhaeuser Company*
JOHN CALLENDER *Pratt Institute*
R. E. WILSON *Private Practice, Seattle*
WILLIAM WAGNER *Texas A&M University*
MARVIN GOODY *MIT*
RONALD HAASE *EFL*
DAVID SIMONS *Cornell University*

Committee on Research for Architecture

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WALTER CAMPBELL FAIA
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NEIL DEASY FAIA
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WAYNE F. KOPPEL

AIA Staff

WILLIAM H. SCHEICK *Executive Director*
M. ELLIOTT CARROLL *Administrator, Dept of Professional Services*
BENJAMIN H. EVANS *Director of Research Programs*

The answers were few, and were slow in coming, but generally it was agreed that the solutions lie in the development of new frontiers of research for architecture, in new concepts for architectural education, and in new responsibilities for the practitioner. A well-coordinated program of research whose primary function is to uncover new knowledge and new ways of using existing knowledge will prove invaluable to the profession—not only in the architectural province but across disciplinary lines in the fields of the hard and soft sciences. The atmosphere for the development of this new knowledge will come only when the educational systems recognize the inherent values and organize themselves accordingly. Acceptance of the new-knowledge concept will depend on an enlightened, open-minded profession, willing to put aside old ways and look for new and expanding frontiers.

Seventeen men, each of whom has achieved distinction in the field of research in architecture, met at the Octagon in Washington in April to discuss the general state of affairs in research. The conference, sponsored by the AIA Committee on Research for Architecture and financed through supplementary dues, brought together people from the universities, architectural firms, research institutes and manufacturers' offices. Although they were given general guidelines, the group ultimately defined for themselves the objective of the meeting—to discuss ways in which the profession can create a more favorable climate for research in architecture.

It was first necessary to nail down the factors which make up such a climate. Such factors as were discussed might be stated as follows:

- 1) Moral support from the profession—the entire profession must recognize research in architecture as a necessary and valuable activity for architects (as well as other disciplines)

- 2) Personnel, trained for research—and as a corollary, increased prestige for research-oriented architects (Recognition is necessary to attract capable people)

- 3) Money—funds are always necessary, although it was the opinion of most that finances will become available as prestige and personnel develop



Coffee break—Dietz, Hassid, Burk

4) Communication—publication, to foster the dissemination of knowledge within the profession and what one participant referred to as “interdisciplinary communication”—keeping architects abreast of discoveries in sociology, psychology and other related fields, and finally

5) Freedom—fewer restrictions and more opportunity for the researcher to experiment outside the rigid framework of preconceived standards and specialized interests.

Having stated the foregoing ingredients, the researchers began to explore means of getting them. Some of the suggestions were relatively simple short-term efforts, which could be implemented fairly quickly; others were more elaborate long-range programs which would not bear fruit for many years.

The suggestions which came out of the conference are summarized later in this article.

The first morning, following greetings from William H. Scheick AIA, Executive Director of the Institute, and Ben H. Evans AIA, Director of Research Programs, was devoted to getting acquainted. Although almost every participant was personally known to the others (such is the size of the research fraternity) the morning provided an opportunity for each participant to acquaint his colleagues with his current research activity and his future plans. Each was given several minutes to summarize for the group his own research background and to touch on the kinds of projects in which he is currently engaged.

These ranged through the entire spectrum for product research on structural components and bonding compounds, through climatological studies, to the purest kind of research which overlaps into the sociological and psychological fields. Later, a member of the Research Committee summed up the morning:

NEIL DEASY FAIA: We had a report on an interesting project of considerable scope now taking place in California on preparing performance specifications for school components, so that school districts might unify their efforts in their purchasing program and

come up with much better facilities for the funds they have to spend.

We had, also, a report from a private researcher who assisted industry in meeting these performance specs in designing systems that would comply and that are extremely interesting and should bear great fruit in the future.

We have had reports on a research sequence at one of the universities that has led to a new building type previously not known on our college campuses—the college communication and lecture center. We have heard that there is interest and oncoming research in the field of bioclimatology, the development of various space-use criteria, in the evolution of thermal environment, and we had the very happy news that what has been known for some time as the Cornell Kitchen is soon to be joined by the Cornell Can [a study of American bathroom habits and facilities, similar to one on kitchens conducted at Cornell several years ago.]

We heard of a program, a very useful and pertinent program, sponsored by NASA to evaluate materials and products developed for its program to see if there was a use for them in the construction industry. We had a report on a study now going forward in Michigan on the environmental effects on human behavior, in this particular case with regard to learning. And, from the same institution a study on foam plastic applications for housing structures. It was interesting particularly to me to learn that at that one institution its general research efforts have increased forty-fold in fifteen years.

We also heard of a study for the development of masonry walls which are laid without mortar of any kind, and where the tension stresses in the wall are resisted by spraying a coating on both sides. That just reinforces my own belief that there are frame buildings that are standing up because of a good coat of paint.

We also learned, and this was rather surprising to me, that our schools are fully engaged in floundering, which was information I had not expected to get, and further learned that the architect must take a stand on intangibles whether he knows what he is doing or not. Obviously we had a very full day.

During the afternoon session, Herbert H. Swinburne FAIA, Chairman of the AIA Committee on Research for Architecture, and Burnham Kelly, Dean of the College of Architecture at Cornell, were asked to discuss research from a broad professional viewpoint.

DEAN KELLY: The problem is that architecture is too wide open. It is not any more a predictable front. It includes just about every aspect of all of our civilization and all of our materials and all of our systems.

By comparison with the happy days of ancient Greece or ancient Egypt, or any of the other great periods of architecture, when people more or less knew what they were doing, we are really in the



Larson and Ehrenkrantz



Evans, Wagner, Hauf

middle of a morass. We can build anything. Materials are available—plastics, light metals, systems of all sorts. We can supply nearly any kind of an environmental surrounding. We can produce almost any kind of a situation if we set our minds to it.

But one of the main problems of architecture now, in terms of the tools and objectives of the profession, and the services the profession is expected to render, is that we are absolutely wide open. There seem to be no guidelines, and we are struggling in all directions at once.

The services that are being provided are far from the old physical environment services. There are a whole range of collateral services. Since the social and environmental sciences have explored into the human development pattern, the expectation is that the architect must know of these things and solve them all in every building he builds.

It is a fantastic expectation, in a fantastic field.

The question really is not "Why aren't we way ahead?" but "How can we make anything resembling progress?"

The system by which we solve problems in all other respects has vastly changed. The creation and distribution of materials, the erection of buildings, all of the supply services, are on a base totally unknown to people as few as fifty years ago.

Is the architect the man who pats his client on the back, makes a series of drawings and specifications which are given to a local builder, who goes out with local tools and puts up a building? Is this an image that is applicable, either technologically or organizationally, any more? Isn't one of our problems the whole matter of whether this profession is organized systematically to cope with the assignment that now is given to us?

Architecture is an art. The towering figures in the profession are perhaps the greatest artists. And as in any of the arts, faced with the problem of being able to do anything, technologically speaking, there is a certain amount of chaos before us at the present. Everybody is exploring objectives. Nobody knows exactly what we are doing.

This is a tremendous challenge that occupies

some of our very best people. It fully occupies the schools, which are foundering on this front in all directions (as any one of you knows who has tried to give problems or criticize problems, or has even seen what these problems are on the boards).

The results can be seen around us in this country—which is peculiarly blessed by all these construction alternatives and by production systems. We are peculiarly stumped by this search for the artistic objective, so much so that almost any observer from abroad says, on a rising note of complaint, "What's wrong with the United States that its routine buildings are so bad?" The reason is that the mass of the routine buildings do not get attention from the architectural profession. If they did, it is not certain that the architectural profession would know what to do with them.

Now, having said all this, I immediately turn around and say that architecture has in this area an almost unique contribution to make. It represents among the professions, among the disciplines in the universities these days, almost the only one that puts a real focus on the final requirements of the ultimate consumer.

Every architect is final consumer-oriented—he wants people to have a good product and to have a good life. Whatever else may be optimized in the other branches of the other professions I have seen, it is rarely this comprehensive good life for the final consumer. We are turning out one of the relatively few groups in our civilization who really are motivated to do something about the problems of the final consumer.

Secondly, we are turning out one of the relatively few groups in our whole educational and developmental system who are putting any real emphasis on the intangibles. By intangibles, of course, I mean those problems which almost by definition cannot be solved with a sliderule, cannot be priced in dollars and cents, and cannot really be fully evaluated except in their final form by people who see and live in the buildings.

Every architect who builds a building has to make a judgment about every aspect of the building,

every aspect of the space, the color, texture, environment—whether he knows what he is doing or does not know what he is doing. And the result is that we have developed in the schools and in the profession at least the guts to stand upon whatever is tangible and make this plunge in to the intangible.

I maintain this is an absolutely essential educational and professional discipline for this country at this time, and that far from backing away into research on the secure aspects, we should be encouraged into making sure we do our research into the areas that have so far been regarded as intangible and difficult, the more so because we know they are more the concern of the architects.

What can you do with an art that must be based on knowledge, where the knowledge is expanding very rapidly, is very cumbersome, very tricky, and where the artist cannot expect to know all that is available?

An obvious analogy is the medical profession. You have heard me say that I think we now stand in architecture about where medicine stood fifty years ago. The doctor was an artist too. And the doctor tried to know all that he could know about the application of medical techniques and the background sciences to his art. But he soon found this was technically impossible, so the medical schools developed and insisted on a related system of education that fits in with the practice—that provides the scientific base, the pathology and biochemistry, the other activities, at a level of complete dignity and respect. It provides them in a manner so that clinical advice and consultation are available to the men who are, if you wish, the final artists in the practice itself.

So architecture in a sense remains behind the times, and the architects face constant communication problems with the people who have developed in modern-time thinking.

One of the reasons that the city planning profession has been able to move so rapidly in the last few years is precisely that it has unashamedly and enthusiastically moved into the position of building

a research base, developing people who can talk to men in the consuming environment who want to know specific answers to specific questions. And the consumers can have confidence that the answers they are getting are based on a thoroughly rational process of analysis.

There is a lot of progress all through the social, economic and psychological fields. Much of this progress is really relevant to architecture. We need two things. One of them is publication. There is a good deal of information that exists and needs only appropriate publication. The other is translation—and here, I think, we have one important field of architectural research, and one to which the AIA Committee should perhaps pay a lot of attention.

When I say translation, let me illustrate with the work of Bolt, Beranek and Newman in the acoustics field. One of the greatest assets of this consulting firm was that at least two of its members had been both physicist and architect, and that they were making their recommendations on the basis of a long and very thorough study of acoustics in MIT's acoustics laboratory system.

But they were able to make a translation from acoustics science into applications of acoustics science, and their translation in the form of reports and publications, has given the profession of architecture one of the few legs that it can stand on with some assurance.

Now, we need these translations not only in the physical environment, but also in the social environment and in the psychological environment. And these things are coming. Here, we might cite the Menninger Clinic Conference a month or so ago. The clinic is becoming interested in the psychological effects of buildings and architecture. They want to establish a communication channel between the two broad disciplines. What we need is to develop translators who can learn enough about these other fields to make accurate, useful summaries and bring them back to the practitioners in our field.

There is no doubt that there is an interest, not only in the related disciplines, but also in industry itself. The industrialists are no fools. They know

Monday morning group discussion



Dillon and Kelly



this is the kind of chaotic mess that represents really a kind of breakthrough potential, and a lot of the great industrialists would like to get in.

At the present, there is no doubt that they find this exceedingly difficult, and the attempts they have had to make have not always been successful. So they are waiting, but there is an interest there.

The biggest lack is the lack of personnel who want to make a career of working in this aspect of architecture—not as the artist practitioner, but as the solid base creator on which the whole practice must rest.

Why should we be so concerned? There are others who, despite all the limitations I have described, have managed to get ahead. They have managed to get a hearing in the foundations and in the government agencies. They are so obviously respectable that they have generated respect. They have produced solid information. And you may say, "Why raise the flag? If we had the men coming along they would do the job, and bit by bit the field would grow."

Of course, the answer to this is only, "Why not encourage people to take this role? Why not create a climate in which this role can thrive, and why not give prestige to this role within the profession, and in all of the profession's related dealings?"

So we come back again to one essential of a favorable climate. As far as industry is concerned, we all know that one of the climate problems is the possibility of getting anything like a good economic income in return for your investment.

I think it must be perfectly clear that if we expect people to put ten years of research, ten years of development, and ten years of distribution and service into an industrial operation, they have to expect that the rules of the game will permit them to come up with a rational answer and make a reasonable profit on it.

But the climate also has to be created in universities. And I would only too willingly concede that universities are not everything. On the other hand, the universities are the source from which

the kind of research personnel we want will come.

We have real troubles. It has been mentioned that the existing student body, by and large, tends to be hesitant about jumping in. Certainly the existing faculty, by and large, is hesitant. They are all enamoured of the same vision, of the same search for the new formal expression of our society and of our building mechanisms. There are many who are interested, but they find it very hard to get into an actual research situation. And they have relatively few people available on the faculty to give them any kind of guidance as to how to move in one of these research situations.

Finally comes the climate in the government. It seems to me tragic that the government's idea of this concern with the building industry is for a certain amount of banking security, and a certain amount of routine building operation security, and that it pays so little attention to the long-range potential of the production system or to the long-range impact on the ultimate user. On both of these architecture has a lot to say to the government, and we have to find ways of making them listen.

It must be clear by now that I am trying to say that the research operations, the research studies, the research men that we need are not to be distinguished from practice. They are a very important part of practice. There are men of this sort already working in large offices. They are absolutely an essential part of the profession of architecture. It just so happens that they are not practicing in a normal sense, and that a lot of the people who will be turned out to meet future needs will be even further from practicing in the normal sense. Their rewards will be different, their interests will be different, their career aspirations will be different.

So what we need is not to talk about what projects we should move ahead with, but how to create this climate, and how to generate the manpower.

Now, I have made one hypothesis upon which this whole thing rests—other hypotheses may come in time, but this one is basic. And that is that it is essential these days, because of the character of the profession in the schools, not to confuse the two different types of minds we are dealing with—both of which respect architecture very greatly, but one of which tends to be a practicing professional, while the other tends to get into the scholarly and research aspects of the profession.

The time has come to try to create within the teaching system a degree structure leading to the PhD or the Doctor of Science, under the architectural schools, that will make it possible to have in the schools at the same time people who are digging into the background base and other people who are working at the creative foreground that leads to the actual artistic practice (if you wish to use the word "artistic" in this somewhat specialized sense).

I would add one more thing. That is that the importance of creating a research aspect is not just to create a "research man," but for what it does for the non-research men going through the school—to give them an understanding of what is available, how

Ward, Swinburne



it is available, how it fits into the program and into the whole procedure.

It may be very important for us to be rather violent. It may be a very good thing for us to shake all the schools by the throat, and when we get through, it might be very important for us to shake the AIA by the throat, too.

It may be that some of the things that are holding back this kind of intellectual growth are relatively small things requiring relatively small changes in emphasis or direction. I grant you it will take major arguments to get these changes made in the universities, and probably even greater arguments to make these changes in the AIA code of ethics or in its structure generally. But it may be that, from a broad point of view, they may not be very great. If they open the career to the kind of man who wants to spend his life finding out how certain things work, and using the best modern tools to find this out, and the best modern communication devices to explain it to the profession, I think we will have done our job.

MR SWINBURNE: It was said this morning—and I am sure it was not facetious—that no one can define what we are talking about at this conference.

One of the things I noticed this morning, as we were all talking, is that there seem to be many things in common, and yet there seem also to be divergent perspectives. I am sure this is why our committee cannot be specific. It is a big subject; it has many facets. Some sort of definition might come out of this conference.

To get on to the broader problems, we might ask questions like this. Who are the researchers? Who is training them? Where are the PhD's who can do this research?

Our committee is interested in assisting where we can, in saying there is a need for those trained in research. I do not consider researchers to be second-class citizens. The attitude that if you are not a great designer you are a second-rate architect must disappear. It is as much the responsibility of the profession as the educators. . . .

I might say that we find that the climate for research is beginning to be right—not only for funds, but the attitude in the profession as well.

When it comes to funding research, we are saying that if the benefits of such research accrue to the profession itself, it should pay for it. But if it benefits society, we can then ask others to help us.

We find, however that there are certain elements—and I will use the phrase—in the *building industry* who are opposed to Federal government sources for funds. We find that there are elements in the building industry who say that the building industry is doing all the research that is needed for buildings, let's keep the government out of this. And I think some of you may have witnessed one of these performances here in Washington last fall, at which time the design professions were represented as having a negative attitude or position when we were not given a chance to express ourselves at all. But the end result of the show was to keep the government out of research.

I say that the medical profession has been given a tremendous boost in the last ten or twenty years with Federal funds. It has not hurt the pharmaceutical houses at all.

We ought to be looking further than material and product research—if we go further than that, we are going to have to get funds elsewhere.

This brings us down to the question of leadership. I am skipping over industry and the foundations. Sure, they are helping in our funding. But specifically I am addressing the question—should we ask the government to do more in funding research?

Leadership, I say, is at the moment in the building industry. Perhaps we should stop saying "building industry" and start saying something else.

If instead of a "building industry" we say that we have a *construction industry*, and things must be researched that occur between buildings—the roads and reservoirs and dams and the landscape itself, to the aura of environment, I think that it would give us a different perspective.

The leadership I think would recognize that since the post-World War II era we have had a rise of new concepts in the environmental sciences, in the behavioral sciences, and the fact that a human being reacts some way or another to a building, no matter how well it may hold up technologically; that there is information relating to all these things, which must be coordinated; that we would be doing more than just "building research."

I ask the question—what are your ideas, how can the AIA help? Can we exert any leadership as one of the design professions, should we seek leadership, are we capable of it ourselves? If not, where are we going for it?

These are questions your committee is asking. And believe me, we do not have the answers. We find that there is great disagreement among very intelligent people in the Institute, as to what we ought to be doing.

My own personal conviction is that we simply cannot stand idly by—that right or wrong we ought to take a position and make a statement.

Having spent their first day defining the ingredients of a favorable climate for research, the conference participants devoted the second to exploring realistic means of obtaining them.

It is difficult to resolve which need comes first—money, people, or an atmosphere of freedom in which dedicated and creative research people can work without inhibition. Rather than debate this "chicken-or-egg" subject, conferees elected to plunge into each problem as a separate entity.

Money

Participants were in general agreement that fund sources should and will be diversified, and will depend to a great extent on the type of project undertaken. Product research, by and large, has been and will continue to be funded by the building industry. Perhaps some segments of the industry can be counted on to underwrite research in broader areas.

Federal financing for some areas of research is necessary and should be promoted. Foundations and universities must contribute also.

MR BARRADALE: [My company] spends over \$5 million a year on research. Our plans go out ten years in advance. I can't tell you *exactly* what I am going to be working on ten years from now, but I know the general areas. Maybe it is nuts and bolts today, but something much greater in the future. For all I know it could be creating environments.

MR DILLON: Despite the best efforts of industry and foundations in support of research, some kinds of research are going to require the support of agencies of the Federal government.

MR JONES: In theory at least, the government is the people, and there are certain kinds of research that the people must pay for themselves. Industry should not fund certain kinds of projects, and will not, because there is no profit to be made from the results.

MR DILLON: Let's take the Public Health Service as an example. PHS is run primarily by the doctors. Do we want to create a source of support for our work that is oriented toward environmental design, or take orders from the other professions?

MR CAMPBELL: But USPHS says, "You architects haven't done what has needed to be done, and someone has to, so we are."

MR LARSON: They certainly don't exclude architects—NIH, etc, work with architects. But they do insist that problems should be specific, and not deal with glittering generalities.

MR BLOOMFIELD: They want specific proposals that fall within funded projects which they administer.

MR SCHEICK: We have to know what the foundations and the government agencies are interested in sponsoring. Is your research a necessity? Is it going to pay? If it is a necessity but isn't going to pay then it should be government-sponsored.

The greatest need is to get specific problems stated. You must define legitimate, specific problems—otherwise nobody is going to listen.

Representatives of various government agencies attended one session of the conference and indicated their readiness to listen. The government representatives outlined for the benefit of conference participants their agencies' areas of particular interest and in several cases, indicated a strong interest in various facets of environmental research.

Agencies represented at the session included the Building Research Division of the National Bureau of Standards; Research and Evaluation, Agency for International Development; Office of Construction, National Aeronautics and Space Administration; Housing and Home Finance Agency; National Institutes of Health and Office of Education, Department of Health, Education and Welfare; National Park Service; Corps of Engineers; Bureau of Yards and Docks; US Air Force.

People and Prestige

Some of the conferees contended that the outstanding need is in the area of qualified research per-

sonnel—that if, in fact, the people are available, every other necessity will follow.

DEAN KELLY: If you get the men, they will provide the ideas and you will get the money. The problem is to try to make it attractive, respectable and successful for somebody to move out of the image that he is used to moving in, into the image that says, "I am a researcher in architecture," and people know what that is and respect him.

MR BURK: The source of researchers must be from within the profession. So now the question—what kind of emphasis should be given to research in the schools, to enhance the status of the research architect? The researcher should not be considered a second-class architect, but too often he is.

First, we need to tell young architects that it is possible to make a living doing architectural research. We have to bring about a working group of researchers. We need to convince people that there is research other than building product research. What about advanced degrees? Are schools prepared to offer work leading to a PhD?

DEAN DIETZ: There is always the question of whether research should be done (taught) at the undergraduate level. Perhaps it is too sophisticated for undergraduates. Of course the general attitude within a school can motivate toward or against research.

MR CALLENDER: How can you have architects doing research if the schools don't train them? The faculty may be indifferent—some educators are outspoken against research. They favor the intuitive approach.

MR LARSON: The big universities, which are generally research-oriented, seem to favor it more than others. The climate for research for architecture is more favorable when the university is research-minded in other fields.

MR JONES: One problem is the requirement that the young architect spend three years in architectural practice as a prelude to registration. It is hard to get the young men to return to research, once they have been in practice in a firm.

MR BURK: Then one problem is to make registration boards aware of the value of research—make them realize there is as much practical value to be derived from working in research as in an architectural firm.

MR CALLENDER: The requirement of three years of architectural practice as a prerequisite to registration is just a matter of interpretation of the law. All you have to do is work under a registered architect. There is no reason why he should not be an architect who is engaged in research except that, so far, the registration boards have not used this interpretation.

MR SWINBURNE: My firm would like to have researchers working for us, in our office!

MR JONES: Students think when they go to the library and look in the literature, they are doing research.

MR CALLENDER: That is okay as a first step in the investigative process, as long as they are aware that it isn't all there is.

MR LARSON: There is a great gulf between architec-

tural research and architectural practice—this is symptomatic of the problem in schools. The schools will soon be accused of being backward, not in step with the times.

DR HASSID: [The reactionary] schools feel they are doing research, looking at the problem in its broad context, while we are dissecting it into its minute parts. If they are being honest when they make this claim, then perhaps they are right. But maybe it's just an excuse.

MR BURK: Back to another point—is there a place for at least an introduction to research techniques in undergraduate work?

MR CAUDILL: You can't devote all your time to specialties on the undergraduate level—otherwise you turn out architects unable to design a building!

MR SWINBURNE: Maybe we need a school that would turn out "architectural researchers" like "architectural engineers" (with no stigma attached to the name).

DEAN DIETZ: If you crowd research and everything else into an undergraduate curriculum, you will dilute undergraduate programs too much.

MR CAMPBELL: Research for architecture should be at the graduate level.

MR GOODY: Last week, when I knew that I was going to attend this meeting, I had lunch with the entire faculty of the architectural school of MIT. I asked them how they feel about research, and to a man, they all say that they are in favor of it. [Most of] the faculty are aware of the situation that we have all discussed—the fact that architecture as a profession has got to change and grow to keep up with the changing world.

MIT is going to strengthen its relationship with industry, but we want to avoid product research. The schools should not be doing product research that industry will pay for, they should be devoting their effort to work that won't be done by industry because there is no profit motive.

MR CALLENDER: One incentive, already mentioned, which might promote the status of research would be to make research a basis for election to Fellowship in the Institute, just like design, public service, literature, etc.

Communication

It was the feeling of the conference participants that the communication problem exists on many levels simultaneously. Opportunities such as the one offered by this conference, for researchers to meet informally and discuss mutual problems, are rare. Even rarer are the interdisciplinary exchanges between architect researchers and specialists in the psychological and sociological areas.

Dissemination of research results to the profession is likewise difficult.

MR CAUDILL: There has been a great proliferation of research papers—many of which are only marginally useful or of interest. Some information does not need to be disseminated. But much should be, and I don't think there is a source.

There is too much secrecy about projects. Architects should have professional interchange. Research papers are likely to promote the cause of what they are doing—they need to convince people that their work is worthwhile, and if they don't publish, nobody will know about it.

The Committee on Research for Architecture should get some kind of publication out to keep track of what is being done. Just a listing of projects in progress won't help—there must be some sort of qualitative evaluation, or some basis of making an evaluation.

MR DILLON: What is needed is a scholarly sort of publication. The International Building Congress (CIB) in Rotterdam has one.

Factors which might make it difficult would be the cost and the dearth of material in the early years, at least. We don't want to start unless it is possible to do a good job of it.

MR CALLENDER: We wouldn't have to have anything very elaborate. Perhaps a simple newsletter, very informal, giving a brief description of projects and a brief abstract of the published report.

MR LARSON: Isn't that the idea behind the research survey and inventory?

MR EVANS: Yes—and of course we try to do what we can in the *AIA Journal*.

MR BURK: This group would be the nucleus of a mailing list for such a publication, perhaps we should start by setting up an exchange of information among ourselves.

Conference Results

Having defined the factors involved in creating a favorable climate for research in architecture, the conferees were able at the end of their meeting to list means of implementation. These objectives can be briefly stated as follows:

1) Some sort of modest start toward a research publication; possibly a newsletter format
2) A forum for the exchange of ideas—on two levels:

- as part of the AIA Convention, a session for presentation of scholarly papers, and
- informal meetings for exchange of information

3) Establishment of Research as a category for AIA Fellowship

4) A strong policy that AIA take the lead in research; that research is a function of the design and planning professions and should be implemented through their professional societies and not through the building industry

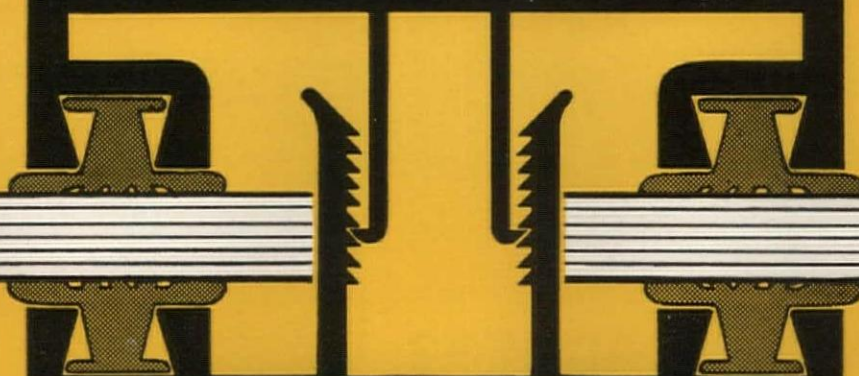
5) An attempt to improve the attitude in university faculties and enhance the image of the researcher, in an effort to improve the quality and increase the number of trained research people

6) A statement favoring government funding of specific kinds of research for architecture

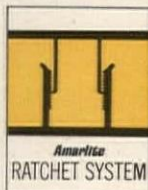
7) A feeling of general satisfaction with the conference—the consensus? It was worthwhile. "I didn't believe that anything would ever come from the AIA on this research matter—until yesterday. This has changed my whole attitude." ■

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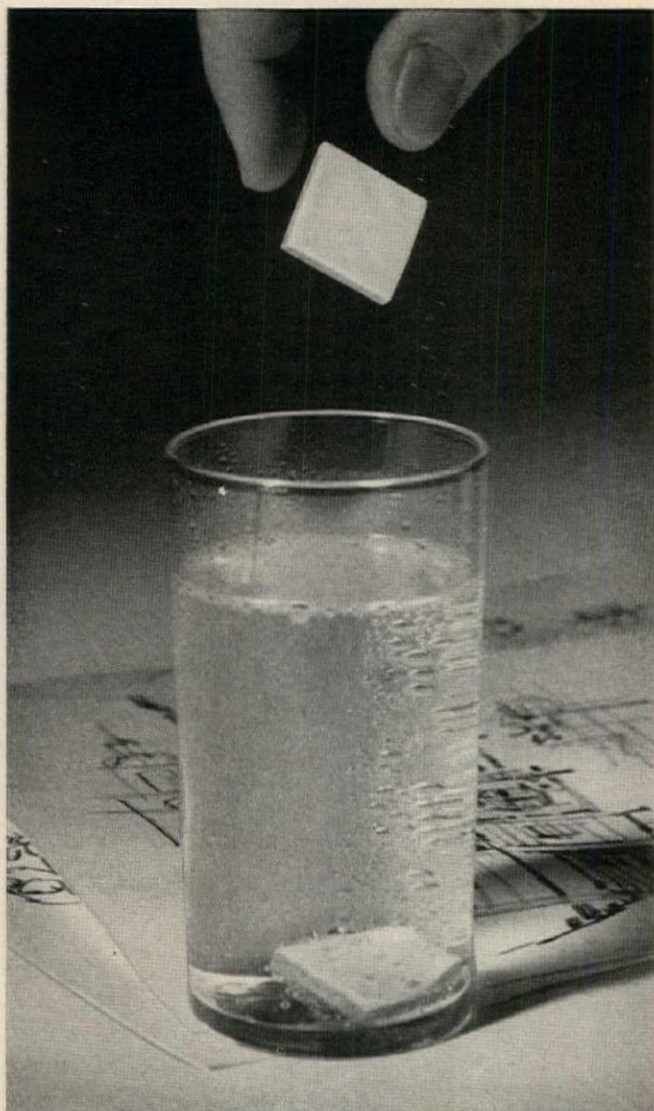


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Octagon Observer *Cont'd from p 10*

AWARDS PROGRAMS / California Leads the Way

Since the AIA Honor Awards program began back in 1949, a total of 270 projects have been cited, 65 receiving First Honor Awards and 205, Awards of Merit (see p 21 for this year's winners); and 99 of those have gone to California. The runners-up: Texas, 16; Connecticut, 14; Louisiana, 13; New York, 12; Michigan, 11; Florida, 10; Illinois, Massachusetts, Washington, 9; Colorado, Pennsylvania, 6; New Jersey, 5; Indiana, Maryland, North Carolina, 4; Georgia, Iowa, Ohio, Tennessee, Virginia, 3; Arizona, Minnesota, Missouri, Oklahoma, 2; Alabama, District of Columbia, Nebraska, New Hampshire, Oregon, 1. Twenty-one states cannot boast a single award, although 11 foreign countries can.

These interesting facts came to light when Faynetta W. Nealis, the Institute's Awards Program Manager, made a study of the 16-year life of the program, prompted by an inquiry from Grady Clay, Real Estate Editor of the *Louisville Courier-Journal*, who wanted to substantiate his belief that no building in Kentucky had ever been selected. Mr Clay, who doubles as Editor of *Landscape Architecture*, was right, of course.


AN HONOR AWARDS ASIDE: The industrial plant is one building type which seldom finds itself on the Honor Awards roster. This year there were two, and one of them—Vincent Kling's Award of Merit winner for the Molecular Electronics Division, Westinghouse Electric Corp—also was named a Top Ten plant in the annual Awards program sponsored by *Factory Magazine*.

Other AIA members who had direct responsibility for the publication's winning projects include John J. Wallace Jr of Lusk & Wallace, for Clifton Precision Products, Division of Litton Precision Products, Inc, Colorado Springs, Colo (see photo below); T. H. Torgerson, corporate architect for the client, and William E. Dunlap of Skidmore, Owings & Merrill, for Container Corporation of America, Carol Stream, Ill; and Ellery H. Davis of Davis & Wilson, Inc, for Dorsey Laboratories, Division of the Wander Co, Lincoln, Neb.

Cont'd on p 75

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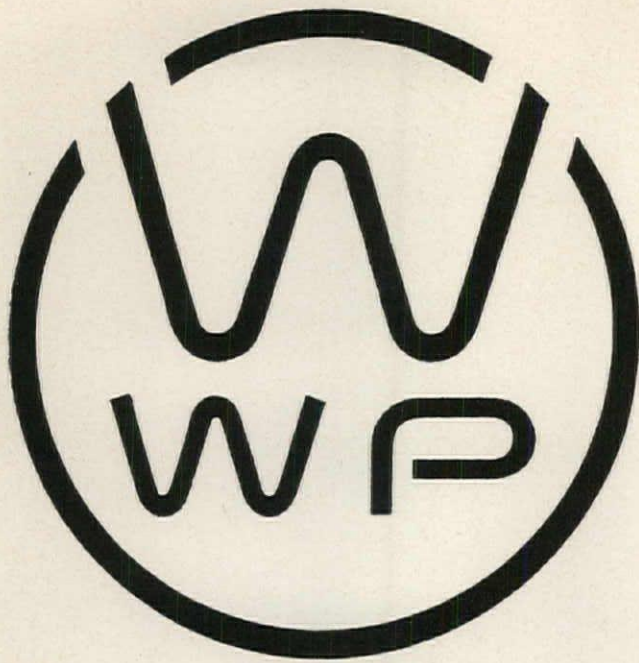
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Octagon Observer Cont'd

BROADER HORIZONS FOR HHFA: The government's design awards program which began last year with the Federal Housing Administration's Honor Awards for Residential Design has been expanded to include the Urban Renewal Administration, Public Housing Administration and Community Facilities Administration. In announcing the action, Administrator Robert C. Weaver of the parent Housing and Home Finance Agency said: "Our country has progressed far beyond paramount concern for mere shelter. We must take cognizance of the necessity for esthetic satisfaction as well as utility. These honor awards will help point the way to future progress in the design of our homes and our communities."

All four agencies will present their citations in recognition of planning and design excellence at ceremonies in Washington, DC, this fall. Deadline for PHA entries is July 13; closing date for the other three was July 1.

COMPETITIONS / Sales and Shelter

"A useful, practical shopping center plan with an inspired use of land," in the eyes of the jury, has won the \$15,000 Grand Prize in the National Community Fallout Shelter Design Competition for Francis E. Telesca AIA, of the architectural-engineering firm of Greenleaf & Telesca, Miami. The seven jurors for the program, which was conducted by the AIA for the Office of Civil Defense, further noted that the center "could be built not only in its own region but almost anywhere else throughout the US" and that its airconditioning equipment could offer "a tolerable environment for the thousands of shelter occupants during emergencies. A unique and carefully planned entry system with baffles provides for natural ventilation in case of power failure."

Telesca's associates on the winning plan were William Cox, architect; Charles W. Temble Jr, fallout shelter analyst; and Robert L. Dykes, Richard I. Clay and Emilio B. Castellanos.

Regional first-prize winners included these architects: Joseph Baker AIA, of Joseph Baker & Associates, Newark, Ohio; Brian Crumlish, South Bend, Ind; H. F. P. Goeters, Houston; Jack Horowitz, Los Angeles.

STALIN, ANYONE, OR WHAT PRICE GLORY? Talk about competitions! Czechoslovakian architects have been invited to submit designs for a new group of buildings to replace the Stalin Monument on Letna Hill above Prague, demolished 17 months ago. This choice bit of information was forwarded to the Octagon by Gerre Jones, former Executive Secretary of the Kansas City Chapter AIA and now stationed in Munich with Radio Free Europe, whose Central Monitoring Desk (CMD) put the competition news on the wire.*

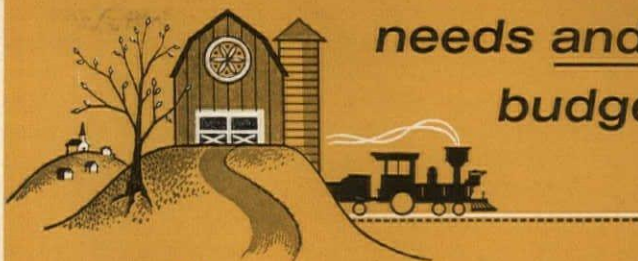
Entrants are required to design "an object of

*ED NOTE: We hasten to add this is *not* an AIA-Approved competition!

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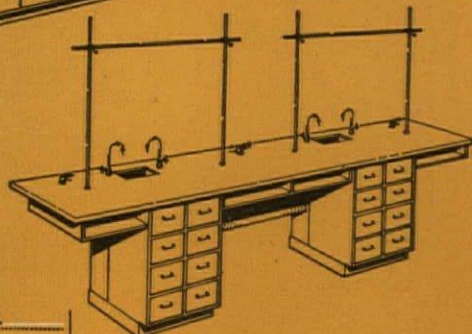
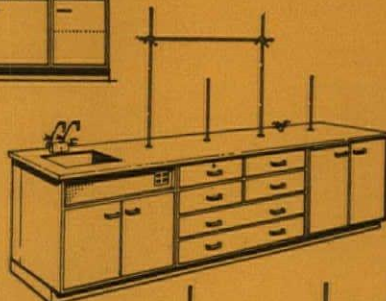
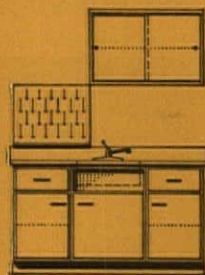
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Octagon Observer *Cont'd*

cultural and public significance" and must take into account that a place for military parades must be preserved as well as the playing fields of the Spartak Praha Sokilovo Club.

Perhaps of even more interest is CMD's "leisurely history of the Stalin Monument, a sprawling 6,000-ton monster which overlooked the River Vltava:

- March 1953—Stalin died
 - May 1955—Monument unveiled
 - November 1961—Central Committee decided to remove the Monument and to appoint a special commission to deal with the problem
 - January 1962—Commission set up
 - August 1962—Commission recommended Monument should be replaced by a building of "moderate" size to serve Prague's social and cultural needs and to express the idea of Czechoslovak-Soviet friendship
 - September 1962—Scaffolding erected around Monument
 - October 1962—Monument demolished with aid of explosives
 - May 1964—Contest for replacement announced.
- What a difference some months make!

EDUCATION / New (& Needed) Approach at Utah

An important direction in professional training for architects will begin its fourth year this fall at the University of Utah, where six traineeships are available in a doctoral program in architectural psy-

chology. Supported by a grant amounting to more than \$26,000 per year from the National Institute of Mental Health, the annual stipends amount to \$1,800 for class 1 up to \$3,000 for class 4, in addition to tuition and fees and funds for supplies and expenses.

Architectural graduates should contact Professor Roger Bailey FAIA of the Department of Architecture (he is Co-director of the program with Dr Calvin W. Taylor of the Department of Psychology) at the University, Salt Lake City 12, Utah.

CULTURE IN COOPERSTOWN: Two companion courses—"Saving the Past: Historic Preservation and City Planning" and "Architecture Worth Saving"—will be part of the 17th annual Seminars on American Culture offered by the New York State Historical Association in Cooperstown July 5-8. The lecturers: Professors Stuart W. Stein, Barclay G. Jones and Stephen W. Jacobs AIA, all of the College of Architecture, Cornell University, and Harley J. McKee, School of Architecture, Syracuse University.

PEOPLE / Clemson Fanfare for Fuller

Winner of the Institute's Allied Professions Medal in 1963, engineer R. Buckminster Fuller, Carbondale, Ill, has received an honorary degree, Doctor of Letters, from Clemson College, where he is an oftime lecturer and critic in the School of Architecture. The College noted "the breadth of his contributions to modern culture and his extraordinary devotion to the education of young architects."

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EXHIBITIONS / Sizing Up the Smithsonian

Although the Smithsonian Institution's Museum of History and Technology opened its doors to the public January 23, installation of exhibits continues as visitors throng through them daily, beginning at 9 am daily (closed on Christmas).

Since it's a good bet that many readers on their next family holiday in the nation's capital will include the new Museum on their "must-see" agenda, the *AIA Journal* will pass along a few observations its staffers have made after viewing the some 20 per cent of the permanent exhibits which have been put in place.

The building has five floors, two of which have entrances at grade levels off the Mall and Constitution Avenue. The former leads into the central hall of the building, where hangs the original Star Spangled Banner.

Interesting as the exhibits may be in themselves, there seems to be no logical progression through the hodgepodge collection. Let's begin on the lower level, or first floor, in Agricultural and Farm Products, with a massive threshing machine and portable farm steam engine of 1869.

From farm machinery, we are directed to vehicles, carriages and automobiles, a rather casual array, though crowded, lending itself to a pleasant, informal atmosphere. The Railroad Hall is an impressive room with the ceiling left open to expose pipes and air ducts, creating the proper atmosphere for the display of the 180-ton locomotive and tender.

From railroading, we backtrack to the Hall of Tools to observe working machines mounted on platforms. The machines, however, will be operated only for special groups and lectures.

Around the corner, we enter the Hall of Light Machinery through a narrow, well-lit passageway flanked by sound equipment (phonographs, tape and wire recorders, etc), typewriting machines and locks.

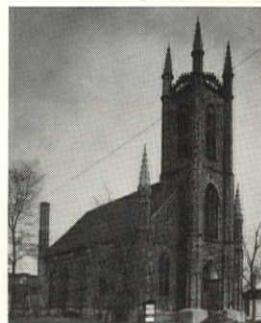
From this interesting presentation, we pass into the Hall of American Costume to a new exhibit of the First Ladies, then on to Everyday Life in the American Past.

SMITHSONIAN PICKS ARCHITECT: For its first director of the new National Portrait Gallery, the Smithsonian has selected Charles Nagel AIA, who was a partner in the St Louis architectural firm of Nagel & Dunn from 1936-42. He assumed the position July 1, coming from St Louis where he has served as director of the City Art Museum for the past nine years. The Gallery will be housed in half of the historic Patent Office Building, initially designed by Robert Mills.

PRESERVATION / Two Positive Programs

The work of preservationists all too often seems to be a futile job, but really encouraging results through long-range programs are uncovered from time to time. The local Committees on Preservation of Historic Buildings in two AIA chapters—Cleveland and Seattle—are cases in point.

For eight years the Cleveland Chapter has been recognizing with an annual award the owners



MARTIN LINSEY

or custodians of a noteworthy building which has been actively preserved, restored or well maintained. The award takes the form of a finely executed hand-lettered certificate presented to the selected subject at a special luncheon meeting, during which the building is discussed by the chapter officer in charge and the owner.

Two structures were selected in 1963: St John's Historic Episcopal Church, Cleveland's oldest (1836) and called a fine example of the early Gothic style (shown here), and Trinity Evangelical Lutheran Church (1873), the city's "best example of Victorian Gothic style architecture."

The architect for St John's is unknown; however, the firm of Carr & Cunningham did restoration work on the church after a tornado did severe damage. Trinity Evangelical Lutheran Church was designed by a Mr Griese who later went into a partnership with one of the church members, forming the firm of Griese & Walker.

In the far northwest corner of the US, the Seattle Chapter gives an award, initiated in 1959,



DON NORMARK

based on an older building's "professional excellence and enduring quality" as part of its annual Honor Awards, photographs of which hang in the Art Museum. Citations are presented to the architects or, if they are deceased, to their families.

Last year's award went to the North Trunk Sewer Viaduct and Footbridge in the University of Washington Arboretum, constructed in 1911. The committee comment: "This bridge is a reminder that environment must satisfy the dictates of more than efficiency. The architects' special contribution is demonstrated here by Willcox & Sayward—that their competence extends beyond the art of building in its more restricted sense and requires their participation in the broad range of forces shaping environment. To this interpretation of function satisfied has been added the dimensions of humane pleasures honored."

W. R. B. Willcox served as president of the then Washington State Chapter AIA for two terms, from 1911-13.

Cont'd on p 80

an entrance



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Octagon Observer Cont'd

QUOTES / Architectural Icebergs

Speaking before the national conference of the American Society of Public Administration in New York a while back, John H. Flandreau, Administrative Assistant to the General Manager of the State University Construction Fund, had some significant things to say about the services of private architects in relation to its long-range campus planning, design of the buildings and construction supervision. The two following pertinent paragraphs should gladden the hearts of the profession everywhere:

"The Department of Public Works of the State of New York has long used the services of associated architects. However, I interpret this as a situation where one architectural organization utilizes the services of a consulting architectural organization, in a loose partnership, to augment its own facilities during part of the construction process. In our case, I believe the situation to be vastly different. Our contract architects are an operational part of the team, throughout the entire process. Our relationship with them is the common-purpose relationship that exists between a client and an architect, not like the relationship between two separate architectural organizations. As a result, when you are considering our organization you actually have to fill in the base of the pyramid with the architects who are working with us. You can't really consider them part of the organization technically, but they certainly are, operationally.

"That puts us in a very different business than would be implied by our legislative assignment. Although our work results in the construction of buildings, we ourselves are not in the business of "building buildings," we're in the business of supervising architects. We are rather like the iceberg. The Fund's organization consists of the 10 per cent of the iceberg that shows above the water. But the greatest bulk of the organization—that which is initiating action, doing the creative thinking, making the proposals, digging, questioning, coming up with answers, struggling be-

tween the demands of the work and our demands—is the great group of professionals that we have working with us to conquer the mountain of design and construction that must be done before our program can be fulfilled. Our job becomes, in this case, one of planning, one of energizing and motivating professional people, one of monitoring a process and maintaining productive relationships between our client, who has the initial demand, ourselves and the architects whose talents are so successfully being harnessed to produce the desired results. We are mobilizing resources for work, not staffing up with specialists for work, and I think this is a considerable departure from the standard practice of capital construction agencies."

"FAVORITE SON ARCHITECT": As rare indeed as that day in June was the last day in April when one of the nation's leading newspapers carried a major editorial in praise of an architect who left town to make good. "Please come home, Phil Johnson," proclaimed the *Cleveland Plain Dealer* in a two-column heading. The editorial about the AIA member said in part:

"The architectural verve and imagination of Philip Johnson has been acclaimed anew in New York City. Why can't Cleveland, his home town, enjoy a public or private edifice designed by this exciting and controversial architect who has bloomed in the last 15 years into a top man in the nation in his field?"

"Johnson's latest triumph is the New York State Theater in Lincoln Center. It has caused international comment. It is said to be unique in the variety and amount of facilities backstage.

"Cleveland couldn't hold Philip Johnson who, at 57, remains a fresh new spirit among architects. His daring craftsmanship was recognized by the late President Kennedy who included him among the art leaders invited to the White House in its cultural encouragement program.

"Cleveland needs a building designed by Johnson as the mark of a favorite son architect on its skyline." ■

Calendar

- Aug 16-20: AIP Annual Conference, Newark, NJ
Aug 17-21: Engineering Foundation Research Conference, Proctor Academy, Andover, NH
Sept 23-25: AIA Board of Directors, New Orleans
Sept 24: Producers' Council Fall Convention, New Orleans
June 14-18, 1965: AIA Annual Convention and XI Pan American Congress of Architects, Sheraton-Park Hotel, Washington, DC. Theme: "Cities of the New World"

AIA Regional and State Conventions

- Aug 28: Mississippi Chapter, Biloxi
Sept 18-20: Ohio Region, aboard *SS South American*, departing from Cleveland
Sept 30-Oct 3: Northwest Region, Hilton Hotel, Portland. Theme: "The Hand of Man"
Oct 7-11: California Region, Coronado
Oct 25-28: New York State Association of Architects, Grossinger's Hotel. Theme: "Design—The Search for Esthetic Solutions"
Oct 29-31: Central States Region, Hotel Muehlenbach, Kansas City, Mo; South Atlantic Region, Jack Tar Poinsett Hotel, Greenville, SC

AIA Committee Meetings

(At the Octagon unless otherwise specified)

- July 11: Specifications
July 12: AIA-CSI Liaison
July 12-13: AIA-Engineers Conference, CEC Headquarters, Washington, DC
July 13: Task Force on Automated Information
July 13-14: Housing
July 30-31: Documents Review
Aug 28-30: School & College Architecture, Colorado Springs, Colo

Tours

- Oct 7-31: Architecture and Garden Tour of Japan. Special extension to Hong Kong to Nov 3; "Festival of Architecture in Japan" in Tokyo Nov 6-10. Contact: Kenneth M. Nishimoto AIA, 263 S Los Robles Ave, Pasadena, Calif 91106
Oct 18-31: Mexican Architecture and Interior Design Seminar-Tour, in cooperation with Sociedad Arquitectos Mexicanos. Tour repeated Feb 14, 1965. Contact: T. H. Hewitt, Apartado Postal 5-251, Mexico 5, DF

Necrology

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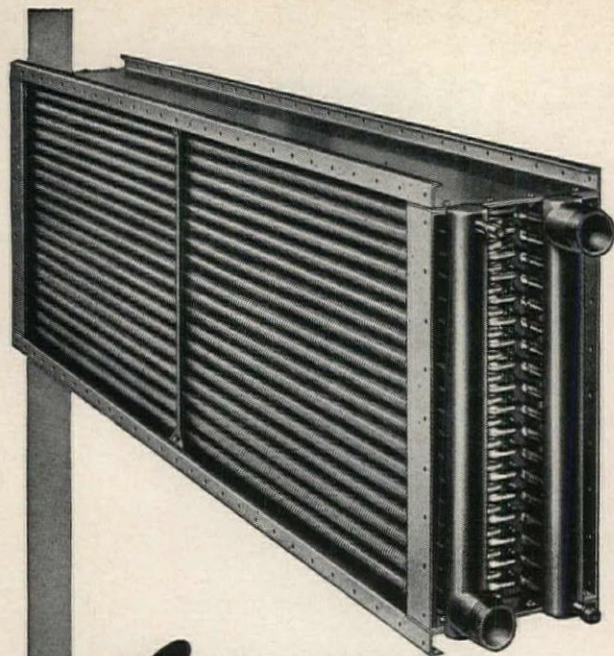
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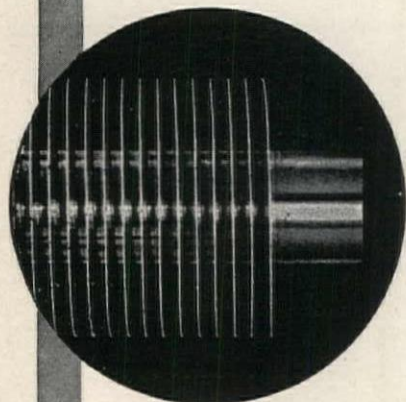
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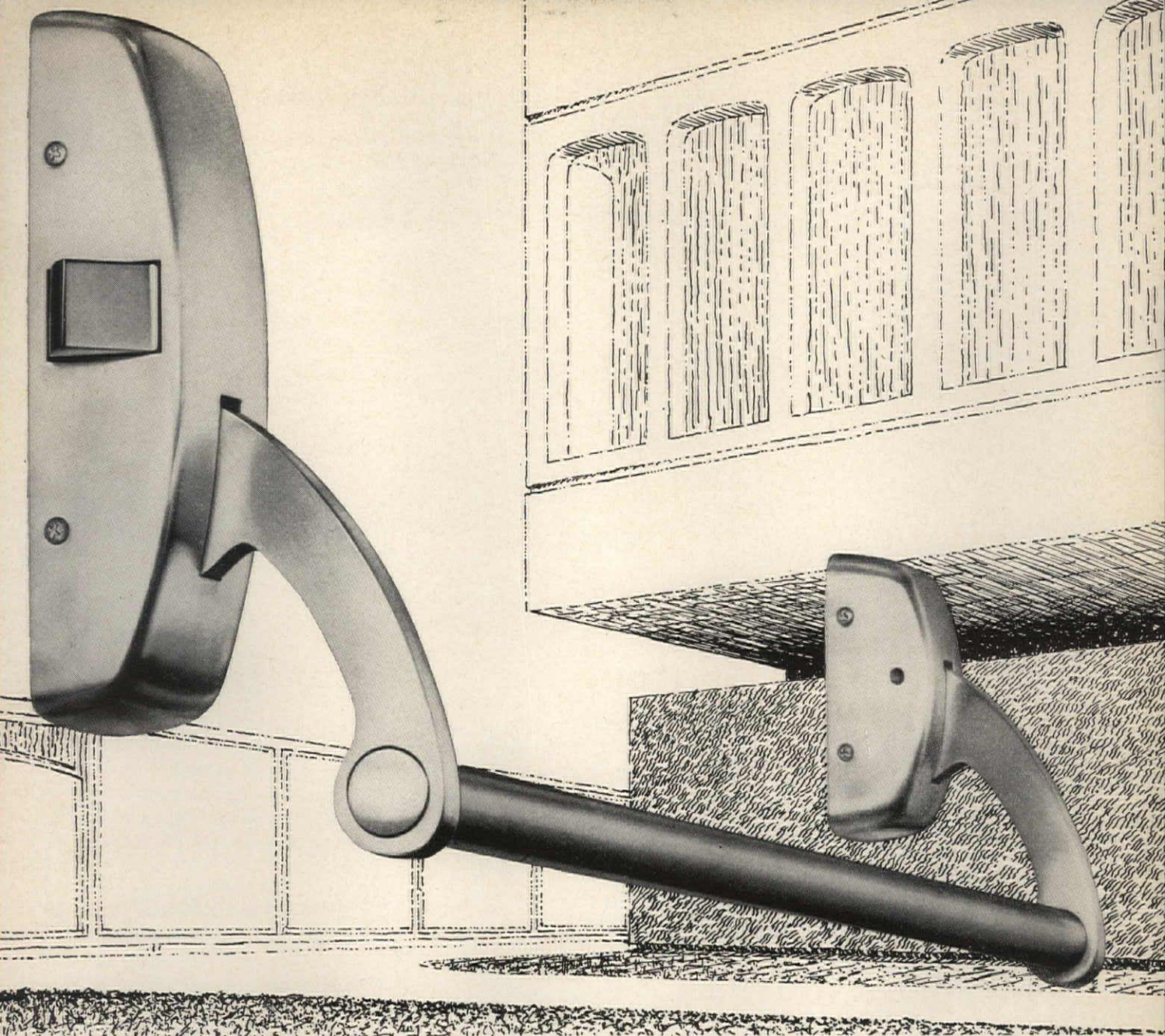
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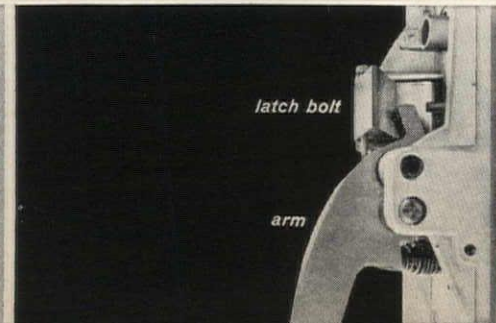
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