

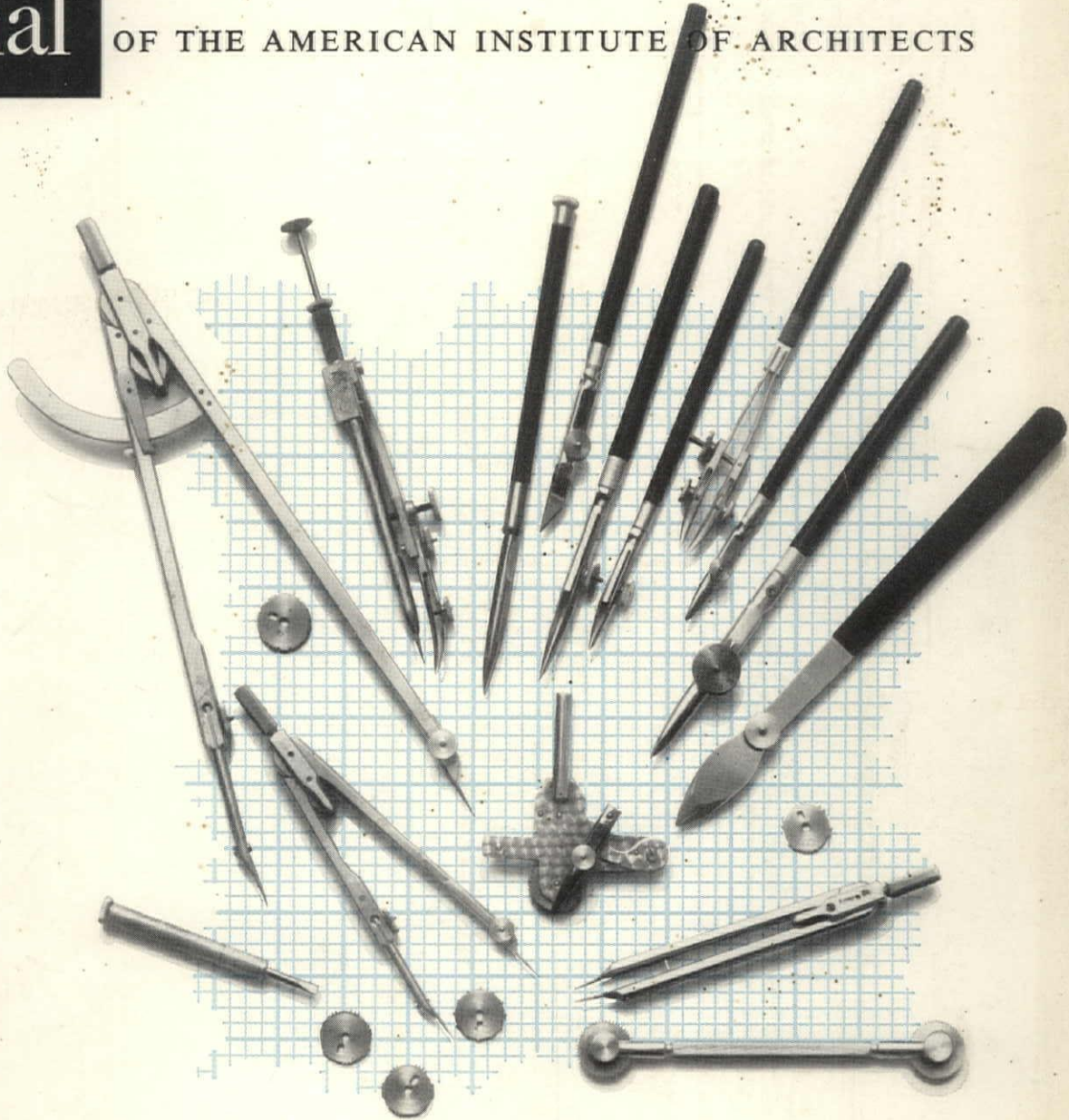


A · I · A

December 1959

Journal

OF THE AMERICAN INSTITUTE OF ARCHITECTS



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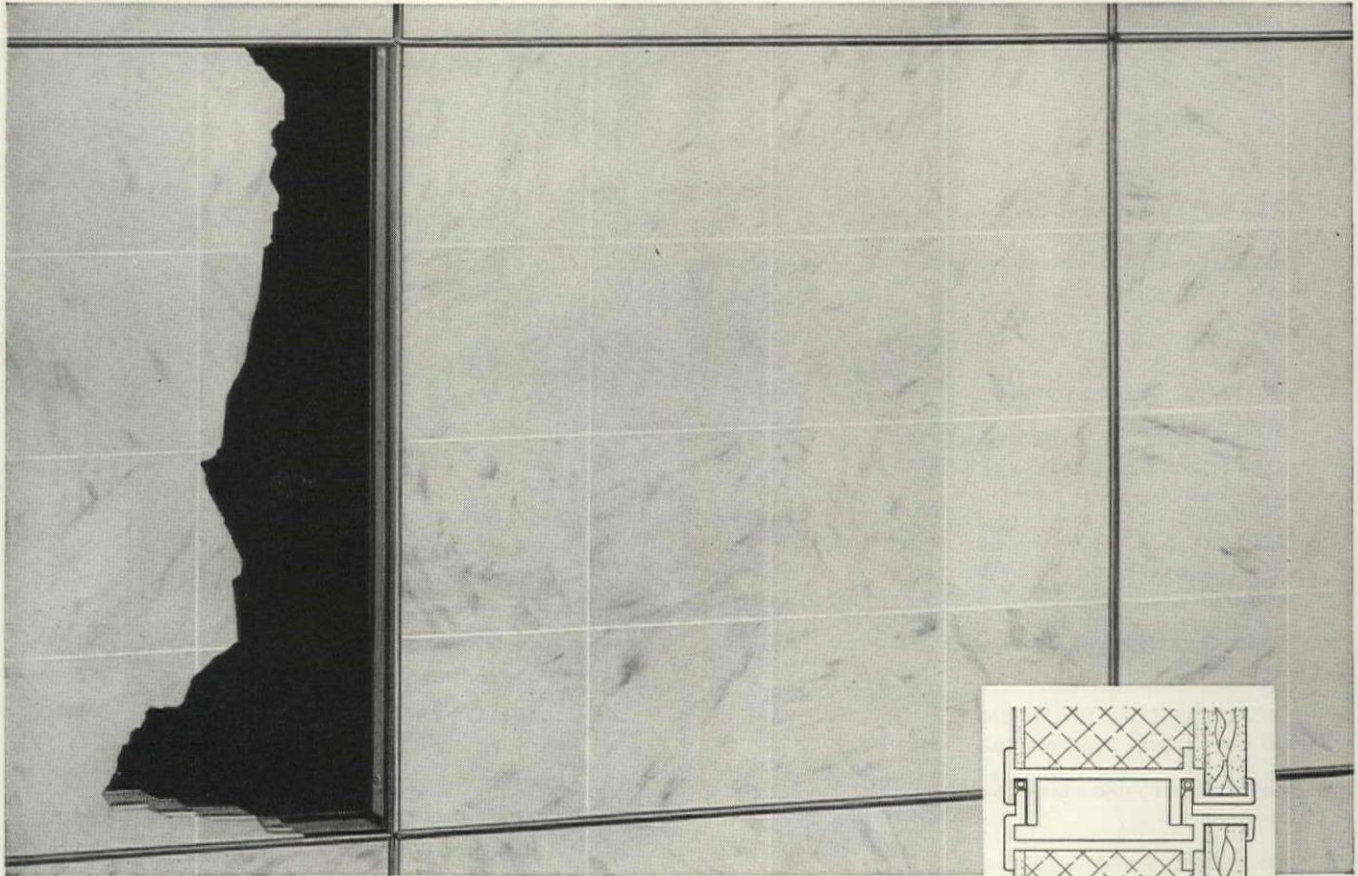
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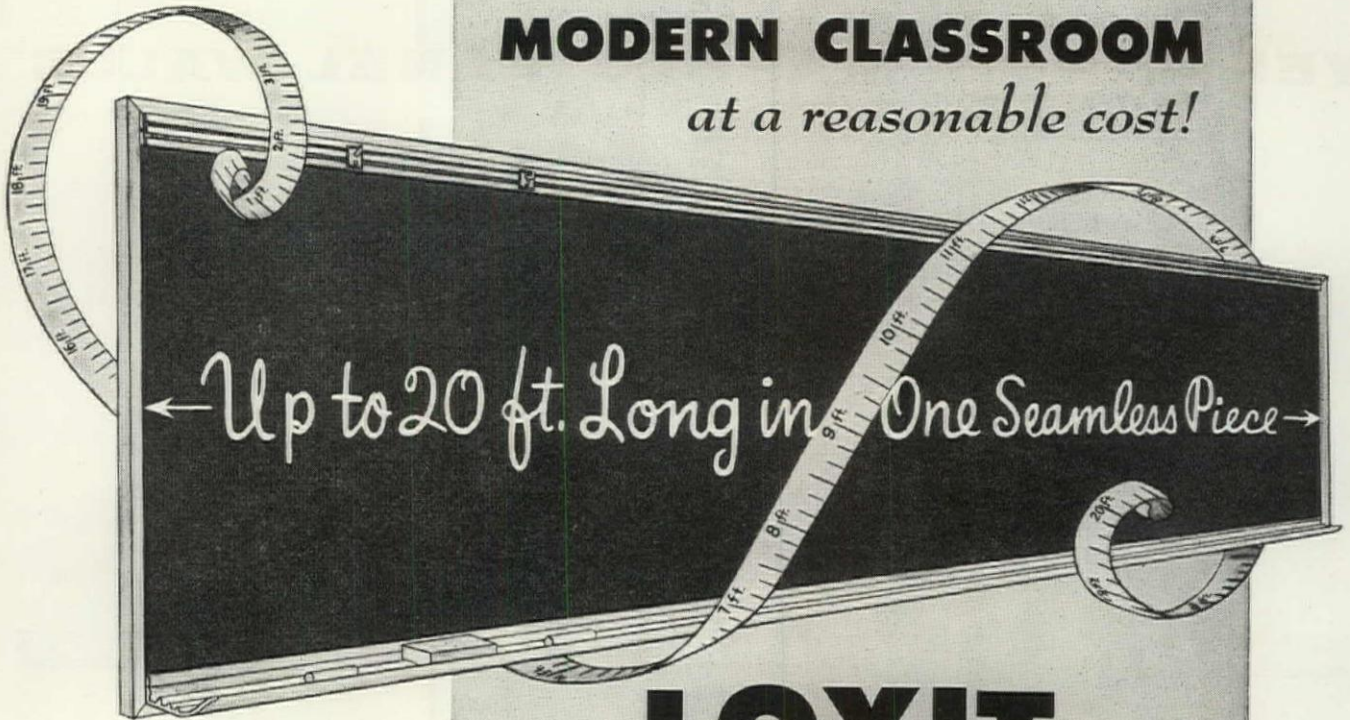
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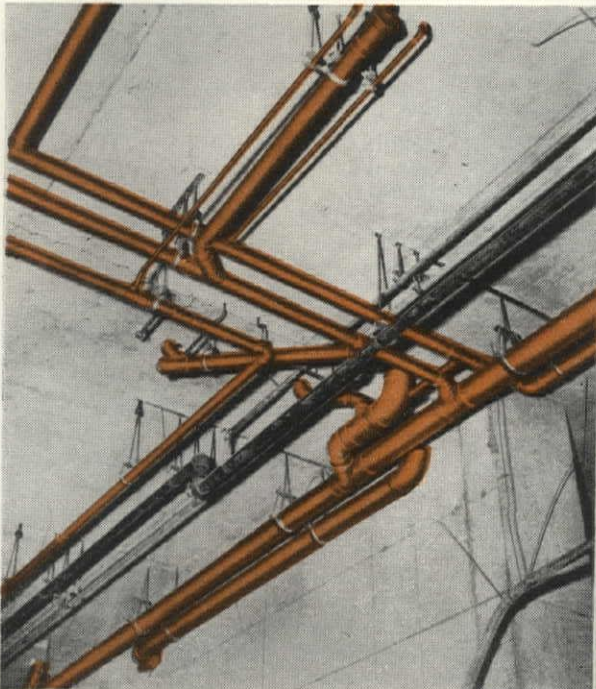
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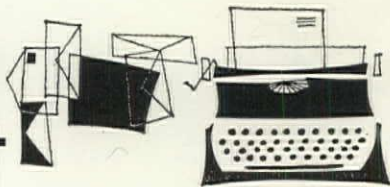
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## L E T T E R S

### The Image of a Profession

EDITOR, *Journal of the AIA*:

Please accept my most enthusiastic congratulations for an article well done—"The Image of a Profession." Reading it was like looking into a mirror held up before my own mind; I could not agree with you more.

As you know, I am a practicing architect and urban land economist, presently disturbed because I feel that the profession, as it is practiced today, is not a "whole" profession. . . . When I read your editorial today, I was reminded of an experience I had about six weeks ago. I would like to describe it to you because it is illustrative of one of the points you so succinctly raised in your fine discourse—the lack of professionalism among architects, the kind of professionalism characterized by the medical profession, the legal profession, etc.

A leading architect in the Los Angeles area, the head of a fair-sized office, invited me to lunch. He had heard of me and the urban land economics consulting service I offer to owners and to architects alike and he wanted to meet me as well as have me explain to him what I do, how I operate, etc. After a pleasant two hours during which it appeared that he had really asked me to lunch in order to tell me something and that he couldn't find a beginning, he finally unburdened himself. He told me that he had felt for a long time the lack of an urban land economics background, training, and experience; that his clients needed the kind of service I could offer them through him; etc. But he hastily added that our profession was one characterized by "rugged individualism" and that architects never consult with other architects for that would be indicative of incompetence, inadequacy, and inability to service clients on the part of the architect seeking counsel. Therefore, he concluded, despite the fact that he knew little about urban land economics, he

would continue to advise his clients on urban land economics matters; he could not risk loss of professional face.

IRVING D. SHAPIRO, AIA  
Beverly Hills, California

EDITOR, *Journal of the AIA*:

I have just read and admired your editorial in the October issue, and would like to make two comments in that connection.

1 While I might go along with your *ideal* of one national professional society including the entire design team, this would seem to be pretty far in the future. A couple of years on the AIA-ASCE subcommittee is my background for that opinion.

2 Referring to your thoughts on closing ranks on education and registration, under the control of the profession, I think this is within realization. A couple of years ago, at a NYSAA Convention, I rode on a bus with Douglas E. Kertland, then President of the Royal Architectural Institute of Canada, and was surprised to learn that their professional groups have acquired almost official control of the registration situation, and that their provincial societies (comparable, of course, to our State Associations) are very closely integrated into their national one. It occurred to me, therefore, that an article by some well-informed Canadian, outlining their *modus operandi* might be a good example to further your thought.

GERSON T. HIRSCH, AIA  
Pleasantville, New York

EDITOR, *Journal of the AIA*:

I have read with interest your editorial of the Image of a Profession. Well said. I brought this subject up at a local chapter and it fell on deaf ears. My proposition at that time was the unification of the profession by enrolling all registered architects in the AIA. All lawyers who have passed the bar are eligible to become members of the local bar association for the

fee of \$5.00 annually. Why can't we do the same? Call it \$10.00 if you wish. \$50.00 gets to be a little too rich for some of the fellows working in offices. It is even too rich for the "little fellow," to which group I belong. And yet, I have had as good a training as the next fellow, and consider all those who have sweated through a license exam worthy of the name "architect."

All architects should definitely belong to the AIA. But, you must open the gates. That is the most important step. Next, we must pound on public safety and individual attention. You and I know it is a matter of design, but the public is abysmally ignorant of the services of the profession. And what's more, we are fast asleep. The issues of Oct. 12th, and 19th, of *Life* magazine carry a series of articles about you and your doctor. Dollars to doughnuts that the AMA is behind this subtle educative campaign. Read them.

CHARLES L. PINCU, AIA  
Pittsfield, Massachusetts

### More Kudos for Lyman

EDITOR, *Journal of the AIA*:

Have just received the *AIA Journal*—September 1959—and would like you to convey to William Lyman, AIA, my hearty congratulations on his sound article "Day of the Stunt."

This article should be hung in every Architectural University or College for our students to read from time to time as they progress through their course in Architecture, sent to all the Editors of magazines to publish and, last but not least, the exhibitionists who are teaching design.


L. ANDREW REINHARD, FAIA  
Bronxville, New York

EDITOR, *Journal of the AIA*:

I would like to purchase 100 copies of William Lyman's article in the September issue of the *AIA Journal*.

GEORGE J. VOTAW, AIA  
West Palm Beach, Florida





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## LETTERS

EDITOR, *Journal of the AIA*:

This is to inform you how much I enjoyed reading the article "Day of the Stunt" by William Lyman in the September issue of the *Journal*. I was particularly intrigued by the first paragraph containing the sentence: "More and more architects are going off on little aberrations of their own that lead them further and further from architecture."

Of course, it is well to shake off the shackles of classical and traditional architectural design where they no longer apply; but I believe that in so doing, it is possible to also shake off some of the basic principles of good design. The designer is now left pretty much to his own devices and many have wandered way out into left field.

In my humble opinion there are certain basic principles of good design and taste that should always be observed. Without any restrictions at all many designers seem to be striving mainly to obtain something different, resulting often in designs that are very bizarre. It seems to me that all elements of design should have reason for being and should be directed toward the understanding and appreciation of the average person. One should not have to be educated in art and architecture to appreciate a well-designed building, but it does require good taste. Unfortunately, now-a-days too many persons—and architects too—are attracted and influenced by the startling or flamboyant in architecture.

So, I agree with everything Mr Lyman says in his article and, with him, hope that "we may be able to rescue ourselves before it is too late." I hope that there may be other articles in the *Journal* in the same vein, and will close by expressing my appreciation of the splendid magazine you and your collaborators are editing.

OSSIAN P. WARD, AIA  
Louisville, Kentucky

EDITOR, *Journal of the AIA*:

I have read with interest the article by William Lyman in the September *Journal* and in general I agree with him, but not quite in as all-encompassing an area of the architectural field as he seems to include.

In perusing the magazines of the trade one can see the work of many original good architects along with the badly stunted works and cribbers. Cribbing of so-called modern is worse today than copying of classics was some years ago. The layman has no knowledge of the old world lines that are being slipped into the contemporary works. The Russian folded roof is a good example of one running the facades right now.

Coincidentally the September issue of *Progressive Architecture* has an article by T. H. Creighton taking the opposite view of Mr Lyman altho it is pointed too far the other way. Some of the boys mentioned by Creighton have shot their bolts and are not now doing the good architecture that brought them to magazine fame.

HARRY L. PERCY, JR., AIA  
Portland, Oregon

EDITOR, *Journal of the AIA*:

I wish to commend the staff of the *AIA Journal* for the inclusion of William Lyman's timely analysis of the current phobia known as Contemporary Architecture. If it takes ridicule to motivate a return to sanity in architectural design, pour it on.

The rise and repudiation, in the early 1900's of mission furniture; a prototype of today's Contemporary Design, should serve as a symbol of the ultimate fate of any impoverished art, whose chief purpose is to supplant that which has been proven acceptable and readily adaptable to modern requirements.

The thought-provoking article "Something is Rotten in Denmark" by Sir Albert E. Richardson was encouraging reading and exposed the weakness of today's design.

Let us have more of them and if possible, lead the Profession and especially the Architectural Schools, back from following false prophets into public discredit.

BENJ. FRANKLIN OLSON, AIA  
Chicago, Illinois

To Good Old Ned

EDITOR, *Journal of the AIA*:

Greetings to Good Old Ned and a suggestion or two on what seems to be troubling him. As for finding material in architectural magazines, why not use architectural training and design sense: Every magazine

has a table of contents, and, believe it or not, *Forum's* is on page one. Why pay a Maine guide? As for excessive fatness of magazines, two things: first, the new "criticism" rests upon dealing with specific instances. E.g., one would have to say that *some* magazines are fat, others normal; *some* may be timid in criticism, others however are bold. Not fair to lump all together: discourages improvement which is always individual. Second: *all* have to earn their own way (except, fortunately, the *Journal*); and in real money the subscription prices collected today equal from one-half to one-fourth of what was collected by the editor of the old *Brickbuilder*—to cite our own predecessor—in 1892, and for a monthly editorial content of just 16 pages. *Tempora mutantur, nos et mutamur in illis* (it's fashionable again to quote in Latin) but also *plus ça change plus ça reste la même chose*, and I doubt that the hard-working hordes of editors today make out any better on the investment than he did. With all best regards to Ned.

DOUGLAS HASKELL, AIA  
New York City

(Note to Good Old Doug: *The Journal* does earn its own way! —Ed.)

Bouquets

EDITOR, *Journal of the AIA*:

May I congratulate you on the big spread you have given to the 1959 Rome prizes.

I think you know that I spent five months in Rome last year as architect-in-residence and was deeply impressed with the marvelous facilities available to young men and women who could qualify for Fellowships at the Academy. The principal thing lacking was the necessary publicity to familiarize the younger people in the profession of the opportunity available, and your wonderful layout in the September issue of the *Journal* does a grand job.

NATHANIEL A. OWINGS, FAIA  
San Francisco, Calif.

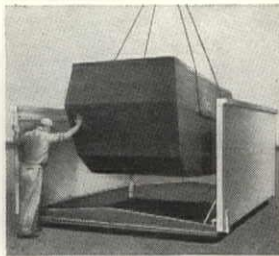
EDITOR, *Journal of the AIA*:

*Journal*, since combining *J.* and *Tech* — excellent — good — and a well-done job. Congratulations to *all* who had anything to do with it.

JAMES TODD BALDWIN, AIA  
Lancaster, Pa.

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► The nature and function of construction contract bonds and the advantages accruing from the bonded contract to the owner, architect, contractor, subcontractor and supplier are discussed in a forty-four page booklet just published by the Surety Association of America.

The Foreword was prepared by AIA President John Noble Richards, FAIA. Under the title "Bonds of Suretyship," the booklet reproduces in convenient form the three sections on bonds from the 1958 edition of the "Handbook of Architectural Practice." Five appendices reproduce the Bid, Performance and Payment Bonds recently approved by the Institute, and the Performance and Payment Bonds of the US General Services Administration.

Copies are being sent to all members of the AIA and the AGC. Additional copies may be obtained from the Surety Association of America, 60 John Street, New York 38, N. Y. ◀

## Columbia Students Study Washington

► Fifteen Columbia University graduate students, under the supervision of Dr Harry Anthony, Associate Professor of Planning and Housing, are undertaking a study of the redevelopment of the center of Washington, D.C. The D.C. Junior Chamber of Commerce is sponsoring and financing the project. The students' work will be presented to the National Capital Planning Commission when completed in May. Director Finley of the NCPC has assured them of the Commission's full cooperation.

The area included in the study extends from the Potomac to the Anacostia rivers, and from the Southwest Freeway to Florida Avenue and T Street on the north. Within this area lie the commercial district, most of the government buildings, a large residential section and other major cultural and business facilities.

After a survey and analysis of existing conditions and a diagnosis of present trends, the students will make proposals for the future development of the city, including such principles as separation of pedestrian and vehicular traffic, height and design control of buildings, a central loop highway and extension of the Mall east of the Capitol. It will also include the creation of

super-blocks and pedestrian malls in the shopping districts.

Finally, the students will study ways to implement their plan, including an examination of necessary administrative procedures, the amount of money needed and what specific projects will be involved. With the nation's interest focussed on the development of the capital city, the Columbia plan should attract considerable attention when it appears. ◀

## RAIC Committee Studies Housing

► A Committee of Inquiry of the Royal Architectural Institute of Canada is travelling about the nation studying housing. Edmonton, Calgary, Regina, Winnipeg, Toronto and Montreal have already been visited; fifteen cities and 9,000 miles of travel are scheduled.

The inquiry is being financed by a \$30,000 Federal grant through the Ministry of Works. The architectural profession is conducting the inquiry as a public service, having in mind that a half-million Canadians move into new dwellings each year.

The Committee is making a visual survey of the nation's residential areas, hoping to learn how circumstances can be improved to provide better-designed residential areas. The group is interviewing homebuilders, lending institutions, transportation consultants and consumer organizations. More than a hundred briefs have been filed with the Committee by large-scale building firms, professional housing consultants and Government officials. Members of the Committee are Peter Dobush, Montreal (Chairman); John C. Parkin, Toronto; C. E. Pratt, Vancouver; and Robert Cripps, Toronto. ◀

## News From UIA

► The competition for a cultural center for Leopoldville, Belgian Congo, was judged from May 27 to June 2 by a jury consisting of Richard Neutra, US (Chairman); E. Rogers, Italy; C. Van Eesteren, Holland; L. Stynen, Belgium; and M. Titz, Belgian Congo.

No first prize was awarded out of the 126 projects submitted, from twenty-five countries. Three received second prize; four received third prize, including one from USA (A. Haner & D. Haner); and four received special mentions. ◀

For the new Air Force Academy buildings, only highest grade materials were chosen, including Hillyard seal and finish for well over one million square feet of wood floors.

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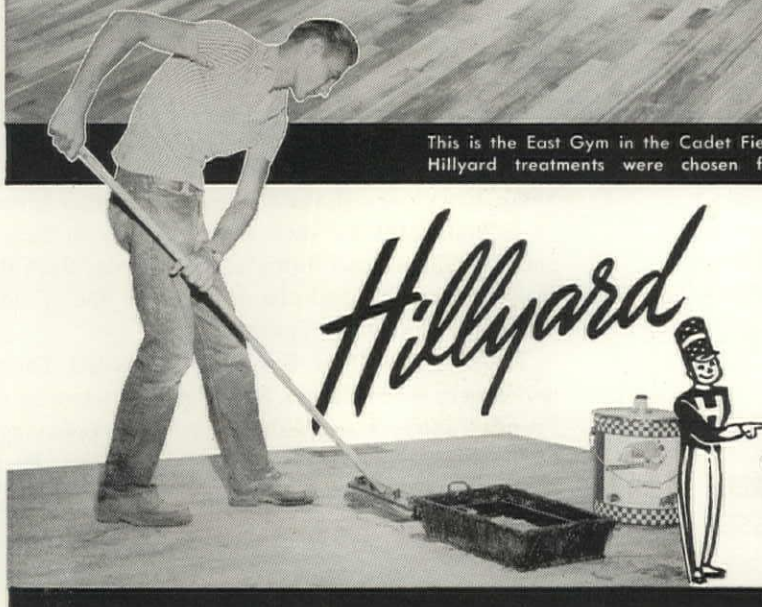
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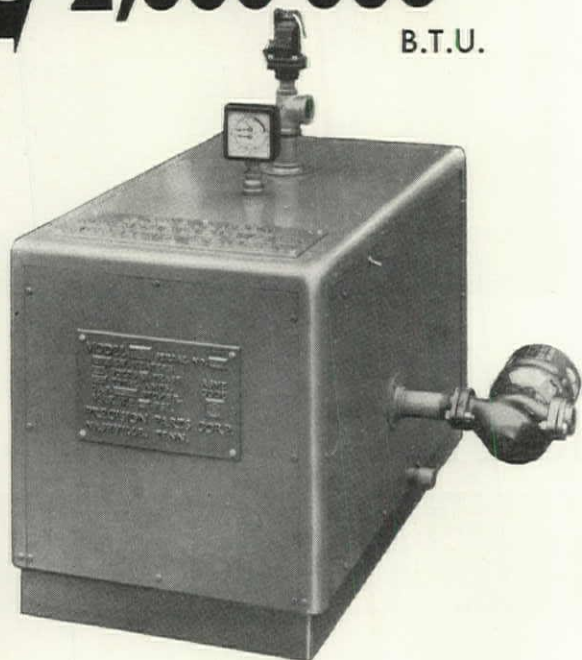
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## NEWS

### AIA-Home Builders Competition

► The West Kentucky Chapter AIA was asked by the Associated Home Builders of Louisville to participate in the 1959 Metropolitan Louisville Home Show by conducting a competition for a house design to be used as a "centerpiece" home at the Home Show and later to be built in local subdivisions.

The Chapter responded actively and set up an open competition under the AIA rules. The Chapter chose its current president, Clyde K. Warner, Jr. as Professional Advisor, and the Home Builders set up prizes of \$600 for first place, \$300 for second place and \$100 for third place.

The program was distributed to sixteen schools of architecture in eastern US, to various AIA chapters and to the public. Out of 140 applications, a hundred entries were finally received. The jury consisted of two architects, an architect-editor and a builder as chairman.

The first prize went to Richard J. Paulin and Ronald E. Ginn of Gainesville, Florida. Their winning design was erected at the Home Show and was rebuilt in a Louisville subdivision for sale to the public. The competition helped to generate considerable public interest in the house, and both the Chapter and the Home Builders were well satisfied with the results. It was a good example of architect-homebuilder cooperation, which may well serve as a model for other chapters to follow. ◀

### International Prize in Architecture

► Established by *l'Architecture d'Aujourd'hui*, this prize was awarded to Kenzo Tange, the Japanese architect who designed the City Hall in Tokyo and the Arts Center in Sogetsu.

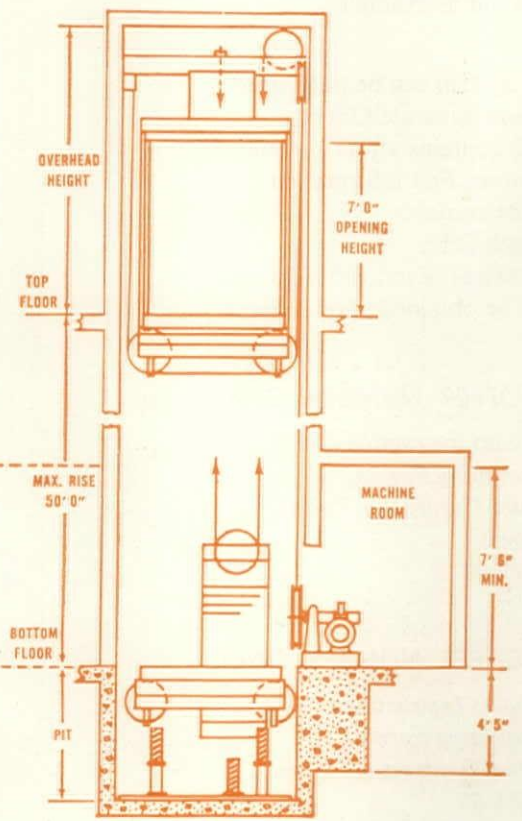
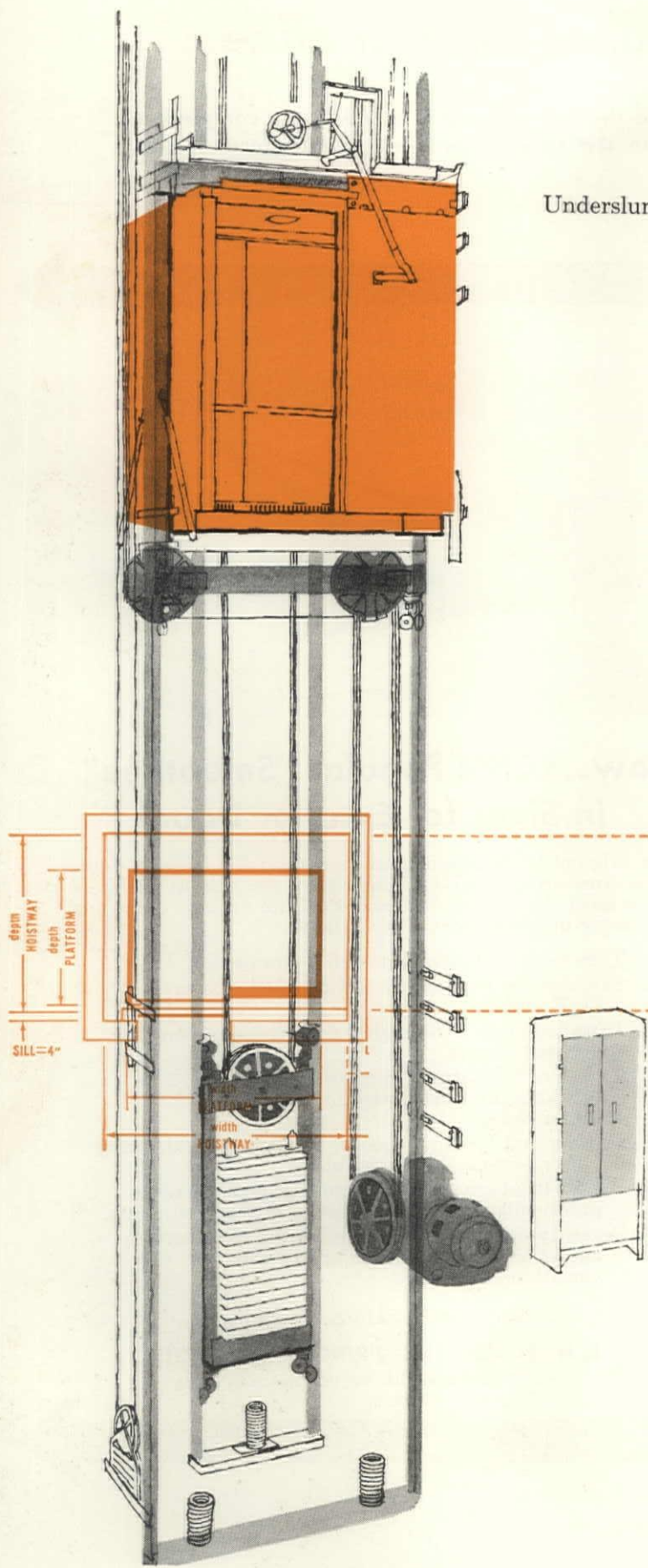
The jury decided to place *hors concours* the submissions of architects already world-renowned, wishing to bring forward new talent. Kenzo Tange has given evidence of diverse qualities: sensitiveness in plastic elegance, power of invention, quality of detail and excellent use of materials.

He has designed various projects, either alone or in collaboration, such as the Palace of Peace and the Children's Library at Hiroshima, the City Hall at Shimizu and the Library of the Tsuda Technical College in Tokyo.

The donors of the Grand Prize invited Tange to France, where there were many evidences of Franco-Japanese friendship under the patronage of the Japanese Ambassador and prominent Parisian personalities. ◀



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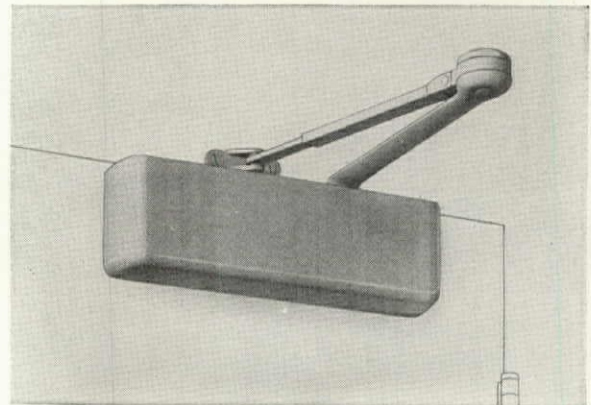
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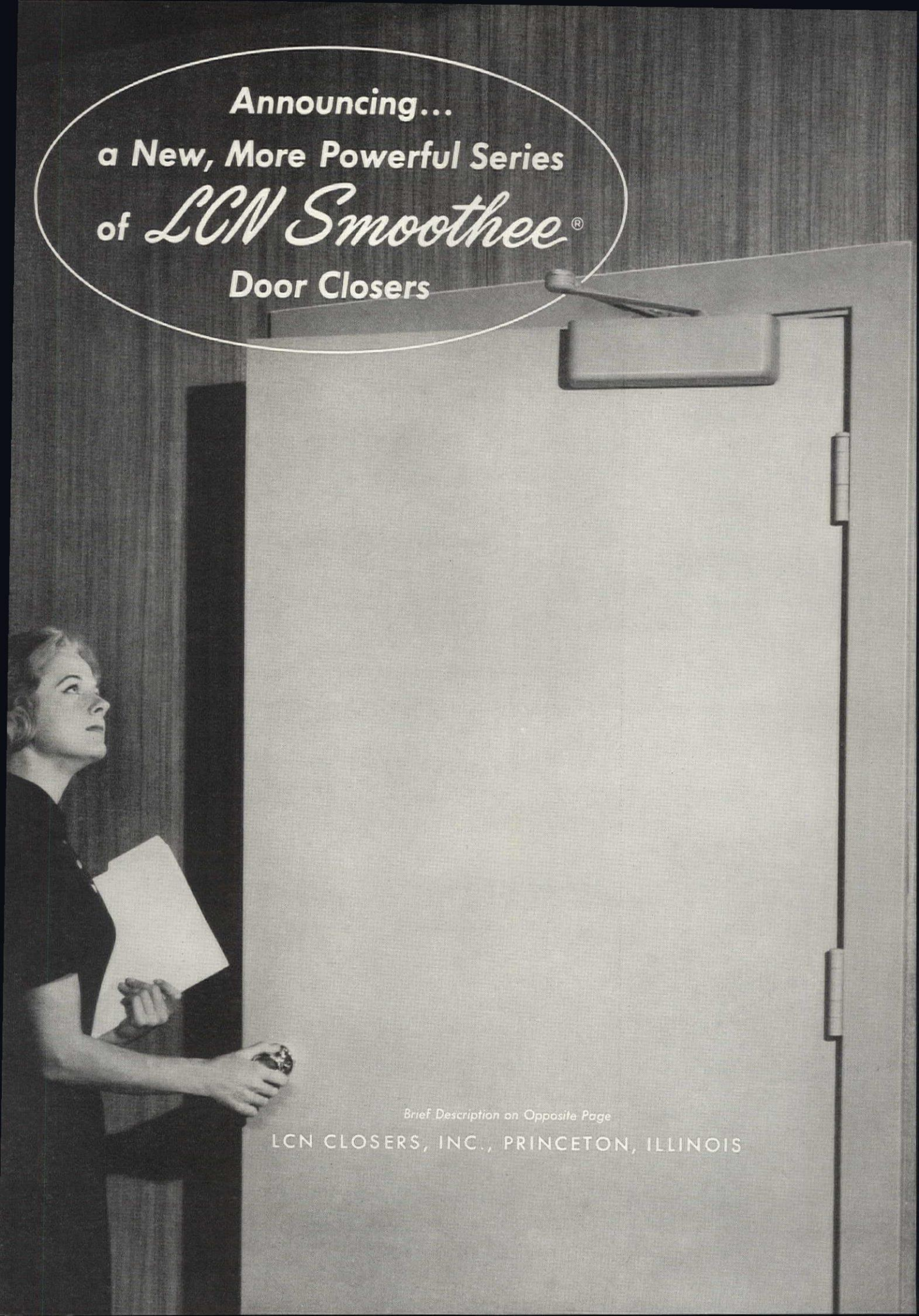
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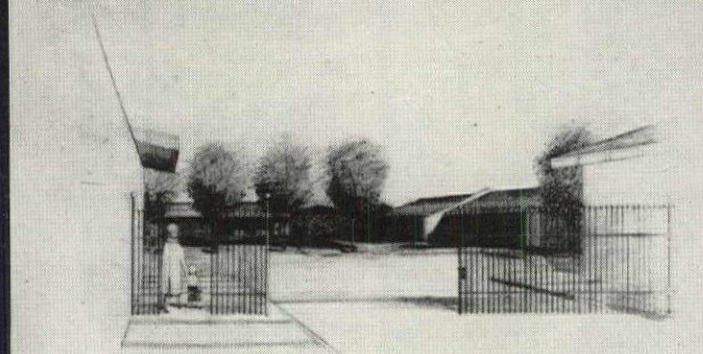
# GRAND PRIZE 1959



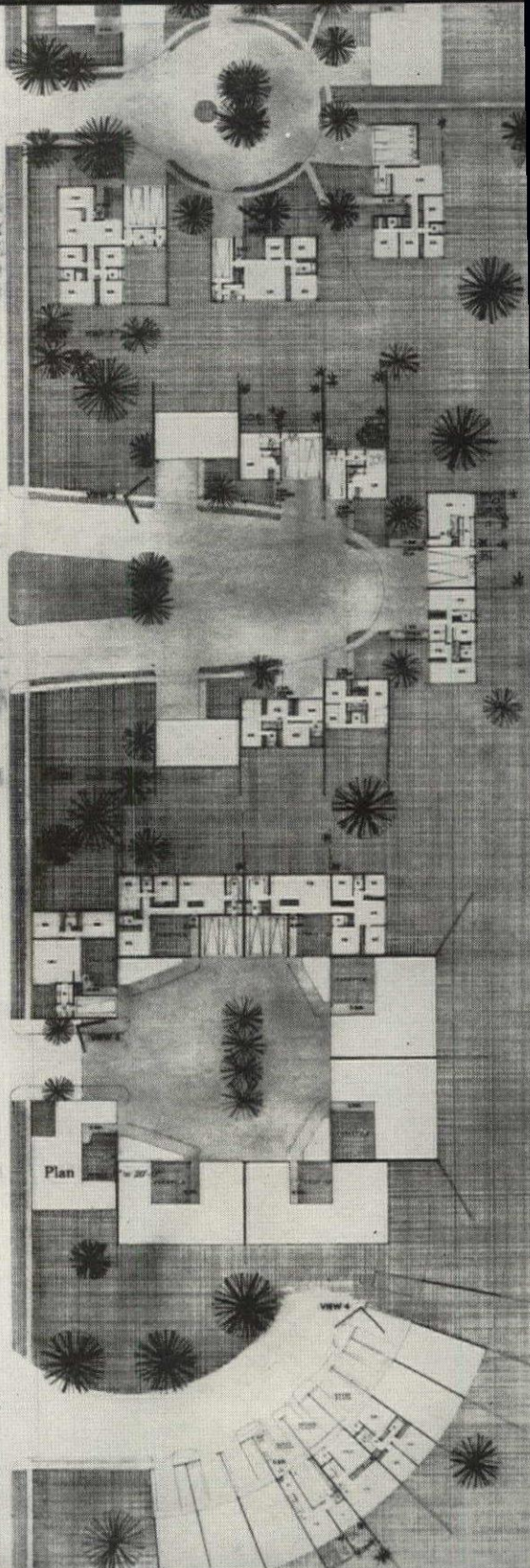
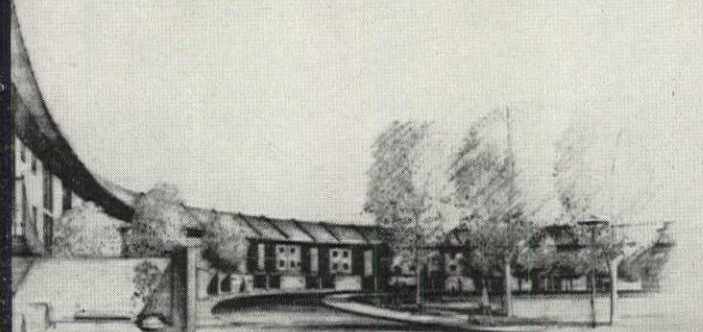
Detached House Micro-neighborhood



Staggered Row House Micro-neighborhood



Atrium House Micro-neighborhood



# Annual Design Competition

## CONCEPT

A major need in tract housing today is to express the small town community of the past in a new form. First, to better relate the individual home to its neighborhood community environment:

- We create a community of micro-neighborhoods sharing certain desirable facilities in common. Each of 56 micro-neighborhoods is located on a cul-de-sac with an average of ten homes. No home faces a circulation street. This makes possible the pedestrian environment essential to good family living where children's safety is primary: Common neighborhood areas are reached by crossing at most one circulation street.
- A variety of things to do are provided within the neighborhood. Pedestrian walks lead through "Small Stream Park" to small playgrounds, sports facilities, the community "country club," "general store" concession, bus stop, a late hour convenience grocer, and toward schools, churches, and shops.
- For the automobile, a circulation loop links micro-neighborhoods, community facilities, and access highways.
- The two small store concessions are conceived to help focus the neighborhood internally, and help support the community facilities.

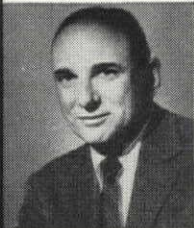
To encourage more individual expression in ways of living we offer four housing types to appeal to varied age groups:

- One story individual homes grouped in micro-neighborhoods of different sizes and character comprise seventy percent of the development.
- Three types of row houses also grouped in micro-neighborhoods, are designed to afford economy of construction and land use. (See ledger.)
- Each type of housing is characterized by a private area for outdoor living. In the row house a front courtyard provides a transition from the street to house, and is also used to handle the automobile.

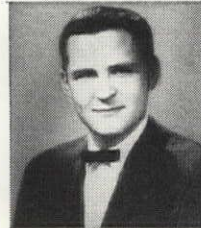
To create a visually appealing environment:

- We propose a comprehensive plan for community appearance. The municipal planning board is assumed to have special zoning powers to adopt this plot which will make the location and arrangement of building binding. These special powers under state enabling legislation are in existence in such cities as New York. They provide that where there is an adequate plan, ordinary zoning rules may be waived.
- To foster pride in the development, and to sustain it as a unity, we propose that deeds include ownership shares in a neighborhood corporation. This corporation shall own all common land, community buildings, and other community improvements, and maintain all private as well as community trees and lawns. An annual assessment of \$30.00 per family will cover building maintenance and labor costs for five employees, each at a salary of \$3000.00 per year.
- A sequence of spaces and vistas unifies the entire development. Both public and private spaces are organized by building masses, heights, and building lines, and by walls and tree patterns to encompass all things seen from the public way. "Vista easements" are provided for public enjoyment.
- A unity of form is achieved throughout the development with simple gable roofs of varying pitches.
- Within each micro-neighborhood a substantial portion of all structures shall be of the same material. Individual character in the micro-neighborhood is obtained with its building material, mass arrangement and special plants or sculpture as the focal point of each cul-de-sac.
- A special sidewalk pattern, street lamps, or other "street furniture" will contribute to the distinctive character of the development.
- The neighborhood is defined from the exterior with a landscaped fence zigzagged at a scale to be comprehended by speeding motorists, and by vistas from highways to the center of the development.

The image of the ideal small town environment can be given new form within the city by the conscious definition isolation of neighborhoods such as this one. If the individual is to flourish, he must again be able to perceive and relate himself to a finite environment of human scale and beauty.



Howard R. Meyer,  
F.A.I.A.



James Reece Pratt,  
A.I.A.



John Harold Box,  
A.I.A.

"The jury awarded the Grand Prize to an entry showing an unusual degree of sensitiveness, coupled with practicality. By unanimous consent, they found it to be a most convincing and beautiful solution at all levels, from the general concept to the varied and well-conceived details. It shows a respect for economy without forgetting the essential demands for aesthetic expression. In the opinion of the jury no other entry had the same degree of self-assurance or clarity of direction."



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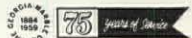
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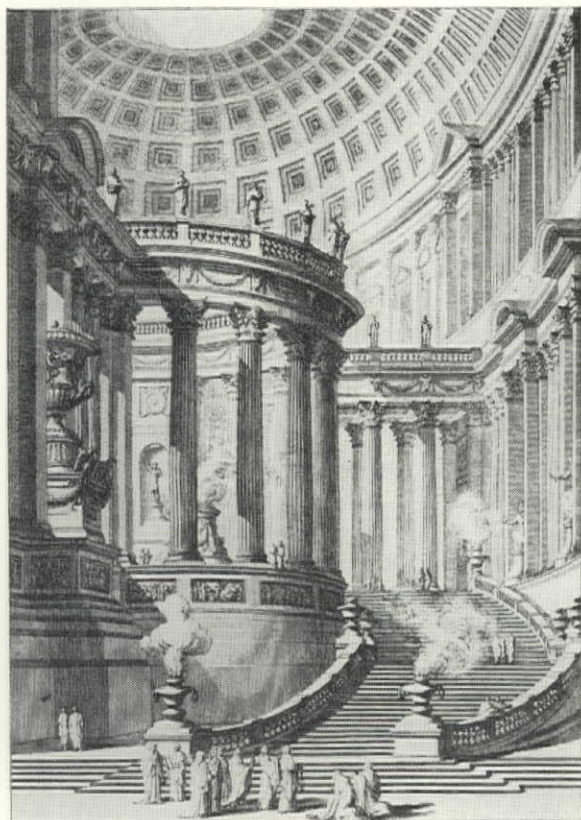


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BY PAUL THIRY, FAIA

► Total Design, as I propose to apply it, has reference to architects and to architecture in its totality.

Total Design, as the term implies, is a comprehensive subject; however, for the sake of brevity, I have divided it into the following categories for your consideration:

- 1 Education
- 2 Creative Forces
- 3 Continuity through Architecture
- 4 Preservation

At the outset we must be prepared to accept the premise that life is a continuous process and that there is no confusion between the require-

## Total Design

ments for new design as contrasted with the needs for the preservation of the historic past.

In the first century B. C., Marcus Vitruvius Pollio, architect for the Roman Emperor Augustus, wrote this directive for architects:

“Acquaint yourself with all knowledge. . . . Be ingenious and docile of instruction, for neither ingenuity without education nor education without ingenuity can render a man a complete artist. He ought to have knowledge of letters, be expert in drawing, learned in geometry, not ignorant of optics, instructed in mathematics, well-read in history, to have intelligently attended to philosophy,

to have knowledge of music, be not a stranger to physics, understanding of law and be conversant in astronomy and the aspects of the heavens."

Vitruvius wrote a treatise on architecture consisting of ten volumes. The subject matter of these books is most revealing. To enumerate them:

Book I is on the science of architecture and the branches of knowledge with which the trained architect ought to be acquainted, viz., grammar, music, painting, sculpture, medicine, geometry, mathematics and optics; it is on the general principles of architectural design and the considerations which determine a design, such as strength, utility and beauty.

Book II relates to materials and the earliest dwellings of man and the ancient systems of Thales, Heraclitus, Democritus.

Book III is on styles; symmetry and proportion; inter-columniation, steps and stylobates.

Book IV is on styles and orders and includes a study of the Corinthian, Ionic and Doric orders.

Book V on public buildings has a preface on the theories of Pythagoras, etc. It treats with fora, basilicae, theatres, and the laws of harmonics and acoustics.

Book VI is on sites and planning; selection of sites; planning of buildings to suit different sites; private houses, their construction and styles; the aspects suited for the various rooms; buildings fitted for special positions; farms and country houses; construction of houses in wood, stone, brick or concrete.

Book VII is mostly on methods of decoration, has a preface on the opinions of ancient Greek writers, with lists of Greek sculptors, architects and writers on architecture, and of Roman architects. It has for its subject pavements, mosaic floors; white stucco for walls; concrete vaults, gypsum mouldings, stucco prepared for painting; building of hollow walls to keep out the damp, and wall decoration by various processes.

Book VIII is on hydraulic engineering, and includes a preface on theories of the ancients. It treats of the finding of good water; of hot springs and mineral waters; of instruments for levelling used by aqueduct engineers; of construction of aqueducts; pipes of lead, clay, etc., and other matters on the subject of water supply.

Book IX is on astronomy. The preface treats of Greek sciences, geometry, the discovery of specific gravity by Archimedes; signs of the zodiac and the seven planets; the phases of the moon; various constellations; the relation of astrological influences to nature; the mathematical divisions of the gnomon; kinds of sundials.

*Through inadvertence, and owing to the fact that the Editor was unable to attend the New Orleans convention, the August issue of the Journal printed a greatly condensed—in fact, emasculated—version of Mr Thiry's outstanding address to the convention. In order to bring his thoughts before the profession, the Journal gives here the full and unexpurgated version of Mr Thiry's important talk*

Book X is on machinery. The chapters are on various machines, such as scaling-ladders, windmills, windlasses, axles, pulleys and cranes for moving heavy weights; on dynamics; on machines for drawing water; on wheels for irrigation worked by a river; on raising water by a revolving spiral tube; on machines with wheels to register the distance travelled, either by land or water; on balistae and catapults; on battering rams and other machines for the attack of a fortress; on shields to enable soldiers to fill up the enemy's ditches; on machines for defense, and examples of their use in ancient times.

Vitruvius considered architecture as a total enterprise. His observations made two thousand years ago call, in fact, for Total Design.

Throughout the ages architects have been interested in everything which involves design. As architects, we *should* be interested in everything which involves design. It is our mandate. Ethically, it is our responsibility.

Obviously, our interests may be differentiated from our work. This should be left to the individual to decide.

In the fields of design, we are not able to see the ends, for as architects we deal with all facets of human endeavor—we accommodate our designs to the physical and the psychological. Our activities have a direct relationship to total values, to environment, to work and to relaxation.

Our processes involve visual realization through content, engineering, the sciences and the arts.

#### *The Training of a Student*

When I was a student, we were taught that architecture is the "Mother of the Arts." This was accepted by my predecessors as gospel; we accept it as gospel.

We were taught that we must continually learn and that we must keep an open mind.

We were taught that travel and historical study were necessary for our education; that through study we would understand culture and through culture gain refinement of thought and taste.

Through education and travel we were schooled to understand location, site, climate and the social and religious implications of life. Our observations were geared to note the architectural differences in situations and the differences brought about by inferences of time and place.

We were trained in structure and we learned the methods and styles of the Greeks and the Romans, and of the builders of the Gothic and the Renaissance.

We were attuned to appreciate the intrinsic values of the architecture of those who preceded us as well as the more accurate methods confronting us. Out of our study of structure we came to understand style and the reasons for appearance.

We were taught to analyze problems to enable us to differentiate between low periods in architecture as contrasted to high periods.

As students we were taught to design our own projects. If we needed help to complete our drawings, we called on underclassmen to assist us.

In like manner, we were taught that an architect, by virtue of his position, must assume leadership. If he needs help in his undertaking, he should call in consultants and assistants.

My generation has accepted these teachings. As time goes on I am convinced they were and are correct.

When some of us joined the revolt against things as they were and decided a new architectural approach was needed, it was not a revolt against architecture itself.

The revolt was against a hundred years of accumulated architectural deficiencies. It was a revolt against inefficiency and waste, against leaks and dirt, and against inflexible use of space.

The revolt was against trying to solve our problems by using old forms and methods.

Architecture, faced with new techniques of construction, new equipment for erecting structures and new viewpoints in design, had to change and it did.

The change is historical; it is as revolutionary as was the Gothic. It was and is based on the sound principles of function.

It was a revolt against copying. Architects wanted a new life and a chance to pursue the creative process in the solution of newly understood requirements and means of accomplishment.

This was not meant to be a destructive process but a creative one. It had to do with the new, not with the old.

Its latitude allows for comparison as the basis for choice. If we have new techniques, it is fundamentally because we had old ones. The old ones are not all bad. This revolt did not exclude architecture as the Mother of the Arts, nor did it seek to ignore composition, proportion, decoration, design, texture, materials, order, symmetry, asymmetry, detail, light, shade, shadow, the opaque, the translucent, the transparent or the use of elements such as water or the incorporation of the fine arts.

It did not preclude the lessons to be learned from ancient structures. It recognizes that methods and techniques change. But spatial forms appear and reappear under different guises. Nature itself embodies all forms and shapes and these we strive to put to our best use.

### *The Modernists*

The moderns represent revolt from the past and run the gamut of their individual and collective ideologies.

Because we live in the present, it is this group of individuals who merit our attention. Their thoughts and actions are important because they indicate the paths of the future—the modernist of today will be history tomorrow. He will be superseded. Some future antiquarian must see quality in his work and save it for posterity.

Usually when we speak of the Modernists, we mean the old guard who proclaimed the need for change and waged the rebellion against deterioration. They had complacency and/or bitter opposition to overcome and much indoctrinating to do. They pointed to the shortcomings of what was being done and charted a new course. As they have picked the bones of the traditionalist, now they are having their bones picked.

But regardless of the application of the term "Modernist," we must always have them with us. A modernist is of the moment. His stature in architecture will depend on the quality of his work and in a measure on his vision of the future. How he withstands the vicissitudes of time is his test.

Recognizing the need for a modern outlook, let us deviate for a moment and take a look at what is going on right now.

We have clear-thinking persons who set the pace in architecture. These are not restricted to past generations but are contemporary.

We have great architects in the world today who have styles of their own and have their followers.



*Le Corbusier: Garches, S.-et-O., Les Terrasses, 1927*

But let us not confuse these with the new cults, who, before a modern architecture has an opportunity to develop, predict its demise, such as the newly-awakened, who find modern architecture a bitter pill, who, without analyzing the reasons for change, have panaceas all their own. These are the self-elected warmth cult. Modern architecture, as though it could be isolated, they say is inhuman.

Now we are on a foray of humanization—this takes strange forms from the restoration of gas lamp posts, to boards and battens and odd mixtures of brick, stone, asbestos boards, aluminum siding, shingles and anything else one can find all done up in a single composition.

New techniques are the vogue of the day, so naturally a new techniques cult has developed which can put together most anything and whose exponents, with scallops, sculptured shapes and cantilevers are having a hey-day.

We have the expressionists, who can talk architecture through its devious phases. These use form and spatial content for their private ends of mysticism. Their buildings possess emotional content on a scale ethereal enough to confound most any one, even themselves.

Carried into art, this expressionism is exemplified by corroded metals and incrustations, to scalpel daubings, to standing off and throwing paint at the canvas, or egg yolks at walls. Anything goes—seaweed, driftwood, chicken wire, nuts and bolts and molten glass—for these, too, possess emotional content.

We have those who expose their buildings unmercifully to weather, or, in contrast, create great structural gymnastics in the name of the humanities.

Related to these are the indiscriminators who perpetrate structural facades and dirt catchers in the name of art.

Structural ornament, finials, north side sun shades, grillage and louvers which cover up struc-

tural and planning faults are part and parcel of the picture.

Some of these bird refuges remind one of an unmade bed with an afghan thrown over the top to hide the wrinkles beneath.

Group effort and architecture by committee are becoming the vogue of the day. This is, of course, on the premise that no one person can do anything, but collectively persons can do everything.

In the face of these varied and measured views and activities, we have the cult of the bored—impalas who, scenting the smallest rustle of disturbance, flee to the refuge of indifference. When confronted with their own work they brush it off as being a phase. They don't do it that way any more. This is a form of exhibitionism. There is always something wonderful and different just ahead, it's on the boards.

These cults, masquerading under the guise of modern, all contribute to the faults rebelled against in the first place. Let's call most of it mule architecture. No pride in ancestry; no hope in posterity.

Let us trust they will not push architecture back into the morass from which it has only so recently extricated itself.

#### *Today's Siren Songs*

Material distributors and manufacturers are quick to grasp opportunities to produce mile upon mile of window walls and prefabricated devices of all kinds for the indiscriminate use of the trade.

Exaggerated statements on design are the rule rather than the exception. It seems architecture is almost a vocal art.

It is increasingly difficult to believe what you see from what you hear.

All this and more is aided and abetted by the press, which, steeped in sensationalism, mass production and dollar volumes, keeps adding gasoline to the fire.

Showmanship and public relations synonymous with commercial ventures are carried into architecture. Exaggerations cloud issues.

Awards once restricted to excellence and merit are now proffered for every conceivable purpose. They are as commonplace as there are promotions conjured up by sales engineers for organizations, manufacturers and circulation departments.

Creativity has taken on strange forms both in architecture and in the arts.

We are exposed to constant incantations on the subject. Creativity is described as metaphysical, biochemical or esoteric. In the field of architecture it has of late involved the womb, creation, procreation, reproduction, growth of cells, split-



ting of cells, atoms, electrodes, astrophysics and voids and solids. It is described as motivated, automated, compressed and tensioned. Buildings must float, be suspended in space, be sculptured or immaculately modular.

We hear that creative force is natural to everyone and woe to him who does not have it, for he must acquire it.

In the hands of the dilettantes, the proper building in the proper place is the least of the worry, especially when everything must have sales appeal, have personality, be progressive, be different and by all means have the qualities of the occult.

To achieve these so-called attributes nothing must stand in the way, nothing is sacred, neither progress nor sacred quality.

Following the siren's song, our cities, our towns and, worse, our open countryside are despoiled.

### *The Continuity of Architecture*

The ability to create is given to everyone in varying degrees. It is a wise person who knows how to use this most precious gift and who has schooled himself in the disciplines necessary for its full realization.

The greatness of a creative work can only be evaluated through the years. What appears to be great creative work today may not stand the test of time. We should be mindful that even Leonardo Da Vinci in his day did not enjoy the adulation which is his at present.

Architecture is an ethereal, spiritual and nebulous undertaking, but, unlike its intangible beginning, a building is a reality with its foundations in the ground. In short, we have moved from the unreal into the real.

At this point, a building becomes worthy to be kept or destined to be expendable. The choice also has become a reality.

There is the school of thought, which we shall call the expendables, which firmly believes a building should be built for a limited-time use and then be destroyed. They propose a life span for buildings of from ten to fifty years.

On the face of it, this idea has intriguing speculations but followed through on a comprehensive basis it has no foundation in fact.

Usually those who make such recommendations refer to the work of others rather than to their own.

Obviously all structures cannot be demolished on a continuing basis either from a logical or economical standpoint.

Building materials alone preclude this possibility but for the sake of argument let us pursue just



*Park Avenue, New York*

H. Armstrong Roberts

one project with this view in mind: The Piazza San Marco, (started in 880 A. D., with buildings added as late as 1810 by order of Napoleon I).

Here, for example, is a majestic place mellowed by years of splendor, which has been kept long enough to demonstrate the qualities of architecture and to observe it as Mother of the Arts.

Here is continuity, a thousand years of it. Here is recorded the work of the architects Coducci, Sansovino, Giovanni, Buon, Lombardo, Ricco; and participating artists, Leopardi, Titian, Tintoretto, Giambono, Jacobello, Vittoria, Vincentino, Palladio, Tiepolo, Caliarì, Veronese, Scamozzi, Palma, Zuccari and Bassano, to mention only a few.

San Marco's assembly is not a museum of the past, it is a vital place which gives the spirit of living and of music to life.

Here is expended man-made effort and artistry for the enrichment of man's environment.

The Piazza San Marco is not the result of a plan. It is the end result of planning. It represents the conscientious efforts of many men—sensitive to a total problem. Buildings, all of importance, have their relative place in the total assemblage.



Underwood—Stratton

*Piazza San Marco Venice*

Sculpture, mosaic, fresco and painting flow continually throughout, each work important but in relation to the whole.

What a tragedy if we were to lose any part of San Marco—from the colorful boats and pilings along the Molo to the pavements of the Piazza itself.

Do we need further argument for the permanent or for continuity in architecture? There are many others. The world abounds in places of architectural quality. Italy, France, England, India, Japan. Every country has its treasures. We have ours.

#### *Accelerated Architecture*

Continuity is defined as continuous or a connected whole uninterrupted in time.

In architecture, continuity means we assume our relative position in the scheme of things. It means we contribute our share to the human pageant and that we exert our efforts to influence for the betterment of our environment, not merely for ourselves but for posterity. We architects in a large measure create the environment which stimulates culture and refinement.

Culture and refinement are attributes in themselves, but are effective only so far as they contribute to the enrichment of life.

Continuity requires knowledge of the past and the present. Continuity implies discrimination and

presupposes appraisal of the useful and the non-useful. It requires the discarding of the useless and imposes an obligation to retain the useful, for it is only the useful which can be considered as contributing to the treasury of mankind's inheritance.

Through their education and training, architects should have the knowledge to differentiate between what should be retained and what should be discarded.

Production, which is the physical result of creativity, preservation and destruction, forms the basis for our collective problem and for successful continuity of architecture from one generation to another.

Within these three, production, preservation and destruction, are embodied the precepts of total design.

Comprehension of total design is mandatory. Although values inherent in total design vary from country to country, according to peoples, to religion and social customs, it is incumbent on architects to understand historical backgrounds and the mores of the people involved. When architects are called upon to sit in judgment on peoples and their institutions, it is essential they be equipped with a thorough knowledge of their subject.

There are too many people, including architects, who avidly sit as judges and who are personally convinced that their viewpoints are authoritative and totally adequate. Unfortunately, we are overrun by those destitute of knowledge, who, obsessed with the doctrine of progress, find no place or thing immune from their immature judgment and unrestrained activities.

They say in an age when things move fast we must think fast. But for the most part haste is confused with efficiency. More times than not, haste is at the root of our problem. Efficiency demands good planning; therefore, in a more practical and realistic way it behooves us to study carefully the requirements of our day. We should do this with reference to the past and with consideration for the future.

Obviously, we cannot revive the past in its own contemporary spirit, but we cannot ignore it because it has its impact on the present.

Fundamentals of life do not change, whereas, viewpoints and methods of living do.

Architecture the historian records these changes—it is the barometer.

In reality, the only static resultant of man's activities has been his structures. In their static nature, they do not change from one generation to another.

Because the phenomena of contact and perception remain somewhat constant, we are able to evaluate architecture retrospectively and we are able to take stock of what we do.

We may ask ourselves then the question: Are we erecting works of significant esthetic quality? The answer is: We are.

With all our techniques and engineering skill have we excelled the cathedrals of Europe or the temples of the East? It is doubtful that we have.

The burden of proof is ours. We have better materials. We have greater technological know-how and we have lessons from history to draw upon.

In countless ways a re-appraisal of what we are doing is in order.

Fundamentally, we face much the same problems our predecessors did. The problems have not materially changed, but, to be sure, the tempo and means of accomplishment have.

Acceleration of movement on the ground, in the air and under the sea has altered the relationship of one place to another. There have resulted in an intensified distribution of both people and goods.

Acceleration accounts for increased production of commodities and machines. It accounts for construction methods which have reduced seemingly impossible tasks to simple operations.

Populations, too, have increased and are increasing at an unprecedented rate.

Increased speed and more people must be accepted as the unit measures of the future. These two factors inevitably require a sharper and more analytical appraisal of the architectural opportunities for order and for an esthetically acceptable environment.

#### *The Need for Order*

As architects, we need to consider more discriminately than ever land use and the placement of communities.

It is increasingly incumbent upon us to know the differences between the urban, the rural and the wilderness.

The natures of these three are different but we cannot successfully isolate one from the other.

For the first time in the history of man we appear to be faced with an overwhelming urge to build everywhere and anywhere. This urge carries us far beyond the recognition of existing values or the correctness of what we propose to do.

Because this urge is on an accelerating basis and relatively uncontrolled, it must become of concern to us.



H. Armstrong Roberts

*Destruction of the countryside*

For as certainly as we cannot avoid building by building, what we do most inevitably has its effects.

If we denude the country, it will be denuded, and if we build in the wilderness we will not have a wilderness.

As architects, we should know by now that all but the city dies with construction.

We need open country and wilderness, both for our own use and for future generations. Being architects we are faced with the responsibility for the successful development of the community, the town and the city.

It is here where architecture provides the setting and facility for man's activities. It is here where we depend entirely on architecture for the protection of our environment.

Isolated structures in the country provide situations of their own making. Good or bad, they impinge on nature and kindly or unkindly they are absorbed. When these structures become contiguous one to the other we have community. Community, in a sense, is an intrusion on nature and on privacy.

We cannot escape by running away, for, as it has been said, "There is no place dedicated to Solitude."

Man has proven he will live in community. This is brought about by the need for protection, services and companionship.

Exceptions have been the agrarians who keep or till the fields. Today even farmers are moving into towns and commute to their fields by day.

To recognize anything but the fact that man is a social animal and that he wills to live in community, despite the fact he appears to attempt to escape it, is a process of diminishing return. Suburbia is a myth.

If we are to be more than sphinxes with our feet in the sand, we must start with some rather bold strokes of area planning on a regional basis.

There is much to be said for the ancient walled town with its moat around it. The wall localized the community with relationship to the countryside. In the ancient society there was a difference between the urban, the rural and wilderness.

Within the wall problems existed in crowding and sanitation and between public and private places. But within the wall it was possible to attack the problems in their confined totality.

Outside the wall the situation was different.

Today, without boundaries or limits, we cannot attack problems in their totality and because of this we flounder and thrash from one unrelated project to another.

To solve for the unknown we must have a few knowns. To accomplish any sense of order, we must establish limits within which to work. We have knowns from experience and history and we have solutions, but because of unstated limits we are unable to complete the equation.

#### *Open Areas Are Unexpendable*

A green zone around cities, towns and communities such as proposed for Ottawa, Canada, would do much to establish limits within which to work.

Separation areas within an outer green zone make possible the subdivision of a city into neighborhoods and districts in an orderly way. These zones can be related in size to the situations involved and in general be predicated on the nature of the land and soil itself.

Such zones should follow the meander of streams through forests and wooded valleys. Green zones of this kind could accommodate parks, recreation areas, parkways, or, where the land is fertile and extensive, be devoted to farmland exclusively. In general, communication routes would parallel these separation zones.

At the turn of the century much attention was given to this principle of land development. In point is the use of woodlands within and near the District of Columbia. Seattle developed a boulevard system which traced the ravines interconnecting its many hills and waterways.

Unfortunately, in recent years, coincident with the automobile, these principles in land development have been lost sight of.

Now open areas of unmolested countryside are regarded as expendable. They are not related to the total problem. Consequently, the public has lost sight of their value for watersheds and for minimizing congestion, pollution of air and of water, and for providing places for relaxation, recreation and wild life refuges within community limits.

Existing town squares and parks are regarded as potential parking lots, and arboretums and recreation areas as places for highways, interchanges and cloverleafs.

We have forgotten that utilities are only service elements and not the criteria in themselves for man's environment.

With the vast exploitation of land and of utilities brought about, because of our changes in acceleration and general economy, we architects have stepped aside, let us hope temporarily, to let some drastic accidents happen.

Too much talk is devoted to redevelopment and not enough to orderly development.

Redevelopment, while held as an esthetic influence, is, in reality, primarily an economic tool and may be exploited. Redevelopment recognizes mistakes. It seeks to cure them but by inference allows for its own series of mistakes.

Urban redevelopment, by its nature, sweeps before it the outmoded and the decrepit, but too often along with it much which is good.

Redevelopment can again in many instances contribute deficiencies by its singleness of purpose.

There is no good argument against orderly development in the first instance. It exercises discipline of mind and purpose. It negates the necessity for making mistakes.

Town planning is the work of the architect. It is not, as many nowadays would like to think, solely a subject of origin and destination, statistics and graphs. Within the field of architecture and part of total design is the relationship of the parts to the whole.

In consideration of the parts to the whole, there often appear inconsistencies. The intermingling of new construction with existing structures as a rule results in incompatibilities which require adjustments.

Too often the adjustments favor the new and tend to overlook the good which is interwoven in the fabric of most older towns and cities.

As architects, we should not let our enthusiasm for the new forestall our recognition of the quali-

ties of the old. We should be the first to recommend preservation.

In the days gone by, no one dredged the Piazza San Marco to allow the water street system to penetrate its depth. Here, in essence, is a place set aside for its own use—surrounded but by-passed by arterials and abutting on the Grand Canal. High and dry and free from intrusion is Piazza San Marco as an example of what has been accomplished and can be done in all town planning. Piazza San Marco has been the heart of Venice since its beginnings but it would not have retained this distinction had it not been respected as such.

Every community has its potential Piazza San Marco. Actually there is no reason why every city should not be enriched with a system of worthwhile places. Architecturally, many older cities and communities are rich in legend and in history. Buildings evidence great charm in color and proportions. Tree-lined avenues and quaint pavings add flavor to the scene.

#### *Historic Preservation and the Design Fraternity*

In most early American villages, towns and cities, plazas, squares, town halls, and churches not only manifest the historical past which we should know and cherish, but they manifest scale and beauty as well. The belief in the dignity of man may be found in the proportions of many an entranceway.

There is no good reason to destroy our heritage. It can be kept. It can be enriched with time and we, in our own way, can contribute to this accomplishment.

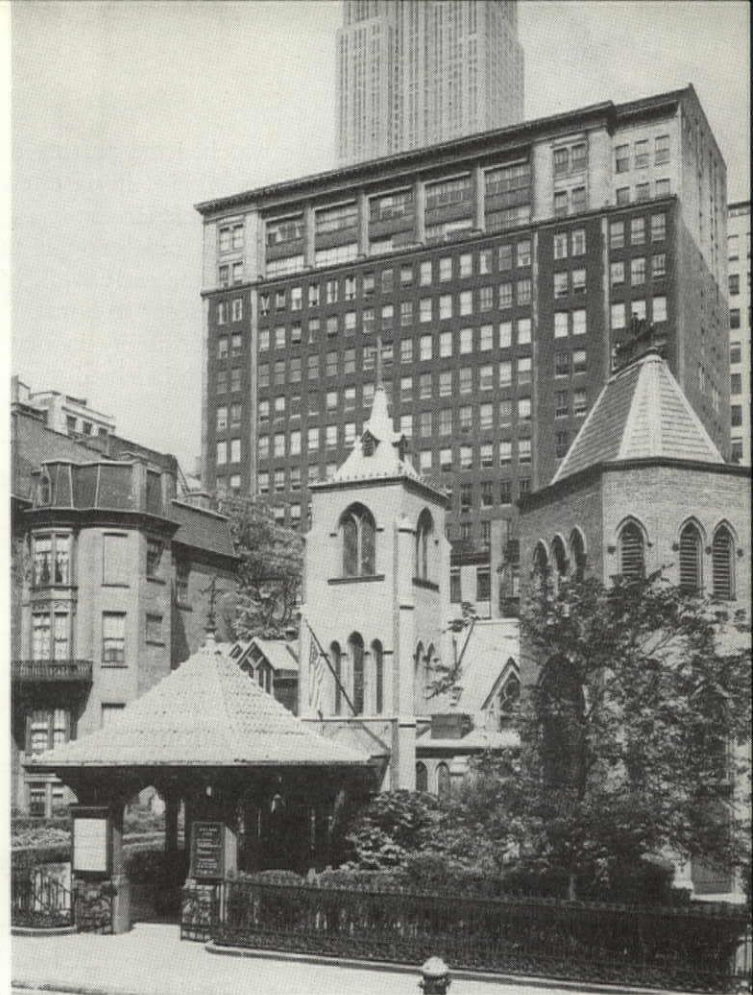
It can be done by a more sensitive observation of our inheritance, by sympathetic appraisal and by awareness of our own activities.

Let us not be prone to ignore the value of the treasure we are destroying.

Too often we allow them to disintegrate before us. Structures and institutions which have withstood generations of use and potentially could continue to do so are left to neglect and ultimate demolition, too often to make way for nothing better than a storage yard or parking lot.

The cause of this decomposition usually is not the building itself but its misuse and lack of maintenance. Often it is the result of deliberate sabotage.

Causes for misuse are many. Exploitation of property income-wise, relaxation of use standards—whole neighborhoods of beautiful dwellings are allowed to decay by allowing multi-family use in single family districts—obviously residences designed for one use are not adequate for another.



H. Armstrong Roberts

*The Little Church Around the Corner,  
New York City*

Infiltration of incompatible land uses — or too often a highway is gouged directly through a district when it should be by-passed, or, using the street right-of-way, viaducts and overpasses are erected which blight the buildings abutting it.

Elegant church spires and proud town halls and squares are over-powered by structures of unrelated scale and proportions and find themselves suffocated. Declasse and disdained, they die and are uprooted to make way for something bigger and presumably more utilitarian.

A case in point is our own capital, Washington, D. C. Here L'Enfant designed a city in which certain structures were to express their individuality, some, by the nature of the plan were destined to be more important than others; most buildings were planned to accept the discipline of a supporting role.

L'Enfant did not see Washington as an assembly of competitive giants but as a place of order.

We are shortsighted to crowd ourselves out of our historical sites. We should find it possible to accept their scale or by-pass them entirely.

As architects, we have watched the passing of countless historical buildings within the last few years without a tear, until the Robie House.

Here is potential destruction new enough to ring a note of warning. Here is the early work of Frank Lloyd Wright. This gets closer to home.

For this disregard and irresponsibility in matters of preservation we are largely indebted to architects and engineers.

It has been my observation that most destruction is caused by recommendations emanating from within our own design fraternity.

Carelessness and lack of respect for our heritage among people who should be the trustees of American traditions is evident on all sides. Such trustees are the political arm of government, the clergy and the religious, architects, town planners, engineers, educators. When carelessness is evident, one can hardly blame the so-called business man, the student or the ordinary citizen for indifference to the problems of historic preservation, especially when tradition becomes synonymous with "old-fashioned" and when the craze for doing away with the old is looked upon as progress.

A means must be found to impress the design fraternity with the importance of the continuity of architecture and of history. Designers must become more discriminate, especially when their recommendations involve the destruction of historic structures.

This cannot be accomplished by crash programs to save a monument, or by catalogs, or by the Sons and Daughters of the American Revolution on occasion assembled.

Because the subject has degenerated to such a low position in the professional viewpoint, means must be brought into being to approach the design professions through such organizations as The American Institute of Architects, the American Society of Landscape Architects, engineering societies and others. Learned presentations on the subject of preservation are mandatory.

Such presentations should not only cover historical subjects but should cover the subject of preservation of the land and of our environment as well. Such presentations cannot revolve around stuffy treatises and meetings on the refinements of classic details, etc.

Because the average student of architecture and engineering has lost sight of the importance of his relationship to history—this brought about largely by the academic zeal to discard the old and promote the modern—students enter professional life with no particular regard for the historic, much less for "dry" subjects such as preservation or

restoration. They do not differentiate between the past generations' slavish copying of ancient designs as opposed to the legitimate maintenance of bona fide works, either in the fields of art or in architecture.

To me, the schools are the real medium for the correction of the prevalent thinking concerning preservation. Following the suggestion that AIA chapter preservation officers approach the colleges for assistance in indexing historical buildings, I would like to go further and recommend that the collegiate schools of architecture be brought into the preservation program by active participation through study and by team activities, not only in indexing, but also in the preparation of drawings, papers and treatises on the subject of historic buildings. Intelligently directed case studies would prove enlightening and encourage interest in the subject.

I believe this promotion should not rest solely with the preservation officer, but should be approached by The American Institute of Architects with the collegiate schools of architecture. The support of the Department of the Interior and its active participation in this work would give stature to the undertaking.

By some means, this movement must be brought to the colleges of engineering—especially to the field of civil engineering, where its views above the mundane are entirely necessary.

I am convinced that the public in general is receptive to preservation where the program has common sense appeal, perhaps accompanied by sentimental or nostalgic quality.

We as architects should back the National Trust for Historic Preservation and contribute to its work.

We should by all means back Earl Reed, Chairman of our own Committee for Historic Preservation. Mr Reed has made this activity his avocation. He has given us great leadership. He deserves our complete and wholehearted support.

The breaking down of standards relating to continuity in architecture is of vital concern to all of us.

We cannot logically divorce ourselves from the past or from the future. It has been said it is hard to know where we are going if we do not know where we have been.

If we disrespect the past and are careless with the present, the future does not bode well for us.

History records only that which has been noteworthy for its evil or its good.

It is up to architects to have a keener and more solicitous concern for Total Design. ◀

# FEDERAL BUILDINGS 1960

BY J. ROWLAND SNYDER

*Director, Architectural and Structural Division, Public Buildings Service, G.S.A.*

An exhibition of new Federal buildings which opened in the Octagon Galleries November 19 to run through January 3, ushers in a decade which points to a high level of activity in Government construction.

The designs, prepared under the auspices of the Public Buildings Service of the General Services Administration (many of these are now under construction), further unfold the promise of the large program described in the AIA Journal of September, 1958.



The projects illustrated on these pages are a sampling of the designs for the Federal office buildings, court houses, post offices, and other types of buildings needed to help satisfy the Government's sizable backlog of critical space requirements. The designs displayed in the exhibit in the form of rendered perspectives, plans, and models demonstrate the important contribution which leading architectural firms are making to the quality of present-day Federal architecture.

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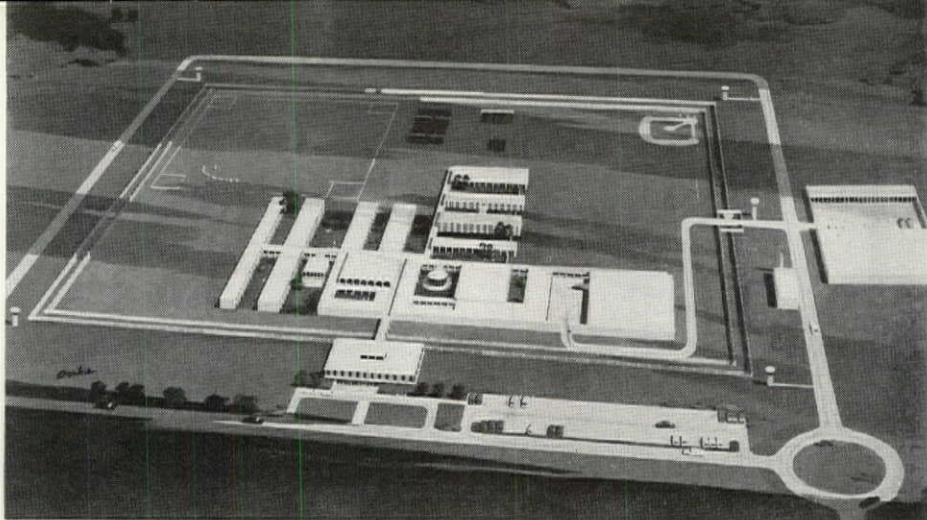
*A Selection from the Exhibit at the Octagon Galleries, Wash., D.C.*



*Federal Maximum  
Security Penitentiary*

ARCHITECTS

*Hellmuth, Obata and  
Kassabaum*



*Court House and  
Federal Office  
Building, San  
Francisco*

ARCHITECTS

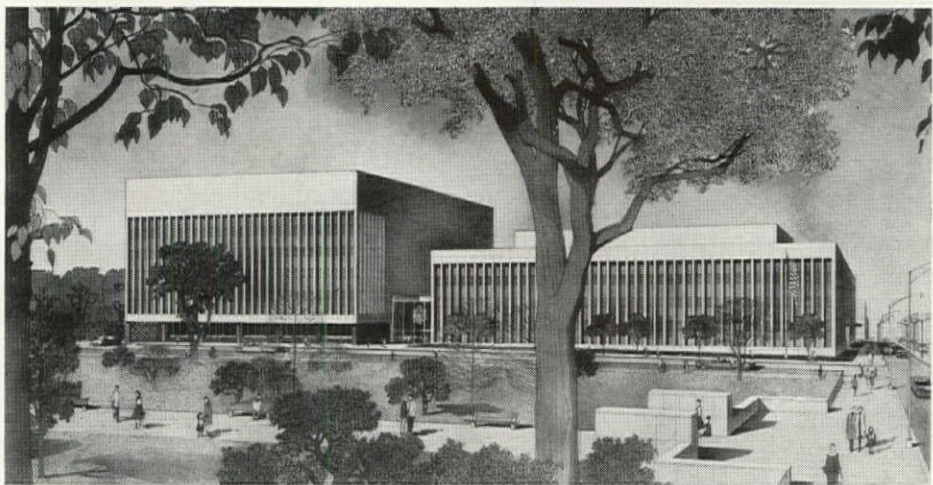
*Blanchard and  
Maher, Albert F.  
Roller, Stone, Mar-  
raccini and Pat-  
tersen, John Carl  
Warnecke*



*Court House and  
Federal Office  
Building, Brooklyn,  
N.Y.*

ARCHITECTS

*Carson and Lundin  
Assn., Lorimer  
Rich and Assoc.*



*Federal Office  
Building, Rich-  
mond, Va.*

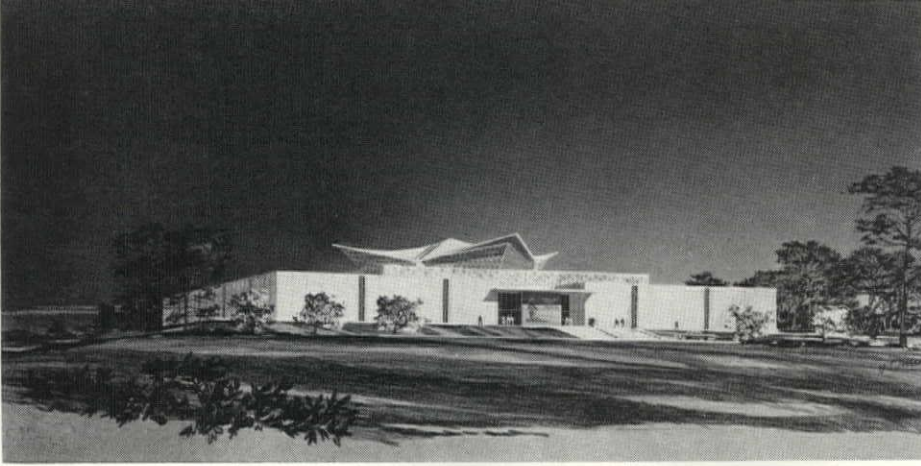
ARCHITECTS

*Marcellus Wright  
and Son, Merrill C.  
Lee Assoc.*





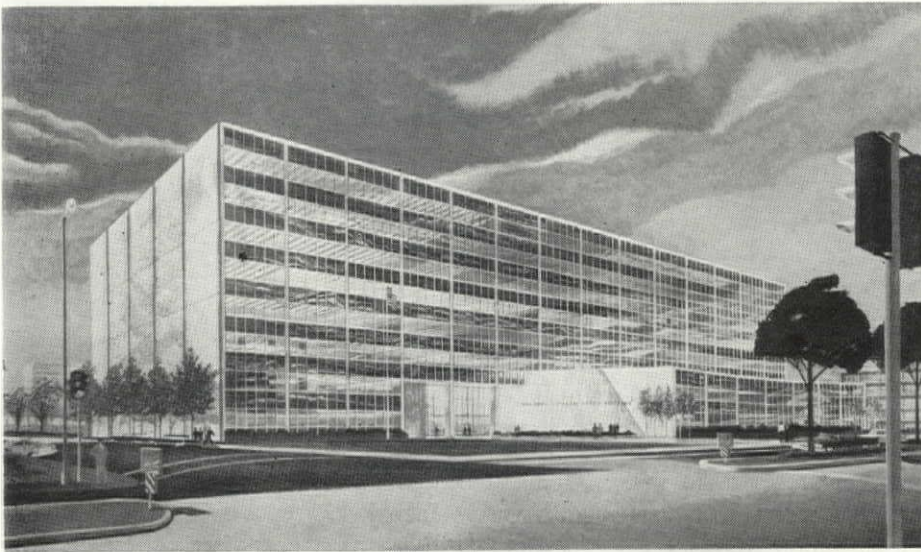
FEDERAL  
BUILDINGS  
1960



*National Library of  
Medicine, Bethesda,  
Md.*

ARCHITECTS

*O'Connor and  
Kilham*



*Court House and  
Federal Office Building,  
Sacramento*

ARCHITECTS

*Harry J. Devine,  
Herbert Goodpastor,  
and Franceschi,  
Dreyfuss, Rickey and  
Brooks*

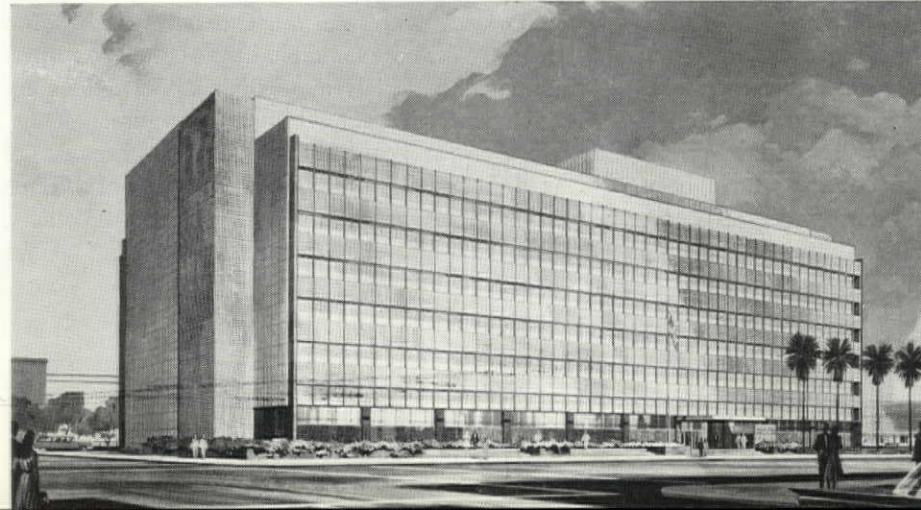


*National Institutes  
of Health, Bethesda,  
Md.*

ARCHITECTS

*Keyes, Lethbridge  
and Condon and  
Richard Collins  
and Assoc.*

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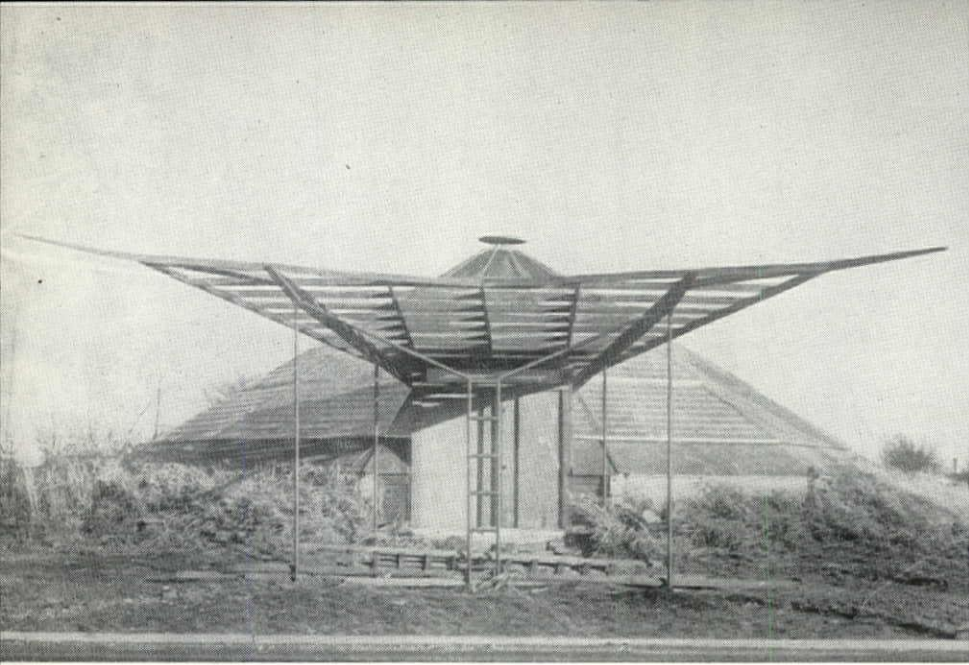


*Court House and  
Federal Office Building,  
Phoenix, Arizona*

ARCHITECTS

*Edward L. Varney,  
Leslie J. Mahoney  
Assoc.*





*The metal "Teepee House" in Norman, Oklahoma, is an example of building under extreme budget limitations—as often happens with Goff houses. This little improvisation of a house, a relative to a farm storage building, has been made exciting by a most delicately designed canopy. (Photo by the author)*

# The Architecture of Bruce Goff

BY H. H. WAECHTER, AIA

In our time, modern architecture is often interpreted in terms of repetitious assembly of pre-designed building parts. Organization Man more often than not makes his home in buildings of neatly worked out monotony, which at times is blessed by refinement of detail. So far, our industrial development has found popular acceptance in a manner which bespeaks self-deprivation of creative expression.

The discipline in restrictive attitudes in form language, which helped us to get rid of much stylistic inanities during the first quarter of this century, is leading us now into constrictions of rarified estheticism on the one hand and into devastating materialism on the other. In fact, social and intellectual conformism have discouraged widely the mastery of the machine through personal expressions of designers and owners of buildings.

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Yet, this modern technical age has produced artists all along who envisioned richer, more human and more appropriate uses of our resources.

The contrast between the more systematizing classical and the more freewheeling expressionistic attitudes has, of course, a history of parallelism which can be observed throughout the various architectural periods. These contrasts have been characterized in various other ways such as, socialism versus individualism, formalism versus

romanticism and, more recently, the term Veblenites versus Jacobites.

Both attitudes have been freely mixed in our time, and both attitudes have produced examples of lyricism as well as of monumentalism.

By now we are so overwhelmed by what production can do in a repetitious way that little attention is paid to the possibilities of expressions which give the human soul a chance to be exuberant, create rich form, and to show freedom from dominance by the machine. Much of what we have done during the past twenty years with our efforts to give architecture the industrial look belonged spiritually to the nineteenth century.

It is only now that we become better aware of this situation. We feel ready to pick up again the lessons of those pioneers who took the possibilities and modes of industrialism too much for granted, and who were more interested in promulgating their visions of how man can live in peace with himself, in a beautiful environment.

I think we should be grateful for having contemporaries with the quiet determination of a Bruce Goff who exemplified that natural and prefabricated materials alike offer opportunities for enrichment of space, form and texture.

There has been much complaint because of the difficulty in pigeonholing Goff's work. Each of his buildings differs much from the others. There is, however, increasing agreement, as far

*Bruce Goff is definitely not a myth, but he does seem to have become somewhat of a legend. The author of this brief account of some of his work has been an Associate Professor of Architecture in several architectural schools, and is now practicing architecture in Cresswell, Oregon. The picture captions are adapted from comments by the author*

as I can see, that the work of this extraordinary architect has exercised an amount of influence which is unusual and significant. This influence is particularly strong with the younger generation.

We are witnessing today a new drive of expressionism which cannot easily be dismissed as caprice. Men like Olbrich, Pölzig, Taut, Gaudi, Mendelsohn, Candela and other expressionists of various descriptions have gained new significance and, after all, Frank Lloyd Wright was always much in evidence. Even Le Corbusier, who over-enthusiastically worshiped the machine, is surprising us by discovering ever freer means of expression. Some of our constructivists in California have shown ways which are far from somber and blend well with the tradition of the Greene brothers, of Maybeck and with the work of Schindler, Harris and Wurster. Recently, the magazines were filled with surprise over the remarkable Presbyterian Church in Stamford, Connecticut, by Wallace Harrison.

Bruce Goff's work has to be seen within this context, as far as historical trends are concerned. He is helping twentieth century architecture to come into its own by taking free advantage of all means at hand to the end of enriching our lives without living a dogma.

Despite Goff's full life of building and design activities, we do not know enough about his work, for contrary to the impression some people

have, his work has not been much publicized. The fact is, this generous man has a mild and very modest personality and is given to no sensationalism. Although Goff is known for having learned a lot from Frank Lloyd Wright—and who has not?—he certainly disproved the master's provocative dictum that one cannot be an architect and a gentleman at the same time.

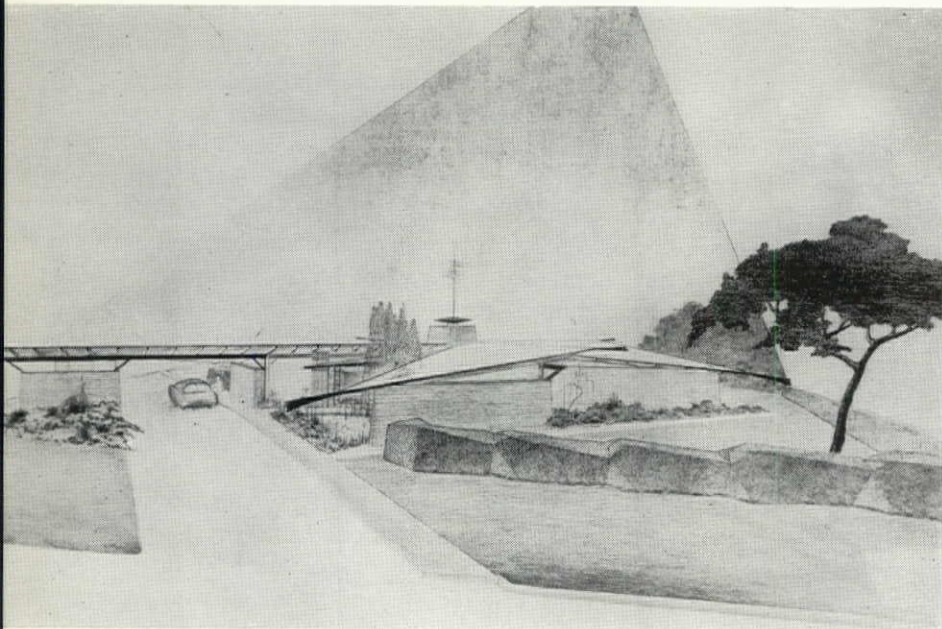
While I have to overlook here Goff's work in the fields of painting and education, it may be said that the rich imagination and fabulous expressions to be found in his paintings made their way into his architectural work. I realize, of course, that such a general statement calls for much analysis and documentation. Likewise, his work as one of the most successful teachers in our time, having inspired students from all over the globe, would deserve much worthwhile attention.

There is no time here to characterize in detail the work of Bruce Goff. With him, who appreciates all the arts and practices many, there is no room for specialization. He is reaching into every direction to serve his bewitching fertility in creating space and form.

Because of the prevailing acceptance of conformity it seems to appear to some people that a design of unusual expressiveness would always require an unusual client with atypical problems. Bruce Goff, however, never claimed that his client has to be an outsider. To be sure, he needed some unusual clients who understood how to take advantage of the architect's imagination for their personal needs. However, for Bruce Goff mankind is made up of individuals who deserve individual attention. There are definitely common characteristics in Goff's buildings, usually reflecting his genius in recognizing his clients' needs. Those aspects of his work which strike us as unusual are nothing else but demonstrations of his imagination in the use of materials and of the lay of the land while seeking an answer to a realistic problem.

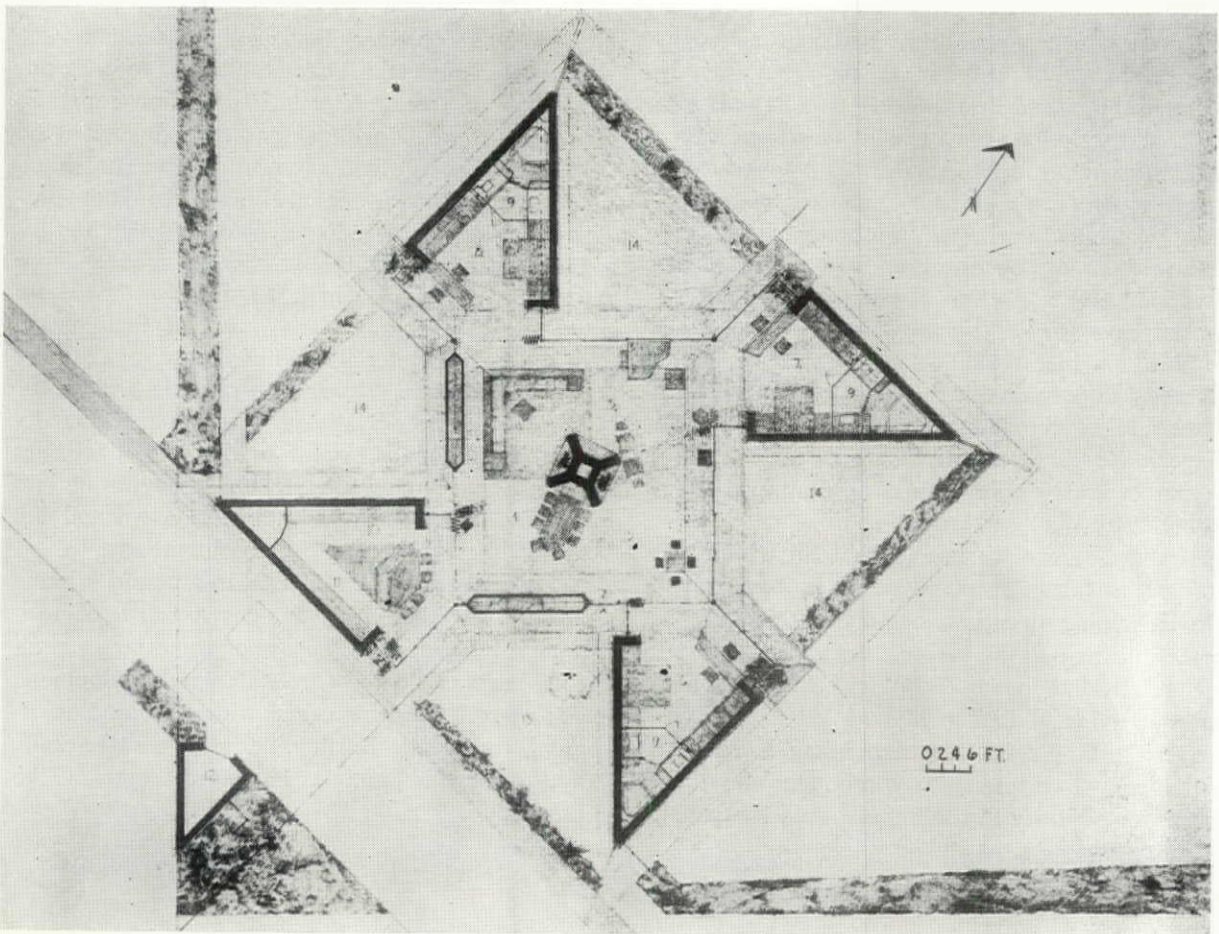
No matter how agreeable any particular design of Goff may appear to us, it is significant that we find in Goff a man who is penetrating into the mysterium of architecture as an art and not losing himself in business considerations.

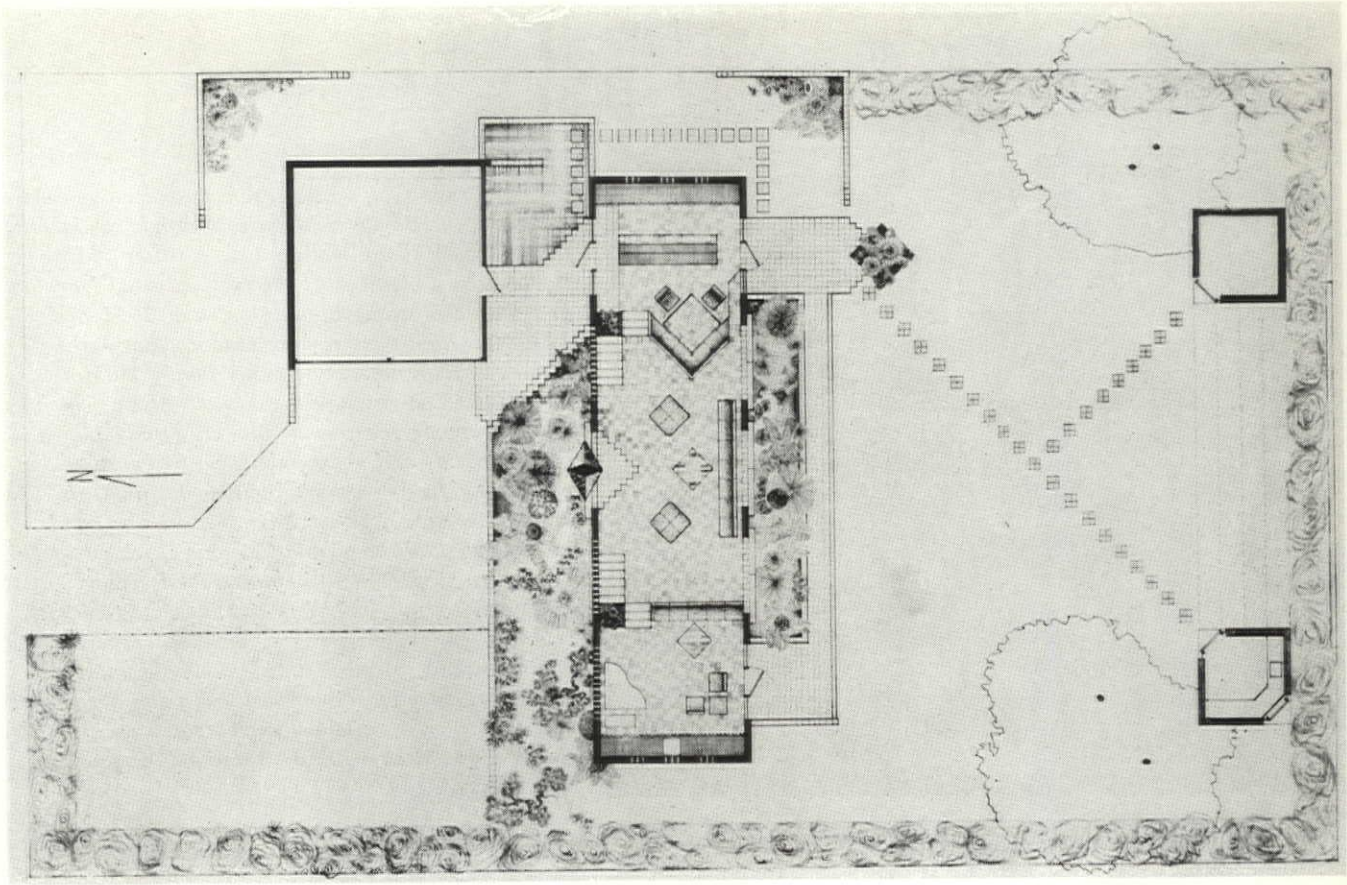
Presently, Goff is immersed in a period of great activity affording him, besides a score of residential buildings, the design of some larger projects, particularly the Circle Center Development, a forty-acre shopping center with office and apartment towers in Bartlesville and the fraternity house for Pi Lambda Phi in Norman, Oklahoma.



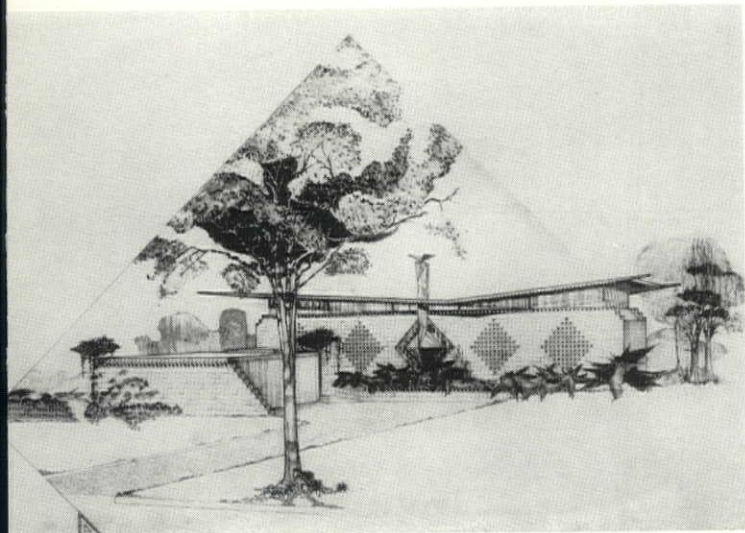
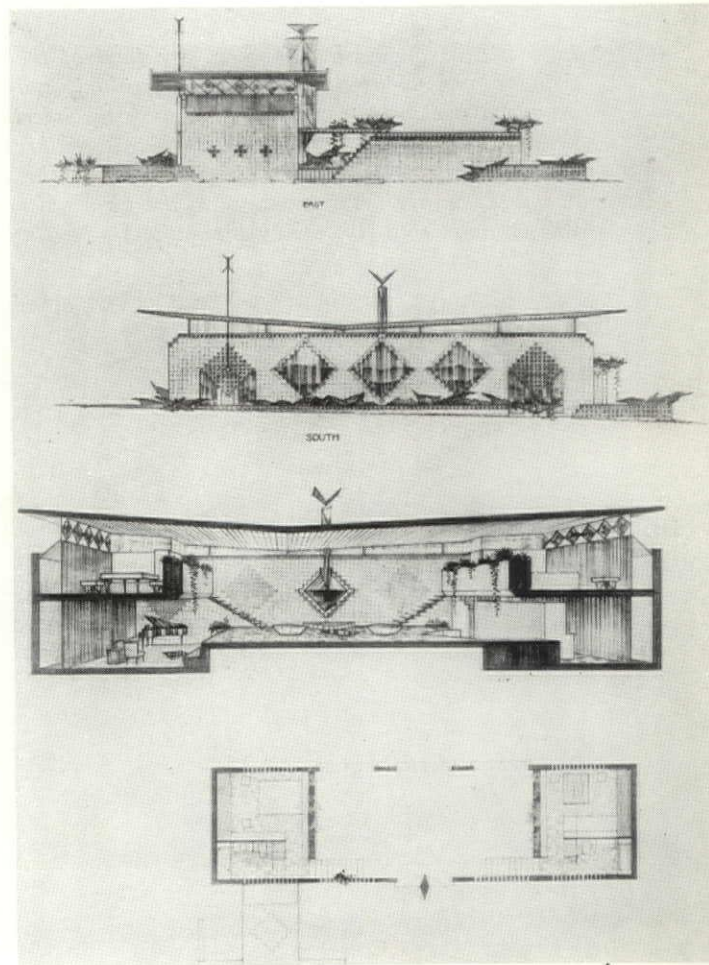
Griggs Studio

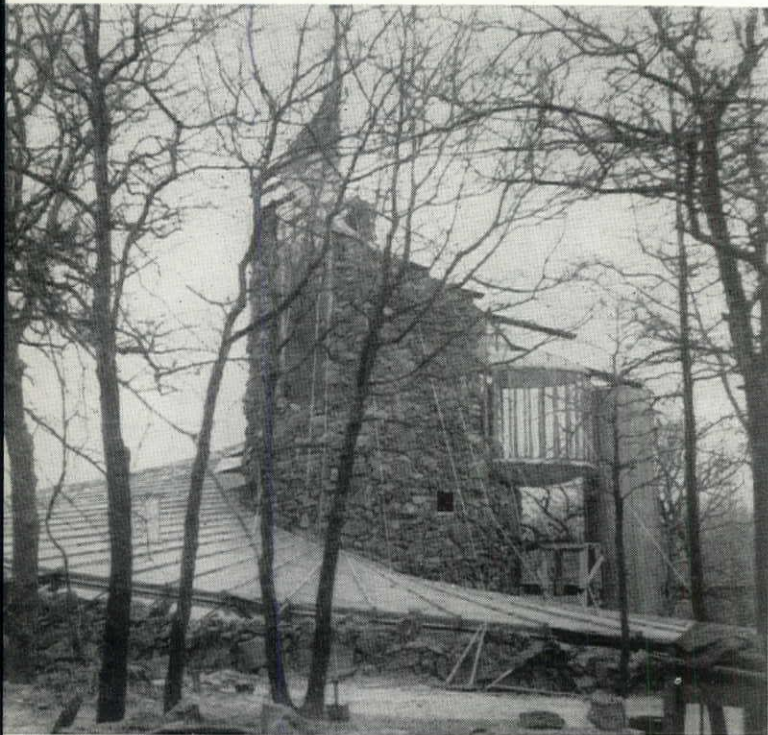
*The pinwheel plan of the Cunningham residence in Lawton, Oklahoma, is quite interesting. Bedrooms with their baths, and the kitchen, are separated and arranged around the central living-dining area. The exterior has the sheltered character of most of Goff's houses, particularly appropriate for the somewhat forbidding climate of Oklahoma. (Photo by Griggs Studio)*





*This house to be built of concrete block in Midwest City, Oklahoma, is certainly a simple enough house, but it shows what a master can do with a material that most architects find difficult to bring life into. Note the continuity of the various spaces. Screens and perforated walls have become the fashion today, but they are not new to Goff; note how they are completely integrated into the other elements of the design*



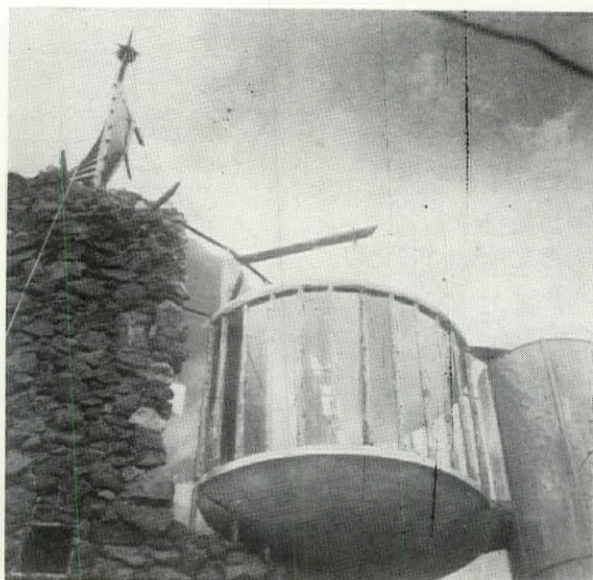


One of Bruce Goff's most exciting and advanced designs is the Bavinger house in Norman, Oklahoma, for which William Wilson was assistant. Mr Bavinger is a member of the art faculty at Norman and built this home himself between 1951 and 1956. His hobby is growing indoor plants, so he wanted shelter not only for his family but for his plants. The result is a fairytale house which not only made the owner and his family happy but expounds and experiments with the principle of moving freely in all directions through continuous space. What Paul Nelson suggested in his cage-like rectangular structure, where space cells were suspended from the arched ceiling, Goff carried out within the helix of a cone. It seems a more logical way to develop a space which is diminishing upward, thus gaining a more natural perspective downward from the suspended saucers which form the living areas, into the living-dining area with its pool and surrounding planted areas.

## THE ARCHITECTURE OF BRUCE GOFF

Inasmuch as the Bavingers were very fond of the local sandstone, it was used in a continuous wall ninety-six feet long, taking the form of a logarithmic spiral crawling out of the ground near the entrance and coiling around a steel pole from which the roof, the interior stair, the living area "bowls" and the bridge are suspended. The ceiling spirals up to a height of three stories at the center of the coil. The kitchen is at the center on the ground floor, the studio is on the third floor. At no time can one see the interior space all at once. The five living areas are in the form of carpeted bowls suspended on the mast and stepped up at intervals of three feet. (Photos by the author)

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# What's Happening to Architecture?

BY IRVING D. SHAPIRO, AIA

► The limited range of services offered by pre-World War II architects has been so greatly expanded in the last fifteen years that the old Beaux Arts-trained practitioner would hardly recognize the role played in contemporary society by his architectural heirs. The change has appeared primarily within the framework of increased specialization, though it is also true that an expansion in function has taken place as well. The traditional services of design, preparation of working drawings, specification writing, and supervision—formerly handled by one or a few men in each office—have been separated on a departmental basis in the larger offices thus permitting the increased efficiency inherent in specialization to come into play. In addition, these basic architectural functions have been broadened in many offices to include those of landscaping, planning, cost estimating, engineering, graphic design, interior design, furniture design, and so on. Indeed, only in the smallest of architectural firms today is the principal still the “whole” architectural man.

One of the major factors lying behind this increased specialization and expansion of function has been the simultaneous increase in the complexity of building and in the size of the market for architectural services. The concepts, techniques, and materials developed since the war became far too varied, diverse, and complicated to be mastered by any one man; specialization was the only answer. Expansion of function became possible with the increasing incidence in the building market of the large corporate client who controlled substantial amounts of capital, who generated work of enormous scope, and who paid fees large enough in total amount to permit the architect to add new “fringe” services to those traditionally offered. The result has been the slow evolution of a new type of architectural firm in response to the slow evolution of a new set of conditions.

It is a credit to the profession that this metamorphosis of the architect was primarily a manifesta-

tion of his constant striving to fully service his client and, in attempting to accurately reflect the changing needs of the changing client, he has indeed come a long way in the last fifteen years. Unfortunately, he has not come far enough.

A most serious gap exists within the otherwise orderly sequential packet of functions offered for sale by the present-day architect, a vacuum which relates to the field of urban land economics—that is, the economics of real estate. Functionally, temporally, or any other way one would care to view the building process, urban land economics matters precede *all* others. Consequently, on the positive side, good urban land economics provides a sound basis for architectural planning. But, on the negative side, bad urban land economics can only lead to bad architecture.

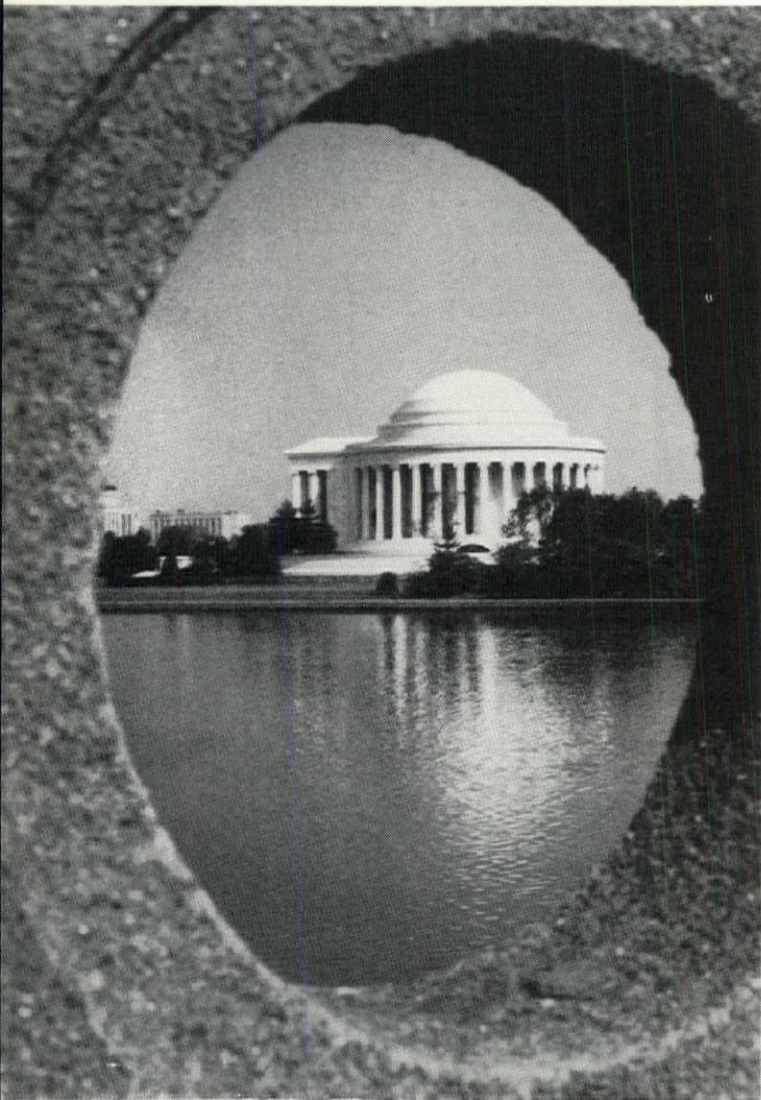
Yet, matters involving the kind of building for a given site, the size of the building, its economic feasibility, financing aspects, and other problems of an urban land economics nature are often either completely ignored by the practicing architect or only tacitly recognized. In either case, he is content to let someone else handle it.

There is yet another aspect to this glaring void in the services offered today by architects. It is well known in the arena of international politics that a power vacuum known to exist anywhere in the world will be promptly filled by one country or another. Similarly with the building industry. That is why an increased reliance for what should be architectural advice is being placed upon other members of the building industry such as real estate brokers, mortgage men, appraisers, contractors, attorneys, accountants, and others, by persons and firms who contemplate building. One manifestation of this practice has been an increasing tendency for these non-architectural practitioners to place themselves *between* the architect and his client and, in many instances, to dictate the design of the project itself in the name of “sound economics.” The architect, not conversant with land economics mat-

ters and, therefore, generally not too sure as to just what constitutes sound economics, is usually defenseless. His only alternative in these situations, therefore, is to submit to the design dictates of these non-designer designers, rather than lose face with his client. Yet, it is not the brokers, attorneys, accountants, etc. who are at fault; they are merely trying to satisfy a need. Rather, it is the architects who are to blame for permitting such a vacuum to exist in the first place. For in a relatively free economy such as ours, if the demand for a type of service develops, someone will always rise to fill that demand.

At present, there appears to be no counter-force being formed within the architectural profession which promises to arrest this unhealthy development. It is true that fully integrated *non-architectural* building companies have risen for the purpose of delivering a complete package to owners who desire one. But the protesting members of our profession fail to comprehend that the “package” firm has arisen in response to a definite need—professional services involving all aspects of building and not just the traditional few. To restrict the activities of these organizations on any legal basis would not be reasonable. Rather, let the restriction come in the form of professional competition through superior service with full recognition of the strides in the right direction that they have made to date.

Today's client operates in a business environment very unlike that known by his predecessor. His building needs, therefore, are also very unlike those that plagued the client of just a couple of decades ago. Unless architects pay heed to this evolving situation and reorient the scope of their services accordingly, they may again become submerged as they were by the engineering profession not too long ago, a submersion which required decades to abate. Considering the architect's superior qualifications to be the leader of the building team, such a development would indeed be a pity. ◀



Martin H. Miller, APSA

*One of the staunchest advocates of federal encouragement of the arts is the far-sighted young Congressman Thompson from New Jersey, who here blasts at the highway builders who are threatening the beauty of the capital city*

BY REPRESENTATIVE

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► The beautiful city of Washington, D. C., your capital and mine, in its long and interesting history, has suffered three attacks on its famous beauty. In the War of 1812, the British burned a large portion of the city, including the Capitol building. In the War Between the States, Johnny Reb got as close as the Potomac on the south and as close as the present location of the Walter Reed Hospital on the north before being turned back. The third attack on Washington's beauty is under way right now and the aggressors are the concrete-loving road builders and bridge designers. Loaded with Federally-appropriated funds, these grass-and-tree-haters have such radical plans to scar the city that one might almost believe the design to be that of a wartime enemy.

Automobiles, like telephones, are really a nuisance, but we have become so addicted to their

use that, as a people, we have become complacent about the location of roads. I would almost bet that if anything similar to what the road-builders are planning for Washington was proposed in Paris the guillotine would be sharpened once more for the protection of that proud and lovely city. Many years ago the Congress established a Fine Arts Commission to be the guardian of Major L'Enfant's plans for our nation's capital. The Commission has done a rather excellent job in the past and at this moment is engaged in a major struggle to keep the city beautiful. I'm going to enlist in their little army to help protect this city which belongs to the nation from the depredations of the road-builders.

In New Jersey we have seen Federally-assisted highway programs threaten the Morristown National Historical Park, the site of Washington's



# Washington Attacked Again!

FRANK THOMPSON, JR.

Headquarters, and numerous historic buildings. New Hope, Pennsylvania, is one of the loveliest towns in the East. Only a couple of blocks in depth from the Delaware River along which are located the famous Playhouse, attractive shops and fine restaurants, New Hope would be destroyed by the plans of road-builders so near-sighted that their only idea for their precious four-lane concrete monster is to run it on the river's bank. These are only isolated instances of the highway-builders' mania. In Washington, D. C., the famed Lincoln Memorial and the (proposed) National Cultural Center will both be overshadowed by a bridge and its approaches which will only add to the present traffic congestion and make the whole waterfront area as unattractive as much of downtown New York and as impossible to drive in as the historic areas of Philadelphia—which a tourist practically

takes his life in his hands to visit. If the congestion in the area of the Lincoln Memorial continues to worsen, and it will if the new bridge and road plans are realized, then a pedestrian tunnel will have to be provided for those thousands of Americans who want to visit this hallowed shrine.

The Washington (D. C.), *Post and Times Herald* put the issue succinctly when it editorialized October fifteenth that — "Chairman David Finley of the Fine Arts Commission has plenty of reason to object to the overdeveloped creative impulses of some of the highway builders who want to turn Washington into concrete. . . . If some of the road enthusiasts had their way, the District would soon resemble nothing so much as an enormous airport apron. Parks, residences, nothing is sacred in the march of 'progress' that has as its ostensibly highest aim the building of universal monuments to the automobile civilization. Must the still-beautiful National Capital look forward, Gulliver-like, only to endless ant-chains of automobiles scurrying along ropes of pavement that stifle its vitality? To what purpose this bringing of more cars into the city to hurry up and wait?"

Partly as a result of the experiences of other American cities with the road-builders, who have insisted on treating local citizens with all the haughty superiority which European feudal lords reserved for the peasants, the Congress has established a Committee on the Federal-Aid Highway Program headed by my good friend Representative John A. Blatnik (D-Minn.). I have little doubt but that Rep. Blatnik will bring the road-builders to their senses. A few tea parties, Boston style, by the outraged citizens, would also be helpful in restoring some sanity to the road-building program. A number of Congressmen — Senators James E. Murray, Joseph S. Clark, Jr., and Hubert H. Humphrey, and Representatives Reuss, McDowell, Wright, Smith (Miss.) and I have introduced Bills which, if enacted into law, would be helpful in preventing road-builders and the road lobbies—financed in part by men with road machinery to sell, from running hog-wild over the prostrate forms of the American people. If we succeed, the people will continue to enjoy the national treasures which will be saved and which are theirs by right. If we fail then I think I'll manufacture pocket-size A-bombs for the amusement as well as the defense of the American pedestrian. The pedestrians will have to do something with the time formerly spent loafing on river banks which will be covered with concrete and doubtless will be increasingly strewn with the bodies of brave but foolish tourists, as well as pedestrians. ◀



*Mr Shulman, the well-known Los Angeles architectural photographer, feels very strongly that architects don't know enough about photography to appreciate what it can do for them, and says so in his own way.*

► The T-square and the camera seem to have become almost equally important tools in the profession of architecture. Someone facetiously remarked at one time that an old piano box, a eucalyptus branch, and a stream of water, romantically photographed, would make page one in the architectural journals; furthermore that the camera in the hands of a sensitive photographer can produce miracles, and that the camera is guilty of much misrepresentation.

Fortunately, however, these feelings are in the minority, for the camera today has earned a position of great respect in the profession of architecture. As a means of communication, the camera has perhaps served better in the field of architecture than any other techniques to inform the public of the work of this wide segment of man's endeavors. Just how the camera can be used to function as an important tool for the architect is still a mystery to too many architects and photographers alike throughout the country.

It is strange that so few architects know anything about photography, and yet they depend so much upon the medium for their livelihood. It is the photography of a building that communicates with the public. Very rarely does a potential client have an opportunity to see a finished building, and often it is not wise to show a building, for many

times the reaction is a most subjective one. The client may not like the landscaping. He may not like the way the building is decorated, nor the color of the draperies. He may not even like the color of the receptionist's eyes!

When a client is taken to a building, there is no direction to the viewing. Thus prejudices may creep in, and more often than not the building may be a disappointment. The photograph, on the other hand, is an edited and directed missive illustrating the significant design and functional elements of the structure.

There is no reason why the photograph should not enhance the building. Photographers take certain liberties with decor and furniture arrangements, particularly when photographing a house. This is extremely important, for frequently entire perspectives are destroyed photographically by certain interior arrangements, and it would be foolish for a photographer not to perceive this.

Also, and more important, a presentation of a house when it is being shown architecturally, is an educational one, not a "This is your life, Mrs MacAllwacky"! The real interest should be directed to the essential design qualities of the house.

If a photograph makes a building "look better than it actually does," one must still admit that there must have been an intrinsic quality inherent in the original design which made this photograph possible. It is not the fault of the architect that a finished building is often not what was planned or hoped for. The compromises and the heartaches which creep into the design and the execution of a building, could perhaps be avoided, but generally they are beyond the control of the architect. After all, how many clients are there in the world like

# The Architect and the Photographer

BY JULIUS SHULMAN

Mr Hanisch of the Stuart Pharmaceutical Company, who permitted Edward Stone a free hand on his building in Pasadena, and did not even visit the structure during its construction?

We feel, therefore, that the photographer can help in this direction by producing a clearer understanding of architecture for potential clients.

It is the purpose of this message to attempt to suggest some elementary means of operation, providing information which will enlarge the scope of the intelligent use of the camera, thereby producing a better educational tool for the architect.

The photographer must edit the scene. He cannot aim his camera at a building and photograph it literally if he is going to produce an analytical story-telling photograph. To communicate, a photograph must present to its viewers sufficient information so as to produce an effect not as seen by the "unseeing" eye of the layman, but as through the eyes of the architect. The carefully composed photograph is not an accident. Its success is predicated upon many factors.

For example, a building can be shown in any one of many camera angles, heights and directions. The position of the sun can control tremendously the appearance of a photograph. It is possible, by shifting the camera two or three inches up or down, or to the left or right, to create an entirely different effect.

Each building has its own characteristics which must be respected, as well as observed sensitively. That is why it is most important for the architect to establish a vocabulary which will enable him to understand the effects of the camera lens. That is because, added to the above considerations, the variations in perspective effect of a photograph

can produce astounding results merely by the changing of lenses. A wide-angle lens can produce an elongated perspective not too unlike that customarily drawn by architects for rendering purposes.

Actually, this foreshortened or elongated perspective can be considered a natural quality, for the eye does not statically observe a building. The eye moves as it studies the facade of a structure. It never sees the building in one sweep as a pure rectangular mass. Therefore, the photographer has a choice of using a wide-angle lens for the effect just described, or of using a normal perspective lens which will recreate on the photographic paper an effect so true to normal proportions that the finished photograph will not produce the result of attracting the eye to the scene. It is the dimensional quality of the wide-angle lens photograph that attracts the eye and creates a third dimensional feeling.

Perhaps at this point it would be wise to consider the need for the introduction of photography in the teaching and training of architectural students. The feeling of the writer is that the profession should not wait for a student to get out of school and into practice before he learns the values of photography, not only for publicity uses, but most of all for study purposes.

Not only is the study of photography valuable to the student for the sake of learning how to analyze the building in perspective, but also for the important study of light upon materials and surfaces, and to observe the play of light on a building at different times of day. A student of architecture studies photographs continuously during his school hours, yet he seldom learns any of

the mechanics of photography, and as a result, often does not know how properly to use the photographs or how to interpret them correctly.

Perhaps practicing architects should spend more time with photographers. Architects rarely accompany their photographers to the scene of the shooting. Sometimes the architect may walk around the building with the photographer and then disappear, leaving it up to the "good judgment" of the photographer, or "you know better than I do how to go about this, so go to it, old man." This is a wrong attitude because the architect who looks through the ground glass under the focusing cloth can learn about a new world of observation. The alert architect knows that the analysis of his building on the ground glass is a very important one and the interpretation can almost make or break him.

Architects like Richard Neutra have become masters at the art of photography, and have learned to use the camera as one of the finest tools of interpretation. And their publicity and publication material show it. This is the way it should be, for the taking of a photograph is not merely a mechanical operation.

At this point, perhaps we should delve into the methods of obtaining the services of the architectural photographer. We should become familiar with the full scope of such a service, which encompasses not only the physical taking of a photograph, but also follows through with assistance in publication by presenting photographs to editors of all types of magazines. For example, an architect may request photographs to be taken for specific purposes, such as office use to show prospective clients, or for AIA exhibits. The photographer can follow through with his own contacts, which often are quite extensive. It may become possible to obtain publication of all or portions of a house, for example, in perhaps six or eight magazines of non-conflicting natures.

Also, there is a great demand for good design photographs by advertising agencies and the advertising departments of companies manufacturing various building materials and equipment. The use of an architect's designs in such advertising is highly advantageous, for these advertisements find their way into the offices of many companies who may some day be seeking the services of an architect. The well-organized architectural photographer, therefore, receives in his daily mail numerous requests for material from the above-mentioned sources. And, besides this, there are other uses possible for photographs of architecture. Numerous books are published on all the

elements of design, be they small houses, large factories, or office buildings. These books are studied by potential clients.

The above are just a part of the services obtainable from an architectural photographer. It is up to the architect to understand all of this so as to give him a clearer insight into the widespread functions of this profession. Therefore, it is wise to realize that the taking of a set of photographs of a building is by no means a small project in terms of potential return to the architect. There have been architects who have become world-renowned on the basis of the publication of one or two structures. The late Gordon Drake's 640-square foot house, his first, is an example. There is a tendency on the part of architects and some photographers not to fully exploit each job.

At this point it should be made clear that because of the extensive distribution made possible by the photographer the matter of rights should be established. In the taking of photographs of a building, the photographer may follow one of two procedures: First, upon the request of an architect, he can proceed to photograph a structure, deliver a set of 8 x 10 glossy prints to the architect, send a bill for his services, and then proceed to go out and drink up the income, forgetting about any further use of the photographs. The second procedure, which, fortunately, is followed by most architectural photographers, is that of establishing an understanding that the photographer will attempt to obtain publication of the material in as many magazines as possible; that he will send the photographs to national companies for advertising purposes, and that he will always be alert to special requests for details of design which would possibly be forthcoming from editors, writers or publishers.

Upon all of the above, therefore, there must be predicated the understanding that the photographer has certain rights to the use of the photographs. In other words, although the architect may want the photographs for some of his own uses, the understanding must be clear that the successive rights are in the hands of the photographer, and that the architect is not to give away prints of the photographs, particularly to manufacturers' representatives, without first checking with the photographer.

As an example of the foregoing, we can cite an experience which occurred recently in which photographs of a project were sent to the advertising manager of a large eastern corporation. A local representative of the corporation afterwards asked the architect for prints of this project. In this in-

stance, the architect, knowing of the photographer's activities, told the representative that pictures had already been sent to the head office. Without this understanding, the photographer would have been in an awkward position if another set of the same photographs arrived at the desk of the advertising manager at a later date.

This introduces the need for complete control over the promotion and publicity of a building. Too often, upon the completion of a project, there is such a race for publicity that each group concerned takes its own photographs and distributes them to its own outlets, often producing negative results because of the resulting confusion and conflict. The ideal situation for the publication of any structure is to direct the photography and publicity through one channel. This should include the interests of the architect, contractor, interior designer, landscape architect, and, of course, the numerous suppliers and manufacturers. Only through this coordination can a building really be successfully publicized.

It is important, too, that the architect understand that the submission of material to magazines should not be done on a wholesale release basis. A selected magazine may be invited to consider the material for publication within a certain length of time, and if not selected within that time, it can be offered to another magazine. With this method of operation, each editor receiving photographs will know that he is being given ethical consideration, and will certainly give the building all the possible consideration.

How does one go about selecting a photographer? The number of architectural photographers throughout the country is extremely limited. This is a relatively new field of endeavor, and it has not attracted too many photographers. The reasons are quite apparent. In some areas of the country there does not appear to be enough work to keep a photographer busy in a field so specialized as architecture. This belief is unfortunate, and should be corrected. The average commercial photographer, even in small communities, could be kept quite busy if he explored the field of architecture and its allied professions. The construction industry is a very extensive one, and the demand for photographs is an ever-growing one.

If architects would literally take in hand their commercial neighborhood photographers, particularly those who have not had experience in architecture but who show certain talents in that direction, these photographers could be taught some of the rudiments of the profession. Architects could do this by direct discussions at the

building site, or by reviewing photographs in the various journals available. Photographers could learn quite rapidly the essential features that are desired by architects, and eventually develop a style of their own so that they could truly interpret the architecture.

That is why we feel that architects should participate in more discussions with photographers on the subject. We hope to embark on a nationwide program in the near future on just this subject. We hope to be able to present demonstrations to architects and their photographers in the field, or during discussion seminars, on the thinking involved in the process of studying a building for photography. It should be possible to conduct a program with cooperation between the AIA and our Architectural Photographers Association. The latter is a nation-wide organization to which belong many of the outstanding photographers in the United States specializing almost exclusively in the photography of architecture. The membership is scattered throughout the country, although the bulk of the members are in the New York area. However, this is a growing organization and we feel that the AIA may eventually arrange some liaison between the two groups. We photographers have been trying to do this, and many of us are presenting talks before architects' groups in an endeavor to present to the AIA a clearer understanding of the need for and the approach to good photography.

It is important that an architect maintain a certain selectivity in the reporting of his designs. There have often been occasions when an individual, a free-lance photographer, a writer, or a free-lance editorial representative, has approached an architect and offered to photograph some of his work for publication. With such a free offer, it is difficult for an architect to resist, and often as not, this type of presentation results in unhappy consequences. The architect may not know the photographer, nor the quality of his work, nor to what publications the work will be presented. It is a purely speculative gamble.

An architect, therefore, must insist upon knowing who is going to photograph his work, and must have a specific commitment as to exactly which magazines will have first priority on the publication. This is necessary so as to insure proper credit lines, and to maintain integrity and high ethical standards of publication. Free photography is not that important, yet in certain areas of the country, many architects have been led into accepting these offers, and have later rued the day when they learned that their photographs ap-

peared in poor presentations in second-, third- and fourth-rate publications, with improper credits, to say nothing of the extremely inferior quality of the photography.

Uncontrolled publication also occurs when a decorator, for example, calls in his own photographer and a complete coverage of a home is made, without proper consideration of the architecture, without recognizing the fact that there was an architect on the building. The selection of the publication in such an instance is in the hands of the decorator, and frequently the architect does not even know that photographs are being taken, and often receives no credit!

Also, the photographs taken by a decorator are very often far from the type that an architect would want of his work. For an architect to come into a home and disrupt the routine of the client's life for a second day's shooting is difficult to arrange, and extremely unfair.

Through the course of the past two decades, photography has become a most significant medium in the preparation of public relations and public information material and education for the profession of architecture. The photographer of

architecture has attained a high degree of respect and is relied upon not only by the architectural profession but also the advertising agency world, and by the majority of magazines.

Photographers are relied upon as judges. Through experience they are able to judge the quality of architecture objectively and from the point of view of editorial thinking. Editors, for example, must rely on a photographer to report to them the progress of design in their respective areas of the country, and often a photographer's judgment is taken as final authority, representing the difference between publication or rejection of a project.

It is the photographer who reports to the editor new and outstanding designs in his area. For the editor to have to contact every architect in any particular section for reporting is a difficult project. It is almost impossible to get architects to report their own work consistently. It is advisable that those who have not used the services of an architectural photographer analyze their own needs and delve into the profession of photography to a degree where they will learn that there is a close relationship between the two professions. ◀

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#### NOT ALONE THE ARTIST CREATES

*Arthur C. Holden, AIA*

The artist wrought, and from his brain  
And nimble fingers grew  
A substance which his love expressed.  
Beauty seemed plain;  
Few people knew,  
Though some had guessed,  
That artist sensed beyond the rest.

The world dubs art what sight reveals,  
But worldwise eyes are blind  
And fail to find  
Or infuse meaning that awakes the mind;  
And art unfelt congeals.

44 So men grope, lost to art's intent  
With unknown needs unsatisfied,  
When art builds surface monument  
That stands as shell unoccupied;  
An vows to save art's vacant shell  
Soon dissipate like brief sweet smell.

*Oh architect, oh artist, in your striving,  
Think first of how your fellow beings live;  
Be understanding of their blind conniving,  
For your art dies, unless they also give.*

How many see the possible which waits,  
When sentient artist points unrealized need?  
How overcome the sloth, which relegates  
Progress to chance,  
When, from art's effort, only more shells breed?

What value shell, alone created?  
Building or treasure  
Grows withered and decayed,  
Unless perceptive living be related  
To utilize full measure  
The form that artist made?

Composer's mind feels magic keys,  
Yet harmonies which he conceives  
Live only when musician frees  
The music that the ear receives.

Art forms are mute in human hands,  
Till living men turn instrument  
And sound the harmony or art's demands;  
Then life expands to the Divine intent,  
And, when art's touch stirs deepest feeling,  
And once mute bodies sing,  
All life responds to art's appealing.  
True art is just life's leavening.

# THE 1959 TEACHERS' SEMINAR

BY WALTER A. TAYLOR, FAIA

*Of increasing importance each year is the annual seminar on the teaching of architecture staged jointly by the AIA and the ACSA. (Association of Collegiate Schools of Architecture) This year's session was held at Grindstone Lake, Wisconsin, just before the AIA convention.*

► It may be fairly stated that nowhere in this country is the theory, practice and teaching of architecture given such a concentrated and thorough going-over as at the AIA-ACSA Teachers' Seminars. The fourth annual Seminar was held this year at Grindstone Lake, Wisconsin, for a period of twelve days involving sixty-three teachers from forty-seven schools, twelve prospective teachers and eighteen special speakers and discussion leaders.

The closest approach would be to take all of the speakers of a typical AIA national convention and sequester them in a comfortable isolated spot with fifty younger-than-average architects, a few artists and engineers, with no distractions and only one assignment: to discuss architecture, in lectures, organized discussion groups and innumerable informal groups and bull sessions—no holds barred. In the seminars the imported experts, practitioners and specialists are required to defend most of what they said in their formal presentations.

There may or may not be general agreement, no formal resolutions and certainly no unanimous opinions, excepting that it is a vastly stimulating period of mind-stretching and cross-fertilization.

For the teachers from somewhat isolated schools there is stimulating contact with leaders and other teachers from the fleshpots of culture, and urban sophisticates learn that there are some potent and refreshing ideas west of the Hudson.

Imported leaders this year included President Richards and Regional Director Spitznagel; and Walter Netsch of Skidmore, Owings & Merrill, Chicago, talked not about the Air Academy but about a nine-point sequence of design decisions to be made on any project.

Richard Bennett, also of Chicago, discussed the needs of practice, the critical stage of transition from student to practitioner and the importance of the Architect-in-Training program.

For a review and comparison of Bauhaus, Ecole des Beaux Arts, and other European antecedents there were Grillo of Notre Dame Ecole Diplômé, and Muschenheim, one-time pupil of Behrens, to report on numerous European schools he had recently visited, and Dr Tom Howarth, new Toronto dean, ably represented British architectural education.

Other sessions were devoted to the relationship of engineering to architecture, the Fine Arts both in teaching and in practice, the architectural school's role in university research, Walter Taylor taking a look at the school of 1984 as a device for appraising current weaknesses and promoting the acceptance of AIA Survey Recommendations. Harlan McClure, Secretary and President designate of ACSA, explained the history and objectives of that organization. Paul Goodman, co-author of "Communitas," was engagingly disturbing as a playwright, author and practicing psychiatrist. Neal Mitchell, an unusually broad gauge engineer, pointed to some of the forced and illogical uses of current structural forms. Malcolmson explained the I.I.T. curriculum, describing architecture as the poetry of technology.

Harold Bush-Brown, ACSA President Buford Pickens, Walter Taylor, AIA Staff, and Karel Yasko, AIA Education Committee, provided administrative continuity, for the program set up by Wadsworth of Cincinnati, Bowser of Ohio State and Koepfer of Minnesota, all "alumni" of previous seminars.

As one of several activated recommendations of the 1954 Survey Commission, the Teachers' Seminars are now well established as a useful tradition, but their financing is still precarious. The AIA Board and Committee on Awards and Scholarships have provided about one-third of the budget, and the trainees, or their schools, pay half of their costs. Private foundations, Ford and Graham, gave half of the funds the first and second years but only to launch the program. Increasingly support comes from the profession; scholarships by Texas and other state architectural foundations, individual contributors including recipients of AIA insurance dividends. The AIA Education Committee is seeking a more stable and continuous system of support. ◀

# Practical Experience and the Education of Architects

BY BUFORD PICKENS, AIA

► As you ponder the perplexing problems confronting the profession — now and in the years ahead — suppose that, beginning next June, the schools of architecture were to make available ten per cent more graduates than last June, each one well-educated and competent. Let us assume by well-educated we mean that each fledgling architect would have roughly the equivalent of a liberal arts degree. And by competent we mean that in addition to possessing certain natural aptitudes developed in the professional courses, each graduate would have a minimum of two full years of controlled practical experience. Let us assume even further that the supervised work in the office and field came early enough in his professional studies to be meaningful during his last two years of school, and that it was so arranged to instill a deep respect for the total scope of professional practice. In this case, it might be possible for the architectural graduate to understand design as a comprehensive process. He might see the creative aspect in building finance, working drawings, or even specifications, as well as in the formulation of preliminary sketches. Because of his “sandwich” education, we could expect that he would enter the professional office not to take over the “design” department, but rather to continue the study of comprehensive design for which his training thus far was a beginning rather than an end.

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This happy day will not arrive next year nor the year after. But conceivably such an accomplishment could be arranged to happen within five to ten years *if*: (1) The schools, singly or as a group, would make a few bold departures from the neo-traditional academic pattern and *if*: (2) The profession were willing to accept a greater degree of its erstwhile responsibilities toward the undergraduate. Perhaps the major roadblock in the way of

accomplishment is the necessity for a certain amount of synchronization and coordination — local, regional or national; step (1) is not possible without step (2), whereas (2), although helpful, could hardly accomplish the desired results without (1). The perfection of the AIA Logbook as part of the Architect-in-Training program is a noteworthy beginning which seems to indicate that the stage is set for cooperative action by the profession. However, the initiative for educational changes clearly rests with the educational institutions.

## *What About the Schools?*

Few if any department heads or deans would care to admit the fact, but schools of architecture have reached an apparent dead end. Subtly shepherded by the Accrediting Board, they have holed themselves up in a five-come-six or seven-year curriculum with no easy way out—no easy way, that is, to include more liberal arts (long overdue), more mechanical, structural, and planning subjects, and still hang on to the best of what the school has tried to do last year. Curriculum tinkering continues in the hope of finding some magic combination of courses, but the net result is usually the addition to, not a more equitable division of the student's time. Clearly there seems to be too much to do and too little time in which to do even a portion of it well.

Unable to budget or to recruit a staff of full-time, experienced teachers, many schools have settled for a system of design instruction which depends for its essential thrust upon visiting critics whose work may have been featured in last month's professional picture magazine, and for whose limited services each school must compete annually with several others. The best teach-



*There is a widespread feeling that all is not well in the teaching of architecture. Criticism of methods and objectives comes not only from the profession but from within the schools themselves. Professor Pickens, of the School of Architecture at Washington University in St. Louis, feels that a young architect's "in-training" period must be integrated with his school years.*

ers are generally those who have the initiative to practice concurrently which, in some cases, requires so much of their time that they must choose either to neglect their students or drop their teaching assignment. All the while, dry rot and petrification remain as a continuing hazard among the permanent staff who, for one reason or another, may not be keeping *au courant* through practice or some type of research in their teaching field.

One corollary to the present apparent impasse is that almost all the architectural schools have now reached the happy median; there is far less qualitative difference between schools today than ever before, a fact to which the Accrediting Board may point with pride (fifty-one out of sixty-one ACSA member schools are now accredited). If the schools generally are in a cul-de-sac, it is on a fairly high plateau compared with the uneven level of instruction offered thirty years ago. Progress has been real but for the most part involved with catching up with the pack rather than in searching for individual patterns of future growth which one might expect to see among sixty-one schools varying widely in size, location and in the nature of their parent institutions. The cornerstone of design education remains the "problem method"—now administered by the individual school—but essentially the same teaching system inherited from the nineteenth century and the Ecole des Beaux Arts.

#### *The Basic Weakness*

The basic weakness of the problem method of instruction lies in its exclusive and prolonged use without adequate recourse to the other aspects of the design process during the student's training. As a launching pad it may be fine, but used over and over for a period of five or six years

it lacks the cumulative force to put an architect into orbit. Unless integrated with practical experience, as it was originally intended, the problem method gives the student a false sense of his own accomplishment. Even when he participates in the formulation of the program and the selection of the site, which is not always the case, he misses many of the form-determining concepts which normally precede the preliminary architectural planning. Then there is the easy habit of finessing away the whole process of preparing contract documents and supervision of the actual building which not only test and alter many facets of the current design, but condition the concept of the next one. Supplemented with the right kind of field and office experience the weakness of the problem method could be reduced and perhaps even offset completely. At least the student would be made aware of the fragmentary nature of his paper solutions.

Perhaps because the design "problem method" is so basic to academic instruction in architecture, it has become the sacred cow, not to be questioned. Thus we see the tendency in recent years to bring the selected practitioner and his paper program to the school, rather than to arrange an effective internship for the students. Only the students lucky enough to have seen a building project through to completion can expect to learn much about architecture from the visiting critic under these conditions. What teacher of design has not deplored the superficiality and unreality of the final judging of the problems? Even if there were sufficient time to review carefully the work of each student, his cumulative experience is frequently less in comprehensive design than in presentation. Today, just as in the Beaux Arts era, it is possible for a talented eclectic draftsman to win top awards when "architecture" is judged entirely by posters. Perhaps the inadequacy of the overworked problem method is responsible for both the frustrations that cause such high student mortality (60-70%) and for the inefficiencies that make academic education in architecture so costly in time and money.

Individual teachers driven by their consciences have frequently devised their own individual gimmicks to offset the unreality of the steady diet of set design problems, but at the cost of far more time than they could afford to spend as a sustained, regular procedure, year in and year out. There can be no backlog save one's own experience and the limit of hours in the day.

From the student's point of view, which is not always considered, perhaps the most unfair aspect

of the typical architectural design problem is the dual role usually forced upon the critic: One moment he is the client, i.e., a layman who tells you what he wants, and at the next he is your professional superior. How easy for the teacher, thus trapped, to lose the confidence of the student! No wonder, at the problem's completion the crit may seem to be a two-headed monster combining the most disconcerting features of cantankerous client and unreasonable boss. If given a chance, an educational psychologist might ask whether the typical student-teacher relationship is a healthy one. He might question whether running the gantlet of paper design problems is the best possible way or just the easiest way to select future architects. Have the schools grown accustomed to living with a paradox, i.e., using educationally obsolete methods to teach the latest theory and the forms of modern architecture?

#### *The Long View of History*

Seen from the long view of history, the notion of group instruction for apprentices outside the architectural office is a relatively recent innovation less than three hundred years old (The Royal Academy, Paris, 1671). The first academic instruction was intended as a supplementary system to relieve the practicing architects of teaching elementary subjects to individuals in the office which could best be taught in group sessions elsewhere. Students were selected from the most promising hopefuls already in the office, and they continued to work in the office where the classroom theory could be tested and the results analyzed in each completed building. However, when the "mail order system" of written programs and central juries made it possible to operate schools remote from architects, the American universities and colleges grafted "the system" to the standard four year undergraduate course. In time, the universities themselves realized that four years meant trade school, so that by 1950 all accredited schools required a minimum of five years.

The term "practice" of architecture connotes the importance of the constant testing aspects of building design—the frank admission that the drawings made today are revised according to the success or failure of what was constructed yesterday. In the light of this cumulative or progressive evolution of design, one can see how important is the relationship of practical experience to academic study of architecture in the overall control, in total quantity and in the "sandwich principle"—i.e., (a) conceive and plan, (b) draw and detail, (c) build and test.

#### *A Panel of Distinguished Critics Seem to Agree*

Once crystalized in the academic monolith, some of the fundamental weaknesses in architectural education are difficult but not necessarily impossible to remedy if we heed our most thoughtful critics. It is well known that both Louis Sullivan and his apprentice Frank Lloyd Wright were disillusioned with the methods of academic instruction in architecture. In spite of the fact that the schools have come a long way since either Sullivan or Wright attended classes, the separation of theory and practice remains at the root of their objections.

Sullivan felt strongly that the academic training of architects was faulty and he devoted a large part of his life to writing about it. "The Autobiography of an Idea" is concerned with his own education. In the "Kindergarten Chats," written at the turn of the century, Sullivan bequeaths to us his critique on American schools. It is written in the form of a dialogue with a young man who has "finished his education" in a school and comes to him for a post-graduate course. Here is a typical reference to academic training:

"These institutions declare with a certain craft of speech that they train the young to become architects; and they allow it to be inferred that by this they mean architects fitted by a proper mental and moral training, a complete equipment of head, heart and hand to deal with the realities of American life, of American democracy, to grasp and retain its potencies, and to express and sublimate its characteristics in the buildings which they create for it. If this be so, then certainly, judging by their *practice*, their *actual methods*, architecture and feeble-mindedness are surely synonymous terms in the lexicon of the schools. What a fraud! For shame upon them—breeders of barren minds." (p. 77)

Wright, by comparison, is less violent but just as firmly against the more recent academic methods of teaching architecture:

"Education, unfortunately for us in dire need, has produced only those who can do things by patterned precept; by election and selection rather than by any creative impulse or instinct guided by tested principle whatsoever." ("On Architecture," p. 251)

He always objects to the student's restriction to artificial problems and paper solutions apart from the realities of "the study of nature, the nature of materials, of tools and processes, and the nature of the thing they are called upon to do."

Le Corbusier, in his attitude toward schools of architecture, stands squarely on the side of Sullivan and Wright and for the same reasons. With all of the bite of the American architects, he writes in 1929:

"I acquired (at nineteen) a positive terror of architectural schools, and of all planning recipes, infallible *a priori* methods, etc., for even at this uncertain period I had appreciated the necessity of having recourse to one's own judgment. I used my savings to travel, keeping away from schools of architecture and earning my living by practical work. I began to open my eyes. . . . How often have I had it drummed into me that it is impossible to achieve a career otherwise than through the teaching of the schools, and that it is equally impossible to practice in my profession without having acquired the celebrated diploma which so pompously crowns the close of an architect's studies—and sometimes, unfortunately, his creative activity as well." ("Ouvre Complet de 1910-29," p. 13)

This unity of sentiment by some of the greatest contemporary architects against the separation of theoretical and practical studies deserves more careful attention by the schools than they have yet given to it. The recent AIA Medalist, Professor Walter Gropius, foremost teacher of architects, after twelve years at Harvard has written eloquently on the flaws in our educational system but thus far, the implications seem not to be understood even by his erstwhile students. In his "Blueprint for an Architect's Training" he writes:

"If we compare teaching the arts of design in the past with our present methods of training, a discrepancy becomes apparent at a glance. In the past, design was developed from apprenticeship in shops—today, from the platonic drafting board. What used to be an auxiliary only for the maker of things—paper design, has become the central discipline of the designer. This shift of emphasis from learning by doing to intellectual discipline—or from the workshop to the classroom—is typical for the present education methods in design. But can an architect become master of his craft without previous experience with tools and materials, without the know-how of an illuminating experience in building making? Should architectural education then be separated from its *present* academic framework? *Many architects would agree with a decisive turn towards greater emphasis on practical experience.*

"I personally have grave doubts as to whether the *present* bookish climate of universities can offer at all a healthy breeding ground for architects. The impact of industrialization on our profession has been so decisive that the young generation should be trained in close touch with the building industries and with their laboratories." ("*L'Architecture d'aujourd'hui*," February, 1950, p. 72)

A portion of Professor Gropius' statement was quoted in "The Architect at Mid-Century" with this brief brush-off: "This seems to mean that the American collegiate system is only to be tolerated as a regrettable and transitional compromise." Not necessarily! Professor Gropius obviously was summarizing his convictions acquired from a lifetime of teaching experience; he is passing along his suggestion for the improvement of schools of architecture recognizing that it would require both courage and imagination to act upon it. Here again architectural education nurses a paradox: We respect the design concepts of Sullivan, Wright, LeCorbusier, Gropius and many other creative architects, but we seem to reject or ignore their corollary premises in the teaching process. As we evolve new forms in architecture, why not also in professional education?

Educators and architects generally agree that training for the practice of architecture requires both formal instruction and office and field training (internship). In a word, they agree that there are some things best taught in the classroom and that there are other skills, knowledge and awareness best acquired on the job. This agreement is reflected in the requirements set up for registration or licensing in almost all states, which are, viz., graduation from an accredited school requiring five or six years plus two to three years of practical office or field work in order to qualify for the State Board Examinations. The fact that a large percentage of applicants fail to pass the first time is significant. From this recognized allotment of time, it is apparent that a total period of about eight years is required for training the young architects of average aptitude. This time in most collegiate schools has traditionally been arranged in the following sequence:

- 5 or 6 years of combined liberal plus professional studies (B. Arch. Degree)
- 3 or 2 years of practical, but not controlled, experience
- 8 years total training beyond high school.

### *A Possible New Direction*

From the educational point of view there is reason to question whether (5 + 3) or (6 + 2) is the best way to arrange the total eight years of a student's time. The existing sequence came into being because professional architectural education has been more or less grafted to the standard academic framework *sans* liberal arts. As long as the formal training period was only four years, there was no difficulty except in the trade school trend. However, as a pattern for professional education, it was more an administrative expedient than a sound educational plan, a fact already recognized in law and medicine. Now that curricula have been extended to five and six years, this prolonged schooling has led to the absurd situation wherein a college graduate at twenty-three years of age frequently begins his postcollege work as an office boy; sometimes he never outgrows his concept of architecture as an abstraction of lines on paper, related but vaguely to the changing realities of the building industry or to the social and economic facts of life.

Architecture is a profession which requires firsthand knowledge of the building process, that is, the putting together of a complexity of functional parts to form a unity—materials and structure to form space and to satisfy human need. But psychologically, the average student is woefully unprepared for the professional work when it comes. Six years of academic studies and paper exercises following directly after the twelve years of elementary and high school education stretches into an unbroken and for some a monotonous sequence of eighteen years. The sensitivity and awareness of even good undergraduates is frequently dulled rather than excited by the tedious routine of classes, lectures and exercises with an occasional "inspection trip." Summer work in a good office does more to awaken his professional interest than most any course in school. However, three months is seldom long enough for the office to train the student, knowing that he has no obligation to return. For the student, three months rarely, if ever, provides the opportunity to see a building project through even one major phase. In such a short period controlled and varied experience is hardly feasible on a large scale.

Since a minimum of two years practical experience is ultimately required in any case, the question arises—why not arrange the sequence so that controlled, on-the-job experience or internship could come at an earlier age and thus revitalize the student's final two years in school, at the

same time providing a maturing period so patently needed? Thus the new 4+2+2 pattern:

- 4 years of general studies plus beginning professional courses
- 2 years internship in office and field (controlled experience)
- 2 years advanced professional studies

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- 8 years total training beyond high school

Adapting this new pattern to any university where two years of general or liberal studies are required of all regular students, the plan might be arranged thus:

- 2 years general studies including math, physics and some drawing and basic design.
- 2 years beginning professional courses related to the Humanities, Physical and Social Sciences.

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- 4 years—Bachelor of Arts or Science (non-professional degree) with major in Arch.
- 2 years internship in architectural office and field work.
- 2 years advanced professional courses with finals equivalent to the State Board Examination.

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- 8 years total = M.Arch. professional degree with automatic registration to practice.

This proposal is intended to indicate a direction rather than to suggest a specific program for any school. Each faculty and each institution is different and so are the potential advantages of the "internship." In some instances, the practical experience might be restricted to the high-quality professional offices only. In others, it might include also experience with approved general contractors and related building industries perhaps with the cooperation of AGC and Producers' Council. Now that jets are shrinking space, at least some independent travel study should be considered.

Many signs point to the present favorable climate for more extensive collaboration between architectural schools and progressive offices. A sincere interest in education has been shown on the part of practitioners by their generous financial support of the R-17 Summer Seminar for Teaching of Architecture, and by their predominance among the subscribers to the *Journal of Architectural Education*. If the schools could take the initiative in setting up a regular and continuing program for student internship, the next step might logically follow, that is—advanced professional education for practitioners themselves. ◀

FOR INSTANCE —

## *An Architect's Right to Delegate His Duties to Others*

BY WILLIAM STANLEY PARKER, FAIA, *Consultant to the Institute on Contract Procedures*

► A recent case raises an important question concerning an Architect's practice. An associate of the Architect, but not a partner, was given authority by the Architect to pass upon work and if necessary to reject work that he found to be unsatisfactory. He ordered some tile work to be done over. The Subcontractor refused to do it so the General Contractor did it and charged the cost to the Subcontractor. The Subcontractor brought suit and the Court held that the rejection of the work was not ordered by the Architect himself and that the agreement between the Owner and the Contractor gave him no authority to delegate his responsibility to others without agreement of the contractor. The cost of the replacement was held to be the responsibility of the General Contractor and the Subcontractor was to be paid for his work.

So far as we are aware no previous case involves this question. We do not feel it is necessary, at this time, on account of this one case, to amend the wording of the Owner-Architect Agreements or the General Conditions. It may be well, however, to consider whether this decision is sound. It is a well established principle that an agreement must be read as a whole in determining its meaning. Let us consider the present Owner-Architect agreement from this angle.

Article 1, in both current forms (B-121 and B-131), describes the services to be performed by the Architect. In B-121 it is a brief list of the elements of service; in B-131 the details are spelled out at some length. Do these paragraphs mean that the Architect, himself, is going to make the preliminary studies, draw the working drawings, write the specifications, make the full size detail drawings? If not, why must it be assumed that he is personally to make all inspections of work done at the site?

Article 2 indicates clearly that the fees of special consultants other than for normal plumbing, heating, electrical, and other mechanical work, are

to be paid by the Owner. This makes it clear that Consultants for the normal domestic engineering are to be covered by the Architect's fee. This makes it clear that the Architect is not going to perform these engineering services personally.

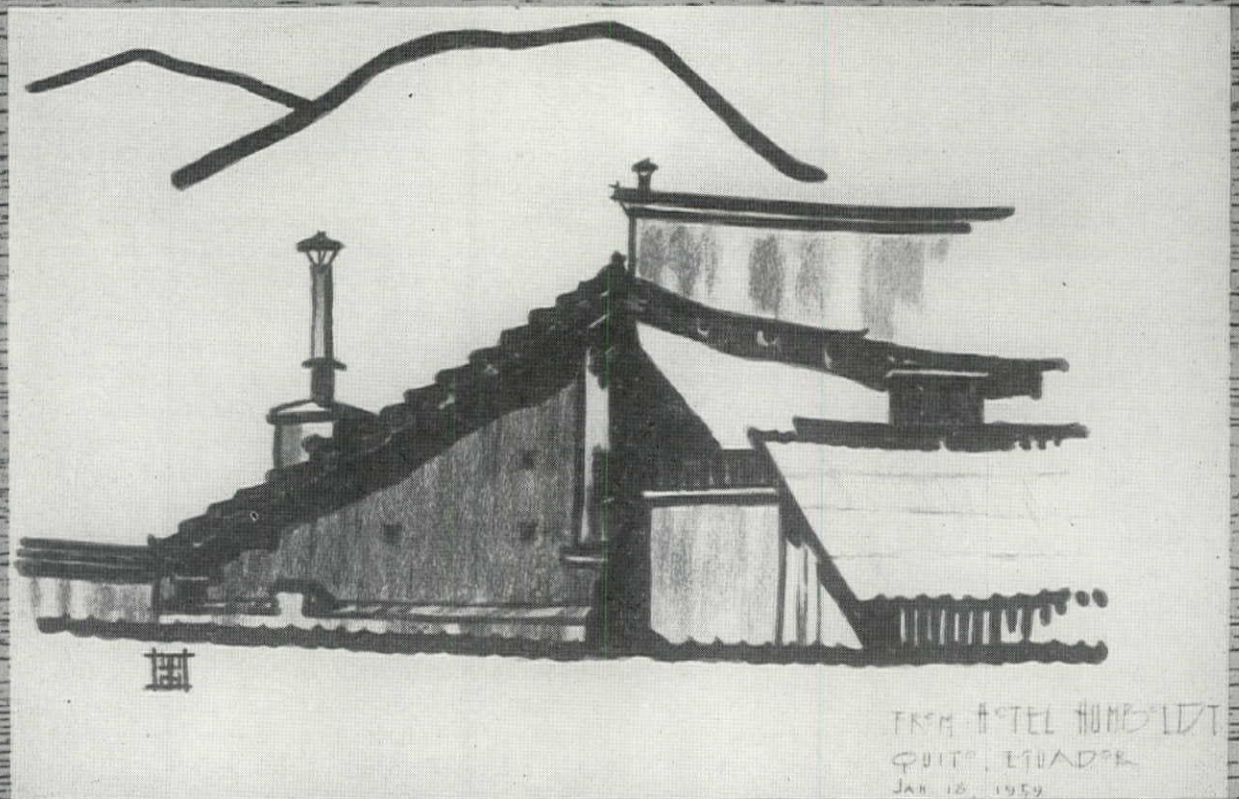
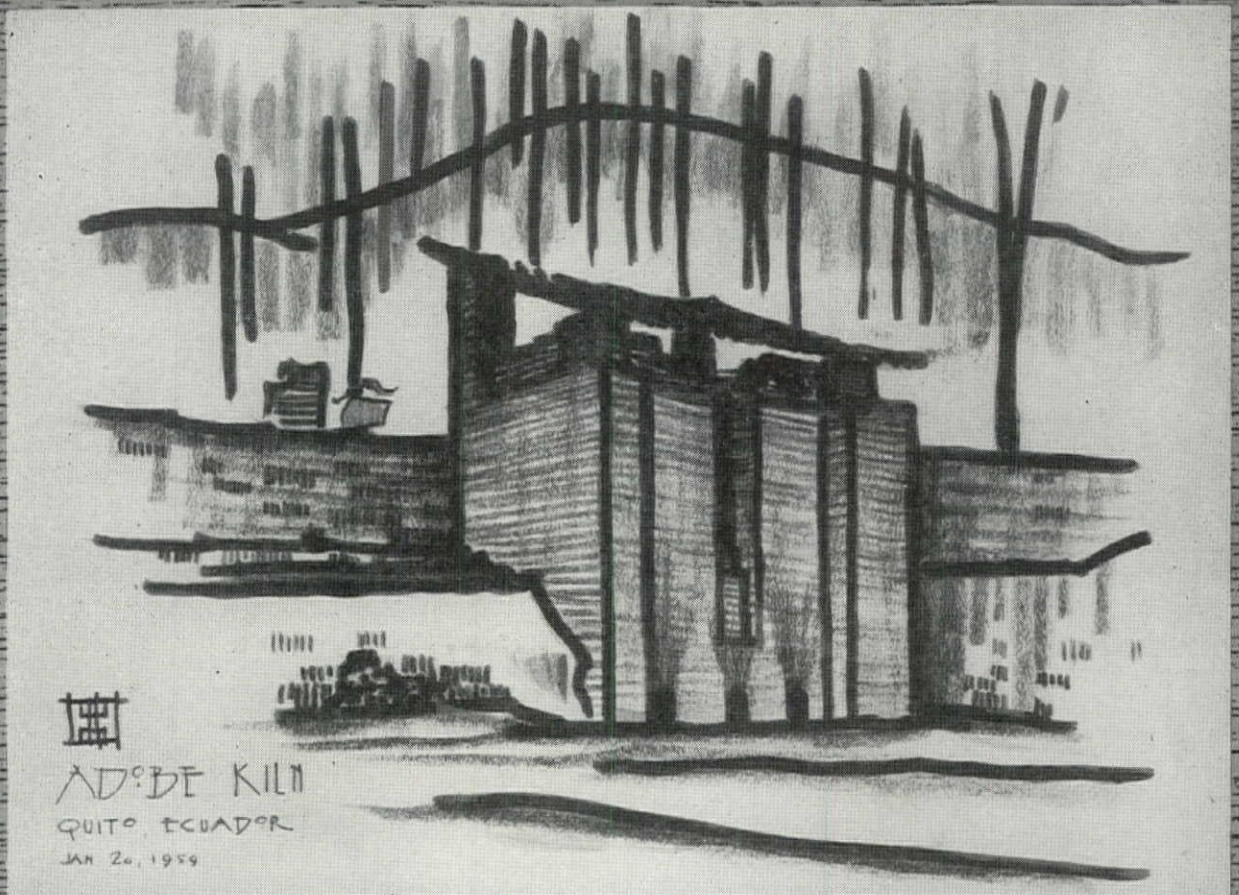
It is obvious that every architect is expected to have draughtsmen to carry out the detailed work of design, to develop the specifications and detailed drawings, all, of course, under the general instructions of the Architect. Likewise supervision may be done in varying degrees by the Architect himself and by his employees with his authority but without his personal knowledge in all details.

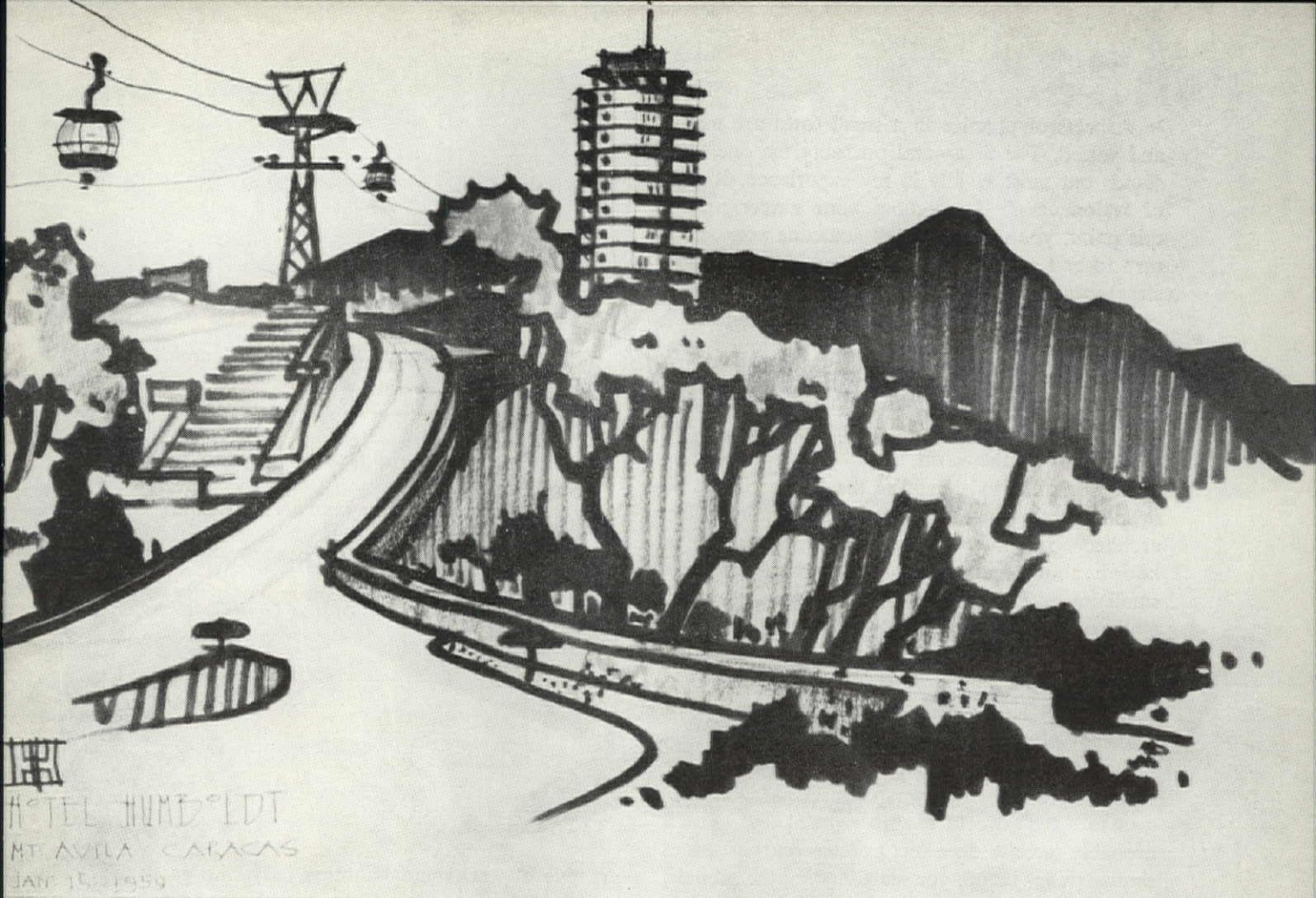
In B-131, Article V, Architect's Expense, a long list of the Architect's employees is given which makes this obvious situation specifically clear, but this hardly seems a necessary confirmation of a normal employment situation.


The Architect's office is an organization for which the Architect accepts full responsibility but he does not, indeed quite obviously he cannot, perform himself all the many details involved in architectural service.

When involved in large projects it may very well be wise for the Architect to let the Owner and the Contractor know who his principal subordinates are to be. It hardly seems necessary to be explicit in all cases, or to name all subordinates who are going to be involved in a given project.

It must be borne in mind that this case above referred to was not construing the Owner-Architect Agreement but only the terms of the Contractor's Agreement with his subcontractor. The fact that this novel court decision has been rendered, however, seems to make it desirable for Architects to give the matter some thought in developing their office routine, and it may be desirable for the Institute to consider some amendment to Article 38 or 39 in its references to the Architect to indicate that he may act through a duly delegated representative. ◀



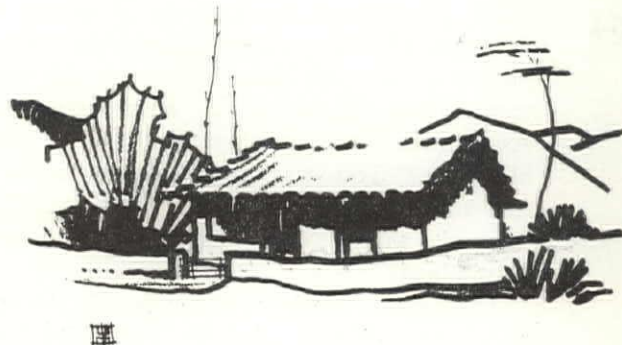


  
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 MT AVILA CARACAS  
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# Some South American Sketches

BY KARL F. KAMRATH, FAIA

Lest architectural sketching become a lost art, we present some sketches to our readers for encouragement from time to time. Mr. Kamrath says: "I used a black Flow-Master broad point pen on a heavy white Strathmore paper 9"x12" sketch pad. They are the first sketches I've made since college—twenty-five years. I made marginal notes of color at the site, and that evening I indicated the color areas with childrens' colored pencils. Naturally, the black and whites lose the sparkle of the color in the originals."



► Aspects of practice in a small town are many and varied. The first—and probably the one that stands out most vividly in my experience, is one of “Aloneness.” Throughout your career up to this point, you’ve always had someone you could turn to and ask. At school you could ask the instructor and in the offices where you’ve gained your experience you could ask your fellow-draftsmen—or the Boss if you dared! But once you hang out your shingle—completely on your own—there’s no one to turn to, and believe me, for a good many months, it’s about the most lonesome feeling in the world.

In a small town, if you’re the first architect to open a practice—as I was—you’re an oddity. Even architects probably do not realize how little is known about their profession, particularly in a small town. The number of odd-balls who come by, presumably just to see if architects look any different, would make an interesting series of stories in itself, but more to the point, the number of so-called leaders who expose *our lack of proper public relations* is astounding!

Before I left the big city to open an office, my wise and learned employers counselled “Don’t expect to set the world on fire right at first. You’ll probably have to do a few porches, carports, and similar things before you start landing the schools, hospitals and other desirable jobs.” How right they were! I’ve done not only those porches and carports, but flower boxes, wood railings, Chippendale garden gates, delineated tombstones, and I’ll bet I’m the only architect who has been given the commission of designing a prefabricated dog house!

But there are many happy aspects of a small town practice—and for my money, they so far outweigh the disagreeable ones that I wouldn’t swap places with any man in a city chapter.

After nearly ten years of practice, I rarely go to an assembly of any sort that I don’t run into at least three or four people for whom I have done work, or who are connected in some fashion with projects I have done. And, I might add, these are pleasant associations.

It’s not without its moments of humor. Not too many months ago, a lady telephoned and without giving her name, asked “Are you the ‘Architect?’” (Why do they always mispronounce it?). Assured that I was, she then asked, “Do you draw blueprints?” Too weary of explaining this for the four hundredth time, I merely answered “Yes.” Then she asked, “How much do you charge to draw a boat?”

The current “Cash-Word Puzzles” in the paper were responsible for the call I received just a

*Remembering that the majority of architects maintain small offices, we think this story of a small-town practice may amuse and encourage many members. The author's office is in Griffin, Georgia, and he is a member of the Georgia Chapter*

couple of weeks ago—another lady who gave no name, but apparently knew me since she called me by my first name. She called and briefly explained that she just needed one key word to finish her “Cash-Word Puzzle”; she thought it was properly spelled thusly, but it seemed to fit better if it were spelled otherwise—what did I think? Fortunately, I happened to know that one and was able to give her the proper answer, thus making another satisfied client—but I still don’t know who!

How does our practice differ from that of the city architect? In several ways, for example: Our work is more personal, in all aspects—with the client, the builder, the subs, the suppliers—we even get to know most of the mechanics by their first names.

Our work is of a wider variety. A couple of years ago we did an industrial plant of a type that few have done, since there are less than a dozen in the whole country. On another occasion we were working with members of the Catholic, Jewish and Protestant faiths at the same time. We run the gamut; we’ve done a public comfort station, abattoir, clinics (animal and human), well-house, entrances, exits, jail, even a horticulture head house—and for the benefit of our naval and marine friends, that’s *not* what you think it is!



# The Practice of Architecture in a Small Town

BY GERALD L. BILBRO, AIA

In a small town, even as close as we are to Atlanta, we find that we must keep a far more expansive literature file—as well as reference material. In the city, the architect can pick up a phone and have a manufacturer's representative at his fingertips on a moment's notice; we cannot. If you want to see an actual example of a material in use, there are usually dozens of such installations right in the city. And do city architects realize how lucky they are to have a university right at their back door? Particularly with their wonderful reference library—and their abundant part-time drafting help.

But then we have friendliness—we're a part of almost everything that goes on. If somebody tries to cut down a tree on our parkways, we are one of the first to know—and we fight it just as hard as some of the old timers. Almost every organization in existence, at some time or another, has to have something to do or say about a building program, consequently we are members of more societies than we can remember, some intentionally, some otherwise. At any rate, we make ourselves available to any worthwhile endeavor—not just because of a possible commission, but because we feel that community pride and development is a two-way road, and if we manage to leave the impression that a nail ought not to be driven unless

it was first specified and then approved by an architect, well, that's an extra bonus.

We try never to miss a chance, particularly with the younger people, to point out that regardless of the size or cost, any construction dollar can be spent more wisely by an architect than by any other person.

Don't be misled, it hasn't been easy, and it still isn't. We're far from having made 100% conversions. Just yesterday, we took bids on a twenty odd thousand dollar residential alteration and addition job while the owner is at this very moment building not one, but two additions, each by a different builder, to his textile plant, and each probably more than double the cost of the work we're doing, and each without professional plans or specifications whatsoever.

Two of my friends in business together are getting a third friend to finance a building that will probably cost one hundred thousand dollars and a fourth friend will build it—again without benefit of architectural clergy.

But even so, we've made headway and although we have our dark brown days, we feel that ultimately we'll carve a niche, however small, and that we'll leave Griffin perhaps just a little bit better than we found it. At least that's the reason for our existence. ◀



## From the Executive Director's Desk

► It may not be only apropos but illuminating to offer a word or two about the hazards and frustrations of programming. For the first time since I have been active in the Institute a Host Chapter committee has been delegated the job of organizing and producing the seminars and keynoters for a national convention. Those at the Octagon who have been charged with this responsibility in the past and who have organized and produced a number of successful conventions have long since substituted a look of grim patience for that of fresh and starry enthusiasm. We have also found it wise to temper advance billing with caution.

Although without question brilliant and successful oratory (though not necessarily in business sessions) can make unforgettable contributions to the enjoyment and erudition of convention-goers, the heralding of the orators has no discernible effect on registration and is an uncertain influence on attendance. The over-crowding of our sessions in New Orleans was due in part to the reliability of the airconditioning of the Roosevelt Hotel and to the fact that distractions away from the convention hall were chiefly gustative. Ample provision at customary hours had been made for that form of delightful but dangerous indulgence. In other cities where attendance was marked, the distractions were not sufficiently alluring. San Francisco will offer our sessions a lively competition.

It is not a difficult matter for anyone who is aware of what is going on in the world, what is being written, and what is being said, to draw up a list of speakers and to spell out a program of promise. However, training is not as necessary for *parti* and *esquisse* as it is for tracking down and capturing that most elusive quarry, the good speaker. There is no guarantee that your catch, once landed and on the platform no matter what his reputation may be, will deliver according to promise. All factors are conjectural including the attitude of the audience.

Were it possible for human beings to organize and produce guaranteed successes, there would be no failures on Broadway. However, as the percentage of failures on that heartbreaking thorough-

fare far exceeds the percentage of successes, it is obvious that whenever we have a successful speech and seminar program, from the point of view of interest, entertainment and stimulation, good luck has favored our labors. We have had bruited speakers of known reputation bore a convention audience to a point where the natural good manners of the architect were put to a grueling test. We have had a little-known substitute hold an audience enthralled and make the convention an occasion to be remembered.

An audience of architects, their wives and kindred spirits generates on assemblage, an attitude, which though not hostile nevertheless conveys an unmistakable challenge which the speaker would do well to heed. To overlook that he is on his mettle can result in an awareness, if he is perceptive, that he has, in the now useable language of *Variety*, "laid an egg."

Any architect who, like myself, finds himself scurrying off every week to his "service club" with mingled resignation and anticipation can testify that an architectural audience is by comparison definitely discriminating. Once a week we absorb or push aside hotel fare, to join our fellow servicemen around a table, go through a brief but increasingly perfunctory religious, patriotic and artificially gregarious ceremony that forms the inevitable part of the service club gathering and listen, generally for not more than twenty-five minutes, to a speaker procured by an overworked committee. I marvel at the relatively low percentage of duds served up to us—but then oratorical inventory is seldom in short supply in Washington. As a rule our service club speakers are interesting and the subjects timely and of general appeal. It is not more than half-dozen time a year, if that, that a functionary of the order lowers the standard with thirty minutes of organizational platitudes.

Recently at my service club we had a speaker with a well-known name. A man high in government cycles, close to the Chief Executive; his title was awe-inspiring and he was doubtless capable of producing an article on his subject

which could be one of fascination and real enlightenment. Although from years of experience in this city I should have known better, I hurried off looking forward to a session that would fascinate and enlighten. However, the great man ran true to official form; the beaming smile, the knowing look, two minutes of acknowledging to all and sundry including, it seemed, the waiters; two minutes of self-emphasis given with a humility that still beguiles, the outlining of the vital message. The audience was atwitter congratulating themselves that being in Washington they were going to get it from the horse's mouth (an allusion of dubious significance). We got it all right—twenty-five minutes of resonance during which not one word of enlightenment escaped the speaker's lips.

With one exception, my fellow club members nodded sagely to each other and observed that we had been favored with a memorable speech and that the message should be carried back to our offices and to our families. I imagine that halfway to either of those rendezvous it suddenly dawned upon the boys that there was no message to carry home and that we could far better enlighten family or business associates by reading aloud the newspaper headlines.

The exception was an architect who recognized instantly the hollow performance for what it was.

It gives me a bit of pleasure after one of these sessions to seek out a fellow professional. I am sure to find, especially if he is an architect, that he has listened attentively to the talk and that he evaluated it accurately. Presumably the great orators of the past were superb practitioners of their art, otherwise their reputations would not have lasted all the way from Demosthenes to William Jennings Bryan. Doubtless they had to speak and speak well to articulate, to think on their feet and cultivate their ingenuities. They had to know something about their subject.

Ghost writing can reach absurd proportions. I recall some years ago when I was writing a speech to be given by the then President of The American Institute of Architects, who incidentally was perfectly capable of thinking up a speech on his own, that another man was writing a speech which I was to give on the same day but in a different place. I am not sure but that the man who was doing the ghosting for me had somebody ghosting for him. It all seemed so ridiculous that I called up the President of the Institute and told him what was going on and he, being a man endowed with good humor and taste, enjoyed the joke and, I am told, got up on the platform and said, "I am about to read a speech prepared for me which I have not

yet seen so that any views I may express are not necessarily my own." However, ghosting is minor when compared to our dependence on mechanical aids. Being afflicted with a form of deafness which is concerned more with pitch and articulation than with volume, I frequently find the cacophony that is delivered by the average loud speaker can be excruciatingly painful. The ubiquitous microphone has become a plague. Go to a hearing before a Congressional committee and see each member of the committee sitting with a microphone in front of him, an instrument the chief purpose of which it seems is to confuse the witness with the shriekings and booms that reverberate around the hearing room. On one occasion I had to ask a United States Senator if he would be kind enough not to ask the questions through a microphone but just to speak naturally so I could hear his questions and so answer him as intelligently as my abilities permitted.

Recently at the Conference of the Western Mountain District where the microphone on the lectern produced a noise that succeeded in drowning out the jet planes taking off from a nearby airfield, the first thing any speaker did was to remove the microphone and talk naturally to the audience. One never knows how the speakers will perform, whether the speakers who had been so devastatingly fascinating at another gathering can put a convention audience to sleep. Or one never can tell when the little-known man can hold an audience spellbound.

Frequently our speakers request an honorarium, sometimes quite steep. I have thought it would be an honor and a privilege to address a convention of The American Institute of Architects so I have always been a little startled when a speaker asked for an honorarium. I have found, however, that often an honorarium is a good thing for if the man is to receive money he will give his best performance in order to earn his fee. Needless to say on the rare occasions when I have received an honorarium for an appearance, I have not refused it.

Well, there are speakers and speakers. In the course of one's life one hears a lot of words. We should not just accept anyone who gets up on a platform but should look at him or her critically and complain if we feel that we have not received as good a message as we should — entertaining, profound, or enlightening.

*Edmund D. Purvis*



## LIBRARY NOTES

### Gifts to the Library

January 1 to June 30, 1959

A regular feature of these "Library Notes" has been a semi-annual list of donors. It is a privilege to offer this recognition to those who have generously contributed to the growth of the library. Based primarily on the gift of some half dozen collections, the library has been fortunate in a continuing flow of gifts, some small and some large, but all contributing in their way to the growth of the library. The present list represents a good cross section of typical gifts received—the old and the new, the unique and the common, the single item and the large collection. But whatever the nature, the library welcomes those gifts which fit into its scope and add to its value and usefulness.

JAMES HOBAN ALEXANDER

Photograph of wax figure of James Hoban.

FRANCISCO JOSE ALVAREZ Y LEZAMA

His "Problemas del Urbanismo Moderno en Mexico."

LE ROY BARTON, AIA

5 volumes.

BYRON C. BLOOMFIELD, AIA

"Apartments and Dormitories"

A. O. BUDINA, FAIA

"Suggestions Preparing Zoning Ordinances" Va. Div. of Industrial Development.

CONNECTICUT GENERAL LIFE INS. CO.

"Cities in the Motor Age" Wilfred Owen.

S. R. COPE

Eight issues of "Form."

HENRY J. COWAN

"Architectural Science Review" vol. 1, no. 1.

THOMAS H. CREIGHTON, FAIA

Progressive Architecture, bound volumes, July-Dec. 1958.

CHRISTIANO S. DAS NEVES, HON. FAIA

Hans Mann's "Strolling Through Rio."

T. DAVID FITZ-GIBBON, AIA

31 magazines.

DAVID GEBHARD

Publications of the Roswell Museum.

GERALD K. GEERLINGS, AIA

Ten of his prints.

FREDERICK A. GUTHEIM

Three issues of "Le Carré Bleu."

HAROLD D. HAUF, AIA

One pamphlet

ARTHUR HOLMES, AIA

Folder of drawings.

INTERNATIONES

"Ingenieurbauten Unserer Zeit."

L. M. LEISENRING, FAIA

"A List of Prices and Mode of Measurement, Agreed on by the Stone Cutters, of the City of Baltimore—February 19, 1805.

FRANK LOMBARDI

"A New Capitol for Hawaii."

EMIL LORCH, FAIA

His "A Survey of Fifty Years—The Ann Arbor Art Association 1909-1959."

EDWIN BATEMAN MORRIS, JR., AIA

One magazine.

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS, INC.

Its "Boat Handling Equipment in the Modern Marina."

NATIONAL BUILDING ORGANISATION, INDIA

Proceedings of Symposium on Housing and Building Materials. 3 vols.

MR AND MRS W. G. NICHOLS

80 volumes from the personal library of Louis Sullivan.

HORACE W. PEASLEE, FAIA

Three old architectural books of the 1700's.

PENNSYLVANIA GERMAN FOLKLORE SOCIETY

"Pennsylvania German Barns" by C. H. Dornbusch.

ROBERT PYLE

300 magazines.

JOHN B. RESCHKE, AIA

"Tuileries Brochures" 23 issues.

MARION D. ROSS, AIA

Magazine with article on "Architects of Oregon: Piper and Williams.

THOMAS J. RUSSELL, AIA

"Architecturally Speaking" by Raskin.

ALBERT SIMONS, FAIA

"Massachusetts Maritime Microcosm" by Samuel Lapham, FAIA.

SOCIEDAD COLOMBISTA PAN AMERICANA

Three volumes.

ROBERT B. STACY-JUDD, AIA

His "Atlantis, Mother of Empires."

MRS. RUDOLPH STANLEY-BROWN

1957 Year Book of the American Society of Bookplate Collectors and Designers with her article on her husband.

SVAZ ARCHITEKTU CSR

Two publications on Czech Architecture.

HERBERT H. SWINBURNE, AIA

"Planning to Build" by Nolen & Swinburne.

EDWARD J. THIAS, AIA

"Architecture Mid-America."

U.S.S.R. UNION OF ARCHITECTS

35 volumes on Russian architecture.

WILLIAM J. WAGNER, AIA

His "Sketches of Iowa Landmarks."

MISS NELLIE M. WHITEHURST

Two volumes of "Atlantic Terra Cotta" and drawings of Union Station, Washington.



**Concrete—The Vision of A New Architecture.** By Peter Collins. 307 pp. 6¼" x 9". New York: 1959: Horizon Press, Inc. \$12.50  
Reviewed by Fred N. Severud

When I received the book for review, I was somewhat staggered by the size of it—307 large pages—and was tempted to decline the assignment. However, it didn't take me long to realize that reading the book is not a chore, but a delightful experience.

The two principal parts of the book are:

1 A brilliant running and amusing story of the birth of this new medium.

2 A documentation of a basic philosophy, with a great emphasis on the work of Auguste Perret. (This basic philosophy is, in a nut-shell: Monumentality, forms evolved from rational structural principles by craftsmen and artists.)

In order to cover the wealth of material as succinctly and objectively as possible, I have decided to let the author speak for himself to a great extent.

The story opens with *pisé*, or tamped earth. The early technique of building formwork is of historical and practical interest. It brings to mind the possibility of further developing this technique in our time with recent improved methods of petrifying the earth.

Contraux' use of folded plates in 1786 is revealing—also his comment "Never has a straight line been able to produce the slightest effect; only projections and recessions can produce a sensation, an emotion in our souls, if I may thus express myself; in a word, only these can divert us, for the play of masses between the projections and recessions, which vary at each step we take, is the only means of charming us."

Throughout the book one is struck with the prominent role that France played, particularly in the early developments of concrete, not only from the standpoint of its practical use, but also to recognize

the serious responsibility that has fallen upon the architectural and engineering profession in utilizing this plastic material both functionally and monumentally.

Some amusing descriptions of growing pains are worth quoting: "The main wall collapsed quietly in the night, dragging with it the confidence of quite a large section of the public." Here is another, reflecting the hard road that the new material had to travel: "The District Surveyor of Camberwell had refused permission for the construction of concrete walls, on the grounds that there was no 'bond' as required by the regulations for masonry."

Copious quotations from early publications give a very fascinating insight into how this new baby was received or rejected in the construction field. One paper delivered by Gilbert Redgrade to the Architectural Association in 1871 carried this pompous title: "On the Architectural Treatment of Rubbish."

Carrying on on the amusing side, the following quotation gives a good insight into the wry humor which permeates the whole book: "I may further remark that the use of concrete produces an inconvenience which nobody would suspect without the experience of it, viz., that unless the flues are lined with pipes or panelled with very exceptional care, the smoke will percolate through the walls and issue in distant parts of the house wherever any part of the wall is not plastered." The author goes on: "These gruesome propensities did not prevent Cockerell from using concrete two years later."

On page fifty, we read "But others were intrigued by the possibility of making metal and concrete work together in perfect union, and a Mr Robins even went so far as to take out a patent in 1869 in which gum was incorporated with the concrete to make sure that it stuck to the steel."

One of the first of the inventors was William E. Ward, a mechanical engineer. He gives us a lesson in observation: "When on a visit to

England in 1867, he noticed some workmen having great difficulty in removing cement from their spades and it occurred to him that if cement adhered to iron tools with such undesirable tenacity by accident, it must also adhere equally firmly to iron joists deliberately embedded in concrete floors." The Ward house has been described in other publications, so I will pass it by.

Wading through the early names given to concrete, we come across M. Legoux' "calceolithemetalliconeurophore."

Onderdonk coined a phrase that bears repeating: "Wooden formwork, to him signified what he called 'stammering,' i.e., building every part twice; first as mound and then as concrete."

Viollet-le-Duc made this dramatic utterance: "To put in immediate contact two materials of opposing properties was, he announced, to lock the wolf in with the sheep." (Page 157).

Part Three is directed towards the contributions of Auguste Perret, and with good reason. He was also associated with equally dedicated architects: "Guadet's enthusiasm for new material is clearly in evidence, since he not only designed the supports to have an almost affected slenderness, but even built himself a reinforced concrete bed."

Another quote from Perret: "'Construction is the architect's mother tongue,' he asserted, 'the architect is a poet who thinks and speaks in construction' and he contended that the stagnation of architecture at the beginning of the twentieth century was due to the fact that architects were speaking a dead language, incomprehensible to the common man."

Collins describes Perret's attempts: ". . . to determine a new architectural vocabulary of general validity for the normal needs of society, and one which would correspond exactly to the new material he wished to use."

Mondrian: "In our day, the architect not being an artist, is incapable of creating the new

beauty." The latter will only be effected by collaboration between the artist and the engineer." Note here his use of "artist" instead of "architect."

Throughout the whole book architectural history, the history of concrete developments, architectural and artistic concepts, are so thoroughly interwoven that it would be presumptuous for me to attempt an evaluation and critique. I can only say that in my opinion it is a work of major importance for anyone wanting to mould concrete into beautiful forms.

**Buildings For Research.** An Architectural Record book. 224 pp. illus. 9" x 11 $\frac{3}{4}$ " New York: F. W. Dodge: 1958. \$9.50

This compilation of articles since 1950 includes a considerable amount of technical data, plans, views and details of research laboratories of many kinds.

For the *Record* it is a curiously sloppy job of editing, marred by a dozen typographical errors and worse—errors which indicate misunderstanding of technical terms ("screens" for "screeds," "low intensity" for "low brightness," etc).

There are a few non-sequiturs, pure verbalizing, which contribute no meaning: "If the approach to the problem is from the point of view of convenience to the scientist, a result combining beauty, fitness and stability is assured" (!) "The buildings, carefully fitted to the contours and hence [?] limited to one, two and three stories . . ."

The AIA could specifically complain about the minuscule credit (footnote in 6 pt. type) to its Committee on nuclear facilities which took the idea of a book on nuclear facilities to Dodge (and offered its unique services to them)—the omission of the fact that the author of the lead article in this book was chairman of that committee—the statement that until 1954 very little information and data were available (the pioneering AIA-AEC-BRAB conference was in 1951 and its proceedings a bible). There is also an unfortunate prominence given to package deal labs.

All these are perhaps minor editorial defects—the book is generously illustrated and useful. It is just not the book it started out to be.

E.P.

**Modulor 2.** By Le Corbusier (translated by Peter de Francia and Anna Bostock) Cambridge: Harvard University Press: 1958: 366 pp. illus. 7 $\frac{3}{4}$ " x 7 $\frac{3}{4}$ ". \$8.00

This 1955 Continuation of Corbusier's 1948 initial description of his design tool, MODULOR, is subtitled "Let the user speak next." It compiles a number of world-wide evaluations and criticisms and goes on to refinements and further developments (including Chandigarh) of this simulateous appeal to geometry and numbers for a system of harmonious proportions. It is not essential for an understanding of MODULOR to have the earlier book.

It is refreshing, from this rather proclamatory writing, to sift a few revealing phrases: healthy scorn for the "miniature metaphysics" (!) about which many write him—a warning of "the gulf of dullness" yawning for "unconditional addition" of an increment—and "I am . . . in the final analysis a poet . . ."

This last is most important, as is his reference to MODULOR as "*high poetics*." It is time for this claim of poetry in architecture to be reasserted.

Refreshing too, is the flat statement "The MODULOR has never conferred imagination upon those who do not possess it."

This is a tale of war against the Philistines and the forging of a jawbone weapon—the *man-with-arm-upraised*, a bit proclamatory, yes, but with startling correlations through the ages—not the only way, but a way of merit.

MODULOR has been criticized as doubtfully anthropometric since selection of a 6-foot man was arbitrary. This seems a question of letting the little guys line up over there and be counted. Against it we could report a recent decision, based on need, to go to 7-foot doors in Texas highschools! The important fact about MODULOR is that it relates architectural proportions to a generalized human body, which the equal increment can never do. Architectural scale is conspicuously lacking in many buildings today—one recent skyscraper by a noted office has as much scale as the 4" section of extruded metal molding set on end it so much resembles.

As for precision—it has also been stated that it is not possible to judge proportions within about 6%—that shadows, perspective, etc,

all make precision unrealistic in buildings. Here again, although we are aware that the difference between 6'-0" and the "average" 5'-8" is (by co-incidence?) 6%, we are inclined to stick with geometry. The French mathematician Le Lionnais wrote Le Corbusier of the order-creating value of accepting a convention and faithfully staying with it. This is an ancient theology and MODULOR provides, within its wide double range, suitable portions of a scale for harmoniously relating and articulating building elements, buildings, sites, cities and, if desired, larger, non-visual arrangements. (What was once non-visual—the plan of a city—is no longer so now that man has taken to the air). This harmony of parts would be destroyed by using different additive-increment grid dimensions in different parts of a building.

It seems that certain values of repeated dimensions in building components may be lost with rigorous application of MODULOR. It is not impossible that a combination of systems will be the answer.

Whatever the hints of frustration for his convictions, this warrior with the jawbone is a Samson. He has never written an unimportant book.

E.P.

**Lighting in Architecture.** by Walter Köhler and Wassili Luckhardt. 223 pp. illus. 8 $\frac{1}{2}$ " x 11". New York: 1959: Reinhold Publishing Co. \$15.00

Originally published in 1956 as "Lichtarchitektur." The first hundred pages are essentially an imaginative pictorial approach, in black-and-white and color, entitled, *Light as an Element of Structure*. Emphasis throughout is on light as a design factor in architecture, illustrated by many examples, mainly German in origin, in photographs and detail drawings. The final section, *Light in Contemporary Space*, analyzes illumination of a great variety of interiors. The continental examples show a great deal more freedom in form due to custom design of fixtures—our equipment is more often from inventory.

The central section, *Light as an Architectonic Medium of Creation* treats light as phenomenon (mainly historical), visual sensations and perceptions, and the "new style

of lighting." These essays regretably tend to get bogged down in nomenclature and not entirely clear technicalities which are not helped by such translations as "esthesio-physiological" and copious quotations from Goethe. Some terms are significantly different from American usage, such as color "intensity" in place of "value." It is yet to be seen whether the new Land theories of color will completely replace the traditional tris-timulus concepts—this book of course was written before Dr. Land announced his private revolution.

To sum it up—this book shows some interesting pictures of lighting effects, the text presents considerable technical data, some of them of doubtful value to the architect—and there is still no single aspect of design which dates a job as quickly as old-hat lighting. E.P.

**IES Lighting Handbook.** 1150 pp. illus. 6" x 9". New York: 1959: Illuminating Engineering Society. (3rd edition) \$10.00

Organized in twenty-five sections, after about three years' work by thirty-five IES committees, this new edition of a standard handbook presents revised official statements and data on all types of illumination.

Basic chapters on physics of light, light and vision, measurement, nomenclature, and color, underly application data on control, sources, calculations—followed by a dozen sections on lighting for specific purposes. There is a 160-page manufacturers' catalog section and a 26-page index.

So far, excellent. Section 11 (30 pages) combines office and school lighting because the joint task force of three subcommittees from the IES, the National Council on Schoolhouse Construction and the AIA Committee on School Buildings, after six years of work, still have some basic disagreements, primarily in the area of high foot-candle recommendations now made by IES (page 9-82), a statement which oversimplifies this complex situation.\* A joint document, a guide to school lighting, will be prepared by the task force.

\* see *AIA School Plant Studies*; BT 1-15 School lighting—20 year progress report; (*AIA Bulletin*: July-Aug. 1954); BT 1-33 School lighting—from an architect's viewpoint (*AIA Journal*: June 1958)

**1958 Building Techniques of Japan.** 134 pp. illus. 8¼" x 11¼". Japan Building Documentation Center, Editors. Ariake Shobo Company, publishers. Japan Publications Trading Co., Ltd., Central P.O. 722, Tokyo, overseas agents. \$8.00 postpaid.

This well printed hard-cover book is the English language version of *Kenchiku (Building) Digest Quarterly*. It is illustrated by 225 photographs, 155 drawings and 20 tables.

This initial volume, as an introduction to the series, is in part historical and general, but includes also chapters on public housing, programming of building areas and facilities, earthquake engineering, fire prevention research and methods, construction practice including caissons, sliding formwork and light-weight trusses.

In addition to numerous buildings illustrated in the historical chapters, there are separate short sections each devoted to one building; apartments, residences, hospital, office and bank buildings, auditoriums, student center, memorial, puppet theater, hotel, post office, airport terminal, railway stations, factory.

Subsequent issues will include in addition to the above subjects; building materials, structural design, city planning, ventilation, illumination, etc.

**Handbook of Degree-Day Data for the United States.** Volumes I and II. 8½" x 11". Vol. I 208 pp. Vol. II 184 pp. New York: 1958: American Petroleum Institute, N.Y. \$7.00 per volume

The American Petroleum Institute, with the cooperation of the United States Weather Bureau, has prepared this two-volume handbook in recognition of the need for a convenient and comprehensive compilation of heating degree-day information.

Volume I contains statistical summarizations of the degree-day data for 171 weather bureau stations with long records throughout the United States. An introductory text explains the statistics and their interpretation in simple, nontechnical language. The statistical tables include:

A Means, standard deviations, and frequency distributions of degree-

days remaining in the heating season for each month, based on a standard (normal) 30-year period. The frequency distributions give ranges of degree-days remaining, together with their probabilities.

B Cumulative and monthly mean degree-days, with standard deviations, for the same period.

C Official US Weather Bureau normal degree-days for each month and for the year, as well as normal remaining and cumulative degree-days.

D Mean monthly and seasonal degree days, with standard deviations, for the complete period of record of each station.

E Trend coefficients showing the average straight-line trend of degree-days at each station during approximately the past half century.

Volume I also contains monthly and annual degree-days normals for 355 weather bureau stations in the United States.

Volume II contains the raw degree-data for each month and year of record for the 171 stations analyzed in Volume I, also an abbreviated history of each weather bureau station showing when station locations were changed.

**Scientific French.** By William N. Locke. New York: Wiley: 1957: 112 pp. 5¼" x 6¾". \$2.25

Convenient, spiral-bound, pocket-size, this is subtitled "a concise description of the structural elements of scientific and technical French."

It is planned to be used with a dictionary as a quick reference to those important facts a dictionary does not tell. It is clear, well-organized and designed for French-English translation, with sample sentences and exercises.

**Scientific German.** By George E. Condoyannis. New York: Wiley: 1957: 164 pp. 5¼" x 6¾". \$2.50

Identical in format and scheme with foregoing guide to French grammar. Pronunciation notes in each reveal a difficulty with any language:

"... resulting pronunciation will not necessarily be understandable to a German (Frenchman), but may suffice for communication of German (French) words between Americans!"

SCENE: The private office of Cox and Box, Architects.

TIME: The present; about four-thirty on a crisp November afternoon.

BOX: Lay down that pencil, partner, relax a bit and tell me what you did with the firm's profits when you went to New York last week. Judging by the cash drawer you couldn't have spent too much time in the flesh pots—or did you find a nice, cozy cheap one?

COX: That would be a pleasure, Box—laying down the pencil and talking, that is. As for the nice, cosy cheap flesh pot, that would be a pleasure too—but try and find it, especially in New York. No, I stuck to the role of the hick architectural sight-seer this time, after I'd finished with the business with our client.

BOX: Did you look over the "new Park Avenue"?

COX: Yes, I surveyed the new glassiness, and I must say that I agree with all we've read about it. The old street, with its stuffy Renaissance facades, was more imposing than the present glitter. Of course, the two masterpieces, Lever House and the Seagram building, are as good as ever—especially the latter. But they suffer the same way a Miro and a Dufy would suffer if they were hung in a gallery with a lot of blatant imitations. These new buildings have nothing except the new look, and that isn't enough. Skeptical of phony Renaissance as I've always been, I found myself thanking God that the Racquet Club is still there, to say nothing of St. Bartholomew's church. After all the cacophony they were music to my eyes.

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BOX: So the old man's slipping back into the old ways, huh? One touch of Renaissance and he tumbles—and after all the corny contemporary he's been turning out around this town, too. That's a good one!

COX: Just a minute there, not so fast. I'm talking about architecture, not just building. Good or bad architecturally, one quality the old Park Avenue had was elegance, and there's more elegance in the Racquet Club than in all the new

buildings on Park Avenue put together—save one, and that, of course, is the Seagram building (I almost said the Miesgram building), which has an undefinable elegance all its own from its tip to its toes.

BOX: Somewhere I read some pretty saucy comments on Canada House. Said it "negated" St. Thomas' Church, which is immediately south of it, or something like that. Any comment?

COX: Plenty. The normal view of that fine old Goodhue church is from the south, since that is the open corner. So the guy was given the job of designing a building which would form a backdrop for the church and yet be an entity in itself. I think he handled it beautifully. As you approach coming up Fifth Avenue you see the rich and flowing verticals of the church silhouetted against two towering blank walls, dark and sooty against light and clean. There are two walls on the south lot-line of Canada House because there is an offset some distance back of the front building line, which brings the recessed part of the facade into relationship with the church. These brick walls don't look just *blank*, they look intentional, as a foil for the church. The architect *might* have striped them or panellized them, which would have ruined the effect. Instead he created the handsomest blank walls in the city. As to the front of the building, my impression is only one of simple verticals, which of course tie right in with St. Thomas' without trying to copy it.

You get the full effect of what I mean if you walk on uptown and turn and look back at the church. It is lost, drowned, screaming against the wriggling glass-green walls of 666 Fifth Avenue—another glassy monster. The view from the south is serene; the view from the north is utter confusion.

BOX: Well, you worked yourself up into quite a lather over that one. Since you're on your way uptown, what about the Corning Glass building—or were you completely off glass by this time?

COX: No, glass has its uses, and

one of them is certainly on the facade of a glass manufacturer's own building. I would say it's very pretty—and I use the word advisedly. It looks like a shimmering, brittle thing that could fall apart any time, but still rich and handsome. The vertical mullions are so exceedingly narrow that one has the feeling that they are insufficient to hold the glass panels in place in a windstorm, and that feeling of lack of support is emphasized because every other mullion is dull in color so as not to count so much as the shiny ones.

But strange things happen at the street level. The usual plate glass show windows look in at walls veneered with matched green and white veined marble—and that's all, as though it were a marble show room. Huge Christmas wreaths are going to look stunning hanging in there next month—let's hope they think of it!

I've heard the funny little vestibule criticized, and it is sort of stuck on, but it didn't really bother me. But one thing did, and in a big way. And that is those blank pools of water between the face of the building and the sidewalk, black and shining, reflecting the dark glassiness above them. The overpowering impression is that something was left out, that here is a void waiting for something to be put into it. What an opportunity for the baroque splash and movement of a fountain and the warm, light touch of planting. Oh well, it's easy to criticize—but the guy should have seen that.

BOX: Look, it's dark outside and I won't have time to stop in Shorty's for a quickie if you don't quit talking—although I asked for it. Come on, let's go.

COX: Shucks, I was just warming up to the climax of my trip uptown, the Guggenheim Museum.

BOX: Well it'll have to wait, and the longer it waits the better your judgment on it will be. Your whistle must be drier than mine by now, I'll buy you one.

EXEUNT TALKING . . . CURTAIN



## The Architect and Noise Control

*These two papers (here slightly condensed) are from a research correlation conference on Noise Control in Buildings conducted by the Building Research Institute in January 1959. Full proceedings are available (\$5.00) from:*

*Building Research Institute, Division of Engineering and Industrial Research, National Academy of Sciences-National Research Council, 2101 Constitution Avenue, NW., Washington 25, DC*

### The Architect's Problems

by Robert L. Geddes,\* AIA

► Architects are always redefining architecture, introducing new ideas, and reconsidering old ideas. Design is really the synthesis of important ideas. The priorities given these ideas, the hierarchy of their importance one to another, are apparent in what an architect builds, and sometimes in what he says. Unfortunately, much contemporary theory and building either ignores noise-control, or treats it only as a surface esthetic.

One wonders what priority is given to noise-control within the following approach: "Architecture is an art and hardly anything else. The aim of architecture is the creation of beautiful spaces, and everything else is so subordinate to it that it just doesn't exist."<sup>1</sup> History is on the author's side. Architecture is essentially an art—a visual art, a plastic art, a spatial art. But one must realize that the experience of architecture

is received by all of our senses, not by the eye alone. "The quality of a space is measured by its temperature, by its light, by its ring,"<sup>2</sup> and how a space is served with light, air, and sound must be embodied in the concept of the space itself. How do we make the "ring of the space" part of the concept of the space?

It is ironic that the modern movement is called "functionalist." Some of the highest priority ideas in our architecture are not based on function but on poetry. The painters have had great influence: A modern architect says: "Transparency is definitely one of our objectives. It is one of the most fascinating new technological possibilities. We can do it with the means we have, with our materials, with our heating systems, with everything."<sup>3</sup> But can we do it and also control noise? The problems posed by transparency are many. Structure becomes light and thin. Space is not isolated, but apparently continues without a barrier through glass, grilles, and gardens.

It is increasingly difficult to reconcile noise-control with other ideas in art and technology. For example, "continuity" is an important idea that underlies much contemporary architecture: the flow of space and the open plan that means continuity of space; and the flow of structural forces that leads to a continuous structure. The leaders of the modern movement, from Wright

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1) Philip Johnson  
2) Louis Kahn  
3) Marcel Breuer

to Le Corbusier, have practiced and preached the importance of "continuity" as an architectural idea. How can we achieve it, and still control noise?

It is important to remember that architecture is always changing its set of priorities. Neither the architect of the next century nor the architect of the Renaissance would set the same emphases or priorities as we do. The Renaissance conception of space and structure, for example, was more static, isolated and cellular; it would have solved some of our man-made noise problems. But that opens the door to new possibilities again. Is there any hope for concepts that will admit noise-control, if not into the center ring, at least into the same circus tent?

Ever since man first crawled into a cave or made an enclosure, there has been a sense of the "operational" basis of architecture. The esthetic of structure has always been based upon the elegant solution and expression of an operation: the carrying of a load, the resisting of a force, the resolution of thrusts. A modern architect says that "A space in architecture shows how it is made. Nothing must intrude to blur the statement of how a space is made. The joint is the beginning of ornament in architecture."<sup>2</sup>

In a similar way, one can consider the way the building "operates" to keep out water: the way water is made to drip from mouldings, the way exterior materials join to be waterproof, the way water-stops are put in all joints. Water-control is part of the basic space order of architecture, and it is part of the detailing of all joints. The way in which water is controlled has become a basis for expression and enrichment in architecture.

These two examples—structure, and the control of water—indicate the possibilities that can be found in an "operational" basis for architecture. They indicate the possibility that the control of noise might also enter fully into a theoretical basis as well as the practical needs of architecture.

Ten years ago, an excellent presentation of this viewpoint was made by James Fitch in his book, "American Building." Fitch said that "the function of American building must be the maintenance of those optimal environmental conditions essential to the health and happiness of the individual and to the peaceful, efficient development of American society."

In defense of our architects, I must point out that until recent years, a simple sound environment was the natural state of man. Our ancestors heard a few sounds and most of them were pleas-

ant: the song of a bird, or the wind in the pines, the cry of a baby. Although some of these sounds might have been dangerous by implication (as warning signals) they were not themselves dangerous to health. All the more ironic, then, that today the man-made sound environment constitutes a real threat to the well-being of urban America. For it was modern industrial society that has created new sound to the point where sound levels in many plants and offices are at the threshold of pain and where most urban areas have an average loudness level that makes protection against it necessary. We have polluted our natural quiet environment.

Architecture must develop more fully as an "environmental art." One purpose of a building should be to operate as a selective filter and barrier, taking the loads of the natural and man-made environment off man's body. One purpose of a building should be to contribute to a humane environment.

The control of the environment is not the totality of architecture, but it must be part of the basic order of design. The architect must make sound control his own problem.

Sound barriers can become part of the expression of architecture. They can be put around the source of the noise, or around the victim, or both. They can be incorporated in the first thoughts about the nature of spaces. Like the water barriers, the sound barriers can contribute to the richness of expression in architecture. Sound absorbent and reflective materials can be given a life of their own, and traditional materials can be reconsidered in terms of their sound qualities. This could happen, but it hasn't happened, because "sound conditioning" does not yet have the status of "airconditioning" in our building program.

It is essential that "sound" be presented to architects in terms of operations, rather than as soundproof materials. We understand heating and airconditioning in terms of insulation, ducts, cycles, humidity, and so forth. It seems incredible to me that most architects and most manufacturers' literatures are so inarticulate about the basic operations of sound: transmission and absorption.

It is also essential that "sound conditioning" be predictable, within reasonable limits of accuracy and economy of effort, while the building is still being planned. I understand that any noise is acceptable as long as it does not annoy the occupants of the building; can this point of annoyance be predicted ahead of time? The architect can rightfully claim that noise is not the problem; annoyance is the problem.

What would the architect like to know about sound? For example, how can we predict the quality of sound, the "ring" of a space? How can we make a space feel more noble, or more gay, or more intimate, or more climactic, or more private?

What is the difference in sound control techniques between large and small spaces? Can the quality of sound relieve the monotony of corridors? How can the quality of sound contribute to a sequence of spaces, a rhythm of spaces?

What does a wall need to be? What does a floor need to be? We understand these questions very well in terms of structure; why not in terms of sounds, impacts, vibrations?

It is ironic that the spatial ideas of our time have dealt so eloquently with structure and light, but so poorly with sound. If the problem of noise-control is clearly stated, so that it be given a high priority amongst the ideas to be incorporated in design, one can predict that new spatial concepts will arise.

And the other side of the coin: Whereas the structure of building has become an expressive element (Nervi, Le Corbusier, etc.), the provisions for sound have generally remained inexpressive. Hung ceilings and other false work are the most common images that come to mind when one considers sound control. But most false ceilings deny the structure and mechanical services of the building. False ceilings tend to "homogenize" architecture. The future direction of architecture lies elsewhere. How a space is made, and how it is served by light, heat, power, sound: this is the integration of technique we seek in architecture.

But we must remember that technique is a means to an end, not an end in itself. Architecture is a social art and a spatial art; its essential function is to help solve some of man's problems and to enrich his spirit. ◀

## Effects of Noise on People

by Lewis S. Goodfriend\*

► Noise is a byproduct of many beneficial devices and processes produced and used by modern civilization. Noise, by definition, is unwanted sound. Continued exposure to this unwanted auditory insult causes irritation and annoyance. The many resulting effects are negative.

Direct and indirect effects:

There are both direct and indirect effects of noise on people. Among the direct effects are:

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- interference with the auditors' activities
- general annoyance
- retaliatory or remedial action
- legal action if nothing else causes the noise to stop

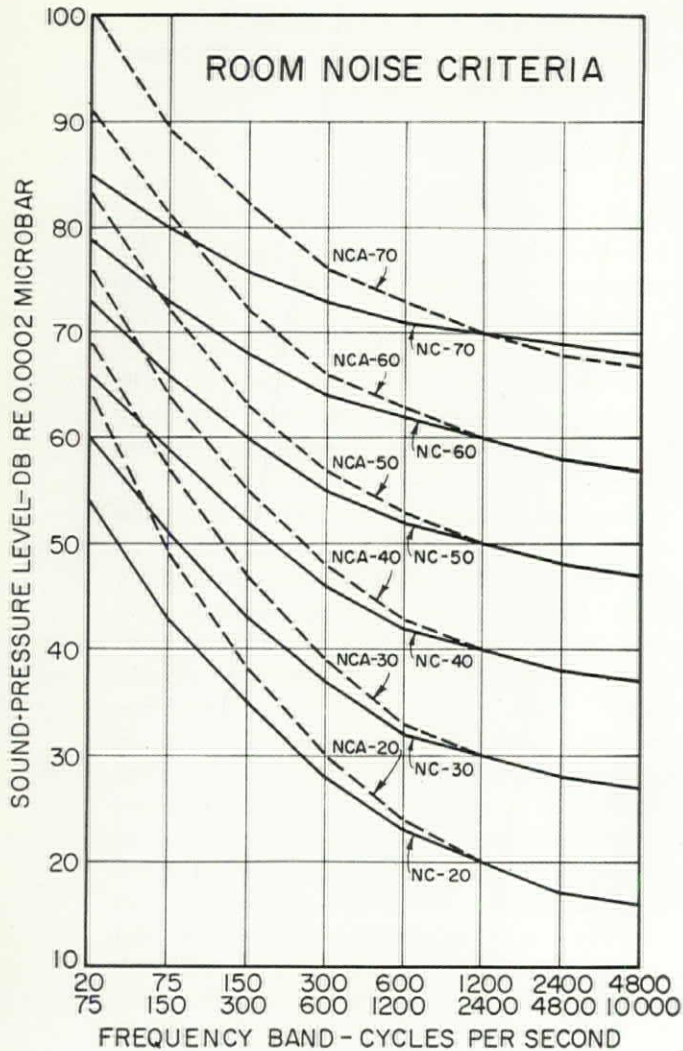
Indirect effects include:

- behavioral changes under stress of noise
- adaptation to noisy environment
- apprehension

These indirect effects may occur simultaneously with and interact with each other and with direct effects to produce a complex group or individual response.

Behavioral changes often occur at such slow rates that neither an individual nor his close associates are clearly aware of the magnitude of the change. I have seen such changes occur in noise-exposed communities where some people are tagged with such terms as "cranks" or "trouble-makers." These people, in a few cases, have reasons external to the noise exposure for their extreme reaction to the noise source or its operator. However, in a majority of cases the noise exposure over a long period of time has given these people the feeling that their fight is a crusade to which they devote considerable energy. They feel, and often rightly so, that their rights have been invaded. It is difficult to interview these people in an effort to determine facts such as the duration of the noise because they frequently exaggerate in their descriptions of both duration and comparative loudness of the noise in question.

The process of adaptation permits office workers to maintain their level of work output with little or no degradation of quality even while working under extraordinary noise conditions. I have seen conditions where the employee consumption of aspirin amazed me. Continuous representations were made by employees to their employer and he in turn to the owners of the noise source—a printing plant recently installed on the floor above the office in question. In fact legal action was in progress. However, no reduction in work output was noted. Some byproducts of this unfortunate environment were (1) more end-of-the-day fatigue for employees and (2) a feeling of apprehension in individual employees for their future health and peace of mind. Although psychologists have determined that noise does not interfere directly with many kinds of work, they have not been able to measure all of the systemic changes that take place in the individual under the stress of loud noise.



Apprehension, which was mentioned in regard to health, has a more important aspect in regard to architecture and community planning. Residents of communities at the ends of airport runways and those near highway intersections where fatalities have occurred are made apprehensive by the acoustical reminder of the presence of the danger.

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*"Music to my ears . . ."*

There are many sounds which are music to the ears of one person which will be annoying to other people. Among these are the sounds made by children playing, model airplane engines, racing sports cars, a sports event heard on someone else's radio or television. These sounds provide a pleasing response for some and a violent reaction for others. The proud father of a future concert violinist may find his child's practicing a musical treat while his neighbors contemplate a call to the police.

The ear is not as sensitive to low frequencies as it is to high frequencies. Thus, sounds which have only low frequency components are often quite acceptable. They include distant automobiles and piston engine airplane traffic—in fact, any sound which through natural means or by control devices has had most of its high frequency energy removed or reduced.

There are some relatively quiet sounds which are annoying no matter how quiet they are. These include conversation from another room heard indistinctly, a barking dog, flushed water heard in a living room filled with guests. These sounds are really members of classes of noises, but they illustrate the noises that are either acceptable or unacceptable on the basis of the relationship of the noise and its source to the auditor.

#### *Design objectives are guides not criteria*

Over a period of many years a number of tabulations have been set up showing in one column a room function and in an adjacent column the corresponding sound level recommended for that space. In some cases these levels are those measured in existing spaces; in other cases they are the design objective sound levels for ideal living or listening conditions; and in still other cases they are the levels which will probably be tolerated by the expected occupants of the space. If the occupancy changes, these formerly tolerable levels may be intolerable. Unfortunately, different writers have used the same terms, "the weighted sound level," "speech interference level," or "NC level" to label their selection but they seldom state whether this is what they would like to achieve or what they estimate as just tolerable.

The most comprehensive guide to acceptable noise levels is based on work by Rosenblith, Stevens and Bolt, in a study prepared for the United States Air Force and later refined by Beranek for industrial, commercial and residential use. This guide is in the form of two charts showing the NC and the NCA curves. The charts have been superimposed and are shown here as a single illustration. These are the same as the earlier curves called the SC curves except that the NC curves have been drawn through integral decibel values.

In using these curves a list or table indicates which of the NC curves is recommended for a given space. The noise control procedures are then planned to achieve the design levels selected, *or any value below the design objective*. Beranek and his colleagues have selected a number of values as design objective noise levels. These levels are to

be measured in the space when it is not occupied. The occupants may or may not make noises of their own. That is under their own control.

It should be noted that the sound level must not exceed the NC curve selected as a design objective in any band in order to meet that objective.

All earlier criteria for noise control design can in a general way be related to these NC curves. The weighted sound level in decibels which has been in use for many years is very close to the shape of the NC curve at the low levels usually recommended for home and office spaces, and the curves of loudness levels in *phons* used in Europe are also close to the NC curves. Beranek himself had this to say about the application of the NC and NCA curves. "The architect or consultant will have to use his own judgment in selecting a curve for a particular specification because of the wide range of attitudes toward noise and because of local customs and expectations in different locations. In some cases lack of funds for quieting may require that a calculated risk be taken."

Where does this leave us? It leaves the architect and consulting engineer with some good guides to design. As you will learn if you do not already know, noise control measures provide large increments in noise reduction through specific design techniques. It is difficult to obtain just a little sound control. For example, adding  $\frac{1}{4}$  inch of additional plaster to a  $\frac{3}{4}$ " thick plaster and steel-stud wall does not add even one decibel to its sound isolation. The addition of resilient clips to the wall system can add ten decibels of isolation in the speech range. Similarly a few bends in an unlined ventilating duct do little to limit the fan and motor noise. Adding a proprietary trap or lining an existing plenum will probably make the fan and motor noise inaudible. It is similar in almost all types of building noise problems. The acoustical engineer *can* spot the noise sources and *can* advise the architect where the control is simple and will be adequate for even the most stringent design objective. He can also outline the critical areas where changes in planning will be less costly than trying sound control by materials and mechanical isolation. These design criteria, which I prefer to call design objectives, must be applied with understanding—understanding by acoustical engineer, architect and his client.

#### *Cost and effect of NC*

There are two major points still left for discussion. One is the matter of the cost of noise control. The other is the effect of noise duration on the design. There are many psychological factors in-

involved in the noise control design. If the design objectives are relaxed by ten decibels, the owner may be able to save ten percent on his construction cost but may be unable to keep all his space occupied. On the other hand, safety factors in the design and rating of duct-silencing devices usually result in quieter ventilating systems than calculated. Decisions regarding these matters affect the acoustical design. Once made they commit the owner to a fixed course. If he settles for less sound isolation he should not try to convince his tenants they are cranks when they complain about noise from adjacent spaces. It is equally foolhardy to provide excellent architectural sound isolation between apartment or office units and connect them together with poorly isolated air conditioning ducts.

A similar situation exists where a heating plant for garden apartments or a hospital is placed in a building of its own, separate from the main buildings, to eliminate noise problems and the steam is then noisily exhausted to the atmosphere creating high noise levels.

There is one condition under which higher noise levels than those recommended as design objectives may be tolerated. This is when the period of time during which the noise is present is brief and occurs only during the day or early evening. A neighbor's kitchen fan running at breakfast and supper hours will not in general be an annoyance even to close neighbors. However, a summer ventilating fan or air conditioning unit that makes about the same noise all day and all night will very likely be considered a nuisance. Similarly, a laundry which shuts down each evening and exhausts its steam lines at 6:15 each weekday evening will not be too annoying even to nearby neighbors, but just let them try a night shift with shut-down taking place at 12:15 at night. There are other sounds for which time is an important factor. One currently receiving considerable attention is the noise from airports. Here the technique designed to determine noise tolerance of the community is keyed to the duration as well as the sound level and its spectrum.

To estimate the effects of noise on people, it is necessary to study both noise and people. The noise experience of the noise-exposed population should be determined if possible. The engineer must study their sociological history if it is residential construction or their tasks and communications requirements if it is commercial or industrial construction. Then the margins, the safety factors, may be estimated and the NC design objectives applied.

**Table II Speech Interference Levels (in DECIBELS RE 0.0002 DYNE/CM<sup>2</sup>) which Barely Permit Reliable Conversation at the Distance and Voice Levels Indicated**

Voice Level Distance (ft)	Normal	Raised	Very Loud	Shouting
0.5	71	77	83	89
1	65	71	77	83
2	59	65	71	77
3	55	61	67	73
4	53	59	65	71
5	51	57	63	69
6	49	55	61	67
12	43	49	55	61

### Speech interference levels

Speech interference levels were defined by Rosenblith, Stevens and Bolt as the average of the decibel levels in the octave bands 600-1200 cps, 1200-2400 cps and 2400-4800 cps. You may note that the speech interference levels of sounds that follow the NC curves have the same value as the NC curves. The speech interference levels (SIL)

may be used to predict the ability of people to communicate over certain distances using standard vocabularies and various degrees of speaking effort. Table II shows the distances over which reliable speech communications may be maintained with the sounds having various speech interference levels. Beranek has prepared a table based on the SIL levels to show office communications conditions at various SIL and NC levels (See Table III).

It is not easy to relate these octave band charts, and even our own experiences in noisy environments, to the requirements for noise reduction. It is not so simple as thermal insulation nor as precise as illumination control. On the other hand it is just as important in the design of buildings.

Unfortunately, noise will continue to be a by-product of the many labor-saving and beneficial products of our modern world. Notwithstanding its continued presence, it will still be unwanted. Nobody wants to live in an icily cold, dark house. Why should they be willing to live or work in a noisy one? Thus the effects of noise will continue to be negative. Engineers can design quieter products and architects can provide better sound isolation, select the quieter products, and meet the most desirable design objective values for building noise levels.

**Table III Office Noise Conditions**

Noise measurements should be performed with the office in normal operation, but with no one talking at the particular desk or conference table where speech communication is desired (ie, where the measurement is being made). Background noise with the office unoccupied should be lower, say by 5 to 10 units.

SIL or NC Curve	Communication Environment	Typical Applications
NC-20 to NC-30	Very quiet office—telephone use satisfactory—suitable for large conferences	Executive offices and conference rooms for 50 people
NC-30 to NC-35	“Quiet” office—satisfactory for conferences at a 15-ft table—normal voice 10- to 30-ft—telephone use satisfactory	Private or semi-private offices, reception rooms, and small conference rooms for 20 people
NC-35 to NC-40	Satisfactory for conferences at a 6- to 8-ft table—telephone use satisfactory—normal voice 6- to 12-ft	Medium-sized offices and industrial business offices
NC-40 to NC-50	Satisfactory for conferences at a 4- to 5-ft table—telephone use occasionally slightly difficult—normal voice 3- to 6-ft raised voice 6- to 12-ft	Large engineering and drafting rooms, etc
NC-50 to NC-55	Unsatisfactory for conferences of more than two or three people—telephone use slightly difficult—normal voice 1- to 2-ft—raised voice 3- to 6-ft	Secretarial areas (typing), accounting areas (business machines), blueprint rooms, etc
Above NC-55	“Very noisy”—office environment unsatisfactory—telephone use difficult	Not recommended for any type of office

## SCHOOL PLANT STUDIES

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### The Services of an Architect in School Building Planning

From a report prepared for the Board of Education of Montgomery County, Maryland

by the Joint Architectural Advisory Committee

Potomac Valley and Washington-Metropolitan Chapter AIA



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**BT 1-39** The American Architectural Foundation • The American Institute of Architects

*This is the thirty-eighth of a series of papers prepared by members of the AIA Committee on school buildings, and by selected specialists, to make laymen aware of school building problems and trends and to stimulate discussion. They are not intended to be definitive last words and carry only the authority of their respective authors. The series will be edited by the committee and issued by the AIA Department of Education and Research under sponsorship of The American Architectural Foundation. Many new subjects are being worked on and contributed articles are welcome. Widespread distribution to laymen and educators is made of these non-technical articles in reprint form. (one copy each issue free—additional copies 10¢ each)*

► Construction of a school building involves a great many groups and individuals, all having differing degrees of responsibility for the final result. The relationship of these, one with the other, can have a decisive influence, not only upon the building, but upon the success or failure of the educational program to be housed within its walls. In an effort to clarify relationships as well as responsibilities of the various participants in a school plant program, the National Council on Schoolhouse Construction together with the AIA prepared a pamphlet entitled "Responsibilities and Relationships in Planning, Designing and Building a School Plant" (AIA Document M-501).\*

#### *Functions of Architect*

1 Review with the educational staff the educational program and proposed schedule of facilities preparatory to making sketches.

2 Assist in site selection.

3 Prepare preliminary studies including site utilization plans and make revisions.

4 Be responsible for compliance with the applicable building codes.

5 Determine structural methods and materials.

6 Provide educational officials with cost estimates and assist in preparing project budgets.

7 Prepare final working drawings and specifications, advertisements and bid forms, assist in securing bids, prepare tabulation of bids; recommend contractors and provide information for the preparation of construction contracts and bonds.

8 Direct the supervision of construction, provide large-scale drawings, check shop drawings, make color selections, interpret drawings and specifications to the contractor, check progress of work, issue payment certificates, and recommend final acceptance.

9 Provide educational authorities with final set of prints including on-job changes and corrections.

10 Plan and specify equipment in cooperation with the school authorities.

#### *Educational Programming*

Before the architect can start development of even the most preliminary sketches, he must understand thoroughly the purposes and requirements of the proposed structure. He must know the client's needs, budget and other factors which will affect the final design. Consideration should be given, not only to present needs, but also to future expansion in terms of site utilization, orientation and topography. These factors are related, although subordinate, to the main consideration which is the designing of a proper environment for learning — spatially adequate, architecturally significant and economically feasible.

#### *Preliminary Drawings*

After carefully reviewing the educational program with the school staff members directly concerned, and with his own staff and engineering consultants, the architect develops preliminary sketches of the proposed structure. These sketches provide a basis for discussion and evaluation of broad concepts of design, size and arrangement of spaces and establish basic determinations which will govern preparation of working drawings. The sketches are examined by the school staff and board, revised and refined until a solution is reached which satisfies every aspect of the program, and has the approval of various individuals and agencies (state and local) concerned.

#### *Working Drawings and Specifications*

When it has been agreed that the preliminary drawings have satisfied all of the client's requirements, the architect begins the working drawings and specifications. The working drawings show, by means of plans, elevations, sections and details, the total scope of the project — space arrangements, kinds of materials and methods of assembly. Drawings are also made

of plumbing, heating, ventilation, electrical installations and all structural work. The specifications, which complement and are coordinated with the drawings, establish quality and kinds of material to be used in construction of the building, from foundation concrete to finishing hardware. They also establish standards of workmanship which the contractor will be expected to provide. In essence then, the drawings will show *where* and *what* work is to be done, and the specifications will describe *how* it is to be done.

The working drawings and specifications serve a three-fold purpose:

- express in tangible form the owner's requirements and the architect's solution
- serve as bidding documents for determining cost
- serve as legal instruments governing the construction contract.

It is apparent that final working drawings and specifications are not a mass-produced product suitable for over-the-counter merchandising. The much-used phrase "buying blueprints" is no more a true measure of the hours spent on sketches, discussions with client and public officials, collaboration with consultants, and coordination of the efforts of dozens of highly trained specialists, than is that small piece of paper, called a "prescription," any measure of the medical doctor's service to his patient.

#### *Estimates of Cost*

Quite often the architect must decide, on the basis of the most preliminary of sketches, whether or not his design can be built within the amount of money appropriated for the project. He must make this decision often as far as a year ahead of the time actual bids can be taken. He must analyze and evaluate a whole series of variables which are commonly known to affect bidding, some of which are as follows:

- availability of materials or equipment

\* Available from the American Institute of Architects, 1735 New York Ave., N.W., Washington 6, D. C.



- condition of local construction market at time of bidding
- changes in costs of material or labor
- season when construction might start
- number of bidders
- unusual conditions inherent in project

A slight change in one of these factors can affect cost of a given project to a significant degree. If the architect has had considerable experience in the school building field, his preliminary estimates are apt to be reasonably accurate, simply because his wealth of experience has provided him with fairly exact unit costs for similar building types. By adjusting these unit costs to meet conditions which are expected to exist at the time of bidding, he is able to predict the cost with a reasonable degree of exactness. Even so, there are many factors present at the preliminary sketch stage that cannot be resolved until detailed investigations of site conditions, structural systems, utility requirements and characteristics of various materials have been made and evaluated. Sometimes a professional quantity surveyor is retained to make an estimate. Here again, since he will be dealing with early sketches and brief outline specifications, his estimate is often inconclusive and cannot be guaranteed. Therefore, preliminary estimates should be viewed, not as a firm commitment by the architect, but as a measure of the estimated cost, prepared for the guidance of those concerned, and representing the best information and judgment available at the particular time.

While working drawings and specifications are in progress, the architect should maintain a running check of market conditions, material costs and constantly evaluate problems in the planning and engineering aspects of the project. If it becomes apparent that some unfavorable condition will have an adverse effect on the project cost, the architect should so advise the board. Subsequent decisions will then be made in the light of the best judgments of all persons involved. To indulge in wishful thinking that somehow or other the price will be right is neither prudent nor in the best interests of the architect, the board of education or the general public.

### Supervision

A troublesome problem in the architect-client relationship is the matter of supervision of construction, because questions often arise from differing interpretations of what constitutes the architect's nominal supervision. Actually, the word "supervision" is a misnomer, when used to refer to that part of the architect's services which begins with the signing of the construction contract. "Administration" is a better word, because architects' office records show that as much time is spent in the office, checking shop drawings, reviewing and approving materials submitted by the various subcontractors and material suppliers, reviewing contractor's requisitions for payment, writing letters, answering telephone inquiries, preparing detail drawings, etc., as is spent in the field overseeing actual construction operations.

Many school people and board members overlook the office administration part of the architect's service because it is a phase of the building operation which generally concerns the contractor and the architect and with which the client is only remotely connected. Shop drawings are an excellent example of architect-contractor relationship.

These drawings are prepared by the manufacturer or supplier for fabricating specific items needed in construction. They are based primarily on information contained in the architect's working drawings and specifications, but cover only the specific and detailed application of the manufacturer's product. It is from the shop drawings that the manufacturer will build his product, whether the product be a coat hanger or a tremendous steel girder. Size, weight, finish and method of assembly must be checked and coordinated with the other parts. Not only does this checking procedure require time for detailed review, but it also requires close collaboration between the architect and his engineers and discussions with the contractor and manufacturer. The architect is the principal factor in this part of the building operation, since he alone is in the key position to coordinate and interpret the entire project which, at times, involves as many as a hundred different trades. Shop drawings for a school project may num-

ber into the hundreds, and for a large project may even exceed a thousand, but they are rarely seen by the board or school staff.

In field supervision, the confusion generally arises from differing interpretations of the words "adequate supervision." To establish this in terms of visits or hours spent on the job does not take into consideration the cyclical nature of a construction operation. At certain vital stages, the architect and his structural and mechanical engineers may have to spend several hours at the site—at other times the clerk-of-works' daily inspection may be adequate. Yet even a client familiar with construction practices would have difficulty in deciding whether better supervision would result if the architect were to visit the job for half-an-hour each day, or whether it would be better to spend an entire morning there one day a week. These are the reasons why it has never been feasible to set a precise schedule of inspections. Just as a patient relies on his dentist to determine the number of visits and length of time needed to correct a specific dental deficiency, so too must the client depend on the architect's judgment to provide adequate supervision. It is really a matter of professional responsibility and personal integrity.

Another aspect of supervision which can cause confusion is the relationship between the architect's nominal supervision of the work and the clerk-of-works continuing day-to-day inspections. While this relationship is not governed by any hard and fast rules, and may change in various parts of the country, some generally accepted principles can be set down.

For example, the State of California has had to cope with the problem of earthquakes for a great many years, and in consequence, has passed some fairly stringent laws regarding school construction practices. They have defined in the statute, as precisely as any we have found, the differing responsibilities of the architect and of the inspector.

"The Architect (or registered engineer) shall maintain *such personal contact* with the project as is necessary to assure himself of full compliance with the approved plans and specifications . . ."

"The Inspector (or clerk-of-

works) must have *actual personal knowledge obtained by his personal and continuous observation* of the construction in all stages of its progress that the requirements of the plans and specifications are being exactly and completely executed. Continuous inspection means complete inspection of every part of the work . . . .

While the foregoing quotations may not apply in every instance, or in every locality, they do express the differing degrees of responsibility usually found in the coordinated supervisory functions of architect and inspector. The architect should be completely familiar with the job site activities and be satisfied in his own mind that the client is getting the quality of construction called for in the plans and specifications. The inspector, on the other hand, should have a reasonably accurate knowledge, by virtue of actual observation and record keeping, that the general contractor and his sub-contractors *have*, in fact, faithfully complied with the terms of the construction contract.

Apart from the actual site work and related office administration, there are other factors, over which the architect has little or no control, which can adversely affect a project. For example, by the very nature of public bidding, an architect has no choice in regard to selection of the contractor who will construct his building. In certain instances, the caliber and experience of the contractor, his financial status, his business methods, the subcontractors he employs, etc., can cause an increase in the architect's administrative and supervisory workload to the point where the architect suffers serious financial loss, particularly when the contractor finds himself in financial difficulties while the project is underway. Material shortages, labor disputes, national emergencies, and even the weather may prolong the construction period by several months to a year, thus increasing the architect's administrative costs. The architectural profession accepts these problems as part of the risk of doing business but architects are ever concerned with the strain these outside influences can place upon the architect-client relationship.

#### *Extra Costs*

There is probably no more both-

ersome problem to a board of education than the payment of extra costs beyond the contract amount. In spite of the architect's utmost care there are bound to occur some conditions on any job which require the payment of extras.

In order to take care of this, some owners set up a contingency item in the project budget, ranging from one to three per cent of the contract amount. There are others who feel that, in setting aside a contingency fund, there is a tendency for the contractor to seek extras, knowing that money is available.

It is prudent to assume that, since absolute perfection never can exist, some provision should be made for a reasonable amount of extra costs in any construction contract.

There are any number of ways errors and omissions can occur. Generally they fall into three categories:

- unforeseen conditions
- changes by the owner
- errors and omissions by the architect

Sometimes a little more care in the review of plans and specifications by the school staff and the architect can prevent errors but in many cases they are caused by factors beyond anyone's control.

Usually the most expensive extras occur from conditions which were either unknown or unforeseen. For example, if rock or water are encountered during excavation, a change in foundations is necessary, test borings and soil analyses. Though accurate, may have been misleading. It is not usually economically feasible to make more than a few dozen test borings which on a large site cannot give more than a bare outline of underground conditions.

In some cases errors occur from the architect's misinterpretation of the client's requirements. For example, chalk boards are indicated when the client may have wanted display board. It is sometimes difficult for the architect in dealing with lay people to be really sure that he is understood. Architects have found that some persons have had a limited amount of experience in visualizing in three dimensions that which is indicated on the drawings. They express an opinion

without really understanding the effect such a decision can have on the whole planning process. Most school systems have a trained staff, some members of which serve as liaison with the architect, interpret the educational needs, and furnish information in a useful and understandable manner. Consequently, errors in this category are usually small in cost, but an accumulation of small items can mean a sizable addition to the contract.

Errors which are most distressing to the architect, and most irritating of all to the school board, are those which are just plain "mistakes." These occur as conflicts between the plans and specifications, or when, inadvertently, an essential item is left out. Architects, being human, can and do make mistakes. Sometimes an inexperienced draftsman will make a simple error, or, insufficient time is allowed for the final painstaking review or coordination of the architectural, structural, mechanical and electrical work. Given enough time to check and recheck, this type of error could almost be eliminated. Unfortunately, everyone—the school board, the staff, the architect and his consultants—is generally under constant pressure to get the building built. Such errors will continue to plague both school officials and architects.

#### *Summary*

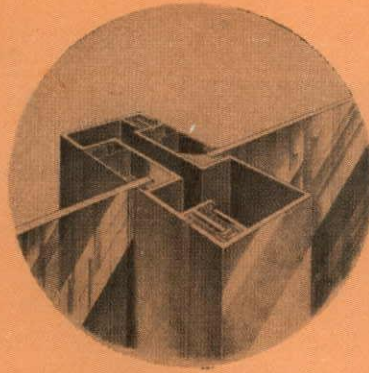
From the foregoing discussions, which cover only a few of a wide range of professional obligations, it is obvious that all architectural services cannot be performed by a single individual. An architect must necessarily call upon the resources of others: the engineers—structural, mechanical, electrical, acoustical and civil—the landscape architect and a host of special consultants—kitchen, hardware, equipment, lighting, library, laboratory—to name only a few. Except in a few unusual cases, the architect pays for these services out of his own fee.

Although he shares his work with many, the architect carries by far the greatest responsibility. As the recognized leader of the group, it is his obligation to see that the joint endeavors of all have but a single purpose—service to the client. ◀

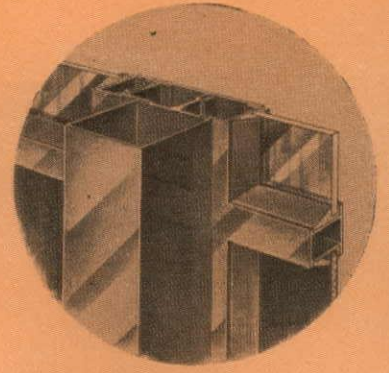
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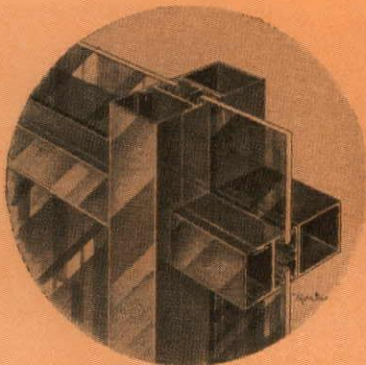
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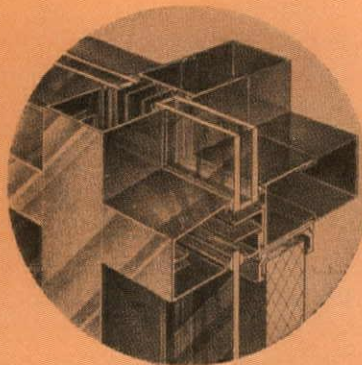


## FIVE DISTINCT SERIES

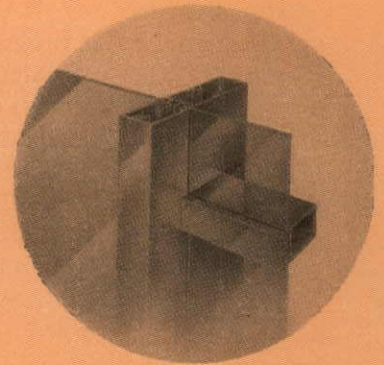
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## S T U D E N T S

► On October 16, 1959, as a part of the Twentieth Annual Meeting of the Texas Society of Architects, another "first" was accomplished in the annals of AIA. As the Octagon's staff member for Chapter and Student Affairs I conducted a Student Affairs "Workshop" in Austin. Participating in this most successful and historic meeting were seventy-seven students, faculty and sponsoring AIA chapter representatives from Texas' five schools of architecture. Kits were distributed, designed to aid these various segments of education and the profession. After greetings and inspiring remarks by Messrs. R. Max Brooks, Director of the Texas Region, and L. W. Pitts, Vice President of the Texas Society of Architects I reviewed the aims and purposes of the AIA Student Chapter Program. I stated that one of the most important ingredients a Student Chapter needs for success is, "inspired leadership and an aggressive program. . . . However, it is essential," I said, "that the faculty and sponsoring chapters provide their support. By supporting the AIA's Student Chapter Program, they introduce the student to the professional problems and responsibilities which he will face on being registered to practice, provide for him a closer integration with present day leaders of the architectural profession, and acquaint him with the opportunities and obligations for improving the state of the art and science of architecture through affiliation with the AIA. If we do all this, we shall have contributed to the general welfare of us all."

Also discussed was AIA's Architect-In-Training Program, how it works, and the method for enrollment. The new Student Experience Log Sheet was shown. This is a green form to be used only by Student-Candidates who are employed, during undergraduate years, in architectural offices or on construction jobs. This record may be included in the A-I-T Log Book when the student-candidate is formally enrolled in the Architect-In-Training Program after graduation. Whether or not experience recorded on this form will be counted for admission to Registration Examinations depends on the regulations of the Registration Board of the state where registration is sought.

The students were also told that just as industry and the Government seek to recruit the best pos-

sible employees, so AIA—for the benefit of the entire architectural profession—must do everything it can to make available to the high school student reliable information about our profession. In connection with this, there was a discussion of "Career Guidance." Material was distributed to aid teams of architects and students in presenting architecture as a career to high school students interested in the profession of architecture.

All those present were told of the Institute's growing awareness of the architectural students—that they are the "bricks" from which is constituted, in part, the temple of AIA.



*Karl Kamrath, FAIA, of Houston, (in plaid coat) conducts a critique of student work at the 20th annual convention of the Texas Society of Architects*

In an informal afternoon session specific questions were discussed and resolved. One school stated that its sponsoring AIA chapter is very small, and has difficulty in giving full support. In this case, the student affairs staff member has agreed to supplement, when possible, the assistance given to this student chapter. The question of eligibility was raised by another chapter; and it was confirmed that student AIA may be opened to any student—freshman through seniors—that the Chapter By-laws provide for.

Student awards in connection with this Conference were: The Texas Architectural Foundation Scholarship to Clarence Berwyn Tisdell, of Texas Tech, who was also the winner of a state-wide design competition. Larry F. Walls of Texas A & M was the recipient of a Scholarship Award as first place winner in a two-state design competition.

CHARLES D. BELINKY



Above grade  
on grade  
below grade

## which vinyl floor goes where?

Before the development of vinyl floors, the architect was limited in his selection of floors for use on grade and below grade. He could not use wood, linoleum, or most of the resilient floors available because these materials are damaged by alkaline moisture. In most cases, his choice was restricted to asphalt tile or to an unfinished floor.

The architect today has a greater selection—being able to choose, from a wide range of vinyl floors, the one that best meets each decorative and functional need of on- and below-grade areas. However, even today, not all types of vinyl floors have universal application. And, while a number of manufacturers make certain basic types of vinyl floors, the characteristics and advantages of each type are apt to vary from one manufacturer to another. Most solid vinyl tiles, for instance, cannot be used below grade. But some can. This restriction also applies to sheet vinyl floors. To clear up some of these problems and apparent discrepancies, Armstrong offers this guide for the use of vinyl floors over regular concrete subfloors.

**Above-grade subfloors** All vinyl floors may be used over above-grade subfloors made of regular concrete mixes, since these subfloors present no moisture problems. However, new mixes—such as lightweight aggregate and air-entrained concrete—require special precautions because they are slow drying and tend to behave like concrete on grade. Moisture tests should always be made with these subfloors to make sure the concrete is dry enough for the installation of vinyl floors.

**On-grade subfloors** The architect is not hampered these days when choosing vinyl floors for on-grade use. Arm-

strong Vinyl Floors—in both sheet and tile form—can be specified with assurance. While some brands of solid vinyl tile require special waterproof adhesives for use on grade, Armstrong solid vinyl tiles (Custom Corlon Tile and Opalesq Vinyl Tile) can be installed with regular adhesives as can Armstrong Excelon (vinyl-asbestos) Tile. Until recently, sheet floors could not be used on grade. Now they can. Armstrong scientists have developed a special moisture-resistant backing, called Hydrocord, which permits the use of sheet vinyl Corlon on grade. This allows you to give on-grade areas a monolithic look with wide seam-free expanses and other advantages only sheet floors provide.

**Below-grade subfloors** A variety of Armstrong Vinyl Floors can also be used below grade. Excelon (vinyl-asbestos) Tile has come into especially wide use because, besides providing excellent wear under all sorts of strenuous conditions, it can be installed with conventional, low-cost adhesives. And both types of Armstrong solid vinyl tile can be used below grade. Armstrong Sheet Vinyl Corlon with the exclusive Hydrocord Back is the only sheet flooring that can be used below grade.

### Technical Assistance for Architects

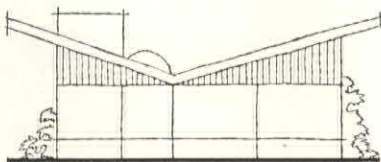
Where unusual conditions exist, Armstrong Architectural-Builder Consultants will be glad to advise the architect or refer the problem to the Armstrong Research and Development Center or to installation specialists. Because Armstrong makes all types of resilient floors, these consultants can make unbiased recommendations. Call your Armstrong District Office or write direct to Armstrong Cork Company, 1612 Sage Street, Lancaster, Pennsylvania.

### Vinyl Floors and recommended use over different subfloors



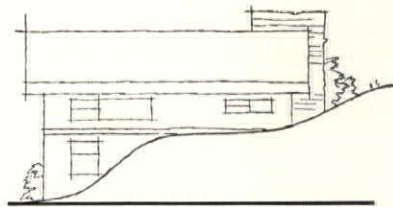
#### above grade

- Corlon (sheet vinyl)
- Corlon with Hydrocord Back
- Custom Corlon Tile
- Opalesq Vinyl Tile
- Excelon Tile (vinyl-asbestos) 1/8" gauge
- Custom Vinyl Cork Tile



#### on grade

- Corlon with Hydrocord Back
- Custom Corlon Tile
- Opalesq Vinyl Tile
- Excelon Tile 1/8" gauge
- Custom Vinyl Cork Tile\*



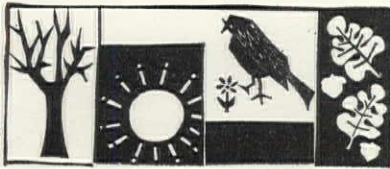
#### below grade

- Custom Corlon Tile
- Opalesq Vinyl Tile
- Corlon with Hydrocord Back
- Excelon Tile 1/8" gauge

\* One foot above grade, drainage away from floor

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## C A L E N D A R

*January 12-15:* Sixteenth Annual Technical Conference of the Society of Plastics Engineers, Inc., Conrad Hilton Hotel, Chicago, Ill.

*January 25-29:* Meeting of Board of Directors, The Octagon, Washington, D.C.

*January 28-30:* Forty-sixth Annual Meeting of the North Carolina Chapter, Sir Walter Hotel, Raleigh, N.C.

*March 14-17:* Fifty-sixth Annual Convention of the American Concrete Institute, Commodore Hotel, New York City.

*April 5-7:* BRI Spring Conferences, Statler-Hilton Hotel, New York, N. Y.

*April 11-12:* Inter-Society Color Council, 29th Annual Meeting, Philadelphia, Pa.

*April 18-22:* AIA Annual Convention, San Francisco, California.

*April 23-30:* Twenty-seventh Annual Historic Garden Week, Garden Club of Virginia. (For information write The Garden Club of Virginia, Room 3, Mezzanine, Jefferson Hotel, Richmond 19, Virginia.)

*May 11-16:* World Design Conference, Sankei Kaikan, International Hall, Tokyo, Japan. (For full information write Wo-De-Co—Tokyo, Room 301, International House of Japan, 2 Tariizaka-Machi, Tokyo, Japan.

*May 12-14:* South Atlantic Regional Conference, Winston-Salem, North Carolina.

*May 28-June 3:* Twenty-fifth World Planning and Housing Conference, San Juan, Puerto Rico.

*June 15-18:* British Architects' Conference, Manchester, England. (For information write G. R. Ricketts, Secretary, Royal Institutes of British Architects, 66 Portland Place, London W. 1, England.

## NEUROLOGY

According to notices received at The Octagon between October 1, 1959 and October 26, 1959

BOSCHEN, WALTER, St. Joseph, Mo.

FISHER, RAYMOND A., Edgewood, Pa.

76 KIMBALL, HARRY SMITH, So. Portland, Me.

RAPP, R. R., Galveston, Tex.

SUMMER, JOHN ERNEST, Atlanta, Ga.

WALKER, FRANK EVANS, Sioux Falls, S. D.

### *Honorary Fellows*

BESTELMEYER, G., Munich, Germany

WORNUM, G. G., London, England

### **Color Slides Needed**

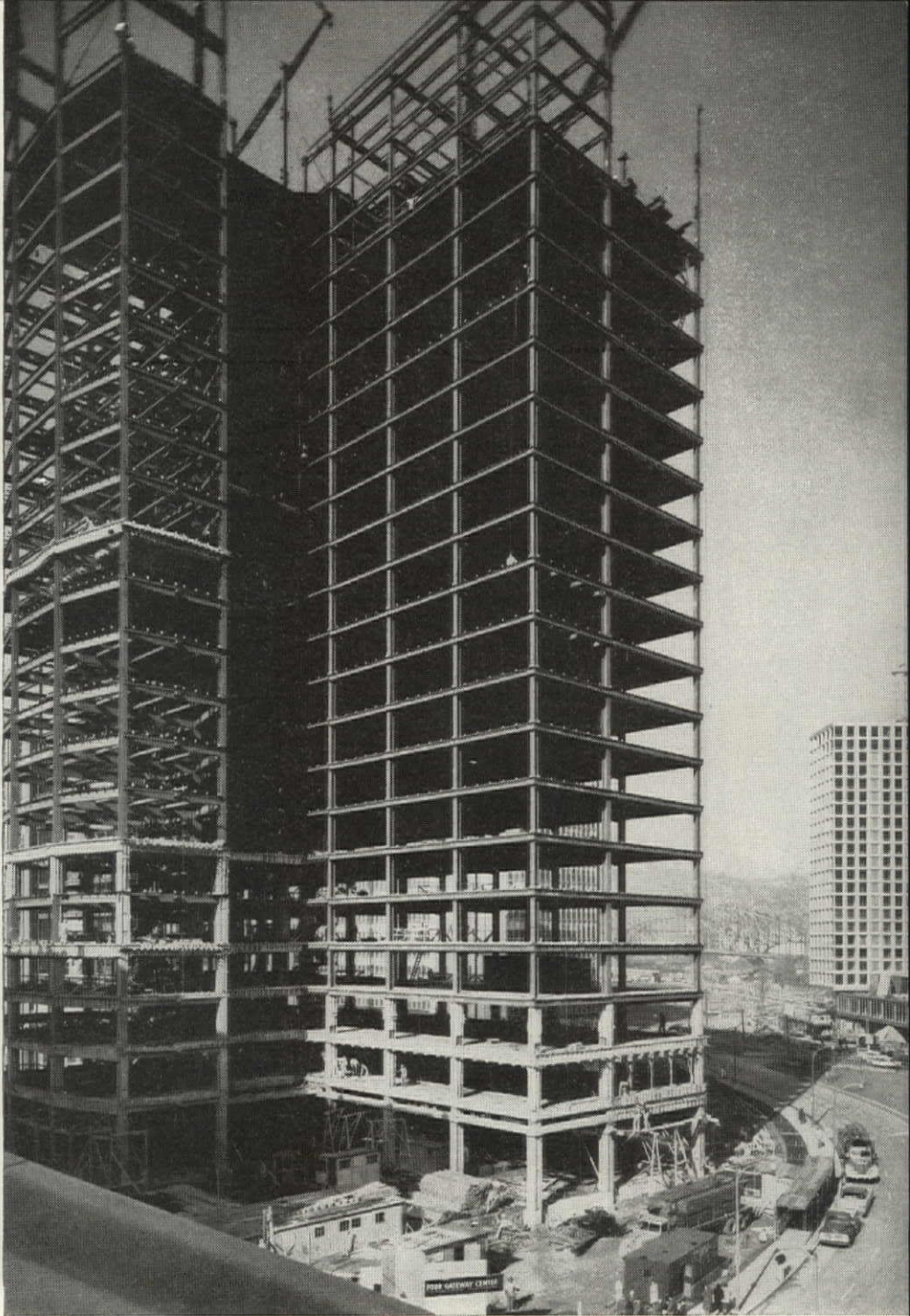
► William Lyman, AIA, whose article "Day of the Stunt" aroused so much attention in the September *Journal*, is building a collection of 2"x2" color slides of good schools for use in a school-planning course he teaches at Eastern Michigan University. He particularly needs slides of the following, having been unsuccessful in obtaining them through the usual channels:

Greenbrae Elementary, Marin County, Cal.  
McDonough School #36, New Orleans  
Uptown Negro Junior High, New Orleans  
Phyllis Wheatley Elementary, New Orleans  
South Columbia Street Elementary, New Orleans

Any assistance should be sent to: William Lyman, AIA, 5395 Hickory Bend, Birmingham, Michigan. ◀

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including other trades!**

The 6,400-ton steel framework of Four Gateway Center, Pittsburgh's newest downtown skyscraper, was topped out on April 29, just 3 months and 17 days after the first steel member was placed. Other trades followed closely on the heels of the American Bridge erecting crew as each floor of the 24-story office building was erected.



An important feature of steel construction occasionally overlooked—*immediate full strength*, is the key to safe, fast and economical construction. When a structure is built around steel, everything about the job moves fast. Not only does the framework go up faster, but other trades can move in and start work almost as soon as members are in place—rather than waiting weeks for safe conditions.

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Structural Engineers: Edwards & Hjorth

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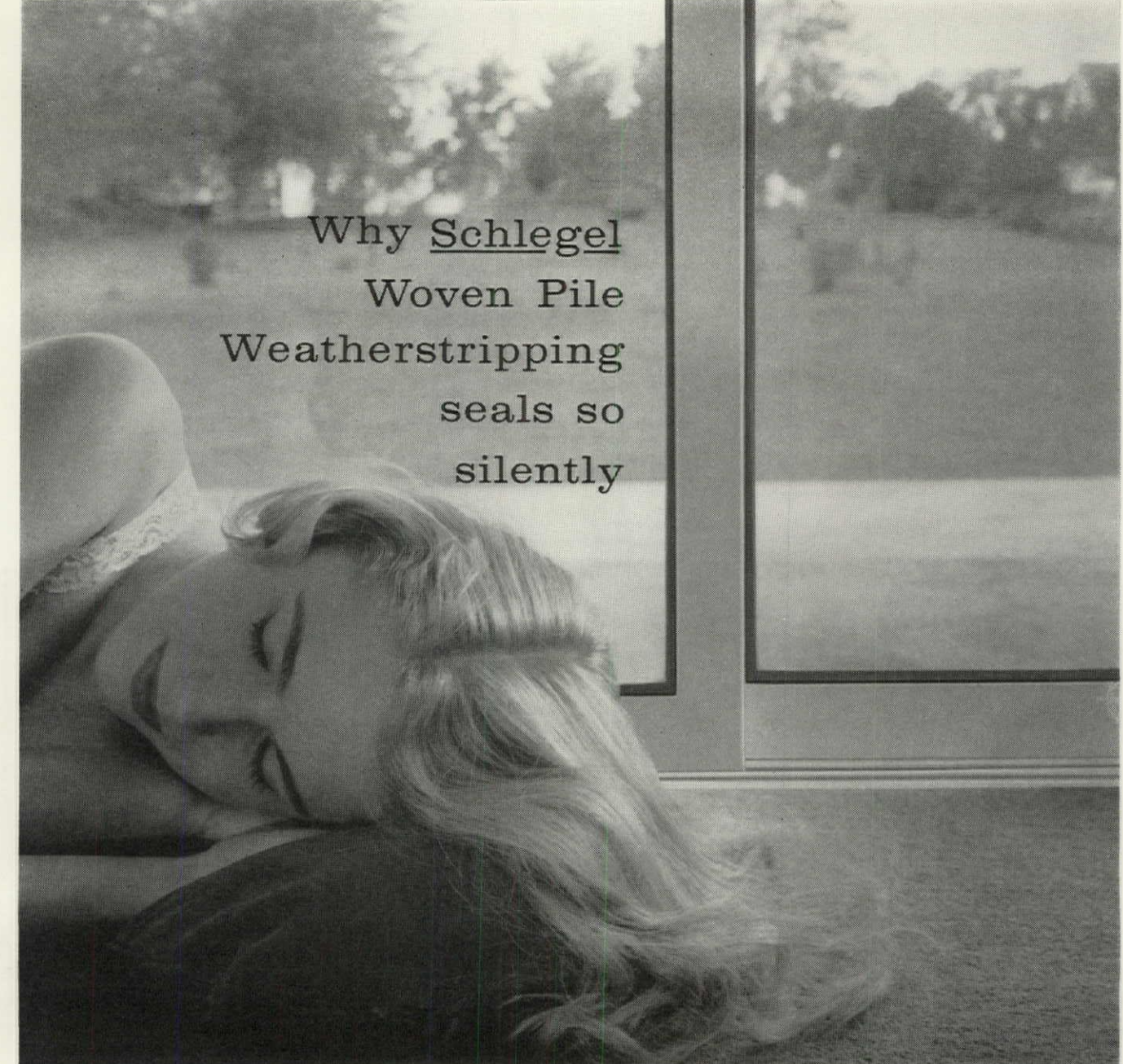
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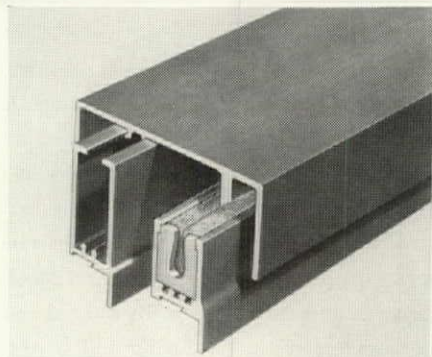
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**WEATHERPROOF.** Neither air, rain, wind, nor dust can seep in. Only Schlegel Woven Pile is silicone treated to insure complete weatherproofing. Schlegel performance has been proven by rigid FHA tests for air infiltration.

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Cross-section view showing Schlegel Woven Pile Weatherstripping installed in the aluminum frame head section of Arcadia Sliding Doors, Arcadia Metal Products, Fullerton, Calif.

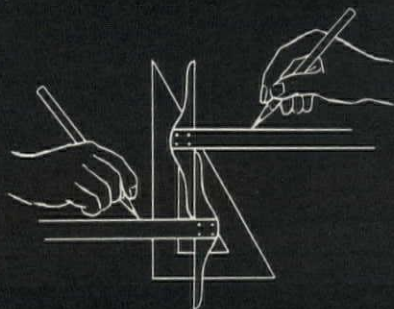
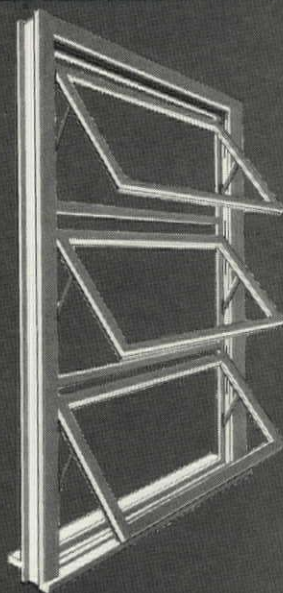
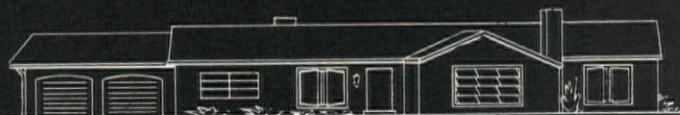
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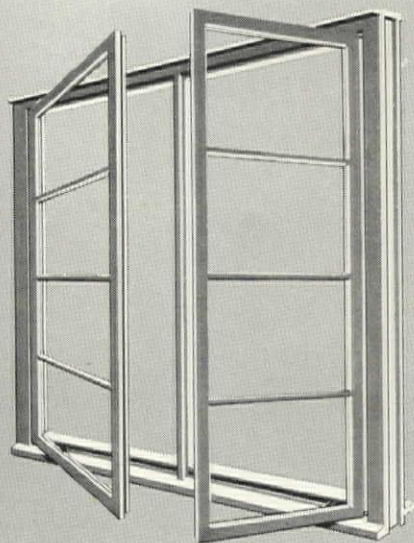
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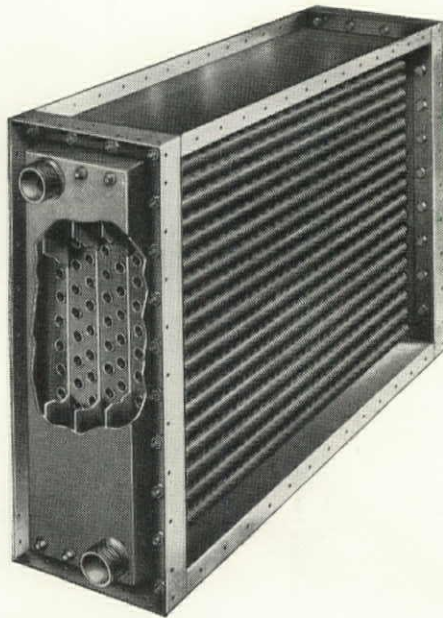
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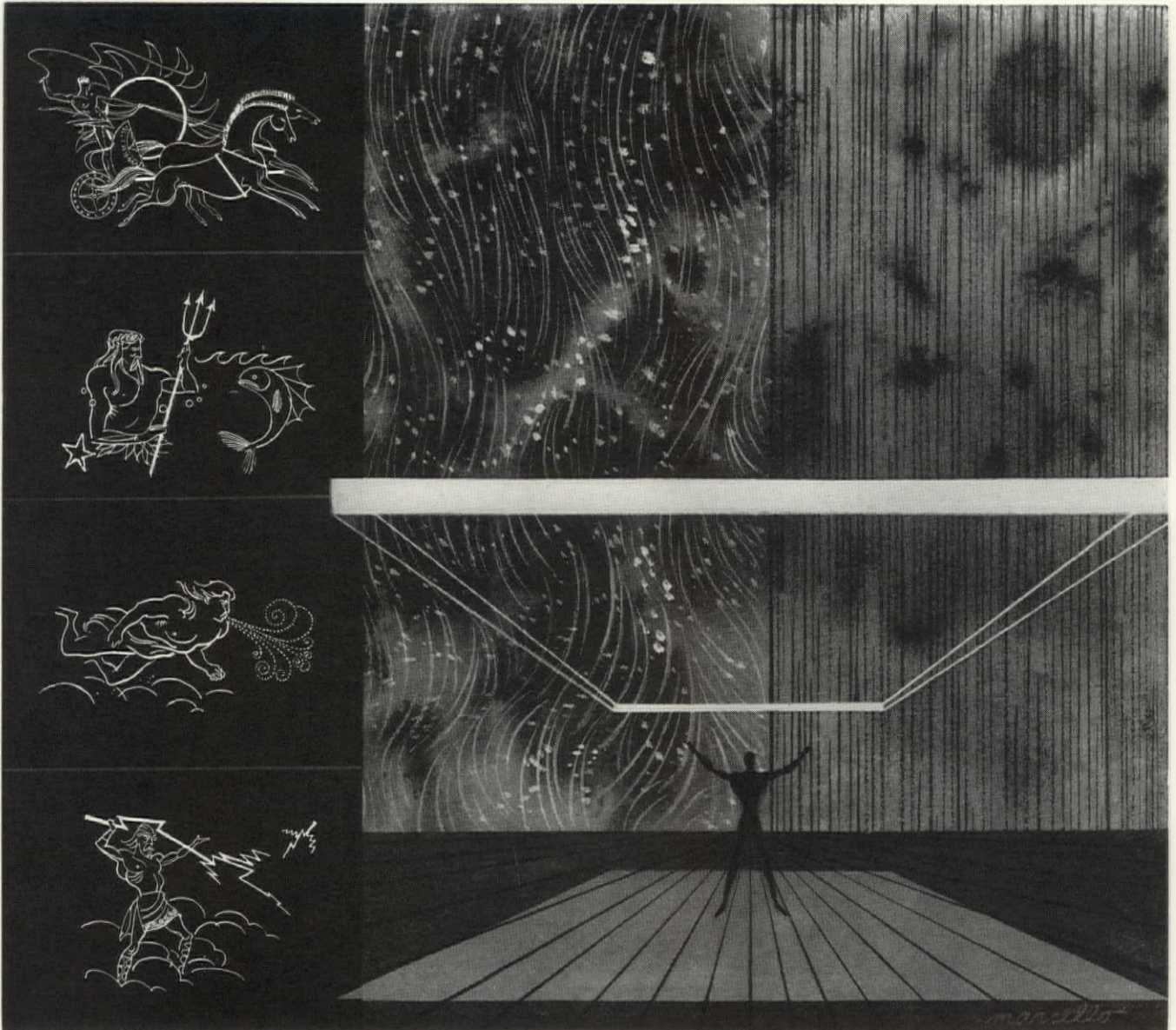
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By Paul M. Laporte, Professor of Art History  
Immaculate Heart College

► To architects, the work of the art department of Immaculate Heart College in Los Angeles is probably best known from the banners which added a sense of color and immediacy to the necessarily austere AIA centennial exhibition. To others, the work of I.H.C. will also be known from the several exhibitions at the National Housing Center, and from Sister Mary Corita's serigraphs which have been shown, and took prizes, in many parts of the US, and outside.

But many, still, would like to know what is behind these astounding manifestations of artistic vitality. At the outset it should be understood that the department is not and does not claim to be, a professional art school. Its main function is as a laboratory of a pilot study of creativity within the framework of a liberal arts college. Most of the graduates get married soon after graduation (if not before), even if some end up as designers or aides to designers. Likewise, the expanding adult program is directed toward the amateur. The professional student, college or adult, joins the ranks on his own risk. He may learn techniques like mosaic, silk screen, or papier maché work. And while he will not be taught "artistic" skills and tricks he may discover purposes, motivations and principles of design. Mosaic work, for instance, was practically abandoned a year or two ago simply because it had become too much of a fad. New and hard-to-handle techniques were introduced to break down the student's self-consciousness as far as "expression" is concerned while the struggle with the material gives, at the same time, character to the work. One new departure is the three-dimensional mosaic. Another is the making of books—binding, lettering, illustrations and all. The most ambitious new projects are the big walls. These are huge collages on paper, with painting added. Some of these are very successful indeed, pointing the way to creations in a more permanent material.

One may say that the best products of the department are on a level of quality, sensitivity, and resourcefulness equal to the best in folk art. The production is not as "arty" as a good deal of the work done in professional schools. If it is excellent at all, it excels through its artlessness. The work grows from the same spirit of modesty and devotion which is the soil wherein the vitality of folk art flourishes.

Artlessness, in this context, should be taken quite

literally. These objects, with the exception of course, of Sister Corita's work, do not pretend to be "art." Nor has the claim ever been made that they are art. They may or may not "become" art, according to the place they will find for themselves within the whole fabric of the emergent creative activities of the midcentury.

The many student exhibitions which are traveling the country, and the great number of admissions and prizes taken both in the student category of the California State Fair and in the All City Festival of Los Angeles are obviously on the level of educational activities. The work competing in professional shows, however, particularly in the Los Angeles County Art Museum Annual, is obviously entering the arena on a more serious level.

What is happening? Have these works, admittedly done by amateurs, suddenly become professional because they were admitted in a professional show? By no means. They simply helped to demonstrate what everybody knew beforehand, namely that a great amount of "technically" professional work is of inferior quality. Truly good professional work will certainly show its superiority, even if competing with "amateur" art. And, as Sister Magdalen Mary, chairman of the art department says: "A flourishing folk art is a good ground for the artist to root in."

But in some respects the art department is quite serious in its convictions, many of which are shared by those whose interest in art is not primarily of an educational nature. Art is conceived as having a certain terminal quality; it is not to be degraded by being used as a means, educational, therapeutic, or otherwise. While education through art is "a realistic training in problem-solving," the "problem" by no means remains an abstraction: It has no existence other than its solution. Each object to be created is unique, and the solution has to be found *now*. The object *exists* validly only to the degree to which a valid solution has been found.

Recently, a group of I.H.C. students made some large decorations to be used by Charles Eames for the new interior of the Herman Miller Showroom in Beverly Hills. This is what Eames had to say about this kind of work done by the art department some years ago: "The displays . . . are something extremely rare in the annals of commercial presentation, and equally rare as an example of what a dedicated attitude toward art education can produce. The result . . . is anonymous in the best sense; without losing personal force, it is a display of well modulated discipline in an atmosphere of freedom. . . . Somewhere in these results lie many of the secrets of what art education is all about." ◀

Robert



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