A·I·A

April 1961

Journal

OF THE AMERICAN INSTITUTE OF ARCHITECTS

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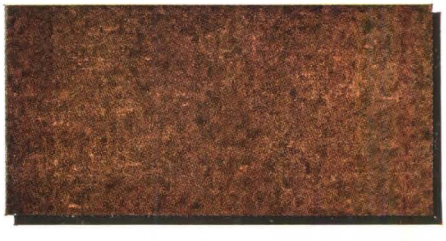

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A·I·A Journal

VOLUME XXXV, NO. 4 APRIL 1961

THE COVER

The "new look" in Fellows' Medals, arranged and photographed by George Lohr. Yellow — Design; Tan — Science of Construction; Light Blue — Literature; Deep Blue — Education; Green — Service to the Institute; Red — Public Service.

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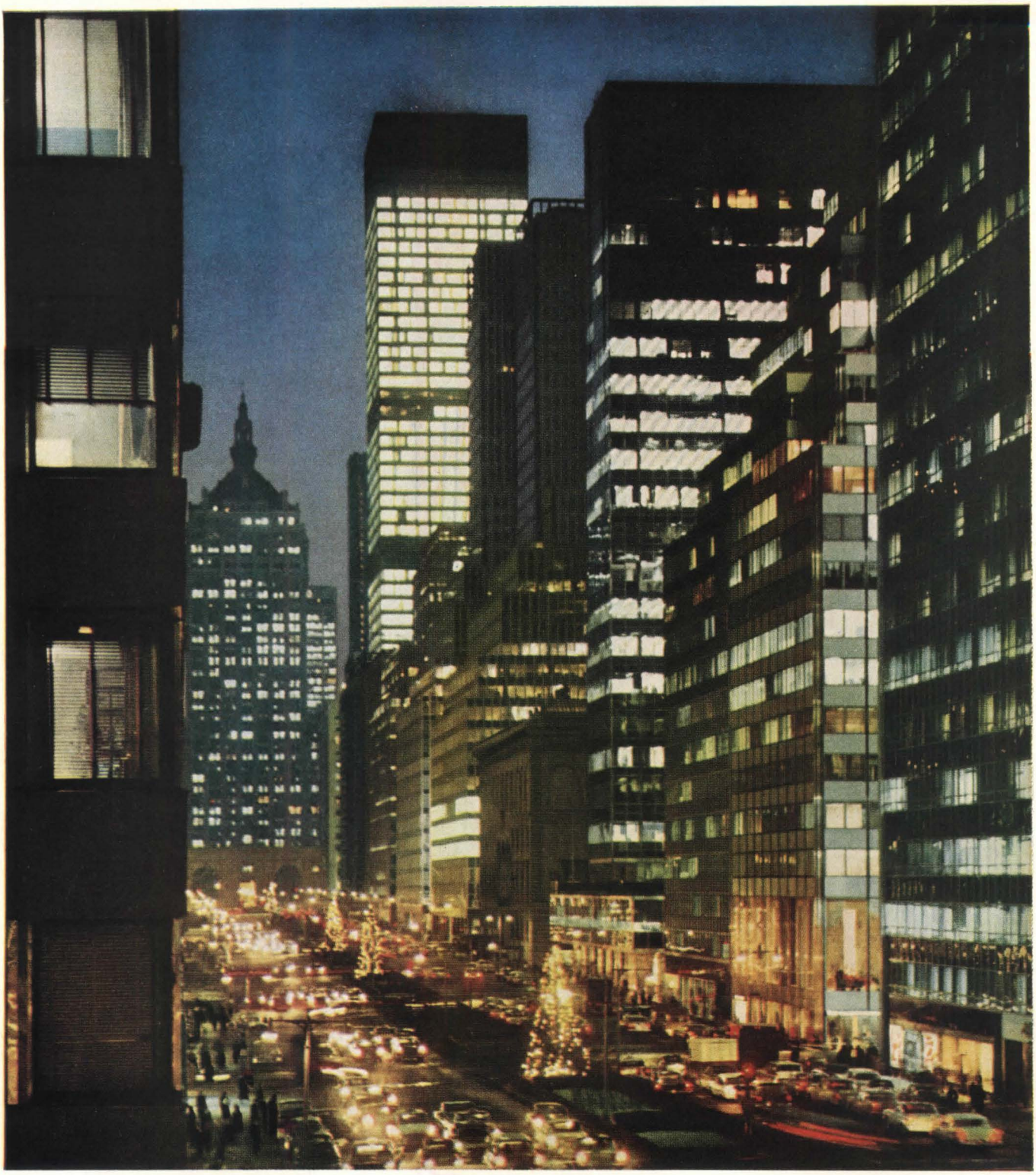

Park Avenue looking south from 57th Street

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Letters

Huxtable, Etc

EDITOR, *Journal of the AIA:*

Please permit me to come back to your reprint of Ada Louis Huxtable's article "The Architect As a Prophet" in the *Journal's* issue for December 1960.

Needless to say that I am much pleased to know that the Museum of Modern Art was doing such shows as the one on "Visionary Architecture" and that the gifted writer, Miss Huxtable, is spreading the word about it. Having been for a while a student of the late Bruno Taut, I was particularly excited to learn that scenes from Taut's "Alpine Architektur" were represented in that show. This would seem by coincidence, a very fitting celebration of Taut's eightieth birthday anniversary.

However, it should sound strange to apply to this magnificent masterwork such characterizations as "shocking," "provocative in the . . . giddy sense," or of "classic megalomaniac grandeur," etc. No explanations are made with regard to the meaning of this book of lithographs.

To be true, the "Alpine Architektur" is not offering such direct prophecy as one finds in another work of Taut, the "Dissolution of the Cities" where we see clearly satellite cities connected by freeways. Yet, the structural suggestions, including polyhedra and all kinds of space frames, are clearly anticipating contemporary developments. Some of them were already indicated in built form by his glass pavilion at the 1914 Cologne exhibition. Also, outer space was obviously attractive to Bruno Taut, but for different reasons, as it is today to those who conduct missile programs.

Bruno Taut was inspired by the vision of the poet Paul Scheerbart who extolled the glory of glass architecture. I do not hesitate to imagine that Taut would have embraced the great possibilities of plastics just in the same manner had he lived only a little longer. By thinking of glass architecture Taut did not think of restricting ourselves to flat glazing of large cubes. He wanted to see rich form, color and music combined in support and expression of a higher social ethos.

This indeed was no empty dream. Just now, when standing at the rim of the thermonuclear abyss, a full understanding of Taut's "Alpine Architektur" would be a much needed appeal which could arouse our senses and give us strength to prevent the holocaust from happening. This work in particular was created by an artist who was not only trying to demonstrate the possibilities in the use of glass but who did this during the gripping awareness of war and its futility. It is no accident that Taut's friends in Japan used the same protest against the infamy of war by re-publishing the "Alpine Architektur" with translation during World War II at great personal risk.

Taut's vision of what we call today United Nations and world government was filled with the need for active creative work on the part of every person in the world in order to give our existence more meaning. To state his vision of such tremendous task he chose as an example to work over parts of an outstanding geographic area, the Alps, which are known to everybody and usually looked at for sentimental reasons only. Now, this may not be regarded sympathetically as a good choice of an example. It is, however, certainly a spectacular demonstration of a point of view which needed to be brought home with force, and with the force of a great artist. Taut admitted that any such task is not an easy one and he shared Goethe's reflective thought that one is only seldom asking from people the seemingly impossible.

If Miss Huxtable would read the moving text which Taut scribbled between and underneath his visionary scenes, she would discover that his outcry against killing and destruction had to climax in stirring us into devotion to creative and constructive outlets of our often untamed powers. His own person was hardly of his own concern. He wanted desperately to give his fellow man better motivations which would enable him to exhaust his drives in worthwhile endeavors.

This may, of course, seem to be an impractical answer according to the conventional standards of contemporary society. In fact, his proposals were so practical and so beautiful that he could not help but believe that those conventional standards would have to be changed if we would not wish to become destroyed by modern technology in the hands of conventional man.

H. H. WAECHTER
Creswell, Oregon

FDR Memorial

EDITOR, *Journal of the AIA:*

Regarding the much discussed Roosevelt Memorial, there may be something ominously prophetic in the design in question. Artists, whether they be poets, painters or architects have a way of divining things to come, albeit unconsciously or sub-consciously. Their inspiration can come

(Continued on p. 12)

USS STEELS FOR ARCHITECTURAL DESIGN: USS Stainless Steel • USS Structural Steel • USS VITRENAMEL • USS Window Sections

Architect: Holabird & Root, Chicago, Illinois • **Associate Architect:** The Cerny Associates, Inc., Minneapolis, Minnesota • **Curtain Wall Contractor:** Flour City Architectural Metals, Division of Hupp Corp., Minneapolis, Minnesota • **General Contractor:** Naugle-Leck, Inc., Minneapolis, Minnesota **Panel Fabricator:** Ingram-Richardson Manufacturing Co., Beaver Falls, Pennsylvania

Letters *(Continued)*

from various sources, often from the realm of the metaphysical, affecting the material world of today.

The world stands in peril of destruction, where nothing combustible nor containing combustible matter will remain standing in the total holocaust. Could it be that these architects were guided by the mysterious force to a design that would withstand the holocaust and remain standing for the new race of man, with his primitive utensils to wonder at and someday decipher the carved allusions to one of the most famous figures of the prior age?

Or could it be that the ominous message contained will so dramatize the crisis, in such majestic and visual enormity that as often happens in times of despair, some giant mentality will arise somewhere in the world with the guide and formula for lasting peace. . . .

Much, therefore, can be said for the design and its conception, and while viewed from outside in an occasional birds-eye perspective, the effect is indeed a primitive array of stone slabs, still once within the memorial the effect might well be stupendous. Then for both reasons, as a warning and a work of art, let the design proceed into execution.

CHARLES C. PLATT, AIA
New York City

On Color

EDITOR, *Journal of the AIA:*

I want to congratulate you for printing the article on color by Waldron Faulkner in the February *Journal.*

I have been connected with the building materials industry for many years as an economic and marketing researcher (including color) and am painfully aware of the problems Mr Faulkner presented.

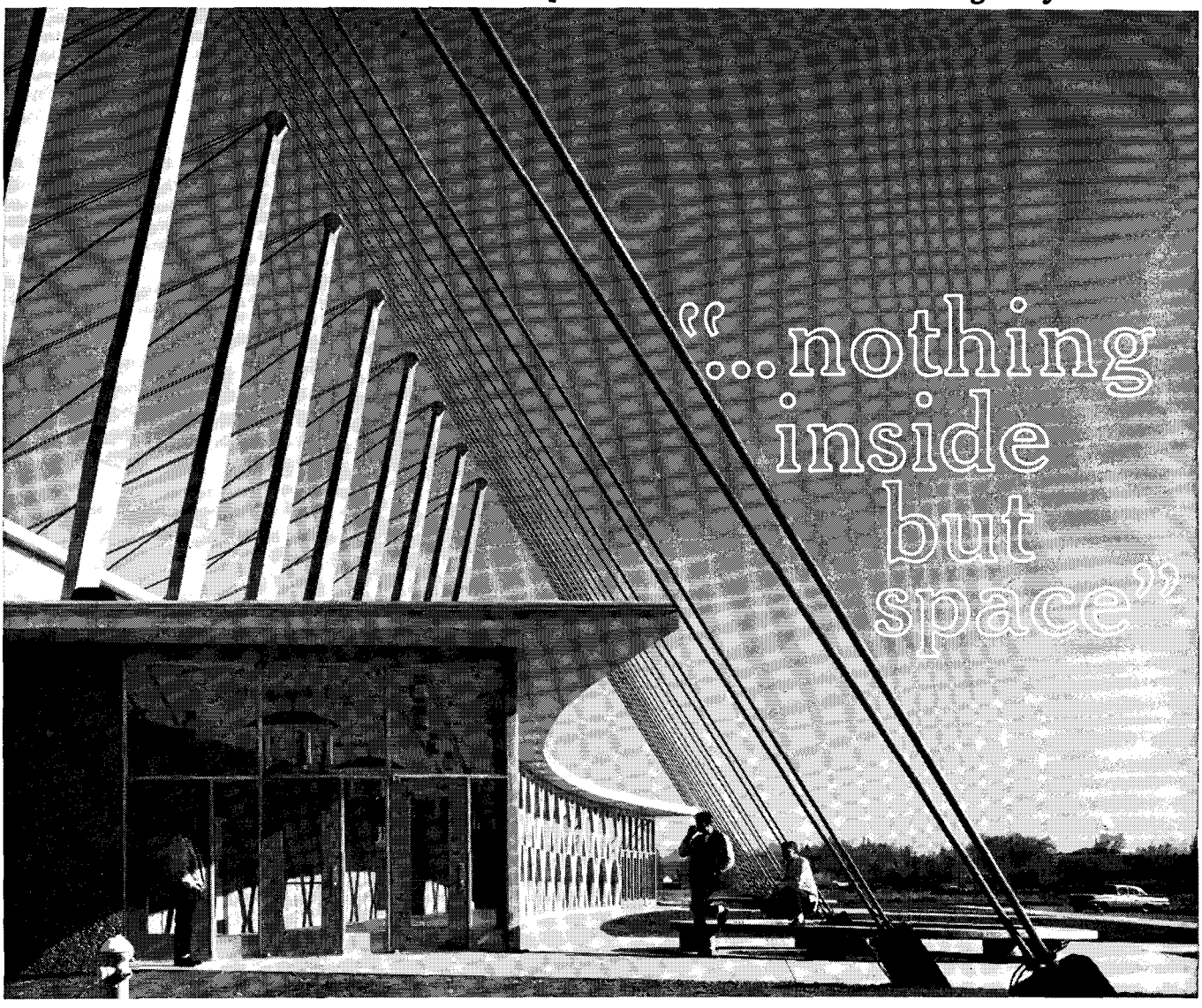
It is, I believe, absolutely essential that the architects as a body express their views if there is to be any progress in this vital area. Of course the views must be logical and based on a sound scientific approach to the problem.

However, I am writing this letter from the view point of one very familiar with the building materials industry and I urge you to continue the assault on the color program following the course so ably set and charted by Mr Faulkner.

EVERETT R. CALL, PRESIDENT
United Marketing Services
Washington, D. C.

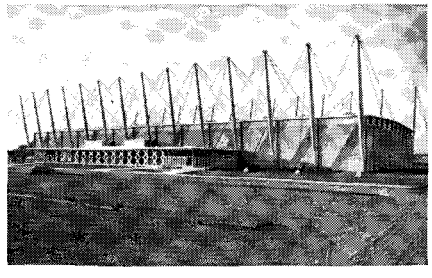
(Continued on p. 14)

Suspended Roof for New College Gymnasium



"Column-free on the inside" is the way the architect describes this exciting and wholly utilitarian structure. It is the Physical Education Building of the Central Washington College of Education, Ellensburg, Washington. It is 150 ft wide by 390 ft long and contains, among other things, a main gymnasium, upper gymnasium, field house, swimming pool, apparatus room, two four-wall handball courts, two classrooms, 14 offices and, locker rooms, dressing rooms, etc.

The suspended roof is actually floating, being slip-fastened to the exterior walls. There are twenty-eight 80-ft high prestressed concrete pylons. Each supports two pairs of 1-5/16 in. prestretched, galvanized bridge strands, which suspend the entire roof structure. The 56 cables, averaging 404 ft in length, were prestretched and accurately marked for all attachment points at Roebling's plant. This resulted in an easy, economical field erection procedure.



Spectacular new Health and Physical Education Building, Central Washington College of Education at Ellensburg, Washington.
Architect: Ralph Burkhard, A.I.A., Seattle
Structural Engineers: Anderson, Birkeland, Anderson, Tacoma
General Contractor: Earley Construction Company, Tacoma
Prestressed Concrete Fabricator: Concrete Technology Corp., Tacoma

Its 99,500 sq ft of floor space cost $14.15 per sq ft, including architect's fee and 4% sales tax, which is below average for a building of this size.

These basic details are indicative of the wide and varied benefits common to all suspended roof structures. Airline terminals and hangars, plants, gymnasiums, civic auditoriums – all are enjoying the free space afforded by suspended roofs.

Roebling's great experience with steel in tension leads naturally to its active role in the suspended roof field. Our findings, theories and interest in its every phase are offered to you at any time. Should you wish further details on this particular structure, or information of any nature dealing with suspended roofs, please do not hesitate to write Roebling's Bridge Division, Trenton 2, New Jersey.

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The Tightrope

by Herman Warner Williams, Jr
Director, The Corcoran Gallery of Art

► I think it is time for museums to live up to their duty more realistically as formulators of the canons of taste as related to contemporary painting. There was need, some years ago, for a break with the past. There can be little doubt now in anyone's mind that the artist has won for himself an almost cosmic freedom. There are now no arbitrary boundaries to his choice of media. There are some who still paint in oil on primed canvas, but powdered pastels in solution, acrylics, watercolor, ink, lacquer, wax, sand, mica, metal foil, malleable metals and metal in sheets, concrete, colored papers, burlap, and other fabrics are used pure or in any complex of a myriad of combinations. I won't elaborate on the freedom of pictorial expression which is so universally accepted. This freedom is vitally necessary, and runs parallel to the limitless possibilities which the explorer-scientists of today have opened to us. But, whereas science can evaluate the correctness or error of its undertaking empirically, we in the arts are nowadays largely bereft of such hard-come-by assessable standards. The fact that no one can prove the absolute correctness of a contemporary artistic solution (but often voices it categorically) lays a particularly heavy ethical burden on museums.

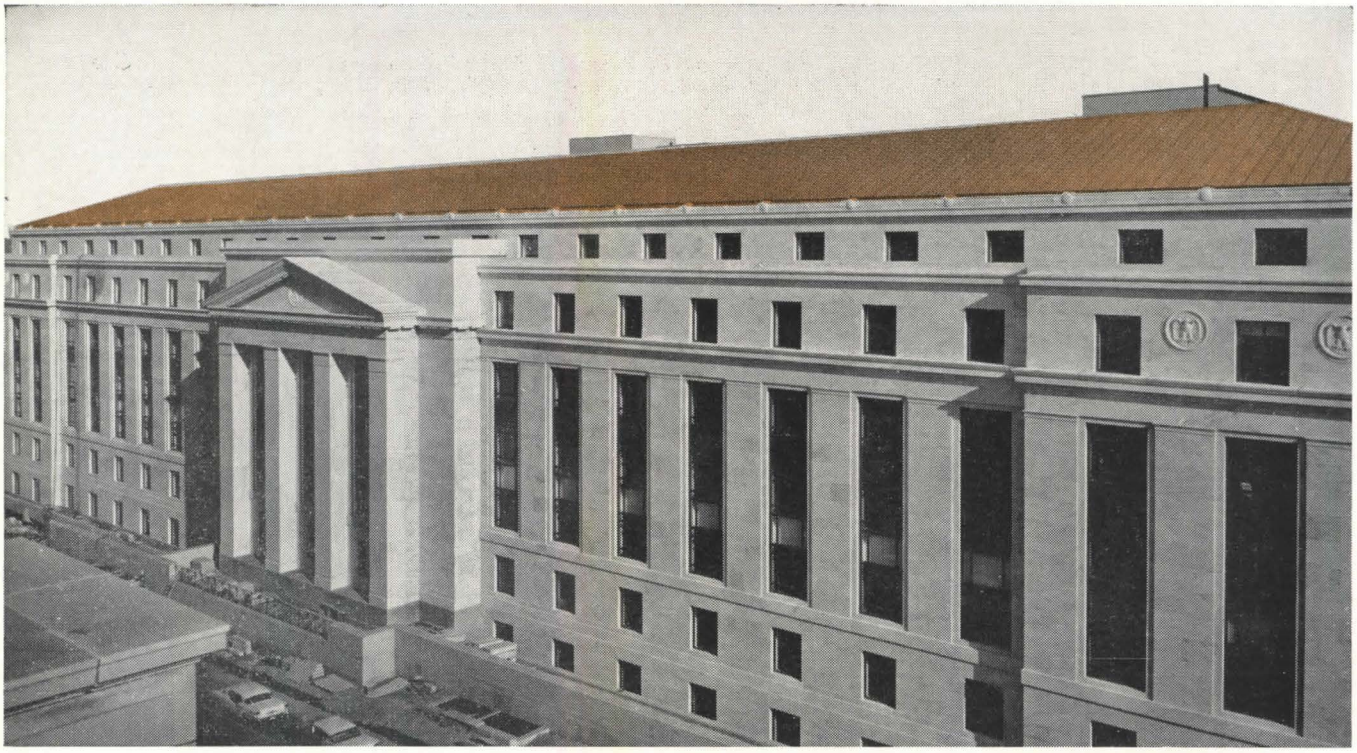
If it were not a fact that the public has been led for generations to understand that our temples of the muses contain the best products of the human spirit, our problems would be easier, for I grant that it is quite fitting for a museum on occasion to bring together and exhibit objects, if for no other reason than that they are strange, be they repellant or beautiful. But I believe, when this is done, that in some way it should be made most clear that the objects are shown for their interest, novelty, or educational merit, but not of necessity as great or enduring works of art simply by virtue of their temporary habitat.

The museum's principal role is, of course, to show objects of aesthetic merit and thus attempt to mold the public's taste. This point of ethics is in simple terms: what does a museum do to walk the tightrope, balanced between a proper respect for the artist's inalienable right to freedom of expression and a museum's duty to avoid being drawn along with the herd after the mirage of novelty? There was once a slogan, "Art for Art's Sake." Now it is, "Novelty for Novelty's Sake."

As far as I can recall, my corn-flakes taste the same now as they did when I was a boy forty years ago. And yet, at least twice a year they are touted as newer, crisper, more nutritious, heavier or lighter, darker or paler, larger or smaller; so it is with autos, light bulbs and everything else than can possibly be made to become obsolescent. Indeed, this disease has infested some of our better known and more affluent artists, one of whom, I am told, remarked on being informed that his picture was shedding paint like dandruff: "Never mind, buy another."

This frenetic urge for novelty, which became acute about 15 years ago, has particularly affected the rising generation, although, to be sure, some of the less strong spirits of the older group have also come under its influence. This artificial pursuit is totally unnecessary. Even as finger prints and handwriting differ, so must the work of one artist differ from that of any other. However, new talent has placed such an economic emphasis on the possession of a distinctive mannerism that this has become an end in itself, I fear. The profits, if the artist makes the grade, are so immediate, and the competition for the rung at the top of the ladder so boisterous, that I am afraid many younger men are being tempted to use all their powers of initiative and imagination not so much to express any deeply rooted inner conviction as to evolve some formula which has the sole virtue of being a novelty. . . . If one, two or three vertical lines, assymetrically arranged on canvas, have great significance, I for one will take my turn later in the queue. If two ovoid forms of uniform texture and color, but of somewhat varied bulk, are important symbols of today, I will eat my humble pie with proper remorse in a few years.

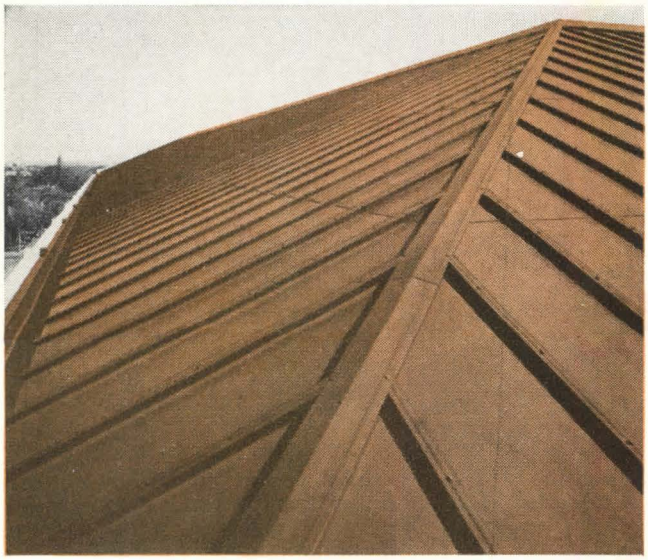
I would be the last to object if the painters mentioned above find satisfaction and fulfillment in such work, or if quantities of individuals who find reward, pleasure and excitement in living with them, buy them by the dozen. They may be correct in their verdict, for it is always a chastening thought that in the past the greatest talents have shone brightest to a few perceptive individual collectors—not to the professional critic, the academician or the museum official, and never to the public. ◄



Copper batten seam roofing on the new Senate Office Building, Washington, D. C.

New Senate Office Building has copper roofing for enduring protection

Approximately 75,000 pounds of Anaconda copper were used for the batten seam portion of the roof and the deep, boxed concealed gutter on the new Senate Office Building. In the nation's capital and in cities throughout the country, copper roofs are establishing records of long service and low maintenance costs.



The roof was fabricated and erected by the Overly Manufacturing Company, Greensburg, Pa. A modified "Overly" batten was formed from copper strip. Roofing sheets were formed from 20-ounce cold-rolled copper. Architect of the Capitol, J. G. Stewart. Architects: Eggers and Higgins, New York City. General Contractor: George Hyman Construction Co., Washington, D.C.

A realistic comparison of roofing costs requires the inclusion of two important factors—estimated maintenance costs over the years, and estimated serviceable life of the roofing material. Copper has proved its economy. Performance records covering many years of service show that expected long life and minimum upkeep are based on fact, not guesswork. Here is an example:

When the 47-year-old Grand Central Terminal Building was razed recently to make way for the huge new Pan-American Building, more than 150 tons of sheet copper were removed from the roof. The copper was still sound and beautifully colored by nature's patina. It is also worthy of note that the scrap value of the removed metal was considerably higher than the price for ingot copper prevailing when the roof was installed in 1913.

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Letters *(Continued)*

Access for Wheelchairs

EDITOR, *Journal of the AIA:*

Several years ago I had an accident which has substantially paralyzed me and put me in a wheelchair decades before my time. Since I am still able to get to work daily and to attend occasional meetings with the help of drivers and attendants, I am surprised to find that modern buildings are still being built which have no access except by the use of steps or stairways.

With a population which is unquestionably aging and with medical science making it increasingly difficult to die, it is inevitable that a growing number will be confined to wheelchairs and unable to get into buildings which are not equipped with ramps, etc.

If I am right that there are destined to be more people who are paralyzed but not invalided, there will undoubtedly be a broader use of power wheelchairs such as the one I now use. Mine is almost exactly the size of a normal wheelchair but it weighs around 240 pounds. With a combined weight of around 400 pounds, even a curb is difficult to negotiate.

The purpose of this note is to inquire if anything can be done to promote the idea that every public building should have some point of access by ramp (not involving even a single step). If a building has one such approach and elevators on the inside, a wheelchair could get around fine.

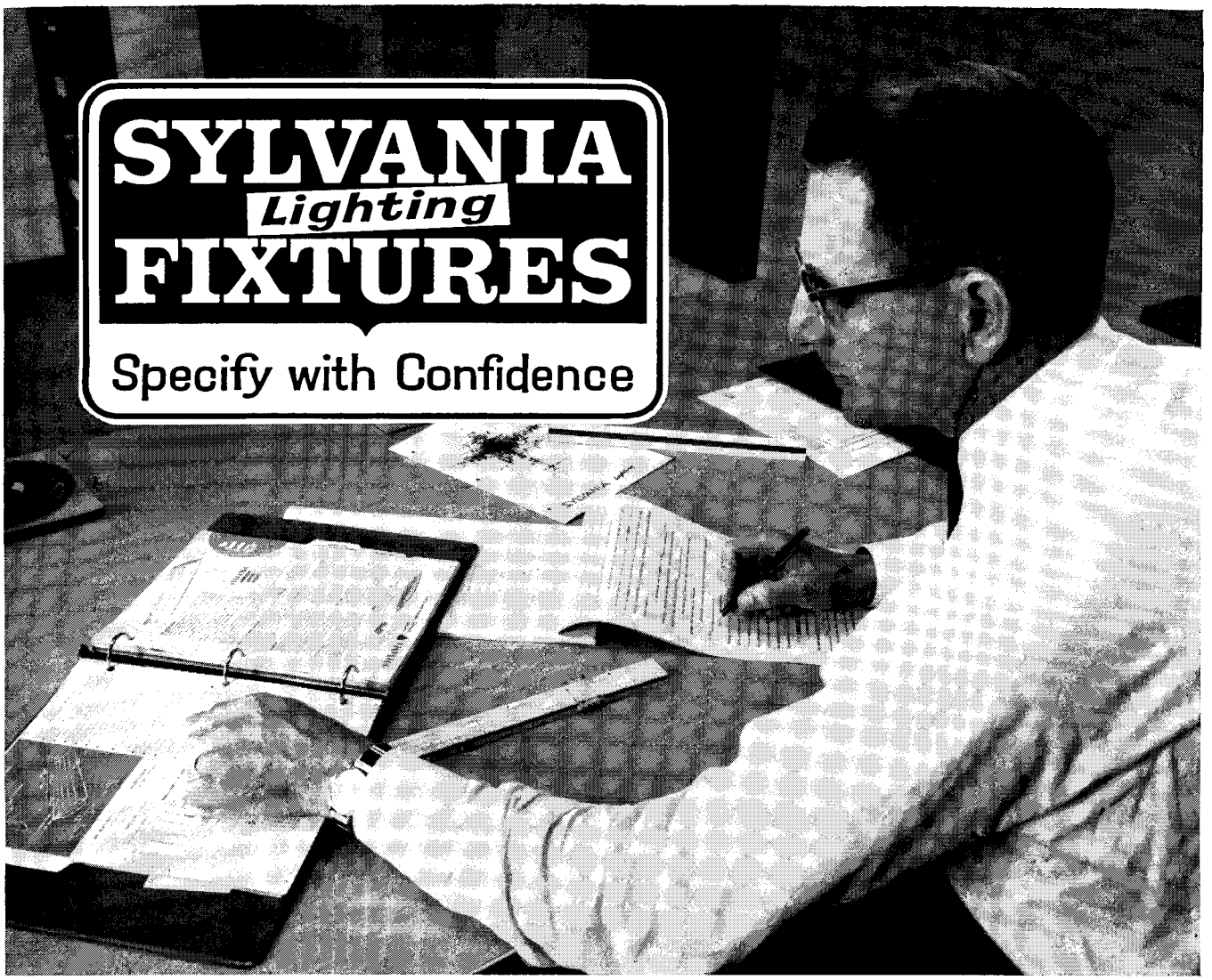
CHARLES A. DILLEY
Cleveland, Ohio

An Author Replies

EDITOR, *Journal of the AIA:*

Mr Onie Mankki's comments on my Winston-Salem seminar ("Letters," Feb. 1961) reflect an attitude of total responsibility which is not over-abundant in the new complexities of design technology. While it is not possible for the architect to control the specifications of each building component, the economics of mass production is often used as an escape-hatch, resulting in a design left with holes that industry is left to fill like a grocer with a shopping list. Architecture can and should do more than simply provide the carton, because the carton is always with us longer than the goodies.

AUSTIN R. BAER
School of Design
NC State College



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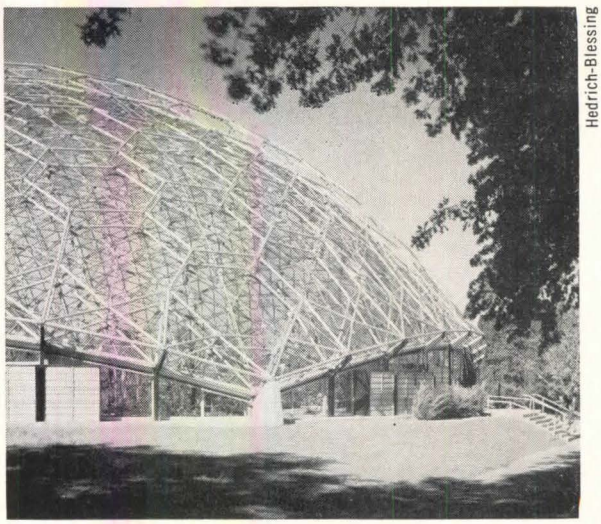

Hedrich-Blessing

Murphy and Mackey Win R. S. Reynolds Memorial Award

The architectural firm of Murphy and Mackey of St. Louis has won the 1961 R. S. Reynolds Memorial Award. This marks the first time that an American has walked away with the $25,000 award since the competition was established five years ago.

The winning design is an aluminum and clear plastic dome, termed by its architects the "Climatron" and used as a greenhouse containing the tropical collection of the 100-year old Missouri Botanical Garden in St. Louis. The Climatron was completed in October of 1960.

The Reynolds Memorial Award is conferred each year on the architect who, in the judgment of his profession, has designed a significant work of architecture, in the creation of which aluminum has been an important contributing factor. This year's competition drew fifty-six nominations from fourteen countries.

Jury for this year's award included Minoru Yamasaki, FAIA, Chairman; Paul Thiry, FAIA; Hugh A. Stubbins, Jr, FAIA; Samuel T. Hurst, AIA; and Henrique E. Mindlin, of Brazil, Honorary FAIA.

A portion of the Jury's report says of the Climatron "A beautiful and refined version of one of the oldest architectural forms, this application of the geodesic dome principles of R. Buckminster Fuller is sensitively executed and strikingly appropriate to its purpose. The climate-controlled space is contained by a lacy structural network with a minimum of obstruction of the sky. Lightly posed on five points, spanning approximately 175 feet, it is about the size of the Pantheon in Rome. The uncontrived details exploit the inherent qualities of aluminum and are well refined. Although there is a minimum feeling of enclosure from the inside, the exterior is nevertheless a clear statement of form, uncluttered by additional appurtenances. By raising the dome off the ground, a hovering quality is attained which presages the feeling of lightness experienced inside.

"The gardens and waterfall, disposed on two levels, appear exceptionally well designed and contribute significantly to the success of the project.

"The tropical lyricism of the botanical displays seems so successfully carried out by the architects of this structure that it must be a marvelous experience for the visitor to enter this great space.

"The Jury was unanimous in its selection of this architectural achievement."

Joseph D. Murphy and Eugene J. Mackey will accept their check and an accompanying piece of aluminum sculpture at a special Awards Luncheon to be held during the Philadelphia Convention.

No Award for Detention Homes

The Jury for the "1961 National Honor Awards for Excellence in Design of Small and Large Detention Homes for Children" felt that none of the projects submitted had the characteristics of the excellence implied by a National Honor Award, consequently no award was made.

Sponsored by the National Council on Crime and Delinquency in cooperation with the AIA, the awards program was for the best large and best small detention home for children awaiting juvenile court disposition.

A portion of the Jury's report reads as follows: "The Jury regrets that it did not find a project which, in itself, had the characteristics of the excellence implied by a National Honor Award . . . the reason the Jury elected not to make an award revolved around the fact either the projects had the functional characteristics for up-to-date operation, but lacked in architectural and environmental quality, or conversely contributed substantially to a new concept in detention home design, but did not fulfill the requirements for proper administration."

Members of the Jury included Paul Thiry, FAIA, Chairman; Sherwood Norman, NCCD; John C. Downey, NCCD; Samuel T. Hurst, AIA; and Emerson Goble, Editor, *Architectural Record.*

(Continued on p. 20)

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Competition

The San Francisco Redevelopment Agency is conducting an architectural competition for the design of 990 apartment units to be erected on twenty-two acres of Red Rock Hill in the Diamond Heights Redevelopment Area, San Francisco. The competition is open to all registered architects.

There will be a five-member Jury of Awards, of which three members will be architects. Cash awards of $1000 will be awarded for each of ten winning schemes selected by the Jury of Awards. The San Francisco Redevelopment Agency will select up to five schemes from the competition winners and will make them available to prospective developers. The successful developer will be required to develop the land in accordance with the design he selects and must enter into a contract with the architect for the design. For information write: San Francisco Redevelopment Agency, 525 Golden Gate Avenue, San Francisco, Calif.

Architects named as jury for the competition include Ernest J. Kump, Palo Alto; John Carl Warnecke, San Francisco; and Don Burkholder, San Francisco Redevelopment Agency. Professional adviser is William J. Watson, San Francisco.

UIA

More than 900 architects have already registered to attend the UIA Congress, according to latest figures from London. By the date of the Congress, July 3-7, registration is expected to reach 1,700 persons.

The US representation, however, totals only fifty-seven and Congress officials have indicated some concern that so large a country as America has taken so little interest in the meeting.

Because hotel space in London is at the straining point during summer months, architects are urged to make their reservations immediately in order to be assured of accommodations.

Official AIA delegates to the Congress will include Philip Will, Jr, FAIA, Institute President; Edmund R. Purves, FAIA; Samuel I. Cooper, FAIA; Henry Churchill, FAIA; and Ernest A. Grunsfeld, Jr, FAIA. Although these men will be official delegates, other AIA members are urged to attend.

Information and reservation blanks for the Sixth Congress may be obtained by writing to Royal Institute of British Architects, 66 Portland Place, London W.1, England, or the Institute.

A·I·A
Journal

The AIA Journal is happy to present excerpts from "The Architecture of America," by John Ely Burchard, Dean of the School of Humanities and Social Science, MIT, and Albert Bush-Brown, Associate Professor, Department of Architecture and Planning, MIT. This great, sweeping survey of the development of society and its architecture in the USA was commissioned by the AIA in 1955 and has been five years in preparation. Although of an entirely different nature, it is probably the most significant work on architecture since the publication of Giedion's "Time, Space and Architecture." The book will be published on April 19th by Little, Brown & Company. It is anticipated that copies will be available for purchase at the Philadelphia convention, at a special price to AIA members. The portions printed below and in the May issue deal with the years 1800 to 1860.*

The Architecture of America

by **John Burchard**

and **Albert Bush-Brown**

► The great American architectural questions have never quite been answered but the argument about each has ebbed and flowed so that now one, now another, has seemed the more important. It is simpler to examine each at the time when it has been most actively discussed. But in choosing to do this we must not forget that none of the questions is ever entirely suppressed.

They have arisen from fundamental conflicts in the American personality. They involve the struggle between the desire to be gay, hedonistic, expansive, even extravagant, and the restraints imposed by caution, frugality and the sense that in the worship of beauty there may be sin; between the instinct to wipe out the past and the nostalgia to preserve it; between the notion that cultivated taste does deserve to be heeded and the egalitarian idea that the people can judge as wisely in the arts as they are presumed to be able to do in politics; between a love for the machine and a fear of it; between the admiration for the expert and the distrust of him; between the sense that man must conquer nature and alter it to his will and the reverence that argues rather that man should accommodate himself to nature. From this too comes one of the most durable of all the debates, that between country and city, yeoman and urbanite, farmer and factory hand, West and East.

First, before there were any questions at all, there was the land. Each of its details was nearly duplicated somewhere in the world. But when you put all the American land together it seemed different. Abraham Lincoln said it was a land suited for one people, but it took a large mind to see that. Individuals loved the details.

The details began at the shores. There was the sheer bare geometry of the rock cliffs at Castle Head, Mount Desert, where the waves dashed against the rock and the brittle spray fell back into a dark cold sea. There were the gentle estuaries dotted with piles of salt-water hay near Newburyport. There were the tall waving pampas grasses of the Jersey meadows, the rigged scarred palms on the tiny hill of a sandy beach in Florida, the ominous boom of the Pacific as it rode under the kelp to the steep sides of the Big Sur, or the rough and foggy coast of California north of Fort Ross where lumber schooners tied precariously near while redwood logs were lowered down to their decks. But the coasts were not places where many people might live. They were often too bold or too marshy or too sandy. We can remember our coastal architecture, its lighthouses, its salt-gray shingles beaten by the weather, but for America most of the buildings were inland. Some American writers wrote of the seacoast but it was the inland continent that entranced most of them.

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Before the West there was the Mississippi. It dominated a great deal of American thought. Like multifold American nature, the Mississippi was many rivers. It was the steep-banked sky-blue stream of Hennepin and Hiawatha and the flat black bayou of Evangeline. But for most Americans it was the broad and muddy river of Huckleberry Finn with its coves, knee-deep above sandy bottoms, its bullfrogs, its gray sunrises, its rafts and its snags, its log cabins, and its fresh morning breezes, "and everything smiling in the sun, and the song-birds just going it!"

After New England and Virginia and the Appalachians and Wisconsin and The River there was the prairie. The Garlands came there, to the meadows so wide that they stretched unfettered to the western rim, to the "grass tall as ripe wheat," to the remote, dim clumps of trees, to "the hawks lazily wheeling in the air," and to the land billowing "like a russet ocean."

West of the plains and before the mountains were the Bad Lands. Frank Lloyd Wright saw the Bad Lands as architecture—"a distant architecture, ethereal, touched, only touched with a sense of Egyptian, Mayan drift and silhouette. . . . Endless trabeations surmonted by or rising into pyramid (obelisk) and temple, ethereal in color and exquisitely chiseled in endless detail. . . ."

In the long run, whether through the Bad Lands or through the grasses, you came to the Rockies, laminated and sheer as they were in Montana, pointed and serrated as they were in Wyoming, massive and dry as they were in Colorado, sculptured into monuments as they dwindled south into Arizona and New Mexico. They were hard enough to pass but the low and tractable places could be found. Then you met the sand, the insistent barrier of all American transcontinental experience. The desert could not be avoided. It subsumed the world's experience of deserts. Walter Prescott Webb has called it the overriding influence that shaped the West, its one unifying force, permeating the plains, climbing the mountains to strip them of their vegetation, drying up the inland lakes, plunging "down the Pacific slope to argue with the sea. . . . It is the great designer of the American West, painting the landscape with color. . . . It shortened the grass on its borders before destroying it in the interior. . . . The trees it could not destroy it shriveled, and those it could not shrivel it petrified."

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The land offered every splendor except those of the tropics and the Arctic, the whole range of nature's palette, varieties of sight and sound, of animal and bird, of wet and dry, of heat and cold, of light and dark, of eminence and depression, of fertility and sterility, all often in close and dramatic contrast.

It provided almost every kind of material for building: Hard and soft woods, woods that were white or red or blue, woods that came curling clean off a plane and woods that splintered at a touch, close-grained oak, tractable pine, wild-grained fir, cherry, maple, cypress, redwood; and tropical woods were not far away. It offered many clays that would provide hard bricks and soft bricks, warm red ones, delicate pink ones, simple grays and dirty yellows. It supported icy granite and burning lime, sandstones and limestones that carved easily, a variety of marbles. It had dirt for abdobe, and grass for thatch, and all the building metals, copper, zinc, lead, aluminum and the bounteous supplies of iron and coal and flux which made steel easy to come by. Whatever the climate demanded of the architecture, the land responded to with useful and handsome building materials. But like the climate and the terrain the range was fantastic. There was almost too much abundance, too much freedom. How could any such variety be served by a single architecture; how could men coming on such wonders be content not to wonder?

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The ultimate American uniformity did not come about solely through the leveling ministrations of the machine or the pollen of American nomadism.

It was also prepared for by the shared mysticism that a man was a different man the moment he set foot on the new continent and that the continent had a mystic unity. You can find this belief in many famous passages from John Winthrop and de Crèvecoeur down to the present. But the early Europeans, like de Crèvecoeur, holding an eighteenth-century European view of nature, thought that the Americans, "incorporated into one of the finest systems of population which had ever appeared," would in the long run "become distinct by the power of the different climates they inhabit." They did not, could not, foresee that Americans would reverse previous human procedures. Instead of being affected very long by the power of the land and the climate, they would affect the land and the climate by their power. It would even seem more important to Americans to apply the power than to be careful not to apply it carelessly or adversely. . . .

The spirit of the frontier laid waste the hills of West Virginia, the cutover areas of northern Michigan, the rivers of the California gold dredges; brought grime and flood to the confluence of the Allegheny and Monongahela and called it a Golden Triangle; shrouded the Sierra Madres in smog; ignored minor desolation in every city every day so that Mencken could justifiably talk of the American libido for the ugly; it was never patient enough to work out the destiny of one place before it pulled up stakes and moved on to another. But it also made Rockefeller Center and the Tennessee Valley Authority; it carried the waters of inner Colorado through the massive Front Range to bring bloom to the eastern slopes. You might love a more intimate nature and pray that grand nature would not be demeaned by man, you might deplore desecrations, weep over the ruthless, thoughtless, even aimless despoliation of natural resources, but you would generally be loving, praying, deploring and weeping in a small company. You might dream yourself back into the imagined richness and integrity of an eighteenth-century New England village or Virginia manor. You might seek desperately to pour water on the dead roots of a never flourishing regionalism, you might hate the machine and the city, you might insist on a diversity for America which Americans did not want, but all your dreaming, seeking, hating and insisting would be quite in vain. All your piety and your wit and your jeremaids would not cancel either the record or the promise. There was the land and its continental embrace, its enormous scale, its indirect and elusive unity, and there was the pioneer, always changing the scene he stopped briefly to change, always moving on until there was nowhere else to move; but then going back to remake what had in the meanwhile become desolate. So the frontier returned from the West to Pittsburgh, Chicago, Detroit, New York and Boston to begin a new cycle. This circular frontier had no end. . . .

About this land there had to be some pivotal decisions. Not all the decisions were unanimous, conscious, wise or even democratic; but some were irrevocable.

The continental decisions came first. The management of the continent was to be undivided and English, not French or Spanish or Dutch.

Had the French remained in the Mississippi Valley, the Spanish in the Southwest and in California, even if each had gained independence from Europe, the parochial limitations would have been very different. The tide of common practice might well have been delayed at the boundaries, even checked altogether. As it was, materials and ideas could flow freely across one almost limitless, duty-free, continental market.

There was the decision about independence from Great Britain. The most superficial examination of the architecture of New Zealand, Australia or Canada will show how different things might have been. As they were, America felt few British architectural shackles after 1820, though Ruskin captivated some minds for a brief period after 1860. Since British architecture was decaying, except for sports like the Crystal Palace, we were lucky not to go through a colonial watering down of what was a weak effort in the motherland. On the other hand the War of Independence had initiated a durable affection for France and for French culture which influenced American architecture at least up to the Second World War.

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Finally, there was the difficult, half-hearted decision that we should play a leading role in world affairs. For American architecture this meant many things. There was the infusion of new architectural ideas brought by foreign visitors or by Americans who had sojourned in many lands. The things Americans wanted, the things they would accept were influenced. The opportunity to build abroad had a similar result. The result might be superficial and appear in thoughtless imitations of the Katsura Palace or the Masjid-i-Shah at Isfahan as happened in the nineteenth century. But later on, in men like Edward Stone or Harry Weese or Minoru Yamasaki, the experience seemed to settle into the spirit and be distilled later in forms that were not imitative.

These were the questions that seemed reasonably on the way to settlement—the continental extent of the nation, its racial pluralism, its early English understructure, its rejection of exotic people whether they were Indian or Oriental or Negro, its partial acceptance of the almost equally

exotic Jew, its unification, and its destiny as an industrial, technological, and urban rather than as an agrarian nation, its development into a vast middle class and its emergence as a world power, but the arguments did not always die down even after the decisions seemed irrevocable.

They were all debated before the backdrop of "The American dream." The dream existed long before James Truslow Adams named it about a quarter-century ago, "that dream of a better, richer, and happier life for all our citizens of every rank which is the greatest contribution we have as yet made to the thought and welfare of the world." Almost all Americans subscribe to the dream, no matter how they differ about what is better, what richer, what happier. . . .

The dream sought reality in countless specific examples, some in architecture. There was for example the early American prison in Virginia, the first one conceived architecturally in America. For it Benjamin Henry Latrobe provided the inscription "The Legislature/ of the Commonwealth of Virginia,/ having abolished the ancient sanguinary criminal code/ The first stone of an Edifice/ The Monument of that Wisdom/ which should reform while it punishes the Criminal/ was laid on the 7th day of August/ in the year 1797/ . . ." When French experts criticized the plan, it was the American dream which answered that the prison was different because "it was planned to emphasize reform and hope. . . ."

In the present day, Americans have been less steadily sure that the dream was true; some may have doubted whether it was even admirable or desirable; more have been able to see its weaknesses, to distrust it. The attitude of most American artists can be studied against the texture of the dream, tragically for men like Melville, O'Neill or Jeffers. Not many architects except Louis Sullivan, John W. Root and Frank Lloyd Wright stand as clean-cut examples of the power of the dream. For it would be absurd to assert that many American architects felt the challenges and disappointments of the dream as intently as the poets and the novelists; only poets among them like Wright and Sullivan would utter such thoughts. The many American architects who sought their sources in Europe, who sought to bring European culture to America, explicitly denied a new architecture and thus explicitly denied the dream; and not many architects would quote Jeffers, "it is time to begin to perish," and create buildings for people they believed to be standing on the peak of time. Critics may be Jeremiahs at heart; architects cannot be.

If architects and their work do not show the extremes of ecstasy and despair about the dream that we can find in the writers, if architecture has supplied but a limited and restrained criticism of life, then this is but another affirmation of the fact that architecture is only partly an art. If the reflection of the society it holds up is pale, it may be that the society itself was a little pale. This, of course, is what the writers were suggesting. . . .

America, like every other country, had its own primitive, naïve and indigenous original architecture. But this was the architecture of Indians—the bark houses of the Penobscots, the long houses of the Iroquois, the tipis of the Crows, the mounds of the Mandans, the pueblos of the Zuñi, the hogans of the Navajos, the log dwellings of Puget Sound. Some of these were even elegant, many contained seeds of promise; but we swept them all aside. Indian words and Indian foods passed into the American culture but nothing important from the Indian architecture, save a belated effort to imitate the form but not the function of the pueblos.

It was not unnatural that Americans should have ignored the indigenous American dwellings, for the evolution of buildings from comparable European primitive types had gone a long way before European settlers came to America. Their own experience and their memories provided them with more advanced solutions than those of the Indians.

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As soon as the colonists emerged from their temporary burrows, such as they dug at Concord, they began to build their version of the English medieval development from the Saxon cruck house. Wood was plentiful as bricks were not and the colonists made the most of this and of their memories.

The houses did not long resemble their medieval prototypes, perhaps no longer than the first winter. The exposed Elizabethan struts, stuffed with bricks or lath and plaster, simply let in too much air and the American addition of heavy siding was urgent. Otherwise the houses still had a distinctly medieval cast. But within fifty years after their arrival the colonists had developed a style house which had distinctive American characteristics. The chimney was the dominant factor in this, and out of it in the long run came four basic plans, one with a great central hearth, one with a chimney at each end, one with two chimneys set in the center of each of two wings, and one with four chimneys, two at each end.

Such primitive constructions were refined rapidly. In other parts of the colonies a few other American innovations were being made such as the gambrel roof which the Dutch seem to have invented here. But though we can still see a few of these ancient American houses, they are not really what we associate with New England. The buildings that come most readily to mind are of later

date and the result at first of considerable native development, then modified by self-conscious efforts at refinement of details, first from memory, then with the aid of books, and finally by the efforts of professional architects. Between 1607 and 1800 dormer windows had appeared, thatched roofs had disappeared, and stick chimneys had been abandoned for brick. The roofs were flatter, the second-story overhang was disappearing. Iron railings had become readily available, houses could be built even as high as five stories; iron-backed fireplaces were known, and the Franklin stove had appeared as early as 1742 but was not exceptionally popular. Carpets were beginning to be used, but sanded floors were common and remained popular in Boston for a long time. After the early handmade crude pieces there was very little American furniture and until 1795, when Duncan Phyfe began his work, almost everything was imported.

Yet a glass works had been operating in Salem from 1638, printing in Cambridge from 1639, an iron works in Saugus from 1646. By 1778 a "defector" had brought us the English textile secrets, the first iron-rolling mill had been organized, and in 1793 Whitney invented the cotton gin. At this point America was ready to enter the industrial revolution as an aggressive participant. But her architecture, though it would be carried far and wide over the land, was not necessarily well fitted to serve every terrain and every climate that was now to be encountered. As the Romans had marched across Europe and deposited the atrium wherever they marched, so the English and their descendants now marched across America and most of the time deposited the New England house. As it became less and less suited to its surroundings, it also suffered depreciation.

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In the period between 1800 and 1860 the central part of the North American continent was to be joined to the United States whose boundaries would then touch the Pacific. But at the turn of the century (save for New Orleans) everything that was really civilized in this land stood east of the Alleghenies. Nor was it anything to be ashamed of for this young and provincial land barely released from colonialism. It was a testimonial to people who built well.

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There were islands of resistance to Eastern fashion. Usually these were associated with special religious groups of Amish, Rappites, Baptists or Shakers in New Harmony, Indiana; Ephrata, Harmony and Economy, Pennsylvania; New Lebanon, New York; and Shakertown, Kentucky. They built substantial and simple buildings of brick or stone or wood, in a peasant vernacular, almost always well proportioned, showing some but not much increase of refinement as they prospered, sometimes as at Ephrata clearly retaining their memories of the late-medieval architecture of their ancestral home. The Shakers in particular insisted that craftsmanship could capitalize on the nature of materials even when the building was modest.

Other religious groups, often partly socialistic as well, built similar communities at Red Bank, New Jersey; New Icaria, Iowa; Bethel, Missouri; and Aurora, Oregon. Their architecture was much the same, sturdy, dignified, unembellished, whether they called themselves the North American Phalanx, the Old Icarians, or the followers of Keil.

The Mormons went further, particularly in their towered and buttressed Temple at Salt Lake City (1853-1893) or the specially dormered "Lion House." So did the Oneida Community when it erected its mansarded Mansion House at Oneida, New York, in 1860-1871. But these architectures are interesting more as an expression of social objectives than because they have any excellence as art or because they have really demonstrated a revolutionary style comparable to the life they house. In the end all such efforts had little influence. . . .

A major factor in the diminishing regional differences was the national acceptance of a professional architecture, American Georgian. Derived from Palladio, the sixteenth-century Italian architect, this style had been modified in England by architects like Sir Christopher Wren and James Gibbs, whose work was known in America through books like William Salmon's *Palladio Londinensis, or the London Art of Building,* first published in 1734.

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It was possible for a gifted man to study Georgian precedents and produce fine buildings. Thus Peter Harrison, of Newport, often called the first American architect, achieved notable success in his Touro Synagogue and Redwood Library in Newport, his King's Chapel at Boston and Christ Church at Cambridge; all are beautiful and dignified buildings, especially admirable inside, and all are within the common tradition he had studied in his books. The amateur, Jefferson, did not stray far from the Englishman Robert Morris's books when he rebuilt Monticello. Where, as in Salem, such scholarship was combined with the skill of a great woodcarver like Samuel McIntire, the general beauty imparted by formal composition was enriched by mantelpieces and paneling, as in the Gardner-White-Pingree House. It was a tradition that set American architecture upon a good beginning; we should not be making the mistake of trying to continue it in modern Lexington, or Shaker Heights; but what remains of it should be zealously

preserved and will always enhance our landscape and our life while it lasts.

But the serenity of the Georgian experience was threatened by the Revolution and by the subsequent demand for a new expression of the new land in every sphere of American life. One could sense this in the first national architectural competition, held for the Capitol in Washington in 1792. Naturally, it drew a group of designs in the accepted Georgian idioms. Some were amateurish, like Philip Hart's badly scaled and ineptly phrased elevations; others like James Diamond's clutter of roof trusses, arches, pediments, domes and other discrete elements failed to provide the desired dignity. Several were surprisingly competent, notably McIntire's, a well-proportioned and monumental English palace. But Washington and Jefferson looked for something more classical than any of these. Such a spirit appeared in the domed and porticoed designs submitted by Samuel Dobie, Stephen Hallet and Dr William Thorton. Thornton's design won the competition, and to it are due the general scale and features of the old Capitol, still visible in the rebuilt east facade. Hallet was asked to modify details and to supply a technical competence which Dr Thornton lacked. Later, Latrobe executed much of the interior work and the dome over the Halls; in 1818 Charles Bulfinch was called from Boston by President Madison to redesign the portico and to achieve a better unity between the wings. Still later, in 1851-1867, Thomas Ustick Walter raised the great dome over the center and constructed two outlying wings whose heavier scale balanced the dome and the central block. This succession of designs was often the result of bitter political and aesthetic bickering. The atmosphere was normally one of great personal rivalry, machination, anger. Men were freely accused of incompetence, extravagance, even venality. Congress and the President were forever interfering. But the fact that so many designers, working in such an unhappy climate, could nonetheless achieve improvement, and maintain an essential architectural unity as they worked across the sixty years, indicates the basic unanimity of agreement about classic design. To compare the situation with the present, we have only to ponder the disruptive proposals made for the completion of the crossing of St. John the Divine, or the additions our contemporaries make to an old American bank or to Grosvenor Square in London. The history of the Capitol reveals also that local traditions were disappearing as the "national" art emerged. The Capitol set the mark for later government buildings like the Department of State and the old General Post Office in Washington, and most of our state capitols have since reflected it. One of them, Boston's State House, by Bulfinch, has been mocked in later designs for schools and even office buildings by architects who have mistakenly been more interested in form than in performance.

The decay of the Georgian and regional architecture was brought about by several forces; there were the designers themselves who began, self-consciously, to import English architecture through books, often incompetently, unimaginatively, merely degrading the native traditions; there was the decay incident to careless handling of details on a frontier indifferent to details since it was always preparing to move on; there was the decay implicit in attempting to put a form where it did not belong, in modification to make it more useful, destroying the old but not creating a good new one since the limitations of the residue were too cramping; there was the decay incident to the unification of a land, tending to level out ways of life. Decay by design could be best seen in the old places where the original memories were greenest, decay by neglect could be seen across the prairie, decay by modification could be seen in the more prosperous parts of the Middle West, and decay by unification was a national experience.

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But the greatest leveler was the development of a national instead of a regional pattern of life. This was substantially a product of technology and especially the technology which made it possible for materials to be sent anywhere, for all parts of the country to know overnight what every other part of the country was doing, of inventions which made the climatic necessities no longer binding on the builder.

In the largest sense of the word there never has been a handsome American vernacular save the old one bedded in the traditions of Europe; there has been a common and more recent American wooden house and it is anonymous enough; but it has no regional character; it has no distinction; it contributes nothing but anonymity to town after town. The leveling may have been inevitable; the specializations of the technological age may have guaranteed that there never again could be a spontaneous regional architecture in America. . . .

A nation which has become one great middle class, which is nomadic, which has much the same education throughout, which is urban and not agrarian, a melting pot even if racially pluralistic, which handles most regional eccentricities by nationally standardized means, which admires change and make it synonymous with progress; such a nation is unlikely to preserve an ancient and honored traditional indigenous architecture.

All this did not happen overnight, as Americans stood poised in 1800 for the great western expansion, they were still rural-minded, racially homogeneous, economically differentiated, regionally

oriented, unprepared for the onslaught of technology. They lived in a clear architectural tradition of neat domestic buildings in which a city was only a larger village. The natural expectation was that these cultural traditions would simply spread westwards with the men who carried them. But the West itself, together with the rapid change in industrial technology, declined such a conclusion; first the results and in the end the aspirations as well. . . .

In the sixty years after 1800 Americans occupied the most productive parts of their continent from ocean to ocean and the western expansion on the land flowed from the industrial expansion of the East. Furs, farms, speculative land profits, and precious metals had drawn Americans westward in that order. By 1849 all these magnets still had power. At the time of Lincoln's inauguration, however, the total population mustered but a little over thirty millions; the center of it was only at Chillicothe, Ohio, though it had moved steadily westward along the thirty-ninth parallel from Baltimore where it lay at the end of the Revolution. Now the industrial Middle West had joined the older New England and Middle Atlantic states in accounting for three-fifths of the population and almost all of the industrial wealth; another three-tenths were in the Southern states east of the great river; only a tenth of the Americans lived west of the Mississippi; only a handful had reached California. The coming years belonged to the Middle West, and nowhere with this more clear than in the Civil War itself which was won by U. S. Grant in the valley of the Mississippi despite the brilliance of Jackson and Lee in the valley of Virginia. . . .

America was moving toward urbanism, but slowly. If five thousand people were a city, then perhaps one-fifth of Americans lived in cities in 1860. The area around New York held a million people but no other American city came near to it. There was but one other with more than half a million, only nine altogether to boast more than 100,000 while only one-twelfth of the people lived in such great congregations. Three-fifths of all the workers were in agriculture, even before you counted the Southern slaves. We were still basically a rural people following the pattern that Thomas Jefferson had laid down a half century before.

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The most exciting promise for architecture was no doubt the new metallic material, steel. The recent inventions of Bessemer in England and the possibly less well-known American, Kelly, were being adopted by 1860 in America for rolled rails, but the beams and the columns were yet to come, so the promise of steel for architecture could only be felt in a future time.

Thus the period was rather one of preparation for a technological-industrial nation than of its realization. It was an age of horses, gas, coal, steam, iron; not an age of automobiles, electricity, petroleum and steel. It was an age in which education was either remarkably theoretical and classical or overly practical. Technological education was in its infancy. West Point and Rensselaer Polytechnic Institute were the only senior institutions in which rudiments of a technological training might be sought; M.I.T. was founded only at the end of the period.

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For architecture, American engineers and particularly their European stimulators had paved a road more brilliant and daring than was yet to be trod. The Howe and Pratt trusses were well known. Roebling's cables at the Niagara Bridge had demonstrated the potentialities of suspension. Labrouste, Horeau and Baltard in France and Paxton in England had built or proposed highly imaginative iron structures at the Library of Ste. Geneviève, the Bibliothèque Nationale, Les Halles Centrales, and at the later Crystal Palace of 1851 in London.

James Bogardus had demonstrated a five-story iron factory in New York, in 1853 Elisha Graves Otis showed that an elevator could be safe; steel was just around the corner while Aspidin's Portland cement was known from 1824. In a humbler sphere the balloon frame, as we have seen, had opened wide flexibility for wooden structures.

Thus from 1830 on, technological opportunities beckoned feverishly to the architects. By 1860 most of the potentially revolutionary materials and methods had at least made their debut. Bunning's iron-domed Coal Exchange in London could have been visited any time after 1849.

If American architecture chose, on the whole, to look rather to the neo-Renaissance gentilities of Barry's Reform Club or the Red House built in 1859 on Bexley Heath by Philip Webb and William Morris, it was not exactly the fault of the engineers although most of them had a taste in architecture which was even more conservative than that of the architects. And if the various American architectural efforts seem to have centered around matters of eclectic choice, the architects were not behaving differently than other Americans. The whole long debate about whether American buildings should be Georgian or Greek or Gothic or Egyptian was quite unrelated to the fact that Americans were moving westward, that railroads were building, that the big shift from an agricultural life to an industrial one had clearly begun to accelerate. . . .

The American society still thought essentially in village patterns, even in the city; expected to solve all the problems of Federalism in the terms of Jefferson rather than those of Calhoun; found it reasonable that the finest buildings should be devoted to the offices of democracy and to the service of the church. And at the beginning Americans knew how to build such buildings.

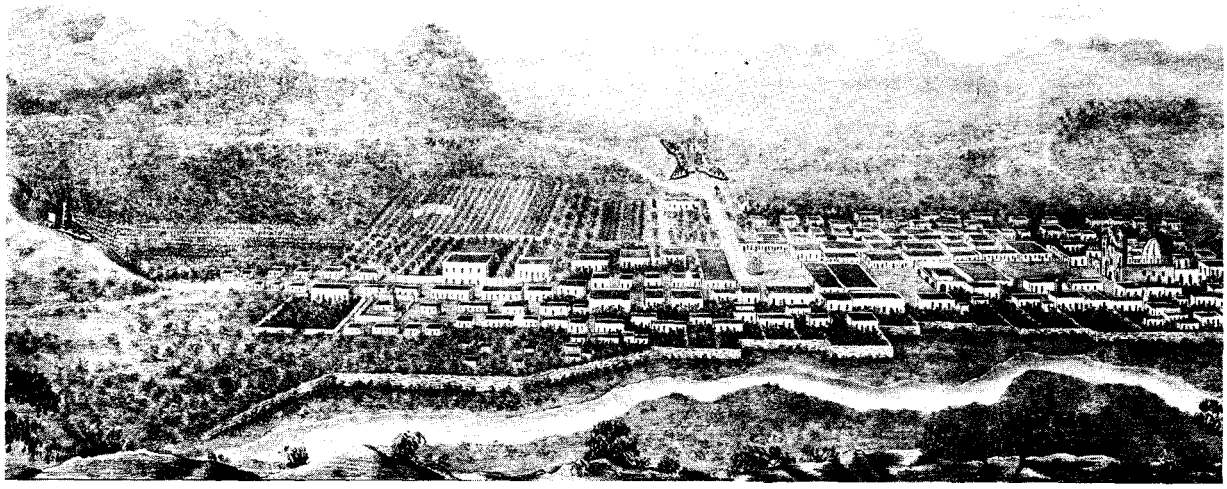
During the sixty years before the Civil War they forgot how to build so well and so beautifully. They left the security of the Georgian rules but found no compensating security elsewhere. They experimented with rationalistic architecture as proposed by Latrobe. They left this promising theory before it was mature, to dabble with a variety of associational ideas about nature and about earlier buildings. From the experiments with association they gleaned a moment of dignified aesthetic success in the Classic Revival; and a more dubious sense of moral fulfillment in the first Gothic Revival. But associationalism also led to importations from Egypt, India, China, via Victorian England, in two orgies of eclectic fashion which left their cities without dignity or repose. At the end rationalism was recalled in a utilitarian cast-iron architecture which had some good qualities. Once the Georgian convention had been abandoned, though, the experiments swirled through time with no clean-cut beginning and end. Always the choices seemed to involve little concern with the vital questions of the needs of the new cities, of industry, of technology. Never afterwards would so much of the architectural debate be centered on style set apart from major social questions. But even the debate was in the temper of the times, measured, quiet, slow. The clamor would begin only with Reconstruction. In some ways it was a long, last look back at a serene past. . . .

In the beginning the steepled churches and porticoed courthouses spoke of a settled, balanced life among agricultural and commercial people. But by the eve of the Civil War, steam engines snorted and drilling rigs whined; the ring of the steel rail sounded louder than the rumble of the cobblestone; tall-masted ships were more urgent than Gothic church spires; telegraph wires sagged across the colonnaded faces of Roman banks; cast-iron stores challenged the right of pedimented government buildings or crenellated churches to speak for America.

As the debate as to what would speak grew louder it brought dissensions and jealousies. Architects divided into camps, each championing a style. If you listened to them all you might come out like young George B. Post who began to study architecture about 1860; to him it seemed as though there were only confusion. Medievalists saw no merit in classic art; devotees of the Renaissance thought modern Gothic beneath contempt; pre-Raphaelites believed in neither. Overall, Post noted that American painters and sculptors frankly stated that they believed there was no art in architecture.

Post's bewilderment was understandable. By 1860 there was little agreement about any of the big architectural questions. One thing, though, was obvious: No matter how beautiful they were, Georgian Annapolis, Federalist Salem and Greek Revival Marietta could not meet the challenges of the new industrial society; in Post's own lifetime the dignified agricultural villages and the commercial towns were erased unless, by accident, prosperity passed them by. Some new men supported regionalism as others had once favored a national architecture. Other new architects sought something more personal than the anonymous classical results. Some argued, as more talented men have done since, that nature should be the chief determinant of architecture; but others insisted that geometry and formal composition should not be abandoned. No one could escape the great argument between those who wanted to derive a national architecture from Europe and those who exhorted young artists to aim at all costs for something indigenous. One might want to cling to the faith that churches would remain the dominant symbols of American society; but he could not ignore Bogardus's successful prefabricated-iron emblems of business enterprise. Was America to remain a collection of picturesque, peaceful, rural villages, or to become a nation of large and elegant cities, or a nation of small planned industrial communities? Where was each American to stand on questions of taste—with the naïve Jacksonian hope for egalitarian art, with Jefferson's distrust in it, with the effort of Calvert Vaux to find a democratic way of controlling it? There was an easy way (and there always has been) to avoid such questions. Men like George Post took it. Like most architects, before and since, they drifted with the crowd, never doing anything distinguished, willingly adopting what was fashionable at the moment even though the changes were frequent and violent. Those who did debate the questions were naturally less content than Post to satisfy current fashion, more willing, even anxious, to affront it. ◀

Because of space limitations, certain deletions (with the approval of the authors) were necessary in this article. Three periods were used when paragraphs were omitted. Three periods used in the center of a column indicates the omission of entire sections. Part II of "The Architecture of America" will appear in the May issue.



View of Monterey from the heights south of the city: 1846. The seat of Spanish power in California as drawn by one of the Regiment of Ohio Volunteers who supplanted the old order. Left to right: Bishop's Palace, Orange Grove, Arista's Garden, Black Fort, Cathedral and Grand Plaza — all typical elements of a Spanish *pueblo* and *presidio*. Through the non-profit Monterey Foundation, legislation has been secured to protect the old area. All photos reproduced from the collections of the Library of Congress and used with their permission.

Planned Cities in the Wilderness

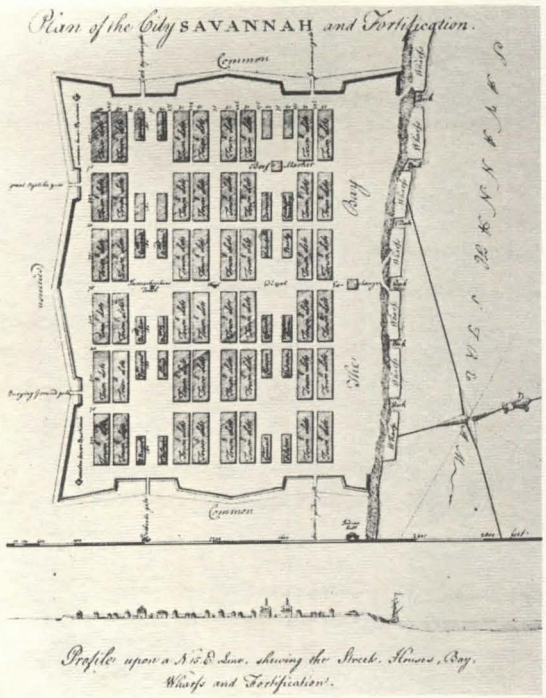
by **Helen Duprey Bullock,** Hon. AIA

Mrs Bullock is Director of the Department of Information of the National Trust for Historic Preservation, a lecturer on preservation procedures at many seminars, and has been elected this year as an Honorary Member of the AIA

▶ Travelers through the brash New World were alternately impressed and amused by the determination of the colonists to create for themselves cities in the wilderness. The first settlements had of necessity been garrison towns, fortified against the natives; but with the pushing out of the frontiers the early cities were located on sites chosen for their healthfulness, the ease with which they could be provisioned, and their accessibility to good transportation, especially waterways.

The sites were then "regularly laid out" with provision made for market squares, commons, churches and public buildings. Regulations were imposed to prevent the "spreading danger of fire," a calamity that had left its mark on the English colonists after the several great fires of London; and still later when the early city of Boston twice experienced devastating fires. Restrictions were laid upon wooden or clay chimneys, on frame houses, and on the minimum size of the dwelling that could be erected. The same sanguine spirit that had led the colonists to adventure to a new world, led them to envision great futures for their cities, and the plans they made for them. Where these cities of early settlement survive today their greatest charm lies in the homogeneity of the buildings in certain areas, and the nice use of open space.

Unless the main stream of history passed them by, however, few early cities escaped having their squares exploited, especially in the past few decades. The waterfront areas, whether on river or harbor, lost their appeal as the rivers and harbors were polluted and destroyed by industry and indifference. Waterways were treated as the unsightly things they have become, and the city turned its back to these thoroughfares; treated



Plan of Savannah and fortification: 1757. De Brahm, His Majesty's Surveyor General for the Southern District of North America described the city as "laid out 2,115 by 1,425 feet square in 24 Tidings each of them in 10 lots, in all 240, and 48 Trustee lots, with 6 market places, each 315 feet by 270 feet square. The city consists of 400 dwelling houses, a church, an Independent Meeting House, a Council House, a Court House and a 'Filatur' "

them as annoying obstacles to the free flow of traffic, to be dammed, bridged, diverted and ignored.

Williamsburg in Virginia was planned as a capital city which could receive a "great concourse of people." It was laid out and surveyed in 1699 in the area of an old settlement known as Middle Plantation where the College of William and Mary had been established in 1692. Plans called for a "noble great street" a mile long from the College to the site for the new Capitol and six poles or 99½ feet wide with parallel and cross streets in proportion. There was a courthouse square laid out, a market square and a site for a governor's house. The church was located on the site of the old church that had served Middle Plantation. In the laying out of the main street (Duke of Gloucester Street), John Page, who had several old houses and a brick oven, became one of the first precursors of those who have found themselves in the path of "progress." Despite his power and position, and his vociferous objections, he was compensated for the damage and the road went through, anticipating as a point of law by some two centuries and a half, the decision of Justice William O. Douglas of the Supreme Court of the United States, in the case of Berman *vs* Parker, that "It is within the power of the legislature to determine that the community should be beautiful as well as healthy, spacious as well as clean, well balanced as well as carefully patrolled. . . . "

The city grew within this well-ordered framework until it lost its place as the capital to Richmond during the Revolutionary War. It suffered severe damage during the Revolution, and again in the Civil War, and sank into genteel decay. The owners of its houses were "too poor to paint and too proud to whitewash." Its city fathers leased off for periods of 99 years portions of the Market Square and Courthouse Green. The site of the old Governor's Palace became a site for a public school, and the handsome falling gardens and ponds were filled in. In fact, planning was abandoned for expediency, and much of the basic beauty was lost.

It was not a loss, however, that could not be reclaimed with the expenditure of some $64 million or more, and the planning of a good peripheral city to serve the needs of the millions who come to view the restored city.

In 1733, Savannah, the first town in Georgia, was laid out under the direction, and possibly according to a plan, of General James Oglethorpe. He wrote, "I have fixed upon a healthy location about ten miles from the sea . . . upon the riverside in the center of a plain. I have laid out the town. . . . The landskip is very agreeable." The plan of the town reflected the three-fold objectives of its soldier-philanthropist founder. It was intended as a refuge for the unemployed of England, those victims of the debtors' prisons who had concerned him deeply. It was to be a military buffer between the Carolinas and the Spanish in Florida; and a commercial center that would fulfill the mercantilistic ambitions of the Lords of Trade and Plantations.

The finest elements of Savannah's earliest plan may still be traced in today's city. When it expanded, a line of fortifications was converted into Oglethorpe Avenue, and the plan was repeated on the south. Forsythe Park was laid out on the old axis of Johnson Square.

The New England villages, Virginia's courthouse towns, the territorial capitals of a westward moving civilization, were for the most part planned cities. The Southwest and California had also created planned cities in their areas around a Spanish pattern of plazas and organized space. The frontier village, the mining town, the disorganized chaos of the western pioneer still retain a validity of their own, even in those ghost towns that have been "rediscovered" and given the treatment of being made into period villages like Tincup, Colorado; Tombstone, Arizona; Virginia City, Leadville, Columbia, California.

All of which is a preface to a very worried

approach to the problem of the architect's role in the important, but vexatious task of dealing with the remnants of the planned city in the wilderness that still survives, and happily so, in every section of the nation.

In the fast-moving urban renewal plans, the plans for freeways, the slum clearance plans, the architect has often left the larger planning to other experts. Quite properly, urban renewal is called in many areas *urban removal,* as the bulldozer is a simpler implement in revitalizing an old and blighted area than the blueprint.

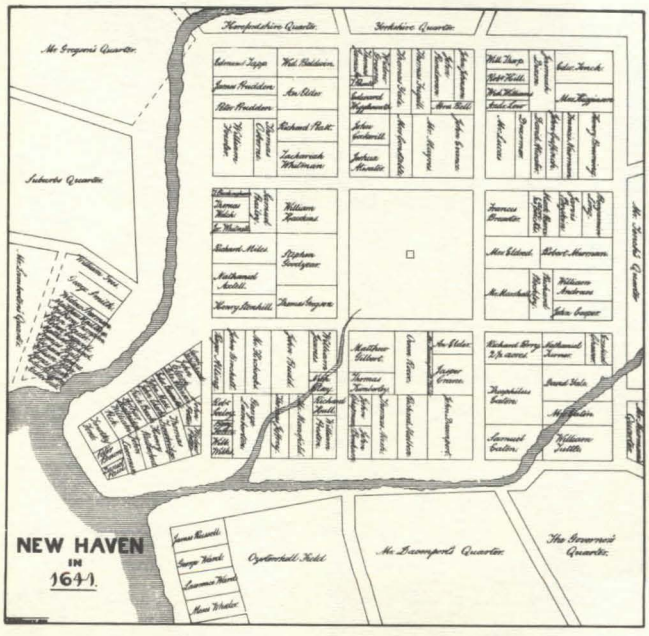
Architects in the 'thirties had a program of measuring and recording early examples of our architectural heritage. This was not, as has often been considered in the past, a highly selective process by which the best and finest was chosen for this recording. It was bluntly a program to employ the unemployed, and where matching funds were available, the WPA and the HABS provided matching funds and facilities. Architectural monuments were recorded, in many cases even measured drawings were made. Another forgotten aspect of the program is that important buildings deemed in danger were carefully recorded, and others of greater architectural and historical merit that seemed secure were not. By an irony of history some of the latter have been lost and their lesser rivals are now secure.

The battle is now engaged. It is essential that the architect seek out the great houses and buildings in his area that warrant preservation. It is too late when the bulldozer is at the door to invoke the anguished wail of the antiquarian and indiscriminate preservationist. We must know what there is still remaining in our early cities that is valid and worth an effort. The architects in a given area have an especial obligation. It is theirs to identify and evaluate the early, valuable structures in their community, or those sections where there is an aggregate of buildings, perhaps of slight importance, which taken in their entirety are of value.

Evaluation, conservation, rehabilitation. These are the proper role of the architect in the too-fast-moving programs of today. It is time to take a breath, to think of those "regularly laid out" towns of another era, and to lay out for ourselves a happy segment of that era.

In the National Trust we have found an important citizens' movement, sometimes indiscriminate and unguided, but based on the solid thesis that a nation with no regard for its past will have no future worth remembering. Could not our architects and preservation officers revive the extremely valuable program of carefully recording and evaluating the vestiges of early city plans, and the architectural units surviving? They are

Plan De La Nouvelle Orleans by N. Bellini: 1742. Sieur de Bienville's plan for a new capital for French Louisiana was made 1718; this later one shows the city developing within the original ramparts. Today this city has four organizations battling to preserve the unique quality of the Vieux Carré under legislation that has been in effect since 1936 and has been upheld by the Supreme Court



New Haven: 1641. Early New England town planning centered around the Common. Where the early towns have grown to modern metropolises the battle to keep this open space from invasion is a continuous one. Boston's famous Common and Public Garden is battling an underground parking garage whose approaches and exits would mar this unique feature of Boston's townscape

The capital of the gold diggin's: 1849. Sacramento City from the foot of J Street showing I, J and K Streets. In this area which has been scheduled for restoration and redevelopment, the Department of Public Highways has proposed a major highway routing which will destroy the surviving old buildings and preclude reclaiming the waterfront area. This issue is being hotly contested by both factions

worthy of more than a passing glance as planes fly overhead making photogrammetic records for super-highway locations, or as urban renewal experts swing the "headache ball."

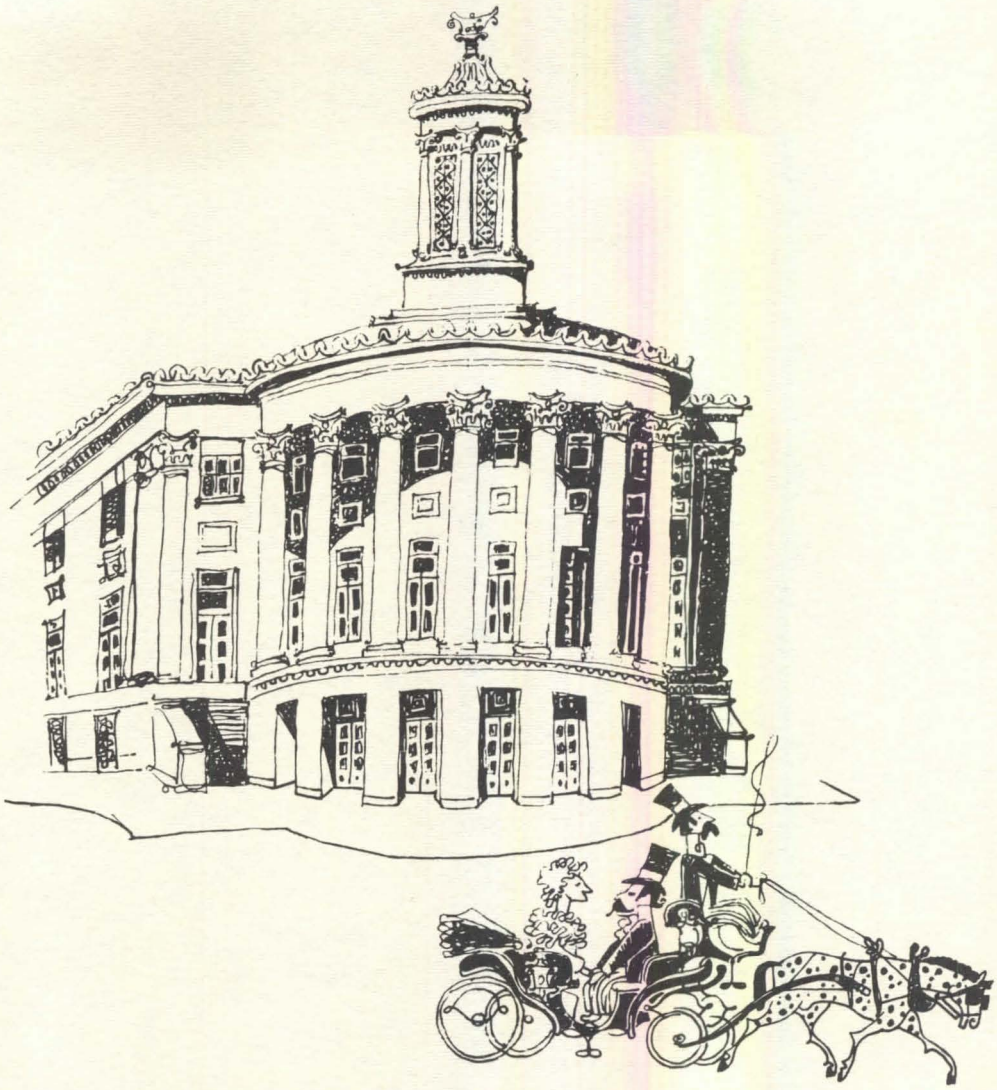
Alexandria, Virginia, is an excellent case in point. This city, which is part of the urban sprawl that is the nation's capital, was honored with a slum-clearance, urban renewal program. One that was much needed. The experts came, and selected as their area of activity twenty blocks of the Old Town area near the Potomac River, in which there were 450 of the oldest houses in the town, many of them restored, and others with a quality that would warrant restoration. They were for the most part owner-occupied. With the bulldozer approach it was proposed that this area be bulldozed and high-rise apartments be erected that would have a view of the Potomac, the Old Port area—and that somehow the city of Alexandria find its way to park the cars and provide the schools for these expensive squatters. Urban renewal is still much needed and well supported by the sound-thinking citizens of "George Washington's home town," but why not where there are no early values to be destroyed? The "expert" has departed, and the renewal plans are under further study.

Only the architect *can seek out* and evaluate the significant portions of our early cities, and decide whether they do or do not warrant being included in our brave new world approach to cities in the wilderness of urban sprawl. As we, in an uncomfortable era of fallout and almost silly escapism to the presence of the past, face the challenges of today, is it not wise to recover for ourselves planned cities in the wilderness? ◄

MORE BENDINER

on Philadelphia*

*on account of AIA will have a Convention there April 23-28



Al Bendiner remembered so many things about Philadelphia that he forgot, and was reminded about so many by his friends, that he felt he had to write another Philadelphia Story for us

► A couple of years ago there was a world conclave of archeologists, ethnologists, anthropologists and others gathered at the University Museum in Philadelphia. The hostess turned to one of her guests and said, "Doctor Gesundheit, what is your field?" Doctor Gesundheit said that he was an ethnologist, and his field was a particular study in population changes. "For example," said the Doctor, "How many people are there now in Philadelphia?" The dowager thought for a blue moment and said, "Really, Doctor, there are only about five families left."

This little story gives you a general idea of your chances of meeting a genuine hallmarked Philadelphian. There are dozens of books about them, however. Books like "Philadelphia Gentlemen," by E. Digby Baltzell; Watson's "Annals"; Jackson's "Encyclopedia of Philadelphia"; Harold Donaldson Eberlein's "Philadelphia Pepper Pot" and many others. Taken together, if you can stay awake long enough, they make the average Philadelphia gentleman sound like a dull social bore.

I guess there is nothing equal to the boredom of solid goodness. Philadelphia used to be a lovely, corrupt and contented Republican town of interesting, arrogant burghers and their *entourages*. Now it is a dull mass of the wreckage of progress. The joint has been jumping following the destruction of the "Chinese Wall" and the Pennsylvania's

center city railroad station. The whole length of the Schuylkill embankment has been mauled, and the old trees were uprooted to make way for a traffic highway so you can by-pass Philadelphia and be in New York much sooner. The center section is being isolated by wide traffic arteries so you can make a quick get-away. The old city has been devastated by the State and Government Mall projects. Now, Independence Hall sits lonely and dwarfed in the middle of yawning grass plots, and around it spring up Colonial candle-in-the-window quaintsies.

A group of buildings known as "Penn Center" should have rivalled Rockefeller Center in beauty, grace and charm. The resulting uninspired mediocrity is more like lower Lexington Avenue.

With all this massacre of architecture, the town has been abandoned by everybody who can buy a commuter's ticket and is permitted to live outside the city of black-and-white ghettos.

Philadelphia gentlewomen pride themselves on not coming to town except on Fridays. Then, oh then, the Acorn and the Cosmopolitan Clubs, the Barclay and the Union League are floating in Yardley's Lavender and Hudnut's Violet. The Friday afternoon concert of the Philadelphia Orchestra is the locale for the gentle Philadelphians. The seats for this concert have passed from generation to generation of the élite, and it looks as if one of the requirements is that you must wear and pass down grandma's unfitted tweeds with matching hat and bag and "Red Cross" shoes.

After Stokowski departed Philadelphia in a blaze of insults, the orchestra hired Eugene Ormandy, a hard-working musician who proceeded to build his own orchestra which is as fine as Stoky's was, but he is outwardly shy and tugs his cuffs and behaves.

The two upper professions of Philadelphia gentlemen are the physicians and the architects, then maybe the lawyers.

Like all good Philadelphia institutions, the University of Pennsylvania Board is interlocking blue, but the architectural faculty is mostly "imported" from dear, dear Harvard.

Philadelphia envies the Harvards, particularly that trained, almost (but not quite) English voice. It's hard on the local sons who still consider the English to be nothing but warmed-over Irish, and who speak American with that awful Philadelphia accent.

Complaints from my earlier articles: I forgot to mention Franklin Square. How could I forget dear Olde Franklin Square, memorialized in a book, "Franklin Street," and the former site of the tenderloin and skid row. In my youth it had a college boy's "hotel" which had a wonderful register of all the customers, like "Buffalo Bill and Buffalo," or "Prince Albert and Miss Lucky Strike," and many other notables.

Bits of valuable information:

Miles of yard goods and classy draperies at Staplers.

Best candy to eat and ship is at Maron's on 18th Street.

John Struthers designed, built and paid for George Washington's tomb at Mount Vernon.

Prince Edward went home from Philadelphia and said he met a man named Scrapple and ate something named Biddle.

Sickel pears are named after Jacob Sichkel, an olde Philadelphia butcher who ate the first one off his tree in 1695.

I believe that Dorothy Parker, at the funeral of W. C. Fields, said his epitaph should read, "I would rather be here than in Philadelphia."

So you see, Philadelphia is a "goode way of life," and if you accept the limitations and relax, you can have a fine dull time and enjoy anything from terrapin to hot dogs with a certain lordly air. If you don't like it, you can always go back where you came from, which is probably Boston. Nobody in his right mind moves to Philadelphia. But do come to see us anyway.

The cymatium, undecorated, is on Chestnut Street, not Fifteenth Street as I wrote it was.

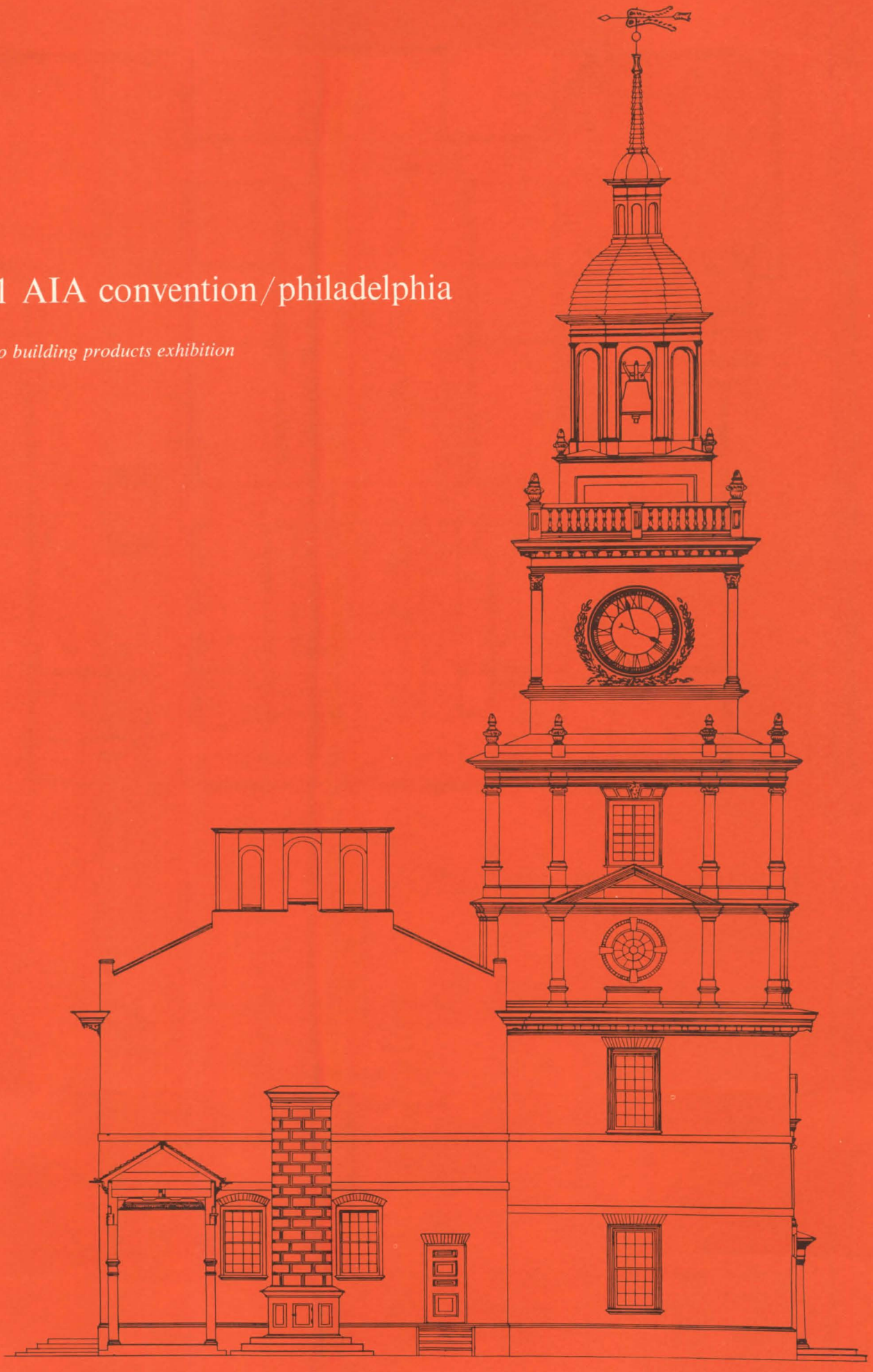
Just east of the Broad and Walnut Street H & H is a crummy alley which is the grand entrance to the Indian tribal meeting ground given the Schuylkills and Shawnees by William Penn, and still owned by them.

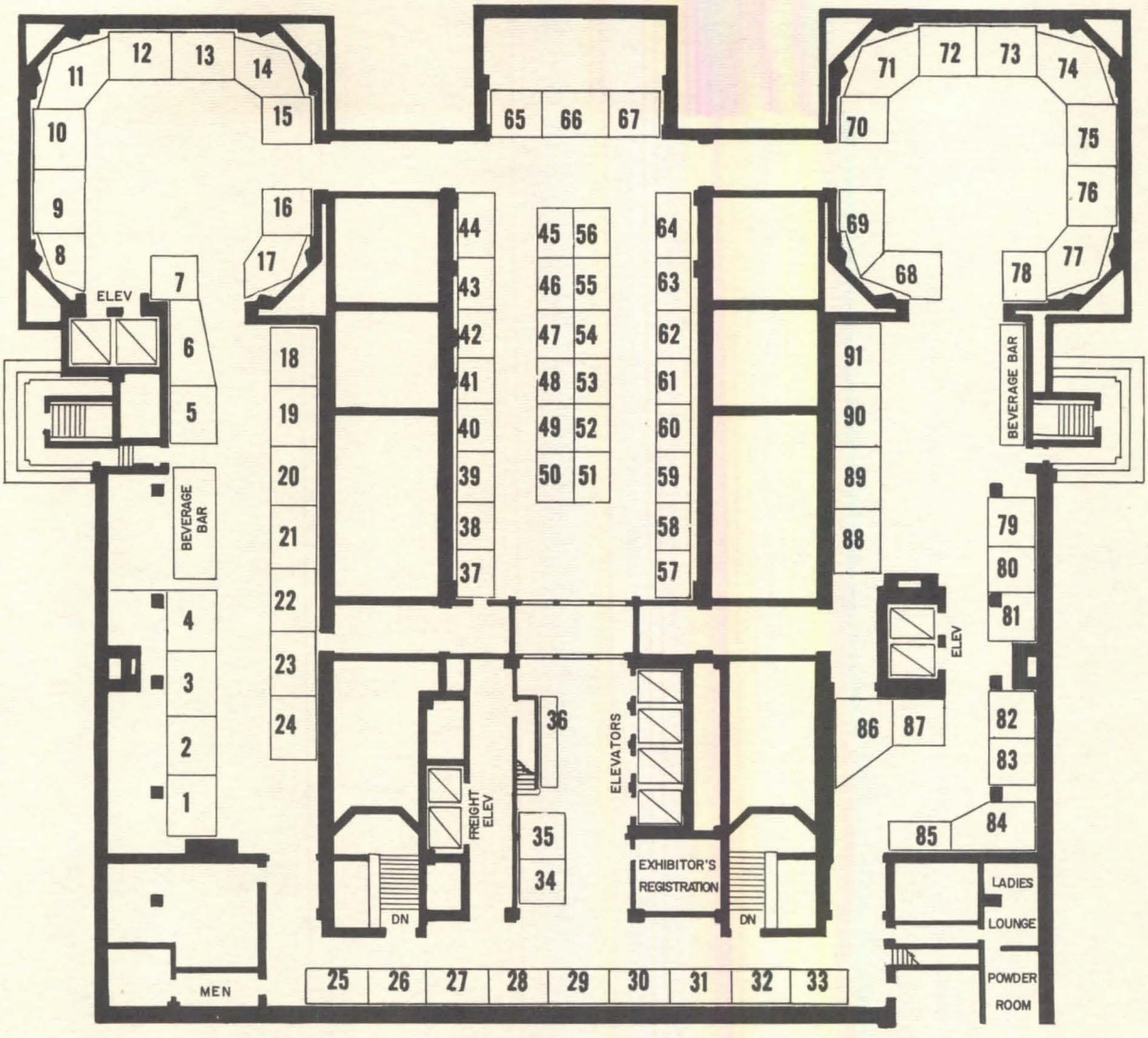
In the University Library is a skull used by Lawson Robertson, the great Shakesperean actor, when he played Hamlet at the Walnut Street Theatre.

Boxing is still held on Thursday evenings at "The Bucket of Blood." The four Ionic columns at the entrance to the Einstein Memorial Hospital are from the olde United States Mint. Right across the street is the memorial to Poinsetta, the only American killed in the landings at Vera Cruz, 1912. ◄

1961 AIA convention/philadelphia

guide to building products exhibition





Booth Arrangement

1961 AIA CONVENTION

Booth	*Exhibitor*
84	ALLIED CHEMICAL CORP. *Barrett Division*
20	UNISTRUT PRODUCTS CO.
2	AMERICAN AIR FILTER CO.
36	AMERICAN GAS ASSOCIATION & CALORIC APPLIANCE CORP.
83	AMERICAN LOCKER COMPANY, INC
79	AMERICAN OLEAN TILE CO.
90	AMERICAN-SAINT GOBAIN CORP.
74	ANDERSEN CORP.
39	ARCADIA METAL PRODUCTS
58	ARKETEX CERAMIC CORP.
62	ARMENTO ARCHITECTURAL ARTS
10	ARMSTRONG CORK CO. *Floor Division*
41	ARVIN INDUSTRIES, INC
89	AZROCK FLOOR PRODUCTS DIVISION *Uvalde Rock Asphalt Co.*
55	B. B. CHEMICAL CO. *(United Shoe Machinery)*
1	THE BILCO CO.
38	BRADLEY WASHFOUNTAIN
23	CALORIC APPLIANCE CORP. *Architectural Porcelain Division*
7	THE PHILIP CAREY MANUFACTURING CO.
22	THE CELOTEX CORP.
15	COLD SPRING GRANITE CO.
46	COLUMBIA ACOUSTICS & FIREPROOFING
8	COLUMBUS COATED FABRICS CORP.
66	CONGOLEUM-NAIRN, INC
57	CONNOR LUMBER AND LAND CO.
9	CORNING GLASS WORKS
69	CRANE CO.
85	CUPPLES PRODUCTS CORP.
64	DAY-BRITE LIGHTING, INC
70	DOUGLAS FIR PLYWOOD ASSN.
72	THE DOW CHEMICAL CO.
19	DUKANE CORP.
37	E. I. DUPONT deNEMOURS & CO.
40	DWYER PRODUCTS CORP.
73	EXECUTONE, INC

67 FEATHEROCK, INC
5 THE FLXIBLE CO.
32 FOLLANSBEE STEEL CORP.
59 GUSTIN-BACON
81 HAWS DRINKING FAUCET CO.
31 HILLYARD CHEMICAL CO.
56 HOLCOMB & HOKE MANUFACTURING CO.
24 INDEPENDENT NAIL & PACKING CO.
87 INDIANA LIMESTONE COMPANY, INC
80 INLAND STEEL PRODUCTS CO.
77 THE INTERNATIONAL NICKEL CO.
71 JOHNS-MANVILLE CORP.
27 JUST MANUFACTURING CO.
82 KAISER ALUMINUM & CHEMICAL CORP.
88 KAWNEER CO.
51 KENTILE, INC
42 KOHLER CO.
65 KNOLL ASSOCIATES, INC
17 KOPPERS COMPANY, INC
33 LAMONT & RILEY CO.
12 LIBBEY-OWENS-FORD GLASS CO.
45 W. R. MEADOWS, INC
28 THE MILLER CO.
21 MINNEAPOLIS-HONEYWELL REGULATOR CO.
61 MO-SAI INSTITUTE, INC
75 THE MOSAIC TILE CO.
30 NATIONAL LUMBER MANUFACTURERS ASSN.
49 STRUCTURAL CLAY PRODUCTS INSTITUTE
25 NUTONE, INC
6 OWENS-CORNING FIBERGLAS CORP.
11 PITTSBURGH CORNING CORP.
50 PITTSBURGH PLATE GLASS CO.
63 S. H. POMEROY CO.
16 RED CEDAR SHINGLE BUREAU
48 FACING TILE INSTITUTE
3 RIGIDIZED METALS CORP.
13 RILCO LAMINATED PRODUCTS
43 ROLSCREEN CO.
34 THE RUBEROID CO. *Mastic Tile Division*
44 SCHLAGE LOCK CO.
54 SLOAN VALVE CO.
52 ST. REGIS PAPER CO. *Panelyte Division*
53 STANLEY WORKS
35 NEW CASTLE PRODUCTS, INC.
91 STYLON CORP.
47 NATIONAL ELEVATOR CONTRACTORS CORP.
24 TIMBER STRUCTURES, INC
60 UNIT STRUCTURES, INC
29 U. S. CERAMIC TILE CO.
8 U. S. GYPSUM CO.
86 UNITED STATES PLYWOOD CORP.
14 UNITED STATES STEEL CORP.
76 UNIVERSAL-RUNDLE CORP.
78 VERMONT MARBLE CO.
68 WESTINGHOUSE ELECTRIC CORP.
26 WILKINSON CHUTES, INC

Exhibits Plus Prizes

► A 1961 Karman-Ghia coupe will be awarded as the Grand Prize at the Philadelphia convention — the first time an automobile has been included in the array of prizes. In addition to the Grand Prize, there will be awarded a number of attractive and interesting daily prizes expressly selected for corporate members attending the convention. There will be daily drawings for prizes between Tuesday noon and Friday noon, at which time the Grand Prize will be awarded.

As in previous years, awards will be made by a committee according to the following procedure: Each booth will be numbered. The first drawing will be to select a booth. The registration book from that booth will then be obtained and subsequent drawings will select the page and line number on which the winner's name will appear. Every corporate member registering at the booths will have the opportunity to win one of the daily prizes and the Grand Prize. The Grand Prize will be awarded only to a corporate member present at the time of the drawing, which will be held prior to the adjournment of the convention on Friday.

This year there will be a wide assortment of prizes from which the winner might choose something to his or her liking. There will be three categories of prizes, in addition to the Grand Prize, these will be for prizes up to $50, $100 and $200 in value. A selection of prizes for all three categories will be on display in a prominent location in the headquarters hotel. The winner in each instance can make his selection.

This will be something of a departure from previous years in that winners may choose from a much broader selection, including such items as a case of vintage champagne; a portable typewriter; gift certificates for a case of filet mignon steaks or live lobsters to be delivered at home; Philadelphia antiques; contemporary paintings, sculpture, furniture and fabrics, by local artists and designers; Philadelphia toile; a set of Wedgewood service plates of old Philadelphia scenes; in addition to leather goods, transistor radios, portable television sets and other items. In this way there should be something to appeal to anyone's individual tastes. Perhaps the most unique offering will be a gift certificate entitling the winner to dinner for a party of four at one of Philadelphia's old, historic restaurants. The recipient of the Grand Prize will have the option to receive a like amount in cash should this be preferable. ◄

Exhibit Hours

Monday—April 24 (Opening Day)
9:00 a.m. to 6:00 p.m.*
11:00 a.m. to 1:00 p.m.**
4:00 p.m. to 6:00 p.m.

Tuesday—April 25
11:00 a.m. to 2:30 p.m.*
4:00 p.m. to 6:00 p.m.
11:00 a.m. to 1:00 p.m.**
4:00 p.m. to 6:00 p.m.

Wednesday—April 26
11:00 a.m. to 5:00 p.m.*
11:00 a.m. to 1:00 p.m.**
4:00 p.m. to 5:00 p.m.

Thursday—April 27 (Closing Day)
11:00 a.m. to 2:30 p.m.*
4:00 p.m. to 6:00 p.m.
11:00 a.m. to 1:00 p.m.**
4:00 p.m. to 6:00 p.m.

* Exhibit open during these hours.
** Cocktails served in the exhibit area during these hours.

Exhibits: What You Will See

AMERICAN LOCKER COMPANY, INC
Booth #83

A complete new products line of Coin-Lok Locker Checking Systems will be shown by the American Locker Company, nationwide leaders in the field for thirty years. Coin-operated locks security-built and equipped with meters for sale or lease will be displayed. William D. Creighton, James P. Demas and Robert G. Wiggins will be in charge.

ARMSTRONG CORK COMPANY
Booth #10

Armstrong's booth will be cylindrical, with inside walls lined with indigo blue materials. The ceiling will be ruffled white plastic. Six new architect-oriented flooring materials will be displayed and shown in lighted photos. Manning the booth will be Armstrong architect-builder consultants J. M. Hall, T. E. Lewis, H. T. Stark, J. W. Brooks, H. W. Reynolds and R. A. Zentmeyer.

AZROCK FLOOR PRODUCTS COMPANY
Booth #89

Azrock's exhibit will feature a new Vina-Lux Premier Series in vinyl asbestos tile that is now available in 3/32″ and ⅛″ gauges for commercial and institutional use. The exhibit will include abraded samples of tile which demonstrate the extent to which the styling is distributed throughout the full thickness of the tile. Booth personnel will include W. K. Clark, J. C. Vynalek and E. B. Webb.

DWYER PRODUCTS CORPORATION
Booth #40

Dwyer series 69 kitchens, the ultimate in fine compact kitchen design will be displayed here. One cabinet combining refrigerator, featuring a freezer, full-size range and oven, upper and undersink cabinets and a seamless porcelain worktop will be shown.

FOLLANSBEE STEEL CORPORATION
Booth #32

The architectural features of Terne Roofing will be featured by Follansbee Steel. Eight lighted transparencies of recently completed jobs designed by well-known architects will be displayed. The form, function and color possibilities of Follansbee Steel products will be highlighted.

INDEPENDENT NAIL & PACKING COMPANY
Booth #24

Independent will feature a comprehensive revolving display of the many types of threaded nails now available in "The Stronghold Line." Shown will be the "Stronghold" Annular Thread, "Screw-Tite" Spiral Thread and other improved fasteners which Independent has developed. At the booth will be Arthur S. Tisch.

KENTILE, INC
Booth #51

Kentile will feature Asphalt, Vinyl Asbestos, Solid Vinyl, Crystalite Vinyl, Cork and Rubber Tile in a variety of colors. Representatives who will be at the booth include W. J. Carroll, J. Clegg, D. M. Hendrickson, W. L. Burch, J. Cullin and J. Moore, Jr.

LIBBEY-OWENS-FORD GLASS COMPANY
Booth #12

The part industry and modern architecture can play in urban renewal will be shown by Libbey-Owens-Ford. The glass company exhibit will feature a three-dimensional model of the refurbishing program suggested for downtown Toledo, Ohio, with the new LOF executive office building featured. The display will include a large photo mural of one elevation of the new glass-clad building. Thermopane and Vitrolux spandrels will be featured.

THE MOSAIC TILE COMPANY
Booth #75

A novel see-through design will be featured by Mosaic. It will show a new ceramic pattern developed for use on curtainwalls in treatments of various tile colors and types. Also displayed will be a ceramic mosaic mural in glazed and unglazed finishes, a new pattern in Mosaic's Byzantile series, the Wall Tile Medley with decorated tile inserts and a patio floor area of quarry tile.

RILCO LAMINATED PRODUCTS, INC
Booth #13

Weyerhaeuser Company, Rilco Engineered Wood Products Division, will dispense technical and descriptive information on the use of Rilco laminated wood beams, arches, bow-string trusses and tied arches for church, school, residential, commercial and industrial construction. Personnel at the booth will include B. C. Shipman, J. G. Marinos, J. B. Pugh, P. Brooks and G. S. Reedal.

VERMONT MARBLE COMPANY
Booth #78

Vermont will feature only samples of American marbles and granites for exterior and interior construction. Theme of the booth will be "Marble Yesterday, Today and Tomorrow" and will be illustrated with photos of recently completed buildings and some projected for the future. At the booth will be A. T. Howe, R. S. Spicer, E. C. Richardson, G. L. Streby, H. L. Rovins, E. J. Young, Paul Weikel, Harry Stoneman and Ralph Woods.

HILLYARD CHEMICAL COMPANY
Booth #31

The Hillyard Chemical Company, manufacturers of floor treatment products, will display samples of all popular type flooring specified in buildings today. "The Finish is a Part of the Floor" will be the theme of their display. These samples will be treated according to the manufacturer's or manufacturer's association recommendations. Benefits of the treatments prescribed will be illustrated by comparison of non-treated samples. Elliott C. Spratt and William E. Hillyard, Jr will attend the Hillyard booth.

INDIANA LIMESTONE COMPANY, INC
Booth #14

"Natural Indiana Limestone" showing several new finishes and applications will be displayed at this booth. In addition, Indiana's new exposed aggregate "Gemset," will also hold the spotlight. Booth personnel will be C. T. Penn, William Swenson, Hugh Kluesner, Robert Seery and James Bole.

INLAND STEEL PRODUCTS COMPANY
Booth #80

The Inland Steel Products Company exhibit will feature Inland roof systems, wall systems and floor systems, and the booth will be attended by H. V. Stehl and C. A. Gomer.

AMERICAN OLEAN TILE COMPANY
Booth #79

Some of the new products displayed here will be a new scored tile design, a new quarry tile color, two new glazed Crystalline colors and Master-Set and Perma-Bak glazed and unglazed back mounted tile. The booth will be manned by Dave Bennett, Clifford Clark, Alfred Johnson, Charles Rammel and Glenn Moyer.

FACING TILE INSTITUTE
Booth #48

Quality-tested, structural, glazed and unglazed facing tile will be shown at here, along with sound-absorbing, sound-retarding "SCR acoustile" glazed brick.

STRUCTURAL CLAY PRODUCTS INSTITUTE
Booth #49

SCPI's booth will show "SCR building panel," a prefabricated structural clay masonry unit; "SCR insulated cavity wall," with a new, economical method of insulation assuring improved efficiency in resisting heat transfer and lower heating and airconditioning costs; "SCR veri-lite," lightweight structural clay units being developed by Structural Clay Products Research Foundation.

LAMONT & RILEY COMPANY
Booth #33

Lamont & Riley, manufacturers of Expand-o-flash, the expansion joint and waterstop material of continuous neoprene with metal edges, will feature installations in full size. The display will include a moving exhibit to indicate the flexibility of the neoprene which constantly fulfills its purpose by "giving," no matter how much takes place in any direction. Examples of Expand-o-flash as a waterstop, installed in poured concrete and in masonry walls, and used in curtainwall construction will also be shown. Demonstrations will be made throughout the convention of the ease of installation and the resulting savings in cost.

NEW CASTLE PRODUCTS, INC.
Booth #35

Featured here will be the new Modernfold Soundmaster 240. The Soundmaster 240 provides greater weight, density and rigidity because of the twon wall, 24-gauge steel panel construction and light tight seal around the four sides of the door, obtained through the use of foam cushioning at each end and combination rubber and felt sealer strips at top and bottom. On hand at the booth will be H. B. Fike, J. A. Waddell, C. J. Saleff and T. J. Campbell.

AMERICAN GAS ASSOCIATION
Booth #36

Viewers at this booth will have the opportunity to inspect two Caloric built-ins used in new home construction and home remodeling. It consists of a built-in oven boiler unit, top burner unit, sink and range hood. Between the two units will be a Caloric automatic smokeless and odorless gas incinerator.

PITTSBURGH PLATE GLASS COMPANY
Booth #50

Both new and old products of PPG will be featured here, including Solargray and Graylites, Spandrelite, fiber glass fabrics, fiber glass wall covering, paints, mirrors, fired-on decorative glass and epoxy-applied decorative glass.

HILLYARD CHEMICAL COMPANY
Booth #31

Samples of various flooring materials showing proper initial treatment and suggested subsequent maintenance will be featured in the Hillyard Chemical Company booth. Literature, including both long and short form floor treatment specifications for each type of floor, will be available. Manning the booth will be Hillyard Maintaineers who act as "job captains" for the architectural profession in the application of floor treatment materials.

THE RUBEROID COMPANY
Mastic Tile Division
Booth #34

The principal product here will be Polymerite, Matico's new concept in floor tile. A revolutionary new resin that affords remarkable clarity of color, resistance to grease and stain and flame retardance made Polymerite possible. It produces a tile surface that is tighter, smoother, making for easier maintenance and greater light reflectance. Manning the booth will be William F. Strout, John Thorpe, Joseph Rihn and John Chain.

THE BILCO COMPANY
Booth #1

All of the fine products produced by the Bilco Company will be on display here: Basement doors, roof scuttles, waterproof sidewalk doors and floor and pit doors. Personnel at the booth will include B. E. Farrell, Jr, J. M. Lyons and H. C. Lucas.

AMERICAN-SAINT GOBAIN CORPORATION
Booth #90

New and old products of this company will be displayed here and literature of interest to the architectural profession will be available.

About Exhibits

Remember first of all to *visit* the Product Exhibit Area at the convention. This year it will be located on the eighteenth floor of the Bellevue-Stratford Hotel which means that elevators will be crowded and service necessarily slow. Don't be discouraged—be determined.

This year's exhibits promise to be bigger and better than ever and each booth will be staffed by competent personnel who can answer all of your questions about their product, and maybe even some about their competitor's product. They will have ample literature, samples and their product will be strikingly displayed.

A new twist to exhibits this year will be the free cocktails served directly in the exhibit area. A "time schedule" for these is located on page forty-one, along with the exhibit hours.

When you visit the product exhibits be sure you sign the registration book at each booth. This puts you in line to receive one of the daily prizes as well as having your name available for this year's grand prize, a 1961 Karman-Ghia automobile.

Ninety-one exhibitors, free cocktails, daily prizes and a grand prize will be waiting for you to claim them at this year's product exhibit area. Make sure you get to the eighteenth floor of the Bellevue-Stratford.


PREMIERE

Presenting

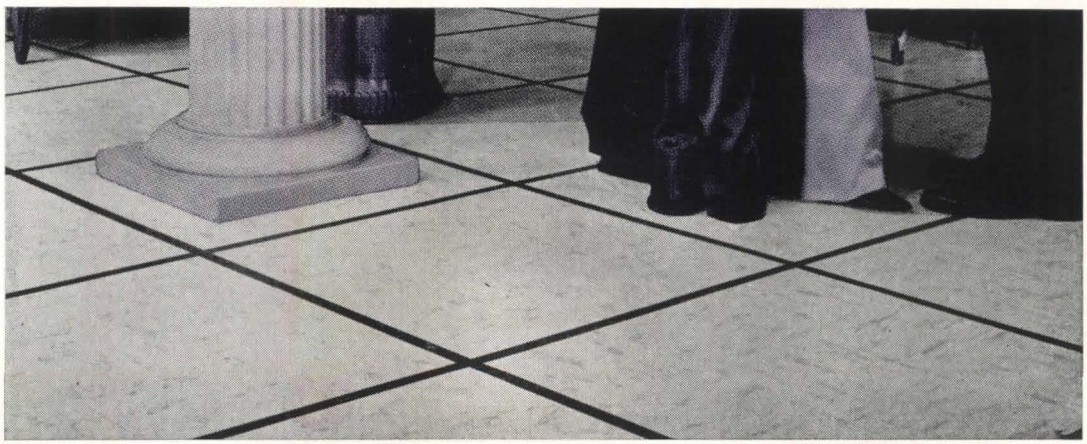
Vina-Lux®

PREMIERE *Series*

A style achievement which begins a new era of classic elegance in vinyl asbestos floor tile

Now from Azrock . . . an artistic achievement in vinyl asbestos tile which brings custom floor styling within reach of virtually any flooring budget. Vina-Lux Premiere Series has the luxurious, subtle patterning of expensive flooring — at the same price as regular vinyl asbestos tile.

Durability, too — Premiere beauty is more than "skin deep." It can be specified with confidence for heavy-traffic commercial and institutional areas because the pattern is evenly distributed throughout the *full thickness* of the tile — it is not a surface decoration. It can be installed over concrete — above, on or below grade; or over wood or plywood subfloors. And like all Vina-Lux, Premiere is grease proof, alkali resistant, economical to maintain.



Available in 9″ x 9″ size; 1/8″, 3/32″ and 1/16″ gauges; seven magnificent colors, including two metallics. Consult your flooring contractor or write us for samples and complete specifications.

AZROCK FLOOR PRODUCTS DIVISION

Specialists in the manufacture of vinyl asbestos tile and asphalt tile flooring.

UVALDE ROCK ASPHALT CO. • 593A FROST BANK BLDG. • SAN ANTONIO, TEXAS

AZROCK FLOORING PRODUCTS

SEE BOOTH 40

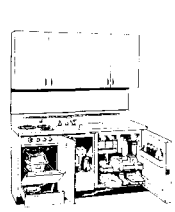
VISIT **DWYER** · BOOTH 40 · AIA SHOW!

Clients demand more? Give you less available space? DWYER KITCHENS or SNACK BARS may be the answer. You can specify complete kitchen or refreshment facilities, yet allow more spacious living or working area at no additional building cost! Consider this advantage in planning apartments, motels, resorts and other rental properties . . . offices, schools and churches . . . institutions . . . and for homes.

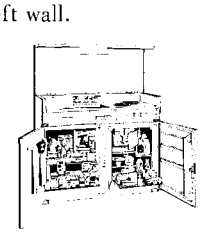
Minimum installation cost and maximum convenience features have made Dwyer units the choice of clients, too. Institutional quality, including vitreous porcelain finish, assures years of dependable service.

Kitchens—from 39″ to 69″ in length, gas or electric cooking facilities, standard or recess installation.

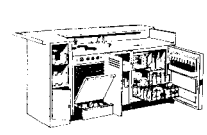
Snack Bars—from 57″ to 89″ in length, electric cooking facilities (optional), install against right or left wall.



SERIES 69 KITCHEN with refrigerator, sink, rangetop, oven, storage. 69″ in length. Vitreous porcelain finish.



SERIES 400 BUFFET KITCHEN with refrigerator, electric rangetop, sink (optional), storage. 48″ in length.



SERIES 890 SNACK BAR with refrigerator, sink, electric range (optional), storage. 89″ in length.

DWYER PRODUCTS CORPORATION • MICHIGAN CITY, INDIANA

STORE IDENTIFICATION IN CERAMIC TILE A.I.A. FILE NO. 23-A

PLATE 668

Mosaic Ceramic Tile

Attracts • Invites • Sells

On the preceding page, you see a most practical and appropriate concept of design in ceramic tile which creates both store identification and customer invitation before the store is entered.

Selling starts at the sidewalk and a carpet of tile brings the customer in. In ceramic mosaic tile, this carpet is colorfully distinctive, unaffected by wear and easy to clean. Almost unlimited design effects are at the designer's command.

On this page, you'll find distinctive tile treatments that give stores personalized character, rich environment and permanent freedom from maintenance problems.

The exclusive Mosaic patterns . . . Byzantile®, Formfree®, Mosaic Medley® and others . . . are specially appropriate for store exteriors. The Mosaic Design Department will assist in their selection on request. The Mosaic Tile Workbook for Architects is in Sweets. For additional data, write The Mosaic Tile Co., Zanesville, Ohio or 131 N. Robertson Blvd., Beverly Hills, Calif.

668—J. C. Penney Co. Arch.: Armet & Davis. Tile Contr.: Continental Marble & Tile Co. Byzantile Pattern 2524-A.

669—Bank of America. Arch.: Continental Service Co. Tile Contr.: Continental Marble & Tile Co. Special Mosaic Medley Pattern.

687—Woolworth Store. Arch.: Victor Gruen Assoc. Tile Contr.: Duffy Tile Co. Mosaic Medley Pattern.

MOSAIC®

PLATE 669

PLATE 687

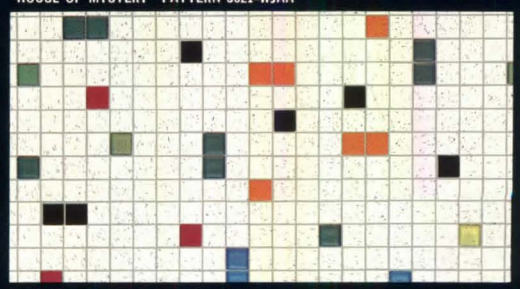
THE MOSAIC TILE COMPANY

Member—Tile Council of America, Inc. and The Producers' Council, Inc.

Offices, Showrooms, Warehouses: Atlanta, Baltimore, Beverly Hills, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Corona, Dallas, Denver, Detroit, El Monte, El Segundo, Fresno, Greensboro, E. Hartford, Hempstead, Houston, Ironton, Jackson, Jacksonville, Kansas City, Little Rock, Matawan, Miami, Milford, Milwaukee, Minneapolis, New Orleans, New York, Philadelphia, Portland, Salt Lake City, San Antonio, San Bernardino, San Diego, San Francisco, Santa Clara, Seattle, Tampa, Van Nuys, Washington, D.C., Zanesville. *Representatives:* Birmingham, Fair Haven, Oklahoma City, Pittsburgh, Spokane, St. Louis. *Distributors:* Albuquerque, Hato Rey, P.R., Havana, Honolulu, Newburgh, St. Louis, Quebec. *Plants:* Corona and El Segundo, Calif., Jackson, Miss.. Little Rock, Ark., Matawan, N.J., Ironton and Zanesville, Ohio,

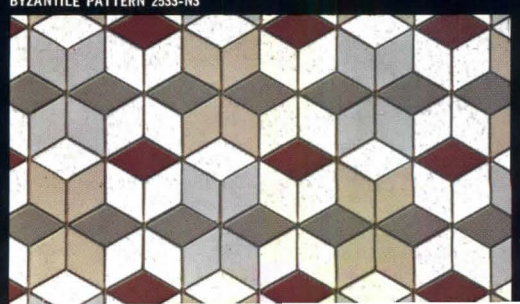
BYZANTILE PATTERN 2524-N2

"HOUSE OF MYSTERY" PATTERN 3021-WJAA



MOSAIC MEDLEY PATTERN 2302-VGBA

BYZANTILE PATTERN 2533-N3



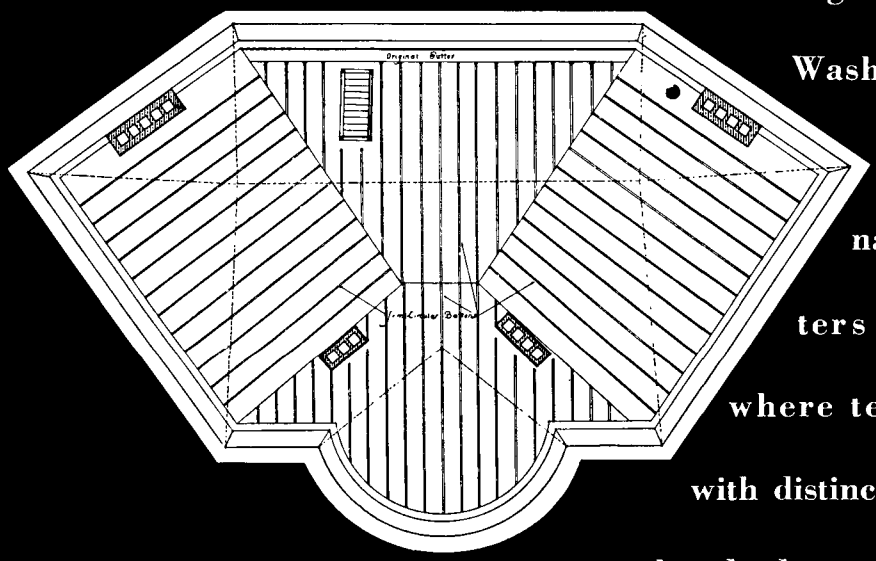
EXCLUSIVELY-MOSAIC PATTERNS which illustrate the great variety of character effects that can be achieved in Mosaic ceramic tile.

For free estimates on Mosaic Tile, see the yellow pages for your Tile Contractor, Ceramic

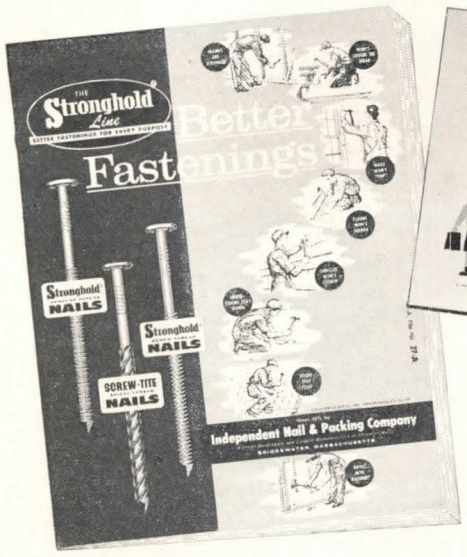
3/4 of a Century of Distinguished Service

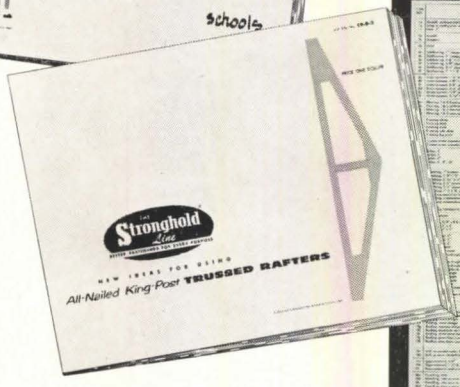
Probably no other structural element so completely symbolizes the inherent quality of shelter — basic to every building — as a visually significant roof. And from a functional standpoint, Follansbee TERNE is almost uniquely adapted to all such roofs. Both statements find striking confirmation in Washington's historic Octagon House, national headquarters of the A. I. A., where terne has served with distinction for nearly a hundred years.

The Octagon House
National Headquarters,
American Institute
of Architects,
Washington, D. C.

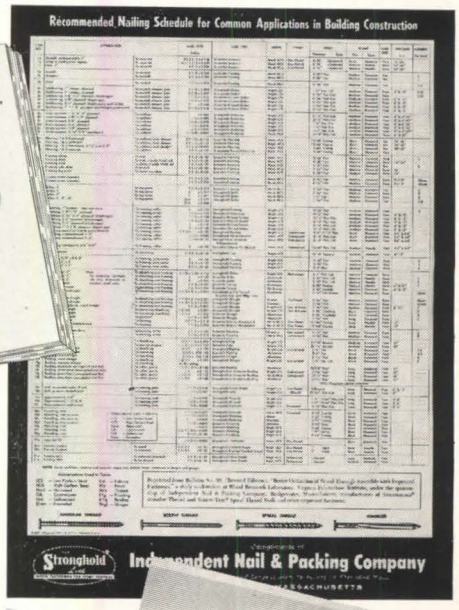


FOLLANSBEE STEEL CORPORATION
Follansbee, West Virginia



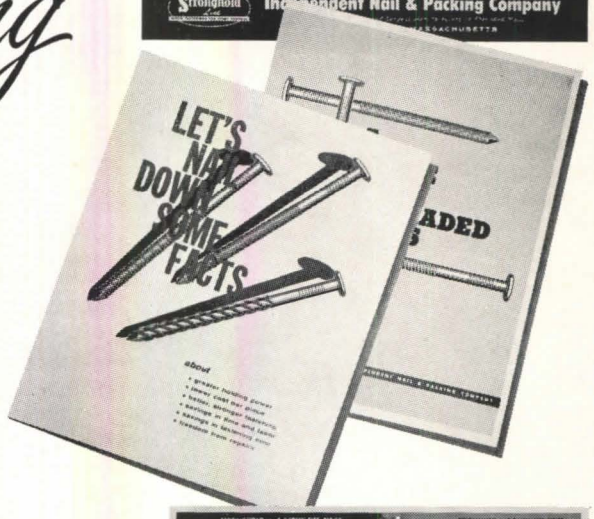


See us in Booth 24
A. I. A. CONVENTION
Bellevue Stratford Hotel
PHILADELPHIA



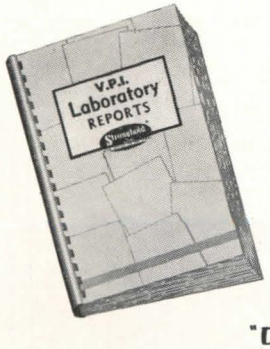
THIS HELPFUL LITERATURE

Yours for the asking



MANY ARCHITECTS and others are finding this authoritative literature on new and better fastening methods helpful. It tells how STRONGHOLD® Annular Thread and SCREW-TITE® Spiral Thread Nails make house frames stronger, keep floors and underlayment smooth and squeak-free, virtually eliminate "popping" nail heads in gypsum board drywall, hold shingles secure in winds up to three times hurricane force — often with fewer nails, slimmer nails, shorter nails — and with important savings in time, labor and materials. STRONGHOLD and SCREW-TITE Nails have revolutionized fastening methods. This literature shows you *why*. Write us for it.

Several of the pieces shown have won awards in PC-AIA and/or PC-NAHB literature contests.



Practically all of the authoritative data available on the holding power of threaded nails is the result of the continuing program of research sponsored by us, and reported in these VPI Bulletins. Ask us for a bound copy.

Sample board at right is 12 x 18 inches, has actual samples of nearly 50 "Stronghold Line" improved fastenings that hold better, tighter, longer — enable you to use new cost-saving techniques and materials.

"Drives Like a Nail...Holds Like a Screw®"

THE Stronghold® Line
BETTER FASTENINGS FOR EVERY PURPOSE

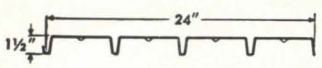
Made only by
Independent Nail & Packing Company
Pioneer Developers and Largest Manufacturers of Threaded Nails
BRIDGEWATER, MASSACHUSETTS

Inland Steel Deck
gets you under cover fast

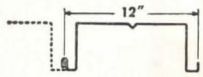
Inland Ribform
for poured construction

SEE BOOTH 80

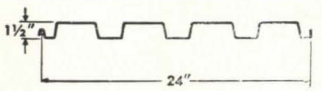
Steel deck or centering...you name it, INLAND has it!



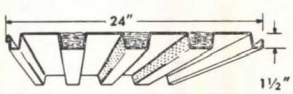
A-DECK — For purlin spacings not exceeding 8'4". Narrow ribs provide deck surface that supports the thinnest or softest types of insulation.



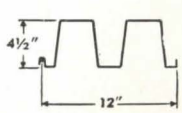
H-DECK — New! For simple spans to 20'0" — 3" and 4½" depths. Especially practical to cover walkways in shopping centers, schools, other installations.



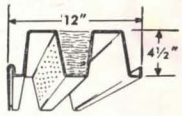
B-DECK — For spans to 10'0". Wide rib distributes metal for greater structural efficiency. Well suited for use as side wall panels.



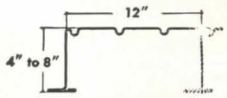
B-ACOUSTIDECK — Two-in-one panel combines steel roof deck with acoustical ceiling having Noise-Reduction Coefficient of .70. Used for spans to 10'0".



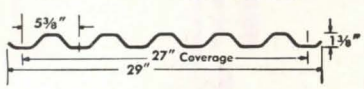
C-DECK—Carries normal roof loads over spans up to 24'0". Used extensively in canopies.



C-ACOUSTIDECK — Offers same Noise-Reduction Coefficient as B-Acoustideck. Can be used for spans to 24'0".



T-STEEL — New! Galvanized only. For clear spans to 32'0". Adaptable to acoustical and flush, luminous ceiling treatments. Provides superior diaphragm to resist seismic and wind loads.



RIBFORM — High-tensile, galvanized steel form for concrete slabs over spans up to 8'0". Three types: Standard, Heavy-Duty, Super-Duty (shown).

Expansion projects and new buildings get under cover fast and economically, when you specify an Inland roof system.

Inland steel deck is easy to handle and weld in place — in any weather that a man can work. Effects of construction abuse are held to a minimum, since types A, B, C, and H decks are Bonderized, then covered with a baked-enamel primer that resists on-the-job damage. One field coat of paint over this is usually enough.

In concrete-over-steel construction, Inland Ribform supports wet concrete with minimum deflection. Rigid sheets are quickly and inexpensively attached to supports — in place, they provide a safe work platform for crews.

Write for catalogs 240, 241, and 245 — see Sweet's sections 2c/Inl, 11a/In, and 2a/In. For help on unusual problems, you can draw on the diversified experience of Inland sales engineers. Write or call your nearest Inland office.

member of the INLAND steel family

ENGINEERED PRODUCTS DIVISION

INLAND STEEL PRODUCTS COMPANY

Dept. D, 4127 West Burnham Street
Milwaukee 1, Wisconsin

EP-SA

ATLANTA, BALTIMORE, BUFFALO, CHICAGO, CINCINNATI, CLEVELAND, DALLAS, DENVER, DETROIT, HOUSTON, KANSAS CITY, LOS ANGELES, MILWAUKEE, MINNEAPOLIS, NEW ORLEANS, NEW YORK, ST. LOUIS

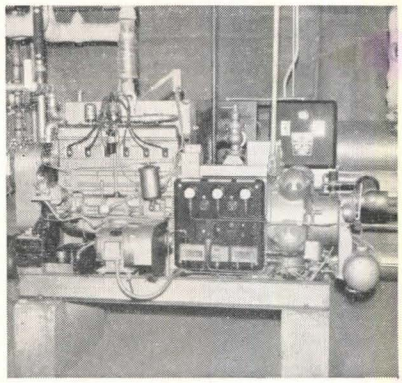
Architect: George Marble

"We cool for pennies per hour with READY-POWER GAS Air Conditioning"

"We wanted comfortable air conditioning for our recreation center. But we also wanted low operating costs," states Mr. Walter Hosek, Chairman of the Building Committee of Sokol Zizka—SPJST Lodge No. 130 in Dallas. "That's why we chose gas-operated Ready-Power Air Conditioning. Although the initial cost is slightly higher than some other available types, we figure that this unit will more than make up the difference in a few years." Mr. Hosek is so right. Ready-Power Gas Air Conditioning units achieve the lowest known operating costs. *Less than one cent per ton per hour!* Cooling is constant, as opposed to the ON-OFF operation of other systems. *LOAD-MATCH CONTROLS* automatically adjust output and fuel consumption to actual cooling requirements. And thrifty gas keeps fuel costs low.

Get all the facts on the unusual economy and efficiency of Ready-Power Gas Air Conditioning. Call your local Gas Company, or write to the Ready-Power Company, Detroit 14, Michigan.

American Gas Association



This 60-ton, gas-operated Ready-Power unit gives Sokol Zizka in Dallas high efficiency air conditioning at lowest operating costs.

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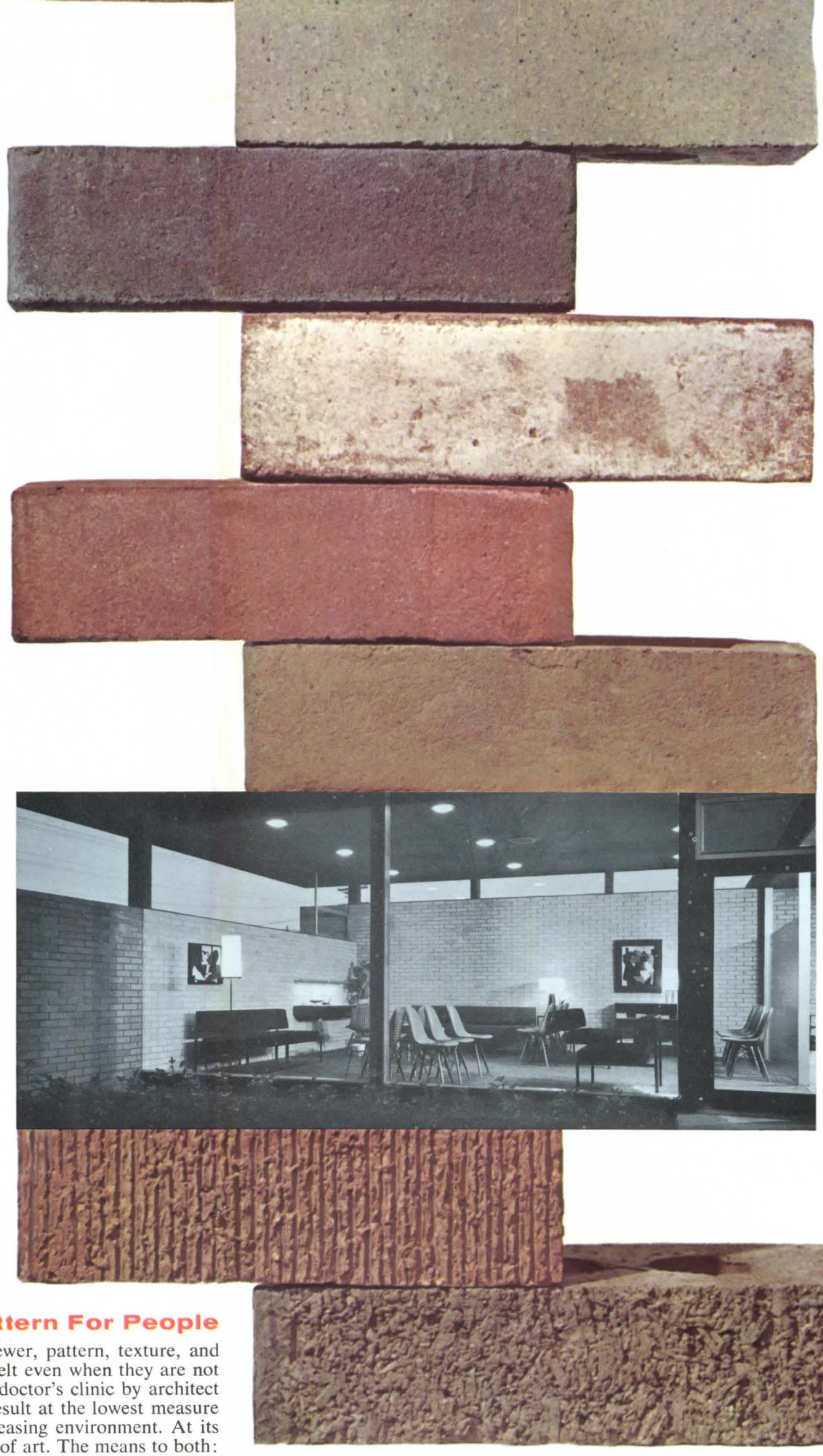
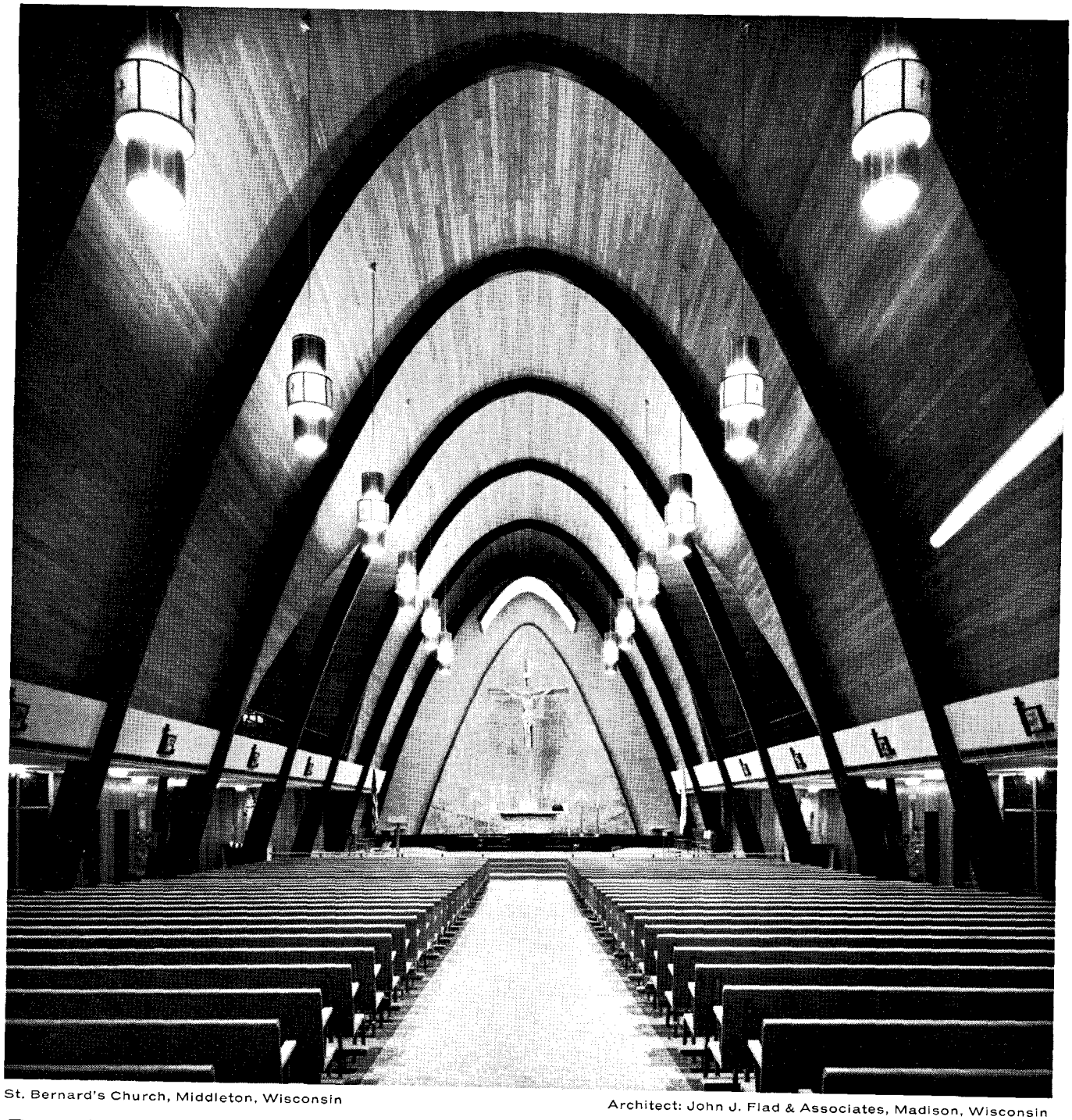


Pattern For People

To the static viewer, pattern, texture, and intimacy of scale are felt even when they are not recognized. In the doctor's clinic by architect Paul Hayden Kirk, the result at the lowest measure of recognition is a pleasing environment. At its highest, it is an awareness of art. The means to both: a skilled architect, a timeless building material.

SEE BOOTH 60



St. Bernard's Church, Middleton, Wisconsin

Architect: John J. Flad & Associates, Madison, Wisconsin

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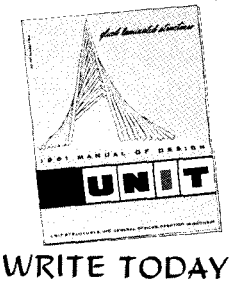

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The use of membrane vapor barriers

WITH SPECIAL REGARD TO RESILIENT FLOORS

Excessive amounts of ground moisture can create problems for on- and below-grade areas of commercial and residential buildings. They vary from merely slight, but unpleasant, dampness to actual structural damage. There are engineering and architectural principles which can be applied to minimize these problems, but they are not always brought into use. Even when they are, moisture in a concrete slab is a variable, dependent upon weather changes, and the relative humidity of the slab usually approximates 100% of the dampness in the subsoil. What may be a relatively dry slab at one time can be quite different at another.

Armstrong Cork Company has given considerable attention to concrete slab construction because of its direct effect on the behavior of resilient flooring installations. In the course of these studies, certain basic information has come to light which may be generally useful to specifiers—specifically useful in connection with selection of resilient flooring.

Exterior procedures to inhibit moisture

For the most part, problems of excessive moisture are not encountered when proper precautions are taken outside the structure. Appropriate drainage systems will usually minimize, if not eliminate, the effects of local weather conditions, terrain, water-table levels, and soil types. They are beyond the scope of this article; certainly an area in which architects, engineers, and building contractors are experienced and skilled.

Moisture barriers recommended for dry interiors

In certain parts of the country, notably Florida and the Gulf Coast area, problems of excessive ground moisture are the rule, rather than the exception. And in some areas, problems are encountered due to saline solutions seeping through the concrete and harming, among other things, resilient floors or the bond of the adhesive used to install these floors. Regardless of the area, Armstrong strongly recommends the inclusion of membrane vapor barriers which, if properly installed, will effectively lower the moisture content of the slab and materially enhance the comfort and livability of the area above the slab.

Obviously, where remodelling is involved, the installation of a membrane cannot, in most cases, be considered. However, Armstrong does have a variety of flooring materials* which are suitable for on- and below-grade installation even though a membrane cannot be installed. These materials will normally perform satisfactorily, but since they are not in themselves moisture barriers, they cannot be expected to prevent the transmission of ground moisture into living areas.

Armstrong feels that the use of membrane moisture barriers is advisable because it moves the dividing line between dampness and dryness four inches or more below the flooring material rather than directly beneath it.

Types of membranes

There are currently available three basic types of membrane vapor barriers that the Armstrong installation experts consider to be safe and commendable for use with resilient floors. These are plastic (the most generally used type being polyethylene in .004 and .006 gauges), butyl rubber, and 55-pound asphalt roofing paper. All three types are effective. None offer outstanding advantages over the others. Polyethylene, for instance, is the least expensive, comes as wide as thirty-two feet, but punctures quite easily. Butyl, the most rugged and long lasting, is also the most expensive. Layers of asphalt roofing paper sealed with hot tar provide a good barrier, but such a barrier doesn't last so long as the other types.

The barrier above, within, or below the slab?

Membrane vapor barriers installed directly on the top of the slab do not provide the stable surface needed for a satisfactory resilient floor installation. Therefore, the barrier must either be laid below the slab before it is poured, or within it, sandwiched between two layers of concrete. (While this "sandwich" method provides a number of advantages as far as wear and preventing damage go, it is more costly—and seldom used at present.) Whenever a membrane vapor barrier is put in with concrete below grade, it is important that it also be flashed vertically up the foundation wall to above the line where the resilient floor will be laid. This will stop moisture from seeping sideways through the walls to the finished floor. Providing that the membrane is intact, untorn, thoroughly sealed, and that there is no leakage around ducts, pipes, or pilings, it will provide good protection against moisture for resilient floors used on and below grade. It is vital that the condition of the barrier and its installation be thoroughly checked just before it is covered.

Special services for architects

If you have questions to do with vapor barriers—or about resilient floors in general – call the Architectural-Builder Consultant at your Armstrong District Office. A flooring expert, he is thoroughly familiar with the installation problems apt to be ecountered in your area. If additional help is required, he can get it from the Armstrong installation experts and the Armstrong Research and Development Center. Or write direct to Armstrong, 1604 Sage Street, Lancaster, Pennsylvania.

* Specifically, these floors are: Asphalt Tile, Excelon vinyl-asbestos Tile, Rubber Tile, Custom Corlon, Castilian Solid Vinyl Tile, and Sheet Vinyl Corlon with Hydrocord Back.

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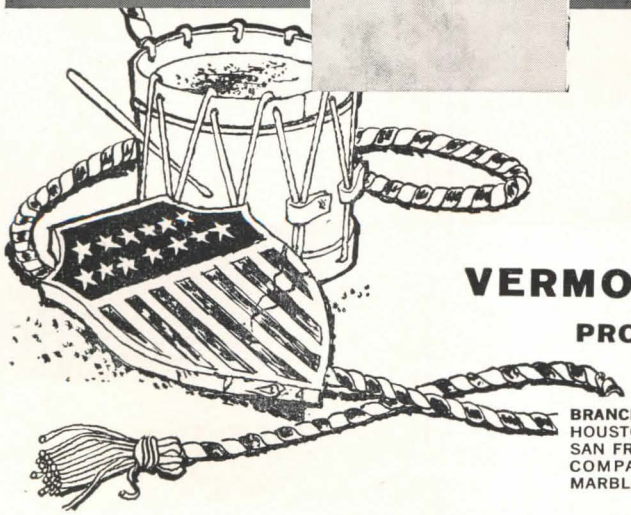
These are special marbles, part of America's architectural history . . . make them part of your most significant current project.

Hand carved white marble eagle



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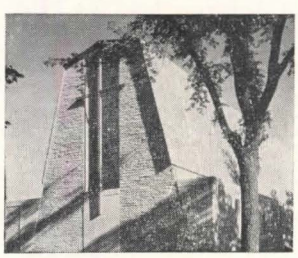
First Methodist Church, Rochester, Minn. Rilco laminated wood arches span 51′; center height 52′; 15′ o. c. Architects: Bergstedt, Hirsch, Wahlberg & Wold, Inc., St. Paul, Minn.



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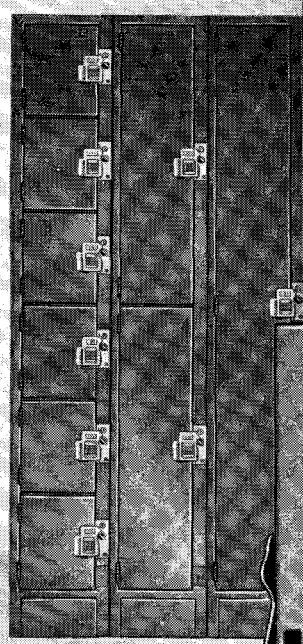

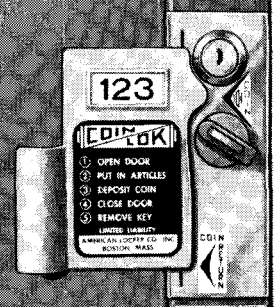

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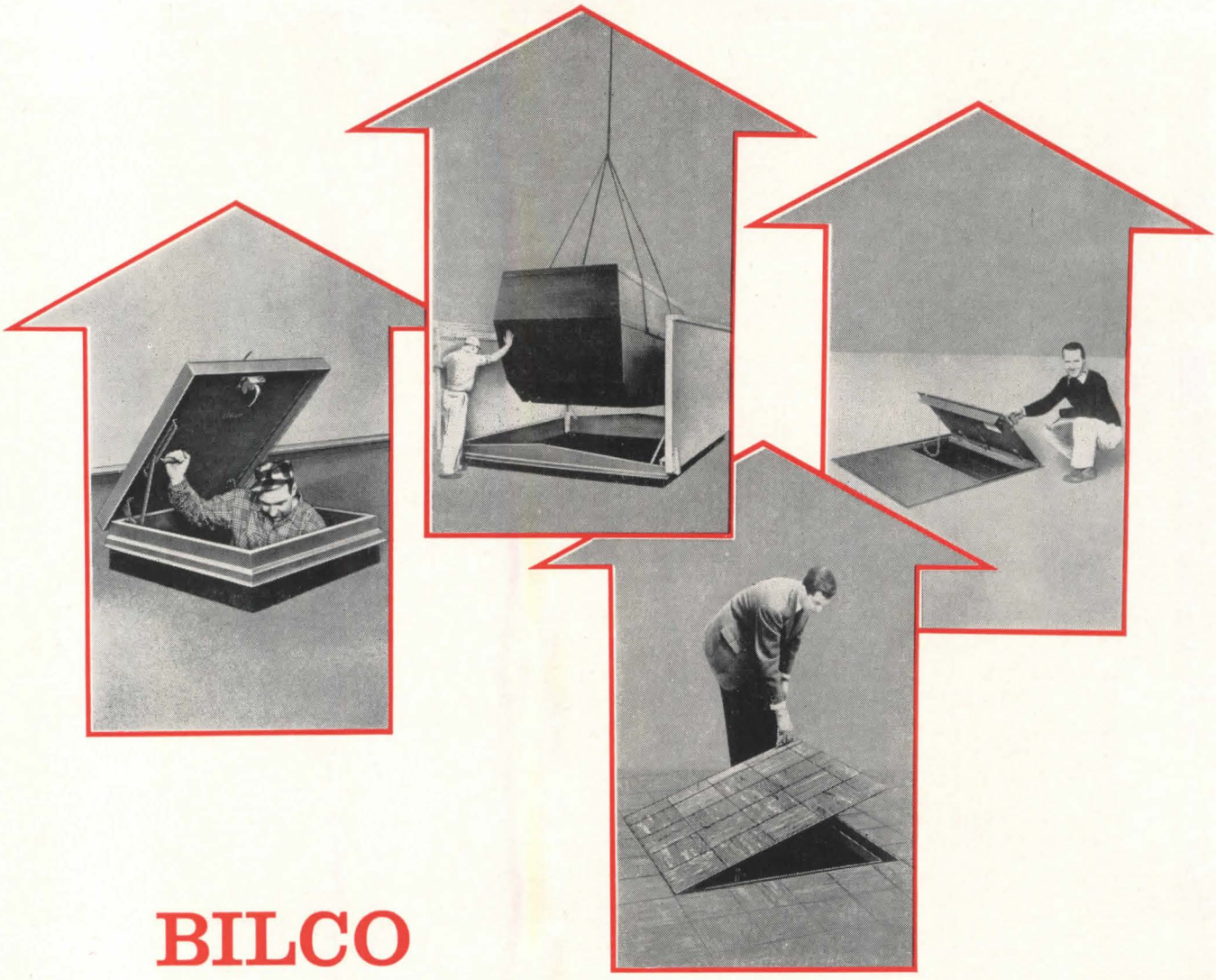

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The Finish is part of the Floor

Here's a beautiful and versatile floor. Properly maintained, it takes punishment in stride. But—far more hazardous than scuffing feet or tracked-in grime, are improper and inferior floor treatments. Instead of protecting the floor, such treatments may actually damage it!

Avoid costly mis-matching of **floor** and **treatment.** Follow the recommendations of the Asphalt and Vinyl Asbestos Tile Institute*; choose the specialized treatments that fit the flooring. Then specify maintenance, to hold "new floor" beauty.

Cafeteria, Notre Dame High School, Bridgeport, Conn.
Architects: Lyons & Mather, Bridgeport

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IN SWEET'S ARCHITECTURAL FILE

*"Maintenance of Vinyl Asbestos Tile and Asphalt Tile Floors," published by the Institute, N. Y. 17, N. Y.

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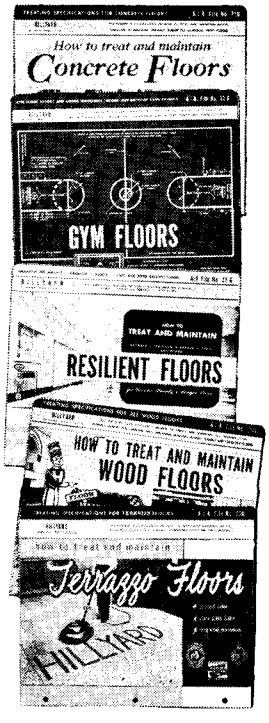

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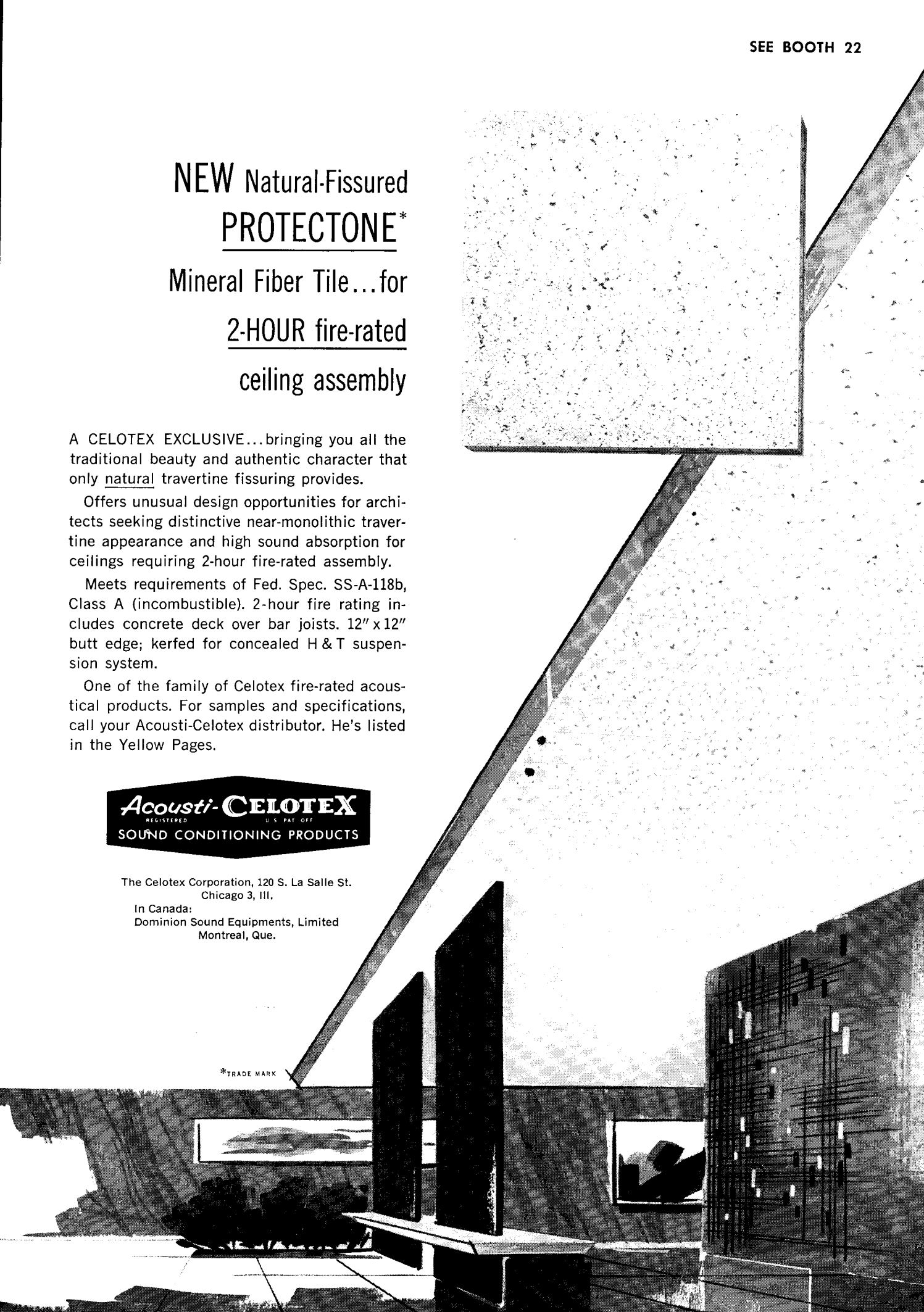


New York Testing Laboratories, Inc. Confirms The Dramatic Superiorities of New Competitively Priced MATICO POLYMERITE™ Floor Tile

Grease Resistant Flame Retardant Improved Durability

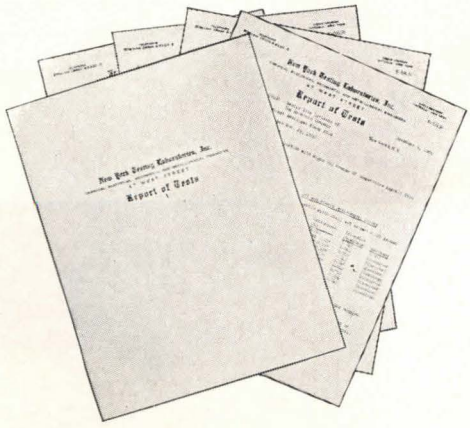
Proved Grease Resistance in unbiased, authoritative tests by this World-famous Research Laboratory. Matico Polymerite is the ONLY Low-Price Floor Tile offering this proof. New York Testing Laboratories, Inc. evaluated new Matico Polymerite Floor Tile *vs.* eight competitive brands of Asphalt Tile (purchased on the open market). Test standards were Federal Specifications SS-T-307, Grease Resistant Asphalt Tile.

Polymerite conformed fully to specifications for Oil and Alkali Resistance. *All eight competitive brands failed in this test.*

Proved Flame Retardance—the ONLY Low-Priced Floor Tile tested to pass evaluations at New York Testing Laboratories. Matico Polymerite Tile met strict U.S. Navy requirements for Flame Retardance under Military Specifications MIL-T-18830 (Ships). *Eight competitive brands of Asphalt Tile tested failed.*

Polymerite Tile is one of the *safest* floorings for home and industry.

Proved Durability—the ONLY Low-Priced Floor Tile tested to meet stringent Navy Wear Resistance Tests. Matico Polymerite Floor Tile conformed fully with Resistance to Wear requirements under Military Specifications MIL-T-18830 (Ships). *All eight competitive brands of Asphalt Tile failed this test.* Other measuring factors indicate that Matico Polymerite Floor Tile provides up to twice the wear of ordinary Asphalt Tile.



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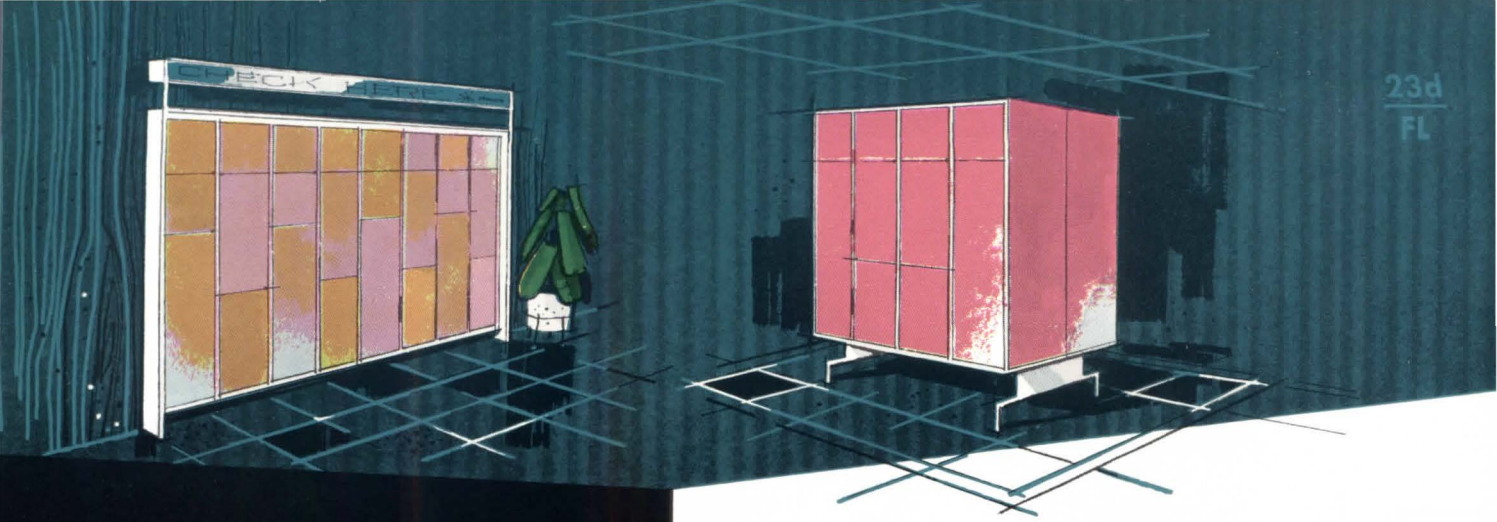

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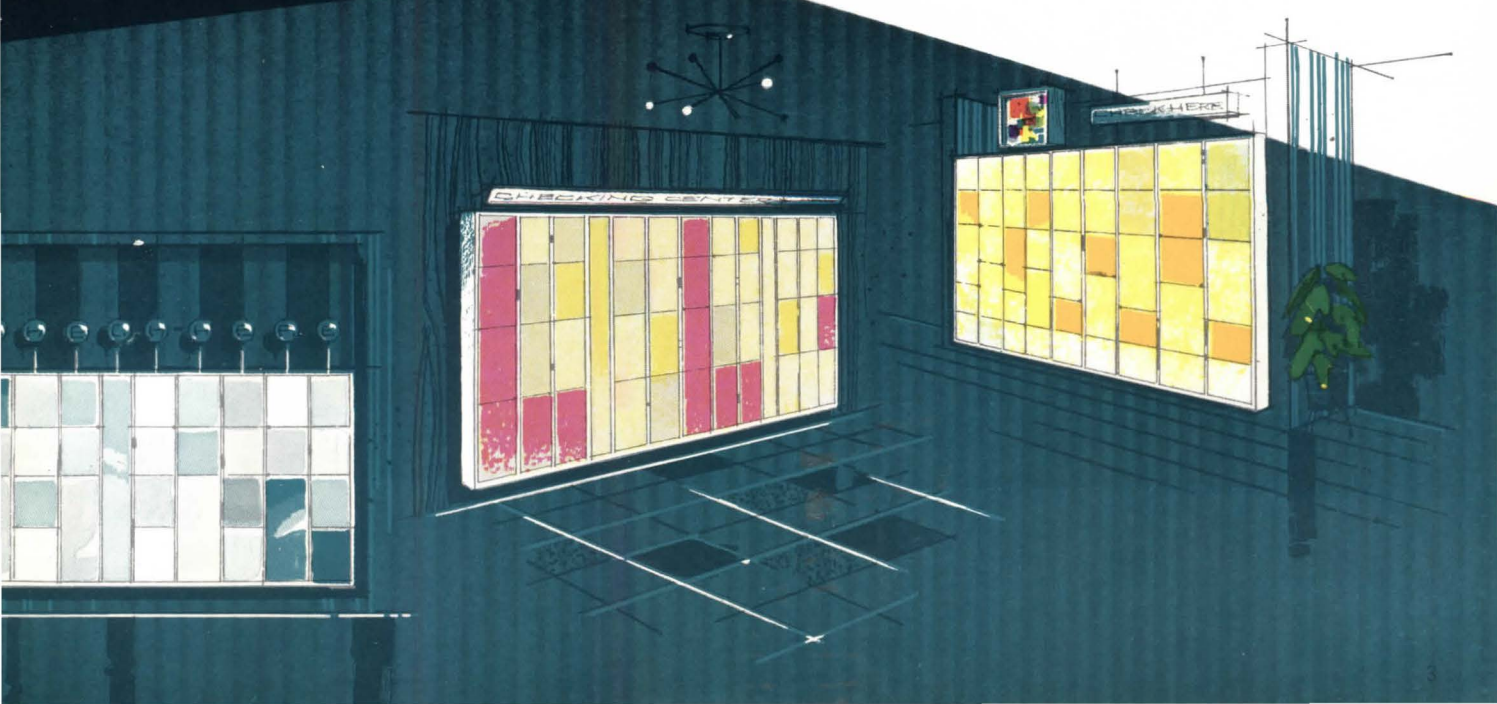

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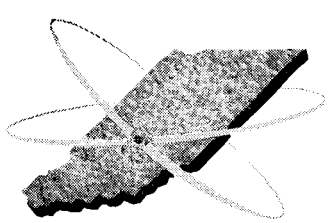

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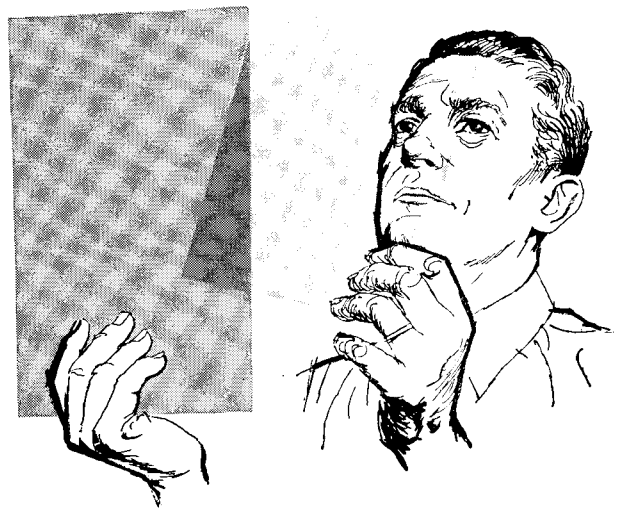

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an Important Message

on the subject of stock doors and entrances

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In designing and developing our new "40 line" of standard custom framing and stock entrance doors, Cupples has worked to give you a line of superior products you'll be proud to specify for any job. Embodying the latest advances in engineering and production, Cupples new "40 line" of stock doors and frames is simplicity itself. It not only saves time and labor in assembly and on-the-job installation, but it offers you complete design flexibility for any job requirement.

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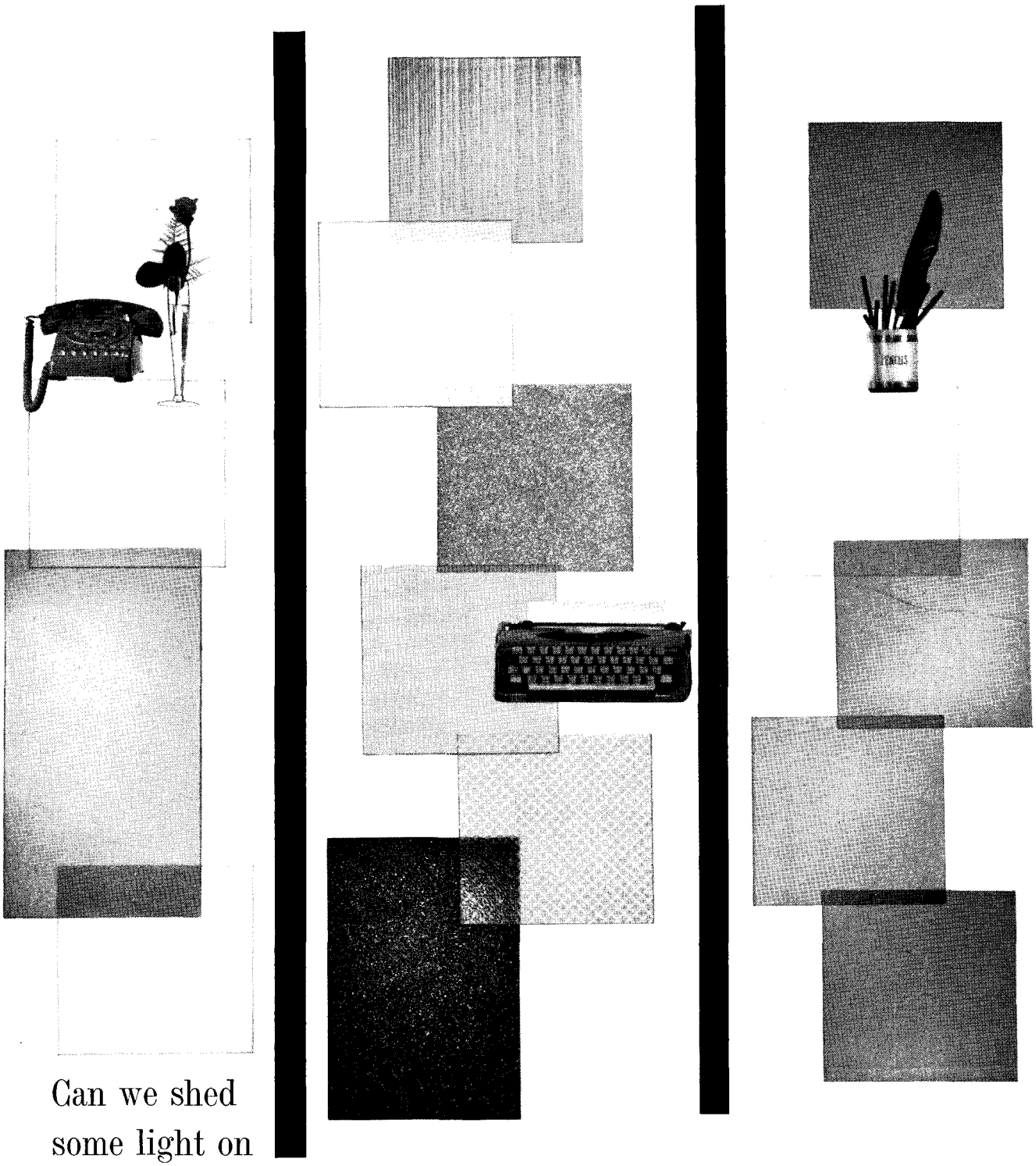

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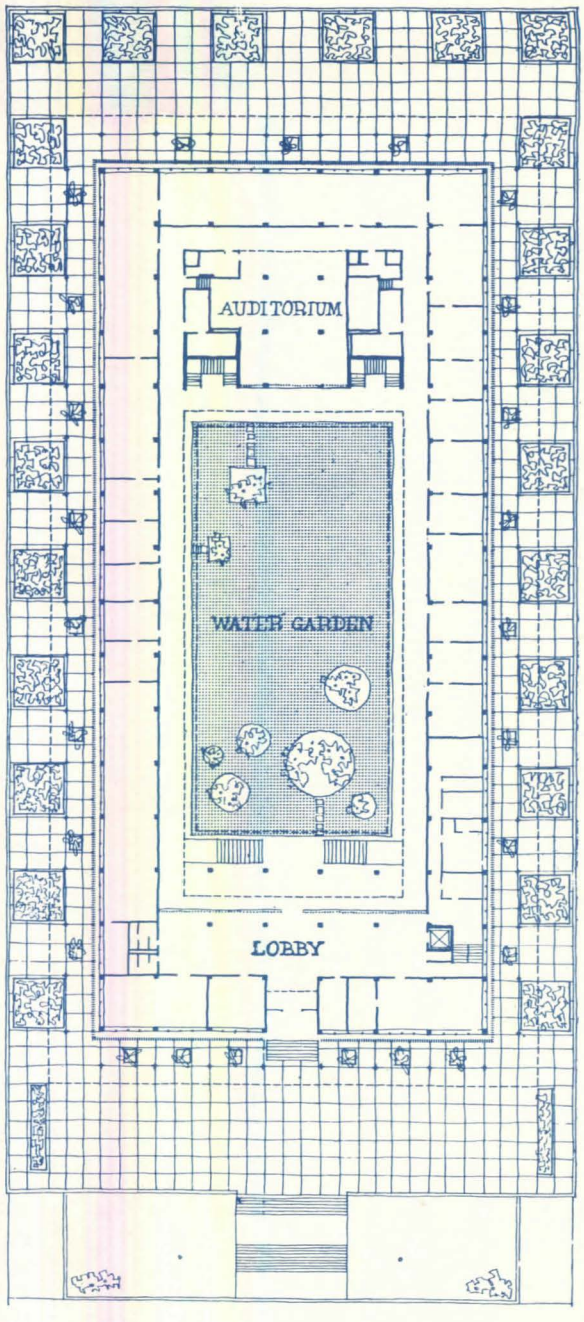
The 1961 AIA HONOR AWARDS

FIRST HONOR AWARD



Building United States Embassy
New Delhi, India

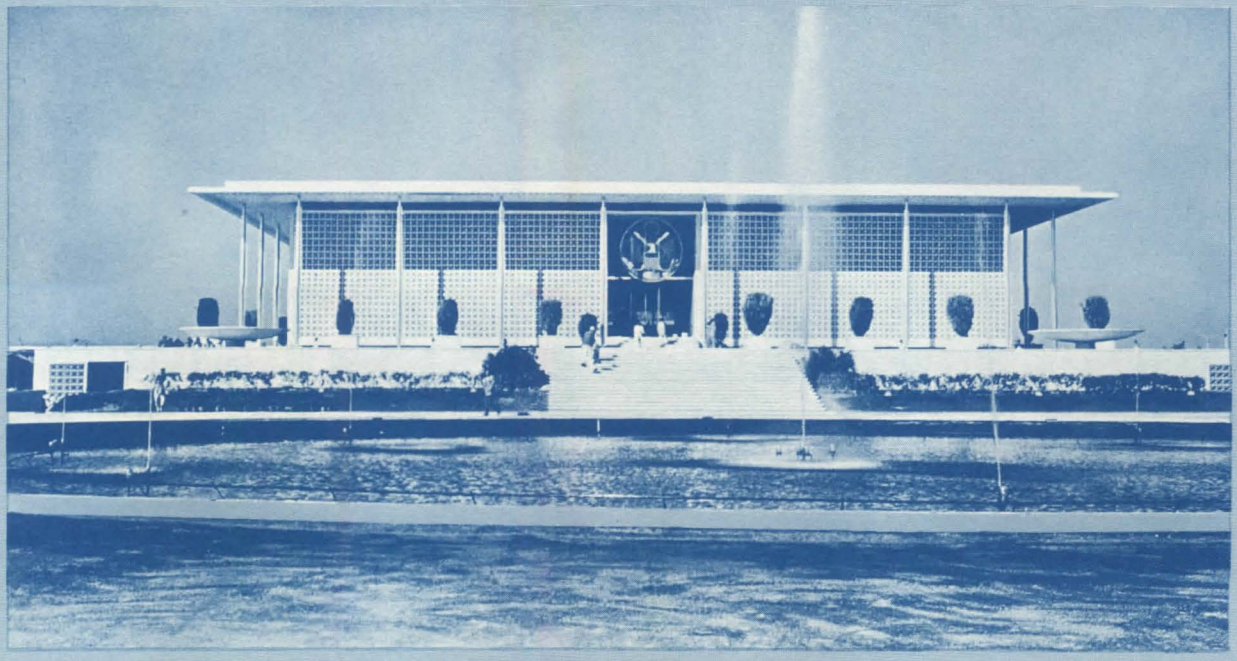
Engineer Peter W. Bruder

Owner United States of America
State Department

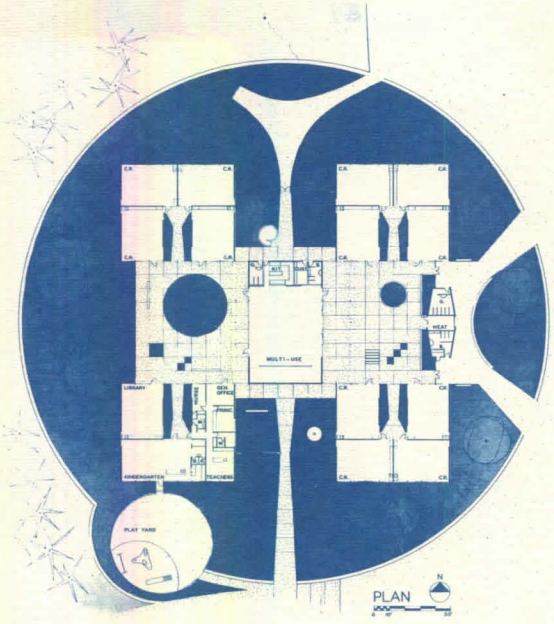
Manager of Construction Sardar Mohan Sigh

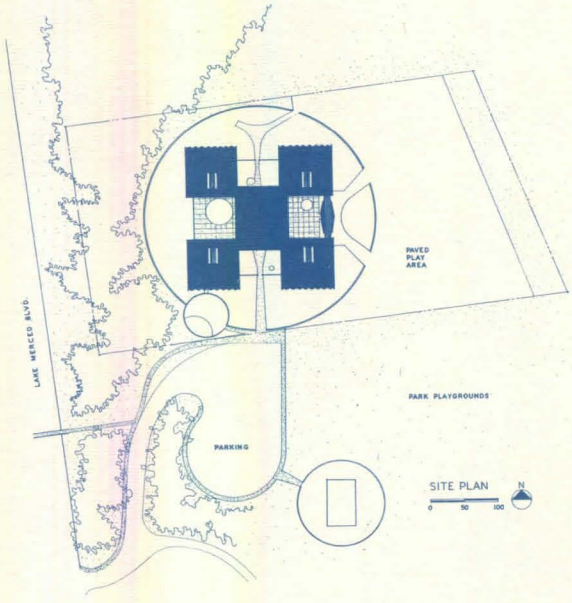
Comments by the Jury This building, already a classic statement, exemplifies serenity and power in government in terms appropriate to the country in which it is a guest.

EDWARD DURELL STONE, FAIA



FIRST HONOR AWARD





Building Fernando Rivera Elementary School
Daly City, California

Structural Engineer Isadore Thompson

Mechanical Engineer Dan Vandament & Associates

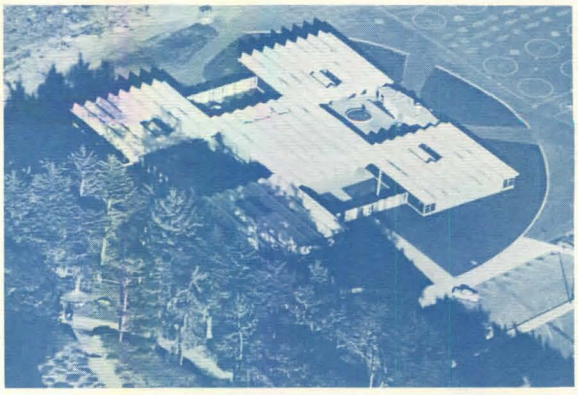
Electrical Engineer Harold Wright

Sculpture Leonard Stanley

Owner Jefferson Elementary School District

Contractor Midstate Construction Company

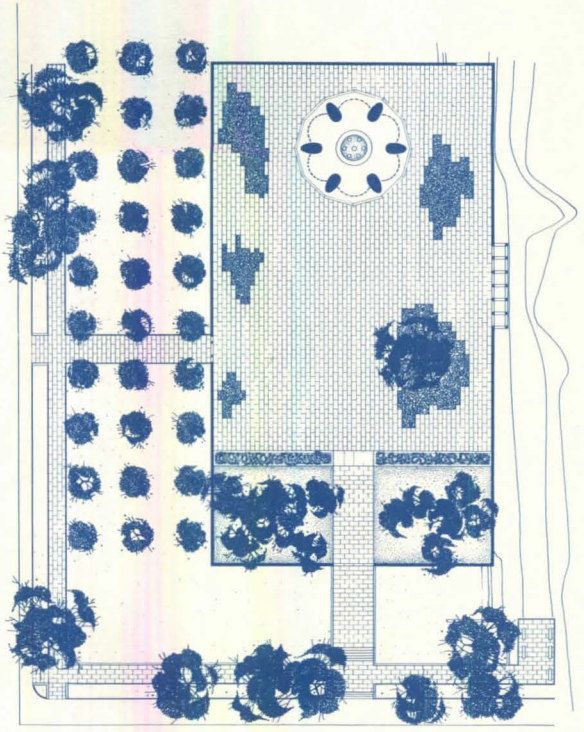
Comments by the Jury A beautifully articulated plan, a logical structural system and a distinguished handling of architecture and its allied arts have all been utilized to create a delightful environment for school children and those who teach them.

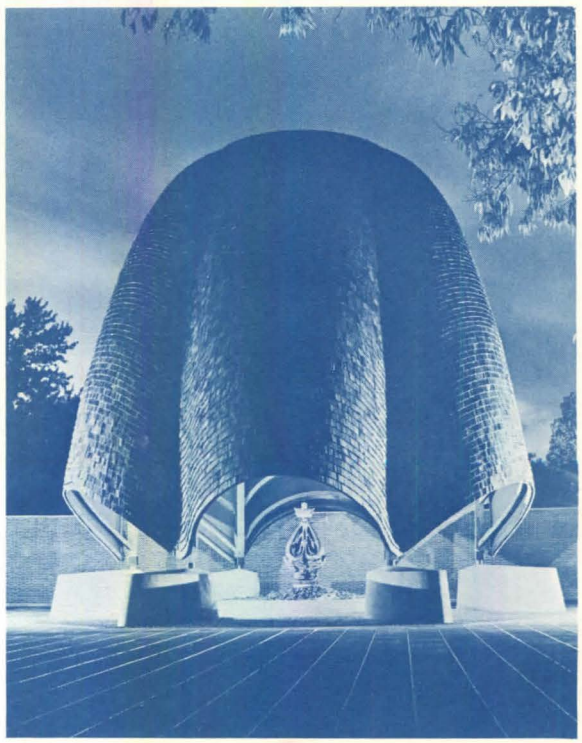


MARIO J. CIAMPI, FAIA / PAUL REITER, *Associate*

Karl H. Reik

FIRST HONOR AWARD





George Holton

Building Shrine
New Harmony, Indiana

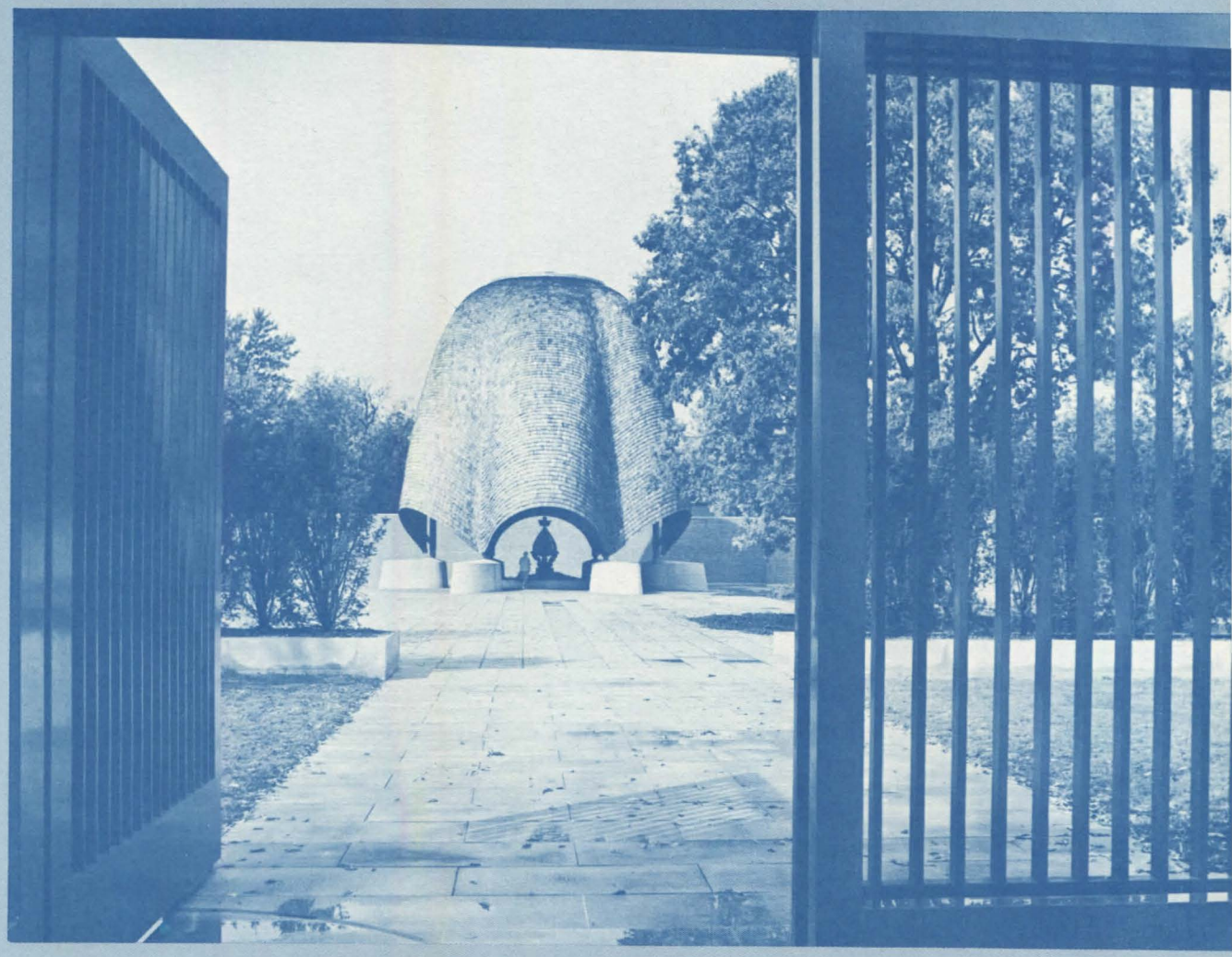
Engineers Wilcox and Erickson

Owner Robert Lee Blaffer Trust

General Contractor Traylor Brothers, Inc

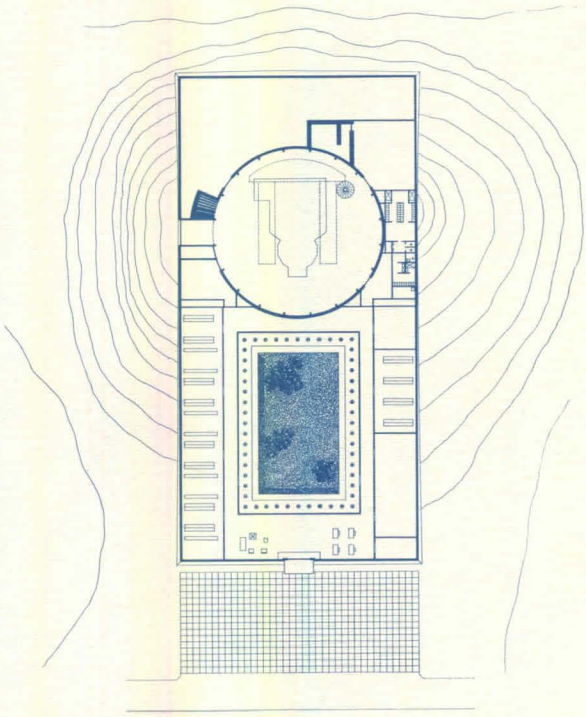
Comments by the Jury A playful and poetic answer to a very unusual building problem in which great dignity and significance have been warmly achieved.

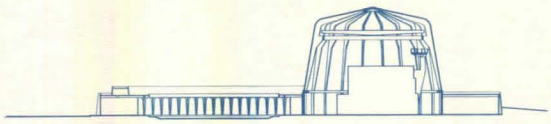
George Holton



PHILIP JOHNSON, AIA

FIRST HONOR AWARD





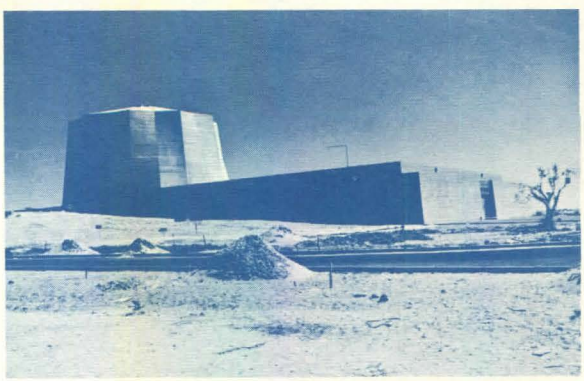
Building Nuclear Reactor
Rehovot, Israel

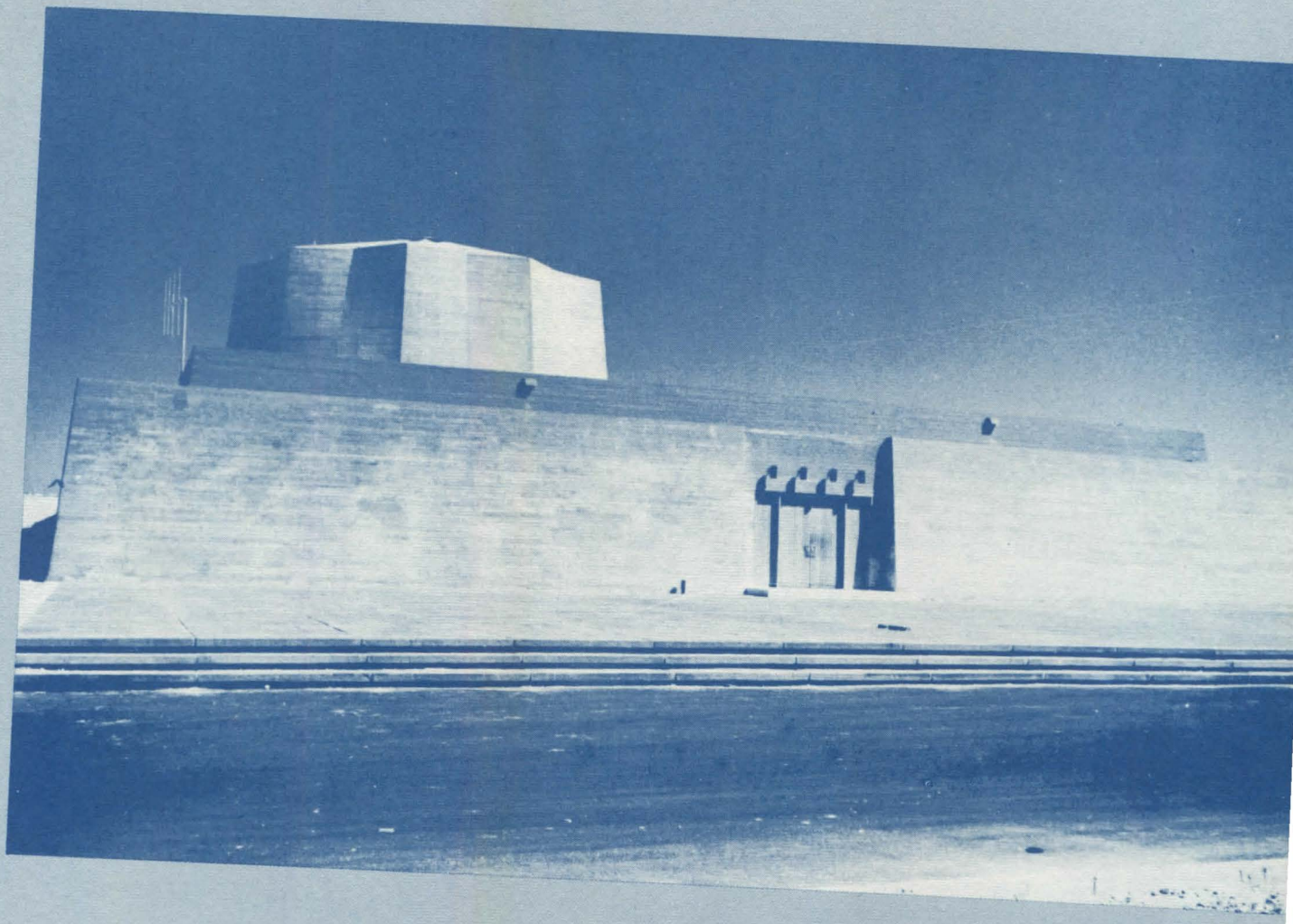
Engineer Lev Zetlin

Landscape Architect Lawrence Halprin

Owner Government of Israel

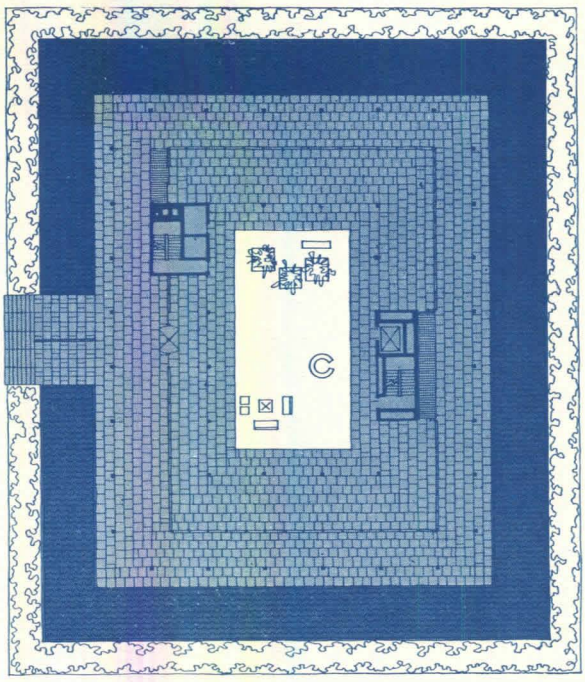
Comments by the Jury A powerful solution which clearly and concisely states the nature of a new building type and the material, reinforced concrete, used in its construction.

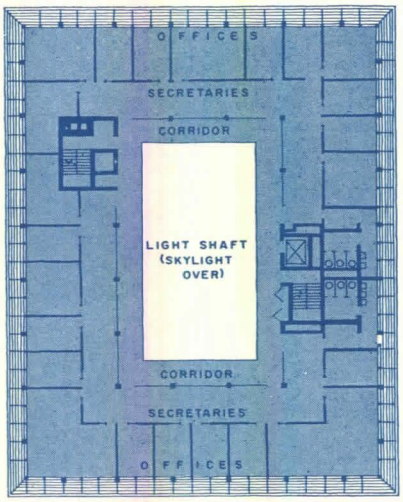




PHILIP JOHNSON, AIA

FIRST HONOR AWARD





Building Reynolds Metals Regional Sales Office
Detroit, Michigan

Structural Engineer Ammann & Whitney

Mechanical Engineer Cass S. Wadowski

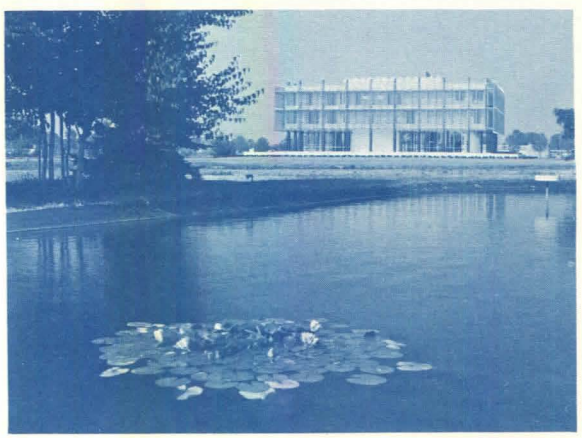
Electrical Engineer Henry J. Guthard

Landscape Architect Eichstedt-Johnson Associates

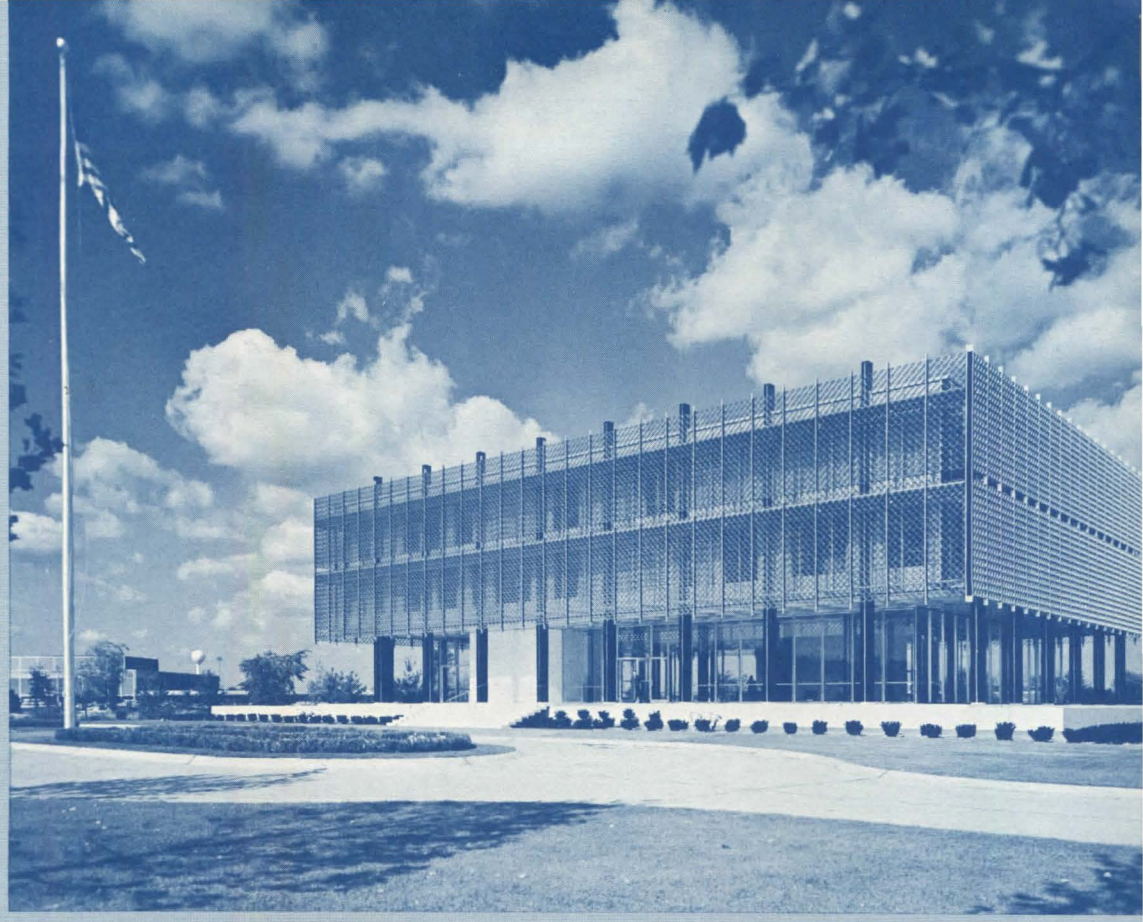
Owner Reynolds Metals Company

General Contractor Darin & Armstrong Company

Comments by the Jury Here is a suburban answer, in poetic terms which embrace both architecture and landscape design, to the administrative requirements of American industry.



Baltazar Korab

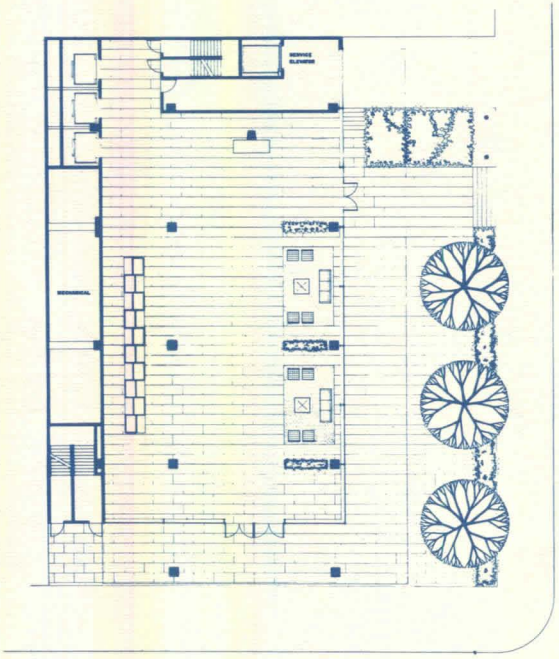


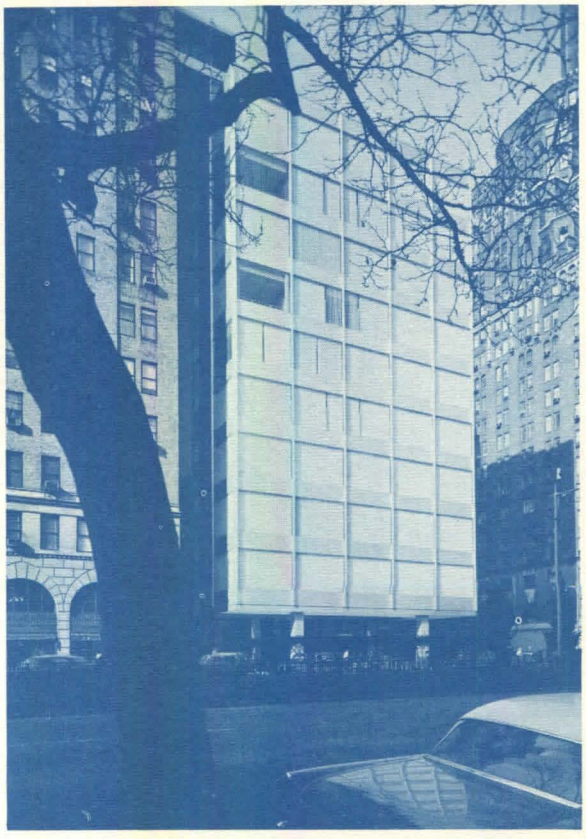
Baltazar Korab

MINORU YAMASAKI, FAIA

Baltazar Korab

FIRST HONOR AWARD





Ezra Stoller

Building Pepsi-Cola World Headquarters
New York, New York

Structural Engineers Severud-Elstad-Krueger Associates

Acoustical Engineers Bolt Beranek & Newman

Mechanical Engineers Slocum and Fuller

Owner Pepsi-Cola Company

General Contractor George A. Fuller Company

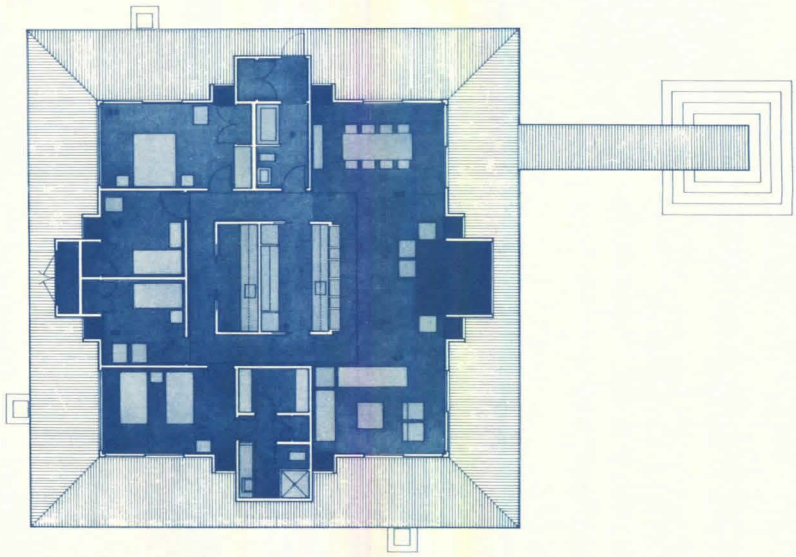
Comments by the Jury Seldom have machine-age building techniques been so expertly utilized in providing an appropriate urban headquarters for an industrial corporation.

Ezra Stoller

SKIDMORE, OWINGS & MERRILL

Ezra Stoller

FIRST HONOR AWARD

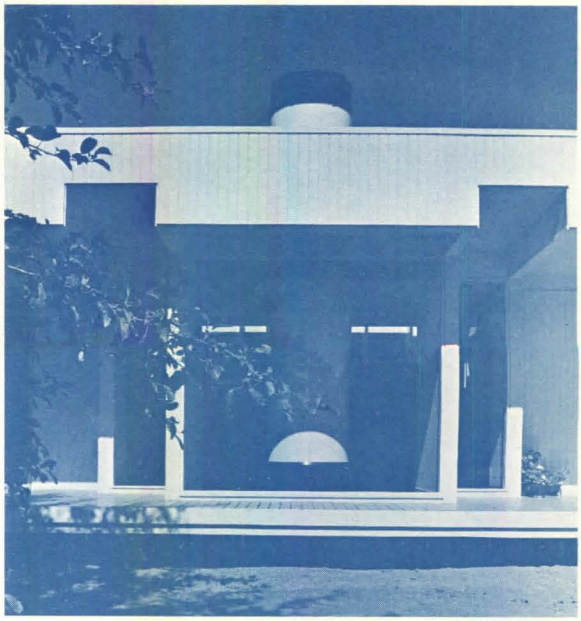


Building Summer House
Northville, Michigan

Owner Mr and Mrs Alan Schwartz

General Contractor William Gruenwald

Comments by the Jury A compact, well-organized, fresh and original solution to family living in which bold spatial organization and forceful structural expression are enhanced by the unusual setting provided by a tremendous apple orchard.



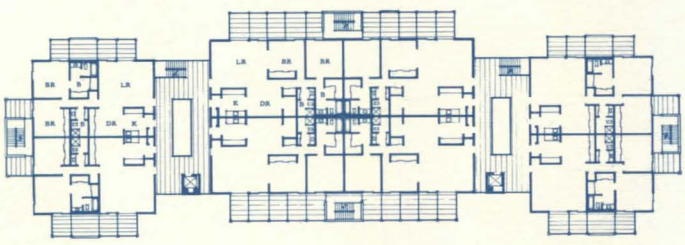
Baltazar Korab

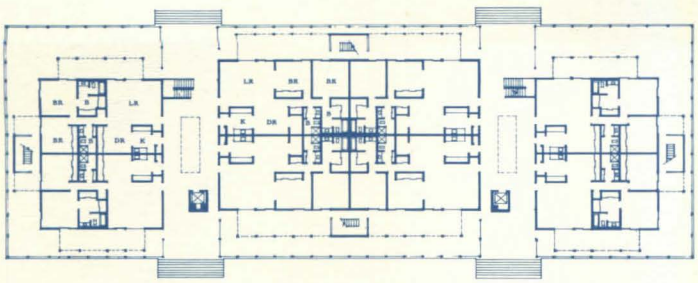
Baltazar Korab

BIRKERTS & STRAUB

Baltazar Korab

AWARD OF MERIT / JOHN CARL WARNECKE & ASSOCIATES





Building Willow Creek Apartments
Palo Alto, California

Landscape Architect Lawrence Halprin

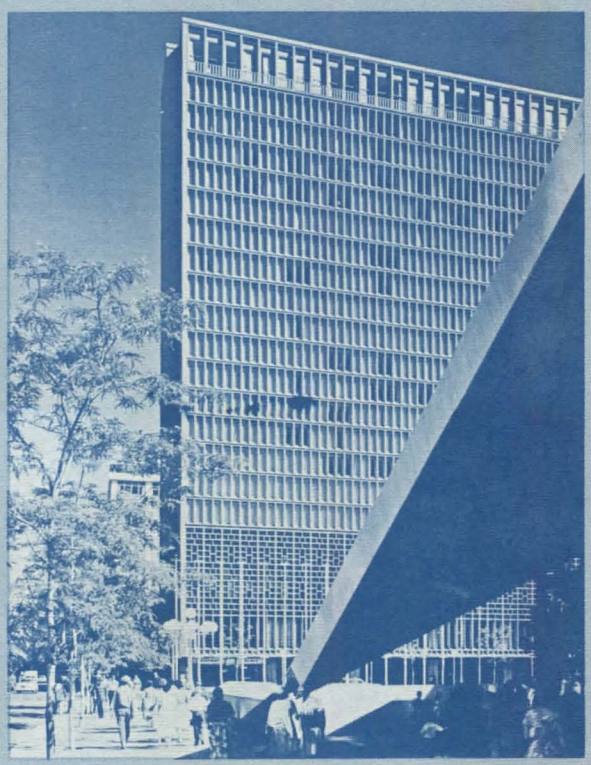
Owner Willow Creek Corporation

General Contractor Howard J. White, Incorporated

Comments by the Jury An outstanding architectural solution to the problem of giving individual character and over-all human quality to a group of luxury apartments.

George Cserna

AWARD OF MERIT / I. M. PEI & ASSOCIATES



Guy Burgess

Project Denver Hilton Hotel
Denver, Colorado

Structural Engineers Weiskopf & Pickworth

Mechanical Engineers Jaros, Baum & Bolles

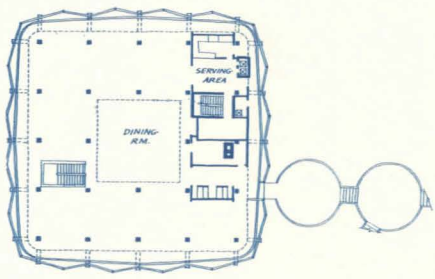
Developer Webb & Knapp, Incorporated

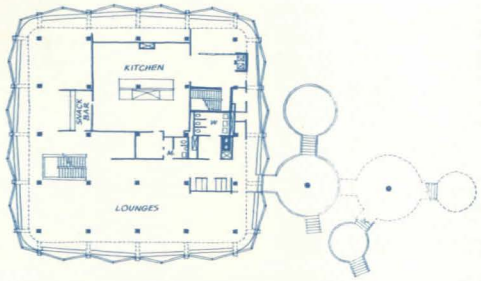
General Contractor Webb & Knapp Construction Company

Comments by the Jury An impressive and interesting interpretation of the requirements of an urban hotel, clearly and logically integrated with the other building elements that complete the program.

Robert Stahman

AWARD OF MERIT / VICTOR CHRIST-JANER & ASSOCIATES





Building Lincoln Commons Building
Lake Erie College
Painesville, Ohio

Structural Engineer Henry A. Pfisterer

Mechanical & Electrical Engineers Fred S. Dubin Associates

Owner Lake Erie College

General Contractor George E. Payne Construction Company

Comments by the Jury Superb handling of interior space combined with an interesting and unusual exterior envelope.

Morley Baer

AWARD OF MERIT / HERTZKA & KNOWLES
SKIDMORE, OWINGS & MERRILL, *Associate Architects*

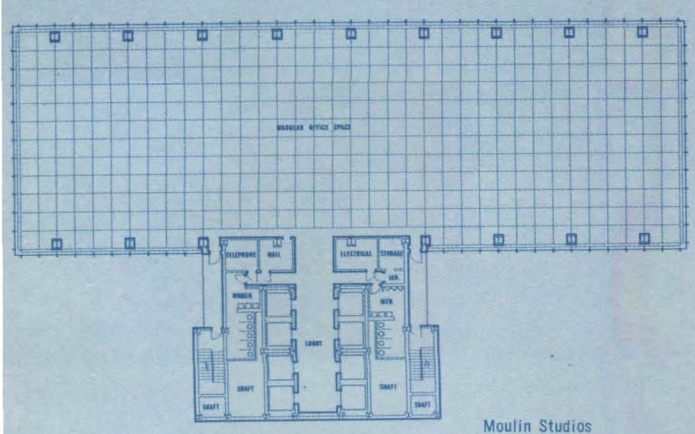
Building Crown-Zellerbach Building
San Francisco, California

Structural Engineer H. J. Brunnier

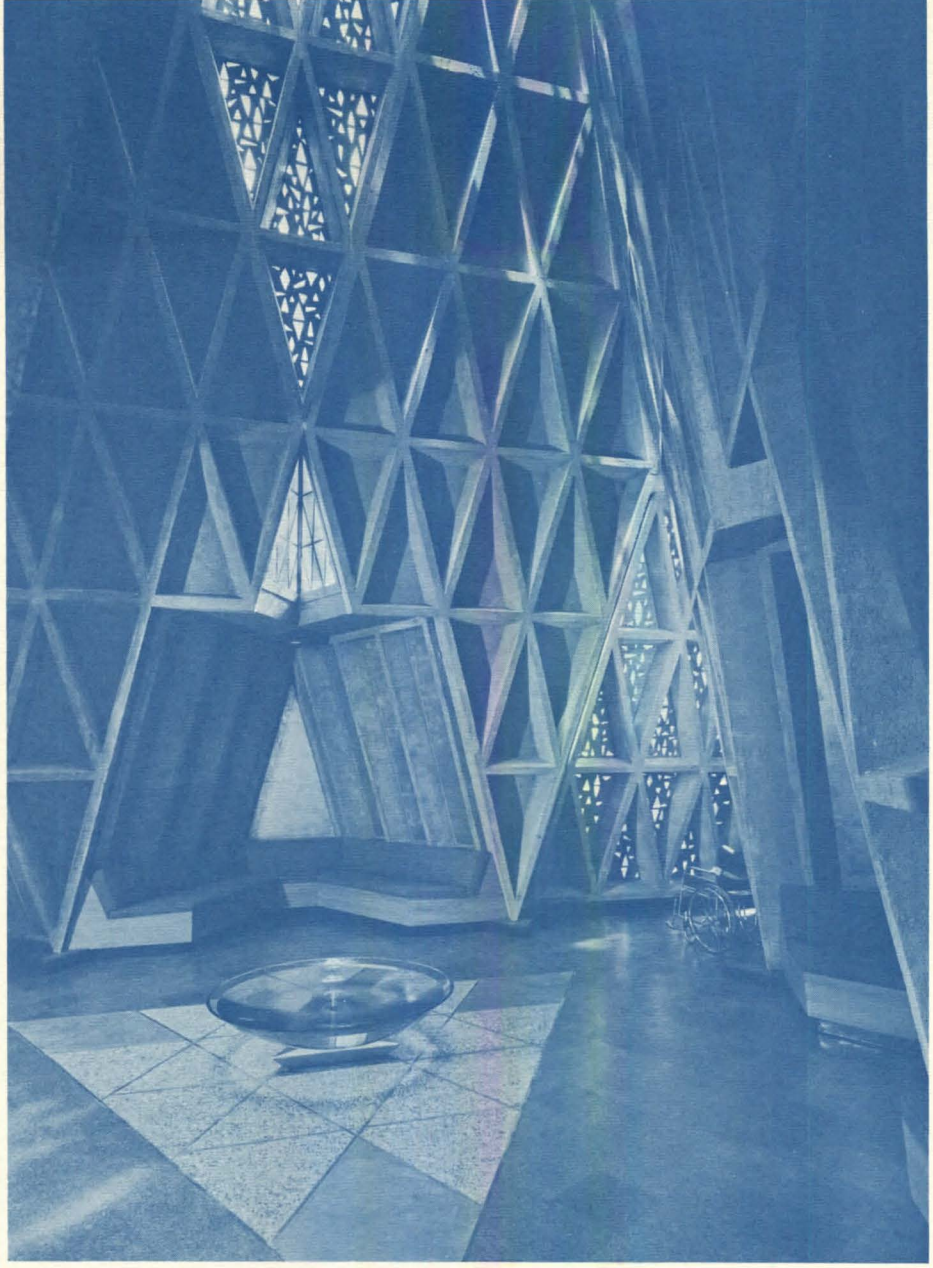
Owner New York Life Insurance Company

General Contractors Haas and Haynie

Comments by the Jury A well-articulated and proportioned office tower with a clear span interior structural system, stands in an *imaginative and appropriate* sunken garden designed with great sculptural feeling.



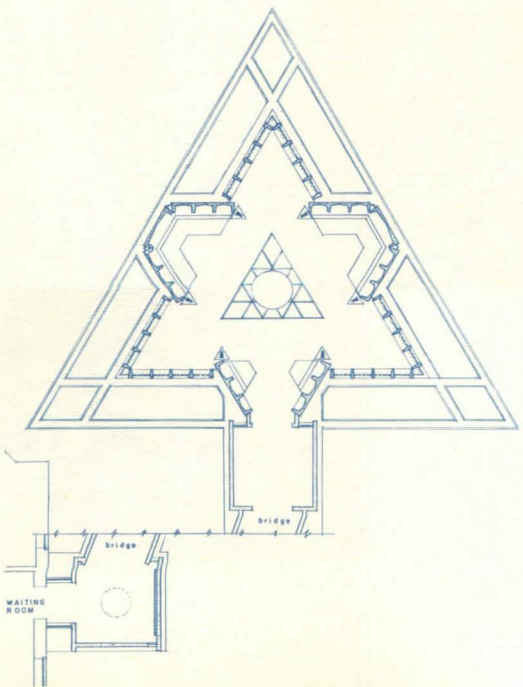
Moulin Studios



Roger Sturtevant

AWARD OF MERIT / HENRY HILL, AIA

JOHN W. KRUSE, AIA, *Associate*



Building Chapel, Moline Public Hospital
Moline, Illinois

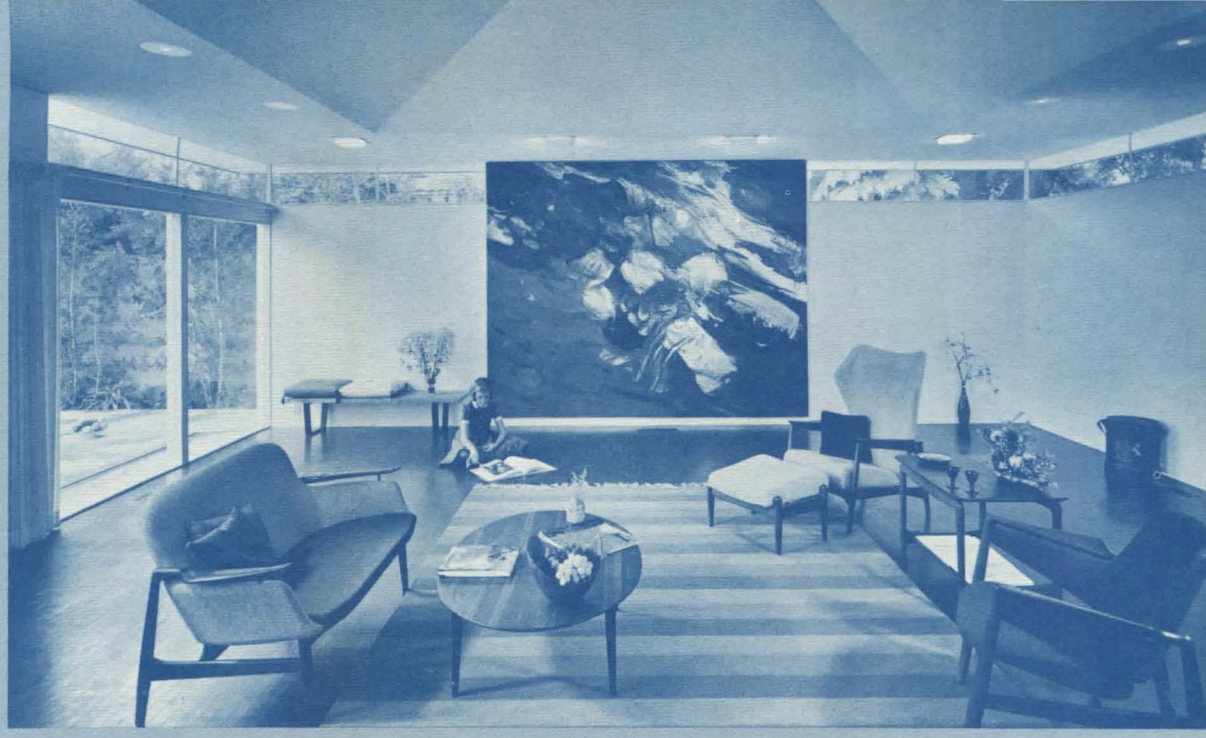
Structural Engineer Isadore Thompson

Owner Moline Public Hospital

Contractor Ericson Construction Company

Comments by the Jury An almost impossibly difficult site well-solved and a distinguished interior with great religious feeling.

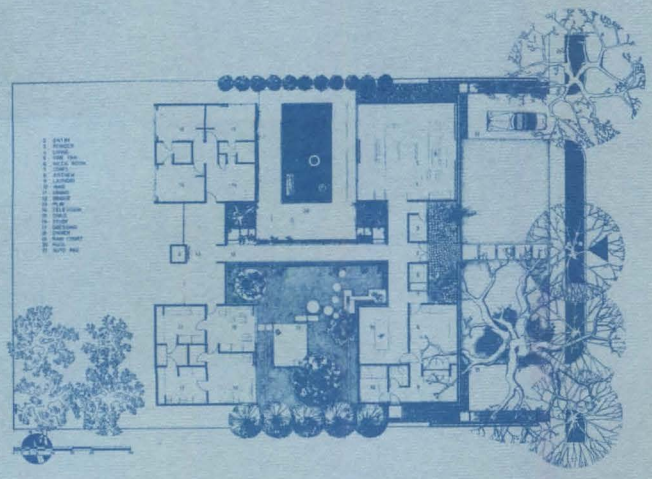
Frank Lotz Miller



Frank Lotz Miller

AWARD OF MERIT / CHARLES R. COLBERT, AIA

Colbert Lowrey, Hess, Boudreaux

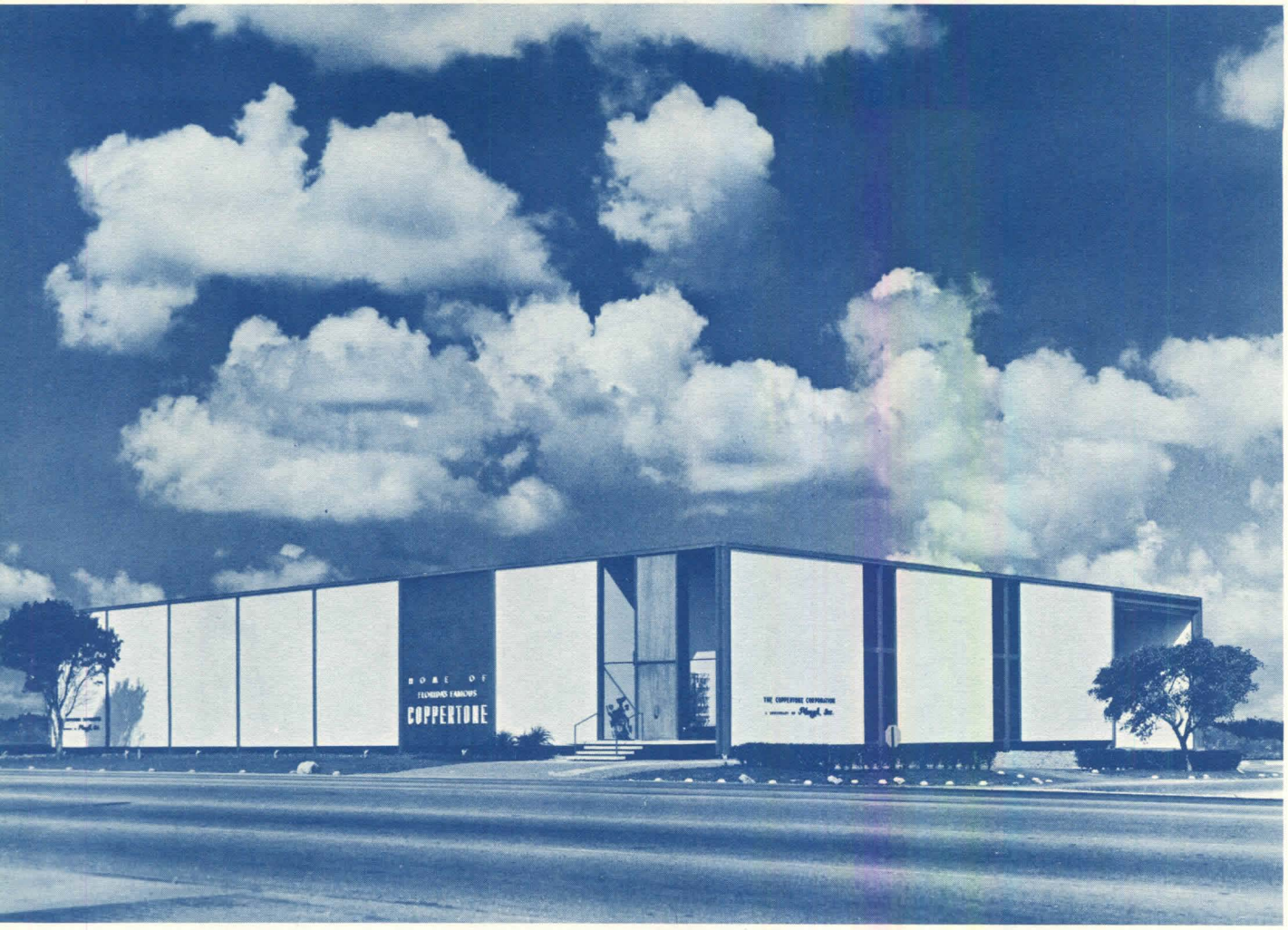


Project Simon House
New Orleans, Louisiana

Owner Dr Henry G. Simon

General Contractor Goodyear, Incorporated

Comments by the Jury The limitations of a tight city lot have been overcome by a brilliant site plan and the resulting four pavilions of the "exploded" house have privacy and architectural integrity.



AWARD OF MERIT / WEED-JOHNSON ASSOCIATES

Building The Coppertone Corporation
Office & Warehouse
Miami, Florida

Owner Plough, Incorporated

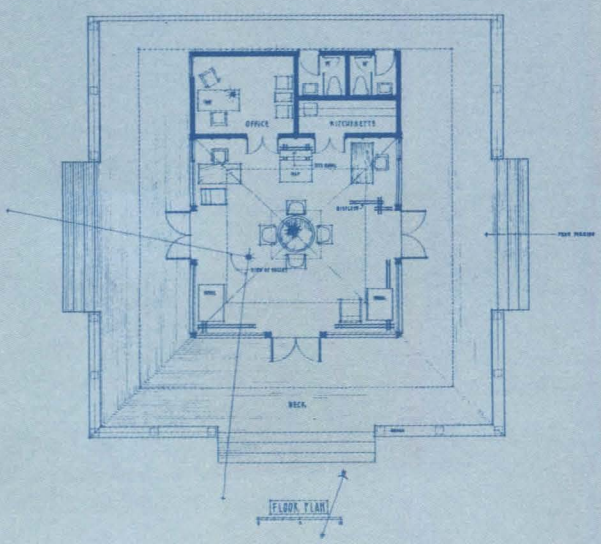
Contractor Edward J. Gerrits, Incorporated

Comments by the Jury Well-planned space and structure and appropriate materials are skillfully utilized in this impressive headquarters for an industrial corporation.

Dandelet Photographers

AWARD OF MERIT / BAY GROUP ASSOCIATES

Daniel H. Bushnell, AIA, Lun Chan,
Ichiro Sasaki, AIA, Camiel Van De Weghe, AIA



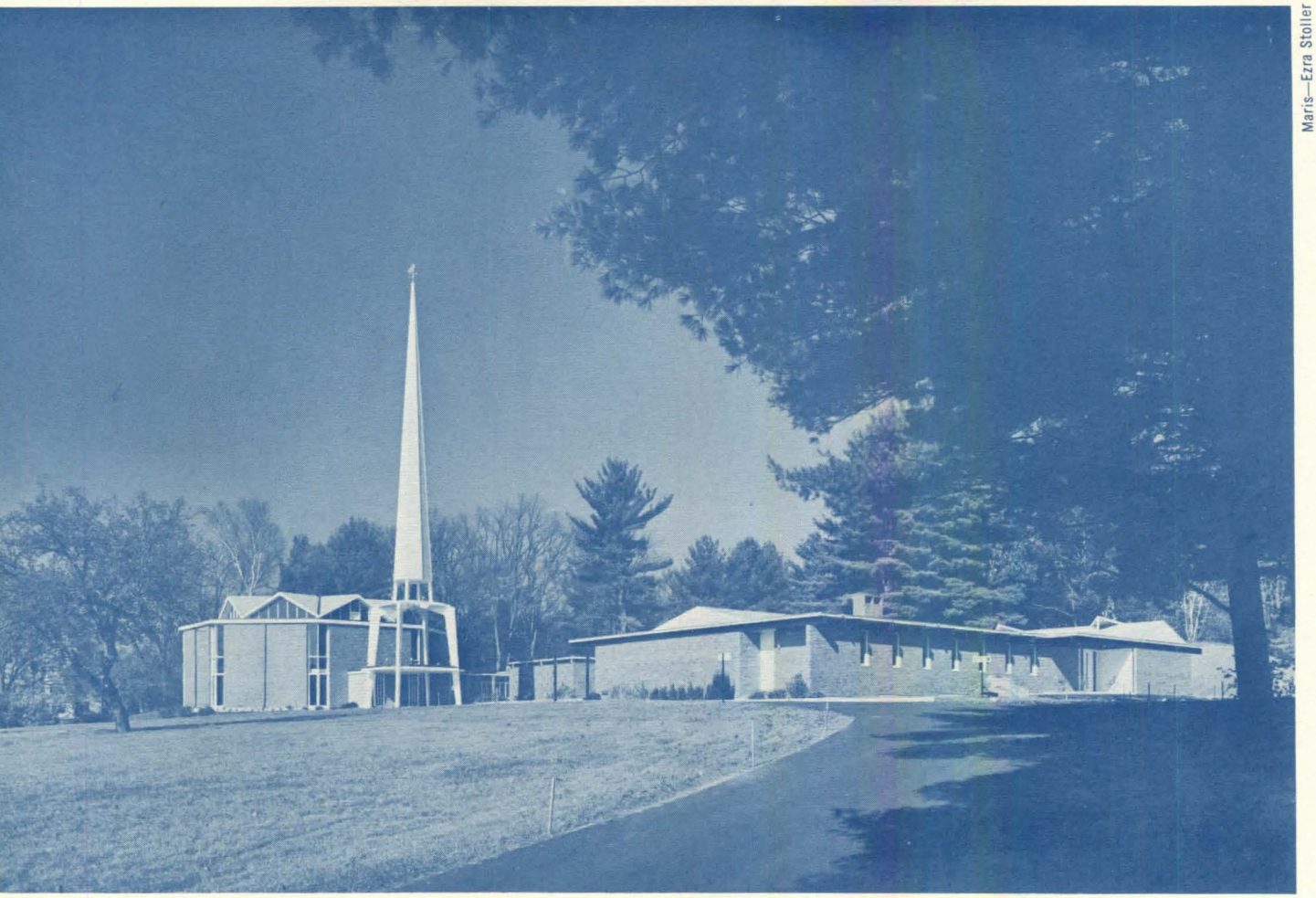
Building Marin Bay Display Pavilion
San Rafael, California

Structural Engineer Chin & Hensolt

Landscape Architect Eckbo, Dean & Williams

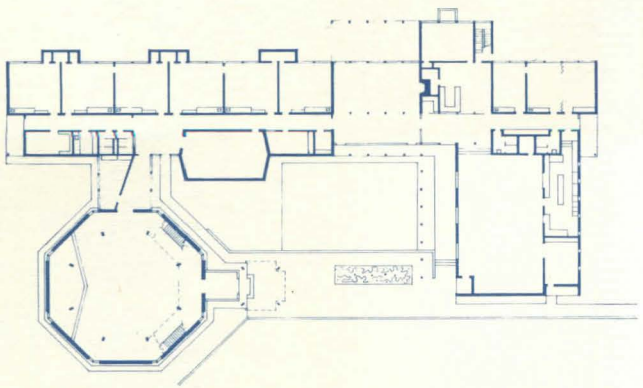
Developer & Builder Latipac-Perini Company

Comments by the Jury An adroit handling of form, materials, structure and site has produced an unusually appropriate setting for the activities of a land development corporation.



Maris—Ezra Stoller

AWARD OF MERIT / HUGH STUBBINS & ASSOCIATES



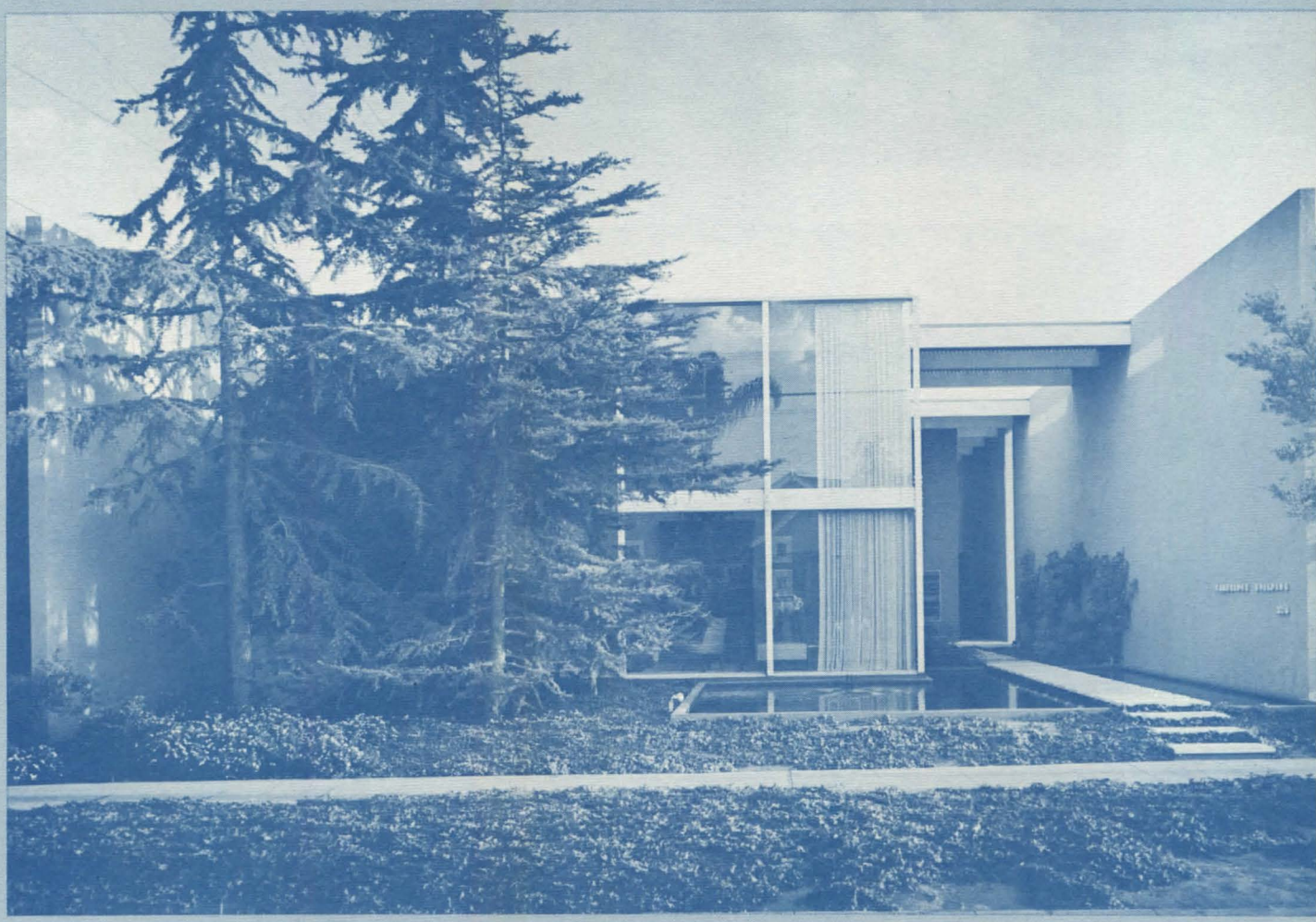
Building The Unitarian Church
Concord, New Hampshire

Owner The Second Congregational Society

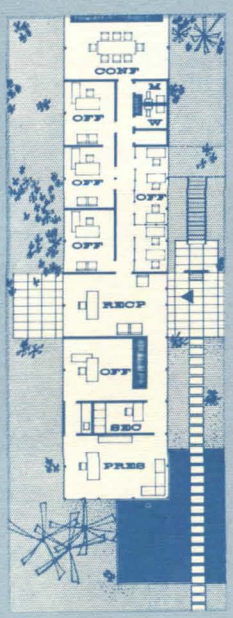
General Contractor A. Taylor Corporation

Comments by the Jury A contemporary and clean-cut version of a New England church and spire expressed in appropriate materials.

Marvin Rand



AWARD OF MERIT / KILLINGSWORTH, BRADY, SMITH & ASSOCIATES



Building Development Firm Office Building
Southern California

Owner Cambridge Investments, Incorporated

Contractor John Halas

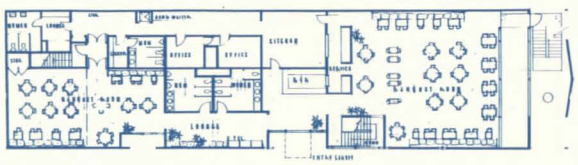
Decorator John Nicholson for Frank Brothers

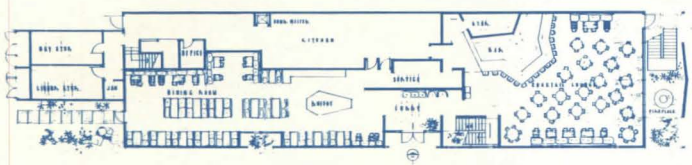
Comments by the Jury A small structure handled with expert craftsmanship.

Larry Frost

Larry Frost

AWARD OF MERIT / RICHARD DORMAN & ASSOCIATES





Building Ivory Tower Restaurant
Santa Monica, California

Structural Engineer Albert E. Erkel & Associates

Landscape Architect Richard L. Dorman

Owner Leon Backer

Contractor Jack MacDonald

Comments by the Jury The entrance and stairway of this restaurant are hospitably visible; the dining areas treated as hidden indoor spaces with a sophisticated exterior envelope.

REPORT OF THE JURY

Established in 1949, the AIA Honor Awards Program is designed to encourage excellence in architecture and to recognize exceptional merit in recently completed buildings.

Meeting in Washington, DC, January 18th to 19th, the undersigned Jury carefully judged 270 entries submitted by architects from every region of the United States, including Hawaii. Almost every building type was represented in the entries: Residences, apartments, restaurants, recreation buildings, churches, schools, colleges, museums, stores and shopping centers, office buildings, industrial buildings and urban renewal projects. After its two-day analysis, the Jury was well pleased with the over-all quality of the entries. Its only regret was that certain well-known projects which should logically have been included were not entered.

Each of the 270 entries was carefully studied by the individual jurors and given a comparative rating. As a result, 138 entries were selected for final consideration by the entire Jury. From these, the Jury selected seven for Honor Awards and eleven for Awards of Merit.

All the awards were made to projects which, in the Jury's opinion, went far beyond mere competence and achieved true significance. Today's architecture, after a hundred years, is still vigorously exploring new materials, new structural methods and esthetic solutions in every field of building. The Jury hopes and believes that the projects selected for awards exemplify some of the best results of this imaginative progress towards architectural maturity.

Morris Ketchum, Jr, FAIA, *Chairman*

Fred Bassetti, AIA

Richard D. Butterfield, AIA

Arthur Q. Davis, FAIA

William L. Pereira, FAIA

"A society is known by the accomplishment which it rewards. As claimants of leadership in the environmental arts, the Institute must proclaim its ideals and purposes by actions as well as by words. Few actions speak as convincingly as the awarding of honors to those who embody its ideals or outstandingly serve the purposes for which The American Institute of Architects was founded. By honoring high achievement it honors itself and proclaims its objectives. In the establishment of awards and the selection of recipients, the Institute must always serve purposes which reveal its dedication to the public welfare. In so doing, however, the Board of Directors must respect the limits of its own competence as a witness. The stretching of its judgment into fields remote from the training and experience of its members is quickly recognized by the public as self-serving publicity. The preservation of its own status, therefore, demands care that it limit its rewards to the recognition of achievement in only those arts, sciences and skills in which its judgment is recognized as competent and worthy of proclamation."—*From* the Policy Statements of The American Institute of Architects.

The final of four important statements by the President of The American Institute of Architects

PHILIP WILL, JR, FAIA / **THE STATE OF THE PROFESSION**

The Continuing Process of Learning

► "Human history," the famous British writer H. G. Wells once said, "becomes more and more a race between education and catastrophe."

I don't believe the profession of architecture is exempt from this truism. If we are to avert catastrophe for our profession, we must prepare ourselves in areas of competence never before considered important to the conventional practice of architecture. We must take the conventional technical skills for granted and architects should be prepared, beyond them, to understand in the most comprehensive sense the environmental needs of society on the scale at which they must be met.

We should, as I have indicated in an earlier talk in this series, prepare for architectural statesmanship.

The architectural statesman, as I see him, must have the broadest possible understanding of humanity and all its needs.

This is not a new thought. Frank Lloyd Wright has said long ago: "There can be no separation of religion, philosophy, science and the great art of building. They are one or none."

For the men and women who subscribe to this view—and only those who do would qualify for architectural statesmanship even in the junior ranks—the present academic training is, in my opinion, totally inadequate. This is also the opinion of the medical and legal profession who have long since decided that their memberships must be educated men first and technicians only second.

Perhaps what we need is what we might label "the academic tree." The idea is simple and as old as man's yearning for knowledge.

Let us begin our education with the broadest cultural trunk. Call it liberal arts or what you will. It encompasses the basic arts and sciences tied to the long history of the human race. Its purpose is to give the student a framework for the full life, a vantage point from which knowledge, human behavior and aspirations can be seen, interpreted and interrelated.

Without such a background, there can be no understanding of man's accomplishment or high purpose; there can be no architecture. Only such background can motivate what Walter Gropius has called "the will to develop a spiritual image of our world, characteristic of our time, an image which would have universal validity."

Such broad educational basis, however, is but the trunk. And the trunk is not the whole academic tree. There are main limbs, secondary branches, twigs and leaves. As the vision of our student broadens and his self-understanding increases, his temperament, energy and curiosity will lead him to follow those he deems most promising of personal satisfaction and potential accomplishment.

The crown of this tree would thus be more than a vocational school of architecture. I see it as an Academy of the Environmental Arts—a comprehensive university open to all the related design professions and dedicated to the study of (and research in) all the facets which make up the environment we must build and rebuild.

Note that we include all the related design professions.

If, as I believe, the design of our total physical environment exceeds the capacity of any individual skill, then all who will ultimately compose the design team should early begin their collaboration while still in school.

In our academy there is a place for the structural engineer, the mechanical engineer, the landscape architect, the architect-planner and others. Let us learn early to share a common language and uncommon ideals.

Note the world "research."

Other professions have long recognized that the place of learning and the place of scientific investigation is best one and the same. Medical schools, far more than independent laboratories, are the centers of medical research. They benefit not only their student but all medical practitioners and all mankind.

The Environmental Academy I envision would assume a similar function with similar benefits, not just in building technology but in those aspects of the behavioral sciences which affect community planning and design.

In our academy the choice to follow any one of the many main limbs of my academic tree—and this is important—does not constitute an irrevocable decision on ultimate specialization. The curse of early specialization to the detriment of Gropius' "totality" of aspect, seems to me brought on by our insistence on academic degrees.

With a frightened look over the shoulder, I propose that we abandon them.

Practical men, who like their files and pigeonholes, will call it unrealistic. Academicians, who are comfortable in the educational hierarchy and with the ordered sequences of the departmental course catalogues, will call it naive. They may be right. Obviously, the consequences to the now well ordered house of education would be frightening to contemplate. Without A.B.'s, M.A.'s, M.S.'s, Ph.D.'s, etc., etc., how would we know who is what, or what is the "pecking order"? How would we set salary scales?

Without honorary degrees how would small colleges attract wealthy donors or commencement speakers? In fact, there would be no commencement. And what of re-unions? The blow to the ribbon and gown industry would be fatal. With the academic log suddenly and unceremoniously rolled over, there is just no telling what strange insects might crawl out.

Perhaps the oddest consequence of all would be a shift of emphasis from education for the sake of degrees to *education for the sake of learning.*

But degrees or not, those students who have both the potential and the desire to aspire to architectural statesmanship—which I would deem synonymous with principalship in a larger comprehensive architectural office—seven, eight or even nine years of university training may be none too much. This is well in line with requirements for advanced work in other learned professions. Those who lead in law, medicine and teaching are rarely satisfied with five years of academic training.

But, as the saying goes, we can't have all chiefs and no Indians. Nor do we have, to put it in the sociological vernacular, "sufficient manpower potential" to warrant this kind of comprehensive and truly professional training for everyone.

This is not to say that the architectural technician we need can be trained from any but inherently qualified and interested youngsters. I don't hold that a boy, just because he is good in mathematics, can draw pictures, and think of no other suitable profession, should take up architecture. Technicians, too, must be dedicated men.

But is there really any magic in the current five-year curriculum for students of such limited potential?

From my observation of graduates, it strikes me that for many, much of this time has been quite wasted and conversely, for the genuinely gifted much more could and should be done.

What would happen, for example, if the basic architectural technical curriculum were reduced and encompassed within four years or even less? Suppose that colleges were to assume the responsibility of producing, first of all, basic certificate holders who, with moderate post-graduate experience, would be qualified to work as architectural technicians, typically as employees. This would satisfy government; for the State is concerned with the protection of the public. Its method of protecting the public is to examine those who design buildings to be sure that they understand how to design sufficiently well to protect the health and safety of the public. Here end the police powers of the State with reference to the profession and it is to this that we might aim our basic technical training. On the record, it appears clear that this is the maximum competence of which at least half of our graduates are capable and to attempt more may be indefensible as economic waste.

In education today the emphasis is shifting from mass teaching to *individual learning.* With understanding guidance each student is encouraged to develop to the maximum of his personal potential and motivation.

With such a theory, standardized curricula and stereotyped graduates are inconsistent. Should we not, therefore, restructure education not to academic habit and convenient lockstep but to the needs, capacities and ambitions of youth?

All this, however, is but food for thought, and it seems to me, a vital subject for discussion. All we wish to do is voice a need. The response can only come by voluntary evolution.

We can and will, however, do all we can to bring the practitioner and teacher of architecture closer together. The schools of architecture, we feel, should be opened to the profession and the profession should, in turn, make greater use of the talent, knowledge and experience of the teachers for the extension and supplementation of its skill and knowledge.

Again, I refer you to the specific recommendations of your Committee on the Profession.

The Committee report states: "The problem of educating the architect, or any other professional, must be a continuing process, beginning with the recruitment during the young man's high school career and ending only upon his retirement from practice.

"We feel that this continuance of education and

development is the main difference between a profession and any other means of livelihood. It is the obligation placed upon us by a society which grants us the privilege of calling ourselves 'professionals.' "

I wonder if we are fully meeting this obligation?

Should not the AIA launch a more systematic program of supplementary education available to all its members?

Seminars, lectures and courses on both technological developments and the behavioral sciences would seem to me a fruitful, yes, vital Chapter activity. If we can succeed in organizing them, or rather, assist our local Chapters in their organization, we will undoubtedly attract many members for whom to date AIA means little more than a set of initials behind their name.

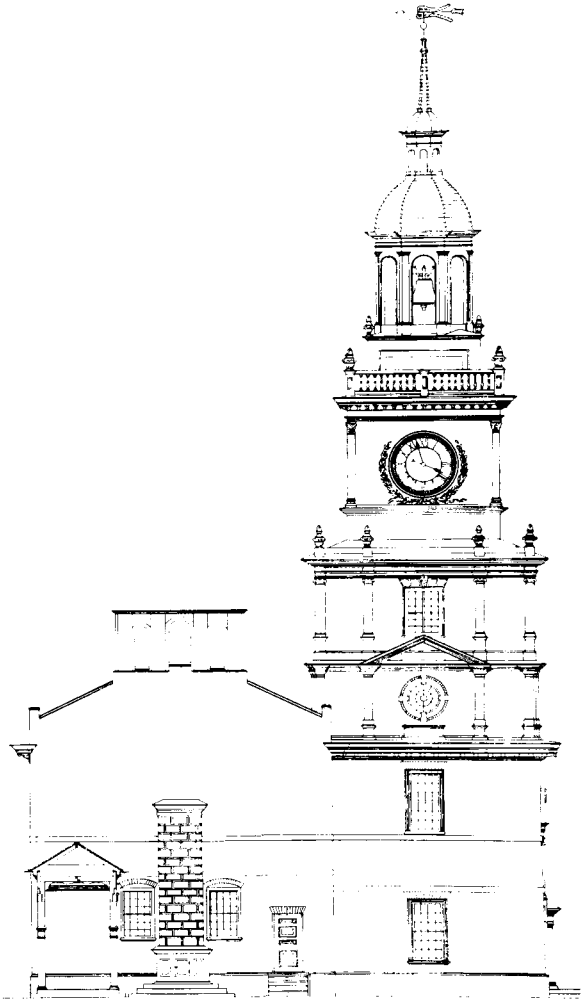
Again, my intent in expressing these thoughts is not to launch an immediate program of action. I do wish, however, to focus your attention on what I consider one of the most vital problems facing our profession today.

We feel the need of broadening our knowledge and enhancing our understanding—for some systematic method to attain that totality of aspect which our mission, perhaps more than any other, demands.

We are, to repeat myself, "in a race between education and chaos."

Half measures will not suffice to produce a profession capable of assuming for our nation full responsibility for shaping our total physical environment in harmony with the aspirations of man. ◀

Penn's Great Town



► Three years ago the College of Fellows of the AIA established a fund to provide encouragement and support for the publication of important books and articles on architecture. The first fruit of this effort will appear April 24, simultaneous with the opening of the 1961 AIA National Convention in Philadelphia.

"Penn's Great Town," (400 pages, 145 illustrations) by Dr George B. Tatum, Professor of the History of Art at the University of Pennsylvania, with an introduction by Theo B. White, AIA, might be sub-titled "300 years of Philadelphia Architecture in Original Prints and Drawings." It is described as the first complete, scholarly history of the architecture of a metropolitan area ever published and includes much material and many illustrations on Philadelphia never before printed. Co-sponsors of the book are the College of Fellows of the AIA and the Philadelphia Art Alliance. It is being published simultaneously by the University of Pennsylvania Press in Philadelphia and the Oxford University Press in London.

An exhibition of all the original illustrations from the book plus many other prints, drawings and 18th and 19th Century builders' handbooks has been assembled at the Philadelphia Art Alliance and will be opened at a special reception for AIA members and Convention guests at 8 pm on Monday, April 24.

Memo from William H. Scheick, Executive Director

To the Lady in Philadelphia

Dear Sirs:

I am taking the liberty of writing to your organization as the wife of a member of AIA for many, many years. Philadelphia, Pennsylvania Chapter.

Often we have wondered, as have others in the profession who are not self-employed, why AIA does not have some benefit for its paying members in return for the quite large dues. In fact, none of us have ever learned exactly what is done with the dues, since we have never heard of any benefit to a member when he may have been in need, or possibly a scholarship for his youngster.

Since I do not want to involve my husband in any way, I will do something I normally disapprove of—that is, not to sign my name. However, any answer to these questions will be eagerly awaited by many of us in one of your Bulletins.

Many, many thanks for your kind attention.

Sincerely yours,

Wife of Member of AIA, Registered Architect

► The question you ask is of constant concern to the staff at AIA headquarters as well as to the national Board of Directors and to the chapters. When I recently became Executive Director of AIA, I asked myself your question with the idea that by finding the answer I could be a good Executive Officer. Let me lead you through some thinking that seems rather basic on this question.

Let's start with a picture of an architect practicing today *without* a professional society in existence. Remember, what affects *him* also affects architects in his employ.

This lone architect would be faced with daily problems of dealing with his clients, with contractors, subcontractors, and many other facets of the building industry. He would have to formulate his own contracts, business procedures and system of office organization. He would have problems with building codes.

He would quickly find a desperate need for an ethical professional code to prevent a state of chaos in honest competition for work with fellow architects and with less scrupulous competitors motivated solely by making a fast buck rather than building with a social conscience. He would have to carry on a private public relations campaign for recognition of his skills and professional status. A natural outcome of this experience by a number of practitioners would be the formation of a local society to bring some order to their professional existence.

Inevitably this new local group would run into broader problems, especially in connection with public buildings of any kind which come under the surveillance of the state, or state laws governing construction in all localities. What goes on in the legislature would be of prime concern to them. And soon some kind of state society would be formed—possibly a loosely-knit society of local groups, but a society nevertheless.

Now consider the United States today. Billions of dollars are spent annually on construction of buildings for the Federal government. And other billions are spent on buildings receiving Federal aid, or under mortgage guarantees by the Government as in the case of housing. President Kennedy proposes that there should be a Cabinet post for a Department of Urban Affairs, concerned with the problems of cities just as the Department of Agriculture has been concerned with farms. This is to be expected in a nation whose population has become predominantly urban, living in cities which are decaying at their cores and growing like cancers rather than healthy cells on their perimeters. Everything which affects the national situation and everything about the Federal Government's concern with cities and buildings is of vital concern to every architect. It seems to be a foregone conclusion that the local architectural societies and the State societies would band together and decide, eventually, that they must have a headquarters in Washington. In this respect they would be doing what literally hundreds of other organizations have done. Materials, manufacturers, laborers, teachers, women's organizations, lawyers, realtors, businessmen, scientists, engineers, contractors, sportsmen, clergymen, newspapermen, librarians—to name only a few groups—have found it desirable, necessary

and valuable to establish societies, institutes or associations with national headquarters. Most of these are in Washington.

Every one of these has reasons for being which stem from the necessity for service to individuals who otherwise would be swallowed up by problems with which he could not possibly cope in today's complex society.

But there is more to a society's existence than providing service. For a trade association the over-all objective may be to sell more widgets. But for any society which represents individuals who live by their talents to create (like architects) there are goals less tangible than selling a widget.

One of these is the establishment of prestige—national prestige which benefits this group of fellow humans nationally, locally and individually. Another is the advancement of their *thinking,* which, in effect, pools the knowledge of all the members and makes each better able to pursue his career. He needs technical knowledge, business knowledge, and knowledge which satisfies his intellectual thirst. For a professional society, there is the formulation and safeguarding of ethical standards which elevate the members of the society to the truly dignified and envied status of the true professional.

Now, every national organization produces certain *tangible* services: A magazine (the *AIA Journal*); a newsletter (the *AIA Memo*); public relations media (AIA news releases, use of public opinion-moulding media, films, brochures, community relations, workshops, etc); technical services (AIA documents, Building Products Register, technical articles). The national organizations hold conventions, student activities and other educational functions. In organizations with strong local components, like the AIA chapters, additional tangible services are produced on the local front as well.

Quite often the member of a society is tempted to measure the value of the society solely in terms of the value of tangibles in relation to the dues he pays. A high price for a magazine and newsletter? Yes, if there were nothing more. Perhaps he forgets or even doesn't understand the tremendous force and value of "intangible" services which are being produced by member action. In AIA we have many, many committees in the chapters, states, regions, and the national organization. Thousands of members take their evenings away from home or some of their days away from the office to work for the AIA as officers or committmen. They tackle problems of practice, legal matters, education, public relations, government affairs, building codes, relations with engineers, contractors and manufacturers, problems of design—all with the object of making it more rewarding to be an architect.

Our job at the national level is to bring together the best thinkers in our whole membership to discuss, formulate and act on ideas in every field of practice so that every unit of AIA can serve its individual members better. These men learn something of tremendous importance—that *serving* the Institute and, through it, the profession, is the most valuable return of all for their dues. Now, dear lady in Philadelphia, not every member can serve the Institute, though Heaven knows every chapter looks eagerly for members to work and lead in chapter affairs. Sometimes, I'm afraid, the young architect and the employed architect feel set apart and don't see how they can really contribute much. We want to find ways to bring them into greater activity because we know their thinking is important to the whole profession.

I have said that our members don't really want or need more "pieces of paper" in return for their dues. They want to find ways to express their ideas and contribute their opinions toward the building of a stronger profession. The way to do so is there at the chapter level now, and we will find ways to broaden the path to national activity. One thing I should add is easily understandable to people who travel or know our nation's Capital. The AIA headquarters is an embassy for your husband's profession. Architects have high status in most countries of the world. The leading world practitioners travel about quite extensively and many come to Washington. Few fail to visit the Octagon. Through personal contact and exhibits at the Octagon, attended by many dignitaries and visitors, as well as by travel by our own representatives to international congresses of architects, we show our American profession to the world.

In your letter you specifically asked about "any benefit to a member when he may have been in need, or possibly a scholarship for his youngster." We have not worked out any plan for the need situation, but the AIA does have a group insurance program for its members which reduces the cost of certain types of protection. In the matter of scholarships, there are two endowment funds which produce the money for about forty scholarships a year for students in architecture. Your child would be eligible, if he intends to study architecture.

Having reached the end of this piece, I fear much remains unsaid. It would be nice to have you visit us at the Octagon, to show you what we do and answer your questions. And, by the way, why not visit the Convention in your city in April with your husband to see what goes on? ◄

NATIONAL COUNCIL OF ARCHITECTURAL REGISTRATION BOARDS

Its Membership and Its Activities

PART II

by **Reinhold Melander, AIA**

PRESIDENT, NCARB

Problems of State Boards

Problems occurring for one State Board are often more easily solved by that Board when the experiences under similar circumstances of other State Boards are available to them. This is one of the functions of the Council. The Council can more effectively disseminate information on such problems when such information that would assist other State Boards is made available to the Council offices. When a State Board encounters an unusual situation, their solution would not only be of interest to members of other State Boards, but in many cases long hours of individual research can be avoided in solving similar problems that are encountered by other Boards.

Illinois

The National Council of Architectural Registration Boards is particularly pleased that the authorities and Board members in Illinois have now returned to a close working arrangement that allows Illinois registrants to complete the requirements for an NCARB Certificate in their home state. Of assistance to architects from other states is the fact that a Council certification and Blue Cover Council Record can again be submitted to Illinois to assist the applicant desiring registration in that state.

What Committees are doing

In addition to the NCARB Board of Review which has a status somewhat different from that of the NCARB committees, the Council has in action during the year 1960-61 four standing committees and seven special committees. Membership on these committees is evenly distributed from State Board members throughout the United States.

The Standing Committees are the Committee on Documents, the Committee on Finance, the Committee on Examinations and the Committee on Advance Planning.

The Committee on Documents receives and collects recommendations for changes and adjustments to Documents of the Council and periodically incorporates the collected changes into revised Documents. The Council Secretary and the Executive Director are also working this year on proposed changes to many of the Council Documents.

The Committee on Finance periodically reviews the investments and financial procedures of the Council and makes recommendations to the Council Board and the Council for appropriate action. This Committee has worked closely during the year with the Investment Counsellor engaged by the Council.

The Committee on Advance Planning reviews past activities of the Council, studies and makes recommendations for aims and objectives of the Council, and makes recommendations to the Council for improvement of procedures and functions of the Council.

The Committee on Examinations supervises the collection of examinations from the various State Boards and periodically reviews those examinations and develops therefrom published sets of typical examination questions for circulation to member Boards and elsewhere as directed by the Council. This Committee also investigates and makes recommendations concerning new examination forms and develops suggestive question types for distribution to the Council membership.

During the past year this Committee has been particularly busy working with the Educational Testing Service in New Jersey on the development of an objective-type examination in professional administration. *This examination will be used by those State Boards desiring to use it as a pilot run during January of 1961.*

The Committee on Examinations also supervises the development of manuals of suggestions relating to the improved types and methods of examination and causes these to be published and distributed to the Council membership. And also, this Committee assumes the leadership in acquainting the various states with the most forward-looking and advantageous developments in examination procedures in an effort to promote uniformity and higher quality of examination procedures.

Among the special Committees the Committee on Licensing advises State Boards on matters concerning licensing and assists on problems encountered by member Boards. This Committee is studying a model architectural registration law based on registration laws in all of the states. *It is studying the definitions of architectural and engineering services so that analysis may be made between buildings that fall within the scope of architecture and those that fall within the scope of engineering.*

Other Special Committees

A Committee on Exhibits assembles displays for showing at annual meetings.

A Committee on Interim Reports and Releases to Publications.

A Committee on Reciprocal Registration by NCARB Certification is studying the advantages of applications through NCARB to encourage the adoption of such procedures by additional Boards.

A Committee is studying the Method of Periodic Review of Council Certifications.

A Committee is studying provisions for retakes of examinations.

A Committee is studying the advisability of reconstituting an Endowment Fund.

Members from many State Boards throughout the nation are at work for the Council and thus for the profession through their Committee appointments that extend the valuable services of the State Board members to a National scope. ◀

Some Questions

asked with great respect by a layman of an architect

by **Elise Jerard**

Take that monument to FDR.
Each of the judges was a star.
The Druidic slabs had a "Primitive Power."
What is the time? What is the hour?

Why is it good that it's primitive?
What does that say of the way we live?
What does it tell about Roosevelt?
Was that how he felt? Or how he was felt?

When FDR looked down from above
And saw the Grand Canyon it was without love.
He said, "It's a big impressive hole.
But it's awfully dead and it has no soul.

"I prefer my trees, alive and growing.
I love the water, alive and flowing."
He knew what he liked, if he didn't know art.
And he had no fear of the human heart.

When is abstraction dehumanization?
And who should speak for a civilization?

Article 20 of the General Conditions

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

► It will be noted that in the finally approved and soon to be issued 1961 printing of the General Conditions the sentence in Article 20 of the present edition regarding the application of the local Statute of Limitations has been deleted.

While the deleted sentence stated the legal fact as it exists, it was considered to be redundant due to the provision in Article 1(g) which states *"The law of the place of building shall govern the construction of this Contract."* This is the basic point that Architects should keep in mind and should be sure that their Clients understand.

Various guarantee periods are provided for in every contract. The first sentence in Article 20 includes a definite provision that the Contractor agrees to remedy any defects in his work due to faulty materials or workmanship and pay for any damage to other work resulting therefrom which shall appear within one year from the date of final payment, or of the Owner's substantial usage or occupancy of the project, whichever is earlier, and also in accordance with the terms of any special guarantees provided in the contract.

Roofing guarantees often involve a period of several years, even up to ten years. Administration of such guarantees is often difficult and often involves guaranty bonds. Operating equipment often requires special guarantees. All such special guarantees are covered by special provisions in each contract according to its special conditions and the desires and demands of the Architect and his Client.

Beyond these special guarantees there is the provision of Art. 1(g) quoted above by which, according to law, the local statutes in each case govern the construction of the Contract. Perhaps the broadest of these local statutes is the Statute of Limitations, which determines the period within which the Owner can make a claim against the Contractor for some definite failure to carry out the terms of the contract and provide the labor and materials specified. The periods vary from three years in Texas to twenty in one State, and from eight to fifteen years in five States. In twenty-four States the period is six years and in eleven States it varies from three to five years. For Contracts under seal the periods vary from five to twenty years.

The Revised Article 20 involves no change in the legal liabilities of the contractors. The one-year guarantee period, as before, is a contractual agreement to take care of such defects during the one-year period following completion of the contract. Apparently some persons tend to interpret the one-year guarantee period as meaning that responsibility for making good defects ceases at the end of one year. A contract must be read as a whole and other provisions of the General Conditions throw light on a proper interpretation of this particular guarantee provision.

Article 25 states that "No certificate issued nor payment made to the Contractor, nor partial or entire use or occupancy of the work by the Owner, *shall be an acceptance of any work or materials not in accordance with this contract." No time limit is stated in regard to this provision.* It further states that the making and acceptance of the *"Final Payment shall not constitute a waiver of claims arising from faulty work appearing after final payment."* Again *no time limit is mentioned.* It would be unreasonable to assume that the one-year guarantee mentioned in Article 20 was intended to limit the application of the unqualified provisions in Article 25.

The normal statute of limitations will determine the added period during which action can be taken. Article 1(g) states that "The law of the place of building shall govern the construction of this Contract." An owner would have to take court action to recover if the Contractor was unwilling to agree as to his responsibility, and proof of that will always be increasingly difficult as the years go by. This situation remains the same as before.

There is now an apparently clear case available in Massachusetts in which the responsibility of the Contractor is clearly evident. The failure and its observance occurred during the one-year period due to a clear failure of the Contractor to complete the structural process specified. This incident indicates clearly the reasonableness of a statute that holds the contractor responsible for such a failure in performance, even if it should first appear after the usual one-year guarantee period.

It is obviously true that there is the possibility that honest mistakes may occur with serious financial damage to the Owner of a building. It is also true that the defect that finally becomes noticeable may be the result of negligence by the Contractor. In any such case the burden of proof falls upon the Owner who must prove that the work was not done in accordance with the contract. If he proceeds against the Architect he must prove negligence in supervision. When defects due to the Contractor's negligence do occur and are serious the Owner is entitled to file a claim and that is the right given to him within certain time limits by the local Statute of Limitation.

The results of such claims may involve costs to the Contractor or possibly to the Architect, if only for the defense of a suit. Such losses can be covered by one or another form of General Contractor's liability insurance or Architect's and Engineer's Errors and Omissions Insurance. ◄

Library

Gifts to the Library
July 1 to December 31, 1960

MARIO ROBERTO ALVAREZ
His "Teatro Municipal General San Martin"

LEOPOLD ARNAUD, FAIA
Thirteen magazines and pamphlets mainly on Brasilia

ELLIOTT L. CHISLING, AIA
Drawing by Bertram G. Goodhue

EUGENE T. CLELAND, AIA
Nineteen specifications ranging in date from 1883-1899

RICHARD H. CLOUGH
His "Construction Contracting"

THEODORE IRVING COE, FAIA
Twenty volumes

CLINTON H. COWGILL, FAIA
"Motels, Hotels, Restaurants, and Bars"

THOMAS CREIGHTON, FAIA
"Progressive Architecture", January-June, 1960

CHRISTIANO STOCKLER DAS NEVES, *Honorary Fellow, AIA*
"Brazil, Land and People" by Waldemiro Potsch

HOWARD DEARSTYNE, AIA
One pamphlet

DOKUMENTATIONSSTELLE FUR BAUTECHNIK
"Bauforschung im Wohnungsbau"

SAMUEL WOOD HAMILL, FAIA
Condensation of John Nolen's report on "San Diego"

ITALIAN EMBASSY
"I Marmi nell'Arte Ecclesiastica"

L. E. JOHNSON
"Manual of Lathing and Plastering"

A. EDWIN KENDREW, FAIA
"The Eighteenth Century Houses of Williamsburg" by Marcus Whiffen

M. LOUIS KROMAN, AIA
Twenty-three volumes

JOHN T. CARR LOWE
"The Principles of Beauty" by John A. Symonds

MARTIN LOWENFISH, AIA
Three hundred slides

ROBERT R. MCGOODWIN, FAIA
Original plates for Henry McGoodwin's "Architectural Shades and Shadows" and book by Millard on "Shades and Shadows"

MARBLE INSTITUTE OF AMERICA, INC.
"Marble Engineering Handbook"

MAX MAYER
"Das Münster zu Ulm" by R. Pfleiderer

ARTHUR MEGGETT, AIA
One volume

ADOLFO MORALES DE LOS RIOS FILHO, *Honorary Fellow, AIA*
His biography of Adolfo Morales de los Rios

NATIONAL HOUSING CENTER LIBRARY
Its "Building Codes Bibliography"

SHERWOOD NORMAN
His "Detention Practice"

ROBERT W. ORR
Material on the first addition to the Iowa State University Library Building

RICHARD W. E. PERRIN, AIA
Two magazines with his articles on Wisconsin architecture.

GEORGE E. PETTENGILL
Two books

MRS. HENRY ROGERS PYNE
Framed drawing of "Three Designs for Walls and Ceilings" by her father, Otto Gaertner

HENRY H. SAYLOR, FAIA
Two books

CARL F. SCHMIDT
Two tour booklets on New York State architecture

ALBERT SIMONS, FAIA
"This is Charleston" revised edition

SLEEPY HOLLOW RESTORATIONS
Its "Pocantico Hills, 1609-1959"

SUPER MARKET INSTITUTE, INC.
"Index of Super Market Articles" 1956/58, 1959

VOORHEES, WALKER, SMITH, SMITH & HAINES
75th Anniversary booklet

FRANKLYN E. WALTER
Some 200 magazines

WATER RESEARCH FOUNDATION FOR THE DELAWARE RIVER BASIN
"River Basin Administration in the Delaware" by R. E. Martin and others.

ROBERT WILMSEN, AIA
"Masterplan for the Oregon State Capitol Group"

ROBERT ZURLINDEN
"Architecture" issued in connection with the eighth Congrès International de Photogrammetrie.

Donors of slides of AIA Honor Awards:

MARIO J. CIAMPI, FAIA

HOWARD H. MORGRIDGE, AIA

JOHN LYON REID, FAIA

From the income of the William Dewey Foster Memorial Fund, presented to The Institute during 1959, nine books were purchased during 1960. Among the titles are: "The Master Builders" by Peter Blake; "Industrial Architecture" by James Munce; "Description of Tremont House" by William Eliot; and "American Colonial Architecture" by Joseph Jackson.

Book Reviews

Hubertus Junius on Architects and Architecture—with both rhyme and reason. Hubert Hammond Crane, Austin, Texas, The Texas Architectural Foundation, 327 Perry Brook Bldg. 1960. 98 pp. 7½″ x 10½″.

Readers of the *Journal* will be happy to know that the poems of Hubertus Junius, published in its pages from 1952 to 1958, have now been published in book form. The volume is a delight.

Probably the most popular single contributor the *Journal* ever had, Hubert Hammond Crane carefully preserved his anonymity until his death shortly after the New Orleans convention, where he received his much-coveted Fellowship.

All *Journal* readers will want this little book, and I hope all *Journal* readers will order it. I don't know its price, but it's worth double. And now, perhaps this is the place to publish what may have been Hubert's last poem, for we received it shortly before his death, and somehow it never got into the *Journal:*

COMPROMISE
by Hubertus Junius

When I was young, I knew my name
Would some day grace the Hall of Fame.
I spurned the dreams of Pericles,
I said he only built to please.
The works of Phidias
I thought hideous.

I spoke with firm finality
And said originality
Was the virtue most desired,
And constantly aspired
To do
Something new.

And often in anticipation
I waited for a grateful nation
To publicize my fame
By calling eras by my name.
However clever,
Somehow they never.

At last in angry desperation
I spurned the plaudits of the nation
And sought applause from anyone
Who chanced to say to me, "Well done,"
And gained reliance
From my clients.
Somehow this seemed to be a
Very welcome panacea.
It soothed my wounded vanity,
I felt I helped humanity;
And such sorceries
Buy groceries.

J. W.

New Housing in Great Britain. Hansmartin Bruckman and David L. Lewis. New York, Universe Books, 1960. 131 pp illus. 9″ x 10¾″. $9.50.

Advocates of central planning as well as the most convinced and intelligent anti-planning spokesmen could use this book to support their arguments. Domestic architecture in Great Britain from 1945 to 1960 provides exhilarating examples of modern housing as well as some appalling specimens of misguided attempts to please everyone. Planning proponents can point out atrocities committed in quest of a speedy shilling while rugged individualists can point with equal scorn at the results of alternate starvation or force-feeding by politically-inspired planning groups. Insights Americans have found in "Crestwood Heights," "The Organization Man," "The Exploding Metropolis," Harvard's "New York Metropolitan Region Studies," "The Exurbanites," "The Crack in the Picture Window," etc, ad nauseum, are hinted at but not discussed. It may be comforting to know that urban sprawl afflicts nations with central planning as well as those on a laissez-faire basis. Still, wisdom counsels us to note that central planning has inhibited and in some cases reversed the growth of the noxious urban weed.

The brief text in both English and German is always germane, but unfortunately the English is also German in construction. The proofreading is bad, and the meaning sometimes difficult to grasp.

The paper calls for comment. Where text dominates, a toned, matte paper makes reading a pleasure but leaves the pictures fuzzy. On the many pages where photographs and other illustrations (over 300) dominate, a high-gloss paper makes for clear illustrations replete with interesting reflections and for the serious student inevitable eyestrain. Considering the importance of the content and the apparently apt selection of material, it is unfortunate that these technical flaws make it a chore to get the value which is definitely here.

British housing reflects the desire for a home which may be a castle. At times one is taken aback by the complete fulfillment of this desire (as when it is mentioned that a multi-unit building lacks central heating). But some solutions are esthetically pleasing and sociologically insightful while apparently remaining structurally sound. If nothing else, this volume demonstrates the enduring necessity for international cross-fertilization.

G. H.

Brazil: Portrait of a Great Country. Edited by Stefan Geyerhahn, text by Ellen Bromfield Geld. Leiden, The Netherlands, 1960. Distributed by the Viking Press, New York. 150 pp illus. 9¾″ x 11¾″.

Ellen Bromfield Geld, daughter of world famous Louis Bromfield, has written an eighteen-page introduction to this beautifully executed collection of 151 black-and-white and eight color photographs of Brazil. It is difficult to decide which is more haunting—the words or the pictures. Both are done with such affection that it is obviously a labor of love.

The great gigantic sweep of our good neighbor to the South is presented in this book that was printed in The Netherlands, again, with obvious loving care. The photographs, most of them full-page, are as exciting as a movie travelogue. For one who has been to Brazil, they will surely bring back pleasant memories. For one who has not traveled to that country, they plant a little seed that whispers, "Maybe someday."

Each of the plates is identified completely in the front of the book, causing this reviewer some distraction by having to continually flip back and forth to find out what he was seeing, but the total effect was so pleasant that it really didn't matter too much.

The book is not on architecture, unless it is the architecture of hu-

manity—the rich and the poor who live out their lives in a Twentieth Century country that is just waking up and stretching itself and saying, "Well now, it's time I got to work."

N.C.B.

Studies in Landscape Design. G. A. Jellicoe. Oxford University Press, London & NY. 1960. 112 pp. illus. 6¼″ x 9¼″. $4.00.

This pleasing little book assembles, sorts out and illustrates the thoughts of one of the great authorities on the subject. It is based on seven lectures, conceived as a whole statement, and delivered (1952-1958) in London, Vienna and Washington. Certain of the pen and pen-and-wash drawings included will take many readers back to architectural school when Shepherd and Jellicoe's "Italian Gardens of the Renaissance" was a favorite reference and at least a two-dimensional introduction to those magnificent treatments of the entourage of the villas.

This book, however, is broader in scope than Italian gardens. It discusses the history and traditions of English landscape design, comments on contemporary practice throughout the world, and in the final three chapters ("Building in the landscape —Motorways—Scale, diversity and space") explores specific problems in a creative manner.

This is a book of ideas arrayed and interrelated in authoritative fashion by an architect and planner who has studied spaces and effects of his period and modern examples on the ground but has not closed his perceptions and mind to the contributions of the sister arts of painting and sculpture, present and past. It is inspiring to learn of a devoted scholar of the great traditions who is also appreciative of the spatial design of Paul Klee, Henry Moore and Roberto Burle Marx. There is a fitness in this which points up the superficiality of those who cannot cross this temporal bridge.

Mr Jellicoe categorizes Italian garden ideas as the universals of geometry, the human figure, movement and environment (the spirit of the place). He finds the bases of English landscape design in the Venetian painters, particularly Giovanni Bellini, and in Palladio, overlaid with optical ideas and colored by the new concept of the use of exotic flowers. Part of his evaluation of Lutyens is important enough to quote: ". . . an architect who appreciated that man has two eyes, and not one eye; instinctively he designed his forms so that the eyes judged the shape stereoscopically, and not solely by shadow or perspective . . ."

Later, in speaking of Greek architecture, he returns to this idea, adding that its importance is such today that he deplores that so much architectural and landscape design teaching is by way of two-dimensional photography.

The author has many perceptive things to say in comparing landscape treatments, such as ". . . the aesthetic difference between the eighteenth century and ourselves is that the former contrasted massive weight of building with the delicate curved line of ground, and the latter are tending to contrast delicate line in structure with massive ground swell . . ."

The chapter on motorways acknowledges German and American contributions but goes on again with a difference that only a born teacher could state: ". . . in modern England it is the road that organizes the landscape through which it passes . . . different from the American way . . ." He speaks of the importance of road design which *passes through* rather than *divides* the natural scene.

Finally, there are excellent statements on design for vision-in-motion, human scale and the needs of man as an individual—particularly with reference to industrial landscape. All illustrations are careful selected from the experience of a broadly-ranging mind. This is a book you will go back to time and again.

E.P.

Books Received

The books listed below have been received in the office of the *Journal*. Their listing in this column does not preclude review at a later date.

Air Conditioning and Refrigeration. William H. Severns and Julian R. Fellows. New York, John Wiley & Sons, Inc, 1958. 563 pp illus. 5½″ x 9″. $10.00

Pre-Stressed Concrete, Theory and Design. R. H. Evens and E. W. Bennett. London, John Wiley & Sons, Inc, 1958. 294 pp illus. 5½″ x 9″. $10.00

Frames and Arches, Condensed Solutions for Structural Analysis. Valerian Leontovich. New York, McGraw-Hill Engineering Monographs Series, 1959. 494 pp illus. 6″ x 9″. $20.00

Plastic Design of Steel Frames. Lynn S. Beedle. New York, John Wiley & Sons, Inc, 1958. 406 pp illus. 6″ x 9¼″. $13.00

An Introduction to the Dynamics of Framed Structures. Grover L. Rogers. New York, John Wiley & Sons, Inc, 1959. 355 pp illus. 6″ x 9½″. $10.25

Blue-Water Boundary, Epic Highway of the Great Lakes and the St. Lawrence. Alida Malkus. New York, Hastings House Publishers, Inc, 1960. 308 pp illus. 6″ x 9½″. $6.50

Structural Mechanics. Samuel T. Carpenter. New York, John Wiley & Sons, Inc, 1960. 538 pp illus. 6″ x 9½″.

Automation and Society. Howard Boone Jacobson and Joseph S. Roucek. New York, Philosophical Library, 1959. 553 pp. 5½″ x 8½″. $10.00

Electrical Safety. H. W. Swann. New York, Philosophical Library, 1959. 292 pp. 5½″ x 8½″. $15.00

The Story of Archeology. Agnes Allen. New York, Philosophical Library, 1958. 245 pp. 5¼″ x 8″. $4.75

Timber Engineering Design Handbook. R. G. Pearson. New York, Cambridge University Press, 1959. 242 pp illus. 7¼″ x 10″. $6.00

Mechanics Part I: Statics. J. L. Meriam. New York, John Wiley & Sons, Inc, 1959. 393 pp illus. 6″ x 9¼″. $5.00

Mechanics, Part II: Dynamics. J. L. Meriam. New York, John Wiley & Sons, Inc, 1959. 420 pp illus. 6″ x 9¼″. $5.00

Analysis of Statically Indeterminate Structures. Clifford D. Williams. Pennsylvania, *International* Textbook Company, 1959. 360 pp illus. 6″ x 9¼″.

Editor's Page

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

TIME: The present; about four-thirty on a wet, nasty March afternoon.

BOX: Say, Cox, I met Bill Brown on the street at lunch time, and he wants us both to be sure and come to the Chapter meeting tonight.

COX: Well, I planned to go—but what's all the urgency about?

BOX: Why, he's all excited about the big hike in dues the Institute's trying to put over on us. I don't know what's come over those fellows. We ask for more service—and we get a dues raise.

COX: Hold on, hold on there, my wild-eyed friend. No more of that nonsense. If you paid a little more attention to your Institute mail, and less to what you hear, you wouldn't be sounding off like a schoolboy.

BOX: Well, Bill said . . .

COX (sharply): I don't give a damn what Bill said. You just listen to me. You know I've been a lot more active in the Chapter than you have, and I think I know what's going on.

BOX (subsiding): OK, OK, start talking. What about those dues?

COX: Well, in the first place, the dues are *not* going to be raised. Membership in the Institute is on an individual basis as you know, and the individual's dues will remain as they are. As a matter of fact, they hope to be able to *reduce* those dues in the future, making it a lot easier on the members who are employees or teachers and such.

However, the Institute does propose to charge all architectural *firms* supplemental dues each year, based on their FICA tax. In doing that, the Institute is only catching up with what many chapters are doing—including our own. They're asking the convention this year to approve a two per cent supplement, although the intention is to ask for only one per cent at present.

Now, do you realize what that will cost us? With our five men and good old Janet it will cost us the magnificent sum of $17.28 a year. And your fast-talking friend Bill, with the biggest office in the city (I think he's got thirty-two employees altogether) would have to pay less than a hundred dollars—and what is that, added to what it costs to run *that* office?

No, Box, $2.88 per employee per year can't hurt *anyone,* but it can swell the Institute's income from dues thirty or forty per cent.

BOX: So Washington gets all that new money. What can they do with it?

COX: Don't be unfair on top of being unreasonable. You know how the costs of running this little office have increased in the past five years. You know even better how the costs of feeding your family have risen — we've both increased our drawing accounts twice in that period. How in hell can you expect *more* service from the Institute when its operating costs have been rising just as ours have?

After all, remember that when you say "the Institute" and "they," you're talking about fellows just like you and me and Bill Brown. "The Institute" is its members, and it's the officers we've elected — and one of them comes from right here in our own town — who are trying to find more money so the Institute can operate more widely and more effectively, which is just what *you* want.

You and Bill Brown were among the loudest, at the last District Convention, in shouting for our state to be made a separate District of the Institute. Sure, that's fine. Our AIA population warrants it. But don't you realize every new Board member and every new District costs the Institute just so many bucks more each year? You want more PR workshops, more legal advice, more help in fighting package dealers; you want more liaison with government bureaus and more personal assistance when you go to Washington trying to land a government contract; and now you want — in fact, you downright *need* — a postgrad "retread" program to update you in the many areas into which our profession's activities have expanded in recent years.

You want all these things and the Institute can give them to you — but not on its present budget. So prepare yourself to give up the price of a couple of bottles of good Scotch out of the firm's till, and you'll get them.

BOX (weakly): Well, you've made a point or two.

COX: You're darn right I have. You want a strong Institute just as much as I do, but a strong Institute has to be well financed. But beyond that, its real strength comes, not from an adequate income but from full and ungrudging support from *all* its members, not just the hard-working few who fill the officers' chairs and make up the committee memberships.

Now, forgive me for lecturing you like a schoolboy, my friend, but sometimes you just seem to ask for it. It's after five. I'll buy you one at Shorty's on the way home.

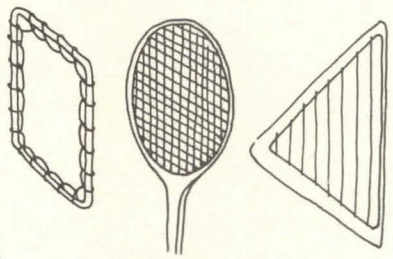
BOX: No, I'll buy and I'll make it a double. And I hope we meet Bill Brown there, for I've got a thing or two to tell him!

EXEUNT TALKING . . . CURTAIN

Tents

by **Dr-Ing Frei Otto** and **Peter Stromeyer**

Continued from the March issue of the AIA *Journal*



a

III The Most Important Basic Forms of Construction

a) *skin framed in a plane*

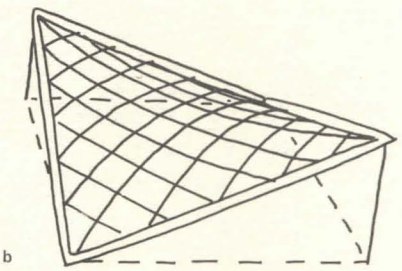
When sailcloth is stretched in a plane frame like a trampoline (tympanic membrane) as in diagram (a), or the strings of a tennis racket, or the parallel strings in a harp, and subjected to pressure, we know that the deformation of the stretched members under pressure is relatively large. Still this form of construction has been applied with some success in the Maculan-type steel roof. When the loads upon a surface stretched in a plane act consistently in one direction, the problem is fairly easy to solve in construction. When the loads change in rapid sequence—common with wind forces—vibrations may set in. Sailcloth stretched in a plane frame and hung in the wind inflates like the sail of a sailboat. Only in this buckled position can it transmit the often considerable forces.

Tents, unlike sails, cannot always be turned in the direction of the wind in order to weight the cloth in balance. The wind pushes at some points and pulls at others. A tent often has large areas where pressure and suction are changing steadily; the tent fabric is thrown back and forth and stresses the structure in a dangerously buffeting fashion.

b) *membrane buckled in saddle form*

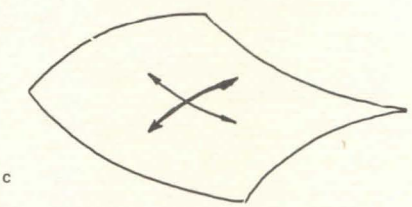
When we stretch membranes (canvas or rope nets) in a frame which is not plane but warped (b), then we find that the membrane under exterior loads—regardless of direction—will not be deformed as much as was the case with the plane frame.

In the case of a warped frame, a saddle-buckled skin develops in which every area particle is buckled in one direction at one side and in the other direction at the other side, as diagram (c) tries to illustrate. Should, for instance, snow-loads press on such a surface, tensile stresses will appear in the "sagging" direction. If wind suction works upward, the cloth is affected in the other direction. In this process the already-stressed form is changed very little.



b

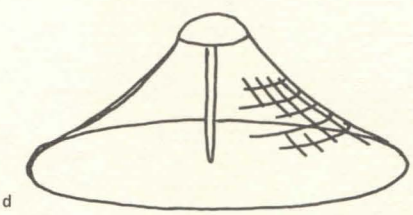
The construction of saddle-formed surface supporting structures has recently been increased due to the application of hyperbolic paraboloids and hyperboloids in shell construction. Stretched membranes and rope nets appear only in exceptional cases in the form of a true hyperbolic paraboloid or hyperboloid, but the forms of both surfaces are related.



c

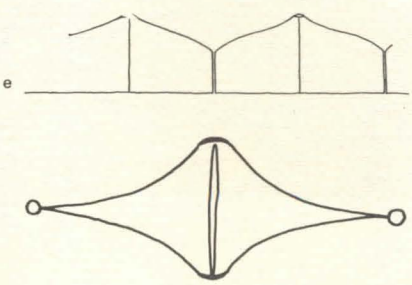
c) *membranes with inner support*

The oldest tent form, as far as we know, is the pointed tent. It is common knowledge that a pointed tent has to be cut for a concave form. The roof skin is buckled in saddle form at every point. But we know too that tensions increase towards the pointed area of the membrane and must be taken into account. Today we employ the method of the buckled, originally flat stretched surface. We push very flexible, but originally flat, membranes upward with tremendous force using supports with smoothly rounded heads (d). The membrane material is taxed far beyond its elastic limit during the original installation, and is thus permanently deformed. After this process of initial forming, the tent retains its shape.

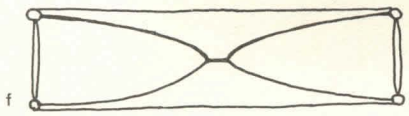


d

When such a membrane is not only pressed upward, but also



e



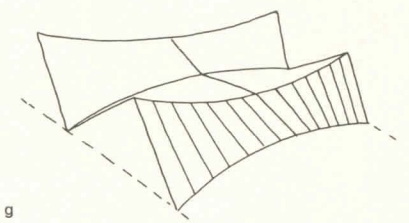
f

pulled downward at some points as in diagram (e), snow-loads, for instance, are taken up by the supports and tensile loads by the anchorages. The roof skin has to be drained at the low points. Such a structure can be made in any desired size since it is composed of equal parts without large marginal stresses.

Self-enclosed forms can be achieved when two membranes are connected either by propping or pulling together (f).

d) *wavy skins and rope nets*

In the case of wavy, prestretched constructions the main buckling directions of rope nets and membranes run parallel. For example, a drooping ridgeline is followed at some distance by a sloping tent guy as in diagram (g) then again by a drooping line and so on. Both ropes are connected by a tensile linkage which again may be a light rope net or membrane.



g

e) *pneumatic construction*

As with wave forms, pneumatically stretched constructions have recently found increased application. These are nothing else but inflated air balloons (h) in ball or cylinder form. The inflation is quite simple and a typical revolving door makes an inexpensive air lock.

It is also possible to produce buildings without increased inside-pressure (i), the construction consisting of pneumatically stretched double-membranes which form the room envelope.

The canvas of a sailboat, the hull of a pneumatic boat, the parachute—all are examples of pneumatic construction, or a membrane which receives its statically effective form through the pressure differences of gases or liquids.

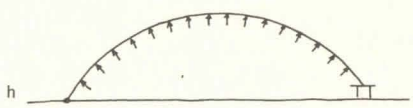
IV Design of Roof Skins Suitable for Pre-stretched Membranes or Rope Nets

Homogenous membranes

foils

Among foils suitable for membrane construction we should mention high- and low-pressure polyethylene, hard and soft polyvinylchlorides and polyester foils.

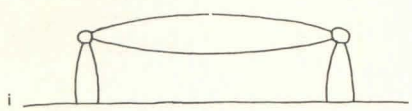
The strength of foils is measured in kg/mm²*. With these materials it ranges from 4,200-28,000 psi depending on the thickness of the foil. These may be transparent, letting most of the light through, or completely clear. Foils may be colored with carbon or aluminum powder. Since aging occurs essentially through the attack of ultraviolet radiation, penetration can be prevented by employing absorbing layers, or adding aluminum foils—the latter may be used in several layers interspersed with plastic foil layers. Various kinds of layerings and special assemblies, such as foam foils, can give the supporting foil more heat insulation.



h

sheet metal and other stiff materials

Unlike foils, sheet metals are relatively stiff. They differ in essence from foils in that their modulus of elasticity is significantly higher and consequently inaccuracies in pattern cutting can be balanced out through the material only with difficulty.



i

Steel as well as aluminum can be employed as loadbearing roof skin, but steel panels require careful tinning or paint coating to resist corrosion. Since pure aluminum lacks a high degree of tensile strength, weather resistant alloys have to be used.

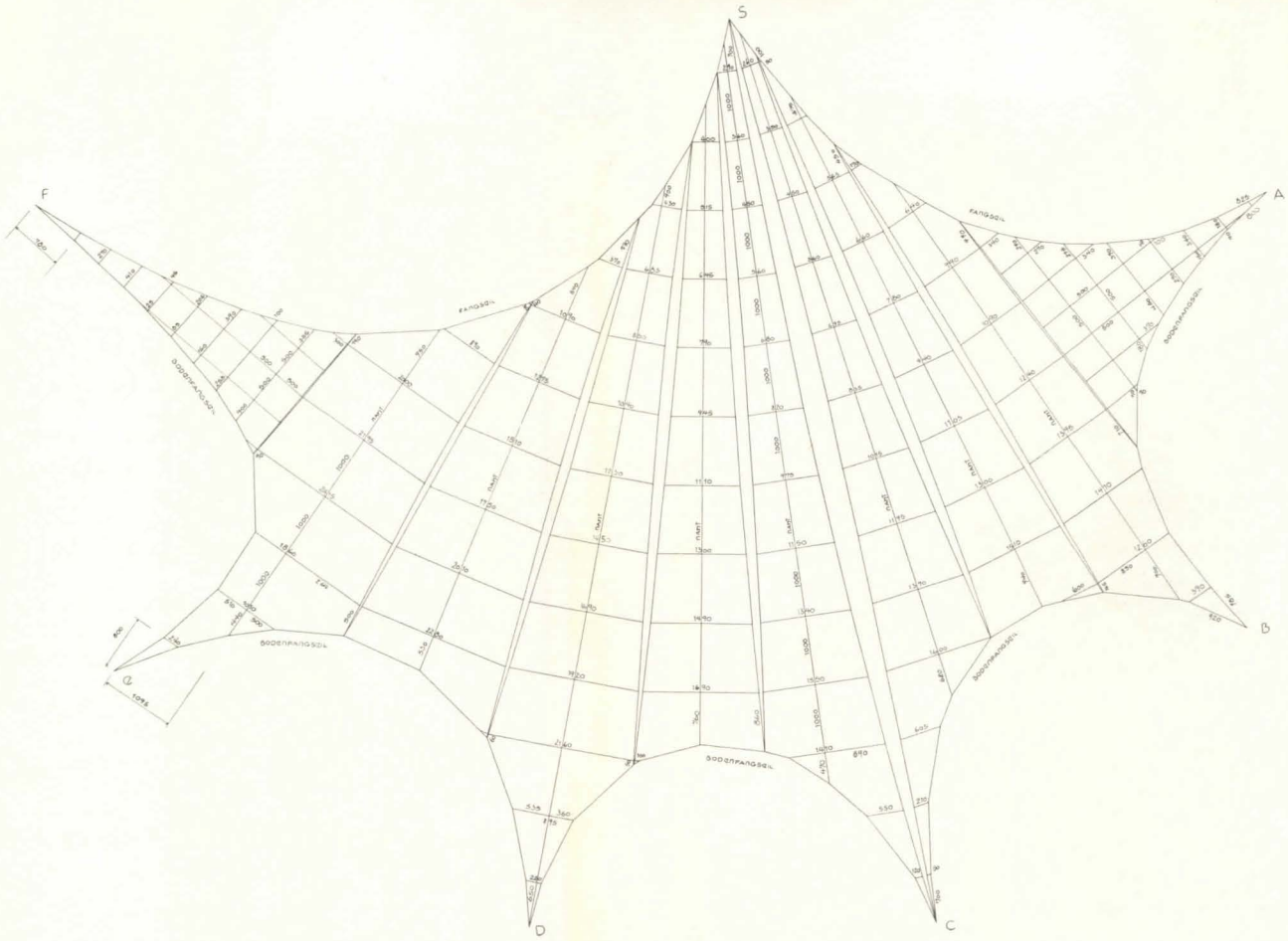
Accurate joining of steel or aluminum sheets—to spatially buckled forms at great height—is extremely difficult. It is possible to spatially deform sheet metals up to the point of plastic flow through overloading.

Aside from sheet metals, other tensile and stiff membrane building materials may be employed, such as plywood, possibly also with a wire fiber interfacing, or plastic sheets which differ from the foils only in having greater strength due to greater thickness.

Non-woven fabrics

As a link between foils and fabrics, non-wovens should be mentioned, in which fibers of equal or different length are arranged in random fashion, though oriented in a flat plane and held together with binders. Paper is one example, which, to limited extent, is quite suitable (see air balloons, umbrellas). Paper consists of cellulose fibers. Today many other non-wovens are manufactured from glass fibers, viscosic fibers and vari-

* standard European tests differ from ASTM



Pattern for cutting fabric for a pointed tent, Köln garden show, 1957

ous synthetics, particularly polyethylene, polyesters, polyvinylchlorides, polyacrylonitriles, coated and glued with PVC, polyesters or polyurethanes for water and air impermeability and also for added strength.

It is to be expected that the future will bring further progress in the development of non-woven fabrics. Non-wovens have the advantage of utilizing high fiber strength almost equally in all directions. All non-wovens can be finished the same way as fabrics.

Fabrics

The famous nomads' tents are made of black goat hair having a high degree of weather resistance. Linen and hemp also work well, jute less so. The most commonly used fiber is cotton. Since asbestos is so weak, the only mineral fiber to be mentioned here will be glass fiber.

Unless it becomes possible to protect the polyamid fibers (Nylon, Perlon) against light, this group of synthetic fibers cannot be employed when conditions demand a high degree of weather resistance. Much to be preferred, and sometimes excellent, are the fibers of the polyvinyl, polyacrylic and polyester group.

In the case of natural fibers, aging is affected by bacteria and mildew, in all other fibers by water vapor and light, particularly UV.

Light stability is of special importance when the roof skins are to be transparent or translucent.

Weight of the fabric depends greatly on its finishing. Fabrics are used ranging from 4.5 to 30 oz/sq.yd. A much used fabric strength is 670 lbs/in fabric width (6,600 lbs/yd!). Note that strength is measured on 2″ wide strips. Fabric is not measured in psi or kg/mm^2, as it is hardly possible to define cross-sectional areas.

The nature of weaving causes two carrying directions, woof and warp, which usually have differing elastic and breaking elongations.

In order that fabrics can be used as pre-stretched roof skins, they have to be properly finished. Animal fibers are impregnated and retardents for mildew or flammability may be added.

Those fabrics whose threads have been woven from short single fibers, and simply received impregnating, have the advantage that while they are water-repellent, they are porous enough to admit air and water vapor and thus are able to improve inside climate—better air flow, heat escape, etc.

Fabrics derived from mineral or synthetic fibers nearly always require coating with plastics to become water-repellent. One coats or dips them in polyacrylic acid ester, polyurethanes, polyvinylchlorides, rubber, synthetic rubber (polyisobutylene, neoprene), polyester, bitumen, paraffines or others. In addition the coatings may receive a vapor treatment of aluminum or precious metals, and can also receive paint coats of all kinds, preferably those which contain small aluminum, mica or quartz particles. Such coatings will provide greater protection against ultraviolet radiation.

The fabrics may be completely sealed by laminating with one or several layers of aluminum foil. Today, it is possible to order the underside of the fabric fully prefabricated or equip it with heat controls later. For the latter the ranking materials are: rubber, polystyrene, polyvinylchlorides and polyurethanes. Such fabrics are particularly suitable for winterized shelters even in coldest regions.

Lattice foils

The lattice foils form an intermediary group between foils, fabrics and nets. One produces knotted, glued wide-mesh fabrics of

1

2

1 The white buckled tent was stretched in flat form and given its final shape by means of hydraulic power applied to poles equipped with rounded wooden bows

2 Complete layout of the tent-café, capacity 800, on the "Interbau" exhibition grounds, Berlin, 1957: a large white tent, 80′ x 90′, and smaller tents of five-pointed membranes

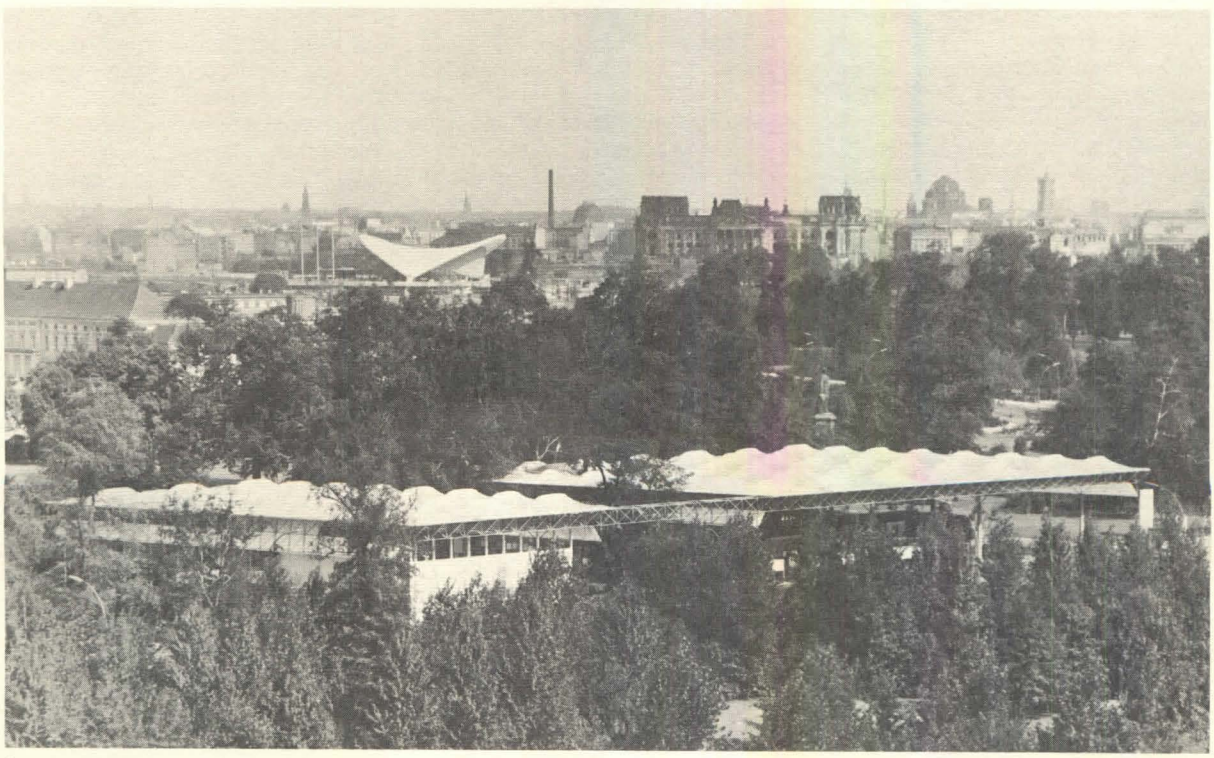
3 Roof skin of the large hall of the Berlin international building exposition, 1957. Steel rod construction covered with spatially-buckled membrane by arching an originally flat membrane according to the Mero method

4 Bird's eye view, project for an exhibition hall in Köln

5 Fully portable and adaptable to various foundations, built up on 40′ module. Roofing consists of 2 parts, one main roof which connects to a support as well as to a drainage pipe, and an intermediary part. Such a hall is independent of earth vibrations and layout to be roofed

6 Studio project for Berlin sculptor, Professor Dierkes (1958). Earthwalls built up with a bulldozer, a wooden frame attached and a white, translucent membrane nailed over it, arched according to the before mentioned principle

7 Project for a music pavilion, 1958. Membrane between five fixed points with central nadir and inner drainage



3

0.1-0.8″ mesh-width made from animal, metallic, mineral or synthetic filaments or threads and closes the open loops with the same plastics used for foil production. Foils are laminated either to both sides, or to one side only with the other side sprayed with the same plastic, or the foil is created by a continual spray against a conveyor belt, or by dipping in a plastic bath.

The strength of those lattice foils now commercially available is not as great as that of fabrics, but higher than that of the foils. As light permeability is excellent, they are gaining more and more attention for greenhouse construction.

Small-mesh, prefabricated nets

Small-mesh prefabricated nets (width of mesh up to 8″) may be manufactured with square or hexagonal mesh. Triangular mesh is usually unsuitable for the preparation of spatially buckled forms. Should the threads or ropes of these nets consist of animal, synthetic or mineral fibers of about 0.06 to 0.6″ width, the nets are knotted and may be glued in the future, particularly when they are made of plastic-covered ropes.

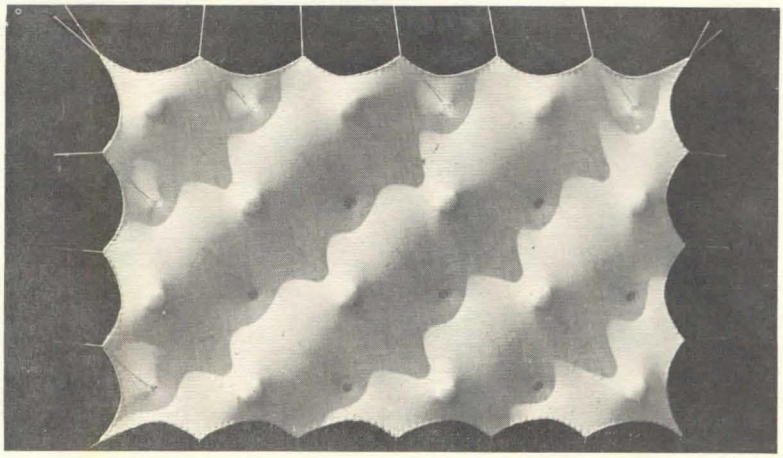
Square or hexagonal meshes of wire nets are produced by twisting 0.02-0.15″ thick wires, usually steel wire. They have been protected against corrosion either through tinning or coating with plastic materials, usually PVC. Tinned nets can also be coated with PVC subsequently. Fabrics of aluminum wire are of lesser importance, since in spite of low weight, usual alloys of aluminum have lower tensile strength. Fabrics of precious metals, however, are very exciting.

The well-known welded steel wire mesh is also quite suitable for the making of stretched membranes, although these are more difficult to adapt to special requirements than wire fabrics.

Using appropriate ropes or wires, fine-mesh pre-woven rope nets facilitate bridging over medium or larger spans.

Open mesh can be closed during prefabrication by means of soft plastic materials (soft PVC) so that a closed skin develops similarly to the lattice foils. Such materials must meet certain stretching requirements because during erection the original mesh form becomes deformed into spatially buckled stretched surfaces.

Normally, closing of mesh is done on the structure in the build-



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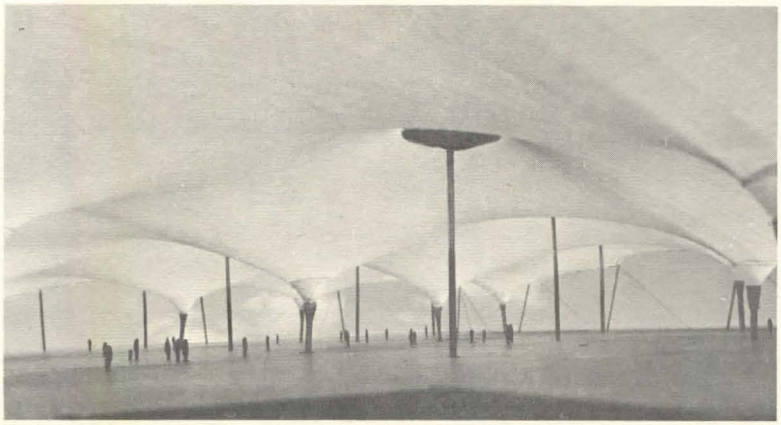

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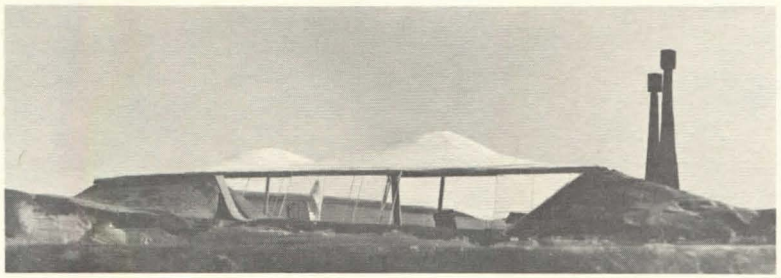

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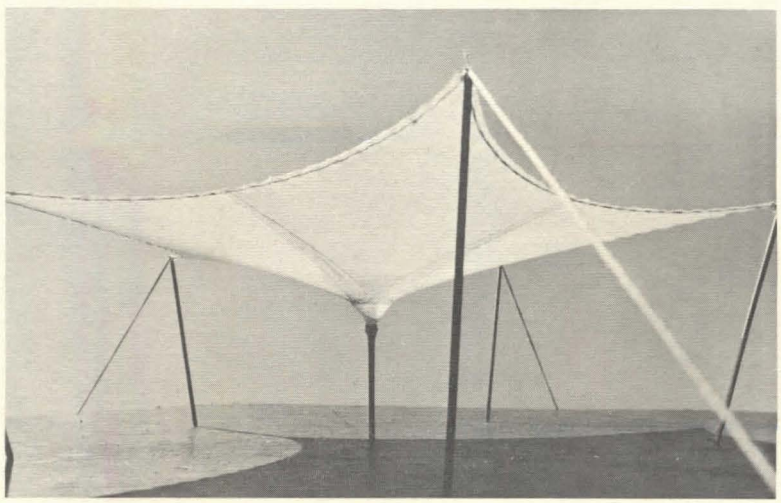

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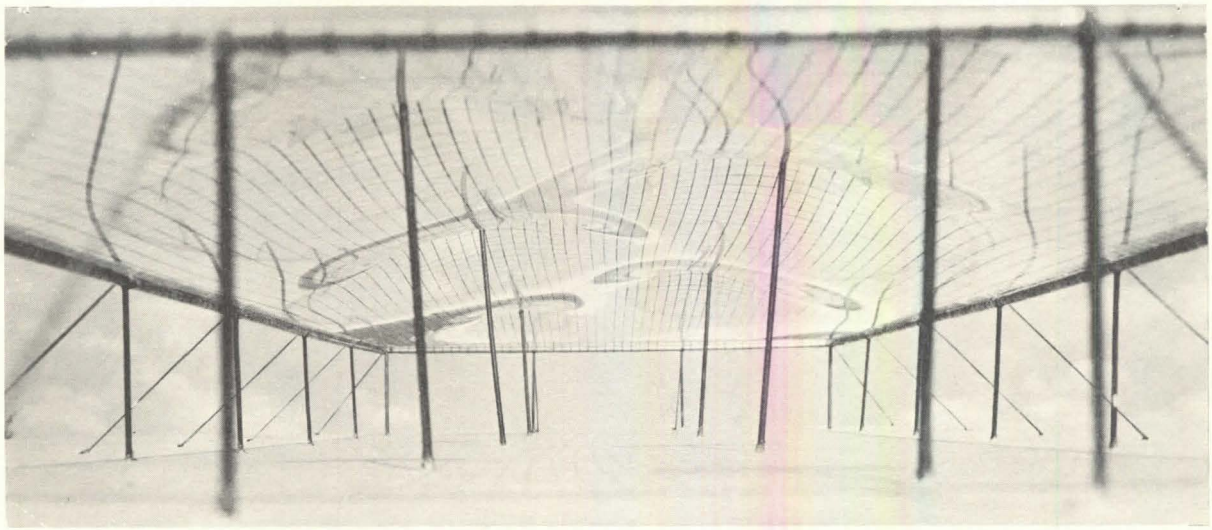

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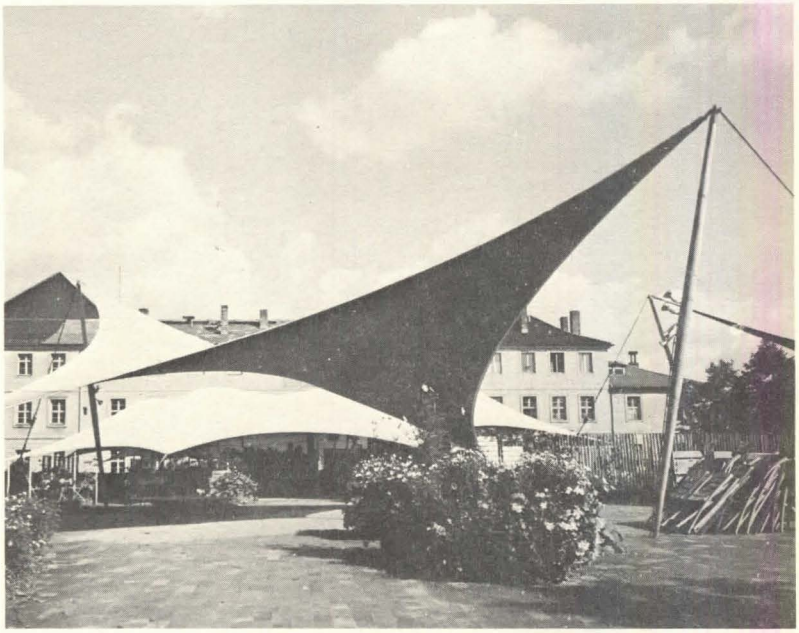

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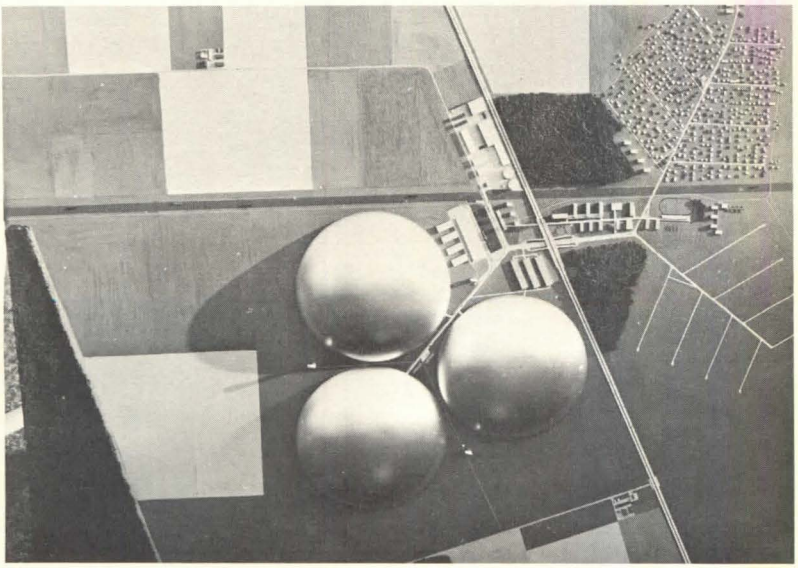

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8 Greenhouse project for an agricultural experiment station (1959). Roof skin: clear plastic on rope-net lattice, pneumatically supported

9 Small tents of vari-colored fabric

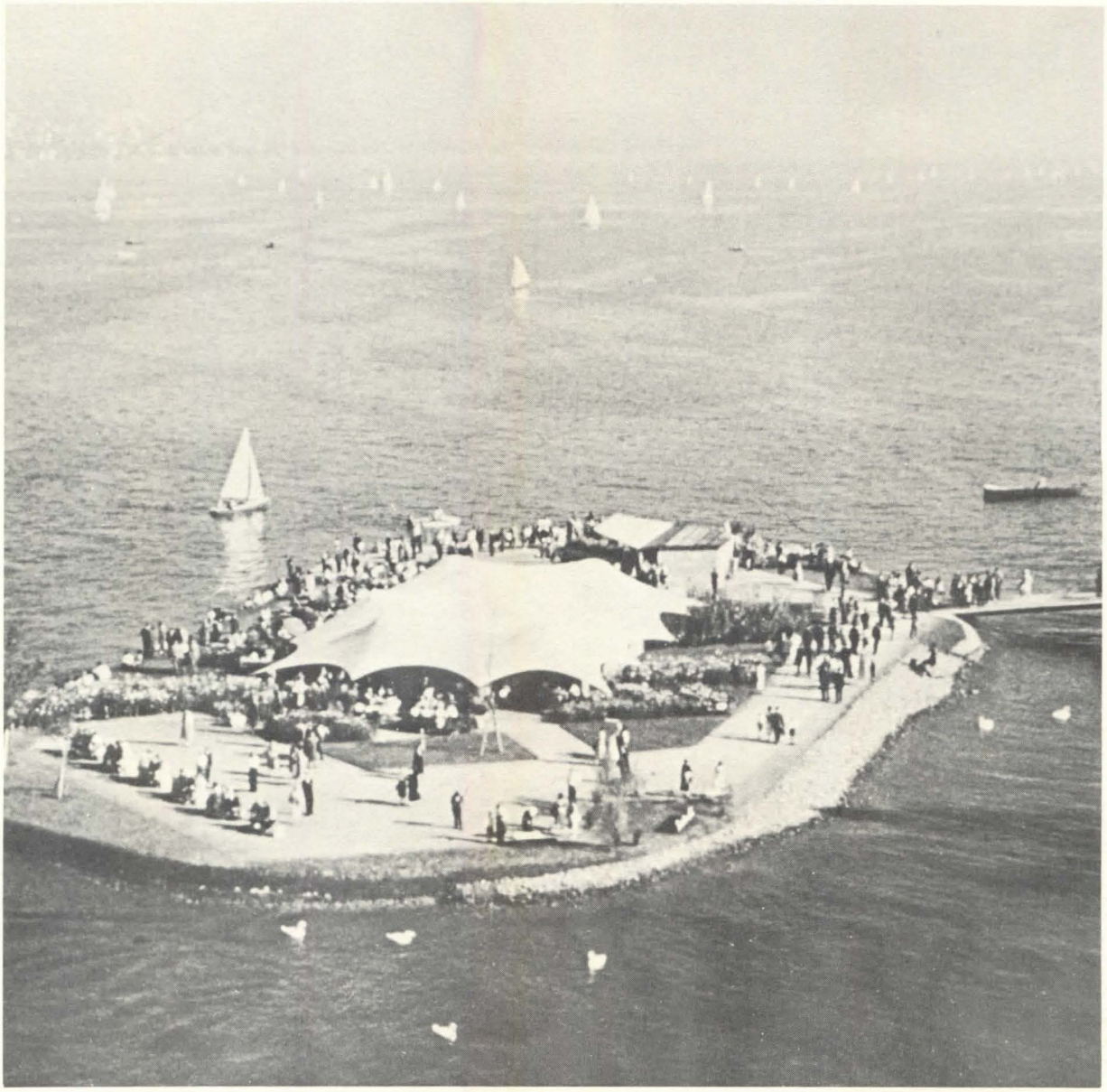
10 Project for a large industrial plant (1958). Pneumatic assembly hall, rope-net-supported plastic skin, aluminum-vapor-treated for light transmittal

11 Tent-café on an island in Lake Zürich, 1958

ing process, for example through laminating strips of plastics of all sorts, waterproofing materials so that skylights can be incorporated, or glass-fiber-reinforced polyester sheets, flat or wavy metal sheets, bolted in place.

Heat insulation can be provided for such a skin either by sliding the insulation material between the outer skin and the load-bearing net or hanging it under it or enveloping the net on both sides with the insulation. Suitable materials are hard and soft foams of PVC, polystyrene, polyurethanes and others, lightweight wood fiber panels, possibly with a finish for fire protection.

When the mesh is not too large it may also be closed by plastic materials, as long as they do not fall through or glide off wires or ropes. One can work with gypsum or with light concrete-containing additives which will get stuck in the mesh, as expanded mica (vermiculite), wood shavings, asbestos of glass fibers which can also be mixed with magnesite, bitumen or plastics and spread or sprayed on.



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By applying foam beads with synthetic adhesives—which can be coated with transparent foils—it is possible to achieve transparent, fine mesh rope net skins having high heat control.

Prefabricated coarse-mesh nets (mesh-width 8"-80")

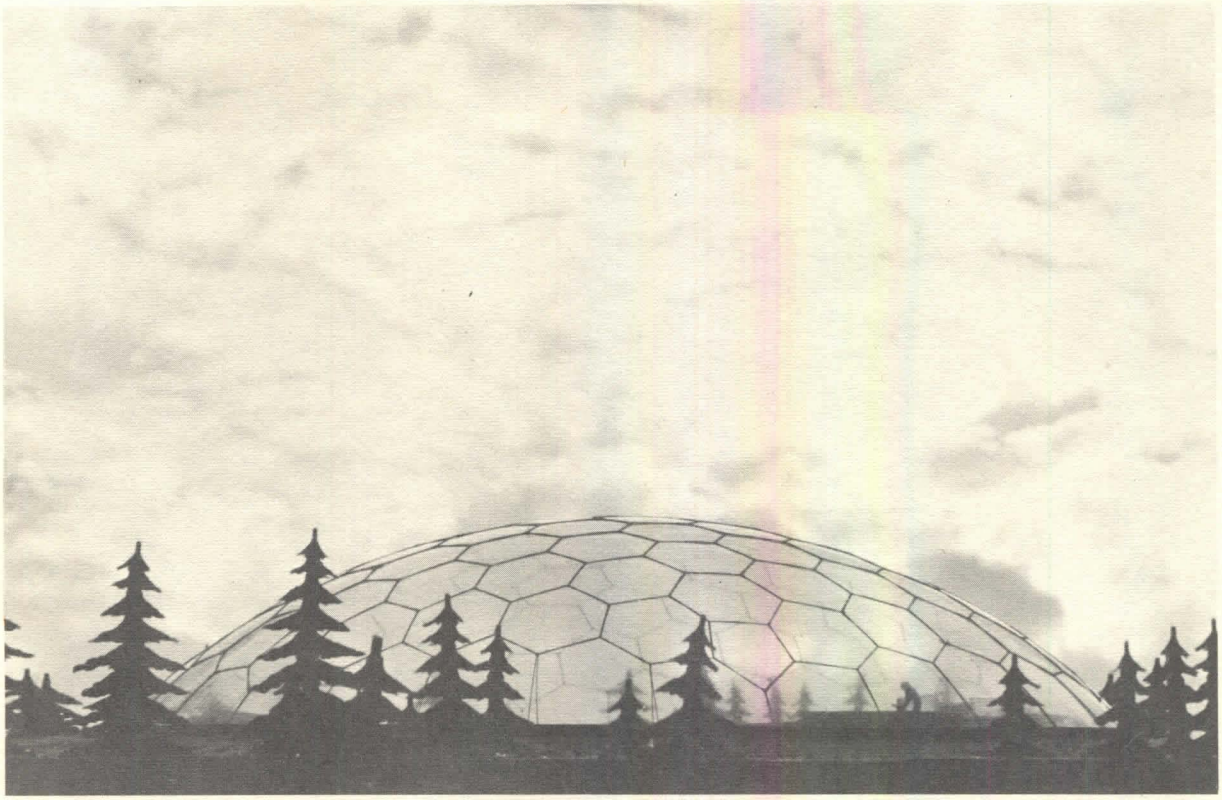
Such nets are used for the largest spans and have been prepared in widths up to 33′. The mesh may consist of equal side lengths in square or hexagonal structure, depending on field of application.

It is also possible to manufacture complete rope nets with differing mesh sizes which adapt themselves to the special requirements of structures. Thread or rope thicknesses between ¼″ and ¾″ are used. While it is possible to twist or glue ropes made from animal, synthetic or mineral fibers—especially when the latter have been coated with synthetics—steel and special alloy steel ropes must in most instances receive special fixing of connections, such as screw or bending clamps. One may also use doubled lines or metal or plastic clips.

Rope nets made from strips are joined during construction with clamps or connecting ropes which act upon the fabric like a sewing thread.

Choice of mesh size depends a great deal on the fitting and filling problem. Work with mesh sizes above 23″ becomes more complicated as there is danger of workmen falling through.

For filling, one may hang integral foil or fabric skin under the pre-stretched coarse-mesh rope net and fix it to the same at certain points. One can also close the mesh directly with foils or fabrics stretching them with tension sticks or inflating them in case of double mem-



Flower exhibition pavilion, Rotterdam, 1960

branes, all in order to achieve a sufficient pre-stretch. Attempts have been made to close coarse-mesh nets with fine-mesh nets and to proceed then according to small-mesh techniques already mentioned.

Meshes may be sealed with rigid sheets, strong corrugated metal sheets, glass-fiber-reinforced polyester resins, plywood or light concrete sheets, hung-in-wood frames.

Ropes may very easily be covered with light metal or wood fiber moldings and filled with window glass; this becomes necessary in the construction of wide-span, economical out-size greenhouses.

Rope nets strung on site

In this case the rope nets are not prefabricated, but are hung during construction, rope upon rope, in exactly measured length between fixed supports, beams or guys. (Note analogy to "air-spinning" used in the construction of suspension bridges.) This method is often used for extreme spans, differing rope lengths and mesh sizes. The advantage is that the installation weight of the individual rope is small, the disadvantage being difficulty of knotting lines at great height.

Suitable materials are: high-tensile ropes of natural, mineral or synthetic fibers, or steel or possibly aluminum and special alloys.

The modulus of elasticity plays an important role in these calculations. Often bundles of parallel wire are employed. It is also possible to produce "site-woven" nets by employing plywood, sheet-metal or plastic bands. They automatically form skins, so that it is only necessary to seal small intermediary surfaces.

Mesh-sealing of rope nets for installation in the air allows for essentially the same work methods as described under heading: prefabricated coarse-mesh nets.

Summary remarks on roof skins:

Today in the field of pre-stretched membranes it has become possible within technical limits—which are considerably further apart than for any other type of construction—to give a roof skin any desirable characteristic. Now we can build roof skins which are transparent or translucent with choice of degree of heat insulation and even a high degree of sound insulation, with any durability desired, for a few days, months, years or tens of years or even longer periods. Wind and snow-loads can be handled and highest earthquake stability achieved. Shipping weight of such structural components is small and even in spite of the special requirements of high-tensile building materials, these systems successfully compete with any other type of construction.

The roof skins briefly described herein permit economical building with foils for small tents, with fabrics for smaller or medium spans. Thorough investigations have shown that spans without supports are possible up to 6 miles, and may even be economical—in special cases—for spans up to 2.5 miles. The pursuit of technical records is senseless if done for record's sake alone, and can become meaningful only when it is useful. Often one accomplishes the same result with smaller spans which of course need less material.

Stretched rope nets receive their rigidity through pre-stretching. Thus they need no additional rigidity through filling. The increased weight of filling is not beneficial, since it merely results in higher rope strength requirements and thus larger rope cross-sections. Reinforced concrete, which, with minimum thickness of 2.5″ weighs 30 lbs/sf (275 lbs/sq. yard) is hardly useful for these techniques. For this purpose the forms of the non-pre-stretched, freely hanging constructions can be employed to better advantage. ◀

Architectural Photography

by **Eric Pawley,** AIA Research Secretary. This article is adapted from a paper for the annual meeting of the Architectural Photographers Association Washington, DC (March 1957)

► Instead of presuming to speak to you at length on photography as a craft—about which I know very little—I should like to explore some analogies from contemporary art and psychology. These ideas of a more fundamental nature I am convinced are important to better architectural photography as an artistic expression. I shall discuss them under several headings: the nature of the image and space, the nature of architecture and composition, the nature of poetry or the perfect picture.

Lest you shy away from the idea and think of your profession as a narrowly limited, entirely objective, visual reporting of fact—let me read a quotation from the philosopher, Ernst Cassirer:

" . . . the forms in art perform a definite task in the construction and organization of human experience. To live in the realm of forms does not signify an evasion of the issues of life; it represents, on the contrary, the realization of one of the highest energies of life itself . . . " [1]

Now, as a motivating force upon man, a communication medium of greatest efficacy, these impressions of an artistic nature are without equal. They reach across the whole sensibility, intellect and emotions.

First, let's think about the

Nature of Perception and the Visual Image:

In this we are concerned not with retinal rods and cones or other mechanisms of the eye but with less physical concepts and perhaps less-generally-accepted ideas of how and what we see.

First, vision, perception and comprehension (there are distinctions) are *individual.* Each of us is conditioned by his own different experience and training and by other influences, including civilized man's heritage of some 500 years of a workable method of drawing a geometrical perspective—the device by means of which we have learned to see three dimensions in two-dimensional presentations of various kinds.

The three-dimensional coordinate system upon which projective drawings and geometrical perspective depend, eventually known as Cartesian space, has been exploded. The geometry of the Greeks has been transcended in current mathematical thought and in the intuitive perceptions of certain artists. It has been bypassed as well by those so-called aboriginals whose perceptive modes have taken different directions than our own inheritance of seeing things the way we do.

You all have heard of such remote tribespeople who will gravely examine a photograph of a neighbor's face as a curious pattern of light and dark on one side of a piece of white-man's paper—without the slightest recognition that

this — to another pair of eyes— adequately represents the head of their fellow tribesman, Njoe, which *their fingers* can feel as a more or less rounded form and which can be cut off, shrunk to an interesting size and hung up as a trophy. Perhaps when they do begin to see them as faces they think of us as going them one better, head-flatteners, and marvel at the white-man's refinement of technique.

That our traditional representation of three dimensions is not the only valid statement of reality-in-appearance is also demonstrated by many contemporary painters and sculptors. In fact, three dimensions may not make a net which is fine enough (in defiance of Descartes' universe of coordinate space) to catch or represent some expressions of reality.

The late Moholy-Nagy, the great design and photographic pioneer and teacher of the original and later Chicago *Bauhaus* schools, said that "vision-in-motion" was the characteristic expression of our times. We see examples of this in multi-image drawings and paintings—by Picasso and his followers in particular. These are not due to inadequate skill in draftsmanship or aberrant visual equipment. The inadequacies are in those who do not understand or will not try to comprehend this seeking for a representation of simultaneous views.

As we pass a subject we see it several ways—receive several different views of it in succession. Restricting ourselves to still pictures, this 4th dimension of time and effects of sequential seeing may be represented as Picasso does by a compound image—or by multiple-successive images in one frame (as in the Italian *Futurist* school of painting, or in stroboscopic photos of action). A third type would be still sequences or a series of separate pictures. The color slide-film called *The House,* made by the designer Charles Eames and his wife of their own home, is an interesting example.

An American painter whose mind works in this manner of a series on one subject is Morris Graves. To digress for a moment on this man whose works have become fantastically sought-after (and expensive)—he is much influenced by Zen Buddhism but his own personal interpretations of nature are quite wonderful. One critic has said that as a painter he is more poet than architect and that whereas we think in figures of speech, he thinks in images.[2]

Duncan Phillips says of Morris Graves' work:

" . . . his fine placements in deep space without ever breaking thru the picture plane are technical distinctions we recognize in a language worthy of comparison with great Chinese nature painting . . ." [3]

Herbert Read, the British poet and critic, in his fine book, *Icon and Idea,*[4] claims the art object may be created before its concept or theory is stated. The *icon* or work of art may precede the *idea.* He believes many academic artists do not really see what they look at and that they try to make what they actually see fit into a preconceived and intellectual scheme of representation.

A painter like the Swiss, Paul Klee, however, has been said to lead us

". . . quietly thru the multiple chambers of his awareness . . . " and " . . . we always know in Klee's art how far it is from here to there . . . " he has "spatial control . . . " [5]

These references to space lead us inevitably to consider the

Nature of Architecture

It is my belief that we are coming to consider architecture, the total concept, to be an approach to the orchestration of all the sense impressions of our environment, including this complex one of space.

Architecture is essentially plastic—3-dimensional—or perhaps has many dimensions if we can extend the term to measurements of certain other sense impressions.

Are we concerned in architectural photography with visual aspects only?

My point is that some visual experiences cross over into other impressions and when we see certain textures, for instance, we experience a tactility, involving us in other reactions and enriching the effect of what is seen.

The same is true of linear design which impels us, at least mentally, to follow its dynamics—tensions, rhythms, symmetries or other approaches to balance and repose. Thru vision alone they involve us subjectively in other impressions which may enhance total design—or wreck it.

Space experiences are of great variety. In a former paper I wrote: " . . . Architecture is a fabric of useful and experiential space—that is, space that you can sense as an esthetic experience. If you wish to understand architecture better, try to develop in yourself this ability to experience space. Static space as you stand in it—or dynamic space as you walk thru it and it flows around you in changing volumes of enclosure.

Even outdoors when walking thru the woods and coming to a clearing or when climbing around in hilly country or when among large rocks you can enjoy participation in space when this sense of it is awakened. In fact you enjoy these experiences now without understanding them . . . " [6]

Geometrical perspective is only one of many kinds of visual perspective—that relationship of lines, surfaces and forms by which we commonly perceive form or space. You should know that geometrical perspective does not show us what we actually see but is an approximation of the view by one eye from a single stationpoint. A perspective drawing is distorted for two eyes and becomes progressively less true as you move away from the correct viewing place. This has been demonstrated and publicized by the famous Ames Vision Laboratory experiments. It is true also of single-lens photography. There is one mathematically correct spot from which to view any photograph—and using one eye at that spot thru a pinhole gives you a still truer impression. It is quite possible that an enlargement for an exhibition should not be used for a magazine reproduction because of difference in normal viewing distance.

Also, what seems to be a wildly distorted perspective drawing or wide-angle-lens photograph can be brought back to a normal view by finding this stationpoint. I suspect, however, that some wide-angle lenses are just crazy and should be called wild-angle. Of course the fisheye lens takes you into a madman's world. But next time you kiss a girl keep both your eyes open—and you may understand Picasso!

There has even been a certain amount of distrust of geometrical perspective by some modern artists. Guillaume Apollinaire, writing of Fernand Léger says:

" . . . just another little effort to get rid of perspective, of that miserable tricky perspective, of that 4th dimension in reverse, of that infallible device for making all things shrink . . . " (!) [7]

Warren H. Reynolds

Metropolitan Sports Stadium, Minneapolis, Minnesota. Honorable mention, AIA's Fourth Exhibition of Architectural Photography. Architect: Thorshov and Cerny, AIA

And also, on the painter Picabia " . . . color no longer depends on the three known dimensions; it is color which creates them . . ."[7]

The painter Kandinsky is said also to have had an intellectually-seated distrust of mathematical means of projection of graphic material.

There is one type of perspective, related to depth of focus or hazy views, which I call "layered." A landscape, marine view or city-scape in thick weather illustrates this—more distant visual planes are less and less distinct and count as simple planes and silhouettes.

Still another selective form of perspective is caused by relative differences in illumination. The pool of light on a stage or in a studio are examples of this. Of course actual limited depth of focus has this same selective result in photography.

Distance is also revealed visually by scale diminution. A brick wall at 100 feet is obviously farther away than one seen nearby. Leaves of trees or ivy, height of people or size of any commonly-known unit, such as an automobile more than two years old, offer this same effect on scale. You can't trust new creations of the fin-obsessed crowd in Detroit.

As you know, a curious photographic illusion may be produced sometimes by telephoto lenses which compress actual depth of field into almost flat 2-dimensional patterns.

Finally, there is a perspective caused by color relationships—just referred to by Apollinaire in the quotation on Picabia. Cézanne is noted for modeling the form of objects in his paintings by color. He is reported to have aimed to render perspective solely by color.

We associate, thru habit and experience, certain colors with distance, like pale blue mountains. Some colors are considered cool or retreating, others warm and advancing and may be used to force illusions of distance or nearness in interior decoration of spaces which are poorly proportioned. They may act in reverse, however, in a color photograph if a room color-scheme or your angle is poorly conceived.

If we understand the conditions we can accept bizarre colors of familiar objects. My late friend, Dr Alberto Thompson of the National Science Foundation, once told me of taking a series of color photos of his wife standing under a tree surrounded by a bright green lawn. In each shot he moved closer. Unless the whole series was shown no one could accept the last one—her quite green face in a portrait. Reflected colors have their obvious application in architectural photography as well and often creep up on the unwary. Under certain conditions ultraviolet, invisible to the eye, will be registered as visible color by emulsions.

It has been a long time since a scornful critic said architecture consists of covering up one material with another to make it look like a third material!

Contemporary architects depend on honest use of materials for some of their finest results. The photographer must be alert to this objective and strive to express it in photographic language.

Acquaintance with furniture design will also help an architectural photographer. He should be able to tell authentic period and contemporary pieces from bad copies, borax and kept-woman-modernistic. Above all he should consider the use of furniture by people when he groups it for a composition.

It is often a great problem to include people in a picture of exterior or interior architecture. Few individuals can pose naturally and interestingly and perhaps still fewer photographers can pose people. Lighting conditions and shutter speed you may wish to use for best photographic results may fight against natural pose and require a frozen figure. Figures are important because they give scale and show relationship of architecture to its users.

It is curious but I believe that in any but news or human interest pictures we are more ready to accept

scale figures if they are "not-like-us." Old people, children, obvious foreigners in costume, all these are much better than another self-conscious architect or photographer (or wife). A professional model can completely wreck an architectural photograph—but there is nothing deader than a picture of a school without children.

Nature of Composition

First, composition means *selection*. The building blocks of visual art are line, surface, form, color, etc. Design or composition appears when these elements are seen or placed in some *orderly* relationship. Symmetry, balance, proportion are terms for these kinds of relationships.

A most important concept to the architectural photographer is a sensitive feeling for the frame—not only proportions of the two sides (if you feel you must limit yourself to rectilinear frames) but the control of the frame-space by the elements of the design. I know of no better training for this than to analyze many 6-fold Japanese screens. Look at them first as a whole—all 6 panels flat against the wall—as many museums rather ignorantly display them. Notice how the lines and forms control the total space, even when part of it is empty. Pay particular attention to the shapes of empty spaces. Then take each panel of the six by itself and see with what amazing skill and sensitivity to this new vertical proportion of the single panel the artist has arranged his lines and breaks in continuity of lines which pass over into adjacent panels. We can learn a lot about cropping a photograph from such study.

And how about more than four sides to a photograph?

The lens really sees a circle. The American painter John Marin was perhaps the greatest rebel against the frame. Many of his watercolors are struck off in space by hexagonal or slanting slashes of brush strokes, in effect creating a visual window into his picture space. He often worked his painting right up over his frames—almost seeming to protest formal limits to his vision. Victor Zuckerkandl, in his remarkable book on music, *Sound and Symbol,* says, as a preliminary to discussing his concept of *auditory space:*

" . . . the space of our practical life and our scientific thinking is not *all* of space . . . " and

" . . . without an order of visual space, there would be no architecture and no physics; but equally, without an order of auditory space there would be no music . . . " [8]

The Nature of Poetry or the Perfect Picture

There are important analogies between poetry and excellent photography. Each depends upon concept selection and refinement of concept until it has what mathematicians call elegance—far from the vulgar pinkie-heisting commonly associated with that word. Both poetry and photography depend on exact expression—which may mean patient waiting for sun, shadows or clouds—or an exactitude which may be purposely in soft-focus language — although I prefer sharp images.

There is a marvelously skilful passage in James Joyce's *Ulysses* (a difficult book which has been called the longest poem in the English language: it's 767 pages). It is that part where a crew of wild Irishmen start careening around Dublin getting more and more drunk until their language and the language of the description become more and more meaningless until all of the sense is completely volatilized. It's soft-focus. His later book, *Finnegan's Wake,* is all nuance and if it *can* be understood it must be caught out of the corner of the mind.

Cartier-Bresson, the noted French photographer, has published a famous collection of character-studies-in-4-dimensions called *The Decisive Moment.* It is a kind of visual poetry of humanity composed with a time-dimension.

The perfect picture is not one that has been tickled to death in the darkroom. My friend, Frank Lopez, AIA, former Senior Editor of *Architectural Record,* who has bought thousands of pictures, once told me he had two touchstones by which to judge the excellence of an architectural photograph:

- does it show how well the architect succeeded in meeting the program for the building?
- does it show the effect of the architecture on the people who live or work in it, use it or see it?

Now these are difficult criteria—but not impossible. We are striving as architects to appeal to the senses, intellect and emotions in our best work and this emotive architecture deserves an emotive, poetic expression in the best sense. Not sentimental but emotive—motivating for the viewer. The power of the image must be evoked.

The architectural photograph should never violate the designer's intent. Before looking for or at angles you must seek to comprehend the building's purpose—its program, in our language—what goes on in it?—why did the architect do it just this way?—what was he trying to do?—then, how can you show how well he succeeded?

Is there something especially photogenic in materials used? How do people look best in it? How do they move around in it? How does it live with its site?

Here are the concepts—the rest is knowing your job—and craftsmanship. Incidentally, Lopez's criteria are tough on bad architecture!

From the beginning of working on this paper I've been haunted by a few lines from the French poet, the Countess Anna de Noailles who waged unending warfare on the snobbish fakes and phillistines of her day. In a late poem reflecting on her life she wrote in withering scorn about them:

"Mes cendres seront plus chaudes
Que leur vie!" *

This intensity, this vividness of humanity should and could dignify your work and transcend the photograph as a mere report of the world taken thru those small round windows upon it we call lenses. Each of us has his own human lens-component design, focal length, speed and supplementary lenses and filters with which we alter the field, size, color relationships or contrast of our perception. Architecture includes man. ◄

("My ashes will be warmer/than their life!")*

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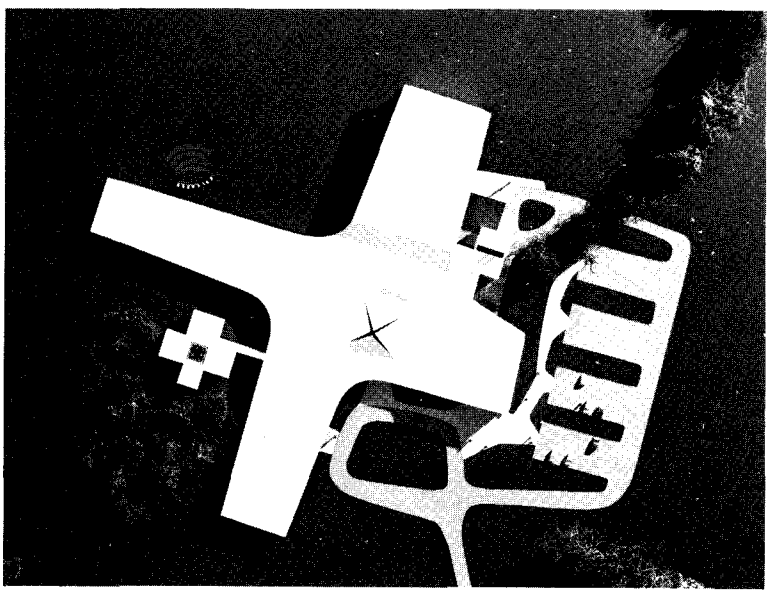
AIA *School Plant Studies*

BT 1-45

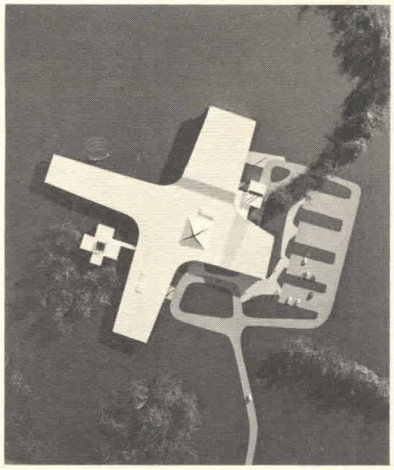
Budget for School Site Development



Lens Art Photo

by **Robert F. White, ASLA**

One 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. New subjects are being worked on and contributed articles are welcome. Reprints of these non-technical articles are widely distributed to educators and laymen. One copy each issue free — additional copies 10¢ each.



High School, Oscoda, Michigan. Architects: Eberle M. Smith, Associates. Intriguing model for a senior high school with a capacity of 1,320 students located on an eighty-acre site. Note ingenious use of simple materials defining site and facilities.

Budget for School Site Development

by **Robert F. White,** ASLA, Landscape Research Consultant

Texas Engineering Experiment Station

► The atmosphere for learning is not confined to buildings alone. The relationships of buildings to their sites and of the sites to the community are vital for stimulation of a sense of belonging to an ordered society. This means a society in which learning is important not only for self preservation from man's destructiveness, but in which nature and her processes are to be contemplated for their life-giving attributes —to be made a part of education.

Since it is not possible to locate each school site in a pristine wilderness or, as a matter of fact to bring the pristine wilderness to the school building, what might be considered an intelligent approach to school site landscape development under present circumstances?

It is not the intent here to describe the process of site or planting design nor to suggest methods of planting or plant types, but rather to suggest the real values resulting from these and to indicate their costs. Professional services for these details are available to those interested. Because of the nature of the work involved, most landscape architects prefer to quote their fee schedule on a particular job, however, to generalize, it may be stated that school site and landscape development plans are usually available on a sliding fee schedule depending on the construction cost —a project costing $5,000, for instance, would call for a 15% fee for full service while a $50,000 project would require a 10% fee, etc. The cost of planning service, in most instances, will be made up in a brief period by the elimination of costly errors resulting from the lack of forethought.

In spite of the fact that man has made great scientific advances and the development of synthetics of all types are now big business, he is still completely dependent upon plants for his existence. Since this is true it would appear that education at all levels should consider vegetation and vegetative processes of inestimable value for learning for all ages.

A Part of Education

The school site is seldom considered in its true character—it is a potential laboratory for learning.

The areas of learning are the purely utilitarian aspects and the esthetic values. A separation of these does not mean to imply a greater importance for either—rather does it emphasize the importance of both.

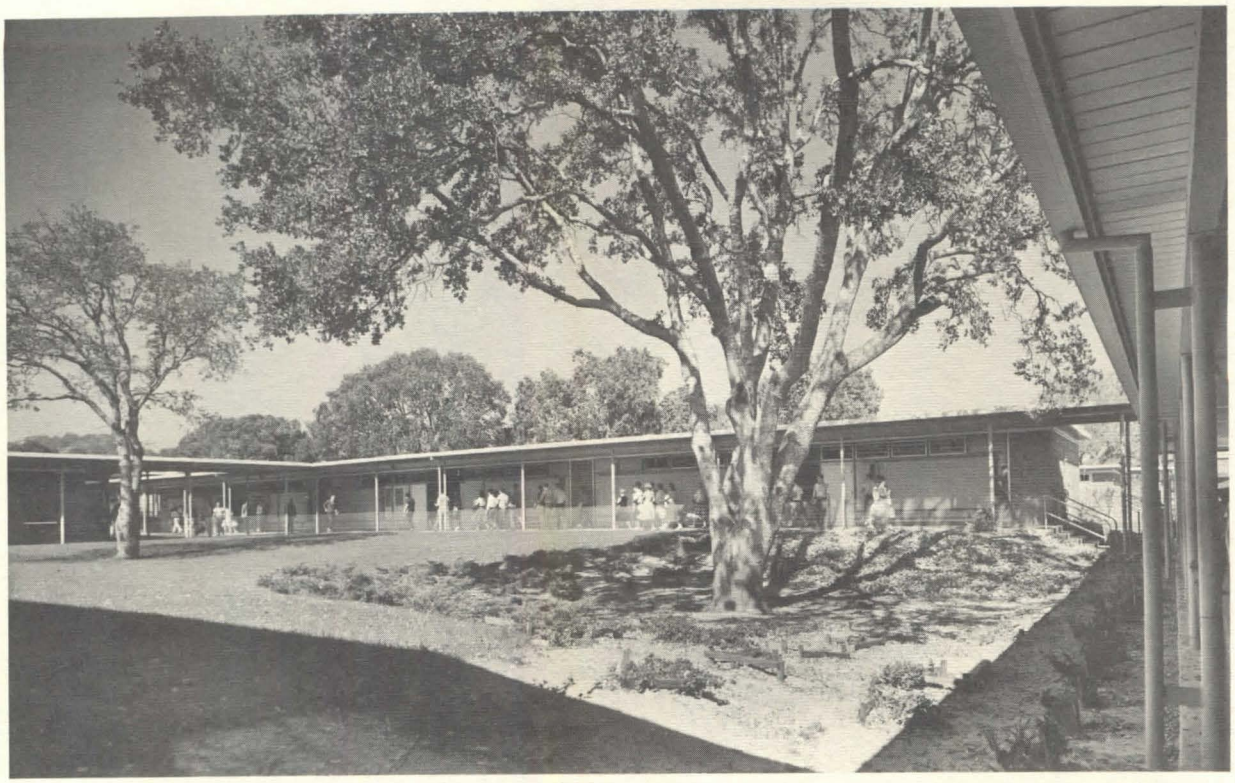
With the rising population and the growing tendency toward corporative farming, and consequent elimination of the small farm, it becomes increasingly apparent that fewer and fewer children will have an opportunity to witness the miracle of seed germination and to gain the realization that most human food is directly or indirectly connected with the soil. Since this is true, a significantly-sized garden plot should be available to all grades on each school site. The gardening should be done seriously and in sections of the country where planting may be accomplished only during spring and summer months, the gardening may be carried over as a very worthwhile summer activity. Such a school garden would not necessarily be limited to the cultivation of vegetables only, both annual and perennial flowers could be included as part of the study. In any case, a well-cared-for garden, be it vegetable or combination of vegetable and flower garden, can be a source of real pleasure.

The garden, under most circumstances, would be a minor portion of the school site. The remaining portion of the site not covered by buildings and parking areas—and of the latter much study is needed—should have some vegetative cover. The cover has very practical aspects, which fortunately have simultaneous esthetic values. It eliminates soil erosion by wind and/or rain and further enhances the site by elimination of dust and mud, which in turn reduces building maintenance costs and produces a more healthful atmosphere.

Anti-Vandalism Aid

At this point it may be well to suggest the importance of stimulating interest in what appears to be a neglected area of our education process—namely, preservation and protection of public property.

Somehow, we Americans have the erroneous impression that public properties are the responsibility of anyone other than ourselves. We see everywhere the results of an attitude that since an area is public it may be abused. Consequently, tax dollars which might have been



Roger Sturtevant

Novato High School, Marin County, California. Reid Rockwell Banwell and Tarics, Architects. A senior high school with a capacity of 850 pupils located on a 43-acre rolling site in the San Francisco Bay area. This site in a small valley with wooded hills on three sides is generously sprinkled with splendid oak trees. Since the housing developments nearby were destroying the trees, the board of education of the school district made it a special point to try to preserve the trees on the site. For this reason the building has been developed among the trees and the play areas have been located on portions of the site that were not wooded

spent to purchase added benefits for all must be used to maintain and police the limited spaces available.

With our rapid increase in population this situation is bound to become more acute unless we can make people see that public property is a trust to all and that it behooves each of us to protect his own interest by caring for it. To flount authority is apparently a human characteristic. If at an early age we could be made to realize that such action really means that we are working against ourselves, the situation might improve. What better place than the school site to introduce the true values of respect for public properties? This can be done only with public properties which have been developed and are maintained in a manner which warrants such respect.

Area and Duplication

Although some far-sighted school administrators have been successful in acquiring reasonably-sized sites for school development, in many areas inadequate sites continue to be bought. To be sure added acreage means added initial and development costs and, not to be overlooked, added maintenance costs.

It is apparent that school authorities may have difficulty in justifying site development costs in relation to total budget. It is hoped that this paper will help bring the *educational* potential of all aspects of school site development into proper focus, so that its immense value will be realized by all, and consequently be given its proper weight in school development budgets.

Many cities have recognized the duplication involved in neighborhood recreation facilities and school sites and have provided for the former by continued use of school facilities beyond the regular school hours. To be sure such use would add the burden of policing but this would be greatly offset by elimination of duplicate public facilities. The idea has much appeal to most tax-payers.

The practicability of combining park, recreation, and school sites is a matter of local concern. Regardless of how it is to be accomplished, if the school site is to yield its full potential and become a laboratory for learning, it is bound to require more area.

Maintenance Essential

If the school authorities are not willing to accept the responsibility for adequate development and maintenance of this type of school site which will serve to educate young people and at the same time prove an asset to the community in which it is located, they might seriously consider multistory structures rising out of very limited hard - surfaced area surrounding them.

Whatever the size, all free land area surrounding school buildings must be maintained. Since this is true, all persons responsible for school site planning must budget for adequate site development and in addition be realistic about budgeting for site maintenance. The new school building will be limited in real value to students and community if it stands alternately on a dusty desert or in a sea of mud depending on the weather.

Budget

Although no single set of figures could possibly be applicable to all sections of the country, the following criteria may serve as a guide to suggest a reasonable basis for a

Annual Maintenance—an example

total acreage included	546 acres
tractor mowing only	185 A @ $ 55.00 per acre
tractor plus small mowers	58 A @ $ 61.76 per acre
lawns and shrubs without permanent irrigation	222.8 A @ $163.58 per acre
lawns and shrubs with permanent irrigation	12 A @ $211.58 per acre
complete maintenance—highly developed areas	68.2 A @ $512.52 per acre
average acre maintenance cost	$165.77 per acre

*Costs may vary in other regions of the US. Figures given apply to the southwest (Texas)

budget for school site and landscape development. Any site and landscape treatment serves its function and looks well in direct relation to the quality of the maintenance it receives. The janitor cannot be expected to maintain the grounds only when he has nothing else to do. Competent grounds maintenance personnel is mandatory, even if it has to serve on a part-time basis.

The following price data on school site development and maintenance costs present a reasonable base for budgeting purposes:

Earth Work

Excavation may range from $1.50 to $15.00 per cubic yard, depending on quantity, nature of material (sand or bedrock) to be moved.

Porous fill $2.60 to $4.00 per cubic yard, again depending on quantity and nature of material.

Lawn Areas

Fine grading, fertilizing, seeding or sprigging may range in cost from $0.35 to $1.00 per square yard, depending on soil preparation, type of grass used, and manner of propagation.

Planting

Groundcover areas may range in cost from $0.25 to $2.00 or more per square foot depending on soil preparation and plant material used. Shrubs used in mass planting or hedge rows may range from $1.50 to $4.00 each planted, depending on variety, size and planting methods. Specimen shrubs and small flowering trees — shrubs or trees used singly to emphasize characteristics of species — may range from $10.00 to $50.00 each planted, depending on variety, size and planting methods.

Shade Trees

In most instances, size of tree, rather than species, is the determinant of tree prices. Although quite large trees may be transplanted successfully, a 5 or 6-inch caliper trunk would probably be largest practicable size to use in school site development. Very often small trees of 2 to 3-inch caliper trunks, well planted and properly maintained will reach the size of the initially planted larger tree in two or three years time. Tree prices might range from $35.00 to $250.00 each, depending on size.

Irrigation

In many areas of the country lawn and planting irrigation systems are necessary to preserve plant materials during periods of drought. They are insurance on the investment. In larger open areas quick-coupling outlets designed to cover approximately 5,500 square feet may be installed for prices ranging from $85.00 to $100.00 per outlet. Pop-up-heads for watering areas where spray control is an important factor cover approximately 175 square feet per head and range in price from $16.00 to $20.00, depending on kind of pipe used. Initial installation costs are soon offset by reduced maintenance and use of less water.

Fences and Screens

Whether or not fences or screens are used on the school site depends on many factors. In most instances they are considered for utilitarian value only and add little esthetic quality. This need not be so and if used, they should become an integrated part of a pleasing composition. They may cost as much as $25.00 per lineal foot for a six-foot, 8″ thick masonry wall or as little as $1.00 per lineal foot for a four-foot chain-link fence.

Walks and Paved Areas

Under most circumstances walks and paved areas are a part of general contract. In any case, they should be generous in width and functional in line and direction. They must be durable and safe. Although walk and paved area materials need not be confined to concrete or asphaltic products alone, these are most widely used. Depending on material and construction details, such as exposed aggregate, color, etc., such surfaces may cost from $0.25 to $1.00 per square foot.

Lighting of school site is another item of site development for which funds should be budgeted.

The foregoing cost information cannot be adjusted to a formula to be applied to all school sites. It is itemized only to emphasize the fact that all site improvements cost money and that such improvements should be considered in developing budgets for school building programs that are not to lose this educational potential.

Any school site will look and function well in proportion to the quality of maintenance it receives and should have a site maintenance budget. Again, it is not feasible to suggest any uniformity. Each site will have its own characteristics and consequently require individual consideration.

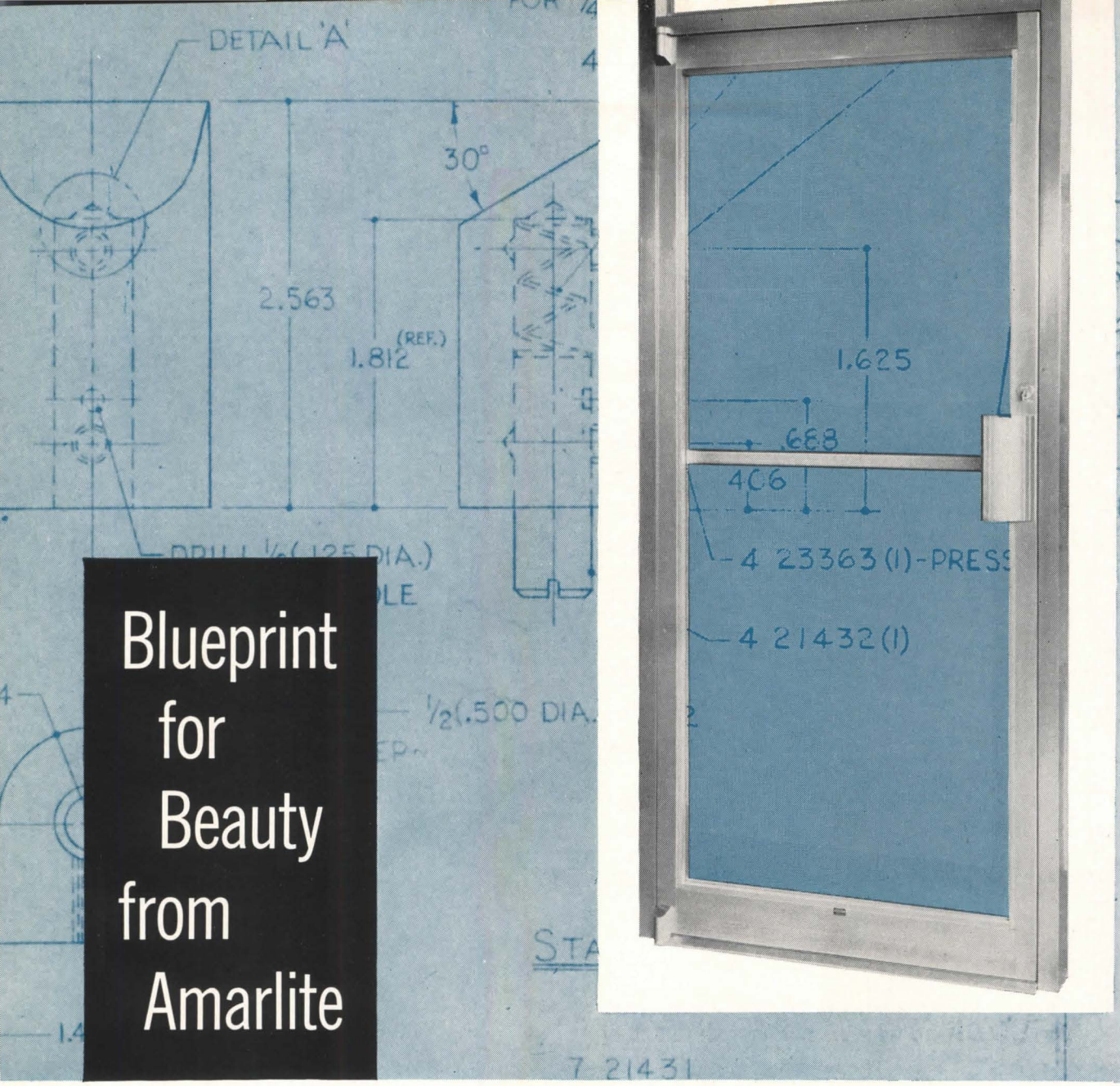
Maintenance Illustrations

The above table reports on actual annual maintenance cost picture for a college campus.*

A thirty-acre campus type high-school site originally planted at a cost of approximately $10,000.00, the planting operation having been done by school board personnel, is now being maintained at an annual cost of $7,700.00—or an average of $256.66 per acre.

Conclusion

Each school site needs consideration as a pleasing community asset, functional in every detail. Its teaching potential should be exploited fully and programmed adequately. A professionally-trained landscape architect can help you toward these objectives. Funds must be budgeted not only for initial development but for continued maintenance operations. ◄



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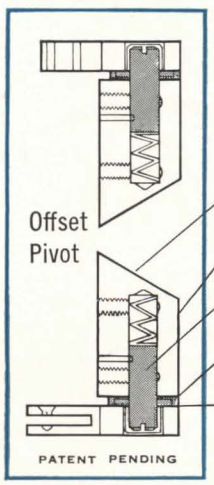

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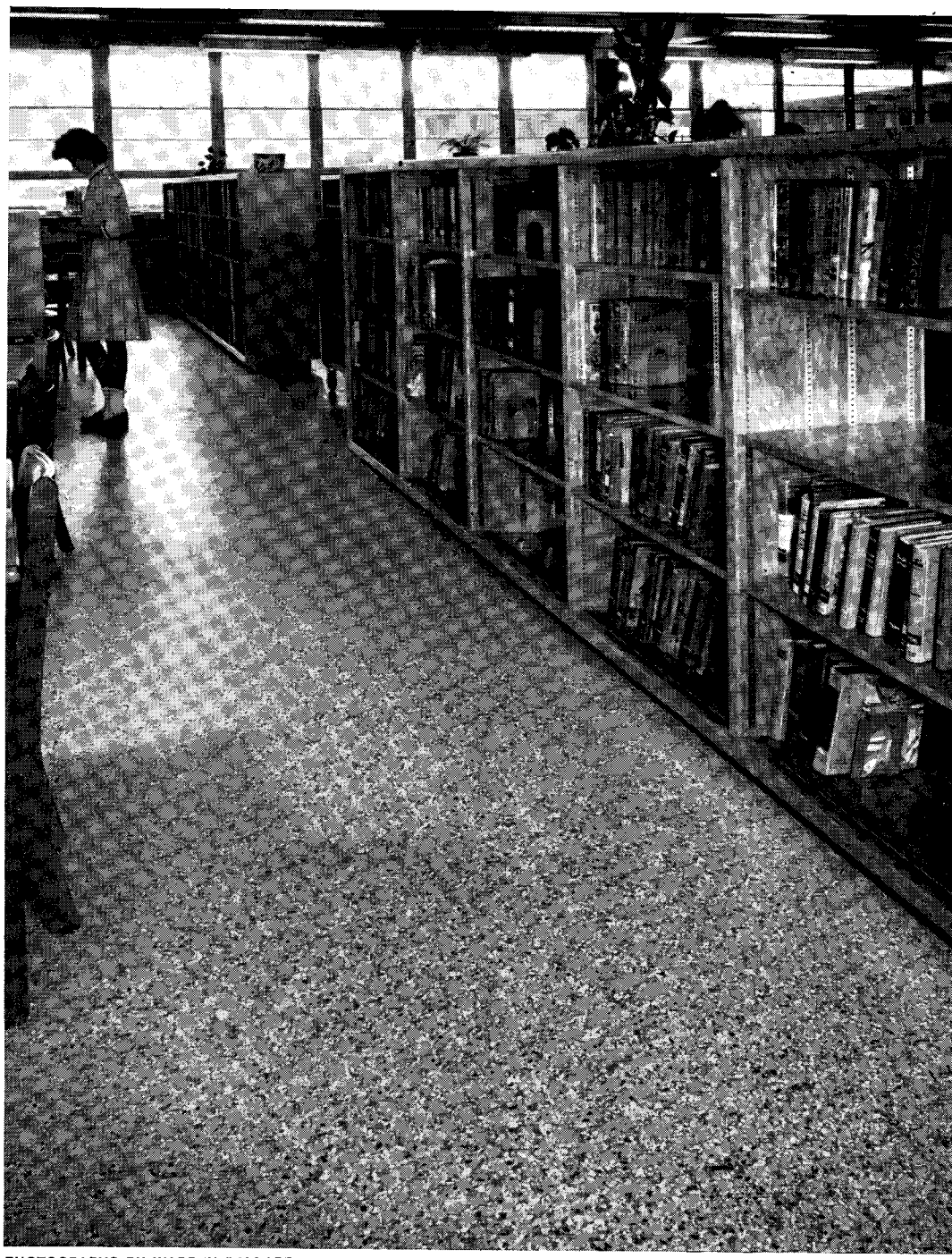

PHOTOGRAPHS BY WARREN BALLARD

"How can you afford Terrazzo classroom floors like these?" ask visiting schoolmen.

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Also present: Samuel Spencer, Counsel, AIA, William H. Scheick, Executive Director, AIA, Edmund L. Purves, Consulting Director and former Executive Director, FAIA, Frederick J. Woodbridge, President New York Chapter, AIA, L. Bancel La Farge, Past President New York Chapter, AIA.

As witnesses: Gilmore D. Clarke, Honorary Member AIA, Keith S. McHugh, Frank C. Moore, Clinton B. F. Drill, AIA, John H. Slocum, Clark D. Ahlberg.

Charge: The accused are charged with violation of Mandatory Standards 9 and 10, which read as follows:

"9 An Architect shall not attempt to supplant another Architect after definite steps have been taken by a client toward the latter's employment.

"10 An Architect shall not undertake a commission for which he knows another Architect has been employed until he has notified such other Architect of the fact in writing and has conclusively determined that the original employment has been terminated."

Facts and Discussion

In June, 1957, complainants were designated by the New York State Architect to prepare in collaboration with Clarke & Rapuano, consulting engineers and landscape architects, a master site plan for the State University College at Stony Brook, Long Island. On December 27, 1957, they were instructed by a letter of intent to proceed with the work in advance of a formal contract. The work for which Moore & Hutchins were employed consisted of two stages, (1) preparation of a site plan, and (2) preparation of preliminary plans for buildings to accommodate the first 3,000 students, together with certain engineering studies and estimates of cost.

On about July 10, 1958, complainants completed Stage 1 of their commission. It was completed on schedule and was favorably received by State officials.

On July 28, 1958, complainants were instructed by letter from the State Architect not to proceed with Stage 2 until further notice.

On August 15, 1958, the formal contract between the New York State Department of Public Works and Moore & Hutchins for the above-described work was approved by the NY State Comptroller.

In April, 1958, Col. C. B. F. Brill, Assistant to Governor Harriman, Frank C. Moore, Chairman of the Board of Trustees of the State University, and other State officials met with Governor Harriman to discuss expediting the construction program of the State University. At this meeting the Governor stated that he was going to assign Col. Brill to take charge of this project and see what he could do to accomplish the objective of cutting two years from the usual six year period required by the State to complete such projects. Col. Brill suggested that if this were to be done, the State should have architects for the actual construction work who were able within their own organization to do the total job. He mentioned the Skidmore firm and that of Voorhees, Walker, but there was no decision made at the meeting as to which firm should be approached.

On April 10, 1958, the Board of Trustees of the State University met and resolved that a panel of architects for the Stony Brook project be submitted to the Department of Public Works as soon as possible. This was never done.

On May 16, 1958, Mr Frank C. Moore met with staff members of the State University and it was agreed that Col. Brill would advise Moore & Hutchins that their contract was being terminated and would contact Voorhees, Walker and see if they would be willing to take the job. No member of the Board of Trustees other than Mr Moore was present. At this meeting the question of ethics was raised and discussed at some length. Mr Teegan, the State University Architect was reported to have stated that provided Moore & Hutchins were properly notified it would be all right. In the absence of that he expressed some doubts. At some time between April and June, 1958, Mr Frank Moore asked Mr Keith McHugh, a member of the Board of Trustees of the State University, to call Mr Voorhees, whom he had known for many years, and ask him whether his firm would be interested in the project, which he did. Mr Voorhees indicated that his firm might be interested, and Mr McHugh said that Col. Brill would get in touch with him to discuss it.

Col. Brill then set up a meeting with Mr Voorhees for July 21. All five partners of the Voorhees firm attended this meeting. It was an exploratory meeting with regard to whether the Voorhees, Walker firm would undertake the job. No commitments were made and there were no negotiations. At that meeting Col. Brill told the members of the Voorhees firm that the State had decided to terminate the contract of Moore & Hutchins.

On August 25 Col. Brill had lunch with Mr Voorhees. At this time there was further general discussion regarding the Stony Brook project.

About July 10, 1958, Mr John C. B. Moore became aware that the Voorhees firm was being brought into the picture. On about July 29, he telephoned Mr P. C. Smith of the Voorhees firm about the Stony Brook project. There is a conflict of testimony regarding what was said in this conversation. Mr Moore stated that he told Mr P. C. Smith that his firm was under contract with the State with regard to the project. Mr Smith denied that Mr Moore said this. The Board considers that Mr Moore's version is the more probable.

About August 25, 1958, Mr Hutchins telephoned Mr Walker regarding the Stony Brook project. He told him that the job meant a great deal to Moore & Hutchins and asked him what his position was in the matter. Mr Walker said that his firm was interested in the job and proposed to go ahead with it if the negotiations were satisfactory. Mr Walker then departed on a European business trip. The record is not clear regarding when he returned. There is no evidence that he had any further part in the negotiations with the State.

Early in September, 1958, respondents submitted to Col. Brill a memorandum entitled "Memorandum of Understanding" dated August 25, 1958, addressed to Col. Brill and signed by Mr Haines. It outlined in detail the scope of the architectural services which respondents were prepared to perform in connection with Stony Brook, the scope of the project,

the schedule of completion of the construction, the scale of fees for the services, and what services were to be furnished by the State. The architectural services included site planning and all work covered by the contract of Moore & Hutchins. The memorandum contains the statement, "Our proposal for the services not covered by the standard schedule of fees listed above, are as follows:" Mr Haines originally prepared this memorandum in late July and it was circulated to the members of his firm. It was then retyped and dated August 25 for a meeting scheduled with Col. Brill for that date but was not transmitted to Col. Brill until early September.

On September 22, Mr Haines met with Col. Brill and discussed the contents of this memorandum. He had had a discussion of it in Albany a few days earlier with Mr Larson, the State Architect. On September 25, 1958, Mr Hutchins wrote Mr Voorhees a letter stating that his firm was under contract for the Stony Brook project and that he understood that the Voorhees firm had made a proposal with respect to architectural services upon which his firm was then under contract. He cited Mandatory Standards 9 and 10 of the AIA Standards of Professional Practice and intimated that there had been a breach of ethics.

On September 26, 1958, Mr Haines informed Col. Brill of the above letter, stated that the situation was different from what Col. Brill had led him to believe, and sent copy of the letter to Col. Brill.

On September 29, a meeting which had been scheduled by Col. Brill and Mr Haines for September 30 in Albany was cancelled. At this meeting, in addition to Mr Haines and Col. Brill, representatives of the Budget Office and the Department of Public Works and Mr Teegan, the State University Architect, were to have been present.

On September 30, 1958, Col. Brill wrote Mr Haines and enclosed copies of letters dated September 28, 1958, from Mr E. B. Hughes of the Department of Public Works to Moore & Hutchins and Clarke & Rapuano terminating their contracts. These letters stated that this notice supplemented oral conversations about thirty days before between Mr Larson, the State Architect, and Moore & Hutchins and Clarke & Rapuano, respectively, at which they were informed that their services would be terminated at the conclusion of Stage 1 of their respective contracts. Mr Moore, Mr Hutchins, and Mr Clarke all stated that no such conversations ever took place. Mr Moore stated further that Mr Larson had confirmed this in conversation with him.

On October 2, 1958, Mr Haines wrote Mr Hutchins attaching a copy of Col. Brill's letter of September 30 and stating that in view of it his firm felt free to enter negotiations with the State. This letter was delivered in person by Mr Haines and Mr P. C. Smith.

On October 16, 1958, a meeting took place in Albany at which Mr Haines, Col. Brill and representatives of the Department of Public Works and the Budget Office and Mr Larson were present. The same people attended this meeting as were to attend the meeting on September 30, which was cancelled, and it was for the same general purposes. No written proposal had been submitted to the State by the respondents subsequent to Mr Haines's Memorandum of Understanding dated August 25. At this meeting of October 16 a meeting of the minds was reached with regard to respondents' employment for the Stony Brook job. The firm started work on the project shortly after this meeting. A few days later respondents received a letter dated October 22, 1958, from Mr Larson offering them a commission. They accepted this by letter to the Department of Public Works dated October 27, 1958. A formal contract was entered into with the State in March, 1959.

Shortly after the exploratory meeting of July 21 attended by Col. Brill and the members of the Voorhees firm, Mr Haines, in accordance with the established practice of the firm, was designated as the partner in charge of the Stony Brook project. From that time on he was the member of the firm most closely connected with it. Next to Mr Haines, Mr P. C. Smith was the member most actively involved in the Stony Brook matter. Messrs. Voorhees, Walker and B. L. Smith attended the July 21 meeting with Col. Brill and each had some further connection thereafter with the Stony Brook matter. As members of the firm, each had a responsibility with respect to it, but they were less intimately connected with it than Mr Haines and Mr P. C. Smith.

Conclusion

The Board concludes on the basis of the facts set forth above that (1) respondents attempted to supplant complainants with respect to the Stony Brook project after definite steps had been taken by the State toward the employment of complainants, and (2) respondents undertook a commission for the Stony Brook project for which they knew complainants had been employed without notifying complainants of the fact in writing and without conclusively determining that the original employment had been terminated.

Actions taken

Resolved, that by a two-thirds vote the Board of Directors finds Stephen Francis Voorhees, Ralph Walker, Perry Coke Smith, Benjamin Lane Smith, and Charles S. Haines II guilty of violation of Mandatory Standards Nos. 9 and 10 of the Standards of Professional Practice.

Resolved, that by a two-thirds vote of the Board of Directors, the membership of Charles S. Haines, II in The American Institute of Architects be and is hereby suspended for two years for violation of Mandatory Standard No. 9 of the Standards of Professional Practice and that his membership be and is hereby suspended for two years for violation of Mandatory Standard No. 10 of the Standards of Professional Practice, both suspensions to run concurrently.

Resolved, that by a two-thirds vote of the Board of Directors, the membership of Perry Coke Smith in The American Institute of Architects be and is hereby suspended for one year for violation of Mandatory Standard No. 9 of the Standards of Professional Practice and that his membership be and is hereby suspended for one year for violation of Mandatory Standard No. 10 of the Standards of Professional Practice, both suspensions to run concurrently.

Resolved, that by a two-thirds vote of the Board of Directors, Stephen F. Voorhees, Ralph Walker, and Benjamin Lane Smith be censured for violation of Mandatory Standard No. 9 of the Standards of Professional Practice and that they also be censured for violation of Mandatory Standard No. 10 of the Standards of Professional Practice.

Director Trevor W. Rogers abstained from voting and took no part in the consideration of the case. ◀