

# Endurance test.

## The Collins & Aikman carpet of Zefkrome acrylic surpasses it every day

This is the rich, firm-bodied carpet that does more than an everyday job. It's built to meet the public en masse, but no matter how heavy the traffic, you just can't crowd it. The Collins & Aikman carpet has the lasting resilience and durability of Zefkrome®, acrylic. It also introduces a new dimension in maintenance: less of it. Because Zefkrome is a round, cross-section acrylic that withstands soil entrapment, the Collins & Aikman carpet is easy to keep in top condition, and it returns to its original appearance after on location cleaning better than any other acrylic carpet.

Now think of a place where the traffic is intense. Air terminal. Hotel lobby. Theatre. That's a lot of people. That's what Collins & Aikman had in mind. This is a lot of carpet.

Distributed by the Painter Division of Collins & Aikman.

The state of the state	Contraction and the second	And a second second second	Section Barrie
STARIE E	All the start	2月二月 正正をかったい	and the server
	State The Town	Nation - Aler	and the second
Part and	All Company	ALL STREET	and a straight
the second second		State Phase	
		Martin Strategie	Constant and the se
		1000年月1月1日	
			E and the second
			A State of the second
	States of the second second	Contraction of the state	

\* Zetkrome® Acrylic is a trademark of Dow Badische Company

Collins & Aikma 210 Madison A New York, New I would like further in Please have a contra	venue v York 10010 nformation and sp	pecifications.
Name		_
Address		_
City		
B		Code

Carpet shown 70% Zefkrome acrylic, 30% modacrylic.



Pearson Chairs by Knoll

The Pearson chairs are so sensitively designed that they appear to be a study in pure form, but actually solve the dual problem of office seating: function and comfort. To preserve the lines of these designs Knoll has developed a new compact control unit which eliminates the mechanical clutter underneath. Another contribution by Knoll to the total office. Designed by Max Pearson of the Knoll Design Development Group. **Knoll Associates,** Furniture and Textiles, 320 Park Avenue, New York, New York 10022. Knoll International operates in 29 countries.





## **PM\* ARRIVES HERE** AT 6:40 A.M.

The Montgomery \*Preventive Maintenance service truck usually arrives early. However, a regular schedule can be set at anytime which reasonably coordinates with lowest traffic flow in your building.

Dependability and safety are critical to satisfactory elevator and escalator operation. Constant, top-notch performance by these units is best safeguarded by systematic preventive maintenance. This prevents emergency breakdowns, unscheduled repairs



and tenant complaints.

Montgomery's PM service men (†) are factory trained specialists on all types of elevators and escalators. To get them working for you, call the Montgomery Service Office in your area (yellow pages of phone book) or write to:

Montgomery Elevator Company, Moline, Illinois 61265 Montgomery Elevator, Ltd., Toronto, Canada Offices in principal cities of North America



(†) Radio dispatched in most of Montgomery's service areas.





## Proven perfect answer for specifiers for carpeting areas with wheel activity... Direct glue-down installation of double Jute-backed carpets

Nothing could be simpler. Double Jute-backed carpet cemented directly to the floor . . . new or old concrete or wood. Or over previously installed resilient flooring. No cushion back on the carpet. No padding under it.

Works perfectly, as Ford Motor Co. proved in a two-year test in Dearborn. Ford is now practically standardized on this technique in new office building construction and for replacements in existing structures.

## **Benefits**

The acoustical qualities, esthetics, luxury and thermal advantages of carpet . . . *plus* easy wheel and caster movement. Conventional wheels and casters can be used. Pads are unnecessary under chair casters if carpet pile is of good commercial grade.

### Savings

Double Jute-backed carpets cost substantially less than cushionbacked carpets with equal pile specifications...or equivalent carpets plus separate underlayment. Installation is greatly simplified.

## **Jute's function**

Jute secondary backing is vital because it provides maximum floor bond. This quality also guards against delamination of the secondary backing from the basic carpet. Jute's greater stability prevents carpets from shifting, which can misalign floor outlets with cut-outs in carpets.

## Applications

Use in any location where free movement of conventional wheels and casters is desired. General offices, hospitals, libraries, supermarkets, computer areas, restaurants, etc.

### Taking up

When replacement is necessary, Jute backing comes off easily with solvents or fast-operating scrapers. None of the removal problems common with cushion backing, such as crumbling and sticking.

Write for complete copies of editorial features shown, plus outline of glue-down installation technique and additional material.



25 Broadway, New York, N.Y. 10004 • American Industries, Inc. • Bemis Co., Inc. • BMT Commodity Corp. • C. G. Trading Corp. • Delca International Corp. • Dennard & Pritchard Company, Ltd. • A. de Swaan, Inc. • Robert F. Fitzpatrick & Co. • Gillespie & Co. of New York, Inc. • Hanson & Orth, Inc. • O. G. Innes Corp. • Iselin-Jefferson Co., Inc. • Jute Industries, Ltd. • Lou Meltzer Co. • Pak-Am Inc. • William E. Peck & Co. of N. Y. Inc. • R. L. Pritchard & Co. • Revonah Spinning Mills • Stein, Hall & Co., Inc. • White Lamb Finlay Inc. • Willcox Enterprises, Inc.

Space-Saving Designs in Stainless Steel Water Coolers!

Elkay offers fully recessed styling! No projections to block the passageway or take up valuable floor space! These gleaming coolers are quality built of 18 gauge (type 302) nickel-bearing stainless steel and have a deluxe LK-6K satin finish. Won't chip, crack, wear, or stain. Exclusive stream-splitter basin is splash-resistant. Sound dampened on underside. Delivers 9 5 gallons of 50° chilled water per hour when ambient and inlet water temperature is 80° F.

Measures 22" wide, 55" high and 121/2" deep. Provides ample head room. Front grill available in stainless steel, laminated charcoal vinyl, or prime coated steel. Wide choice of models in Elkay's complete line. Write for Catalog DFC-2 or see our listing in Sweet's Architectural File. Elkay Manufacturing Company, 2700 S. 17th Avenue, Broadview, Illinois 60153.



Easy to Install! Easy to Service!

Front grill removes with the turn of 3 screws. Self-contained cooling unit requires two plumbing connections and an electrical connection. Easily removed without disturbing drain.

©1968 EMC



see our catalog in Sweet's S Circle 218 on information card



Terene de

## AIA JOURNAL

PUBLISHER Wm. Dudley Hunt Jr., AIA

EDITOR Robert E. Koehler ASSOCIATE EDITOR Neil E. Gallagher ASSISTANT EDITOR Bess Balchen ART DIRECTOR Marilyn S. Housell

BUSINESS MANAGER Henry E. Kleiner PRODUCTION MANAGER Harry N. Miller CIRCULATION MANAGER Jane B. Solt

AIA Journal, Official magazine of The American Institute of Architects, published monthly at the Octagon, 1735 New York Ave. N.W. Washington, D.C. 20006. Telephone: 393-7050.

Subscriptions For those who are, by title, architects, engineers, architectural employees (specification writers, designers, draftsmen, estimators, planners or landscape architects, and to those in architectural education (faculty and schools), and to libraries, building construction trade associations, and building product manufacturers and their employees: basic rate-\$5 a year, \$8 two years, \$4 to architectural students in the US, its possessions and Canada. For the same titles elsewhere: \$10 a year. For all others: \$10 a year in the US, its possessions and Canada; \$18 a year elsewhere. Single copy: \$2. Payable in advance. Publisher reserves the right to refuse unqualified subscriptions.

Change of Address Give Circulation Department both old and new addresses; allow six weeks.

Second class postage paid at Washington, D.C.

© 1968 by The American Institute of Architects.

Opinions expressed by contributors are not necessarily those of the AIA.®



VOL. XLX, NO. 5

The chairman of the Commission on Education and Research reflects on the need to keep learning The Professional Development Program ..... 44 PDP, for short. Here, based on a three-year study, four evaluations of the program, its worth 55 Shaping a City's Future ..... Dallas, where action has replaced dialogue and citizens work in consonance toward their goals Libby Dam: An Engineer Talks Esthetics ..... 59 Let wilderness survive is credo of its planners; construct, but heed nature's serenity and beauty Groping for Order in Designing for Growth ..... 67 Call for a master plan, for expansion possibilities and room for individual design as well 71 1968 Rome Prize ..... Examples from the portfolios that won a year of study, Italian style, for two young architects

Comment & Opinion .....

43

#### Departments

Asides	6	Calendar102
Newslines	12	Letters
Unfinished Business	40	Advertisers
Books	98	Information Service 106
		1 6 11

Cover: Purposeful symbol-and a complex field.

## Asides

**Next Month:** The Imperial Hotel has passed from this earth, but it will long be remembered—by architects and laymen alike who knew it personally or through books and research. And even as it was dying, the Tokyo landmark was creating news, for the account of its demolition is a revelation in itself.

A Japanese architect-educator, a longtime fan of Wright's, led an onthe-spot investigation, documented by drawings and photographs. In a letter accompanying his manuscript, he says: "Although Wright's idea for the hotel was topnotch and brilliant, the general construction was poor. Apparently, it was falling apart without any hope of repair. Built on pudding soil—sand and clay—the structure had been sinking unevenly for years."

Other December features include a portfolio of sketches which illustrate an architect's sheer joy in drawing; an exposition by William F. Buckley Jr. on "The Politics of Beauty"; and another post-mortem on the Princeton Report in the ACSA section. The latter, by the way, appears four times a year and is reprinted for additional distribution among the educators and schools.

When in Rome: One of the traditions of the AIA JOURNAL is the presentation of the work of the Rome Prize winners in architecture, and this year is no exception, as the current issue indicates. At presstime, the details of the 1969 program came across our desk (see Calendar).

Inside Design: Architects are among the professionals invited to contribute to a "how and why I did it this way" book. Joseph Selame, designer and instructor at Boston University, hopes to convey to both laymen and design colleagues alike the essential elements that lead up to and make up the end design results. Besides architecture, other areas include landscape, interior, industrial, graphic, fashion and audio-visual. R.E.K.

PHOTO & ART CREDITS: 47, 54—courtesy University of Wisconsin; 58, below—Fred Coston; 69, above left—Allessandro Macone, Inc.; 69, below left—Phokion Karas; 74 courtesy Tulane University; 76 left—courtesy National Trust for Historic Preservation; 76 right—courtesy Redevelopment Authority of the City of Philadelphia; 78—Laurence E. Tilley; 79—Colonial Williamsburg.

#### THE AMERICAN INSTITUTE OF ARCHITECTS

#### **BOARD OF DIRECTORS**

#### Officers

President George E. Kassabaum, FAIA\* St. Louis, Mo. First Vice President Rex W. Allen, FAIA\* San Francisco, Calif. Vice Presidents Jules Gregory, AIA\* Lambertville, N.I. Daniel Schwartzman, FAIA\* New York, N.Y. David N. Yerkes, FAIA\* Washington, D.C. Secretary Preston M. Bolton, FAIA\* Houston, Tex. Treasurer Dean F. Hilfinger, FAIA\* Bloomington, Ill. Executive Director William H. Scheick, FAIA Members of the Executive Committee of the Board

#### Directors

(Terms expire 1969) California Cabell Gwathmey, AIA San Francisco, Calif. **Central States** Rex L. Becker, FAIA St. Louis, Mo. Florida H. Samuel Krusé, FAIA Miami, Fla. Illinois Jack D. Train, FAIA Chicago, Ill. Pennsylvania G. Harold W. Haag, FAIA Jenkintown, Pa. Texas George F. Harrell, FAIA Dallas, Tex. (Terms expire 1970) East Central States A. Bailey Ryan, AIA Louisville, Ky. New England Philip W. Bourne, FAIA Boston, Mass. New York Max O. Urbahn, FAIA New York, N.Y. North Central States Joseph H. Flad, AIA Madison, Wis. Ohio Joseph Tuchman, FAIA Akron, Ohio Western Mountain Sidney W. Little, FAIA Tucson, Ariz. (Terms expire 1971) **Gulf States** Arch R. Winter, FAIA Mobile, Ala. Michigan Walter B. Sanders, FAIA Ann Arbor, Mich. Middle Atlantic Milton L. Grigg, FAIA Charlottesville, Va.

#### New Jersey Robert R. Cueman, AIA Summit, N.J. Northwest John L. Wright, FAIA Seattle, Wash. South Atlantic S. Scott Ferebee Jr., FAIA Charlotte, N.C.

#### HEADQUARTERS

1735 New York Ave. N.W. Washington, D.C. 20006

#### **Executive Director**

William H. Scheick, FAIA Mabel Day, HON. AIA, Secretary

#### **Institute Services**

Administrator J. Winfield Rankin, HON. AIA State, Chapter & Student Affairs Raymond L. Gaio Convention John R. Carlson Membership Maureen Marx Awards Marie F. Murray

#### **Public Services**

Administrator M. Elliott Carroll, AIA AIA JOURNAL (previous page) Governmental Affairs Philip Hutchinson Jr. Glenn White, Review Information Services Neal English Mary M. Grant, Memo Librarian George E. Pettengill, HON. AIA Urban Programs Israel H. Stein, AIA

#### **Professional Services**

Administrator Frank L. Codella, AIA Education Gordon A. Phillips, AIA James E. Ellison II, ACSA Research James L. Haecker, AIA Professional Practice Leonard Mayer, AIA Technical Programs Thomas R. Hollenbach, AIA Building Design Programs Maurice Payne, AIA

#### **Business Management**

Controller W. G. Wolverton Assistant Controller Ronald J. Panciera Purchasing Agent James F. Sessions Data Processing Loretta V. Cleek

The above is intended to facilitate communications between the membership and the AIA Headquarters and is not a complete staff listing.

design idea: one material insulates..... above and beyond!

ROOF DECK

PARKING DECK

ICE RINK



AWC performs "above and beyond" the expectations of ordinary insulations. It is applied hot and dry to roof decks, plazas, parking decks and ice rinks. When compacted in place to a specified thickness, it provides slope to drains. This monolithic layer also compacts around irregularities, and provides a smooth surface ready to receive a membrane. These and many more AWC features open the door to new architectural designs utilizing All-weather Crete. Call Silbrico for complete details and specifications.



G300 RIVER ROAD + HODGKINS, ILLINOIS 60525 CHICAGO PHONE (312) 735-3322



This new wrap-around keeper, with its rubber tipped bumper, is designed for long, trouble-free service. Solid brass plus the brilliant beauty and protection of chromium plate.

## The beauty of SOLID BRASS HARDWARE

...a long life feature of Weis Toilet Compartments



HENRY WEIS MFG. CO. ELKHART, INDIANA

Circle 242 on information card

Write for Catalog See Weis in Sweet's

Triton invented this pocket-size Carpet Rater to clear away all the fancy talk and get down to earth.

1 04

20

70 1

10

5

11

arpet Rater

01/8

TRITON

Use it like a slide rule to get instant answers when you're checking contract carpet specs. Yours, ours, or someone else's. It will give you fast figures on pitch, gauge, density, wear units—even FHA standards. It works like Triton. No fancy talk. We base our business on specification selling. That's why Triton made a buck Carpet Rater

that makes contract carpets stand up and be counted.

Don't take our word for it. Get our \$1.00 Bull-Dozer and see.



Triton Contract Dept.111 Division of Trend Industries, Inc. 148 Cain Street N.E., Atlanta, Georgia 30303 Here's my buck(s) send me\_\_\_\_\_Bull-Dozer(s).

State\_\_\_

Name\_\_\_\_\_ Firm Name

Address

City\_\_\_\_

Title

Zip code\_

314

211

The place:



The striking new Caterpillar Tractor Co., Administration Building, Peoria, Ill.



The designer: Mrs. Diane Mitchell, Interior Designer

Administrative Reception Area



Administrative Reception Area: hand-hooked custom parquet design carpet in celadon color and deep shags in an abstract design; blue, purple, red. Lobby: Special wool yarn, hand-hooked; grass green. Meeting Room: Special 100% wool carpet in blue and charcoal colors. **Bigelows:** 

Designer Diane Mitchell was commissioned to carpet the entire building in an attractive, durable, low maintenance carpet. She chose Bigelow. Why? Because Bigelows combine all those features with 143 years' experience. Mrs. Mitchell and our carpet counselors chose luxurious wall-to-wall carpet and custom carpet for areas of special interest.

With Bigelow, Mrs. Mitchell got the look she wanted, so did Caterpillar Tractor Co., and so will you. Call a Bigelow Sales Office, or, for a free brochure on Commercial Carpets, write Dept. A, 140 Madison Ave., New York, N.Y. 10046.

## people who know buy Bigelow 3

Bigelow sales offices are located in Atlanta, Boston, Chicago, Cleveland, Dallas, Denver, Detroit, Los Angeles, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco, Seattle.



Doors of unusual dimmension require unusual control: Rixson concealed floor closers.\* The clean, uncluttered lines of contemporary architecture require controls which are ou of sight and harm's way: Rixson concealed floor closers.



Rixson's No. 28 Series center hung for exterior or interior doors. Exclusive full control panel adjustment for back check, latch and closin speeds, spring tension and selecto hold-open.

\*Details? Request: "A Short Cours In Door Control" from:

RIXSON CLOSERS A DIVISION OF RIXSON INC. FRANKLIN PARK, ILLINOIS In Canada: Rixson of Canada, Ltd.

Supervising Architect: C. F. MURPHY ASSOC. Associate Architects: SKIDMORE, OWINGS & MERRILL, IOEBL, SCHLOSSMAN, BENNETT & DART

One of more than 1000 Rixson floor closers in the Chicago Civic Center.

## Newslines

## Institute Building Program Awaits Recommendations; Competition Winner Leaves

Twice dampened by the District of Columbia Fine Arts Commission, the headquarters expansion efforts of The American Institute of Architects are seeking new means of fruition.

The AIA Headquarters Committee has been asked by the Institute's Board of Directors to recommend a course of action on the building, including a method for selecting a new architect.

Mitchell/Giurgola Associates of Philadelphia, winner of a national competition to design the building, bowed out of the project after none of its designs or revisions could satisfy the Fine Arts Commission.

The chasm that developed between the architects and the commission was described by Institute President George E. Kassabaum, FAIA, as "unbridgeable."

However, Mitchell/Giurgola did design—as the Institute's Board of Directors pointed out—a building to the AIA's satisfaction.

The board understood the unwillingness of the firm to make further design compromises, Kassabaum said. But he added that the board also supports "the principle of approval by design review boards such as the Fine Arts Commission, even though sometimes their decisions lead to differences in professional judgment."

Presumably, the board at its Dec. 2-4 meeting at the Octagon will receive Headquarters Committee recommendations.

**Decade of Spadework:** As matters now appear, the decade of the '60s might well be consumed in proposing, planning for and, perhaps most of all, trying to get Fine Arts Commission approval of the proposed building.

It was at the Philadelphia convention back in 1961 that the AIA board was authorized to explore expansion proposals. In Dallas the following year, convention delegates were told of crowded conditions.

There was a motion to continue feasibility studies, but it failed. A motion to hold a competition for the design of the headquarters was a better register of delegates sentiments. It drew 669 yes votes to only 41 no.

At the Miami convention in 1963, approval was given a resolution separating the existing headquarters from the Octagon and garden, freeing the former from an Institute prohibition against its use for mortgage purposes. Delegates had been told that other possible sites for the building were investigated, but that the Octagon location was deemed to be the best in the capital.

A competition was arranged. In its second stage, 221 entries were

Under construction for Japan's Expo '70 is the "unfurling flag" of Russia.



reduced to six, and from the six emerged Mitchell/Giurgola. The objective, which the Board of Directors says still obtains, was a design "of special architectural significance, establishing a symbol of the creative genius of our time, yet complementing, protecting and preserving a creative symbol of another time, the historic Octagon House."

Site Is Expanded: Mitchell/Giurgola's winning design in the 1964 competition was set aside by a change in the problem; a successful funds campaign among the membership permitted the acquisition of the Lemon Building flanking the Institute's present headquarters, significantly expanding the buildable site.

Though thus blessed, the first design to follow the site expansion encountered the distinct disapproval of the Fine Arts Commission. The commission regarded the design as too domineering of the Octagon. That was last year.

A more recent design was faulted by the commission because of a space well or notch where the structure's two wings met, on the axis with the Octagon. This at first was described as a "detail" which could be reconciled in informal meetings between the architects and the commission.

This was not to be. The AIA board accepted Mitchell/Giurgola's resignation with regrets.

### Russians First in Space At Fair; US Tries Again

The Russians went to Montreal's Expo '67 with an angular envelope crammed with hard-edged contents. The United States flanked the Soviets with a sphere containing a much-debated soft-sell approach.

For Osaka, Japan, and Expo '70 it would be more of the same.

The USSR is building a crisp behemoth which it will doubtless jam with literal exhibitry. The US was again to take the spherical route four up-in-the-air spheres this time, with air-inflated wall systems. But the concept fell out of feasibility when Congress decided to appropriate only \$10 million for the entire Osaka presentation. Reportedly, the building itself is to consume about half the appropriation.

The Russians, meanwhile, were Continued on page 15

## ' he nice thing about the new generation of I uildings by B Itler is - they I on't look like B Itler B Itler B Jildings

Maybe you're designing a shopping center. Or an auto showroom. Or a municipal building. It doesn't matter. Whatever you're designing, look to Butler for a fresh, new palette of structural and visual elements.

The New Generation of Buildings by Butler offers more freedom of expression and greater advantages in construction than ever before.

With these four interrelated systems, even the most striking low-rise designs are more practical. More economical. Here's why— All new-generation buildings have one thing in common. They're computer-proven solutions made up largely of standardized components. So you and your client still get all of Butler's advantages. A low-cost way to build without compromise in design approach; a faster way to build; single-source responsibility; guaranteed costs; predictable performance and value; earlier occupancy; and better investment return.

And within the four systems you have your choice of seven factory-made curtain walls in excellent low-lustre earth colors, and four outstanding roof systems.

Do us a favor this year and take a close look at The New Generation of Buildings by Butler. Write: Architectural Systems Department, Butler Manufacturing Company, at the address listed below.



Sales Offices and Builders Nationwide BUTLER MANUFACTURING COMPANY 7601 East 13th Street, Kansas City, Missouri 64126



SPACE GRID®-A sophisticated structural/mechanical system with high performance environment, maximum space flexibility.



TRIODETIC®-A new, structural system that now makes domes, barrel vaults, exotic shapes, practical and economical.



LANDMARK<sup>TM</sup>—Contemporary system with decorative fascia plus horizontal profile. Modern appearance with economy. WIDESPAN<sup>TM</sup>—Butler's original rigid frame line. The system with real buyer choice, high performance, low maintenance.



AIA JOURNAL/NOVEMBER 1968 13



## A noted architectural firm builds its

LCN is pleased to show these pictures of the new office building of Minoru Yamasaki and Associates in Troy, Michigan, where LCN Door Closers were used on many doors.

LCN makes a variety of closers. Architects know them for the superb control they provide, for their clean simple lines, for their reputation for troublefree service. These qualities are not at all surprising when you think that LCN has been making door closers—and nothing else—for over 40 years. And that in each of those years they have made significant advances in door closer design and performance.

For full information see the LCN representative in your area. His phone number is in Sweet's Architectural File.



## own building



LCN CLOSERS, Princeton, Illinois 61356 A Division of Schlage Lock Company In Canada: LCN Closers of Canada, Ltd.

#### Newslines from page 12

said to be coming with some \$20 million. The Soviet team of architects developed a truss design using H-beams and steel piping that rises to 300 feet. It is expected to be the largest structure at Osaka to be built by people other than the Japanese, according to the Takenaka Komuten Co. which submitted the low bid (around \$7 million) for the job.

The pavilion is designed to represent an unfurling Russian flag. Expo '70 coincides with the centennial of Lenin's birth.

The deflated US pavilion was the work of architects/designers under the name of Davis, Brody, Chermayeff, Geismar, de Harak Associates. The joint venture is working on the new design made necessary by the reduction of funds.

Meanwhile, the US site remains idle while the Russian building, along with eight other pavilions Takenaka Komuten is constructing, is underway. In the trunk-andbranch system for the 815-acre fairgrounds, the US location is just south of Russia's. The system was laid out by AIA Gold Medalist Kenzo Tange, Expo '70 chief architect.

That sphere at Montreal, now an aviary and botanical garden, continues to receive honors, most recently the American Institute of Steel Construction's Special Award of Excellence as "an outstanding achievement in technology and esthetics."

A postfair run of Expo '67, under the title of "Man and His World," closed last month.

### Question of Who Is Leader In Design Team Approach Remains Unsettled Issue

When architects these days pose the question, "But who will lead the team?" their thoughts are not on the gridiron.

What they have in mind, of course, is the much-talked-about design team concept. And the question is being asked with increasing frequency within allied professional disciplines as well.

In Pittsburgh last month, the American Society of Civil Engineers heard its leadership role defended by the president of a Harrisburg, Pa., engineering firm.

John R. Dietz of Gannett Fleming Corddry & Carpenter, Inc., told a technical session on structural engineering that safety and attractive-Continued on page 18

AIA JOURNAL/NOVEMBER 1968 15

Circle 301 on information card

This colorful new booklet describes how Inland/Milcor Exterior Wall Systems, employing light-weight structural members, can help you stay

within your budget and still achieve the exterior effect you want. These versatile systems offer you, the architect, freedom to select or combine the surface materials, textures and colors you prefer. They include a unique assembly that provides a 2-hour fire-rated load bearing wall. They are suitable for any condition from bearing walls to balcony railings. They are used with exterior walls any type of structural framing system, and for almost any building size, shape or end use. that save space,

Inland/Milcor Exterior Wall Systems provide quality construction, proved in use for many years, weight, time yet are surprisingly economical - have provided savings as high as 50% of the installed cost of other types of construction. They're lighter, narrower and more quickly erected too - reducing structural requirements, adding usable space, and often contributing to earlier occupancy.

and cost. To get the whole story on how these systems can benefit your projects, send for your copy of the Inland/Milcor Exterior Wall Systems brochure. Inland-Ryerson Construction Products Co. Dept. K, 4127 West Burnham Street, Milwaukee, Wisconsin 53201.

> Formerly Inland Steel Products Company and the structural fabricating, reinforcing steel and post tensioning divisions of Joseph T. Ryerson & Son, Inc.

AIA JOURNAL/NOVEMBER 1968



Circle 356 on information card

INLAND MILCO EXTERIOR WALL SYSTEM

Guide to

## Look for value beneath the surface when you select pewing



COMBINATION SEATING features a variety of veneers, finishes and end standards. Quiet, self-rising seats with armrests offer theatre-chair comfort. A lot of religious furniture looks alike, but when you select American Seating furnishings, you assure your congregation of lasting quality that goes much deeper than what you can actually see. Naturally, only the finest, most durable woods are used, but what you can't see is the skillful kiln drying that controls warping, or the superb finishes that not only *look* attractive but resist moisture, wear, abrasion and cleaning compounds. These are just a few examples of quality that goes beneath the surface.

Many people who selected American Seating furnishings twenty, thirty, even fifty years ago are still using it with complete satisfaction. They know what we mean when we say, "Quality is the only true economy."

Why don't you find out, too. For literature, write Department AI-671-A, American Seating Company, Grand Rapids, Michigan 49502.





## FIRST WITH ALL-SOLID-STATE SOUND

Rauland





and consulting engineers. Write today. **RAULAND-BORG CORPORATION** 3535-L Addison St., Chicago, III. 60618

Circle 304 on information card

Newslines from page 15

ness in highways have always been chief concerns of civil engineers, and he added:

"Now that the team concept (cooperation between other engineering disciplines, architects, landscape architects and social groups) has come into vogue, it is clear that if we are to escape being relegated to the role of technician, we must battle the opposition for leadership."

Meanwhile, Archibald C. Rogers, FAIA, the most avid spokesman for the design team concept—he could be called the author as it is now conceived—has been spreading the comprehensive/team gospel.

Speaking in Atlantic City before the New Jersey Society of Architects, in a preview of an address he later would make to the American Institute of Planners, he said:

"If you're going to do a city over, then a public development corporation should be established—a single client which would commission a design team to redevelop the city.

"By using this technique, the planning is entirely comprehensive," Rogers said. "For example, a highway is not based on its own merits alone but on its relationship to transportation, land use and economy as well."

That same approach is being used by Skidmore, Owings & Merrill for 18 miles of interstate expressway passing through Baltimore. Partner Nathaniel A. Owings, FAIA, was quoted in *Time* (the Aug. 2 issue in which he appeared on the cover) as saying it is "the most important job that SOM has ever tackled."

Yet Rogers, in questioning at the New Jersey convention, admitted that the concept brings with it inherent problems in terms of establishing leadership, involving citizens, meshing systems, etc.

## Firm's Union Alternatives Topic of Upcoming Seminar

The newly formed Joint Committee on Employment Practices, of which the AIA is among the six founding professional organizations, will show its initial thrust Dec. 6 when it sponsors a seminar in St. Louis.

Called "Alternatives to Unionization—an Examination of Modern Employment Practices," the all-day meeting at the Chase-Park Continued on page 26



All Vinyl Wallcoverings are not created equal And beautiful, durable VICRTEX Vinyl Wallcoverings prove it.

The two most dangerous words in your specifications section are "or equal." They often open the door to severe disappointments and dissatisfaction with a finished project. With vinyl wallcoverings this is particularly true.

Because no other vinyl wallcoverings can match the rich textures, luminous colors, unique patterns and superior stain-resistant finishes of Vicrtex.

When you specify Vicrtex Vinyl Wallcoverings, you're perfectly justified to regard that "or equal" clause for the danger it is. Tighten your specs, double-check along the way, and make certain your beautiful design becomes a beautiful reality.



Empire State Building, New York 1 · (212) LO 4-0080

This is a ceiling at work.

It does more than look right. Because its heart, C-60 Luminaire, delivers light without glare, comfortable sound levels, conditioned air. It's a ceiling system you design with. Here, for example, vaulted C-60 modules are used with Sanserra Travertone<sup>™</sup>: a tile with a seam-hiding texture. The total system offers unusual design flexibility while meeting functional requirements. C-60 Luminaire and other ceiling innovations are described in our folio. Please write for a copy. Armstrong, 4211 Sage St.,

Lancaster, Pa. 17604.



## POLAR WHITE QUARTZ EXPOSED AGGREGATE

NGO

## Make something of it

## ... something great.

You can't beat it for pre-cast concrete panels. It's the toughest. The whitest. The most opaque. And one of the most beautiful, with no distracting transparent or reflective qualities.

Polar White Quartz aggregate won't stain or discolor in any climate. It's available in any quantity . . . and can be matched perfectly, even years from now. Equally important, the cost is competitive with any other maintenance-free facing.

Want samples? Write:

P.O. Box 1198 • Roanoke, Virginia 24006 • Phone: (703) 344-0971 A Subsidiary of General Stone and Materials Corporation



## **GLASWELD DOESN'T GIVE A DAMN WHAT THE WEATHER'S LIKE AT QUOGUE.**



ELD INSTALLED APRIL 1960, PHOTO TAKEN JUNE 1968.

ARCHITECT: JAMES A. EVANS, A. I. A.

In a delightful village on Long Island, New York, with the unlikely name of Quogue—there's a group of circular cooperative apartments called Round Dune. They were erected on a sandy spit of land bounded on one side by the Atlantic and Shinnecock Bay on the other.

The architects realized at the outset that in this exposed location the buildings would take far more than the usual beating from the weather and the elements. Brilliant sunshine on perfect summer days. Sand storms, sea spray, strong winds, downpours at other times.

Problem: what to use on the building's exterior that would stand up longest, or require the least maintenance, under these rigorous conditions. Solution? See next page.



## SOLUTION: U.S.PLYWOOD'S GLASWELD.



Solution: U.S. Plywood's Glasweld<sup>®</sup>. Because this asbestos reinforced panel with its durable allmineral coating withstands the most severe climatic onslaughts and keeps its new look for many years.

On the exterior of building after building, Glasweld has proved its durability. It appears optically flat when properly installed. Doesn't "pillow" or "orange peel." It's rustproof, incombustible (fire hazard classification 0-0-0), waterproof. Virtually impervious to stains, too.

Glasweld comes in 24 colors. Unique decorating effects can be created for both new construction and modernization.





PLAN SECTION THROUGH EXTERIOR WALL

There's more information about this versatile, economical and trouble-free paneling in our brochure on Glasweld. For your copy, call the Architects Service Representative at your nearest U.S. Plywood office or write U.S. Plywood, 777 Third Avenue, New York, N. Y. 10017.





## No matter how you approach it!





## GET SMOOTH UNCOMPLICATED LINES AND INHERENT NATURAL BEAUTY WITH REED EXIT DEVICES

Reed exit devices are just better looking. The modern slim lines blend in more naturally with modern doors. The round drooping crossarms, necessary with other devices, are not present. Only smooth flat lines that complement the installation.

Reed exit devices are a simple single plane, echoing the plane of the door. And the crossarm and operating lever are solid front and back. Looks good from any angle.

# E.

## DESIGN SIMPLICITY EASY OPERATION

Reed Exit Devices feature a unique operating principle. They operate every time. The crossarm and operating lever retracts the latch bolt directly with the easiest pressure. There are no cams or levers to bend or bind. You're assured of operation every time even with heavy usage or school building abuse.

For more information contact your Reed representative or write.



REED<sup>®</sup>DOOR DEVICES Box 58, Wood Dale, Illinois, 60191

2008

Circle 246 on information card Circle 239 on information card

AIA JOURNAL/NOVEMBER 1968 23 Circle 315 on information card

# Formica

## Product designs that make sense wherever



Paneling for maintenance-free walls. FORMICA® brand Panel System 404 has a warmth and richness that fit in beautifully with any room setting. Rich woodgrains have a soft, suede finish that's warm to the touch, a depth that eliminates all signs of glare and shine. Smudges and fingermarks wipe off clean with a damp cloth. The versatile spline and insert system permits you to accent or subdue—with bold contrasts or subtle matching of panels and inserts. For details, see Sweet's File 11a/Fo.



New "dress up" colors for trouble-free doors, surfaced with FORMICA<sup>®</sup> brand laminated plastic. Pre-finished, ready-to-hang interior doors may be color-harmonized to complement walls, floors, or furnishings. Tough, hard finish takes on all hands, resists scratches, grease and spills. No refinishing required. Opposite faces of doors may be different patterns to blend with the decor of adjacent rooms. For construction details of available types, including fire-rated, consult Sweet's File 17c/Fo.

Leadership For a highly imaginative product package that puts greater freedom in your designs, contact your Formica representative soon.

# has designs

## durability and low maintenance are important.



**New wall paneling for high-moisture areas.** New FORMICA<sup>®</sup> Panel System 202 eliminates tiles, grout and maintenance worries; stays fresh, new-looking for years. Flat, smooth surface may be color-matched perfectly to countertops, cabinets, walls or doors. Ideal for new construction; also for remodeling . . . goes over any structurally sound wall as is. Panel System 202 is a total system, including panels, trim molding and adhesive. For details see Sweet's File 11a/Fo.



**Restrooms can be bright!** And with FORMICA® brand laminate at your disposal, total room design is easier to achieve. FORMICA® brand toilet compartments, for example, are the most decorative, vandal-resistant compartment you can specify. The scratch-resistant finish is difficult to damage, easy to clean. Specially designed hardware gives the finished installation added durability and longer, trouble-free operation. For details, see Sweet's File 13b/Fo.



Formica Corporation • Cincinnati, Ohio 45232 • Subsidiary of



For instance, specific engineering and installation data on all important pool equipment; specification sheets; scale drawings; experienced technical consultation to aid in the design of the most dramatic, yet practical, commercial, institutional or residential pools. In addition, Paragon expertise in custom fabrication and product innovation can give you a "plus" advantage in your overall effort. Why not put our depth of experience to work on your next project? Check our Sweet's Catalog File insert 36c/ PAR or write for additional copies. We're glad to be of service.



Circle 302 on information card

#### Newslines from page 18

Plaza Hotel will deal with the acquisition and retention of firm personnel.

The committee was formed to answer the need for a cooperative effort established at a Chicago seminar last December on "Facing the Union Problem." (For a report, see AIAJ, Jan. '68, p. 6.)

Besides the Institute, the sponsors are the American Congress on Surveying and Mapping, American Society of Civil Engineers, Consulting Engineers Council/ USA, Council for Photogrammetry and Professional Engineers in Private Practice-National Society of Professional Engineers.

A Chicagoan, Louis A. Bacon, representing PEPP-NSPE, is committee chairman and will preside at the seminar's morning session. The treasurer, Robert J. Piper, AIA, also of Chicago, will be another participant, speaking as an employee on what makes it all worthwhile with the title "For Love or Money."

Inquiries regarding the seminar should be directed to Thomas R. Hollenbach, AIA, at the Octagon.

## Behavioral Data, Systems: 'Oversold and Underused'

The uses of social and behavioral data and systems analysis techniques have been "oversold and underused" in planning the kinds of buildings figuring in a research study of the Department of Architecture, University of California at Berkeley.

This is the opinion of Sim Van der Ryn, AIA, director of the study to assess the application of behavioral research and systems design methods in the planning of institutional facilities, including housing, health, educational and social service quarters.

The 18-month study has received a \$99,000 research grant from the National Institute of Mental Health.

Van der Ryn, professor of architecture, said that "theory, data and application have not been linked. New knowledge and techniques have the potential to build healthier institutions, or they can be used to reinforce anti-human tendencies."

A psychologist, a sociologist, an economist, two systems planners and another architect, Roslyn Lindheim, AIA, are also participating in the research.

Continued on page 33



Circle 217 on information card Circle 335 on information card

# Globe-Union builds a "jewel box"

Highlighting the superb design by Harper-Drake & Associates, Inc., Architects, of Milwaukee, is the arrangement of the facility's three buildings around a reflecting pool. This two-story executive office building is completely surrounded by the pool's expanse. Glass-walled enclosed bridges span the pool to join the various buildings.

Floor-to-ceiling walls of bronze-tinted Thermopane<sup>®</sup> insulating glass give the structure a ''jewel box'' elegance, enhance the corporate image of this manufacturer of electronic components, batteries and other packaged power units.

Thermopane with Parallel-O-Bronze<sup>®</sup> plate glass contributes more than beauty to the buildings. It softens the brightness of the sky and pool reflections. It reduces sun heat transmission through window areas. It reduces cost of heating and air conditioning. It heightens employee morale by affording eye-restful views of the site's natural beauty.

L-O-F makes a particular kind of glass for every purpose in building design. Consult Sweet's Architectural File. Or call your L-O-F Glass Distributor or Dealer listed under "Glass" in the Yellow Pages. Libbey-Owens-Ford Company, 811 Madison Avenue, Toledo, Ohio 43624.

Libbey-Owens-Ford





The old Philip Carey trademark (above right) is out! The new Philip Carey trademark (lower left) is in! We hope your continued confidence in our products will lead you to see it often in the future.

PHILIP CAREY CORPORATION, Cincinnati, Ohio 45215

28 AIA JOURNAL/NOVEMBER 1968

Circle 351 on information card

## SELECT THE FINEST

# GJ 80M HD non-handed surface door holder

00000

stops the door cushions the stop holds the door



Simon's Rock School, Great Barrington, Massachusetts Architects: Morehouse, Chesley and Thomas, Lexington, Mass.

## How S'mon's Rock School got its stock Andersen Windows.



nce there was an architect who was commissioned to design a one-of-a-kind campus which was to be the home of a whole new concept in secondary education.

So he carefully studied the future needs of the school, the wooded, 350-acre site, the beautiful Berkshires in the background, and decided to frame the views with stock Andersen Windows.

Why *stock* windows in such a unique design? With six types and hundreds of sizes, our architect had complete design freedom. He knew he could get them fast from local warehouse stock to meet his construction schedules. (He liked the local service backup, too.)

Then, of course, he wanted the natural look and warmth of the best wood windows so as to avoid condensation problems and insulate against the frosty New England falls and winters. He knew that the welded, insulating glass and close Andersen tolerances might mean as much as a 15% fuel saving in some of the buildings.

Finally, his experience told him the Andersen windows would operate beautifully for ever after.

And that's the story of how—and why— Simon's Rock School got its Andersen windows. May we help supply the happy ending in your next design?

For more information, see Sweet's Architectural or Light Construction File. Or, call your nearest Andersen Distributor.

















One of the newest uses of one of the oldest building materials is the sandwich panel, made by bonding a thin slab of marble to an insulating core and adding a hardboard backing. Such a panel is only half the weight of a 2'' slab of marble but has four times the insulating value.

The example shown here is the Livonia National Bank, Livonia, Michigan, one of six banks in a chain using the same construction technique. Vermont Pearl Danby Marble was chosen for this particular project, but any other exterior Vermont marble could have been used.

For further information on marble and its use in contemporary construction, contact your Vermarco representative or write to the Vermont Marble Company, Proctor, Vermont 05765, Dept.A-11. Vermont Marble...naturally the best



## Sandwich panels...contemporary, economical way to use beautiful, enduring marble



#### Newslines from page 26

## Precasters Expand Program Of Quality Certification

The Prestressed Concrete Institute has expanded its plant certification program to include architectural precast concrete products.

Thirty-eight plants throughout the United States currently hold the certified designation, having demonstrated the capability to produce quality products in accordance with the prescribed PCI plant certification requirements. These requirements are based on the "PCI Manual for Quality Control" for plants producing prestressed concrete products and the newly published "PCI Manual for Quality Control" on architectural products.

PCI will enter into contracts with any US producers, regardless of membership in the organization.

Under the program, a certified plant is subjected to three inspections yearly—one in-depth with advance notice given to the plant and two spot inspections without advance notifications. The firm of Ross H. Bryan, Inc., consulting engineer, conducts the plant inspections and performs the scoring based on the two PCI manuals.

Upon certification, a producer is authorized to display the "PCI Certified Plant" emblem.

Charles W. Wilson, chairman of the plant certification committee said of the program which is now in its second year: "I doubt very much that a program with the teeth that this one has in it has ever been successfully instituted before voluntarily."

Inquiries about the program should be directed to PCI at 205 W. Wacker Drive, Chicago, Illinois, 60606.

### US Archive of Historic Architecture on Display

Working with a small professional staff and with little fanfare in the nation's capital, the Historic American Buildings Survey currently is in the spotlight at the Library of Congress.

The first major exhibition devoted to the work of the HABS, on display until Jan. 1, includes 400 enlargements of architectural photographs and measured drawings, ranging from prehistoric Indian sites to a 19th century cathedral in Sitka, Alaska.

Since its establishment in 1933,

the HABS has preserved the details of some 13,000 structures in 40,000 photographs, 30,000 measured drawings and 10,000 pages of written documentation.

The staff is a part of the Office of Archaeology and Historic Preservation in the National Park Service, which has had advisory assistance from the AIA since the program's inception.

#### Necrology

JAY LOWE CHAPMAN Sherman, Tex. FRANCIS CHIAVERINI Providence, R. I. HIRAM J. HAMER

Hawthorne, Calif. HOWARD E. PHILLIPS New York, N. Y. GEORGE L. WILLOX Carmel, Calif.

Members Emeritus

E. LANE CRAWFORD Norristown, Pa. PAUL P. HENON Philadelphia, Pa. HERMAN A. SCHUH Philadelphia, Pa.

Honorary Members

U. S. GRANT, III Washington, D. C.

## Sedgwick dumb waiters are trouble free

even before they're installed

When you select a Sedgwick Dumb Waiter, you get a completely integrated installation including dumb waiter doors and self-supporting steel tower, designed and engineered by Sedgwick.

This places the responsibility for the entire installation in the hands of **one** supplier — cutting in half the red tape, contracts and approvals, and eliminating your coordination of door and dumb waiter design and erection. All equipment is shipped at the same time, saving shipping and handling costs. The same mechanics install both doors and dumb waiters.

Sedgwick Dumb Waiters and Doors are available in a complete range of modern, improved types and standard sizes that can be adapted to fit requirements exactly.

Doors are manufactured in bi-parting, slide-up, slide-down or hinged arrangement. Also access and clean-out doors (Underwriters' Labeled where required). Send for complete literature and specifications.



287 West 14th Street, New York, New York 10011

> OTHER SEDGWICK PRODUCTS : Sidewalk Elevators Roto-Waiters Residence Elevators Stair Chairs

Circle 250 on information card



## There has never been a siding material like it!

It "paints" itself...maintains itself... improves with age.

# Bare, (68) Cor-Ten Steel is now being used for industrial siding... and it's a natural!

Nature "paints" it with a dense, attractive oxide patina that seals out the atmosphere and retards further corrosion. If the patina is scratched, it heals itself. COR-TEN steel is one of the few manmade materials that grows more handsome with age, and its 50,000 psi minimum yield point makes it naturally more damage-resistant than other metals.

USS COR-TEN Steel is being used bare for its natural beauty, self-maintenance, and strength in buildings, bridges, transmission towers and sculpture in all parts of the country. Wouldn't it be a natural for your next industrial siding project?

How Much Does Siding Made Of USS COR-TEN Steel Cost? We don't sell it, so you'll have to ask a panel manufacturer. But the price will be right because COR-TEN steel is the most economical, maintenance-free architectural metal on the market today. And the beauty, durability and strength are built right in.

For more information, see your panel manufacturer, contact a USS Construction Marketing Representative through the USS Sales Office nearest you, or send in the coupon for our new booklet: USS COR-TEN Steel for Architectural Applications. United States Steel, P. O. Box 86 (USS5789), Pittsburgh, Pa. 15230. USS and COR-TEN are registered trademarks.

United States St P. O. Box 86 (U Pittsburgh, Pa. 1	SS5789)
	a copy of your new book: USS for Architectural Applications )).
Name	
Company	
Street	City
State	Zip




The Eli Lilly employee lounge and library. Beautifully carpeted in Cabin Crafts Cimarron. Eight shades, in greens predominately, give this area a feeling of quiet serenity. A big plus is the carpet's acoustical value.



One of several employee cafeteria dining areas gets its look of understated elegance from Cabin Crafts Cimarron. A beautiful look that stays that way! Its dense construction keeps soil on the surface. Spills and stains are no problem. Cleaning is easy.



Cabin Crafts Cimarron graces this office area. Notice how Cimarron blends with a wide range of colors. Gives the whole room decorator continuity.



This is the new administration building of Eli Lilly and Company, international pharmaceutical manufacturer.

## \* Of course it's a Haws drinking fountain

...a beautiful drinking fountain shouldn't be too obvious. Agreed? Carefully-sculpted to enhance your ideas ... clad in the native splendor of cast stone (five colors, two finishes). The Haws Model 30 outdoor drinking fountain stands exquisitely in harmony with its setting ... any setting. A fountain? It could almost pass for a work of sculpture. Yet this sly harmonizer is incomparably rugged – a fountain for all seasons, kid-proof,

weather-proof, freeze-proof! Write Haws Drinking Faucet Co., 1441 Fourth St., Berkeley, Calif. 94710.

The drinking fountain that looks better than a drinking fountain—Haws Model 30 in vivid stone.



Circle 235 on information card

## The number is Corbin 110

Your number for dependability. Strong, functional and stylish. One of many utilitarian door closers from Corbin. It typifies the beauty, quality and dependability built into all Corbin products.

Your Corbin distributor can furnish you with complete data on this design, or write P. & F. Corbin, Division of Emhart Corporation, New Britain, Connecticut 06050. In Canada—Corbin Lock Division, Belleville, Ontario. Circle 346 on information card



#### UNFINISHED BUSINESS



BY WILLIAM H. SCHEICK, FAIA Executive Director

#### When You Think About Housing

The poor," says the Bible, "shall ever cease out of the land." It oesn't say why.

To America, the land of opporunity, came millions of poor Euroeans, often settling in ethnic comunities. They didn't stay poor. The youthful nation needed reources of human energy and ingeuity. It rewarded those who could rovide it.

Mature, rich America was begining to act as though the Bible vas right. Millions of Americans eemed doomed to be the poor who re always with us. Especially the escendants of some immigrants who were brought here by force.

But America now asks why this hould be. Is there something about mature, rich, cultured society that ancels out the opportunities offred by a youthful, acquisitive and ncultured society? Indeed. Our sohisticated civilization simply has o productive role for the underducated, undertrained poor.

The option is whether to treat nem as a permanent human liabily, or treat them as a human repurce by curing the social, ecoomic and physical ills which nreaten them with permanent illure.

We call it the urban crisis.

A major sector of this complex roblem is a direct concern—in act, a direct responsibility—for rchitects. This is the physical enironment that will be one of the teans to transform humans from abilities into resources. A physcal environment that helps change espair into ambition, apathy into ride, resignation into zest. If this iracle cannot be fully wrought for dults, it is worth the try for their mildren.

Housing is the foundation of the hysical environment. Housing is the physical translation of solutions o socio-economic problems. Peraps one reason why early public ousing turned out to look like barticks was because the underlying perio-economic problems had not een solved at all. Now we know that housing is not just a family living unit. A house on a mountaintop is the escape for a well-to-do family from regimented suburbia. The share cropper thought there was an escape for him to the tenement in the city. So we know that environment is community and community is housing and are learning how to plan.

The problem: housing low-income people in the urban highdensity community.

The housing bill of 1968 says that 6 million units of low-income housing must be built in 10 years.

Is it conceivable that these 6 million housing units can break completely with old concepts of public housing? Tom Rogers, director, Office of Urban Technology and Research of HUD, seeks the breakthrough in research. Can research create housing that will contribute to transforming the poor from a liability to a resource?

Can research discover the essentials for healthy living for the poor? As an architect, do you know what these essentials are? If you do, you know more than anyone else at this point in time. Whatever you know about design for affluent family living doesn't count. That's too easy.

The AIA called for "better design" for low-income housing. Too unspecific for the law-making congressman who thinks design means only attractive exteriors.

The AIA has called for "amenities" in low-income housing. The General Accounting Office thinks this means "frills—like balconies." No one mentions the quality of open space, as opposed to ample open space consisting of debrisstrewn, beaten earth within cyclone fences. No one mentions privacy or quiet for the poor. No one mentions materials and finishes that will not deteriorate to slum quality too quickly.

No one mentions these things because no one can speak with authority about them as essentials (not amenities). The HUD research program thinks of other things first:

• numbers—so many million units

cost—so many dollars per unit
hardware—technology to solve cost per unit.

What is the outcome of this approach? For you, Mr. Poorman, probably something like a 1960 compact car. The numbers/cost/ hardware approach seems related to "what we can afford" for you.

How much more would it cost to give you the essentials for living to upgrade your life? Why, we really don't know. And we might have to subsidize them.

You could call my house an upper-middle priced 1965 model. Mr. Gifford in Red Oak Heights owns a superdeluxe 1969 model. The families in Sherwood Forest (no trees at all) have the lower-priced full sized models. All of us have a good deal more than the essentials. Each of us subsidizes his living to a point well above the "essentials level" according to his ability to produce equity or meet mortgage payments.

Zeke McCoy out in his Appalachia shack is hopelessly below the essentials line. He can't subsidize himself up to a cold water sink.

Some of our lawmakers know this. They have put into the housing bill several ways to subsidize Lincoln up to something "decent," as conceived by the numbers/cost/ hardware approach.

As a taxpayer who will help this subsidizing, I want to know how we can subsidize Lincoln's housing up to that yet-to-be determined level of essentials that will help him eventually to leave poverty and public housing forever. I want to see research include this basic investigation.

Architects have been accused of abdicating their responsibilities in housing. Many have. Now is the time for us to be active in the new thinking, especially on basic design standards.

Who is closer to understanding design for humanity?  $\Box$ 

### THE THE CHAIR HAS HIDDEN DURABILITY.

Guaranteed for 5 years. The steel frame, with 12 hidden wire welds, completely supports the seat and back all around. The flexible, leather grained thermoplastic seat resists cigarettes, knives, impact, weather and stains. Even the Lexan glides are unbreakable and won't come off, rust or mar the floor.

Write for free full-line furniture Catalog 3-68



Current Catalog 3-68 COMMERCIAL FURNITURE IN ADVANCED DESIGN

Oxtures Mig. Corp. 1641 DII CRYSTAL . KANSAS CITY, MO. 64126 . PHONE COLLECT 816/241-4500



# Bright idea

Wash fixtures that serve many and save money! Bradley Washfountains save an average of 25% on floor and wall space. You can choose from 54" and 36" diameter circular and semi-circular models, plus two-person Duos. So you can specify Washfountains that get maximum use out of every square inch of available space.

What's more, Washfountains serve up to 8 people with one set of plumbing connections, cutting installation costs as

much as 80%. They require practically no maintenance. And they reduce water consumption from 45% to a whopping 80%. Specify Washfountains for plants, commercial buildings, schools, institutions—wherever you want to handle large groups of people economically. The more Washfountains serve, the more they save. See your Bradley representative. And write for literature. Bradley Washfountain Co., 9109 Fountain Boulevard, Menomonee Falls, Wisconsin 53051.

## From Bradley

## AIA JOURNAL



-----



There was once a time when innovation developed during the course of day-to-day professional practice influenced technological and social changes. The pace during these days was such that exchanging ideas at the annual convention and reading one's professional journal with dedicated regularity was all a practitioner needed to do to stay relevant to the changing scene and understand what the students were talking about. That time is gone.

Now the scene is dynamic. Technology, along with changes involving social, economic, governmental and psychological factors, are perplexingly complicated, and one is hard-pressed to determine what to do. The urban situation is getting out of hand, and even now threatens to do permanent injury to our nation: 200 million people, all exercising freedom of choice in deciding their acts and aspirations, are demanding a viable environment.

Neither the profession nor the national establishment has learned how to fulfill the demands to satisfy the aspirations of a dynamic, democratic society. But more and more, the national establishment looks to the architect for the innovations, the leadership, the coordinating skills necessary to harness advancements for the common good. For the architect, this requires the development of skills well beyond which his training heretofore has prepared him and an adaptability to change exceeding previous norms.

Research and education—call it professional development—are accepted responsibilities of The American Institute of Architects because these necessary activities can best be done by the members pooling their efforts. But professional development remains the obligation of the individual architect. This is the concern of the AIA Committee on Internship and Continuing Education.

The four articles that follow explain to the chapter how professional development can be made meaningful for the individual. It is the result of a three-year study which, of course, is continuing beyond this report in techniques, needs, motivation—all of the considerations necessary to develop continuing education programs and to encourage participation. H. SAMUEL KRUSÉ, FAIA

Chairman, Commission on Education and Research



**PDP:** The letters stand for Professional Development Program which stands, in turn, for sustained preparedness of the professional, enriched preparation of the intern. In the four articles that follow, members of the AIA Committee on Internship and Continuing Education describe the background, development and purposes of its comprehensive and vital program.



## Means of Survival

#### BY JULIAN E. KULSKI, AIA

Although it is true that the practicing architect learns something new every day, it is equally true that his "education" is so accidental and sporadic as to dictate special and continual effort toward architectural competence.

The architect who neglects professional development faces professional extinction. Continuing professional study is the best way to avoid this tragedy. While recognizing this, the architectural profession has, however, the singular distinction among the leading American professions of not having a comprehensive, organized program of continuing studies.

This is largely the result of a rather widely held but antiquated notion that he who passes the state board examination and becomes a registered architect automatically becomes a full-fledged architect, competent to undertake and solve any architectural problem, however new or complex.

This sense of a false security generally is shattered soon after the young practitioner opens his first office. But premature notions of readiness are responsible, no less, for the underutilization of architects in the United States and for the gradual but dangerous trend of ever-decreasing influence of architects in the development of this country, of lowered reputation, remuneration and prestige.

Many leading architects and architectural educators have repeatedly called upon architects to give more significant recognition to the professional responsibility for improving their competence in a constantly changing society. However, it is unfair and unworkable to place the responsibility for sustained professional development solely on the individual architect.

The American Institute of Architects owes to every practitioner the basic duty of helping to provide him with the opportunity to become a better architect and a more successful one in shaping the American environment.

There are two major and vital areas of architectural practice which need continuing education: professional competence and professional responsibility.

The need for greater professional competence is recognized by the profession and indeed generates the greater interest and enthusiasm. It is considered mandatory that we make continuing education available to all, that we develop educational programs aimed at improving our general competence, and that we offer opportunities for advanced instruction in specialized fields. The objective of a successful program of postgraduate education must be more than that of providing practitioners with additional information; it must be based upon the principles of the teaching-learning process which develop personal standards of excellence.

The second need, to create a higher degree of professional responsibility, is the overriding problem facing the profession today. The AIA Standards of Professional Practice are written around the traditional role of the architect, the design of individual buildings, with the primary stress on his responsibility toward the individual client. With the expansion of architectural practice into urban design, this traditional responsibility should also be expanded and redefined in terms of the architect's responsibility to the community as a whole.

The architectural profession must assume greater responsibility for the creation of the total physical environment and to this end must re-examine and reorganize its standards.

The responsibility for developing a truly effective program for continuing education is clearly the joint duty of the AIA and the Association of Collegiate Schools of Architecture. Education of quality cannot be provided without the active collaboration of the schools of architecture.

American architects are confronted with problems of increasing complexity, not only within their practice but also in the many activities heretofore not traditionally associated with architectural practice. With the United States engaged today in a mammoth building and rebuilding program, the architect's largest client is government, but the participation of architects at the middle decisionmaking level is insignificant. At the highest level it is nonexistent. According to a recent survey, there are no architects in federal government service at the levels of assistant secretary or above and none on the staffs of Congressional committees. No architects are US senators or representatives, state governors or mayors of large cities, and furthermore, government policies are almost totally devoid of design policy considerations.

It is unnecessary to continue enumerating the new problems with which the American architect is confronted. Many of these problems result directly from the increasing complexity of architectural practice and from changing economic, social, legal and financial structures. Also, because of the architect's unique creative, analytical and administrative abilities, there is an ever-increasing need for his services outside of actual practice, as the Princeton Report clearly shows.

However, it is beyond a shadow of a doubt that even if all recommendations of the Princeton Report were implemented, architectural education, no matter how excellent, still would not prepare the student for all of today's architectural problems, let alone tomorrow's. Not in so short a time as five to seven years.

Continuing education in architecture must be viewed in the broadest possible terms. It is an educational process which begins the day a commitment is made to enter into the study of architecture; it carries on through undergraduate and graduate studies, the internship program, research and professional activities and midcareer development programs; and it is of greatest significance during the most creative years.

There is an enormous interest in continuing education and an almost universal conviction that our profession can wait no longer for an effective and comprehensive program. This attitude runs through the profession, encompassing practicing architects, local and national officers of the AIA, recent graduates and students. It has been best expressed by the following statement of Walter B. Sanders, FAIA, made while ACSA president:

"What is needed is a comprehensive, highly coordinated, long-range program of continuing education not a few vaguely related courses but a total program embracing course work in all areas of professional practice, from office procedures through all the design disciplines (site planning, structural design, mechanical design, etc.) to highly specialized building types. Such a total program would require not only the resources of the profession but the resources and facilities of the schools of architecture.

"At the national level, the AIA and the ACSA should together develop effective continuing educational policies and coordination. At the state and regional levels the societies and chapters should establish specific programs in conjunction with the schools. With proper cross-communication and feedback, 'continuing education for architecture' can become a meaningful reality—a tool with which to do a better job.

"What all this adds up to, I think, is that it behooves us, both teachers and practitioners, to work together and at all levels in furthering the establishment of a comprehensively designed continuing educational program for architecture if we are, indeed, to assume increasing responsibility for the creation of the total physical environment. Without such a program we cannot, in my opinion, look upon ourselves as truly qualified for such an important and formidable task. The need is there. The funds to initiate study of the problem appear to be available. All we need is action."

The profession as a whole urgently desires a comprehensive program in continuing education to 1) assist in improving professional competence, 2) broaden responsibility of the profession, 3) improve and strengthen the role of the architectural schools and 4) coordinate and direct the entire spectrum of continuing architectural education activities on national and regional levels.

It is obvious from various national studies that architects are inadequately compensated for their services, particularly when compared with other professions. In order to increase their earnings absolutely necessary not only for their individual development but the future of architecture—architects must qualify themselves to give better service to their individual and corporate clients and, most certainly, to better serve society.



#### BY GILBERT LEFFERTS JR., AIA

Education is a lifelong process. In reality it has to be; it has to be when we are told that the half-life of technical information is only about 10 years. This means that a decade hence half the technical information we now hold will be irrelevant.

Continuing education programs introduce a broad array of opportunities for grasping unfolding knowledge, for keeping up.

Of the three means of gaining an education—formal instruction in an established institution; selfeducation; and scheduled, programmed postgraduate instruction —continuing education deals with the latter two.

The learning processes also number three. They are the abstract, delegated to the general aspects of education provided in the schools; the specific, involving selected topics aimed at the preprofessional through internship; and the precise, pertaining to detailed aspects of a given subject of relevance to the professional. Again, continuing education deals with the latter two.

The dictionary defines an intern as a graduate gaining supervised practical experience. "Internship" is the term given to a program of continuing education preparing him for a professional career through exposure to all the basic aspects of professional practice.

Continuing education for the professional involves a program to keep him abreast of the latest developments in materials and methods, practices and procedures.

Continuing education is both in demand, and, to be sure, in some supply through various programs offered around the country. The purposes here are to discuss demands for intern and professional instruction, to assess current offerings and to define the voids evident in present programs and procedures.

#### DEMANDS

It is significant that to date the architectural profession has failed to undertake a meaningful program for either intern or professional. The demands are evident from the following recent surveys:

ACSA Survey: An ad hoc committee on internship of the Association of Collegiate Schools of Architecture conducted an inquiry into the internship training experiences of a group of graduates and found general endorsement of the internship period. There were many comments on methodology, however. It is significant to note that those who complained of insufficient employer interest in or responsibility to the intern constituted a minority. Constructive proposals for improving the intern program included suggested short courses and seminars on topics of special interest and a program to directly involve the intern with the real problems of urban architecture.

NIAE Survey: An independent survey was conducted in 1965-66 by the National Institute for Architectural Education regarding the development of a significant internship program. Questionnaires were sent to more than 250 recent graduates. Thirty-three percent responded, indicating an interest in a program aimed at their group. Conferences were held with the graduates to determine their needs.

From these discussions it was concluded that a definite void exists in architectural education in the period between completion of formal study and attainment of professional status. At the 1966 AIA convention in Denver and again at the New York City convention the following year, NIAE held seminars on the general topic of continuing education. The seminars brought together, along with NIAE personnel, representatives of the AIA Committees on Education and Continuing Education, the National Council of Architectural Registration Boards and Princeton Report researchers. "Demands" for a continuing education program were reinforced in these seminars, but in general their conclusion was that "everybody is talking about continuing education for the architectural profession but nobody is doing anything about it."

AIA Survey: The AIA Committee on Internship and Continuing Education in 1966 circularized the membership by chapter and state organization to obtain basic statistical data on the demands for a program for both intern and the practicing professional. The percentage of returns was well above the average, clearly indicating wide interest (see chart on p. 53).

A strongly affirmative—almost unanimous—vote acknowledged a need for "continuing education on a high professional level." Overwhelming support was given for both intern and professional programs. There was unanimity to the effect that such programs should be administered by a combination of the profession and the schools.

Since continuing education requires of the professional an investment, it is noteworthy that a majority of those responding was willing to devote both time and money to participate in such programs.

Eighty-five percent of the respondents indicated firm support for a full-time professional staff for the administration of the program on both national and regional levels, similar to the formats followed by the engineering, medical and legal professions.

Professional Societies: The National Society of Professional Engineers sponsors continuing education programs through its sections monitored by the central organization which recommends specific courses to the membership.

The American Medical Association also maintains an active program serving some 30 recognized specialties in medicine. These programs are initiated by the various state medical societies. There has been a suggestion to establish a system for relicensure or recertification at frequent intervals—based on participation in continuing education programs—but for the present the medical profession views this as unrealistic.

The American Bar Association, composed of some 21 sections representing specific fields of practice or basic interests, yearly sponsors a minimum of one continuing education program per section. The results are reported to the membership in 87 different publications. In addition, up to three invitational seminars are sponsored annually by the ABA, some lasting as long as five days with fees up to \$400.

From these surveys both within and without the architectural profession, it is evident that 1) demand and support exist for a significant program of continuing education for both intern and professional in architecture, and 2) other professions have such programs and they are well established.

#### ASSESSMENT

Internship: The Philadelphia Chapter AIA is currently evaluating a comprehensive internship program begun in 1966 and enjoying the support of both local practitioners and the Pennsylvania State Registration Board.

Every practitioner engages in an internship program whenever he hires an architectural graduate. It is incumbent upon the professional to make the intern's "in-house" experience as significant as the limitations of practice render possible.

The significance of the Philadelphia program is that its emphasis is on the intern's exposure, through an organized pattern, to all that is required to maintain an effective practice. It emphasizes participation of the intern-not the mentor -in seeking this exposure by capitalizing on his natural motivation to achieve competence. It provides both intern and mentor with a running, visual picture of the intern's progress through this exposure and leaves all evaluation to the NCARB -relieving the office of this responsibility.

The program differs from previous attempts in that it recognizes the futility and inconclusiveness of experience records of a general nature, and it brings together the natural incentive of intern and office to provide a comprehensive exposure. It also has mandatory features, including outside course work organized on a professional level and at the intern's cost. The Pennsylvania State Registration Board has accepted the merits of this program and beginning January 1969 is requiring the intern's documents to be submitted as a prerequisite to examination.

Other internship programs have been initiated in Kansas and West Virginia.

Community Design Centers: The

term workshop might also be applied to these centers having a twofold purpose: first, as a place where architectural advice is made available to neighborhoods not in a position to otherwise benefit from professional services; and second, as a place for architectural graduates to serve as interns. These centers or workshops provide real program situations and constraints through direct exposure. Since services are generally performed at night, workshop experience is supplemental to office experience.

The design center movement, sometimes referred to as "advocacy planning," is a totally new role for the architectural profession. It resembles the legal aid services of the law profession. Financial support has been forthcoming from private foundations and public agencies, including among the latter the Department of Health, Education and Welfare Higher Education Fund, Office of Economic Opportunity, and the Department of Housing and Urban Development.

The most firmly established design centers are the San Francisco Community Design Center, Architects Renewal Committee in Harlem, Philadelphia Chapter AIA Workshop and the New York Institute for Architecture and Urban Studies. Volunteer professional service units are also under consideration in a few other cities.

A new organization, whose program was initiated this past summer, is the National Association of Student Planners and Architects



through which students provide technical, architectural and planning services to local community organizations otherwise unable to afford such services.

The San Francisco Community Design Center, which opened in January 1966, is an outgrowth of a program on Continuing Education in Environmental Design initiated by Claude Stoller, AIA, with support from the University of California. The center is currently involved in more than 50 projects ranging from rehabilitation of old houses to planning parks and playgrounds to studying low-income housing for entire communities. A project once accepted is assigned a senior professional volunteer who heads a staff of volunteer interns.

The studentless San Francisco program differs somewhat from that of the Architects Renewal Committee in Harlem which began its activities by establishing summer workshops with students from major architectural schools. ARCH grew out of a 1964 symposium sponsored by the New York Chapter AIA Housing Committee. A chief concern of ARCH is the training of minority group youth in the basic principles of architectural practice.

Philadelphia is the first city to have an AIA-sponsored community design center. The AIA Workshop, as it is called, involves upward of 30 volunteer architects, interns and architectural students in more than a dozen projects aimed at assisting neighborhood associations in achieving their goals.

The Institute for Architecture and Urban Studies in New York City is basically a training organization, for full-time graduate students, which seeks to provide better qualified personnel for professional offices.

But the Institute envisages, as its program develops, the introduction of a continuing education program through seminars and lectures to provide a forum for architects on the social, economic and political problems of physical design. It is also proposed that through participation in the Institute's education program, for limited periods at midcareer, a practitioner can become acquainted with new problems and new methods in architecture in the urban context.

Continuing Education: There is an increasing number of independent courses, lectures and seminars being offered to the architectural profession. A review of these programs (40 were tabulated by the



committee) readily reveals that they can be classified according to sponsorship: university (by far the largest group), private or professional.

Of special note is the increasing number of private institutions and associations organizing special courses for the architect. These include the Crowell Collier Institute and a projected series by the Building Research Institute and Construction Specifications Institute.

There are as many different subjects and formats available as there are sponsors. However, certain trends and conclusions can be extracted. It is interesting to note that many universities have established extension divisions or continuing education divisions to further adult professional studies. Where the number of participants is limited, the totals are found to be relatively small, 15 to 30-indicating concentrated work sessions. The costs vary according to whether they cover lodgings as well as registration fees. It should be noted, however, that an adequate fee structure makes these programs self-sustaining in terms of operational and staffing costs. The subject matter of these continuing education programs ranges from the general to the specific.

A further point in architectural education to be identified is the planned programs and seminars held in individual architectural offices across the country for the benefit of their own employees.

The necessity for today's professional to maintain a working knowledge of his field is becoming increasingly evident. It is significant to note that the NCARB, at its July meeting, established a study group to investigate the need and responsibility for recertification procedures and requirements. Voids in Content: Internship programs as now constituted relate to "in-house" techniques. There is currently no national program to introduce "extra-curricular" experiences to supplement the intern's office experiences. Although the independent courses and seminars referred to earlier are generally available to the intern, they are not specifically oriented toward him.

VOIDS

Existing design centers which provide significant twofold practical programs, as in San Francisco and Philadelphia, are too few and far between. Each metropolitan chapter of AIA should consider the establishment of similar centers or workshops to provide those areas requiring professional urban planning services with the best architectural advice available. In so doing, these centers would also provide experience for the intern.

The discussions held with the preprofessionals have indicated such a need for assisting them in recognizing and accepting the practical realities of office practice and the restraints imposed upon a real project, while at the same time maintaining the creative thought and spirit stimulated in a student while in school—but so often discouraged when entering an office as a "junior draftsman."

The preprofessionals also have indicated a need for group discussions in workshops which could be conducted with established practitioners and recognized specialists in given fields so as to continue their contact with the intellectual atmosphere. Research and study in specialized fields was also considered an area which would help the preprofessional achieve recognition in the profession. The most popular subjects for a "study and experience" program were urban renewal and housing. The plan of study in which the majority expressed an interest was design. Although design is probably the best presented discipline in architectural education, only about 20 percent of the candidates pass this one phase of the registration examination.

The AIA survey findings recognized the need for discussing the everyday problems of practice. They indicated that seminars and workshops, with attendance limited to no more than 20 persons, are considered the best continuing education formats. The subjects of greatest interest included: The Architect and the Law, Structural Techniques, Design Development, Urban Design, Regional and City Planning; Programming; Estimating and Architectural Economics; Specifications; Office Management.

Voids in Procedure: There are three basic voids in procedure: communication, coordination and continuity.

It is a shame that, except in iso-

lated areas, there is today no defined program of communication with a graduate from the time he leaves school until he applies for licensure.

Although the ultimate responsibility for professional development rests with the individual himself, we in the professional and educational fields should not make it so difficult for that individual to realize his legitimate aspirations.

The AIA membership survey indicated mixed opinion on the need for a professional publication devoted to "continuing education."

It is important to note, however, that self-instructional programs have proved as effective as other forms of instruction and often are more useful for retention and individual efficiency. A means must be provided for disseminating information on continuing education to both the intern and the professional.

Coordination of the AIA programs at the national, regional and local levels is required with those of the affiliated associations of ACSA, NCARB and NIAE together with the continuing professional studies programs of other disciplines. Also required is coordination of the many programs of continuing education currently available to the profession. These programs must be reviewed and cataloged to avoid duplication of effort.

No program to satisfy a given need will fulfill that need unless continuity of effort is available. Continual evaluation and monitoring must be provided so that the program may be revised as the needs of the profession are revised.

To sum up, there is not only a need for continuing education in architecture, but a continuing need for cooperation and coordination between the schools and the profession and society.

This calls for the establishment of a National Center for a Professional Development Program in Architecture under-the auspices of AIA/ACSA/NIAE, dedicated to the concept that education is a lifetime process and structured to stimulate and coordinate provocative ideas for the continual improvement of a national program of continuing education.



#### BY ERNEST J. MESSERSMITH JR., AIA

The task of The American Institute of Architects' Committee on Internship and Continuing Education is to examine the role of the profession with respect to the evolving careers of its members, and to establish what responsibilities the profession should undertake in this connection.

It is easy to become over-organized in such an effort. And it is easy to recommend sweeping proposals having remote chances of being implemented, or even taken seriously.

Such proposals are often the result of long and labored deliberations, the conclusions of which are generally shaped by unforeseen considerations significantly affecting the original precepts. It is this human trait that prompted the Duc de la Rochefoucauld to accurately observe: "Although men flatter themselves with their great actions, they are not so often the result of great design as of chance."

As with most aspects of human

nature, however, there is the other side. It has also been observed, for example, that "chance favors the prepared mind." On pondering our assigned task, this observation provides us with what seems a more reasonable point of beginning. Architects, like other people, prepare their minds by learning the things necessary for survival. And quite often they learn them by chance.

Indeed, "architects-in-learning," at whatever point in their careers, have been the constant companions of chance—they have had little choice. What is astonishing is the lack of even token attention to the process of updating by what is assumed to be an imaginative and farsighted fraternity. It is not even remotely sensible that a profession possessing the abilities so obviously necessary to an evolving society should be so threadbare in its efforts to keep itself prepared.

There need be no ego conflict in a direct approach to this necessity. It has to be obvious, however pain-

ful to some, that the many aspects of total environment are so interrelated with physical environment that we architects are in real need of a sensible amount of organization with respect to continual selfpreparation. Chance must be reduced. We are caught up in inescapable motion. Men need to be ready; they must be ready sooner; and, more of them must undertake the preparation. Younger men are getting larger responsibilities earlier in their careers, for the simple reasons that schedules are being forced and manpower is limited. Established practitioners are undertaking larger-scope responsibilities frankly because they know their profession logically should provide the services required.

This is all happening fast. And it is wholly inadequate for the profession to do nothing on the pretext that all the data is not yet in—that education is changing, that licensing has not yet established its own definitions, etc.

After all, this is—we should not need be reminded—a profession.

Actions affecting the directions of a profession should come from the profession. Certainly, they should not be the results of "reactions" to proposals originating elsewhere. We most assuredly know better than anyone else what is becoming required of us. What is left to do in light of this knowledge is to establish what we require of ourselves and then set about to provide it.

Amid all attempts at understanding our times, one thing is clear: Changes are occurring and will continue to occur at an increasingly rapid pace.

For our purposes, that's all that is really necessary to understand. If programs for professions are to be established, they must be programs that can:

easily be changed and updated,
transmit the concept that it is necessary (for the learner) to continue to keep updated.

The schools have their problems in establishing programs to cope with the needs of students (and, in many instances, are doing something about these needs). The licensing agencies are aware that broad changes are inevitable in their programs (they, too, are beginning to approach these problems). The profession, now becoming aware of its shortcomings in preparedness procedures, should have led the way in articulating a course of action.

As yet, it has not.

Now the profession must assess its position. It needs to form a flexible program that can reflect the demands of society on one side while simultaneously absorbing products of institutions who are also, hopefully, attempting to provide a similarly flexible learning envelope.

What then is this program? What does it encompass? How does it relate to schools and registration agencies? What does it do for the individual as he leaves his formal education years?

First of all, there is clearly a definable area of formal academic training. That is to say, no matter what program—Princeton Report type, VPI type, etc.—an individual aspiring to practice architecture, or some specialized area within architecture, will pass through an organized academic program.

From the point of successful completion to the day he retires from practice, the professional should have a more-or-less continual program for his preparedness. In short, a Professional Development Program—a program providing the best available opportunities for continual training and learning throughout his career.

It must acknowledge the limits of the schools and undertake to assist the early maturation of the aspiring professional. PDP should and will provide a contact with every graduate, whether he be generalist or specialist, and direct his attention either way. PDP will become the liaison for the profession with the National Council of Architectural Registration Boards coordinating internship requirements with licensing standards, however these develop.

PDP will provide groups, i.e., AIA chapters, with the tools to organize direct exposure programs for students, interns and young professionals by addressing current and pressing social needs.

PDP will provide, through the cooperation of universities and chapters, the largest groups (i.e., AIA regions) with complete programs for continual updating, offering courses and seminars in locations so situated as to be accessible to region members.

Individually examined, the areas covered by the Professional Development Program are:

#### INTERNSHIP

Undoubtedly, the area most neglected by the profession has been that endured by the graduate on his way to the registration board. With the exception of school years, no other time is more important.

It should be understood that no internship program is going to "teach" per se. An intern is committed to achieving professional status. At this point he is primarily motivated by this commitment; no "top-down" or "instructor-pupil" relationship is either necessary or, indeed, existent.

His motivation is "bottom-up." He knows there is much with which to become familiar and he is increasingly aware that, with the possible exception of some design capabilities, he is not knowledgeable enough to accept the responsibilities of a commission. Therefore, he cannot pursue his career until he is more prepared. This is genuine motivation.

It follows then that what is needed is an organized system of exposure.

The intern must be shown what

subjects are most important to understand—what responsible practice entails, legally as well as technically.

This means issuance to all graduates of an exposure program document designed to give them a "time and subject" guide, capable of indicating at any period their progress in covering this work. It also means heavy participation on the part of the interns, and the cooperation of NCARB.

It will mean compulsory completion by all interns of such tasks as writing agreement documents; writing at least one complete specification (including all general and special conditions); attendance at, and participation in, the presentation of schemes to public agencies for development and approval; thorough estimating exposure; and compulsory attendance at professional courses on legal responsibilities of practice and office administration.

As the "architect-specialist" graduate develops, special exposure documents will be tailored to assist him in covering his work. The objective will be to bring the intern from graduation to registration while imparting along the way some semblance of understanding of the full scope of his responsibilities. The profession owes him and itself—this much.

The registered practitioner has an inherent position in this relationship. For he also is naturally motivated to provide the proper exposure for his interns in order to bring them to productive potential as quickly as possible.

Under this concept there is no need for the employer to keep records. The intern makes all entries and presents his charts on a scheduled basis. At this time, he and his employer are exposed to graphic evidence of progress being made. If the employer cannot move the intern around, the intern moves to another office—a process which has occurred in the past, and, it is realistic to assume, will continue in the foreseeable future. Estimated time for employer is about five minutes per intern each six months.

As for evaluation, it would be redundant for an employer to evaluate an intern at any time. That's what the state registration board is for. The board will, and should, take full responsibility for judging a man ready for practice.

Incidentally, it makes little difference whether the NCARB reduces or alters its examinations. We are concerned with the whole. Under the Philadelphia program the intern's experience record consists of two sheets. Sheet I requires the listing of all jobs worked on during the review period. Each project is assigned an alphabetic designation. These letter designations are used on Sheet II in the appropriate spaces designating phases of the project to which the intern has been exposed. Sheets give both intern and mentor quick disclosure of what has been covered, what needs to be. Mentor verifies experience.

OFFICE	DEXTER, ROYAL & BANCROFT	MENTOR			
1	211 SOUTH INTH STREET	C.N. ROYAL			
PROJECT	S	SCOPE # 60,000			
D	NORTHWEST MEDICAL CENTER . PHILADELPHIA	320,000 -			
E	EXTON JR. COLLEGE . CHESTER COUNTY, PA.	2,400,000 -			
TATEME					

- "O" Candidate beginning to develop technical details.
- "C" Field supervision with principal.

intern and his development as a practicing architect. If NCARB turns out to be testing only parts of the architect, that should not, in any major way, affect our goals.

PDP will, with respect to NCARB, attempt to coordinate preregistration training in step with the evolving licensing concepts. It is to be expected that licensing eventually will be concerned with specific areas of technical criteria only. Should this develop, there will be even heavier responsibility incumbent upon the profession to train the graduate thoroughly—not only in those design areas it holds sacred but in the administrative and operational areas it knows are so necessary to practice.

#### DIRECT EXPOSURE

Direct exposure programs (community design centers or workshops), best organized by AIA chapters, initially will be administered by chapters in urban centers but need not be limited to cities. PDP will provide necessary information as to the structuring of these programs. The format will be reasonably loose to adapt to the area being served, but guidelines as to limits of service rendered and responsibilities undertaken can be fairly easily maintained. Essentially, these programs put interns, students and professionals on "teams" serving communities not able to afford professional help. Their effect is twofold:

First, they recognize the natural motivation of an intern to become involved with a real client and a real situation. They draw him away from moonlighting under inadequate supervision and toward genuine and responsible—and rewarding—efforts.

Second, and more important, they direct responsible attention where attention is needed most—to the ghetto neighborhood or the individual property owner genuinely wanting to undertake improvements, but unable to afford even the simplest form of qualified assistance.

The area of responsibility of PDP with which the professional will have his longest contact is, of course, continuing education. Now, under PDP, an AIA region-by-region scheduling of seminars and full courses will be established on a demand basis. As the results are made, program formats will be available to learning centers.

PDP is not composed of generalized conceptions but results from experience. Pilot programs such as those described have been operating in several areas of the country over the past few years.

The intern program begun in 30

CUARLES W. ALLGOOD NAME II MAR GS MAY GS MAY G OCT 65 3 G 6 MOS. MAX DATA COLLECTION A DOC. PROGRAMMIN D E DEVELOPMENT A COST ANALYSIS RE PRESENTATION C,D D DOCUMENT D C COORDINATION SPECIFICATION COST ANALYSIS ADDENDA BID OPENING SID NEGOTIATION B POST-DOC. B C AGREEMENT Z PRODUCTION IMUA OVERHEAD PUBLIC RELATIO RS CIIV MENTOR .

Philadelphia offices is now citywide and by January 1 figures to become a requirement of the Pennsylvania State Registration Board of all aspiring registrants for that internship time spent in Pennsylvania. Other such programs have been begun in the States of Kansas and West Virginia. From these undertakings will emerge the initial documents of PDP. The documents, in other words, will be rooted in actual experience.

Direct exposure programs have been operating in Berkeley, Philadelphia, New York and Washington—and other cities are beginning programs. Their organization is simple, but their direction requires full time and should have paid directors and secretarial staffs. Interns, students, etc. should work as volunteers.

Continuing education programs have the most complete history. There are many functioning programs—too many to enumerate some of which began as pilot studies. Again, the foci are the major urban centers.

Finally, and perhaps not initially obvious, one of the more meaningful effects of PDP might even be a developing cohesion within the profession: a total identification between profession and professional, growing from the clearly expressed concern for each architect, from graduation to retirement.

## The Goals of PDP

#### BY JOSEPH H. RUDD JR., AIA

That we are living in a rapidly changing society is more and more evident with each passing day. The growth rate of knowledge, already swift, continues to accelerate. And with the quickened rate we also see, in this dynamic era, recurrent shifts in emphases. We are much concerned now with the development of man. We have come to a stumbling halt in our march toward progress as we stop to reassess the basic principles of our democratic heritage.

Architects are suddenly faced with awesome new responsibilities. Some of us feel our influence on the wane. Others—and I am among them—believe that a cloak of leadership is being thrust upon us. We of the latter view see ourselves being called to task for the state of our physical environment. We see ourselves being called upon to help solve neighborhood, city, state and even national problems.

Almost unannounced, the years of quiet talks to small groups, occasional articles in the public press, and the sincere conviction of dedicated men to their selected task have suddenly borne fruit: From the confines of Webster's, "architecture" has burst forth into the public domain.

The status of architects and architecture is not the crucial issue, however. What *is* overriding is the need for our services. What dominates is the sorry state of our physical environment. Directly or indirectly, by our own initiative or the impelling of others, we are responsible for the condition of the cities and the ghetto, as well as the creation of a new environment and the solution of the basic problem of shelter for millions.

Problems to be solved daily in every phase of practice have multiplied at an astronomic rate. It is readily apparent that emerging techniques of practice have barely broken the surface of our true professional needs. As individuals and as a professional society, we must meet the challenge to the creative ability of the profession. The maxim, "Practice is research aplenty," no longer applies.

If we are to fulfill the task our time assigns us, effectively contributing to the advancement of our nation, we must develop our resources through continual education and research.

To planners and designers this must include not only self-development but a concern for the total development of future architects. In the continuity of time, work started now must of necessity be completed by younger men. Thus we know that we professionals, separately and together, must realize that continuing education is a necessary function of being a professional.

To the AIA Committee on Internship and Continuing Education certain patterns in the growth of the present-day architect—patterns having pronounced "voids"—leave much to be desired. The trail from the halls of academic life to the ultimate retirement from practice is long and arduous . . . it is frustration, slow development, and eventually achievement and recognition. In the final analysis, the only supports along this path are a strong will, individual desire and determination to succeed.

The true rewards and recognition are determined only in our development of the physical landscape in which man lives, works and plays. The longevity of the shelter we provide must of necessity evolve continuously from the changing pace and new directions of our society.

In view of these many aspects, the committee feels that the profession should provide a total um-

#### A profile of available courses appears on page 92 of this issue.

brella of guidance from academic training to retirement. We have called this umbrella the Professional Development Program. We believe that the prime responsibility for the guidance of such a program lies with the architects' professional society, The American Institute of Architects.

We fully recognize that professional growth must follow an extended course, running from "initial exposure through academic training, internship, licensing and professional practice and into retirement." In order to achieve a comprehensive continuing education program, we must of necessity develop close liaison with schools of architecture and their university resources of allied specialties and research facilities.

At the same time we need to improve our communication with public bodies and to work toward uniform licensing laws. Our present Institute programs in elementary and secondary education along with an amplified public relations program have contributed substantially to the initial exposure toward architects and architecture in general. More can be done and these programs must be continued.

The Princeton Report furnished a depth study of academic training and projected an outline of the "viable" future architect who is rapidly becoming a part of everyday practice. The "architect-generalist" no longer can cope with all phases of expanded services as practice spreads across the full range of environmental design.

At this time we have not yet developed an active and concerned program for the vital internship period or for the years of professional practice. In the practice years, the transfusion of new thought and ideas and the continuing development of competence have been allowed to lay idle in a morass of indifference created by the pressures of business-as-usual.

A complete and thorough study of this vital area has been the direct concern of our committee for the past two years. In 1966 the committee through a nationwide survey of AIA chapter and state organizations took the pulse of the membership regarding the need for a program, individual desires, kind and type of subject matter, time available and other pertinent details. Also sought were the opinions and assistance of member and affiliate schools of the Association of Collegiate Schools of Architecture.

The enthusiastic response was heartening. It showed that the membership is willing and ready to participate. It revealed that architects, in order to realize professional growth and profit in practice, are seeking to build on their competence by acquiring new techniques.

From continuing research and

		THE REAL PROPERTY OF	A CARLES CARLES		DUCATIO	MGCD INC. AND M	RVEY				
<ul> <li>Do you believe there is a</li> </ul>	Yes	No	Urban						68%		
tinuing education on a high professional			197	3	Regional and City Planning						67%
level?					Specifications: Development and Production						62%
Profession			143	3	Project Finance and Loan Development						61%
Schools	52		Estima	100 C 100 C					61%		
	uida aamt	lautaa	Mare	No	Programming						60%
<ul> <li>Is there a reason to prov</li> </ul>			Yes	No			Economics	5			58%
education in step with your professional 189 11 development, i.e., the intern (I) and the					Architectural Lighting						56%
	ern (i) ar	na the				Manage					55%
practicing architect (P)?			120	0	Yes a second second second		ns for Offi	ce Use			52%
Profession			139	9		nsiderat					52%
School			50	2	and the second s	valuatio	n				49%
• Should courses be developed for each			Yes	No	Contrac	Web Street Street					49%
			182	16			ning and	Develop	ment		41%
of these groups to assure progressive pro- fessional advancement?			102	10			ontracts				40%
Profession			136	10		nent Bu					38%
Schools			46	6			gram for A	Architec	tural Pra	ctice	37%
0010013			40	U		ee Ben					22%
• An effective program for	or contin	uing eq	lucation	should	Other (	give su	ggestions)				19%
be administered by:		0			Which	of the	following	location	is would	he hes	st suited
	Profe	ession	Sc	hools	for such p				io noura	NO 000	Je Surecu
	1	Р	1	Р	City		47%		Universi	tv	75%
Chapter	55	5	7		Resort	area	17%		Other (I		6%
State	35	15	9	3							
Regional	16	20	4	4			of the ye	ear wou	ld be th	e best	time to
National	27	24	10		plan such	a progr					
Schools	51	48	21	21	Spring		36%		Fall		49%
Combinations of both	85	96	41	44	Summe	er	23%		Winter		52%
	_			-	Do vo	u think	attendar	nce sho	uld be	limited	? If so
<ul> <li>Do you believe a deman</li> </ul>			Yes	No	check one						,
of program now exists in	n your o	organi-	160	35	20-40		38%		80-100		8%
zation?					40-80		21%		No restr	iction	
Profession			122	24		1905	and a second		and the second		4170
Schools			38	11			your pers			Ye	
• D			Max	Nie	would you				nable fee	e 91%	6%
<ul> <li>Do you believe consulta</li> </ul>			Yes	No	to defray	costs o	f the mee	eting?			
design disciplines who se		nitects	191	10		10 100		ness en la			-
should be invited to part	licipate:						that the A			Ye	
• At the present time, do	vou hav	ve anv	Yes	No			sional sta				6 13%
programs of this nature in your area?				141	istration of					d	
programo or this hatare hi	Jour un	ou.	58	- 1-			long the				
· Which of the following	g listed	subject	s would	be of			edical and	d engir	neering		
interest if offered in such	The second s				profession	ns?					
Architect and the Law				77%	Is then	e a nee	d for a pro	fession	al pub-	Yes	No
Structural Techniques				76%	lication devoted to continuing education? 56						6 42%
Design Development		76%	profession								
									10-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		
How much time would	you ha	willing	to coon	d owny fr	AND VOUR DES	ation for	r attandar	an at a	uch moo	+10002	Sec. 1
• How mach time would	you be	winnig	to spend	a away ii	Sin your prac	clice to		s per yea		ungs:	
						1	2	3 ger yea	4	5 or r	more
1-2 days					50%	11		19	17	6	nore
Long weekend (Thursday	nm-Sun	dav)			49%	57		5	8	1	
Middle of week (Tuesday					8%	11		2	0	-	
1 week per year	muisud	51			12%	11	4	2			
T week her year					12%						
Othor					13%						1.2.1.1.1.
Other	these	sessions	s be co	nducted t	o be the mo	ost infor	mative to	you?		4	
Other In what manner should				5-20	20-4		40-80	Contraction of the	-100	Ur	limited
		Group	1 31263						CONTRACTOR CONTRACTOR	1000	
		Group	51265		33%	6	7%	6	5%		10%
In what manner should		Group	51265						5% L%		10% 1%
<ul> <li>In what manner should Lectures Seminars</li> </ul>		Group	51265	56%	12%	6	5%				10% 1%
<ul> <li>In what manner should Lectures</li> </ul>		Group	51265			6		1			

pilot programs we have gained proven techniques and some basic ideas. Continuing cooperation from ACSA schools, universities and private agencies indicates a wealth of available material, teachers, and new techniques ready to go into active programs on call from chapters and affiliated university sponsors. Underway in various parts of the country are programs in which architects work through universities and sponsoring institutions which sought and received their cooperation in continuing professional studies. All courses have been fully subscribed and some have waiting lists.

The results of the AIA canvass and related surveys established that there is a demand for continuing education and outlined the basic scope of an effective Professional Development Program.

In 1967 the AIA Board of Directors, under then President Robert L. Durham, FAIA, created the fourpower commission in Education and Research. This first step began the necessary liaison of all groups -AIA, ACSA, National Architectural Accrediting Board and the National Council of Architectural Registration Boards-toward effective leadership and the chance to solve mutual problems and to coordinate allied fields of interest. With a command level established and a coordinating source available, what is needed now is an organization for implementation of a total program.

The committee is expanding its efforts to establish a bibliography of current programs and available sources of material for dissemination to chapters and affiliated organizations. Programs are being reviewed and evaluated, and research efforts are being organized.

At the Portland convention last June the AIA membership agreed to a \$25 dues increase to strengthen and broaden Institute activities. Accordingly, our committee and those on Education and Research are developing the following:

Administration: The establishment of the office of the National Director of the Professional Development Program, fully staffed, to develop and implement a national program for the coordination and dissemination of source material for continuing professional studies.

Regional Education Centers: The establishment of centers through the existing regional structure by utilizing facilities of colleges and universities strategically located in these areas. These centers will



serve as the necessary extension of the national Professional Development Program by providing facilities and staff and offering programs to local chapters and by initiating new programs.

Architectural Monograph: The establishment of facilities for the printing and dissemination of research findings. With the assistance of the Committee on Research, specific programs will be determined and assigned to schools with proven research capability. The results of this research will then be developed into a comprehensive practice - oriented monograph and sent to the practicing architect.

Internship: The establishment of an "exposure program" to identify the architectural graduate and assist his transition from academic training to an active professional life. Little thought or credit has been given to the educational background and potential of the new graduate. Yet other professions give recognition to their graduates upon completion of educational requirements and recognize them as qualified professionals during interim professional training prior to licensing.

The architectural profession must now establish a definite program providing effective transition form school to professional life and assure continuity in educational experience for the young architect under the guidance and supervision of a qualified practitioner. Foremost in this program is the need for identification with the profession as a basic achievement after graduation.

An effective pilot program created by the Philadelphia Chapter AIA is now being reviewed by the Pennsylvania State Board of Registration for incorporation into licensing requirements.

Community workshops are an effective part of the total internship program. When programs of this type are organized and monitored by the professional society through the chapter, they provide a needed creative outlet for interns and help to fulfill the civic responsibility of the profession. The intern under monitorship of a director and practicing professional stands to gain valuable direct exposure to problems of practice not always experienced in the office during this interim period of his career.

The articles we have presented here outline the nature and scope of the Professional Development Program. It is evident from the experiences in education over the past few years that there are no clear conclusions with respect to specialization and licensing in our profession. Therefore, the program that is developed here has taken change as its guideline and, accordingly, has been structured to accommodate developments.

The author is chairman of the AIA Committee on Internship and Continuing Education.

#### Shaping a City's Future

In spearheading the "Goals for Dallas" program, Mayor Jonsson, an honorary member of the Institute, talks the language of architect and layman alike. Past president and board chairman of Texas Instruments, Inc., a multimillion-dollar electronics firm that has insisted upon architectural quality in its buildings, he is employing some of the techniques of corporate management in meeting the city's problems as he serves his second term.

#### BY GEORGE F. HARRELL, FAIA

Citizen participation is the keynote in the ambitious program of a major American city to plan its future in a systematic, orderly manner. Citizens of all economic, social, racial and political backgrounds are working together in small and large committees, neighborhood meetings and group discussions to determine what kind of city they would like Dallas, Texas, to be.

The "Goals for Dallas" program, a grassroots version of President Eisenhower's "Goals for Americans," was launched in December 1965 by Dallas Mayor Erik Jonsson with the challenge to "shape and create the future, not be run over by it." The program is a logical effort to build a future of, by and for the people who will live in it. So far, 114 goals have been set, encompassing the full spectrum of urban living from government to slum eradication, from education to public safety.

Some six months after Mayor Jonsson's appeal for goal-setting, 87 men and women from Dallas journeyed to a nearby retreat for immersion in

**The author:** Mr. Harrell, of the firm of Harrell & Hamilton and director of the Texas Region AIA, also is a director of the Greater Dallas Planning Council and currently on the Goals Task Force of the "Design of the City" division. A score of Dallas architects are serving on various goals committees, and two—Pat Y. Spillman and Enslie O. Oglesby Jr., both AIA members—were among the original conferees.

analysis and idealism. It was a cross section in every sense of the word. The schools, government, the slums, the churches, business, finance, the arts, higher education—all these sent representatives.

The goals conferees were armed with essays on urban life from 12 competent local citizens, including an essay on "Design of the City" by Pat Y. Spillman, AIA.

Other essays dealth with government, health, welfare, transportation and communications, public safety, elementary and secondary education, higher education, continuing education, cultural activities, recreation and entertainment and the economy of Dallas.

Discontent permeated the essays. Most were frank to the point of bluntness in surveying the city in which they lived. Moreover, they were not too optimistic about future prospects if trends were allowed to continue unchecked. What the essayists wrote about Dallas most likely could have been written about any other American urban center, vintage mid-1960s. But in Dallas. the boastful, thriving, cosmopolitan, financial and distribution center of the Southwest, the observations were more than conversation pieces. Then, in the gambling spirit that built Dallas on cotton futures and petroleum wildcatting, the conferees went about the business of nurturing challenge. In all they drafted 98 goals based largely on the essay findings.

Then in 33 town hall meetings held throughout the city, more than three out of five goals inspired by the cross section group were altered. Twelve new goals were added, and four were divided into two separate statements, resulting in an increase to the present 114 goals.

Out of the neighborhoods came stronger and more specific statements of policy than the conferees generated. For example, the general "Goal for Design of the City" emerged in a state of near militancy:

"We demand a city of beauty and functional fitness that enhances the quality of life for all its people. A series of studies and plans must be made which will become a continuing dynamic, living design for our city." Use of the words "demand" and "must" captured the spirit of urgency that surfaced in neighborhood discussions.

There was pointed criticism that poor areas of the city were not getting services of the quality, quantity or promptness found in other areas. A basic desire for individual home ownership, along with strong city enforcement of codes, surfaced repeatedly. People in the neighborhoods called for supervised playgrounds, not just pretty parks.

An incomplete freeway that dead-ends into uselessness prompted many to call for more coordination between highway engineers and city planners. Groups closest to this situation noted that an ambitious renewal program in that area had been followed closely by right-of-way purchases and consequent razing of the improved properties.

Better street lighting was emphasized as a weapon against crime. As for the police, there were suggestions that they be better educated in psychology and human relations for more effective day-to-day enforcement of the law.

One of the more novel suggestions was to levy an "employment tax" based on the number of miles a person travels to work each day, with the person who travels farthest paying the most.

Mayor Jonsson, summing up the meetings which closed phase 1 of the program, candidly admitted that he didn't agree with all of the goals. However, he added a footnote that characterizes his role: "I did manage to remain violently neutral throughout."

In the area of "Design of the City," 10 specific goals were drafted in the neighborhood meetings. One goal, calling for reappraisal of past plans and consideration of new studies, included seven subsections touching on overall land use, downtown, open spaces, appearance, drainage and preservation of historical landmarks. Another goal called for protection and improvement of neighborhoods by providing the highest standards of municipal services, enforcement of codes and ordinances and by requiring responsive maintenance of public and private properties. Some program leaders evidenced open surprise that so many laymen seem to desire precisely what many professional architects and planners consider optimum planing objectives.

Other goals urged more intensive research by area colleges and universities on urban life, a plan for downtown that would include recreational and residential uses, renewal program for blighted areas and public housing "for citizens who cannot be adequately housed otherwise."

Following the neighborhood meetings, all of the suggestions and comments which developed were carefully reviewed, and the final revised goals were printed in booklet form. It was widely distributed, copies being placed in libraries and schools and on the newsstands.

Architects and planners have found a friend in both the mayor and the program, for Mayor Jonsson, at the outset, served notice that he would talk the language of architect and layman alike. A prime example came in his capsule of a city's characteristics, incorporated in the goals kickoff address:

"In my view, cities are only part of a tool kit through which men accomplish their goals and plans, and I always have felt that one should be continuously critical of one's tools to determine if those in use are sharp and adequate not only for the work at hand but for tomorrow's work as well. A building is a tool, and when one is constructed, we think first of its function, and we seek to ensure fulfillment of that function by providing appropriate space and equipment for the tasks to be done. Each component of the building contributes something toward the achievement of the objectives for which it is designed. Cities rarely are built that way....

"I believe cities as well as individuals and institutions should engage in three fundamental kinds of planning.

"The first of these is the planning of goals for the whole, or perhaps a better phrase, the overall needs. In my mind these are the philosophic delineations which contemplate our society as far into the future as we can reasonably estimate it.

"Second, and following immediately, we need to define specific and detailed objectives that are

Led by their mayor, Dallas citizens have studied, thought and argued about what kind of a city it should be.





"It is, after all, our city, and if we neglect it, what we do not do may overshadow all that we do."-Erik Jonsson.

in harmony with our philosophic goals. We need to price those objectives to see which ones are the most immediately critical or desirable, assuming we cannot afford them all—all at once.

"Third, we must have a mechanism to check our accomplishments against our plan—to keep flexible, keep current and to alter either our goals, our specific objectives or our plans as circumstances suggest changes."

The mayor thus established himself as go-between for those whose business is planning and those who either reject or adopt the plans. Planning, he urged in the kickoff message, should be everybody's business, for everybody must learn to live with plans or lack of them.

Later in the goals campaign, the mayor called for an "ever-renewing, great city." It formed the basis for his announcement for a second elective term in 1967. This came after completion of the first phase of the program. Phase 2 was not long in coming: the assignment of task forces to take the revised goals back to the neighborhoods. There, objectives are being rehashed, and residents are being asked for suggested means to accomplish recommended ends.

There are 12 task forces, chosen from among 1,400 volunteers. Each of the specific goals areas has its own task force. In the first round, some 10,000 Dallas citizens participated; Mayor Jonsson is aiming for at least a tenfold increase through the task-force effort.

Since Dallas launched its program, a few other large cities have tried something similar, with the anticipated grab-bag of success and failure. Mayor Jonsson insists that the jury is still out, and will be for some time, on "Goals for Dallas." But already the program has produced one significant series of results.

The mayor, with the city manager's staff and

department heads, sifted suggestions in the neighborhoods for priorities. They arrived at a capital-improvements bond program totaling \$175 million. Not only was it the largest ever proposed in Dallas, but it also was the most ambitious attempted by any city of similar size in recent history.

One item was land purchase for a regional airport, to be owned and operated jointly with the City of Fort Worth. The question had been rejected earlier when submitted as a multicounty effort. There still was a substantial reservoir of antipathy toward Dallas' sister city to the west.

Another portion dealt with improvements in and around Fair Park, home of the State Fair of Texas, largest of its kind. The park, which includes the renowned Cotton Bowl, is located in a high-crime district. During the bond campaign, several fans had been mugged en route home from a night football game.

These were the most controversial components, but close behind came the subject of a new municipal services center—to the layman, a new city hall—which was a key development of an entire geographical section in a rundown portion of the central business district. Dramatic expansion of convention facilities was proposed at Memorial Auditorium, across the street from the new city hall site. The citizens were reminded that Dallas stood to lose its status as third-largest convention city—behind New York and Chicago—unless better facilities were provided.

Two more issues concerned a code-enforcement program in a 14-square-mile blighted area and construction of an all-purpose service center within the area. Both were to involve large sums of federal aid, a subject once anathema to Dallas.

In another day, the odds would have suggested defeat of nearly everything in the bond program



The 114 goals run the gamut from government and design of the city to its economy to all educational levels.



except routine street and drainage improvements and revenue bonds for water and sewer service. However, "Goals for Dallas" had signaled clearly that this was a new day.

City officials took up where the goals leaders had left off, carrying the bond program in an information campaign to every corner of the city. Many who attended the bond-discussion meetings were repeaters from earlier goals sessions. In frank give-and-take, proponents of the bonds explained how the proposal had evolved from the grassroots.

Dallas had set goals, the important first step, then had provided the vital follow-up. Mayor Jonsson's recommendations in his kickoff address began to sound more and more prophetic. Quickly, his third plank—measurement of progress and vigilance to keep goals up to date—went into effect with the launching of another citizen-information campaign.

The mayor went on television one recent Sunday morning with a progress report. Compared with some mayoral productions elsewhere, it was extremely low-key, but this is a sample of the sincerity that found its mark:

"If I had to tell you—in a single word—what "Goals for Dallas" means to me, the word would be 'caring.' After all, the art of living is little more than the art of caring."

It was an encore to his statement a year earlier: "Today we visualize the Dallas of tomorrow as beautiful, clean, safe, efficient . . . a city in which each citizen can achieve his true individual potential in an environment friendly to that aim. . . .

"We wish for the calm and the peace of the village our forebears knew, and to know our neighbors as they did. We wish our city to be one which reinforces the family because it is the most successful mode by which men and women have learned to live together in good will, freedom, justice and the prospect of a better life. We wish it to be a city which lives by the significant verities and values and teaches them to its young so that they may be sustained as whole persons and, through them, society and civilization may progress and mature.

"If these desires are to be fulfilled, we must conquer the hostile parts of our environment and expand and improve the friendly ones. . . . To do the right and important thing often will call for seemingly unreasonable sacrifices, but to make them may well prove to have been a real bargain.

"Goals for Dallas" is our blueprint and our challenge. With these goals attained, Dallas can indeed become one of the great, eternal cities."

Within four months of that statement, Dallas' \$175 million bond program was adopted, and the people-to-people program had begun to set in motion some of those designs the city has on its future.



## Libby Dam: An Engineer Talks Esthetics

#### BY SYDNEY STEINBORN

The \$360 million project underway on the Columbia River system in Montana is more than an engineering venture. It is based on an architect's comprehensive plan, supported by an illustrated treatise, on the general architectural and landscaping considerations applicable to the design of the dam, the powerhouse and related structures, and river and general area development. The chief of the Engineering **Division**, US Army Engineer District, Seattle, and a Fellow of the **American Society of Civil** Engineers, describes the philosophy behind all this.

In the Seattle District, Corps of Engineers, we recognize that Libby Dam is the only international project of the four reservoirs mentioned in the United States-Canadian Columbia River Development Treaty which took almost a decade to negotiate. The document itself, the engineering agreements and negotiations that preceded it, and the projects provided by the treaty are certain to serve as models for the development of international rivers.

We expect the project to be visited by many Canadians and other foreign nationals as well as a great many Americans because of its location near several major US and Canadian national parks. Further, visits will be encouraged by 22 recreation sites along the 117-mile shoreline in the US which will ultimately contain 1,500 overnight campsites.

These factors indicated that we could expect damsite visits of 300,000 persons annually during construction and rising to 4.7 million in 100 years. With a growing national awareness of the impact of public works construction on natural beauty, we anticipated the need to do a good job of accommodating visitors

#### ARCHITECT'S STATEMENT

The mountains rise on every side, cut deep by the Kootenai River which is joined downstream by the Fisher River. It is difficult not to be inspired by the beauty and the serenity of the scene and the majesty of the setting—and not to feel a certain reluctance at the idea of disturbing it. The solitude, the mountains, the trees, the rocks, the river, the islands in the river and the sky above with its scudding clouds are most impressive.

The first thought, then, in visualizing Libby Dam was one of the blocked river, of the effect of this river and its islands, of the submersion of the mountains and of what would appear above the newly created lake. It was one of visualizing coves and peninsulas, wooded lake shores and the hills which would rise beyond them. It was an experience of walking down the Kootenai River and the understanding what was destined for its banks, of the disappearance of its islands, of the narrowing and deepening of its channel, of the disfigurating possibilities of fills and riprapping.

It was anticipating an enlarged highway system and the intrusion of thousands of automobiles, of people who would stop to view the new dam, and of tourists who would look for facilities of all kinds -for camping, staying a night or fishing in a river which would be dammed up. One could not help thinking of the fish and wildlife in general and how they would be affected by the change in the course of the river. Actually, then, the problem was and is one of making everything as compatible and homogeneous as possible and letting the wilderness live with the introduction of construction and an added form of wildlife called man. To this end, our recommendations PAUL THIRY, FAIA are made.

and that project construction and operations vis-à-vis project environment would have to be done tastefully and with finesse.

To help us with this approach to the design of the damsite structures, we engaged an architectural consultant who is familiar with the environmental planning problems of large public works. Selection of our consultant followed normal Corps of Engineers procedures. After reviewing the credentials of a number of architectural firms having national reputations, we chose Paul Thiry, FAIA. He previously furnished architectural guidance on the powerhouse for the Seattle District's Chief Joseph Dam, also located on the Columbia River.

Our instruction to architect Thiry was to provide a comprehensive plan with sketches of architectural treatment of the dam and powerhouse and of appurtenant features such as visitors' facilities on the dam, observation decks, restrooms, landscaping, etc. From these, the Seattle District staff would develop final designs.

Thiry's contract with us required that he visit most of the major US dams in order that he could incorporate in his report and recommendations the good things he found and, at the same time, offer suggestions for avoiding the bad. His first input into our design covered items to be considered in terms of environment and functions of the project. These were broken into four areas:

 Project environment wilderness

• Project functions—flood control, water storage, power and distribution, reception, conservation, navigation, fish and wildlife

• Project features—about 60 different but related items, ranging from the dam and powerhouse and elevators to signs and drinking fountains and water levels

• Support for project functions and features—about 30 items such as hotels/motels, picnic areas, concessionaires, parking, car and boat rentals, etc.

With this input, a comprehensive plan was developed for the dam, its immediate vicinity and the 3<sup>1</sup>/<sub>2</sub>-mile reach of the Kootenai River downstream to the mouth of the Fisher River. This plan—and here I am paraphrasing Thiry's report—is oriented to the objective

Viitors' Center & viewing platform from Treaty Tower

that people should be able to see our dams, not only in their general appearance but also in their more awesome and inspiring features. He believes that many of these can be included in a dam and powerhouse without undue costs to make their workings understandable by telling the story through direct contact. He hoped to provide drama, scope and excitement because they were indigenous to the project. He proposed doing this by using features which were an integral part of the project rather than 'pasted on'' as afterthoughts.

Thiry also recommended that the impact of the project on its environment should be minimized by integrating the architectural design of the dam, powerhouse and visitors facilities into a single unit. This integration required considerable care and coordination with our structural and civil engineers, including specifying rigorous control of contractor operations.

One of Thiry's criticisms of existing dams was that the shape of the powerhouse was rarely, if ever, integrated with the downstream configuration of the dam. Yet it is adjacent to this slope that the powerhouse is often placed. As his planning developed, he became so concerned with this aspect that he did not include any sketches of a conventional structure.

The inevitable confusing complex at the spillway has been markedly simplified by continuing the basic horizontal lines of the dam across the water passages. This resulted in a unique structural feature: the trunnion bridge. It will assist with maintenance and permit visitors to have access to the trunnion anchorages, over the spillway and behind the massive gates. This is truly bringing the public into direct contact with the dam's workings and functions.

There will be cantilevered view points upstream and downstream of the dam on both abutments and from the powerhouse. The stilling basin bridge is a key design element. It integrates the lower level of the structure with the overall design by continuing the strong horizontal lines set by the top of the dam and the spillway complex. In addition, it offers a physical tie with left-bank parking and roads, thus permitting free circulation for both

Herial view of dam & powerhouse from down stream

maintenance personnel and the public. The stilling basin bridge is currently under detailed study.

The use of a stilling basin bridge, a relatively unique feature in dam construction, is a manifestation of the concern that we gave to the problem of traffic circulation. This concern has resulted in the provision of good parking for both official and unofficial visitors, no matter from what direction they may visit the project. The provision of adequate parking reasonably close is the result of Thiry's tour of major damsites in the US. He found that at many projects the best areas for parking were pre-empted by operating personnel and that the accommodation of visitors was only a secondary consideration. Circulation is assisted by making the top of the dam usable by the public with very little restriction. There are 110 parking spaces available across the top of the dam with 60 close to the intake tower elevator or the two Treaty Tower elevators.

Visitor interest and convenience during tours have been carefully planned. For example, all areas can be reached by persons in wheelchairs via ramps or elevators. We have two 40-passenger units in the Treaty Tower and a similar elevator in the intake tower. Access from the top of the dam to the top of the Treaty Tower is by a 30-passenger hydraulic elevator. During the winter, the Treaty Tower will serve as a visitors' center as well as the location for permanent exhibits featuring the international aspects of the project, including the negotiating procedures used to develop the Columbia River Treaty.

The 40-passenger elevators will take visitors to the turbine-floor elevation. At this level, they can enter the powerhouse from the dam without going through the visual shock of a short walk in bright sunlight. Galleries that will be used by the public will have a trapezoidal shape and low-key lighting rather than the conventional string of utility lights. The shape of the public galleries and the lighting are designed to reflect a cavelike atmosphere and give one the feeling of being in a subterranean passage.

As visitors come out of the Treaty Tower elevators at the turbine-floor elevation, they will face an aquarium which fills the entire gallery wall on the reservoir side of the dam and which will be

Powerhouse from left abutment

Powerhouse from right abutment

#### Herial view of spillway, transion bridge & Treaty Tower

stocked with native fish. This is designed to give the sensation of looking directly into the bottom of the reservoir.

Integrating the powerhouse configuration to the downstream face of the dam is accomplished by means of a structure whose basic structural element is a huge slanted T-frame. Applying sandwich units to this frame gives us the sloping walls and roof, which integrate the powerhouse shape with the downstream sloping face of the dam.

Within the powerhouse itself there will be two lighting systems. When maintenance is not being performed, the lighting will be subdued, casting shadows on the wall. Hydraulic elevators will be available between the turbine floor and all viewing or operating levels in the powerhouse. The gantry crane will serve the generators and turbines as well as tailrace bulkheads. The tailrace deck located inside the powerhouse will be available to the public, and there will be a downstream view point besides bubbles on the floor to permit a view of the tailrace from the inside.

Routing of the tourists, particularly in the powerhouse, is predicated on the goal that the public should be permitted to become knowledgeable on hydroelectric-energy generation at public expense at the actual site. Practically, this meant a compromise and a change in our normal powerhouse design techniques. We are planning for the presence of the public but in such a manner that project operations are not inhibited or endangered. If at all possible, the public will be permitted to see the "insides" of the cabinets, consoles or rooms which are usually obscured by doors. Our guiding criterion: What needs to be changed or added to make what we are doing better understood and appreciated by the public?

Our comprehensive plan also is concerned with the physical environment of the dam structure. Therefore, a landscape plan has been devised along with our structural concept sketches. This includes the development of a major day-use recreation area— Souse Creek—on the right bank immediately upstream of the dam. The plan also encompasses all project lands from the damsite to the Fisher River's mouth.

The sense of the landscape plan,

Crossover at Top of dam with Treaty Tower

or park plan if you will, is to keep heavy traffic lanes away from campgrounds along the river and to make certain that they are oriented to people rather than to vehicles.

Concern for parkland areas downstream is reflected in the routing of the transmission lines and in the siting of the switchyard. Our original siting of the latter, based on liaison with the Bonneville Power Administration, placed it a short distance downstream. We were reluctant to damage the virgin timber on the hill which overlooks the entire project and which was behind its open parkland available for camping. Accordingly, last summer we made a reconnaissance with the BPA's transmission-line planners and developed a resiting that removed the switchyard from the river, placed it back of two low hills well away from the main highway and completely hidden from the project area. The excellent parkland on the left bank was thus completely bypassed by the transmission lines.

Feedback on our designs came from our prebid conference where we stressed the importance of minimizing the impact of construction operations on the environment. We had made detailed studies of the required staging areas for contractor operations and provided the necessary space under rigorously controlled conditions. In order that there might be no misunderstanding as to which areas were to be used for these operations, the pertinent sheets of the invitation to bid were printed in color. All these things were reviewed in detail at the prebid conference.

The construction fraternity's reaction to these instructions and restrictions was immediate and vocal. In view of the construction plans of the low bidder— Morrison-Knudsen, Inc.—these restraints had a positive effect. The firm is building its concrete plant just upstream and at levels below maximum pool. To date, the contractor is conducting its operations to match both the letter and intent of our specifications with respect to preservation of the natural beauty of the site.

This is a welcome change from the usual concept, to wit: "After the dam is complete, back away from the worksite, scattering petunia seeds in your wake."

Crassover between powerhouse & base of dam

#### Groping for Order in Designing for Growth

#### BY JOHN C. HARKNESS, AIA

Static, isolated structures must give way to buildings conceived for free expansion; master planned, but still allowing for the creativity of the individual architect.

When we went to architectural school, design problems were generally described in a short, neat document known as the Program. It set out in precise form the functional relationships of the various parts of the building to be designed and tabulated the various areas which comprised the parts of the building. We all worked hard to produce specific designs for the specific problems, and this is the way they were judged.

Slowly it is becoming more and more evident to me that one of the basic elements in most architectural problems was overlooked in this procedure: the time factor. The program was stated as a complete entity and the solutions were final, closed designs, totally static.

More and more we are confronted with the fact that a building is the container of living activities and as such must reflect the ever-changing growth patterns it contains. How is this possible? I don't think we have any good answers, but some directions are beginning to emerge.

The problem exists at almost all levels:

• The growing family needs a place to live. To a certain extent the problem can be solved by moving, but this is not always possible or ideal. It is absurd when row-house accommodations or a Levitt-town type development is so incapable of expansion that a family must move when they have another child. At this stage in life, it can upset patterns of family friendships and of education, even if another home can be found.

• Take the case of an institution in a city. Growth of such universities as Harvard, for instance, shows a series of consolidations within the "yard" and successive explosions outside as properties are acquired. The institution/community relationship may become difficult; the university itself must change its internal pattern of relationships. Assume, for the moment, that there was a good balance of academic areas, dormitories and athletic facilities. Growth is usually

**The author:** Mr. Harkness is a principal of the Architects Collaborative Inc. in Cambridge, Massachusetts. His present article is an adaption of a speech before the Virginia Chapter AIA.

accompanied by change of function of some of the buildings, a change for which they are unprepared, sometimes accomplished only by gutting them totally inside the outside walls.

• Recently my firm started work on a bank building in downtown Boston. Our client outlined present needs and furnished us with a 25year projection. Many banks build facilities exceeding their own needs, lease the space and take it over as needed. A study shows that this hasn't always worked out as easily as it sounds. When a bank has a favored client as a tenant, it cannot very graciously ask him to leave. Also, growth does not always happen according to plan. So often the result has been that the bank has built another building at a distance, moving out one or more departments, to solve its problem. Our client is approaching the problem with the idea that expansion space below grade can be designed for ultimate bank functions but temporarily used for parking to help carry costs. In a few years I will be able to tell you how this works out.

• One of the most complicated growth situations deals with the city hospital. It has all the problems of a city university and, in addition, an internal relationship which is much more closely interwoven functionally. In the case of a hospital it is not a matter of convenience, not whether 10 minutes is adequate to get from one place to another during period break. It can in a very real sense be a matter of life or death. Thus as the hospital grows, it must do so in a way that maintains these close relationships at all times, not only in the final arrangement but also during construction. All of this is without considering scientific developments, which cannot be predicted, and changing patient care.

• The city itself is the ultimate example of our failure to plan for growth. The problem of suburban sprawl and urban decay are too familiar to bear repeating. Not only is it wasteful economically, it is at the very root of our social unrest. Failure to find a solution can challenge the entire democratic process.

I indicated that I believe certain directions are evolving which may help solve our problems.

First of all, I think we should not design for the overly specific program. We should analyze each project and try to find elements of a common denominator and design as many generalized spaces as possible. Thus we may have laboratory areas for sophisticated services, classroom spaces, patient care areas, etc., grouped together. The hard, or inflexible, areas requiring specialized equipment such as kitchens, deep therapy units, large auditoriums, etc., should be pulled out of the body of the plan to avoid interfering with free growth and change in the generalized zones.

The prime generator of the design then becomes a system for structure and mechanical services: a framework into which the elements of the program fit and which allows for a fairly wide range of adaptions according to growth and change. This concept is diametrically opposite to that of an isolated work. I must say I think many buildings being built today are totally unconscious of this attitude.

There has been much discussion of this approach recently under such headings as systems design or, as in the July 1968 issue of *Progressive Architecture*, omnibuildings. Perhaps, to a certain extent, it is a matter of scale. We, as architects, have always attempted to design buildings with integrated structural/mechanical systems. The omnibuilding seems to be working with a much larger unit, a building complex or a whole city system. This is badly needed to achieve any sense of order. The present system of individual designs each competing with its neighbor is almost sure to produce chaos, even in the hands of able and conscientious architects.

Twenty-five-year projection study for the National Shawmut Bank headquarters building in downtown Boston.





Model of the Government Center, Boston, shows variety of individual buildings within the overall master plan. City Hall, center, is competition-winning design by Gerhard Kallmann, Noel McKinnell and Edward Knowles.

Three phases in a possible growth pattern for a city hospital (right). First step shows buildings already completed or in progress.

Proposed development of Tufts New England Medical Center, Boston. Growth pattern will follow and be contained within an overall systems approach to the structural and mechanical systems with a horizontal zoning of function.









But there is a danger. The solution to chaos is not dictatorship, and I am afraid that some of the omnibuilding systems may be so domineering that they would be only half built before we would all be leading a revolution against them. The challenge is to find a framework which, on the one hand, will produce order and, on the other, allow sufficient freedom of expression.

Perhaps, then, one answer to internal growth and change is the design of structures of sufficiently generalized nature to allow for such change.

Let us consider for a moment the problem of external growth. This requires: 1) a basic structure initially designed so that various organic components can expand in an orderly fashion, and 2) space in which to expand.

As noted above, a tight classical design is generally not well adapted to such growth. Rather, structures developed around a system of units which can be added, like leaves on a tree, has greater potential for maintaining a sense of unity while increasing in size. But even if growth is achieved in such a fashion the question arises: Should buildings, institutions and cities be capable of infinite growth, or is there an appropriate organic size for each?

Although analogies are dangerous, I think we can draw a real parallel between organic growth and the growth of buildings, building complexes and cities. In fact, Eliel Saarinen in his book *The City* did exactly this, very eloquently.

He showed that medieval towns followed organic patterns which gave them a real sense of order. And, like most forms in nature, they achieved a certain size that was right for their function and did not grow any more. For example, an Italian hill town was (and is today) a farm community in which the men and women go out every day to work in the fields on the slopes and in the valleys around the town, and return at night. The distance they could travel conveniently dictated the size of the town. Large towns, and cities whose function related to trade routes, were not quite as precisely defined. But if a set of social and economic circumstances prevailed for a substantial period of time, the resulting citytown pattern achieved a balanced size and form and order.

The trouble today is that growth has become out of control, and uncontrolled growth is a cancer which will of course eventually kill the organism in which it exists. The physical expression of this is all around us: in spreading suburbia with its many houses but almost no communities; in black-topped shopping areas isolated from the outside world by a sea of parking lots; and in the resultant decay and death of the inner city. Perhaps, until we can solve the population explosion, it is foolish to think we can improve the situation. Perhaps we can blame the fact that so cial and economic factors are changing so fas that no organic balance can be achieved.

However, I think it is just at a time such a this when the architect, the designer, the artist i most needed. Just as the doctor is not needed when everyone is healthy, so, one might argue the architect is not needed in the totally health society. Certainly there is much evidence of won derful anonymous designs evolving from thes balanced communities. The Greek island village the New England village green, even castles and churches were not created by architects.

But today our society is sick, and we need th doctor and the artist. We need people who real ize that there is an underlying order to form any who can guide us back into healthy patterns of growth.

I think that buildings, cities and towns do fol low patterns of organic growth, and it is our jol to establish methods which allow this growth to happen in a healthy fashion. Because of the rapid changes, both social and economic, we must tak positive action. The growth will not happen auto matically as in older, more stable, societies. The architect must become conscious of time and growth as a design factor and get away from the concept of architecture in the classic sense poised timelessly in space. He must add new scale in his thinking, a scale between the city planner, concerned with zoning, densities, traffic etc., and the architect, working on an individual project for a particular client.

This increasing role of master planner will establish in a much more specific way the relation ship of buildings, their volumes and the space between. I think this can be done without de stroying the creativity of architects working or specific projects within the master plan. An interesting case in point is the Boston Governmen Center, master planned by I. M. Pei & Partners Subsequently, there was a national competition for the City Hall, a focal point to the plan. Pei had already defined the height and general size and location of the building. Yet, as any of you who saw the competition results will know, there was a wide variety in the solution—and certainly no lack of creativity in the winning design.

Master plans of this sort, for government centers, for universities, for hospitals, etc., as well as for entire cities, must be designed with the growth factor in mind. And just as freedom can only exist within order, so, I believe, organic growth can only exist within the context of an ultimate size for the particular organism. There fore, we must determine this ultimate size. Hope fully, we can produce a framework allowing freedom for human beings within it, capable of change and with a growth potential to its optimum size.



- S

rize winner Heimbaugh, a native f Chicago, received his Bachelor h Architecture degree from Washngton University, St. Louis, in 966. Most recently he has worked with Skidmore, Owings & Merrill, hicago. In his design for a receational center on the levee of the fississippi River (top), he attemptd to integrate the romantic flavor f St. Louis' waterfront with a muluse entertainment area covering 50,000 square feet.

Schwarting, of Columbus, Ohio, eccived his Bachelor of Architecure degree from Cornell Univerity in 1966 and, this year, his Maser of Architecture degree from the an Studies, New York. His plan or a Boston School for the Perbruning Arts (below), with a large nusic hall and a theater, is on a site hosen for its deteriorated condition, its strategic location to the heater district of Boston and for s complexity, which required parcular focus on site solution.

The Rome Prize Fellowships are ffered annually by the American academy in Rome to promising oung American artists and scholrs to encourage them to pursue heir interests independently. It arries \$3,650 and free residence nd studio for a year's stay in the architecture were William Platt, AIA, chairman; Henry N. Cobb, AIA; Donlyn Lyndon, AIA; and Valter A. Netsch, FAIA.







Heimbaugh's urban high schoo a third-year design, is a consol dated, internally oriented educational facility. His low-density vetical housing study, also a third year project, contains 10 dwelling with open space the only require ment. A Portland Cement Compettion winner, the final model was built with another student who wo the coin toss to go to France for summer of studies.
With the drives of social change and the imminent promises of cybernetics and other modern miracles, numerous intriguing questions arise regarding the remaking of our planet. Among them is the question of relative worth and motivations of preservation.

Already it is apparent that preservation for its own sake, for casual curiosity or introverted sentiment is far too inconsequential and too restricted in appeal. The concern for history, culture and art in connection with renewal brings the processes of conservation and renovation into relation with the search for a favorable environment. This calls for the removal of detrimental influences as well as active measures to preserve the positive and to capitalize existing potentials. A sense of well-being and of viability in space and time become essential factors in urban design, aimed at community coherence and selfawareness for the individual.

The idea that historic heritage can be a matter of community concern, or even public prerogative, has finally taken its place in American thinking. To be sure, there will always be the shallow kind of historicism, the gaping, empty and bored kind of tourism, the cheap, commercialized travesty of historic taste and other false values or misguided intentions.

Yet, who is to judge between these and the first worthy impulse, the genuine response to some ephemeral impression, and idling glance or ruminating thought that seeks no deep penetration, nor specific historic data, yet avoids the unknowing dullness of thick-headed indifference? Even this most tenuous kind of appreciation that reads some dim, yet poignant, symbolic image into the aging landmarks of our cities may deserve to be considered in applying protective controls.

Behind the dynamics of preservation there are various types and levels and degrees, yet always with one underlying sentiment, as ancient as mankind itself. The desire to cling to a background of cherished mementos, either to retain or to resurrect, stems from the wishful denial of death. To primitive man, as in the early Babylonian epic of Gilgamesh with its final note of helpless rage, death was a concrete, substantial thing, not an event or phenomenon as we see it today. Eternal life was something equally concrete.

The massive symbols of early antiquity bespeak the will to believe that man and his works —in the species and somehow in specific cases can withstand the threat of ruin and oblivion. By the time of the Greek world, more complex and evolved motivations had appeared. When Mnesicles built his gateway to the Acropolis he had to adjust his design and curtail it rather abruptly so as not to disturb the ancient Pelasgian wall that terraced the sanctuary of Artemis Brauronia. It appears likely that some conservative pressure group, possibly headed by a priest of Artemis, reresented one of the early instances of preserv tionist activity to modify the free development direction—we sometimes call it progress architecture.

The two influences, religious and antiquaria continued to expand in late Greco-Roman cultur if we are to judge by the writings of Pausanias, kind of traveler's description or guidebook of Greece. Landscape, people and current local a tivities were passed over by Pausanias, whi historic background and legendary lore of mythological associations were afforded detaile coverage for each locality.

Antiquarian emphasis disappeared in the Mid dle Ages, which were dominated almost exclu

**The author:** Professor Lemann is with the history of art and architecture department at Tulane University's School of Architecture. The present article is a reworking of excerpts from his *Historic Areas* and *Structures*, part of a renewal program for New Orleans, and *The Vieux Carré—A General Statement*.

sively by devotional values. Tourism was under taken always in the name of a sacred pilgrimage When the crusaders established a kingdom a Jerusalem, they employed as a matter of cours the current French style in their extensive build ing at the very site of the Holy Sepulchre, with very little thought for previously existing structures or the original appearance of the setting where Christ lay buried.

An awareness of historic style, and some acuit in distinguishing styles, emerged only with the Italian intellectuals of the Renaissance and their enthusiasm for reviving antique, i.e., Roman, traditions. The Renaissance architect, painter and historian of Italian art, Giorgio Vasari, could lood back on the Gothic style, which he called "Gen man work," and remark that it was "both in ornament and in proportion . . . very different from both the ancient and the modern, nor is it adopted now by the best architects but is avoided by them as monstrous and barbarous, and lacking in everything that can be called order."

In Meaning in the Visual Arts (Doubleday 1955), the noted scholar Erwin Panofsky has in geniously shown how academic humanists like Vasari could make fine distinctions and display a surprising judgment regarding buildings in the discarded idiom, for the very reason that they saw them as downright odious and outmoded specimens.

In its departure from medieval tradition, the Renaissance developed a theory of building—i might be fair to say it was like a religion in its serious implications. One basic principle was that any structure should stand as a pure, harmonious entity, clear and consistent, properly propor-



Philadelphia is one city where citizen involvement has helped preserve rundown, worthwhile buildings, adding to the joys of city living and giving a sense of continuity. Here, 246 and 248 Delancey Street before and after.

tioned in all its parts within and without, and with an interior that echoed and revealed its outward theme, or vice versa. When an architect was called upon, as occurred with fair frequency, to provide a facade for an old-style building that remained incomplete, he was confronted with an agonizing decision: Either he must adhere to the despised Gothic of the interior, or he must create a design that transgressed the sacred principle of interior-exterior coherence.

The problem arose with every restoration, rebuilding or extension of a building, indeed with every posing of a "modern," i.e. Renaissance, work in any time-worn street or piazza of Italy. Generally the old landmarks were preserved, allowed to remain as though inevitably, while new work introduced a new keynote, equally as though it were a matter of course. Vasari himself enframed a vista of the rugged old town hall of Florence with his elegant Uffizi loggia, in the latest, self-conscious manner. No contrast could be more emphatic yet the arrangement, a fortunate and famous one, shows that the strong bias of Renaissance taste could on occasion make a virtue of necessity.

In the latter part of the Renaissance, a hassle over the design of a facade for the Gothic church of San Petronio in Bologna produced all possible variations, either of abandoning or adapting to the concept of *conformità*, not to mention a goodly sampling of design projects by several protagonists.

Certain small but important distinctions emerged amid the heat of theoretical debate. Particularly, it was recognized that "well-made Gothic churches" could exist, in spite of the supposed confusions of Gothic and its lack of guiding rules; or that "after all, the rules of Gothic architecture are more reasonable than some people think." "Remarks like these," Panofsky continues, "announce, in spite of all dogmatic antagonism against the Gothic, the emergence of what we may call an historical point of view—historical in the sense that the phenomena are not only connected in time but also evaluated according to 'their time.'" Here we arrive at a turning point in the world's history of historic evaluation.

A little later, by the mid-18th century, archeological activities like the measuring of Greek monuments and the uncovering of Pompeii and Herculaneum, meant that historic inquiry began to acquire distinctly romantic overtones, while at the same time the criteria of objectivity and precision were cultivated to approach present-day standards.

The enlightenment of the 18th century heralded not only encyclopedias, advances in scientific inquiry and the rise of political liberalism, but also the beginnings of museums and the ubiquitous type, the gentleman-scholar in his cabinet heaped with experimental equipment, objects of art and curiosities of nature. Everywhere, the spread of a more informed historical viewpoint was interpenetrated with poetic yearnings for distant times and places.

At this very time certain revealing terms like "romantick" or "picturesque" received their modern significance and were familiarly larded through the wording of cultivated speech and critical literature. Inquisitive bookish delvings and adventurous world travel fed the trend of 19th century romantic eclecticism and supplied it with an increasing body of accurate data.

The romantic-realist urge to seize upon all outward phenomena, to analyze, identify and assign into categories, achieved a vivid exactitude, compendious and secure, but destroyed the sense of continuity that had hitherto managed to survive even the perfectionist ideals of the Renaissance.

Some dominant trends of the 19th century did not acquire their fullest realization until our own time. A case in point is Colonial Williamsburg, its full-scale mobilization of archeology and thorough showmanship hardly possible before the era of millionaire ascendency. Here the unguarded visitor has been heard to exclaim that "it is like stepping into the 18th century." Yet always lurking are telltale hints that should remind him of the ineluctable law of mutation.

Important details here and there mock the jaded imagination, like the recent haircut of a "colonial" apothecary, the horn-rimmed eyeglasses of the artisan who demonstrates a historic handicraft, a shopgirl's pretty touches of modern cosmetics, or the dearth of pigsties, privies, water troughs, wells.

These and countless other little lapses give the lie to costly efforts of excavation and special brick-making for reconstructions, while one single, unregenerate, nonconforming house with jigsaw details flaunts its middle-class Victorianism with refreshing candor in the very face of the reconstituted "old" Capitol building. Above all, there is the disconcerting intrusion of the spectator himself and his myriad counterparts, an endlessly streaming reminder of the 20th century phenomenon of tourism, of the acres of parking facilities nearby.

In order to view the scene to better effect, one should leave the busy promenaders along Duke of Gloucester Street and visit the semidocumentary film in the reception center. Aided by the art of cinema, the unanticipated truth comes home with a sudden realization: Colonial Williamsburg, Incorporated, is an extraordinary product of our time, unprecedented, staggering, spectacular! But let it be fully realized that whereas the Rev. William Archer Rutherford Goodwin, prime initiator of the restoration, could still witness "the ghosts of the past (that) walked the streets at night" in the sleepy, forgotten little town of 1926, today Colonial Williamsburg, unincorporated, is gone, gone, gone.

The foregoing remarks, for all their apparent flippancy, are not intended to debunk the achievements of 20th century Williamsburg, in its way as daring in scope as our most ambitious skyscrapers, expressways, suspension bridges or colossal systems of dams. Some future age may wish to preserve it as a monument of this century, superimposed over earlier fragments, just as some day one of our extraordinary planetariums will appear as quaint a curiosity as an 18th century orrery does today. Any style based eclectically on an earlier tradition always betrays some small traces of its own era, which become increasingly recognizable as time goes on.

Was Colonial Williamsburg, Incorporated, worth doing? No thoughtful person would care to answer with an immediate ringing negative in spite of the destruction it inflicted on an untouched bit of Southern charm. To be sure, for all its efficiency, the ensemble of today represents a belated 19th century mindset, the dream of arrested time; and not a modern dynamic vision.

Certainly, it supplies a comfortably misguided sense of edification to hundreds of visitors who, like the gaping throngs at the cottage shrines of Stratford-on-Avon which, according to Margaret Halsey's diverting travel diary With Malice Toward Some (Simon & Schuster, 1938), "have never read [Shakespeare] at all and hope to get the same results by bumping their heads on low beams."

Certainly, when the director of restoration enthusiastically removes all later additions to get back to the original aspect, he must necessarily remove the traces of time's interim, at the risk of ending with a disquieting freshness, the sleek "Williamsburg finish."

The vista of time is best represented by the lapse of time itself, for which there is no truly convincing substitute. It is possible, of course, to simulate the effects of aging, sometimes with remarkably deceptive results, but more usually the simulated effects produce nothing more than an empty simulacrum, which may dull rather than stimulate the effort of empathy. The imagination is not fired by heaping onto history's dead coals, but by breathing gently on the hidden embers.

Certainly, this historic site has had widespread educational value, and its effect cannot have been entirely stultifying. Such exhaustive search for documentation and all types of substantiative evidence, such sustained and experienced efforts to insure the utmost faithfulness are almost unmatched and can only earn the highest commendation. Williamsburg plants in the minds of thousands of visitors the idea of historic preservation and demonstrates what can be done with modern methods, especially the excellent display techniques in the reception center.

The impact of Williamsburg is inescapable, and to many it will convey at least the naive beginnings of a historic sense. The experience could be the beginning of some small kind of wisdom that history is said to engender. It seems reasonable to conclude that it was worthwhile to undertake such a restoration at least once, and Williamsburg may have been the best locality to choose for the experiment.

Contemporary with the Rockefeller project and almost equal in notoriety, Henry Ford's Greenfield Village, dedicated in 1929, is a repository of displaced buildings, unrelated except as Ford foundlings. Its arrangement is not calculated to suggest a particular locale, nor yet a historic sequence. Like the vast collections in the nearby museum, the village preserves disparate remnants of the disappearing culture that Ford's own system of automation had helped to render obsolete.

After World War II the movement that Williamsburg and Greenfield Village both exemplified and fostered was suddenly accelerated and acquired not only wide acceptance but even official support. During these years many states enacted protective laws and city governments acquired a historic consciousness.

Independence Mall in Philadelphia was created by act of Congress. Following the principle of *conformità* and the Williamsburg model of historic consistency, the enactment called for demolition of all but pre-Revolutionary buildings and thereby destroyed notable landmarks, leaving the 18th century monuments isolated and divorced from their normal urban setting. More fortunately, the nearby development of Society Hill typified the rise of citizen involvement.

Locally independent, usually private and even spontaneous renewal campaigns have included such promising developments as the Factor's Walk group along Savannah's waterfront, Gaslight Square in St. Louis, Jackson Square in San Francisco, the Georgetown section of Washington, D.C., the Ansonborough area in Charleston, South Carolina, Mount Adams in Cincinnati, the Strawberry Banke Project in Portsmouth, New Hampshire, Brattle Street in Cambridge, Massachusetts, and Beacon Hill in Boston.

The forthright acceptance of history or beauty by legislators or legal theorists is now seen to gain in strength almost with each passing month. For example, the preamble to the 1966 Historic Preservation Act declares that "the historical and cultural foundations of the nation should be pre-

College Hill in Providence, a few years ago a slum, is now a classic example of American preservation, integrating areas of historic architecture into redevelopment programs. Shown is Benefit Street in 1958 and 1960.





served as a living part of our community life and development in order to give a sense of orientation to the American people."

Most notable and widely praised of all urban renewal combined with historic preservation is the College Hill project in Providence. Begun with individual initiative about a decade ago, the movement produced a *Demonstration Study* of *Historical Area Renewal* (City Plan Commission, 1959). By this time, some 20 houses had already been restored by private interests, and with each the pace of the work increased. Indeed, one of the most significant results of the study is seen in the amount of privately financed restoration.

The 1960 annual convention of The American Institute of Architects cited the Providence City Plan Commission for its initiative in the study "whereby there has been held up for all to see the possibilities of restoring to a city some of the amenities of man's environment, lost for a while, but still recapturable by a resolute community."

In November 1963 the AIA JOURNAL published an updated report and summarized: "The process of private restoration is based . . . on the faith of the owners in the stability of the hill . . . If we have a sound plan, success can be triggered even in advance of urban renewal . . . An area master plan and architectural design plan are being carried out by urban renewal or public action and by the persuasion of individuals or private action in parallel fashion."

Work has progressed and continues on College Hill, largely privately undertaken but guided by the 213-page inventory and its recommendations, and strengthened by municipal ordinance. Christopher Tunnard and Boris Pushkarev, in their monumental work on *Man-Made America* (Yale, 1963), have commended the College Hill Study for its departure from earlier preservationist attitudes, particularly where it states, "the commission shall encourage that the making of alterations and repairs to structures . . . be made in the spirit of their architectural style, but that additions to structures may be made in styles other than the one in which the structure was built."

They go on to quote from the state enabling bill: "It is not the intent of this act to limit new construction, alteration or repairs to any one architectural style. . . . Good design should be encouraged so that this era's philosophy of architectural design can take its place among those of our forebears."

Here is truly far-reaching innovation in historic attitude, more momentous than the first glimmers of sophistication in the Renaissance. It avoids the traditionally static view of history and recognizes the effects of historic continuity as an interplay between survival and mutation.



Colonial Williamsburg, in spite of all efforts to make it authentic, is still a mutation which some day may be regarded as a monument to the 20th century. Typical attraction (above) and replica of the old Capitol.



### **RADIATION SHIELDING: AN ARCHITECTURAL PRIMER 2**



## The Nature of the Hazard

#### BY ROBERT J. PATTON

In a city, fallout particles would initially settle in a thin layer on the ground and on other horizontal surfaces located above the ground. Because of the complexity of the urban relief, the distribution would be irregular rather than even and altered by the proximity of buildings, unusual terrain, bodies of water and vegetation. The distribution would also be affected by wind and rain moving the particles about to form dense buildups in some places and perhaps to remove them in others. Where a buildup of fallout occurs, there is an accompanying increase in the amount of radiation being emitted. Variations in the contaminated field cannot easily be foreseen; this contributes to the difficulty of definitive development of protective systems within the complex environment of a city.

#### **Radiation Characteristics**

Each particle in the fallout field is a minute source of radiation that emits gamma rays in all directions. Any unprotected person or group of persons within the proximity of fresh fallout would be exposed to the harmful effects of these rays which travel through space in straight lines. A portion of them will collide with atoms of denser matter with which they come in contact. Some of these collisions will result in ricochet with continued travel in a new direction. This phenomenon, called scattering, creates a condition in which dangerous gamma rays can reach a target from angles other than directly from the fallout field.

As gamma rays move away from their source, they spread apart and become less dense. This has the effect of decreasing their intensity; consequently, distance is an important factor in the consideration of protection.

It is apparent that, in a built-up area, radiation emanating directly from the fallout field or scattered in the atmosphere will have ample opportunity to come into contact with structures. Gamma rays have penetrating power similar to X-rays but possess far greater energy. As they

bombard a mass of material, three possible actions occur: 1) Some of the gamma rays will pass through directly in a straight line unaffected by the material; 2) some of the rays will collide with the atoms of the material and careen off in a new direction to emerge from the material at an angle different from that at which they entered and at a lower energy; 3) some of the rays penetrating the material are absorbed and never emerge.

In very dense material, where atoms are packed close together, the entering gamma rays would have a greater chance of being absorbed and scattered than in a less dense material. This likelihood would increase with added thickness and would lengthen the rays' paths of travel through the material. Therefore, a mass barrier effectively resists the penetration of gamma radiation by virtue of its density and thickness.

The two factors which function most effectively as protection from the harmful effects of gamma radiation are the decrease of radiation intensity through interaction with a barrier of adequate density or thickness. Any condition or combination of conditions in an urban complex providing adequate distance or barrier resistance to radiation will contribute to the protection of people during the period of decay.

The characteristics of urban form, pattern and relief make the use of these factors in providing protection extremely complex. Perhaps the clearest way to view a city which has been contaminated by fallout is as a three-dimensional abstraction. A densely built-up urban area is an agglomeration of compartmented volumes separated by open spaces occurring basically at ground level. The surfaces contaminated by radioactive fallout would be these open spaces and the elevated planes, such as roofs, of the structures which surround them.

The ground-level area diminishes as the density of structures increases; this becomes most evident in the central core of the city. Here a new condition arises. The contaminated planes become essentially multilevel and the roof of a building acts as a contaminated ground plane to an upper level. This multilevel aspect of the radi-



Fallout pattern Atmospheric scattering



ating ground plane coupled with atmospheric scattering (affecting particularly the upper stories of high-rise buildings) and the concentrated pockets formed by building proximity contribute to the difficulty of providing shelter in a falloutladen city.

The most natural human reaction would be to seek security in the multitudes of compartments to be found within the enclosing shells of buildings. If the walls and roofs of all buildings were of characteristics which would effectively absorb or scatter gamma rays, reduce their intensity and render them harmless, such would be the simplest form of radiation shielding. But, because of differing densities and thicknesses, the wall materials of modern structures have varying resistances to gamma ray penetration; all buildings will not provide adequate protection. A glass curtain wall, for example, has little resistance compared to masonry.

Persons taking refuge inside a structure exposed to direct radiation from a contaminated field of fallout and scattered by the atmosphere would be exposed to the rays penetrating the walls and emerging from the inside surface. The condition of the emergence of the rays is a phenomenon best understood by visualizing the entire interior surface of the exposed wall plane as glowing with radiation. The rays emerge in all directions from all points on the surface. This condition would also exist for the ceiling, particularly if it were a contaminated roof plane. Persons in the line of travel of any of these emerging rays would be targets.

In the past decade, progress has been made in the fields of science and engineering indicating that the design of protective systems is possible. Furthermore, protection is possible within an acceptable economic framework and can be accomplished without causing an unpleasant visual distortion of the urban environment. The greatest barrier to progress in this area is the often posed question: "Is it worth the trouble in the face of the potential destruction of a nuclear attack?"

#### The Advantage of Protection

Our civilization has had no direct experience with nuclear war other than Hiroshima and Nagasaki (which was small in scale compared with today's potential), and there are many questions concerning the advantages of attempting to provide protection in the event such an attack were to occur. The foremost question is: "Would the impact of any nuclear attack be so devastating that no one could possibly survive?" Any optimistic point of view in answer to this question generally leads to the further question: "If survival were possible, would the post-attack environment be such that it would be livable and reconstructable?"



Decrease in radiation intensity with distance Gamma radiation barrier penetration



These two questions are the ones to which civil defense planners, whose job it is to analyze protection capability, direct their attention—lifesaving and post-attack recovery potential. Specific answers are difficult; the amount of destruction to the life and property of an urban area is a variable related to the kind of attack incurred (number and size of weapons employed, air burst or surface burst) and the nature of the target (density of the city, topography etc.).

From the standpoint of lifesaving potential, there is no doubt that the immediate vicinity of a thermonuclear explosion would experience total destruction. Persons nearby would be exposed to the effects of blast and fire; protection is possible, but it would require extensive construction measures and great expense. However, in areas farther out from the point of detonation and in cities not attacked or hit, radioactive fallout may be the only danger with which to contend.

Strategic targets may be the sole objective of an enemy, leaving large population areas for which protection should be considered. The lifesaving potential in these areas could be measured in terms of shelter from gamma radiation. Studies conducted by the Department of Defense and based on classified information reveal that, in an all-out attack upon this nation against military, industrial and population targets, 2 percent of the land area would receive significant damage, but 74 percent could be blanketed with radioactive fallout.

The second point in question is that of postattack recovery. Obviously, the consequences of a nuclear disaster would entail a severe disruption of our urban technology. Nuclear attack would leave varying degrees of damage to essential elements of the urban system: utilities, communications, transportation, etc. Successful planning should include protection of these facilities from the effects of an attack. However, this is useless unless the human element survives to reenergize and restore the orderly functioning of society.

Urban design has, as its final goal, the successful integration of the physical elements which support the activities of the community of man. The process begins with an analysis of the constants and variables to be dealt with based not only on the context of the present but also on scientific predictions of what future conditions might be. Our country is moving toward the largest rebuilding of urban communities in our history. If radioactive fallout is one of the future possibilities with which we are to deal, total-design concepts for the protection of populations should be incorporated into the master planning process. This spells out the challenge facing those who, through their professional abilities, are best equipped to meet it—architects, planners and engineers.

# You've made the move to electric heat. Good choice.

# Now, who installs it?

Electric heat is an electrical function and should be the responsibility of a qualified electrical contractor. That way, you've got the one man who can furnish, install, connect and inspect electric heating equipment—the one man who can see the job all the way through from plans to permit to operating guarantee.

How can you be sure a qualified electrical contractor will furnish and install your next electric heating system? That's easy. Put the heating specs into the electrical section of your building plan.



AIA JOURNAL/NOVEMBER 1968 87



### SIMPLICITY OF DESIGN, UNIFO WHITENESS. THE CEMENT I ATLAS WHITE.

The Exhibition Hall, Philadelphia Civic Center, Philadelphia, Pennsylvania. Over 850 white precast panels form the exterior of Philadelphia's newest architectural showpiece. These same panels, which were sandblasted to a sparkling white finish, also serve as the finished interior walls in some areas of the building. Precast panels made with ATLAS White Cement are as exciting and beautiful for building interiors as they are for exteriors. The builders chose ATLAS White for its uniform whiteness and physical properties. Precast Contractor: Camden Architectural Cast Stone, Cam-den, N. J. Architects: Edward Durell Stone, New York, N. Y. and Davis, Poole & Sloan, Philadelphia, Pa. General Contractor: McCloskey & Co., Philadelphia, Pa. Write Universal Atlas Cement Division of U.S. Steel, Room 5752, Chatham Center, Pittsburgh, Pa. 15230. ATLAS is a registered trademark.



Atlas

### COMPLEXITY OF DESIGN, TRUE COLOR. THE CEMENT IS ATLAS WHITE.

linois State Highway ffice Building, Dixon, III. his Seal of the State of linois illustrates the tricacy of design that an be achieved with errazzo. ATLAS White ement was used to bring ut the true color of the arious colored chips sed to form the seal. A ix of Georgia white, earl gray and Cardiff reen chips was used proughout the entire rrazzo floor. Terrazzo xemplifies beauty, de-gn and durability. Terazzo Contractor: Rockord Central Tile and errazzo Company, Rockord, Illinois. General ontractor: Lindquist onstruction Co., Dixon, linois. Supervising rchitect: John McLane, ixon, Illinois. Write niversal Atlas Cement ivision of U. S. Steel, oom 5752, Chatham enter, Pittsburgh, Pa. 5230. ATLAS is a regisered trademark.







### ARCHITECT Corporate Director Facilities Construction

This major world-wide corporation is seeking a registered architect to manage its corporate facilities construction programs. The position requires experience and creativity in the design of manufacturing plants, engineering laboratories and general office facilities for U.S. and overseas locations. In addition, candidates must have the ability to plan and supervise building construction programs involving the effective direction of people working on these projects at widely scattered locations and to supervise a corporate architectural and construction staff.

Interested candidates should send a resume outlining experience, listing past employers, accomplishments, interests and salary requirements to:

> Box 11-68 AIA JOURNAL 1735 New York Avenue, N.W. Washington, D.C. 20006

We are an equal opportunity employer.

Statement Required by the Act of October 23, 1962, Section 4369, Title 39, United States Code, showing the ownership, management and circulation of

#### AIA JOURNAL

Published monthly at 1735 New York Ave. N.W., Washington, D.C. 20006. Statement filed September 23, 1968.

The names and addresses of the Publisher, Editor and Managing Editor are: Publisher, Wm. Dudley Hunt Jr., 7404 MacKenzie Court, Bethesda, Md. 20034; Editor, Robert E. Koehler, 1748 Corcoran St. N.W., Washington, D.C. 20009; Managing Editor, NONE.

The owner is: The American Institute of Architects, a nonstock, nonprofit New York membership corporation, qualified in the District of Columbia, 1735 New York Ave. N.W., Washington, D.C. 20006. Stockholders holding one percent or more of the stock are: NONE.

The known bondholders, mortgages and other security holders owning or holding one percent or more of total amount of bonds, mortgages or other securities are: NONE.

No person, corporaton, partnership, trust or other entity beneficially owns an interest amounting to one percent or more.

4	Average No. Copies Each Issue During Preceding 12 Months	Issue Nearest
Total No. Copies Printed. Paid Circulation Sales through dealers at		29,200
carriers, street vendors and counter sales Mail Subscriptions Total Paid Circulation	None 21,431 21,431	None 21,440 21,440
Free Distribution by Mail Carrier or Other Means Total Distribution Office Use, Left-over, I Conciliation	27,360 Jn-	6,225 27,665
accounted, Spoiled af Printing Total I certify that the stat above are correct and co	28,200 ements ma	1,535 29,200 de by me
abore and maile	Thunt Ir	Publisher

(Signed) Wm. Dudley Hunt Jr., Publisher

# Just another Heat Transfer Coil?

# NONSENSE!

Smooth-fin design gets the credit. Its tapered shape puts every inch of transfer surface to work. There's room for more fins—more heat exchange per sq. ft. of compact space—higher air velocities with less turbulence are possible and practical.

Water coil drainage is positive heating coil drainage and venting is greatly improved. Aerofin coils are lighter even though framed in rugged pressed-steel casings.

But there's more. Aerofin completely engineers coils to fit today's most sophisticated heating and air conditioning fan-system applications. Complex mechanical and thermal calculations are made. Collateral factors are objectively evaluated: pressure drops—turbulence and velocity variables—stainless steel or copper tubes with correct diameter and fin-spacing efficiencies—fluid fouling factors—and header designs for easy banking in stacks or connecting to duct work.

Туре СН

Hot Water Heating Coil

Specify dependable, true-rated Aerofin Coils and get *maximum* performance. Comfort control of America's showcase structures offers testimony to that promise.



Lynchburg, Virginia 24505

Aerofin is sold only by manufacturers of fan system apparatus. List on request.

AEROFIN OFFICES: Atlanta · Boston · Chicago · Cleveland · Dallas · New York · Philadelphia · San Francisco



It is called Electa.

our galleries: New York, Chicago, Los Angeles, Dallas, Grand Rapids. For a brochure, write on your ead to Stow/Davis, Grand Rapids, Michigan 49502.



mation card



#### A PROFILE OF EXISTING PROGRAMS OF CONTINUING EDUCATION IN ARCHITECTURE, 1967-68

Sponsoring Agency	Type of Courses	Duration	Fee	Participants	Sponsoring Agency
University Sponsored			7-1-1		Washington University,
Ball State University, College of Architecture & Planning, Muncie, Ind.	General topics of architectural interest	weekly, evening courses		-	St. Louis, Mo.; School of Continuing Education
University of California Extensions, Los Angeles; Program of Continuing Educa-	Urban planning, history, design	14/16 meetings	\$40/45/50	******	University of Wisconsin, University Extensions
Program of Continuing Educa- tion for Adults—Continuing Education in Environmental Design	Landscapes, con- struction law, finances	4/6 lectures	\$35/45		University of Toronto, Div. of University Extensions
Cooper Union, New York City, Div. of Adult Education	Architecture & cities; art & society; uses & abuses of computer	evening lectures	\$5	up to 1,600	Privately Sponsored ACSA/Office of Civil Defense
Georgia Institute of Technology Continuing Education Program	Management, CPM/PERT urban planning	5/11 days	\$30/40	limited to 25	Bolt Beranek & Newman
Catholic University of America, Washington, D.C.	Planning techniques, transportation planning				Boston Architectural Center Program for Continuing Education
George Washington University, Washington, D.C.	Urban/regional planning, administration, data processing	*******	******	-8880,0000	
Georgetown University, Washington, D.C.	Economics, health, community facilities	******			Building Research Institute
Massachusetts Institute of Technology Special Summer Programs	City and regional planning	1/2 weeks	\$400		Management Science Construction Specifications Institute, Metropolitan New York Chapter
University of Miami, Div. of Continuing Education	Acoustics seminar, strength of	4/5 sessions	\$15/35	*******	The Crowell-Collier Institute of Continuing Education
	materials			- 18	Lutheran Academy for Scholarships
University of Notre Dame, Center for Continuing Education	Conference on advancement of urban society	4 days			New School; Center for New York City Affairs,
Ohio State University	Computer technology	9 days	\$275		New York City Northwest Electric & Power
Oklahoma State University	Management development, creativity,	1-day sessions	\$25		Association Pittsburgh Urban Transit Council
	water & pollution control				Real Estate Institute New York University
Pratt Institute, Brooklyn, N.Y., School of Continuing Professional Studies	Problems of space planning, business interiors, graphics/freehand drawing	10 sessions	\$75	Annesian	
	Urban design	lecture series			Professionally Sponsored Chicago Chapter AIA
Rensselaer Polytechnic Institute; Technical Services Program	Computer methods	3 days		limited to 30	
University of Southern California, Los Angeles	Acoustics/arch. design, lighting/cost	7/21 sessions, semester	\$50/unit		Connecticut Soc. of Archs., AIA, University of Conn., Continuing Education Program Delaware Chapter AIA
	control, air conditioning, hospital planning	courses			University of Delaware
Syracuse University	Symposium on urban problems	1 day			New York Chapter AIA
Tulane University	Symposium, "The New City"	1 day	(annearda) (	*******	Philadelphia Chapter AIA
University of Washington,	Programming of	5 full-day	\$175	limited to 15	University of Pennsylvania

nsoring Agency	Type of Courses	Duration	Fee	No. of Participants
hington University,	Campus planning,	3 days	\$90	
ouis, Mo.; School of	law enforcement,	2 weeks	\$176	-
tinuing Education	motivations & communication,	3 days	\$120	
	leadership skills	3 days	\$110	
versity of Wisconsin, versity Extensions	Building design, interior design,	11 days	\$300	
	computer methods	1 week	\$150	
versity of Toronto, Div. niversity Extensions	Planning & urban design	10 lectures	\$35	
ately Sponsored				
A/Office of Civil Defense	Nuclear defense design	5 weeks	free	
Beranek & Newman	Acoustics,	5 day-	\$325	limited to 40
	computers, structures, mech. lighting	long seminars		
ton Architectural Center	Systems analysis,	7 lectures	\$35	
ram for Continuing cation	acoustics/lighting, computer applications, air pollution/ Congressional plan	5/10	\$50/100	
ding Research Institute	Building modules	2 days		
ter for Applied agement Science	CPM/PERT	1 day	\$35	
struction Specifications itute, Metropolitan York Chapter	Specification writing	15 2-hr. sessions	\$190	
Crowell-Collier Institute ontinuing Education	Architectural law	1-day seminars	\$75	
neran Academy for plarships	The Church & visual arts	3 days	\$15	
School; Center for York City Affairs, York City	City planning, homes & housing	8/15 sessions	av. \$4 per session	
hwest Electric & Power	Electric environ- ment control	2 days	*******	500
sburgh Urban Transit ncil	Conf. on urban transportation	2 days	\$60	
Estate Institute York University	NYC zoning, bldg. codes, urban renewal, bldg. constr., cost est.	8/10/15 sessions	\$100	
essionally Sponsored				
ago Chapter AIA	History of	32	\$35	-
	architecture, the arch. & the	lectures 6	\$25	
	computer	lectures		
ecticut Soc. of Archs., University of Conn.,	Construction specs.,	12 sessions	\$96	
inuing Education Program	lighting	5 sessions	\$40	*******
ware Chapter AIA ersity of Delaware	Specs., law, admin., design theory, history		\$50/75/90	*******
York Chapter AIA	Committee mtg. on school & hospital planning	(varies)		
delphia Chapter AIA ersity of Pennsylvania	Management techniques, urban design	*******	\$200	20/25



Our reputation is on trial from the moment an Inland division mines the raw iron ore until the last panel is put in place on your building.

We offer complete steel floor, roof, wall and joist systems. Plus slope beam and rigid frame structural component systems.

We help make our systems and your designs work together. And we back our promises with our reputation.

# your roof deck this morning.

Your Inland man would like a chance to help you on your next project involving steel floor, roof, wall or structural systems. For his name or any of our technical literature, write: Inland-Ryerson Construction Products Co. Dept. K, 4127 West Burnham Street, Milwaukee, Wisconsin 53201.

> Formerly Inland Steel Products Company and the structural fabricating, reinforcing steel and post tensioning divisions of Joseph T. Ryerson & Son, Inc.







### A winning design uses Buckingham<sup>®</sup>Slate...naturally

Buckingham Roofing Slate, Facia Panels, Exterior Paving and Interior Flooring combine as design features to compliment the total design of Forrest Coile & Associates Christopher Newport College building. This outstanding Virginia building was awarded a certificate of merit at the 1968 Virginia Museum of Fine Arts bi-annual Architects, Designers and Photographers Show. Buckingham Slate Catalogs are in Sweet's Architectural File and the Building Stone Institute's Stone Catalog.

Photo by: Taylor Lewis

### **BUCKINGHAM-VIRGINIA SLATE CORPORATION**

1103 EAST MAIN STREET . RICHMOND, VIRGINIA 23219 . TELEPHONE 703-643-8365



# Antron picks up just as much day-to-day soil as any other carpet fiber. But your clients will never believe it.



"Antron" fiber balances light to look clean.

"Antron" is the surprising new fiber from Du Pont that keeps its new look longer than any other carpet fiber—and keeps the appearance level of the busiest buildings at their highest.

Even light colors look clean longer, because Antron\* nylon minimizes the appearance of soil. Some carpet fibers are transparent, so you see not only the dirt on the side facing you, but the dirt on the opposite side is magnified. "Antron" is different. It is specially structured to be opaque. It controls absorbed, reflected and transmitted light to minimize the appearance of soil.

And because "Antron" is a nylon, it's the most durable carpet fiber made. It resists crushing, pilling and fuzzing and is easy to clean. When you combine all these benefits, your clients end up with carpets that need less frequent cleaning and keep their new look longer. Carpets with pile of "Antron" deliver a long term saving. And *that's* something you *will* believe!

"Antron" is the optimal carpet fiber for high traffic areas and is available in a wide variety of contract styles from leading mills. Ask BIGELOW about "Stati-Check," "Stati-Point," "Terrytuft" and "Contender."

For a free brochure on "Antron" (and Du Pont's other contract fibers) write: Contract Carpet Specialist, Du Pont Company, 308 East Lancaster Avenue, Wynnewood, Pa. 19096.



\*Du Pont registered trademark. Du Pont makes fibers, not carpets



# How come you designed the outside to keep the rain out, but not the inside?

Like the carpet in the lobby.

100-to-1 you never figured to waterproof it, like the outside.

So when you don't waterproof it, the tenant does. First drops of rain, out come the plastic mats. What a beautiful way to introduce the rest of the building.

Why blame the tenant?

Magee says if you care about the outside, you should start with the inside carpet.

That's why we made All Site carpet.

It's made of solution-dyed Acrilan<sup>®</sup> acrylic fiber in the pile.

Acrilan makes sure moisture won't rot it. Sun won't fade it. And stains will wash off.

Next time you're thinking carpet for the lobby, think Magee waterproof indoor-outdoor All Site made with Acrilan.

It'll keep the plastics out as well as the rain.

To find out more about our All Site waterproof carpets,

write:

The Magee Carpet Company, 295 Fifth Avenue, New York, N.Y. 10016 Mills: Bloomsburg, Pa./Perry, Ga., Member American Carpet Institute.





#### RUNSWICK



#### ADDATE: NAME IN SCHOOL EQUIPMENT VABLE SEATING FIXED SEATING DESKS/TABLES

CABINETS LIBRARY/ OURCE CENTER FURNISHINGS CHALKBOARD/ SPLAY SYSTEMS OLDING WALLS GYM SEATING RTABLE STAGES

### Help stamp out lazy walls

Brunswick Folding Walls are *working* walls. They open easily . . . close easily . . . give you sturdy, rigid walls that'll stand up to heavily used chalkboards, tackboards, and pass doors. Install one for simple space division. Install two, three, four, or more to turn cafeterias into classrooms, classrooms into seminar rooms. With Brunswick Folding Walls you're free to design flexible facilities that can be changed quickly and conveniently as the area need changes. Need sound control? Our Acoustic Folding Walls make adjoining areas seem rooms apart. Write for more information.

#### It's never too early to let us help with your planning. (It's never too late, either.)

For ideas, for information, for problem solving . . . feel free to contact Brunswick. We're tuned in to what's happening on the educational scene—and we'll be happy to help you. No cost or obligation.

Brunswick Corporation / School Equipment Division 2605 East Kilgore Road/Kalamazoo, Michigan 49003



# Books

**Campus Planning, 1967.** Editors, Frederick W. Mayer and Carl V. Schmult Jr. Ann Arbor: Society for College and University Planning, 1968. 98 pp. \$3.

The papers presented in this publication are of importance to anyone who is responsible for campus planning, and they should be read with careful consideration due to the unprecedented burden on colleges and universities today.

In the introduction to this book contributed by Allan F. Smith, vice president for academic affairs of the University of Michigan, it is stated that "most colleges and universities are from one to seven years behind the capital growth that they ought to have in order to meet the teaching burden they are now exposed to." Smith goes on to remark that the facilities the institutions already possess have been made obsolete by the knowledge explosion and that buildings, laboratories and other physical facilities have to be modernized or replaced.

A major function of the Society for College and University Planning is its annual conference aimed at bringing individuals together so that they can consider matters of mutual interest relating to long-range developments of institutions of higher education. The society held its second annual conference at the University of Michigan in August of 1967. All the major papers of the conference are included in this publication.

There is the key note address by W. R. Keast, president of Wayne State University, in which he outlines the conditions that affect university planning and some of the pressures that must be recognized and develops some criteria by which one might evaluate campus plans. His presentation is followed by papers by David H. Scott of the University of Guelph and by Evan H. Walker, architectural consultant in Toronto, on college and university planning in Canada.

The major portion of the book, however, is given over to a consideration of three environments, and perhaps this section of the book will most interest architects. The educational environment is discussed by R. H. Whaley, chancellor of the University of Missouri at Kansas City; the human environment by Harold Horowitz of the National Science Foundation; and the physical environment by Richard P. Dober of Dober, Paddock, Upton & Associates, Inc., who has written the widely used book called Campus Planning (AIAJ, Feb. '65, pp. 60-61). Case study presentations of three institutions are made by Albert Canfield of Oakland Community College; F. J. Matzke of the State University of New York; and by Harlan E. McClure of Clemson University.

Circle 348 on information card

Early American Houses: The Seventeenth Century. Norman Morrison Isham. Watkins Glen, N.Y.: American Life Foundation, 1968. 80 pp. \$2.45.

The original edition of this book, published in 1928 by the Walpole Society, was limited to 175 copies. As a result, one has been fortunate if he found a copy, and chances are he paid well for it. The appearance of this new edition, modestly priced, is therefore good news to the student of architectural history.

The book provides a great deal of precise information on 17th century American architecture, and the measured drawings and photographs add greatly to the book's usefulness. This edition includes an introduction and a bibliography of books on colonial and classical revival architecture published from 1880 to 1930. These inclusions are by Hugh Guthrie.

North Carolina's Capital, Raleigh. Elizabeth Culbertson Waugh. Chapel Hill: University of North Carolina Press, 1968. 216 pp. \$12.50.

This handsome book is a highly entertaining history of Raleigh from its beginnings in 1792 to the present day. It was a planned city, founded as the capital of the state. Part 1 covers the years 1760 to 1850, beginning with the wilderness that was Raleigh before the commissioners selected the exact site from at least 17 land tracts which were available for sale. There are pictures and descriptions of such landmarks as the city cemetery, the old State House and the birthplace of President Andrew Johnson.

Part 2 includes the Civil War era and extends from 1850 to 1900. Here are stories and pictures of stately old houses, hotels, churches, office buildings, the Governor's Mansion, educational institutions and the Confederate Monument. The last part of the book, 1900 to 1967, sees the city growing and becoming industrialized. The structures in this section include the Dorton Arena, an AIA Honor Award winner.

The volume was designed to be published coincidentally with Raleigh's 175th anniversary. Its initial purpose "was to light new torches in imaginative and discriminatory preservation, a book to be owned for enjoyment, for delight." Its first printing was sold out within a month of its publication by the Raleigh Historic Sites Commission.

The book is a cooperative effort on the part of many people. The author was assisted by a distinguished editorial committee. Other cooperating agencies include the North Carolina Department of Archives and History, the North Carolina Museum of Art and the Junior League of Raleigh. The contemporary photographs are by Ralph Mills.

Circle 100 on information card for addresses of publishers whose works are reviewed.

Circle 348 on information card ►



### Put a wall to work today

Lazy walls can make a school lazy. Brunswick Folding Walls make things happen—give students and staff a facility that can be changed immediately to meet changing area needs. Brunswick's Folding Walls are sturdy, *working* walls . . . easily opened, easily closed (manually or electrically). You can have them with chalkboards, tackboards, even pass doors. There's a size for every need—a finish for every decor. You say you need sound control? Check into Brunswick Acoustic Folding Walls. They have a way of keeping sound in its place. Write for more information.

It's never too early to let us help with your planning. (It's never too late, either.) For ideas, for information, for problem solving . . . feel free to contact Brunswick. We're tuned in to what's happening on the educational scene—and we'll be happy to help you. No cost or obligation.

Brunswick Corporation/School Equipment Division 2605 East Kilgore Road/Kalamazoo, Michigan 49003



#### BRUNSWICK



#### SCHOOL EQUIPMENT MOVABLE SEATING FIXED SEATING DESKS/TABLES CABINETS LIBRARY/ RESOURCE CENTER

No. 1 NAME IN

FURNISHINGS CHALKBOARD / DISPLAY SYSTEMS FOLDING WALLS GYM SEATING PORTABLE STAGES

# For multiple use gym floors, specify Hillyard Trophy<sup>®</sup> wood seal and finish



**DESCRIPTION:** A seal and a finish specially formulated for wood gymnasium floors to give a light, durable, slip resistant playing surface that will resist rubber burning and marking.

SPECIFICATION AND HOW TO APPLY: An epoxy seal and finish. Apply with lambswool applicator. Seal coat fills porous wood surface. Two seal coats are recommended on highly porous wood. Game markings, using Hillyard Gym line paint, are painted in before finish coats are applied. Two finish coats are required. See Sweets Arch. File for detailed specification.

**EXCEPTION:** Do not seal and finish wood floor until building is free of excessive construction moisture and the floor and atmosphere in the building are normal.

#### COVERAGE (Average):

50 sq. ft.
or gallon. 00 sq. ft. er gallon.



TECHNICAL DATA: N.V.M.: Trophy Seal — 30%, Trophy Finish — 40%. Color: Gardner (typical) 4-5 (extremely light). Drying time: 7 hours to overnight (depending on humidity). Produces a glare free surface with proper light refraction. Exceeds all MFMA requirements. High abrasion index. Retains light color — eliminates need for removing or sanding off finish for many years.

**GUARANTEE:** Controlled uniformity. Vacuum-packed. When applied according to directions and under supervision of a Hillyard representative, all claims for the product are guaranteed—provided containers are received at job site with factory seal unbroken.

MAINTENANCE: Regular treatment with Hillyard Super Hil-Tone dressing for conditioning and dust control.

APPROVALS: Maple Flooring Mfrs. Assn., Institutional Research Council. Listed by Underwriters' Laboratories as "slip resistant." In use: 12 years on all major basketball tournament floors.



REFERENCES: Sweets Architectural File, section 13n

A.I.A. File No. 9 (Wood Flooring) Gym Floor specifications folder available on request.

Free follow-up "job captain" service protects your specifications. A trained Hillyard Architectural consultant will gladly consult with your specification writers on proper, approved procedures and materials for the original treatment of any type floor you specify. Write, wire or call collect.



The most widely recommended and approved treatments for every surface



Fire lookout atop Georgia's Brasstown Bald Architects: Heery & Heery Their material: red cedar handsplit shakes

Certi-Split Handsplit/Resawn Shakes, 24" x 34" to 1 14" with 10" to the weather

Build something up on top of a mountain in Georgia and it has to be rugged. Tough enough to withstand a lot of wind and weather. Yet graceful and honest enough to blend naturally with the misty, tree-crested ridges that surround it.

One material you can depend on to fill both requirements is red cedar handsplit

shakes. Bold. Evocative. Rich in natural color and beauty. Yet surprisingly practical.

Red cedar shakes offer you nearly no total design flexibility. Plus such advantages as natural insulation, light weight, low upkeep and complete weather resistance. And that's true whether you're building on a mountain in

Georgia or a beach in Hawaii.

Next time, for the effect you want, why not consider the real thing: Certi-Split handsplit shakes. For more information, see Sweet's catalog listing 21d/Re. Or write: 5510 White Bldg., Seattle, Wash. 98101 (In Canada: 1477 West Pender Street, Vancouver 5, B.C.)

Circle 265 on information card

Red Cedar Shingle & Handsplit Shake Bureau

One of a series presented by members of the Forest Products Promotion Council.



Should <u>all</u> your clients' security be your concern?

You may be specifying a TELKEE key control system for some hospitals, schools and industrial complexes; but overlooking it on buildings

where there are only a few locks.

A TELKEE system of key control is so simple, so relatively inexpensive, with so many advantages for your client, that it ought to be included whenever your hardware specifications call for 20 locks or more.

TELKEE means security, economy, convenience for *every* lock in every building . . . for restricted areas, storage of valuable supplies, confidential files, for any item with a lock. TELKEE guards against key loss and costly lock rekeying.

See Sweet's Architectural File or write today for your complete A.I.A. File: TELKEE, Box 811, Glen Riddle, Pennsylvania 19037.



SYSTEM OF KEY CONTROL

# Calendar

#### National

- Nov. 23-27: ASC/AIA Student Forum, University of Michigan, Ann Arbor
- Dec. 6: Seminar on Alternatives to Unionization an Examination of Modern Employment Practices, Chase-Park Plaza Hotel, St. Louis
- Jan. 30-Feb. 2: Society of Architectural Historians Annual Meeting, Statler Hilton Hotel, Boston
- Mar. 17-20: United States Institute for Theatre Technology Annual Conference, Hollywood Roosevelt Hotel, Los Angeles

#### Continuing Education

• Rome Prize Fellowships beginning Oct. 1, 1969. Applications and submissions, in the form prescribed, due Dec. 31. Contact: Mary T. Williams, Executive Secretary, American Academy in Rome, 101 Park Ave., New York, N.Y. 10017.

• Travel grants for study and professional training in the creative arts abroad in 1969-70. Applications due Feb. 1. Contact: Institute of International Education, 809 United Nations Plaza, New York, N.Y. 10017. Students currently enrolled should apply to their campus Fulbright Program adviser.

#### Competitions

• Design for headquarters of the International Atomic Energy Agency and the United Nations Industrial Development Organization and an international Congress Center in Vienna. Nine awards with \$20,000 first prize. Registration due Dec. 31. Contact: Consultative Committee, International Competition for the Headquarters of International Organizations, Marc Aurelstrasse 2a/30, Vienna, Austria.

#### Awards Programs

AIA Honor Awards, Entry slips and fee due Nov.
15. Contact: Marie Murray, Awards Programs, AIA,
1735 New York Ave. N.W., Washington, D.C. 20006.
Design in Steel, including architecture for the first time. Submissions due Jan. 17. Contact: American Iron and Steel Institute, 201 E. 42nd St., New York, N.Y. 10017.

• Reynolds Aluminum Prize for Architectural Students. Submissions due Jan. 28. Contact: Marie Murray, Awards Programs, AIA, 1735 New York Ave. N.W., Washington, D.C. 20006.

R. S. Reynolds Memorial Award. Nominations due Feb. 3. Contact: Marie Murray, Awards Programs, 1735 New York Ave., N.W., Washington, D.C. 20006.
AIA-American Association of Medical Clinics. Entry slips and fee due Feb. 21. Contact: Marie Murray, Awards Programs, AIA, 1735 New York Ave. N.W., Washington, D.C. 20006.

#### Tours

• Mexican Architecture and Interior Design Seminar-Tour, meeting Mexico City Feb. 9-22 and Sept. 14-27, 1969. Contact: T. H. Hewitt, P.O. Box 2292, San Francisco, Calif. 94126.

• Architecture and Gardens Tour of Japan, departing April 4 from Vancouver, B.C., 24 days, optional Hong Kong and Bangkok extension (three days each). Homeward trip may be routed through Hawaii. Repeated in fall. Contact: Kenneth M. Nishimoto, AIA, 263 S. Los Robles Ave., Pasadena, Calif. 91106.

Circle 321 on information card 102 AIA JOURNAL/NOVEMBER 1968 Ellerbe Architects, Inc. H. G. Christman Construction Co., Inc.

The Sargent Maximum Security System Protects Notre Dame Library



The new Memorial Library of the University of Notre Dame is the largest of its kind in the world. Its 750,000 volumes include many manuscripts, folios and volumes of priceless nature and one-of-a-kind editions.

The University decided on the Sargent Maximum Security System for the 782 locks which guard the library areas, exhibits and faculty offices.

The new lock system prevents unauthorized key duplication: the unique six-sided reversible keys with precision milled indentations cannot be duplicated on "corner-store" key cutting machines.

In addition, the Notre Dame Library is acquiring in these locks a new degree of pick-resistance. Unlike conventional cylinders, which have a single row of usually five or six key pins, the new cylinder has 12 key pins located on three different rows. The pins converge on the key from three different angles, making the cylinder impervious to the usual professional picking or "raking" techniques.

The Notre Dame Library contains a large number of faculty offices in addition to its books. Area control was

greatly aided by the many levels of master-keying available in the Sargent Maximum Security System.

Among the other out-

standing examples of Maximum Security installations are the new Loyola University of Chicago Medical Center; Pier 66 luxury motel-marina in Fort Lauderdale; Philco Ford, Western Development Laboratory, in Palo-Alto, California, which is typical of large manufacturing plants with proprietary security needs; the offices of the Secretary of Defense in the Pentagon; and Allstate Insurance Company's home office building outside of Chicago.

For full information on the Sargent Maximum Security System, write to Sargent & Company, 100 Sargent Drive, New Haven, Conn. 06509 • Peterborough, Ontario • Member Producers' Council



# Advertisers

Aerofin Corporation Richards & Weiss, Inc.	90
American Seating Company Ross Roy, Inc.	17
Andersen Corporation30 Campbell-Mithun, Inc.	-31
Armstrong Cork Co., Bldg Prds Batten, Barton, Durstine and Osborn, Inc.	19
Armstrong Cork Co., Floor Div	v 3
Bigelow-Sanford D'Arcy Adv. Co., Inc.	10
Bradley Washfountain Company Hoffman-York, Inc.	42
Brunswick Corporation98 Garfield-Linn & Co.	-99
Buckingham-Virginia Slate Corporation Riddick Adv. Art	94
Butler Manufacturing Company. The Griswold-Eshleman Co.	13
CPR Div., The Upjohn Company Emmett Crotzer Adv.	26
Cabin Crafts	<b>-37</b> ).
Philip Carey Corporation Northlich, Stolley, Inc.	28
L. E. Carpenter & Co., Inc Harold Marshall Adv. Co., Inc.	18
Dow Badische CompanyCo Norman Craig & Kummel, Inc.	v 2
E. I. du Pont de Nemours & Co. N. W. Ayer & Son, Inc.	95
Elkay Manufacturing Company The Biddle Adv. Co.	4
Emhart Corp., P. & F. Corbin Division Wilson, Haight & Welch, Inc.	39
Fixtures Manufacturing Corp Sher & Jones, Inc.	41
Formica Corporation24 Clinton E. Frank, Inc.	-25
General Stone & Materials Corporation North Adv., Inc.	20
Glynn-Johnson Corporation Edwin E. Geiger Adv.	29
Haws Drinking Faucet Company Pacific Adv. Staff	38
Hillyard Chemical Company : Ayres & Assoc., Inc.	100
	93
Hoffman-York, Inc. Inland-Ryerson Construction	
Products Gompany, Milcor Div	16
Hoffman-York, Inc.	

- Johnson Service Company .... Cov 4 Hoffman-York, Inc.
- Jute Carpet Backing Council ... Bauer, Tripp, Hening & Bressler, Inc.
- Kawneer Company ......109-111 Peitscher, Janda Assoc., Inc.
- Knoll Associates, Incorporated. . 1 Chirurg & Cairns, Inc.
- Libbey-Owens-Ford Company .. 27 Fuller & Smith & Ross, Inc.
- Magee Carpet Company .....96-97 Grey Adv., Inc.
- M. I. T. Press ..... 106 Franklin Spier, Inc.
- Montgomery Elevator Company. Clem T. Hanson Co.

- Rauland-Borg Corporation ..... 18 George Brodsky Adv., Inc.
- Reed Exit Devices, Division of Eaton Yale & Towne...... 23 Connor-Sager Assoc., Inc.
- Red Cedar Shingle & Handsplit

   Shake Bureau
   101

   N. W. Ayer/F. E. Baker, Inc.
- Rixson Closers ..... 11 Motivation Dynamics
- Sargent & Co., Division of Walter Kidde & Co., Inc. ..... 103 Hepler & Gibney, Inc.
- Sedgwick Machine Works ..... 33 Prescott & Fuller & Co.
- Silbrico Corporation
   7

   Elving Johnson Adv., Inc.
   7

   Stow/Davis
   91
- Sweet & Co., Adv., Inc. The Sturgis Company ..... 105
- Ketchum, MacLeod & Grove, Inc.
- **Telkee, Div. of Sunroc Corp.** . . 102 Ernest William Greenfield, Inc., Adv.
- Trend Mills ..... 9 Sweet and Company
- United States Plywood Corp. .. 21-22 Young & Rubicam, Inc.
- United States Steel Corp.....34-35 Batten, Barton, Durstine & Osborn, Inc.
- Universal Atlas Division of United States Steel ......88-89 Batten, Barton, Durstine Osborn, Inc.
- Vermont Marble Company .... 32 Knudsen-Moore, Inc.
- Henry Weis Manufacturing Co... 8 Ash Adv., Inc.

## Letters

#### **Ghost Town Revisited**

EDITOR:

2

Being a native of Tyrone, New Mexico, I want to tell you how much I enjoyed Robert B. Riley's article "Goodhue's Beaux Arts Ghost Town" in the August issue. My father was the first general manager for Phelps Dodge at the time the town was being built.

Mr. Riley's concept is so refreshing compared to the usual magazine and newspaper articles about Tyrone, and he has combined factual information with poetic sentiment which appeals to us of the ghost town. As the author says, "It certainly was a happy town."

Presently we spend the summer months haunting the nearby ghost town of Pinos Altos, 6 miles north of Silver City.

Our son is now a teaching assistant in architecture at the University of Illinois while working on his master's degree; perhaps he might design a town such as the one his grandfather helped develop.

> MARTHA SAWYER HOPPER Tucson, Ariz.

### 'Little New Under the Sun'

I read with interest the "Museum Above the Mounds" piece in the May issue and must take issue with architect Coady's statement regarding the uniqueness of his solution.

I enclose a brochure on the Mound State Park in Moundville, Ala. As you will note, the building, which contains displays, offices, laboratories, etc., was constructed over the excavations, leaving them in situ. I suggest that you whisper gently into Mr. Coady's ear that age-old truth, "There's little new under the sun."

NICHOLAS H. HOLMES JR., AIA Mobile, Ala.

ED. NOTE: We assume Mr. Coady believes in the adage, too, judging from his comment on the Museum of the Illinois Indian: "I do not know of another museum that provides for display and anthropological research which is located on the site being explored."

#### Correction

The Institute's projected income for 1968 as reported by Treasurer Dean F. Hilfinger, FAIA, in the September AIA JOURNAL (p. 73) should have read \$2,692,000. The incorrectly cited figure was taken from the convention's official transcript. The Sturgis 1700 gives an executive the backing he needs...

and puts a spring in his seat.

> However, its price is low enough that just about anybody can get one.

What's this world coming to ?

For complete details about the Sturgis 1700 line chair, write Department AI, The Sturgis Company, Sturgis, Michigan 49091.



#### Principles of Architectural History by Paul Frankl

translated from the German by James O'Gorman

foreword by James S. Ackerman Paul Frankl completed this historical-critical analysis of post-medieval architecture in 1914, and its scale and scope of outlook remains unrivaled to this day — except perhaps in the writings of Geoffrey Scott and Sigfried Giedion. Although written in part as a refutation of the beliefs and methods of his teacher, the renowned Heinrich Wölfflin, the book reveals a grand design that has outlasted the special circumstances of its origins. **\$12.50** 

#### Team 10 Primer

#### edited by Alison Smithson

Today the architects grouped together in Team 10 are J. B. Bakema (Holland), Aldo van Eyck (Holland), G. Candilis (France), Alison and Peter Smithson (England), Shad Woods (France), Giancarlo de Carlo (Italy), J. Coderch (Spain), Pologni (Hungary), Jerzy Soltan (Poland), and Wewerka (Germany).

Team 10 Primer is a collection of those articles, essays and diagrams which Team 10 regards as being essential to its individual members' positions. In a way it is a history of how the people involved have grown or changed as a result of contact with the others. Much new material has been included in this revised edition of the work. \$5.95

#### Shaping an Urban Future:

Essays in Memory of Catherine Bauer Wurster edited by Bernard J. Frieden and William Nash

The distinguished contributors to this volume pay homage to the late Catherine Bauer Wurster by following and widening some of the trails she blazed in urban policy studies and by exploring some new areas on their own.

The contributors and their topics: Lisa Peattie – Squatter housing Charles Abrams – Housing policy Thomas Pettigrew – Race relations Edward P. Eichler – New communities Lowdon Wingo, Jr. – Developing cities in the developing world

Norman Beckman – Governmental reorganization

Britton Harris – The problems of planning itself

#### \$7.50

or order from

The MIT Press 50 Ames Street Cambridge, Massachusetts 02142



### Architects Information Service

To order single copies of items listed: circle number on card that corresponds to number beside each of the listed items you want. Send no money now. The charge, if any, for a single copy is noted for each item, and you will be billed for this amount. Minimum billing for reprints is \$1.

#### **Current Issue Reprints**

#### single copies free

- 1 Professional Development Program (PDP)—p. 44
- 2 Radiation Shielding: An Architectural Primer 2 (three-part series offered as package)—p. 80

#### **Previous Issue Reprints**

single copy prices as noted

- 10 The Architect and Housing—8 pp.; no charge
- 17 Liability Insurance—6 pp.; 25¢ Down-to-earth look at the architect's status
- 20 Modular-Jointed Education of Joe's Boys —4 pp.; 25¢ Progress report on the Princeton Project
- 104 Expo 67—16 pp.; 50¢ A Canadian architect's critique
- 105 Planning the Powder Room—3 pp.; 25¢ A workability tour of an impenetrable area
- 106 Art/Architecture-13 pp.; 25¢
  - Art as an Architectural Element
  - A Few Thoughts and Criticisms
    A Bank as an Art-Architectural
  - Patron
- 107 Practice Profile: Pancoast/Ferendino/Grafton of Miami—6 pp.; 25¢ An unusual contract with a school board
- 108 Practice Profile: Wallace K. Harrison, FAIA—6 pp.; 25¢ Study of the 1967 Gold Medalist
- 109 Designing a Church: An Act of Risk—3 pp.; 25¢ Appraising today's religious symbols
- 110 From Three Emerged One—24 pp.; no charge Jury report of the first Reynolds Award for Community Architecture
- 111 How to Make the Most of Your Models—3 pp.; 25¢ A clever photographic technique

To order manufacturers' technical data: Circle number on card that corresponds to the number beneath or beside each product advertisement for which you wish additional specific printed technical data sent to you. Information will be sent from the appropriate producer.

112 An Architect's Sketchbook—8 pp.; 25¢

Drawings from Japan and India

- 113 The Immediate Environment—36 pp.; \$1 Seven viewpoints on the architect's role and responsibility in housing
- 114 The Big Ground Wave-5 pp.; 25¢

Challenge of supersonic travel

- 117 Adventures in the Pursuit of Excellence—5 pp.; 25¢ A review of the controversial Bard Awards
- 118 "Let's All Go Down to the Jail and See Andy Warhol"—4 pp.; 25¢ Finding room for the arts in resourceful communities

#### **Special Offers**

- 33 AIA JOURNAL subscription information and prices. For registered architect rates, see subscription card.
- 34 Binders for AIA JOURNAL, information and prices
- 35 AIA JOURNAL Annual Index, 1967, single copy free
- 36 Reprints in quantity, information and prices
- 39 The House and Its Design, slide kit sponsored by the AIA and United States Savings and Loan League, information and prices
- 40 Clearinghouse for Federal Scientific and Technical Information, subscription price
- 41 Uniform Plans for Stock Schools, annotated bibliography
- **43** 1966 Design Award Program (HEW-AIA-EFL), brochure of higher education facilities
- 44 Your Building and Your Architect, 18-page booklet for clients
- 45 Checklist for Cities, a working guide for urban analysis
- 46 NACA Ceiling Systems Handbook, order form

Circle 270 on information card 106 AIA JOURNAL/NOVEMBER 1968



# Armstrong offers the widest variety of resilient floors. The best is the one that suits your design.

Evanston Township High School, Evanston, Illinois. Architect The Perkins & Will Partnership, Chicago, Illinois. General Contractor: George Sollit Construction Company, Chicago, Illinois. Flooring Contractor: Johnson Floors, Berwyn, Illinois.



# For the Evanston Township High School, the best floor is Imperial Modern Excelon Tile.

Evanston Township High School is a multischool.

To the students, it means having all the resources of a large school while getting the personal attention of a small school.

To the staff, it's the concept of four schools in one—each with its own administrative and academic faculty but all sharing nonacademic facilities.

To the community, it was the spending of nearly \$14,500,-000 for new and remodeled buildings.

The architects knew that, kids being kids, they'd leave their mark on the 200,000 square feet of corridor and classroom floors. So in addition to a budget-priced material that looks good at all times, they wanted a floor that conceals scuffs for a long time.

Their specification: Armstrong's  $\frac{3}{22}$ " gauge, 12" x 12" Imperial Modern Excelon (vinyl-asbestos) Tile.

By using the same pattern throughout the four schools, they achieved a oneness in design. Also, the tight-mottled graining of Imperial Modern has its practical side—hiding the heel marks of an expected enrollment of 6,000 students.

Imperial Modern Excelon looks expensive, but it isn't. In fact, is has the same low price as Armstrong Standard throughgrained Excelon. Through-grained? That's just another way of saying the pattern goes all the way through each tile to last as long as the floor itself.

There's an Armstrong floor to suit every kind of project. Before you make your next floor decision, talk it over with your Armstrong Architect-Builder-Contractor Representative. He'll be objective about it. With the world's largest line of resilient flooring behind him, he'll make recommendations based on your specific needs. Call him. Or write Armstrong, 509 Sage Street, Lancaster, Pa. 17604.

SPECDATA, IMPERIAL MODERN EXCELON TILE ☐ Tight-mottled graining through thickness of tile. ☐ Available in 9" x 9" and 12" x 12", ¼" or ½" gauge. ☐ Excellent durability and ease of maintenance. ☐ Installation above, on, or below grade. ☐ Excelon and Imperial are registered trademarks of Armstrong Cork Company.



### the *Inside-Outside* story

# new Kawneer **Zipperurall** 2

Put the aluminum *inside* or *outside* .... ...lock comfort *inside* and weather *outside*!

Bring the beauty of Permanodic<sup>®</sup> hard color finished mullions *inside*, or put them *outside* without penalty in cost or performance. The Neoprene gasket reduces heat loss through aluminum, preventing interior condensation. Moreover, Zipperwall 2 is the only preengineered gasket wall system with both an internal pressure relieved drainage system and a combination of split mullions and telescoping heads to accommodate thermal expansion. And Zipperwall 2 handles 1-inch insulating glass as well as ¼-inch plate. The "zipper-like" glazing makes installation faster and easier, yet completely seals components.

#### FIRST PRE-ENGINEERED SYSTEM TO OFFER REAL DESIGN FLEXIBILITY

Do you prefer single, narrow sight lines—or double sight lines for emphasis and contrast? You can do all of these because Kawneer Zipperwall 2 offers both single and double gasket mullions.



For details, write Kawneer Product Information, 1105 N. Front Street, Niles, Michigan 49120.



New Dynamics in Architectural Aluminum

Kawneer Company, Inc., a Subsidiary of American Metal Climax, Inc. Niles, Michigan • Richmond, California • Atlanta, Georgia Bloomsburg, Penn. • Kawneer Company Canada, Ltd., Toronto

C Kawneer Company, Inc., 1968



Employers Insurance of Wausau, Wausau, Wisconsin Architects: Childs & Smith, Inc., Chicago, Illinois Consulting Engineers: Howell-Stiggleman Company, Chicago, Illinois

## Wausau Story

Superb new office complex with efficiency rating to match!



Functional efficiency, no less than creative design, is reflected in every detail of the three-building headquarters complex of Employers Insurance of Wausau. The major time and operational savings resulting from centralized control are especially noteworthy.

Equipment and services throughout the 500,000 square foot complex are supervised and managed from a Johnson solid state electronic control center. They include the air conditioning, fire and smoke detection, security, snow melting, pneumatic tube, and master clock systems, power services, lighting, and intercommunications.

Everything, from refrigeration machines to room temperatures, can be monitored automatically, electronically a total information system that enables the engineer to concentrate exclusively on points that may need attention, the exceptions.

There's no limit to the building functions which we can coordinate through a versatile Johnson control center. We call this Integrated Building Systems Management. It's a concept that saves nothing but time and money. Ask your Johnson representative for more details.



AUTOMATIC CONTROL SYSTEMS • INTEGRATED BUILDING SYSTEMS MANAGEMENT • CONTRACT MAINTENANCE • INSTRUMENTATION CONTRACTING Circle 280 on information card





