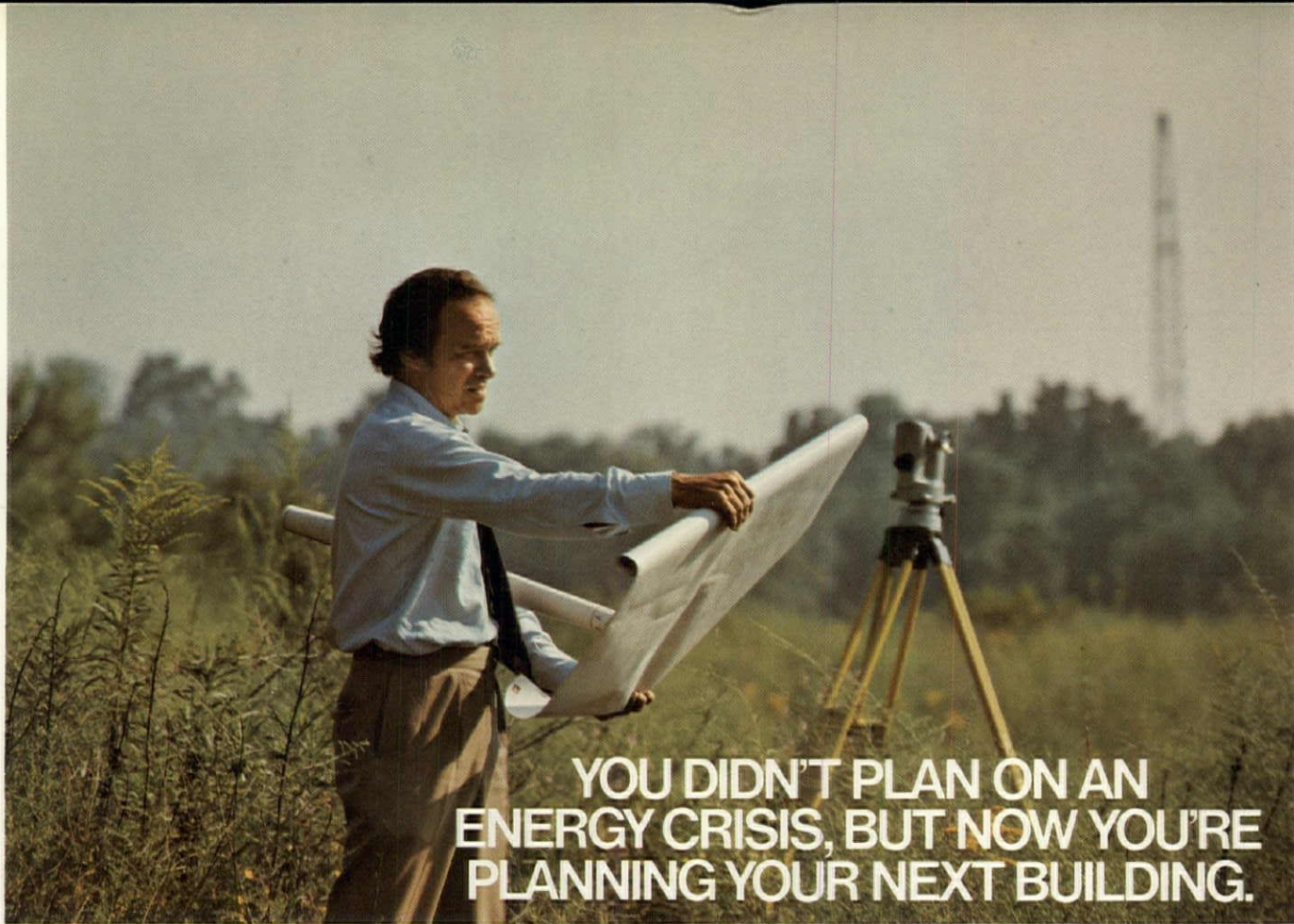




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Compare the energy conserving capability of masonry, for instance, with double-plate glass walls.

At 4:00 P.M. on a hot August day in Washington, D.C., the heat gain through a square foot of west-facing insulated brick and concrete block wall will be 2.2 Btus an hour.

The heat gain through a double-plate glass wall in the same location will be 173 Btus a square foot in an hour. A big difference.

Project this differential over 10,000 square feet of wall. You come up with a heat gain through masonry of 22,000 Btuh, while the heat gain through double-plate glass is 1,730,000 Btuh.

In the case of the masonry wall, cooling equipment with a two-ton capacity can handle the heat gain. But with the double-plate glass wall, about 143 tons of cooling capacity will be needed.

An analysis of a typical 10-story building shows that over its useful life, the air-conditioning cost for a square foot of our masonry wall will be about 23 cents. For the double-plate glass wall, it will be \$7.60.

It takes a lot of money to buy, install and create space for all the extra air-conditioning equipment

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Compare the heat loss in winter. It has a dramatic effect on energy consumption and building operation costs.

Our masonry wall, for example, has a "U-value" of .12. The double-plate glass wall has a "U-value" of .55. (U-values are used to determine heat loss through one square foot of wall area in Btuh per degree Fahrenheit differential across the wall.)

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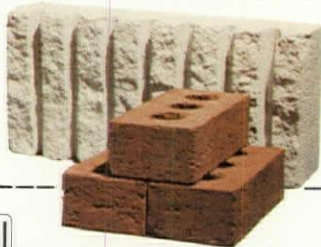
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# FINANCING REAL ESTATE DEVELOPMENT

HARRY A. GOLEMON, AIA, EDITOR

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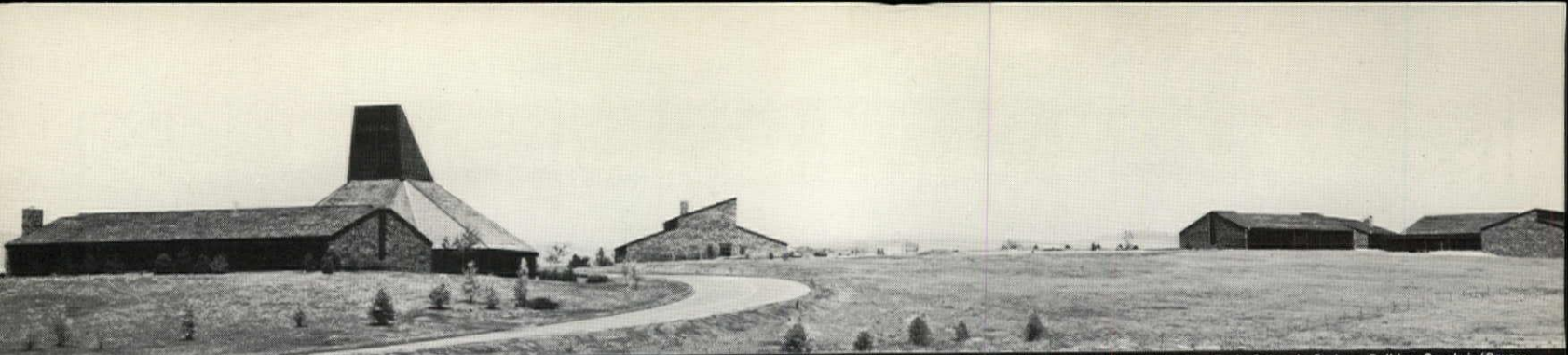
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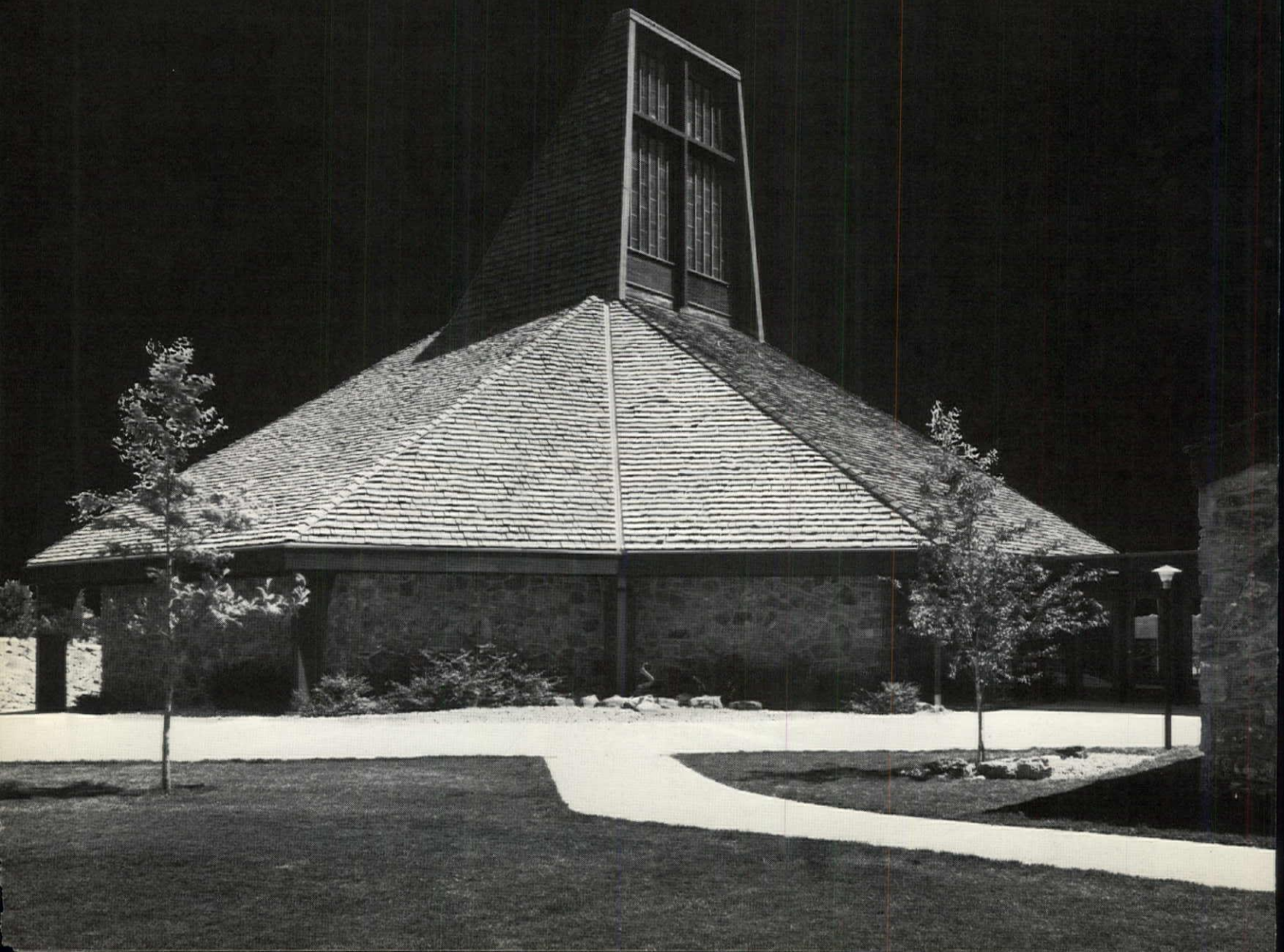
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**The View from the Top:** On the seventh floor of the new Octagon Building, Hayden P. Mims enjoys what is undoubtedly the most panoramic view of monumental Washington that can be seen from the AIA headquarters. From there, the executive director of the National Council of Architectural Boards, eyes, among other things, the Washington Monument, the Jefferson Memorial and the Capitol itself. He shares the space—a little more than half the floor—with 19 employees, one of whom is Samuel T. Balen, AIA, who is director of professional services.

Literally and figuratively, NCARB has come a long way since its move in January 1962 from Oklahoma City to the old AIA headquarters building. The board struggled with a small staff and an equally small budget, and its affairs were, generally speaking, in a state of disarray. The mention of NCARB to a good many architects produced nothing but ire as they waited for months, and in some cases years, to secure their "blue cover," now available in a fraction of that time. The cover, which indicates that the individual holds the council certificate, is used to transmit one's record to a state board in support of his application for reciprocal licensure and carries NCARB's recommendation that he be registered or licensed as an architect without further examination.

Today, NCARB is made up of the architectural registration boards of the 50 states, the District of Columbia, the Canal Zone, Guam, Puerto Rico and the Virgin Islands. Since its founding in 1920 in Chicago, it has issued more than 14,000 certificates, of which over 11,000 holders continue to be active. In fact, it is interesting to note that in the past five years NCARB has certified almost as many architects as it did in the first 30 years of its existence.

This coming December a new machine-graded exam will be introduced. And NCARB is providing leadership on a number of other fronts. For example, it recently completed two surveys—one among certificate holders, the other among qualified candidates for registration who took the seven-part exam last December—the results of which are analyzed in an article in this issue on page 27.

In passing, it should be mentioned that NCARB is one of the organizations that make up the Five Presidents' Conference, all of which have representatives housed in the Octagon Building. Besides The American Institute of Architects, they are the Association of Collegiate Schools of Architecture (Dave Clarke, executive director); the Association of Student Chapters/AIA (Fay DeAvignon, president); and the National Architectural Accrediting Board (Mrs. Helen S. Steele, executive secretary).

Among the conference's major commitments is a year-long, self-study now being conducted by NAAB. The project's aim is to examine and evaluate the nature of architectural education at the accredited schools, with a view toward strengthening the process of accreditation itself. Other high-priority concerns of the group include the training of technicians, internship and continuing education for practitioners. Thus, through such intraprofessional programs as these, we are beginning to see the shaping of a closer knit profession that will be of one piece—from earliest student days through the years of mature practice. So all of this, along with NCARB's physical move back to the Octagon, is a step in the right direction.

*Robert E. Koehler*

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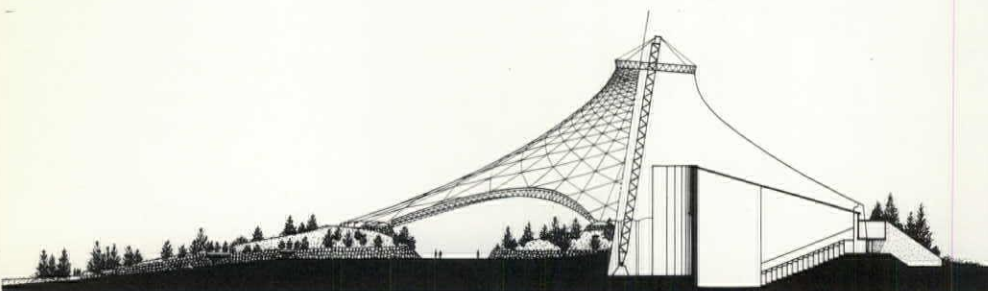
Nature strikes back.

Government, citizen groups, public opinion are all on her side.

And business is often the target. Almost every company planning construction has felt the pressure. So much so that to keep up with



**In Spokane, a world's fair is abuilding which will open next May on a riverfront site close to downtown; and in Maryland, a political breakthrough is in the making as the Governor appoints a professional panel to recommend procedures in the A/E selection process.**



*Pavilion entrance leads to theaters on the east side against high rockery walls.*

## **US Pavilion's Strong Statement Will Greet Expo '74 Visitors in Spokane**

A translucent white canopy of coated fabric spanning an area of 320x280 feet will cover the United States Pavilion at Expo '74, which will open May 4 in Spokane, Wash., for a six-month stand.

As architects for the \$11.5 million project (cost includes the six-month operation), Naramore Bain Brady & Johanson were asked to produce a building easily identifiable both day and night that could be salvageable when the exposition closes and that could be designed and constructed within a 15½-month period.

The concept calls for a network of cables extending from the 130-foot-high crown of the structure down to two sides of the base where they are anchored to a series of pylons and piers. The openings between each pair of pylons form two large arches that open to the interior of the rest of the fairgrounds on a site adja-

cent to the Spokane River near the central business district.

Since there was no standard geometric formula that applied to the canopy's irregular shape, the structural engineers (Skilling, Helle, Christiansen, Robertson) built a model, hung weights on the cables and took readings with a theodolite surveying instrument.

The bridge cable spanning the two arched openings, 167 feet wide by 40 feet high, is tensioned by the pull of the connecting cables. Although this cable has a diameter of only 3⅝ inches, a clevis fitting that weighs 659 pounds is necessary to anchor it to the arch pylons.

The pavilion will feature exhibits on current environmental and ecological issues. The theme "Man and Nature, One and Indivisible" will be expressed in displays, films and gardens. The landscaping (The Perron Partnership) will be developed for permanent use after Expo '74.

## **Maryland's Governor Accepts Institute's Proposal, Names A/E Selection Panel**

Governor Marvin Mandel of Maryland has accepted the recommendation of the AIA that a public blue-ribbon panel, including "architects of national reputation and unquestioned integrity," be appointed to develop alternatives to present methods of selecting design professionals for state work.

William Marshall Jr., FAIA, who will become president-elect of the Institute in December, and Mario Schack, AIA, president of the Maryland Society of Architects, met with Mandel and presented the recommendation to him which was contained in a letter from AIA President S. Scott Ferebee Jr., FAIA. The action of the Institute comes on the heel of allegations widely reported by the press that some architects and engineers have made political contributions to elected officials in the hope of being awarded state work.

Pointing out that the abuses of the type alleged in Maryland are not only illegal but are considered unethical by the AIA, Ferebee wrote that the Institute would recommend architects for the panel. Ferebee stated in the letter that such a panel can produce a recommended process that will assist Maryland's governor in his determination of procedures that, at the least, will "diminish the possibilities of wrong-doing" and will also establish "a national pattern for dealing with these issues."

Ferebee commented in the letter that the AIA "has for many years dealt with the issue of establishing a process" that would eliminate unethical practices. Early this year a special task force was formed to deal with the broad question of political contributions "without, at the same time, contravening the rights of the individual architect to participate in the political process." (For more on the task force, see p. 42 in this issue.)

Named to the panel are two Institute Fellows: John W. McLeod of Bethesda, Md., and Jack D. Train of Chicago.

The chairman is Dr. Abel Wolman, professor emeritus of sanitary engineering, Johns Hopkins University, and currently president of the International Water Resources Association, one of four pro-



**A new awards program and an AIA position statement on design/build also share the limelight in what's happening in the profession today.**

fessional engineers who have been appointed. The others are Harry C. Simrall, dean of the College of Engineering at Mississippi State University; Leslie C. Gates, Beckley, W. Va., president-elect of the National Society of Professional Engineers; and Billy T. Sumner, Nashville, a vice president of the American Consulting Engineers Council.

Completing the panel are George R. Lewis, secretary, Maryland Department of General Services; Harry R. Hughes, secretary, Maryland Department of Transportation; Edmond F. Rovner, secretary, Maryland Department of Economic and Community Development; Joseph Mur-nane, executive secretary, Maryland Association of Counties; and Robert R. Nathan, Washington, D.C., attorney and economist.

The Governor has requested that panel recommendations be submitted to him by December 1 so that they can be reviewed and prepared for introduction in the 1974 session of the State General Assembly.

**Imaginative Use of Aluminum Products Highlighted in Design Awards Program**

At the annual meeting of the Architectural Aluminum Manufacturers Association held in Seattle in October, the architects who had won first place in the 1973 aluminum products design awards program were announced. The program, co-sponsored by the Aluminum Association, gives each of the two top winners a prize of \$1,000. This is the first year that the awards program has been held.

Winner in the new construction category is the Sir Sandford Fleming College in Peterborough, Ontario, Canada. Toronto architects R. J. Thom & Associates used a variety of aluminum panels and extrusions for design effect and easy maintenance. The other two finalists in this category are the IBM Corporation's computer operations headquarters in Sterling Forest, N.Y., designed by Gunnar Birkerts & Associates, and the Middletown State Hospital, Middletown, N.Y., whose architects are Prentice and Chan Ohlhausen.

Top winner in the remodeling category is the office of architects Smith, Hinchman & Grylls Associates, Inc., in Detroit. The firm wanted an in-town location for



*Before and after views illustrate the remodeling winner, while a college complex takes the top award for new construction.*

its headquarters with a modern look that showed the firm's style. The glass building is framed with aluminum and uses aluminum "spider" castings to meet city building code requirements for support at all four corners of a glass pane and to create a solid design statement. The other

two finalists are the Goodyear office building in Akron, Ohio, designed by Hoag-Wismar-Henderson Associates, and the Bache Building, Binghamton, N.Y., where Norman J. Davies, AIA, joined two buildings with aluminum panels.

Members of the jury were editors Robert E. Koehler, Hon. AIA (*AIA JOURNAL*); Robert J. Steele (*NAHB Journal-Scope*); John Goldsmith (*House & Home*); Roy Diez (*Professional Builder*); Jack Lewin (*Home Improvements Magazine*); and Phillip Sheehan, consultant, National Home Improvements Council.

**AIA Task Force Seeks to Come to Grips With Issues of Design/Build Process**

The development of an AIA position on design/build which will be responsive to present-day demands from the client sector is high on the list of the Institute's priorities. As an initial step, a task force established earlier this year has released an interim report following a meeting in September.

Although few conclusions are contained in the present study, the identification of issues and questions is expected to be of assistance in the further pursuit of producing an appropriate AIA position. The Design/Build Task Force in its current report candidly says:

"The wide variation in approaches taken and requirements established by various clients seeking to establish 'single point responsibility' for the design and construction of their projects may make it unfeasible for the AIA to develop a set of guidelines which would be fully responsive to the client sector. Furthermore, the task force's investigation has revealed that in all design/build projects there are one or more features directly in conflict with professional and legal aspects of the traditional approach to projects.

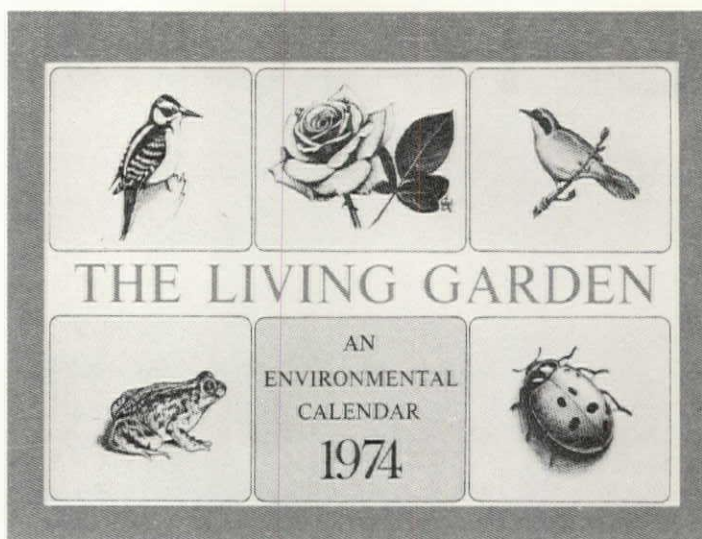
"Therefore, the role of the Institute may involve the removal of professional impediments which presently limit the architect's ability to participate in design/build projects (such as ethical prohibitions against building contracting and free sketches) and the identification of the risks and benefits resulting from the de-

*continued on page 54*



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## Clovis Heimsath, AIA

**The Systems Phenomenon:** Many trends beckon in this time of rapid change within the profession, a period that might be termed "postmodern" architecture. There are inflatable structures, Las Vegas zip-zap instant design, convoluted geometry and the systems process.

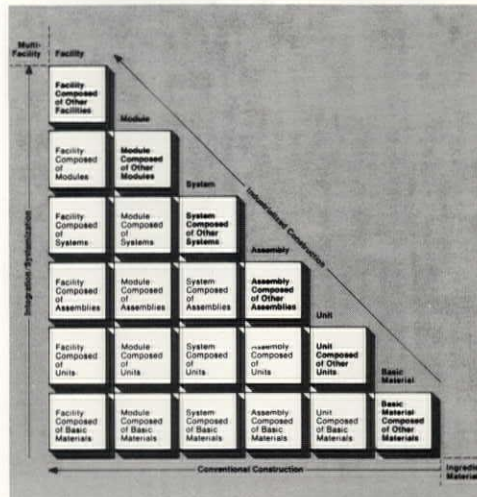
Is the systems process misunderstood and underestimated? Perhaps. Nonetheless, systems represent a billion dollar industry. Architects who yawn at theoretical implications of systems perk up when they become aware that clients are demanding systems, with the federal government in the lead. State agencies along with major school districts, universities, health care clients and corporate developers with large repeat business are following suit. In short, the blue chip clientele is deeply into systems. The systems approach will outlive today's other trends and will be the herald of tomorrow's architectural practice.

To understand the systems phenomenon, it is essential to realize that systems merely quicken the pace of what has been happening within the profession for years. Systems is short for systems process. It is the process of product design and delivery that is changing the profession and is not the introduction of a universally accepted building erector set.

The process articulates, strengthens and develops the seemingly haphazard directions in today's practice. It incorporates programming—an integral part of the design process—as well as materials and structure selections, the crucial step that all architects recognize. Systems point beyond today's typical practice by plotting the course of a building through construction, suggesting that the architect has an increasing role to play in the previously somewhat alien construction phase.

To break the process down into subsystems may seem redundant, but it is the subsystems redundancy that makes the process meaningful. Systems are built

**Mr. Heimsath**, one of the founders and current chairman of the AIA Systems Committee, calls himself a "second generation practitioner" who uses systems-oriented construction in the practice of his Houston firm.



of subsystems, which in turn are built of components, which in turn are built of materials. This is hardly an esoteric exercise when the McGraw-Hill Sweet's GuideLines Program decides that such subsystems build-up is the proper way to categorize all building products. Subsystems break the building into component parts, articulating the walls, floors, ceilings, etc., as definable entities capable of subsystem design and integration. Subsystem definitions cannot be dismissed when they are already accepted as the matrix for major product integration.

The School Construction Systems Development study, now a classic, directed hundreds of thousands of design hours to clarifying building subsystems and the product delivery process incorporating those subsystems. Since the study a score of years ago, integrated products are on the market, system processes are known to an increasing number of professionals, and clients want what systems bring: speed of construction, built-in flexibility for the life of a building and known costs, if not cost savings.

Systems may sound deceptively simple if thought of as a particular structural system, an integrated ceiling system or a planning computer program. Simplicity turns profound, however, when each of these steps is combined and a fabric and dimension of design unfolds that is more comprehensive than ever envisioned.

Systems are the thread that makes sense of an environmental impact statement, which in systems terms requires

**A story that is quietly revolutionizing architectural practice is being told architects by the AIA Systems Committee.**

that a project be integrated into the infrastructure of a community. Systems make sense of the energy crisis, which in systems terms requires that a project be accountable for the energy that it consumes. An increasingly integrated environment requires integration of its component parts, and the systems process articulates how this can occur.

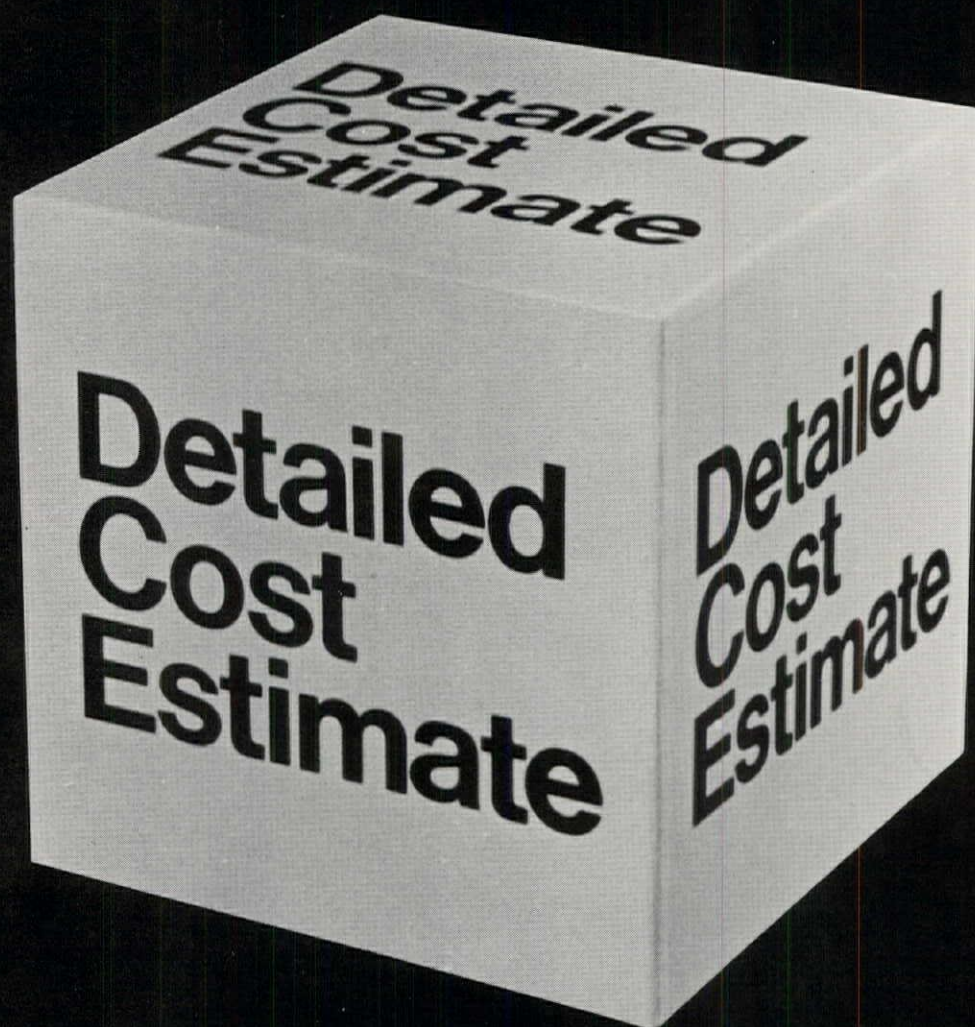
It is to plot the evolving complex area of systems practice that the AIA Systems Committee came into being. The 53-man committee is made up of pioneers in systems from all over the country, representing all aspects of the building community. Ezra Ehrenkrantz, Jerry Weisbach, George Heery, Jonathan King, Carl Koch, Neal Mitchell, Visvaldis Paukulis and Robertson Ward joined with second generation practitioners who were not involved in the development of systems theory and products but who are actively engaged in the implementation of both theory and products. The thrust of the committee's activities is to get the story to the general practitioner. To accomplish this goal, plans are in process for the compilation of a bibliography of available materials, a series of regional seminars this coming spring and a systems manual of pertinent information.

One can confidently predict that systems will prevail as the thread of tomorrow's architecture. The systems process finds those elements of the building fabric that can be systematized.

Yet the systems process is not the only process in operation in the environment, thank God. The drive for individuality in buildings, as well as in behavior, is perhaps the other element in tomorrow's architecture. A rush to variety and non-order, however, can only be meaningful against the tension of an ordering. The systems process provides the ordering, and as it evolves it will make possible, even demand, greater vistas for non-systems. In the meantime, the evolution of systems in today's world is exciting. Systems aren't a building material, as the committee realized when it dropped the word "building" from its original title. Systems are a process, and more than anything else systems are a frame of mind. □



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## **Graduate—Practitioner**

**“Students are poorly prepared to practice when they graduate.”**

**“Students are generally not very concerned about gaining experience before graduation.”**

**“Schools are not responding to the current needs of the profession.”**

**“Students feel that professionals have not kept up with their part of the responsibility in assisting students and young professionals to become an important part of the profession.”**

## **How Far Apart?**



# Students: Where They Stand

Fay DeAvignon

"Today's graduates are not qualified to produce the kind of work I need done in the office" has been the typical comment voiced by professionals at conventions, meetings of The American Institute of Architects and in architectural firms throughout the country during the past several years. How often do you hear a fellow practitioner state that "schools are not responding to the needs of the profession"? It is unfortunate that at this time there probably is no one person or group who knows how to really define those needs.

From the educators' and the students' points of view, the question comes down to how practitioners regard students upon graduation. Are they young professionals with knowledge and skills that have been developed through well-rounded programs encompassing education and some basic experience, or are they simply bodies whose primary function is to prove that they can "use a pencil"?

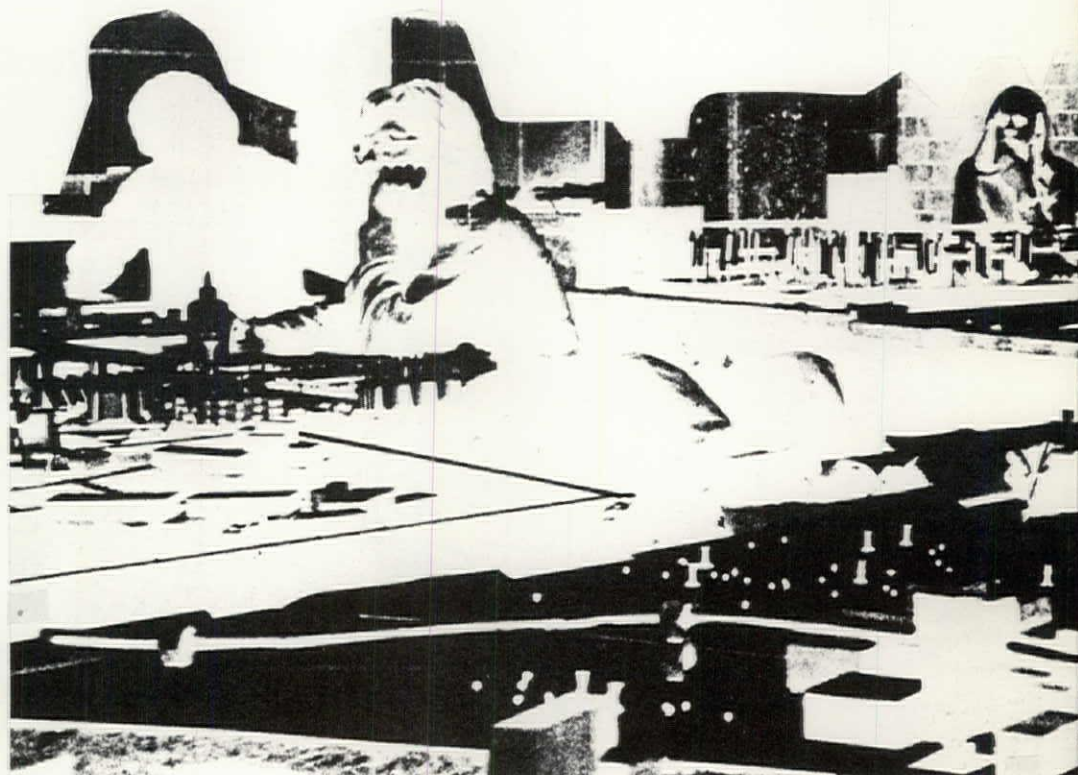
Over the past five years or so, the profession of architecture has seen some tremendous changes take place, dictated from within its own boundaries as well as from external forces—a change from the responsibility of the beaux-arts architect, whose main concern was to create buildings that were structurally safe and esthetically pleasing, to a profession that is so rapidly expanding its scope and becoming so much more involved that professionals have yet to define the role of the "new architect." Therefore, it is the responsibility of the current professional to know more about numerous other factors that were of little or no consequence to practitioners in days past.

These new horizons opening up within the profession place a great deal of responsibility on those holding the future of architecture.

For the profession it means several things. No longer is the architect able to hide under the mask of the "master builder." He or she must learn to share the knowledge of other professions (planning, real estate, law), exchange new

**Ms. DeAvignon** is student adviser to the Board of Directors of the AIA and president of the ASC/AIA.

Myths, like those on the preceding page, abound concerning the architectural student and the kind of education he receives.



**THE MYTH:** Students are poorly prepared to practice when they graduate.

**The question:** What do you feel you should know by the time you have reached your first professional degree?

**The answers:** A synthesis rather than an emphasis on any area would be most desirable, I believe. A design professional needs to understand or have a grasp on the design process, new behavioral information, technology, etc . . . in other words, a grasp on the totality of reality and those tools to deal with it, including economic realities. *Rosemary Rowan, third year, Temple University*

I feel you should know a little about a lot. The emphasis is strictly a personal matter. I don't feel schools should be oriented to "how to pass the registration exam in five easy years." However, all the *content* should be there, in conceptual form at least." *Dean Bradley, fifth year, Kansas State University*

I feel that one with a Bachelor of Architecture Degree should have a basic knowledge of the important theories of architecture and the general method of doing what a real architect does, complete from initial PR work through pro-

gramming, design and finally working drawings. However, I don't know how to accomplish all of this in just five school years. I don't think we should be expected to be accomplished in any one area nor do I think we should be expected to perform without the help of other experienced people in the office. We should be expected and respectively should be eager to assume a responsible, productive role in the office. *Steve Payne, fifth year, University of Colorado*

**The question:** Where do you feel you are the strongest, weakest? Is it a result of your formal education from a school oriented in that direction?

**The answers:** I am strongest in general design concepts and in relating other disciplines to architecture . . . I am weakest in nuts and bolts know-how, both in the actual construction and approach (i.e., cost estimating). Yes, but I'm happy about this because I feel the nuts and bolts type information can be gained quickly with on-the-job training. *Langston Trigg Jr., 1973 graduate, University of California, Berkeley*

Urban planning and design are my fortes . . . drafting and illustrative ability needs work. No, the school I attended claimed



Students, in answer to a questionnaire, discuss some of the pertinent trouble areas to test the validity of these myths.



to stress design, but it actually failed to stress any area. *Recent graduate, Catholic University*

My present strengths, derived from academic experience, lie in understanding and attempting to deal with complex urban problems, architectural history and theory; my greatest weaknesses, stemming from insufficient office experience, consist of working drawings and construction management. It was more a result of personal inclinations and particular subgroups within the school that stimulated an interest in the varied fields. *Marion Moffett, sixth year, Massachusetts Institute of Technology*

**The question:** Do you feel that you are qualified to take the registration exam, or will be as soon as you are eligible?

**The answers:** Yes, some parts, I'm sure there are certain things that I'll have to be exposed to before I can pass, but I'll be able to pick them up as soon as I work full time in an office. *Jaime Gesundheit, sixth year, University of Southern California*

Yes, if I had continued my "apprenticeship" with Gensler & Associates because of their positive attitude toward involve-

ment in office activities. *Mark Maves, recent graduate, University of California, Berkeley (now with the AIA staff)*

Yes, with some on-the-job training. *Langston Trigg*

**THE MYTH: Students are generally not very concerned about gaining experience before graduation.**

**The question:** Do you feel that it is important for a student to have exposure to the "real world" situation before he or she receives a degree? How much experience have you had?

**The answers:** Yes, an internship program at the University of Colorado provides students with the opportunity to work for architects in the area. Usually, eight hours a week are spent in the office. We get three hours credit/semester, but no pay. The architects here seem to value the program as much as we do. It was the most worthwhile class I've taken to date. I've had the internship class (fall and spring) eight hours/week and full time during semester break and summer of 1973. *Steve Payne*

Yes, it makes one appreciate school more and helps to temper the idealism

ideas in materials and building systems, and work on a consulting basis with other practitioners on projects too large for a single firm to handle. With new advances in technology, an increased awareness of the environmental plight facing our society and the current trend toward a more humanitarian approach to design, the profession finds itself creating other alternatives to traditional practice, and even perhaps *new* professions, all necessitating a background in architecture.

For students this means a much more intensive search into the definition of the meaning of "architecture." They must have the ability to foresee what direction the profession might be taking by the time they have enough background to begin practice. They must have the knowledge and the material to be able to investigate what kind of education would best suit those needs, and then somehow be aware enough individuals to know what is going on around them as well.

Architectural education, just as the practice of architecture, has gone through many levels of change over the past several years, and each school has attempted to respond to the new needs in many different fashions. For the educational institutions this means developing "new" curriculums, though having certain responsibilities toward keeping much of the present material taught as a basis for learning. Therefore, studies such as mechanical systems, graphics and structures must of course stay; however, emphasis on new techniques and methods of application of this material, i.e., computer technology, land planning, etc., is growing more necessary each day.

Because of these increased demands, schools play a major role in determining what is to happen to our profession in the future. Let's look at what the schools are doing today.

Recently, a survey was conducted by the Association of Student Chapters/AIA among a random sampling of architectural students from across the country, representing varying institutional philosophies, levels of education and attitudes concerning the state of the profession. Undergraduates, graduates and recently graduated students were asked to respond to a



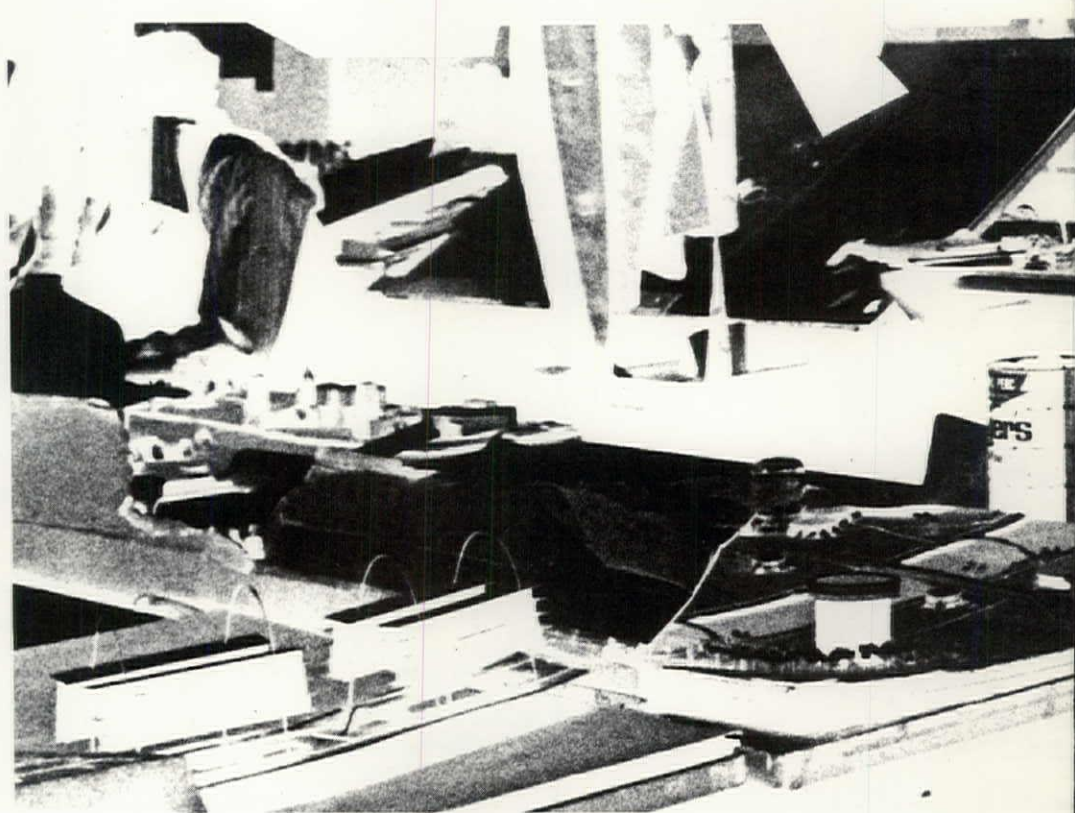
**Though myths, they point to a definite gap between students and practitioners. What's the matter? How can it be bridged?**

lengthy and comprehensive set of questions, dealing with everything from personal experiences at the precollege level to what role they feel architects should play in society today. Included here are some of those questions and some of the responses received. These views, though only a few are presented, can be considered to give an accurate reading of what many students are concerned with today.

When asked what kind of education students feel they should have received by the time they reach their first professional degree, the responses were relatively the same: a basic working knowledge in many areas, such as behavioral sciences, design technology and ethics.

Many students feel that their weakest links are in the area of technology, or the nuts and bolts of the profession. However, the consensus is that this should not be taught in school but should be experienced in some sort of internship program. The idea of work/study programs has been growing more popular each year, with a variety of different routes available to fill this experience void. There is unanimous agreement in the belief that experience of some sort is absolutely essential in rounding out a student's education, and every student (beyond the second year of school) who was questioned had already had some experience, whether through an established internship program or simply summer work found on his own. With this in mind, it was no surprise to find students fairly confident in their ability to pass the registration examination as soon as eligible. This gives the candidate at least two more years of office practice experience to concentrate on the more technical aspects that perhaps had not been picked up at the university.

Many students agree that the academic environment sometimes develops a more idealistic attitude with respect to the profession and that some exposure to reality in terms of work experience permits students to look at their education in a somewhat different perspective. The concern voiced by many, however, is that if the student is employed too early, the work might tend to inhibit the growth of



and "ego" so common with architectural students. It helps to emphasize how much more there is to learn. I've had two summers of work in Alabama firms. *Serena Randolph, fourth year, Tulane University*

Yes, it is essential that one understands what architecture means both in school and in practice. Students should make an effort to work while they are in school, not only in architectural offices but also on construction jobs and in all other related fields. *Jaime Gesundheit*

Definitely. In fact, there should be some way each student is guaranteed employment, every summer he or she can work. *Cat Stevens, third year, Prairie View, A&M College*

**The question:** If you had your education to do over again today, what would you change, if anything?

**The answers:** I would want more contact with the profession. *Bruce Schafer, 1973 graduate, North Carolina State University (now with the AIA staff)*

I would change the time sequence and work one year or more before entering graduate school. *Jaime Gesundheit*

I would propose a basic program with specialty options developed within a work/study framework. *Recent graduate, Catholic University*

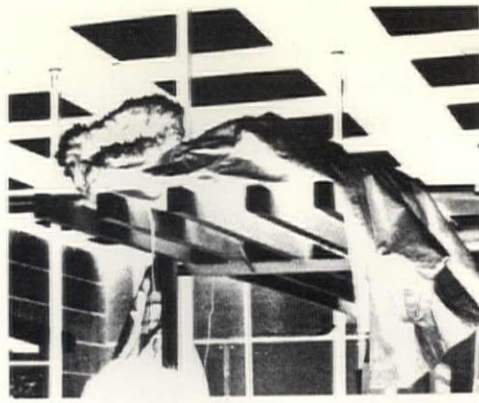
**THE MYTH: Schools are not responding to the current needs of the profession.**

**The question:** Are you receiving the kind of formal education you anticipated as a student first entering architectural school?

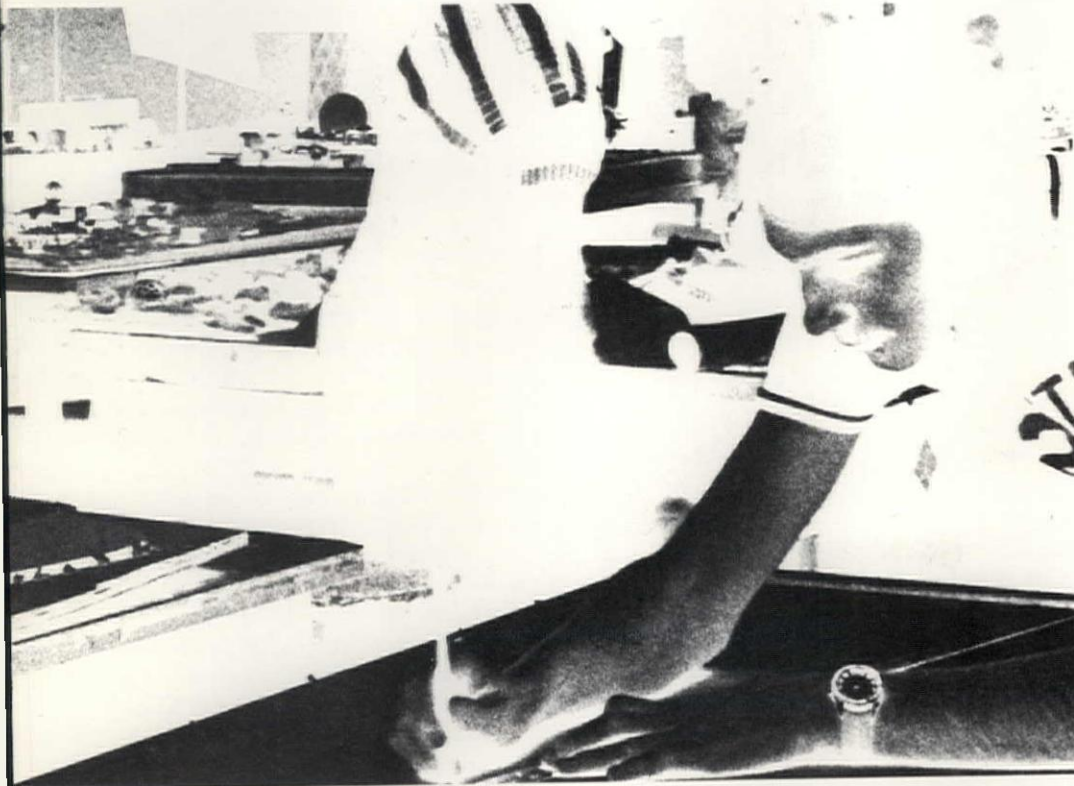
**The answers:** No. I expected to be "trained" for the job market; late nights in the studio cranking out working drawings, watercolor renderings and models of building after building. I expected to be taught things instead of concepts, "tricks" instead of theories; to design for the wants of today, oblivious to the needs of tomorrow. Facts, not ideals. History, not vision. *Phil Allen, fifth year, University of Oregon*

No, but then this is fortunate. I expected the spoon-fed variety of education most college students come to expect through high school conditioning. My education thankfully has been more a broadening rather than a pinpointed education. *Rosemary Rowan*





Students find that a common weak link in the education is the nuts and bolts of practice; there's strong need for professional assistance.



Both as an undergraduate and graduate I received a much more liberal education than I expected. I expected a beaux-arts type of education with drawing courses and design-like-me courses. I found instead great uncertainty in the profession and in educational circles. *Richard Lee Rice Jr., sixth year, Harvard University*

**The question:** Did your formal education provide you with a realistic view of the practice of architecture today?

**The answers:** Not alone. Along with work experience and ASC/AIA involvement, I gained a realistic view. I've met several ivory tower instructors who totally reject practitioners and the profession. *Langston Trigg*

No, but this was not its goal. It was up to me to learn the real world, but the faculty could have made it easier to communicate with architects (i.e., seminars, exchanges, job placement, etc.). *Bruce Schafer*

I think my education pointed out some of the problems with the profession. By taking courses taught by developers at Harvard and MIT, I learned how they think and act. I learned that their de-

mands are not always incompatible with good architecture. Perhaps the ability to communicate is one of those things lacking in our profession and schools today. *Rick Rice, Harvard University*

**The question:** Do you feel that schools of architecture have shifted emphasis during the period you were receiving your education?

**The answers:** Yes! My education spans approximately eight years from technology and design to methodology back to technology. *Pat Davis, fifth year, University of Texas, Austin*

Yes. When I began, it was strictly structure in mind. Now it's the human and his environment. *Cat Stevens*

Yes. I started out in the first 4&2 program in the country with emphasis on liberal arts. The social and technological aspects were eventually pursued to an extreme, mostly incapable of implementation. During the later part of school, the direction was drifting back to typical practice skills and a refreshing but frustrating effort to translate behavioral and natural science knowledge to implementable tools. *Mark Maves*

design imagination—something worth thinking about.

When asked if they would change their educational experience at all if given the opportunity to repeat, again the emphasis seems to be more heavily on the time frame for learning rather than the curriculum itself. This tends to be an overall feeling among those recent graduates who have perhaps come out of school with a master's degree, have spent relatively little time in an office situation, and are now wishing that they could have seen all the options before jumping right into the last formal step of education. This exposure plays an important role in helping students decide which route to take (or, in some cases, which not to take) and, as is obvious from the responses to this question, there is definitely a need for professional assistance *before* the final years of school.

Unlike many recent statistics which state that there has been "no actual shift in emphasis" in curriculums at schools of architecture, all reports from students read differently. Those who have experienced the most apparent changes, of course, are those presently in their final years of school or the recent graduates. There seems to be no doubt in their minds that the pendulum has once again shifted its weight from the initial emphasis on technical (beaux-arts) knowledge to the behavioral and the natural sciences (sociological) half way back again to some fair compromise.

Each student stated his amazement at the kind of education he has received, obviously being led to believe that he would have been dictated to rather than encouraged to pursue an individual identity in the profession. This is a rather disturbing fact, as once again it clearly exposes the gap we seem to find inherent within this profession.

When it comes to determining whether their educational experience was the answer to all of their needs, students became more ambiguous in their responses. The feeling seems to be that a purely academic exposure cannot fulfill all elements necessary to develop their personal as well as professional growth.

The feeling several years ago among



**The communications gap is not as wide as it is believed to be, but students will continue to voice anger with professionals who don't see it as their responsibility to help the schools help the students help themselves.**



**THE MYTH:** Students feel that professionals have not kept up with their part of the responsibility in assisting students and young professionals to become an important part of the profession.

**The question:** Do you feel that the architects you have been or are in contact with are generally willing to assist you?

**The answers:** I've never run across an architect unwilling to spend considerable time talking with me (professional to student). *Phil Allen*

Most architects I know have never offered me a job but have made an effort to become acquainted with what I'm doing and have tried to rap about what they are doing. In general, I feel architects are interested in what goes on in the schools and want to relate to students. *Jaime Gesundheit*

There are some architects who are really interested in students and would help us in any way they can; however, there are at least five noninterested ones for each concerned one. *Serena Randolph*

Yes, most are, if they feel you have something to offer. *Pat Davis*

**The question:** How helpful has this experience been in defining the part of the profession in which you would like to be involved?

**The answers:** Very helpful in realizing the general direction of the profession. More than helping pinpoint a part of the exist-

ing profession, it has helped show the task of bridging its parts. *Mark Maves*

All experiences are valuable only if you are willing to let them be, in the sense of doing what you think is best while not falling into the role of the traditional architect. Actually, I thank architects for turning me in the direction I am heading. *Peter Dimatteo, sixth year, State University at Buffalo*

**The question:** As a product of the shift in emphasis in architectural education, do you feel that your priorities are any different from those of your predecessors?

**The answers:** Yes, while I am told differently, I think that people graduating today have a stronger social concern. In time, this should translate into improved personal ethics, as well as improved social and environmental conditions. *Recent graduate, Catholic University*

I think there has been a shift in emphasis in everyone's values, especially with regard to our environment. Some of our predecessors have likewise shifted their values in the process; some haven't. *Serena Randolph*

I think that there is a slight difference in the priorities. Perhaps I should say a difference in the degree of emphasis rather than a shift in emphasis. There seems to be more concern for the socio economic and psychological characteristics involved in problem solving for people. *Ella Hall, fifth year, North Carolina State University*

students that professionals were not responding to the needs of the public, other professionals and the education of future practitioners is generally shifting in at least some of these areas. Students now feel that though not often helpful in terms of providing job opportunities, most practitioners are open and willing to spend time exchanging information and offering advice. This interaction seems to have assisted many students in helping to develop a feel for which direction the profession has chosen, whether or not they felt it was the proper route.

Undoubtedly, there is currently more concern for the "social" impact of the built environment upon the "user" than ever before. This awareness has developed a new consciousness for students in terms of defining the "new" role of the client in the decision-making process, being more sensitive to the client's needs and fulfilling an obligation to the public by making it aware of the potential of individual and community efforts. Through academic exposure, students today feel pretty strongly that they are more conscious of these new responsibilities and, because of this, hope there will be an improvement in the standards of the profession once they are in practice for themselves. Though there is idealism to some extent, their impressions are pretty realistic and well-founded as a result of some in-depth observations of the current status of the profession.

No student denies that professional and economic pressures do indeed affect the attitude of the practitioner. However, there is little compassion for the selling of one's moral obligations, which makes the insensitive rich and the sensitive not eat.

It should be reemphasized that the four myths presented here are only that—myths—and that they represent the frustration of a minority of practitioners who will continue to voice their dissatisfaction with the products coming out of schools of architecture. As for students and graduates, we, too, will continue to voice dissatisfaction and anger with professionals who don't see it as their responsibility to help the schools help the students help themselves.

Take the time. We need you. □



# Faculty: Approach to Relevance

Eugene E. Crommett

The "relevance" of architectural education seems to be the great concern of students and professors of architecture these days. And practicing architects criticize the schools of architecture for their graduates who, they claim, are useless and impractical in the professional office. We might well ask, then, relevance to what?

Relevance to man as he is and, I hasten to add, as he envisions what he ought to be. Christian Norberg-Schulz, Lewis Mumford, Albert Mayer and other writers have argued quite convincingly that the work of architects involves much more than problem solving in terms of immediate necessities and short-term economies, that architects are formers of new environments that can and do alter the lives of others, both now and in the future. Thus relevance surely involves the establishing of priorities and the making of decisions which are of social, political and even philosophical consequence.

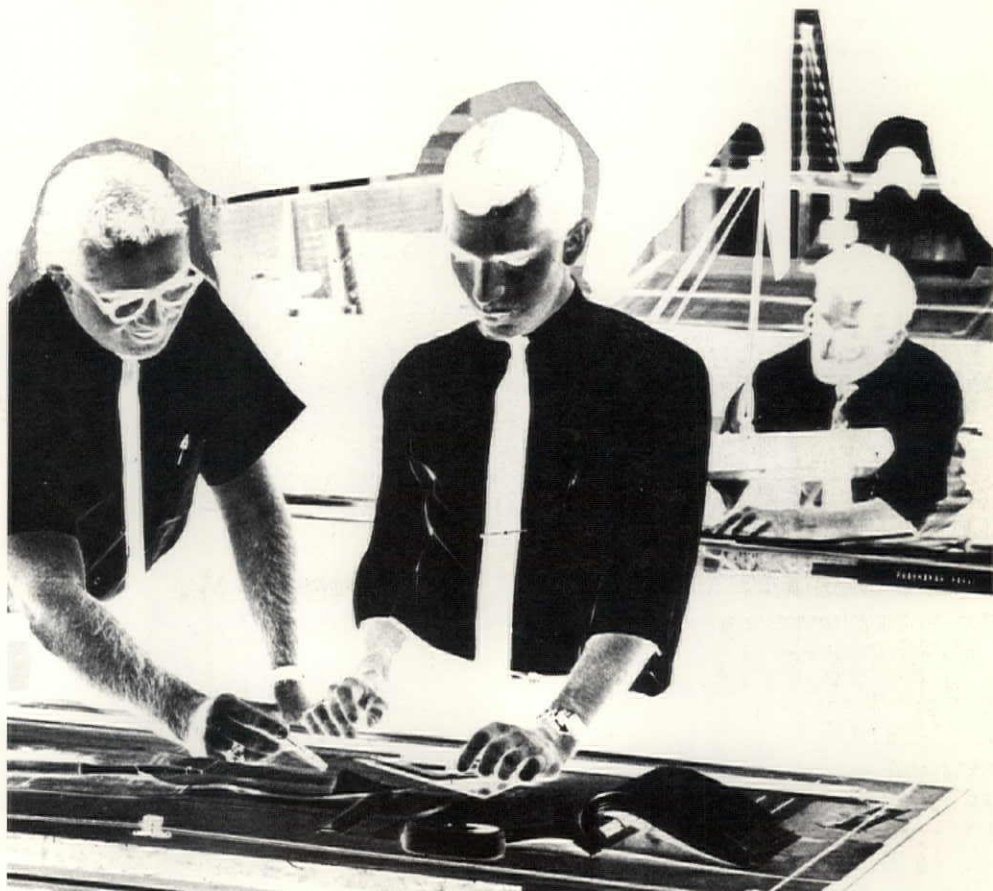
Probably more practicing architects than not find themselves less in a position to initiate these decisions than to participate with others in their formulation. Fortunately, new alliances among those involved in this process, such as interdisciplinary practice and environmental psychology, will no doubt enhance this kind of participation. Unfortunately, many architects are too swept up in the day-to-day activity of getting the building built and the client satisfied to think very much about the larger question of the relevance of architecture to man and the cosmos.

It is my own deep concern that practicing architects come to terms with the relevance of architecture to man's total situation. To say that architects need to accept long-range responsibilities, even ethical concerns, is by no means to propose that we abandon the solving of immediate problems and become exclusively social philosophers. Yet, I hardly think it possible to be an influential architect without being something of a social philosopher as well.

Remember Wright in *The Living City*,

**Dr. Crommett** practices architecture in Puerto Rico, where he also teaches at the University of Puerto Rico.

Relevance to what? To man as he is, as he ought to be. Schools of architecture have taken the lead in dealing with theoretical and philosophical problems; practicing architects have a responsibility to participate in these efforts.



Gropius in *The Scope of Total Architecture*, Neutra in *Survival Through Design*, Le Corbusier in *The Radiant City*? Visionaries, social philosophers all. Much of the literature of recent architectural student "resistance" calls our attention to the neglect of the practicing profession concerning architecture as an instrument for long-range social reform. Many of the pioneers of modern architecture, don't forget, were no less concerned than our activist students about making good design available to the greatest number of people for the highest social good. We can see how functionalism, once it is stripped of its searching dream of a better life for all, becomes little more than a narrow formalism. Anonymous architecture becomes banal in its repetitiousness; attempts to dress up sterile forms become contrived and we are left—I forget who said it—"with the perfume of an empty vase."

If practicing architects have long-range social responsibilities, then it is all the

more important to say that professors of architecture also have them. It would seem fundamental to point out that the teachers in our architectural schools must be capable of profound analytical activity concerning man's present environmental plight, and sensitive and imaginative enough to entertain new visions of how man can take control of the situation for the long-term common good. In general, the schools have taken the lead in dealing with theoretical and philosophical problems, but this does not relieve the practicing profession of its obligation to participate in these efforts—indeed, its participation is essential to them.

Similarly, lest their visions become detached from reality, professors must know firsthand of the practical and human minutiae with which the practicing architect must cope. The best of dreams can evaporate before the forces of political and economic expediency. The potential impact of architecture as an instrument of social change can dissolve in the hands of



**The issue of relevance reduces to the problem of bridging the gap between the study and practice of architecture; practitioner and professor alike must work to bridge that gap.**



those who are ill equipped or who do not know how to come to terms with the people and forces whom they must influence and with whom they must work.

Additional observations could be made concerning other aspects of architectural education. Whether we are thinking of the fostering of design talent, the acquisition of graphic and technological tools, the development of managerial capacities, or a liberal education in the arts and sciences, all of which the architect will need in order to function, there always exists the issue of theory versus practice, thought versus action.

Our students often complain because they have to follow "canned" programs in their courses. No doubt this suggests that they should be participating more in the formulation of these programs at the decision-making level, but it suggests as well that their professors should be men who have relevant social concerns and who are resourceful enough to relate these to the work in studio and classroom.

Admittedly, it is difficult to feel that architecture can deal with life and death matters when the highest outcome of student effort is the awarding of an academic grade. This points further to the need for a better integration of architectural education as a formal academic exercise with architectural education as practical experience in the office, field and community at large. This has been recognized by some schools of architecture by the development of work/study programs. Curriculum reforms will also help, if they have well-stated and realizable goals related to actual situations in the practice of architecture. More physical facilities, more funds for research and experiment will also help. But we must return again to the fundamental issue here: the professors in our schools of architecture and the practicing profession.

Although I have no objective statistical evidence to support the view, it is my distinct impression and that of many with whom I have spoken of the matter, that practicing architects are not known for their continuing interest in architectural education. For the record I must say that there are, of course, important exceptions. In general, however, the typical practicing



architect does not concern himself too much with the problem, for example, of encouraging and retaining the services of capable professors of architecture.

The opposite is also often the case: There are many professors who have all but lost significant contact with the practice of architecture. You will recall the words of Professor Higgins in "My Fair Lady": "They haven't spoken English in America for years!" I remember a parallel comment made by a professor of architecture with whom I spoke at a national conference on architectural education: "Oh, I haven't practiced architecture for years." I tremble to think that this may be a typical case.

The evidence points to the existence of a gap between the teaching and the practicing of architecture. Many teachers and practitioners are convinced of this. Even in cases where architects see it to be otherwise, if the profession does not renew its

efforts to prevent it, it will easily come to exist.

There are other indications of a gap between teaching and practicing. It is increasingly difficult to find good deans for our schools of architecture. There is a half-believed observation that the best architects are the worst teachers, and that the opposite is also the case. Yet, I continue to be haunted by the thought that the relevance of architectural education depends, above all, on relevant professors of architecture. In a word, the issue of relevance reduces to the problem of bridging this gap.

Now, a relevant professor of architecture I would take to mean, at the least, a person committed to architecture *and* teaching as his life's work, one who is willing to make adjustments to resolve possible conflicts between the two callings so that he can see them as but two facets of a single purpose. This will take some doing



**Practicing architects are not known for their interest in architectural education. On the other hand, there are professors who have all but lost significant contact with the practice of architecture.**



on his part, so that others will not find him to be but half an architect and half a teacher.

The problem is not one of achieving a permanent static condition but of maintaining a dynamic balance between the practicing and teaching of architecture. This requires continued reaffirmation and renewing. Thus, the relevant architect/professor himself serves as a bridge and a bridge-builder to close the gap between the architectural school and the practicing profession.

The structuring of the faculty in a school of architecture is also a means to bridge the gap. A well-proportioned faculty might consist of a dean and a number of professors with an exclusive commitment to teaching and academic administration. These would provide a measure of institutional continuity within the school and between the school and the university of which it is a part. A second

group would consist of architect/professors with a permanent commitment to a dual career of practicing and teaching architecture. A third group would be the practicing architects who would participate on an occasional and short-term basis in the teaching effort of the school. Their periods of service would range from one single design project to a year or two.

It is the second group which is our main concern here: the architect/professor who combines practice with teaching. To do this without inviting the disgust or wrath of university boards and clients alike, or without suffering a nervous breakdown, is no small task. Nevertheless, I would argue that it is possible and worthwhile.

Why do both? The strongest argument is relevance, bridging the gap. There may be other ways for professors of architecture to do this, such as occasional consulting work, research projects, travel,

leaves of absence, etc., but none of these would provide a constant reciprocity between the teaching and the practice of architecture.

Ideally, on any one faculty the teaching/practicing professors should represent as a group as many different kinds of professional activities as possible, from membership in small to large to interdisciplinary firms, specialties from single structures to regional planning, and work in the private and public sectors. An important consideration in the selection of a professor is how his particular experience as a professional complements that of his fellow faculty members from the overall view. All this presupposes that you believe in the variety of experience and opinion as a means to constructive argument and evolution, that you can count on a certain degree of intellectual and emotional maturity on the part of the professors and have found a first-rate dean to hold the faculty together. I think that such a faculty would be more relevant for the students and other members of the profession. I think, too, that what goes on in our schools of architecture would be better related to what goes on in the world outside.

It is surprising how many students enter schools of architecture without knowing much at all about the subject, or without having really known an architect. The fountainhead syndrome still seems to dominate many, and in Latin America, for one, architecture continues to be widely considered a very prestigious calling. But even the flimsiest of motives can be replaced with the growth of talent, the acquisition of knowledge and professional dedication, else the dropout rate of our schools would be even higher than it is.

This brings us to the point: For many, even perhaps most architectural students, their professors are the first architects they have known. To put it another way: The professors must represent to the students the realities of the profession and what it means to be an architect. A professor who enjoys reciprocity between teaching and practicing has a definite advantage in his efforts to do this.

This observation is important from both the motivational and the practical points of view. Psychologically speaking,



**Could be our man is the architect/  
professor who combines practice  
with teaching. Why both? The  
strongest argument is relevance.**

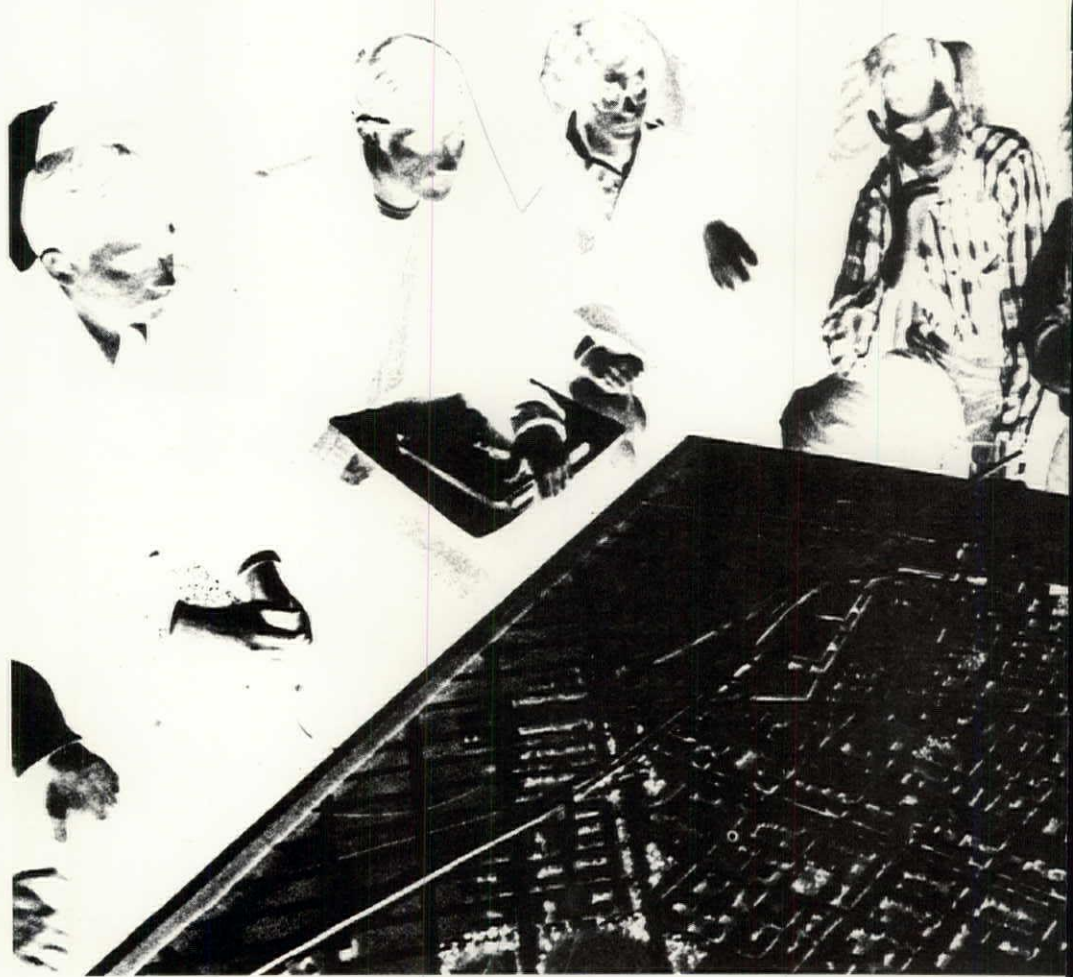
it is nice for a student to *feel* that his professor knows what he is doing and talking about; practically speaking, it is equally nice for a professor to *know* what he is doing and talking about.

Now, if architecture could be reduced to a formal exercise, then all that I have said is of less consequence. But if architecture involves people in well-designed environments, then it will be important that theory and practice come together in the person of the architect/professor.

In my own experience, there has been a reciprocity between my practice and my teaching in architecture. I am sure that one has contributed constructively to the other, and that no practical conflicts between the two activities have ever been beyond solution. This is by no means to say that problems do not arise from time to time but only that the dual role requires on the part of the architect/teacher a significant amount of flexibility, energy and tact. There are at least four contexts within which he will have to place and adjust himself if he is to be successful. Each of these is partly within his control, partly beyond it. They are: 1) the school of architecture and university where he teaches; 2) the firm where he practices; 3) the clients whom he serves; and 4) his own self.

Conflicts between teaching architects and university administrations concerning "outside work" have reached the level of *cause célèbre* and have touched even the mightiest of the profession. On occasion, students have been known to revolt, crying out: "Where are the professors? They are never in the studio! They are always out attending to their own practices!" Undoubtedly, the situation is subject to abuse on the part of professors who also practice architecture. The school or university has every right to expect its professors to put in a well-defined minimum of effort in the studio or classroom, on academic committees and for student counseling, that, in a word, even professors of architecture ought to earn their salaries.

It would be ill conceived and unfair for a professor to dismiss all claims of the university administration, muttering to himself that his practice comes first. At all costs it is important to keep the issue off

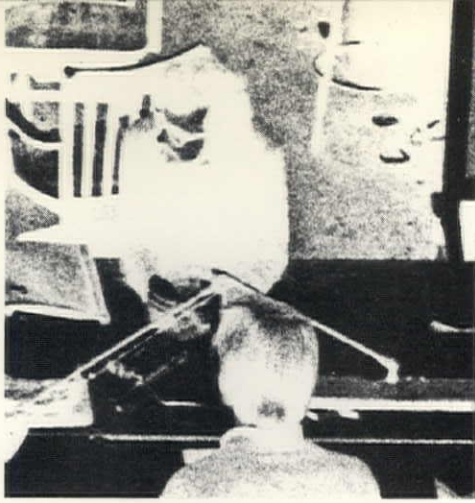


this level because practicing and teaching must be maintained as "both-and" and not be allowed to become "either-or." Occasional absence to attend to a crisis or unavoidable date in the professor's practice ought to be allowed by the institution. But the academic duties of the architect/teacher must be written in his appointment book as fixed obligations. If the workload in the office is getting too heavy, then he must explain to the prospective client that he will either have to take on the work at a later date or not at all. This would be more the case in individual practices than in larger firms, where other professionals can be counted on to help.

I continue to believe that it is quite accurate to compare the work an architect/professor does in his practice to the research and writing that professors in other fields do. It is often difficult to advance this argument in an atmosphere where

words and numbers are accepted as the most significant symbols of communication. Visitors to schools of architecture from other faculties are often mystified by what to them is an extreme emphasis on visual communication and a totally sensual perception of man. Undoubtedly, this is to a large degree our own fault because we have not done better in explaining to others just what architecture is all about. On occasion university officials have been disturbed by what appears to them to be the "trade school" atmosphere of our studios and shops. Indeed, we ourselves are well aware of the difficulties involved in translating the meaning of a design course into the terms of academic value, credit hours and the like. But with respect to research and original contributions, the best laboratory of the architect is the real world, whose environment he "orders, and the most worthwhile creative





**Teaching and practicing are complementary activities and may be one means for keeping our schools of architecture relevant to the realities of the world.**



effort he could make is an actual design he has competently executed.

If the professor is an employee of an architectural firm, then some kind of understanding, even contract, will have to be worked out on the basis of allocation of time between practicing and teaching. A partnership or large firm of which he is a principal may involve a similar arrangement: the firm should consider it worthwhile to number teachers among its employees or principals. An individual practice, however, in spite of its limitations with respect to scope of projects is probably the most convenient arrangement because there is no problem of division of responsibility with another person.

In any office structure it is possible for the architect/teacher to put in extra hours to fulfill all of his obligations. In individual practice there are times when the work piles up, but with experience it is possible

to learn how many projects to take on and when to postpone or refuse a new one. This will not be seen as a sacrifice if the architect values his role as a teacher.

Concerning the clients of the architect/teacher, in my experience most seem to be somewhat intrigued by my role as a professor of architecture. However, individual prejudices vary, and on occasion the client needs to be reassured. These prejudices fall into two areas: that the architect is teaching because he is not very successful in his practice and needs the extra income, and that his teaching schedule may cause him to render less than full service to the client.

With respect to the first matter, professional competence can be illustrated by showing the client some of the projects successfully completed by the architect and by engaging in informal but enthusiastic discussion of the importance of

teaching. Most will respond positively to comments that point out such advantages as the architect's opportunity to learn through teaching and to "give back something" to the school, the profession and the community through teaching. Many clients continue to ask from time to time how things are going at the school. When it would be germane, an articulate client can be invited to participate in a jury or give lectures in the area of his specialty.

With respect to a possible conflict of interest between obligations to the school and to the client, initially, the architect can explain that he is extremely careful to take on work to which he can render only the fullest service, and that otherwise, he would refuse to take it on. Later, his availability, promptness in keeping appointments and fulfillment of schedules will clear away any doubts that the client may continue to have.

The last area of concern is the architect/professor himself. To put it simply: If he fails in his attempt to carry out his dual role, then the whole concept is bound to be questioned and possibly rejected. I have seen failures and near failures where architect/professors have become so swamped with work in their practices that their teaching has seriously suffered. In cases where the situation has come up for discussion, it could only be pointed out that if the architect/teachers had indeed lost control of matters, and if they still wished to continue teaching, they must reaffirm important personal commitments and make sacrifices to realize their goals.

I have often wondered how many practicing architects would be effective professors in our schools of architecture if they could be convinced that there need be no basic conflict between practicing and teaching as a dual career. Teaching involves, in its own way, as much creative effort as designing. Teaching and practicing are complementary activities, the one informing and enhancing the other. Above all, this can be one of the means for bridging the gap between the study and practice of architecture, for keeping our schools of architecture relevant to the realities of the world and for facilitating the development process from student to graduate to practitioner of architecture. □



# Practitioners: Drive for Multidimensional Learning

James P. Gallagher

This year, 14 students in their fifth or sixth year at the University of Michigan's School of Architecture will be employed in 13 different architectural firms, most in the Detroit metropolitan area. They will be given a wide experience in the production of construction documents, all the way from design development to the taking of bids, usually following a specific project through these steps. In addition, the student gets extensive exposure to, and counsel from, key professionals in all disciplines involved with the project.

The various programs range from a highly structured and planned series of meetings, consultations and reports at a large firm such as Smith, Hinchman & Grylls Associates, Inc., in Detroit to a series of paperbag lunch meetings with a principal of a firm like Swanson Associates in Bloomfield Hills.

The program, now in its second full year, is a joint undertaking by the Department of Architecture at the University of Michigan, the Michigan Society of Architects and a number of leading architectural firms throughout the Midwest. It is aimed at exposing advanced architectural students to the actual conditions of practice and making it an integral part of their professional education. Unlike the clear-cut separation of work and schooling in most co-op programs, the Professional Exposure Program (PEP) integrates education and experience during a full school year spent in a participating office, for which academic credit is given toward the degree of Master of Architecture.

There is no divorce from the university, however. Professor Harold W. Himes, AIA, key proponent of the program at the university, monitors the students' progress, receives regular reports from them and evaluates possible changes in the curriculum suggested by the work experience. In addition, Himes stays in regular con-

**Mr. Gallagher**, director of public affairs, Smith, Hinchman & Grylls Associates, Inc., Detroit, was an associate and then a senior editor at *House & Home* for 18 years before joining SH&G. For 15 years, he conducted the Homes for Better Living program in association with The American Institute of Architects.



tact with the participating professionals and principals, and MSA Executive Director Ann Stacy provides liaison with the statewide membership. The program was approved by the faculty and by department Chairman Robert C. Metcalf, FAIA, who has followed PEP with deep interest and has given it his complete support and personal attention.

"The university has always been concerned about criticism from the profession that graduates are not as aware of the facts of professional life and procedures as they should be," says Himes. "At the same time, we have had criticism from ex-students that they wished they had known more clearly where to place their educational emphasis. PEP was developed to attack both these complaints simultaneously and to provide us with a continuing feedback of changes in practice that might affect our teaching."

Fifteen firms have taken part in PEP so far. In Michigan, they are: Swanson Associates and Tarapata-McMahon-Paul-

sen, Bloomfield Hills; Rossetti Associates Inc.; Blum, Vaporciyan & Mitch; Nathan Levine & Associates; and Smith, Hinchman & Grylls, Detroit; Ellis-Naeyaert, Warren; Frederick Stickel & Associates, Troy; Commonwealth Associates, Jackson; Lewis, Kingscott & Associates, Battle Creek; Jickling & Lyman, Birmingham; Lane, Riebe & Weiland, Ann Arbor; Wakely-Kushner Associates, St. Clair Shores; and in Illinois, C. F. Murphy Associates and Skidmore, Owings & Merrill, Chicago.

Philip J. Meathe, FAIA, president of SH&G and a U of M graduate, agreed to have his firm serve as the guinea pig and assigned the detailed development of the program to D. E. Roggenbach, AIA, corporate director for architecture. The result was a careful study/work experience that placed each student on a project team with interim assignments in specification writing and construction follow-up. Parallel with the work assignments, the students participated in a series of



**The Professional Exposure Program (PEP), started by 15 Midwest architectural firms and the University of Michigan, incorporates part of the apprenticeship into the educational process instead of having it come later.**

**Programs range from highly structured and planned meetings, consultations and reports at large firms to paperbag lunch meetings at small offices.**



scheduled conferences with SH&G executives and managers at all levels of corporate responsibility.

Roggenbach also served as "corporate father" to the students, regulating work assignments and monitoring their progress and the operation of the project. William R. Fleming, SH&G director of personnel, provided logistic support for the program and assisted in its day-to-day development. It was his responsibility to assure that informed corporate/employee liaison was maintained.

His firm, Meathe explains, feels a deep responsibility to assist the educational system in preparing the men and women who will make up the profession of the future. "If there are deficiencies in their training that might make their professional progress difficult, we must point them out to the schools. And on the other hand, many of these talented young men and women get much broader and more technically sophisticated educations than we did and may show us better ways of doing what

we do. We expect to gain as much from PEP as any student."

The PEP process differs radically from the usual co-op program, which is usually related to financial necessity and provides the student with employment and income to enable him to continue his education. This alternation of so many months of work with so many months of school can sometimes be haphazard, since the student is expected to be productive immediately and is assigned to whatever needs doing most urgently in the office.

Through the joint responsibilities of employment and education, PEP envisages a more structured program which will vary considerably with the nature, size and organization of the firm. Rigidly or loosely structured, the program should provide the student with the work experiences and exposure he wants and needs as an integral part of his educational program.

The four primary objectives of the PEP program are to:

- give students exposure to the technical

and managerial functions of typical architectural firms.

- identify educational shortcomings as a guide to the final year's course of studies
- evaluate this work experience in terms of educational preparedness, and to feed back this evaluation to the U of M faculty as an aid in determining new curriculums
- develop PEP as an educational aid for future students.

The first year's program was based on a single pair of students, Douglas Hanna and John Schade, both in their final year of work on their Master of Architecture degrees, and both interested in the management of an architectural practice. Both being single, they took an apartment together in Detroit, which converted the program to a virtual 24-hour per day experience. This was a special circumstance, however, and succeeding students have not had similar advantages.

Although the first students were primarily interested in management techniques their intent was not, of course, to study this subject for eight months and graduate as qualified managers but rather to study how the various production stages are managed, as well as the problems that are encountered. Their interest was the management of the process rather than the process itself.

One PEP criterion is that the students spend as much time as possible on productive work and as little as possible on overhead, so that participating firms can be assured of not being asked to underwrite nonproductive employees, a demand that many smaller firms would find impossible. The typical category and pay scale offered is that of junior draftsman, under the following reasoning: They have little experience, will be productive only about 80 percent of the time and are getting school credit; and the program is an unknown quantity.

The firms involved had some doubts that the student would be very self-supporting and productive, but the first group of students proved that they become productive in a remarkably short time. The nonproductive time is mostly that spent in guidance and counseling, often on an after-hours basis.

William W. Lyman Jr., AIA, thinks



**PEP sows benefits in all directions: The students, through involvement in real projects, get a clearer idea of which specialized courses they want to take during the final academic year.**



that his firm gets more out of the program than do the student, and, he says, "We figure that it doesn't cost us anything."

Meathe reinforces this and explains that most of the time the students are working on actual jobs, and SH&G is making the normal profit on their hours. "This more than makes up for the time spent in conferences. We feel that any extra cost to us is nonexistent. At the same time, we gain a great deal from working with these men."

Himes finds that most firms are surprised at the breadth and depth of the students' education, especially in the environmental sciences, computer technology and research, and in their ability to analyze and solve problems. He notes two recent graduates who went into major offices and found themselves put into leading roles in illumination engineering and computer operations. Their credentials in those subjects were more substantial than those of anyone else in the firm.

Historically, experience in an office follows education and has been thought of as an apprenticeship. What PEP does is to incorporate a part of this apprenticeship into the educational process instead of having it come later. There will always be a divergence between what young people bring to employment and what is expected. The student must know and understand the comprehensive requirements of professional practice and the best place to learn this is in the reality of an office rather than the university.

Also, it is difficult during the school years for the student to evaluate himself and the profession and get a glimpse of how he will function in a real situation. The school provides an atmosphere of abstract and theoretic problems and aims to teach the student to think. The office gives him the concrete problems in the context of reality.

Exposure to actual offices and real projects has given the students a clearer idea of which specialized courses they want to take upon their return to the university and final academic year. As the program is set up, the PEP year involves one semester of preparing for the office experience, then a full eight-month school year with a firm, followed by a final year leading to the

master's degree. The preparatory semester is mandatory, partly because the student may have no knowledge whatever of office practice and procedures but mainly so that Himes can get to know the student and his abilities and work out the best possible match with a participating firm.

The first two PEP graduates, whose emphasis was on management and business administration courses upon their return to U of M, feeling that they had to learn broader management principles if they wished to apply them in the profession. Others are taking real estate law and finance and cost estimating, looking toward project development. Still others are concentrating on design courses, feeling that their office experience indicated that they were deficient in organizing the design of a project. And one student, sensing that he had difficulty in his relations with some of the regular employees of the firm in which he served, made a strong recommendation for courses in practical psychology to give students better insight into how to win friends and influence fellow architects and engineers. "I'm sure I made a lot of mistakes in dealing with people, and a better knowledge of human psychology might have prevented some of them," he comments.

Under Michigan's six-year architectural program, the first two years are taken in liberal arts, the second two in a comprehensive core curriculum of architectural subjects, the final two are directed at the specific professional interest of the student. The PEP program is only one of several alternative paths that a student may select during the final two-year period. Under PEP, the office year helps to clarify the direction a student may want to take and gives him a broader and deeper insight into the special knowledge he wants to gain during his final year.

According to Himes, the maximum effectiveness of the PEP program depends on the level of commitment on the part of the professional firm. This does not mean that the principals personally must guide the student (although they should take a continuing interest in his progress), but they must insure that responsible key personnel make the program work. This



eliminates any likelihood that the student might become pigeonholed in meaningless make-work tasks or that his progress—or lack thereof—might be overlooked. In one instance where this high-level commitment was lacking, the student felt that there was nobody in the firm who really knew why he was there. The firm had agreed to take him on, but had not made a true commitment to his professional education.

The matching of student and office is highly selective. Himes does a good deal of screening to determine whether the objectives of the student will be met by the special expertise an office can supply. All firms are expected to take the man through all the steps of construction documents, but the structuring of the program ranges from highly organized to grasping opportunities as they arise.

Even at SH&G, where the experiences and conferences are tailored for the operations of this large, multidiscipline office, a measure of flexibility is built in to take advantage of special opportunities. For



**Participating firms learn from the students, who are getting a broader and more sophisticated education than did current practitioners.**

**The university gets continuing feedback of changes in practice that might affect the teaching and is made aware of deficiencies in the training of the students.**



example, the first two students at SH&G were scheduled to be developing working drawings when it so happened that they could become involved in the organizing and managing of two relatively small industrial projects, perfectly suited to their experience level but of the types that are available only rarely in the office. The students could carry out the production of construction documents from the very earliest stage all the way to bids. They also got the unscheduled but valuable chance to meet with the client together with the project manager, an opportunity they considered among the most valuable lessons they had.

At the firm of Blum, Vaporciyan & Mitch it was possible for the student to become involved in an effort to rezone a piece of land in order for the client to use it in the optimum manner. He was also able to see the two quite different schematic developments that would have evolved from the approval or disapproval of the zoning change—a facet of practice

that seems light-years away from the classroom but one in which the professional constantly is engaged.

This matching of students and firms is further complicated by the logistics of office location and individual student personal situations. This places some limitations on expansion of the program. Most of the firms are located away from Ann Arbor, and Himes reports that they run into questions of working wives, apartment leases, available living quarters near the employment and all kinds of transportation problems, which all work against matching the student with an appropriate office.

Although Himes feels that the feedback between university and employers is working well, mainly due to the close contact maintained, he feels that communication between students and university needs strengthening. "We started out thinking that most students would return every couple of weeks to discuss their experiences and any problems they encountered.

But it's a long way to and from Ann Arbor; our schedules do not always work out. A liaison like this is a major lengthening of the work day or work week. Perhaps the feedback should be by way of written reports, scheduled into the work activities in the same manner as conferences are."

Participants who have not completed the second part of the professional practices course and who are working within 50 miles of Ann Arbor return for that class on Wednesday evenings. Those who are farther away get tapes of the lectures and discussions and must pass an examination based on them. In addition, no matter what the distance, they must return several times during the year to Saturday sessions, which consist of general discussions about experiences, problems, suggestions, etc. Himes chairs these meetings to evaluate how the students' experiences relate to curriculum and teaching.

One specific change that has been made at Michigan as a result of PEP is the introduction of specifications into the preparatory semester. The first students strongly recommended this when they found that they were almost completely ignorant of the role and importance of specs. Also, increased emphasis has been placed on the general skills of drafting and lettering, an area employers said was reducing the use of the students. The latter, too, acknowledge a weakness in drafting. Says one:

"I just didn't know the nuts and bolts of documents, and I wasn't well founded in drafting technique. The other men I talked to admitted the same lack of experience in construction documents. This prep course during the introductory semester should help a lot."

If it could be funded, the students recommend that a slide or film presentation be made by the university for showing to prospective participating firms, both top executives and the personnel who would carry out the day-to-day program. This film would emphasize the advantages to the firm as well as the improvement of the professional education of the students. The students feel that such a film would eliminate any doubt or ignorance about exactly why the student is there, and what is ex-



**One PEP criterion is that the students spend as much time as possible on productive work to make sure that participating firms are not being asked to underwrite nonproductive employees, but are making the normal profit on their hours.**

**What this work/study program proves is that if the profession wants graduates to have command of a variety of skills — in short, a relevant education — architects will have to get more directly and deeply involved in the educational process.**



pected on the part of everyone involved in the program.

One of the most important benefits to the firms is the realization that, with slight modification, the PEP approach may be used to broaden the professional knowledge of any employee. If working across all corporate management functions and counseling by senior professionals will improve the education of a senior student, why cannot it also improve the performance of a person already on the staff? At SH&G, two young employees, both graduates, are being exposed to all levels of corporate responsibility, although most of their work week will continue on the specific projects to which they are assigned.

All the firms that were asked agree that the PEP success cries out for some sort of ongoing effort directed toward other capable and interested employees as part of a continuing program of professional education and development. There is clear realization that the attention given to the PEP group is not typical of that given a similar new employee hired right off the street. Harry Vaporciyan, AIA, comments:

"Remember, these students have come

into the offices as special people and are getting special attention. The fact that they have almost complete access at any level for any problem or question is not typical of real office life. Perhaps what we need is some kind of equivalent of PEP during a man's entire professional lifetime."

Surprisingly, there is little talk of any significant gap between the university and the profession, since the architects do not consider lack of experience a gap in the person's training. Thomas J. Lucas Jr., AIA, of Tarapata-MacMahon-Paulsen puts it this way: "There is no real gap in their training, and even the unfamiliarity with office practice doesn't last long. There is always the fact of limited experience, but we cannot look to the school to provide that. The school's role is to provide an atmosphere in which to learn to think, and to confront abstract and theoretical, even idealistic problems."

Both students and professionals estimate that the eight-month PEP program is equivalent to at least 18 months of routine office experience after graduation. And students who have returned to school to complete their course work say that

they are ahead of their classmates who have not been in the program.

Himes attributes much of the accelerated progress to the difference in reception when counsel or instruction is given by a recognized practitioner rather than an instructor in the university. Students tend to associate the classroom with theory, whereas the same information given in the office has the "ring of reality." One remark heard again and again from PEP students is that "in the school, they told us over and over that such and such was important, but I never realized how right they were until I got into an office and had it proved right before my eyes."

What the Michigan/MSA program proves is that if the profession wants graduates to have a command of a variety of skills, if they want them to know design, construction documents, computer technology and programming, specifications and a host of related subjects, architects will have to get more directly and deeply involved in the educational process. They must get the feedback to the schools which enables these to decide what to provide the students besides adequate learning opportunities. It is not enough to complain that the graduate cannot do many of the things required in an office. The schools must be informed specifically about the deficiencies.

Where does PEP go from here? Almost universally, the offices are enthusiastic and are willing to take one or more new students each year. Himes estimates that probably only 25 percent of the students want to take part in PEP, or would benefit from it. Students who have the opportunity of working summers or part-time in offices often feel that they would rather devote the year to university courses that might be difficult to pick up later on.

But for those who want to test their educational training against the demanding world of office practice, and who want to gain more conviction about the roles they wish to play in the profession, PEP is ideal. For a university devoted to the education of capable and talented architectural professionals and for firms which want to pass on their experience and counsel to tomorrow's professionals, PEP is a proven success. □



# NCARB: Move to a Narrower Information Gap

E. G. Hamilton, FAIA

How good is the training our graduates from schools of architecture are receiving? What do they themselves think of it? And how well are they rated by the principals in firms that hire them?

The quick answer to all of these questions is that we seem to be doing a better job of training our young people than many architects might suppose. But it must be immediately stressed that we really cannot say for sure because ours is a profession that has paid too little attention to what happens to the trainees between the time they are graduated from school and the day, several years later, when they sit down to take the professional examination.

During the past year, the National Council of Architectural Registration Boards has moved on two fronts to narrow the information gap which now characterizes the education/training phase of our profession. We happen to be uniquely positioned, through the basic constituencies served by our 55 member boards, to elicit data from the two groups within architecture which are most directly involved with training: the applicants who take the professional exam for registration and NCARB's nearly 11,000 certificate holders. It is largely the firms of the latter to which young people turn for jobs after graduation.

Last December, all but 18 states gave the seven-part exam to qualified candidates for registration. NCARB distributed a questionnaire at that time to its member boards and asked that each person taking the exam fill it out.

While the exam candidates were responding to this questionnaire, NCARB's certificate holders also were receiving a questionnaire. Both were designed to help us begin to develop a definitive profile of these two important groups. In addition, however, we hoped to learn something of the interrelationship between trainee and practitioner through their expressed attitudes toward the professional training experience.

Mr. Hamilton, who assumed the presidency of NCARB in June, served as chairman of its Examination Development Committee from 1969-72.

What follows is a preliminary analysis of these two questionnaires. We will consider each separately, then relate them to each other. (A significant qualifier: NCARB's Research Committee leadership—notably William C. Muchow, FAIA, and Arnold Butt, chairman of the Department of Architecture at the University of Florida—regard these findings as a useful starting point and only the beginning of an ongoing research program which several years from now should yield a much clearer picture of the profession as a whole.)

**The Examinees' Questionnaire:** NCARB received 2,905 responses from the candidates who took the seven-part exam last December. The 37 boards who administered the exam break down by region as follows:

Region	Number of Respondents	Percent of Total
New England .....	92	3.16
Mid Atlantic .....	662	22.80
Southern .....	673	23.18
Mid Central .....	453	15.60
Central States .....	46	1.58
Western .....	979	33.68
	2,905	100.00

The examinees' questionnaire consisted of 27 questions. The first 10 dealt with personal data, educational background and whether a candidate was taking the registration exam for the first time (and,

The architectural profession is not paying sufficient attention to the linkage between education, training and practice. Now, a move on two fronts is underway to narrow this information gap.

quired which can be "credited toward registration."

Of the 2,905 taking the exam, 776—27 percent—were doing so for the first time. Of the 776 first-timers, 602—78 percent—had professional degrees. And of those 602 degree holders, 61 percent had bachelor's degrees, 11 percent had their master's and 6 percent held degrees from foreign schools.

How did the first-timers fare? The pass/fail breakdown is a tabulation of the three basic groups, educationally, that took the exam: those lacking a professional degree, those with a professional degree and those with a foreign degree. It is important to note that a considerable range of educational background is reflected in each group. The nondegree holders, for example, came to the exam with a high school diploma or less in some cases; some college; and even four or more years of college but lacking an architectural degree in many other instances. Nor does the summary break down the several kinds of degree-holding candidates, e.g., five-year bachelor's; four- and two-year bachelor/master's; combined single-school bachelor/master's, etc. Similarly, the foreign candidates brought to the exam educational credentials of many types.

The pass/fail record for first-timers, all seven parts, comes out percentage-wise as shown on the chart below:

The exam results argue persuasively for the candidate who holds a professional

Educational Level	History and Theory		Building Construction		Building Equipment		Professional Administration		Structure		Site		Design	
	P	F	P	F	P	F	P	F	P	F	P	F	P	F
Lacking professional degree	37	63	60	40	56	44	62	38	36	64	41	59	39	61
Professional degree	87	13	74	26	85	15	87	13	72	28	58	42	56	44
Foreign	44	56	37	67	53	47	43	57	47	53	33	67	40	60

if not, which parts were being retaken). The remaining 17 questions were directed only to those candidates with professional degrees in architecture. These were framed primarily to elicit information on the quality and the amount of experience ac-

quired. Foreign candidates, of course, face special language problems. And the Americans who lack a degree in architecture are handicapped by a reverse application of the timeless adage that while there is no substitute for experience





**NCARB, questioning applicants for the professional exam and nearly 11,000 certificate holders, has gathered data to get to the facts, facts on which the groundwork will be laid for a closer knit profession.**

neither is there a substitute for a sound academic foundation.

The foregoing table does not reflect the difficulty experienced by examinees in two exam parts of particular interest to many in the profession: Site Planning and Architectural Design. Taking all examinees into account—the first-timers, re-takers, degree holders, etc.—a good many more failed these parts than passed them. The NCARB Research Committee feels there could be a number of reasons for this. The exam could have been too difficult, those grading Site and Design could have been too tough, or perhaps the schools are falling short of the mark. In any event, these two sections will bear special watching in December when our first entirely machine-graded exam will be given.

NCARB's questions relating to preregistration work experience produced a generally impressive response. All but 15.8 percent of candidates holding professional degrees had experience in architectural firms prior to graduation. Indeed, nearly half had over 13 months' experience; and of these, over two-thirds had over two years' worth of office time.

The after-graduation record was equally solid. At the time the exam was taken last December, 25 percent of the candidates had chalked up between 37-48 months of experience; nearly 63 percent had over four years' worth. How does this well-seasoned group of candidates feel about the quality of their training? Here's how:

Quality	Number of Respondents	Percent
Excellent .....	1,050	37.1
Good .....	1,332	47.0
Average .....	396	14.0
	2,778	98.1*

\* The missing 1.9 percent is accounted for by those who considered the quality of training to be "poor" and by those who had "no credited experience."

Given the prevailing skepticism among young people today, we find the above assessment nothing less than astounding. "These replies," according to educator

Butt, "should lay to rest at least two time-honored complaints: the first by graduates who claim that architects 'want me to spend two or three years detailing toilet stalls'; and the second by architects who charge the average graduate with not having any 'practical experience in an office.'"

Candidates were asked about the availability of jobs after graduation. Were there enough of them? How was the pay? What was the size of the first firm they worked for? Altogether, how many firms have they worked for?

Most graduates relied on individual initiative in locating their first job; only 6.8 percent said they were helped by a placement service at school. A total of 54 percent said jobs were available after graduation, and 51 percent stated they were selective about the jobs they accepted. While there appear to be more job opportunities in offices of 10-19 and 20-49 professionals, over half of the graduates—52 percent—head for small offices (1-9) after graduation.

As for movement from one office to another, 53.5 percent of the exam candidates worked for three or more offices in three to four years. The breakdown is like this:

Moved	Percent
3 times	19.5
4 times	14.1
5 or more times	19.9

Although candidates overwhelmingly expressed a favorable attitude about their training experience, only 19 percent of them indicated that they worked in offices with an organized training program. And while 63 percent had more than four years' experience, 81 percent felt that three years is sufficient. It seems clear, as confirmed by both the examinees' and certificate holders' questionnaires, that the requirements of the training phase in a young aspirant's career are reasonably well satisfied by present-day practice. But architects need to understand that the benefits thus far come not from sound professionwide planning efforts but simply from muddling through.

#### *The Certificate Holders' Questionnaire:*

The single most impressive result of this survey was the response itself. Of the 10,800 questionnaires distributed, 10,036 — a remarkable 92.9 percent — were completed and returned to NCARB.

The second most impressive result took the form of a qualitative discovery about certificate holders. Without a doubt, they comprise the profession's leadership. For example:

- 7,948 — 79 percent — of the respondents are members of The American Institute of Architects.
- 1,422 — 14.2 percent — have earned master's degrees.
- 7,339 — 73 percent — are principals in firms, i.e., owners, partners, corporate officers or directors.
- Of these principals, 85 percent are AIA members; the same number have professional degrees; and 15.4 percent hold master's degrees.

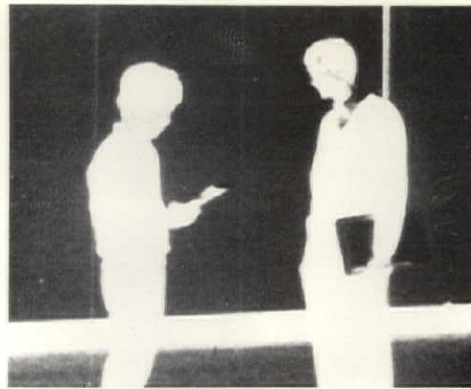
At the end of 1972, the 10,036 responding certificate holders collectively held over 36,000 state registrations, for an average of about 3.6 per practitioner. By contrast, according to Bannister's great study *The Architect at Mid-Century*, a total of 991 architects in 1950 averaged just 1.7 registrations. (At the current rate of growth, NCARB's member boards can anticipate a 400 percent increase by 1990, with 126,000 files on 21,000 certificate holders.)

Principals also were asked about the size of their firms. Again, some interesting changes have occurred since 1950. For instance, there were just 29 firms that had 100 or more employees 23 years ago. Today, the percentage share of firms in this 100-plus category is only 5 percent. But the *number* has jumped to 340, which means that many more thousands of employees are concentrated in the largest firms than was the case not too long ago. This fact alone raises important new implications for the education, testing and training of tomorrow's architects, not only for NCARB but also for the profession.

Having characterized the extraordinary certificate holder sample, what did we learn specifically from it about the caliber of young candidates for registration? Around 7,000 principals (about 1,000



These facts prove that two time-honored complaints may be discarded: first, the graduates' claim that architects stick them with detailing toilet stalls; and second, the architects' charge that students get no office experience prior to graduation.



But answers to NCARB's questions also strongly suggest an increasing need for organized training programs if we want to shorten the distance between our young graduates and the practitioners.

	Number of Architects	Excellent	Good	Fair	Poor
Site and design .....	5,998	7.6	47.4	37.8	7.2
Building equipment and construction .....	6,026	1.7	16.3	45.4	36.6
Structural design .....	5,742	1.8	22.7	52.1	23.4
Drafting and delineation ....	6,141	8.2	41.2	37.4	13.2
Specifications and contract documents .....	5,685	0.7	8.8	37.2	53.3
Computer technology .....	2,310	2.3	23.9	36.9	36.9
Personal relations .....	5,733	9.1	57.9	20.0	4.0

Are we producing enough young architects to fulfill the profession's responsibilities? NCARB's questionnaires have yielded no conclusive evidence, one way or the other. However, 31 percent of the certificate holders maintained that there are not enough qualified persons to fill the jobs.

We also know that the number of people employed in large offices, i.e., 50 persons or better, is increasing at a disproportionately high rate. This development strongly suggests an increasing need for organized training programs, too, if we hope to produce young practitioners whose learning experience is not confined to the detailing of toilet stalls. □

declining to respond) were asked to rate the capabilities of graduates hired in the past few years in seven categories, with the percentages shown above.

Of particular interest is the principals' rating of graduates in Site Planning and Design. Traditionally, these are major hurdles in the seven-part exam; the failure rate for them in many states last December went as high as 60-80 percent. Yet we see above that 55 percent of the principals rated graduates they have hired as being "excellent" and "good" in Site Planning and Design. Another 37.8 percent rates them as "fair"; and assuming that a "poor" rating might be equated with a failing grade, only 7.2 percent of the principals would have flunked the young people who worked for them in these key areas of professional concern. As noted earlier, this conspicuous inconsistency warrants close study in the coming era of four-part, machine-graded exams.

The principals in firms were questioned on training as an "organized learning program." The three questions shown in the charts at the right compare the attitudes of principals affiliated with firms in five size classifications.

Predictably, the larger the architectural firm, the more receptive are the principals to the idea of an organized learning program. And since no less than two-thirds of all firms of 10 or more employees expressed a favorable attitude toward such a program for young people, both during school and after graduation, the missing element appears to be the profession's determination to get the job done.

Would you be interested in participating in an organized learning program in collaboration with an architectural school?

	Yes	Percent	No	Percent	No Answer	Percent
Firms 1-9 .....	2,444	53.8	1,905	41.9	194	4.3
Firms 10-19 .....	861	69.3	350	28.2	32	2.6
Firms 20-49 .....	653	71.8	226	24.9	30	3.3
Firms 50-99 .....	208	70.5	80	27.1	7	2.3
Firms 100 .....	233	66.8	103	27.5	13	3.7

Do you have an organized program of learning for new employees?

	Yes	Percent	No	Percent	No Answer	Percent
Firms 1-9 .....	568	12.5	3,833	84.4	142	3.1
Firms 10-19 .....	265	21.3	964	77.6	14	1.1
Firms 20-49 .....	209	23.0	683	75.1	17	1.9
Firms 50-99 .....	99	33.6	192	65.1	4	1.4
Firms 100 .....	152	43.6	186	53.3	11	3.2

Would you be interested in participating in a learning program in collaboration with an architectural school for students while they are still in school?

	Yes	Percent	No	Percent	No Answer	Percent
Firms 1-9 .....	2,452	54.0	1,866	41.1	225	4.9
Firms 10-19 .....	832	66.9	369	29.7	42	3.4
Firms 20-49 .....	626	68.9	245	27.0	38	4.2
Firms 50-99 .....	203	68.8	82	27.8	10	3.4
Firms 100 .....	228	65.3	104	29.8	17	4.9



# Wrapping It Up

**Though not as wide as it is thought to be, there is a definite gap between our architectural learning institutions and the practicing profession. How to bridge it?**

**James E. Ellison, AIA**

A gap exists all right. Educators, architects and students have not been able quite to get it all together. This collection of articles, with their complicated and highly personal points of view, tell us a good deal about the nature of that gap.

But the articles also suggest some simple—perhaps obvious—principles and particulars about how to bridge the gap. These represent just a few glimpses of the kinds of personal and institutional gap-bridging activities which are quietly underway almost everywhere.

There are many other examples; some have been described in recent AIA JOURNAL articles. Work/study and cooperative programs for instance. Probably, the best known are those of the University of Cincinnati (AIA JOURNAL, August) and the special certificate-granting Boston Architectural Center. Those involved—students, practitioners and educators—are convinced of the value of mixing smoothly the practical and theoretical elements of education.

Community Design Centers are another example. Currently, there are 71 of these in 59 cities, 73 percent of them directly linked with schools of architecture and/or components of The American Institute of Architects. Students, educators and other volunteers, under the careful supervision of practicing professionals, cooperate to provide a wide range of professional services to individuals and community groups who need but cannot afford these services by private practitioners.

Then there are the many conceptual models and a few active examples of clinical centers—service and research institutions involving students, educators and practitioners—which are not so different in concept from the medical profession's "teaching hospital." Several schools of architecture, including those of Rice University, State University of New York at Buffalo and the University of Wisconsin at Milwaukee (AIA JOURNAL, January, '72), are operating or plan to operate clinical centers.

It is probably surprising to most that the gap does not seem to be as wide as

generally thought. However, lest the evidence cause the profession to feel too comfortable, it must be emphasized that the communications gap still exists. And still the profession has not succeeded in creating a smooth and productive transition through the education/experience/licensing/practice process.

In the AIA, the National Council of Architectural Registration Boards, the Association of Collegiate Schools of Architecture, the National Architectural Accrediting Board Inc. and the Association of Student Chapters/AIA, programs are underway to do something about all of this.

For example, this year the AIA created the Task Force on Performance Criteria in direct response to both the communications gap and the Institute's 1972 resolution No. 5, which urges schools of architecture to provide opportunities for students not only to prepare for architecture as it may become in future years but also to obtain a full education in subjects which will prepare them for useful roles in offices and firms practicing architecture as it is today.

What are these roles? How do we describe them? There's no question but that practicing architects have expressed a variety of concerns about architectural education and its products: the graduates. But these concerns have never been organized or expressed in a way which would be of help to architectural schools in establishing educational objectives and curricula, or of help to the NAAB in evaluating and assisting the schools, or of help to students who wish to know how they should prepare themselves for practice roles. And it is significant to note that the dominant student career interest is once again architectural practice. NCARB's surprising research statistics (p. 27) support this view.

The objective of the Task Force on Performance Criteria is to create an organized framework for describing the variety of roles that exist in current architectural practice. It is the view of the task force that average profiles of these roles can be developed with the input of a scientific sampling of individuals who are actually performing in those roles in

practice. Current thinking suggests that each profile will consist of a comprehensive list of the tasks and activities which are pertinent to the practice role, each described in terms of the level of performance which the role demands, on a scale from low-level, basic understanding to top-level, in-depth skill.

The task force hopes that the final product of the study—the full set of average profiles—will represent a definitive statement of what practicing architects are now doing, and thus what they need and what they will demand of those they hire. Then it is hoped that:

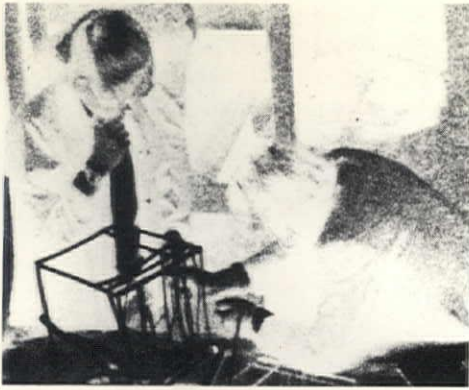
- Educators will review school curriculums in terms of articulated needs of practicing architects in order that the educational opportunities for interested students will be as complete as possible within the scope of the schools' resources.
- Practicing architects will understand and accept their obligation to cooperate with the schools in providing internship and work/study opportunities and other support in meeting educational needs which cannot be fulfilled by the schools, to assure that the interested students turned graduates turned employees will be fully prepared for their chosen practice roles.

The AIA has over the last several years encouraged education and student involvement in Institute affairs, programs and committees, an effort which is also related to bridging the communications gap. AIA support of student activities and of the ASC has grown substantially as it has become increasingly apparent that students have much to contribute and are anxious to do so. In 1974, the AIA will support student activities to the tune of \$74,900, not including costs of student participation on committees and task forces.

The AIA is also reaching out to educators. Young faculty members gather once each year at the jointly funded AIA/ACSA Teachers' Seminar. At each, a substantive issue in education is discussed creatively in terms of educational methodology and experimentation. At recent seminars, a great deal of attention has been focused on incorporating practical and real-world considerations and

**Mr. Ellison** is administrator, AIA Education and Research Department.





**All signs point to the door of the practicing profession: Architects must accept the responsibility and become more involved if the professional development process is to be improved.**



activities in teaching. Also, for the first time next year, the AIA *MEMO* will be distributed to each faculty member at ACSA schools. The Institute considers this to be another step toward improved communications.

Probably the most significant and effective mechanism for confronting the gap is the Five Presidents' Council. Three times yearly, the presidents, presidents-elect and key staff of the AIA, NCARB, ACSA, NAAB and ASC meet to discuss mutual problems and to coordinate activities toward the goals of eliminating communication problems and creating a unified effective professional development process. Recently, the Five Presidents' Council along with its special representative task forces have initiated significant studies which promise to improve the situation considerably, not only due to the nature of the studies but also to the important fact that these are joint studies

whose results will have the support of all the constituencies: educators, students and practitioners.

Possibly, the study which is most directly aimed at bridging the gap is about to be conducted by the Task Force on Internship. The task force has been charged by the Five Presidents with developing a simple, workable, creative internship program which will define its purposes, the responsibility of the various participants in internship activities, the great variety of activities and experiences which may comprise internship and methods and guides to internship opportunities. At the outset, the definition of internship is assumed to be very broad and hopefully will include clinical and other creative approaches to practical, real-world educational activity.

It is clear that the internship study will result in new demands on practicing architects who have the principal responsi-

bility for providing most experience opportunities for students and graduates.

The Five Presidents have also initiated a major study of the NAAB. This may result in significant adjustments and improvements in the professional development process. The study, just getting underway, will be focused on the scope of NAAB's responsibilities, the processes by which NAAB evaluates the schools and assigns visiting teams, the relationship of NAAB to its founding organizations, and the administrative and funding structures required for its mission.

The Five Presidents have the additional objectives of finding ways to a better understanding of the mixed attitudes of the organizational constituencies and improving the methods of describing the complex range of education opportunities available in the various professional schools of architecture. Preceding articles describe ASC and NCARB efforts toward the former objective, while ACSA is planning a special education study toward the latter, and others could be described.

It is possible to be optimistic. At this time, it is a fact that educators, students and practitioners are at last beginning to get it all together. But one thing is clear: The majority of practicing architects are not fully accepting their share of the responsibility. There is need for much more practitioner involvement: in advising and supporting schools of architecture; in participating in teaching; and, perhaps most importantly, in creating opportunities for students and graduates to gain field experience to complement their formal education. Those who are involved have both rewarding times and difficult times. Nonetheless, the basic responsibility cannot be shirked.

A 1973 AIA convention resolution calls in strong terms for more practitioner involvement in education. The preceding articles demonstrate the need for this.

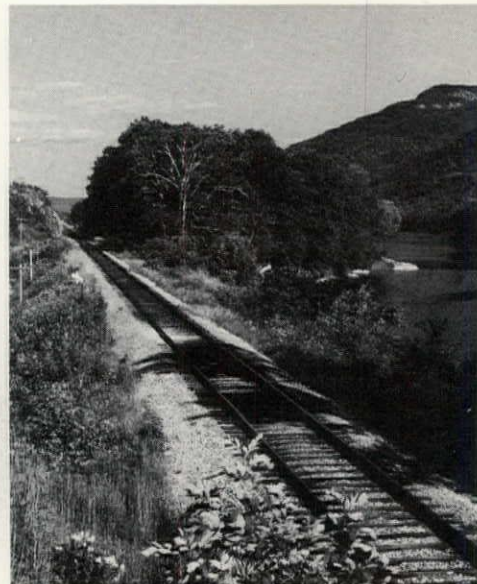
The credibility and competence of the architectural profession will depend upon an improved professional development process, and this really represents the individual architect's and the architectural firm's basic responsibility to the profession. It's your responsibility—get involved! □



# Looping Vermont by Steam

In the Green Mountain State, an architect has suggested a plan to celebrate the nation's bicentennial in 1976. It would take passengers by rail and boat in a loop around Vermont.

Robert A. Burley, AIA



Transportation has always been a major catalyst and a source of irresistible interest for Americans. From clipper ships to steamboats, from cogwheel railroads and cable cars to airplanes and skilifts, transportation has probably attracted more inventive effort and outpouring of money and energy than any other national involvement.

Everybody uses the transportation systems, and they, in turn, have been a major determinant of our lifestyles. Everything we build and nearly everything we do takes into account the dictates and potentials of our modes of transportation. For more than 200 years, transportation has been the thread that has tied us all together.

In 1876, at the midpoint of our nation's history, the American genius was evident; machines instead of wind and horses were pulling masses of people and goods. The steam engine was king, and the steam train and the steamboat had made imprints across the country. Yet, as bold as this manifestation was, it is fast fading today. The passenger train system has shrunk; the empires of riverboats and ocean liners have almost disappeared.

In and around Vermont, however, this mid-bicentennial imprint remains. Steel rails still thread their way along the lake-



shores and through the valleys; cities and villages still cluster around canopied stations. Mansard-roofed and colonnaded hotels still wait for long-departed guests to return. Fortunately, too, the waterways remain as they were long ago.

The pace of change has been increasing, but the state still retains existing, and restorable, evidence of the nation at its midpoint in history in a relatively unspoiled landscape—more, perhaps, than in any other state. Highway views have often been altered radically, but the river, canal and rail lines pass along routes that are surprisingly undisturbed.

I made a proposal to the Vermont Bicentennial Commission that at least one historic transportation loop around Vermont be restored to help celebrate the nation's bicentennial year in 1976. The

proposal involves a statewide system of trains and boats to ferry both Vermonters and visitors around Vermont, with entry points from New York State, New Hampshire and Canada. People would leave their automobiles behind for several days while they viewed lakes, mountains and farms from Victorian parlor cars and boat salons. Younger people will have the new experience of sitting in rocking chairs on porches and of walking through villages, while their elders will participate in these almost forgotten experiences.

The restoration of passenger transportation links which circle the state would give genuine incentive to the restoration of streets, buildings, stations and greens in dozens of villages and cities around Vermont.

The state is fortunate in having expertise in the matter of old transportation systems already. Much of the rolling stock exists in railroad collections, particularly in Steamtown in Bellows Falls. The museum there contains one of the largest collections in existence of steam locomotives from this country and Canada, and it offers a 26-mile tour between Bellows Falls and Chester aboard a 70-year-old steam excursion train operated by the Green Mountain Railroad.

Boats would have to be constructed new from existing plans and photographs. Here help could be obtained from the Ralph Nading Hill and Shelburne Mu-

Mr. Burley heads his own firm in Waitsfield, Vermont.



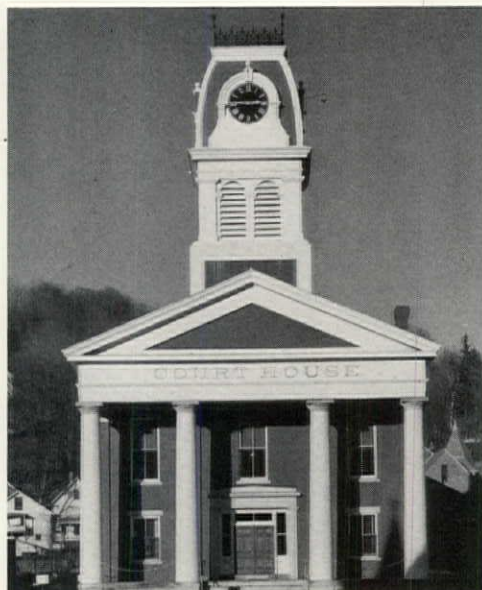




The plan takes travelers back to the days of 1876, when steam engine was king (it provides for the use of personal steam, too, on a bike). It's a history lesson that might inspire reconsideration of current travel options.



But most important, the plan is meant to preserve for future generations dozens of Vermont villages now endangered both by apathy and automobile impact.



seums. The lake boats are envisioned as 19th century steam-powered boats, and they would probably be fueled by oil rather than coal.

It has been suggested that the sidewheeler Ticonderoga, now on view at the Shelburne Museum, be launched again and placed back in service. However, it seems that the "Ti," with all of its original furnishings and equipment, is probably safer and of greater long-term value at its present dry-land museum setting.

The new boats should be constructed to meet current government regulations for passenger-carrying vessels and, rather than duplicating the Ticonderoga, offer an opportunity to reproduce some of the other sidewheeler designs. Twenty-eight steamboats, in addition to the Ticonderoga, have operated on Lake Champlain since 1808.

The plan envisions a loop in two directions, not just one-way. For the sake of both scenery and safety, travel would be by daylight. The intent is to slow people down; there should be no hurry to whip around the loop. A byproduct would be the reduction of the bicentennial crush on our highways. Frequent stops of trains and boats to admire the stations and other buildings and for picture taking and excursions would be encouraged.

There would be music on both boats and trains, and good meals would be provided. Overnight accommodations would

be available, not just at one point but in 15 to 20 places around the state. In all this return to the bygone days, use will still be made of such modern conveniences as a computer service for accommodations, tickets to events and travel reservations.

Vintage railroad cars and sidewheelers may not be a serious alternative for the future. However, as the scale of our energy and pollution problems becomes more evident—not to mention problems of nerves, noise, safety and the inhuman scale of life today—this 1876 history lesson may help us reconsider some of the modern travel options that we actually have.

The short-range goal of the plan is obvious: a full-scale history celebration by Vermont for the nation's 200th birthday. The long-range goals are equally important: preserving for future generations and centennials dozens of Vermont villages that are endangered by both apathy and automobile impact; and adding modern railroad equipment to the improved passenger facilities in the years immediately following the bicentennial to give Vermont an efficient in-state rapid transit alternative.

The Vermont Bicentennial Commission has endorsed this plan and has received assurances of cooperation from all of the railroad lines involved in the system. As planning work proceeds, the enthusiasm has grown: It has been suggested that at each station there should be bicycles—instead of cars—for rent; and that the bicycles should be returnable at any other station; a group of high schools has offered to build a Connecticut River flatboat as part of their curriculum and then to serve as guides for visitors when the boat is in operation. Bicycle paths between villages may be another goal of the transportation system for 1976; an art train or museum that would travel around the state in two or three railroad cars is also being considered. Many villages are now giving thought to restoring opera houses and planning special programs for the bicentennial year when visitors will be arriving once again at the station or the old dockhouse.

All aboard! □



## VERMONT'S HISTORIC TRANSPORTATION LOOP

### By boat:

**Windsor:** Constitution House, Main Street, Windsor House, Post Office, Precision Museum, Railroad Station, covered bridge to New Hampshire and countless other excellent buildings.

**Connecticut River:** South of Windsor the railroad crosses into New Hampshire; therefore, this section south to Steamtown is a potential riverboat trip. No dams or rapids in this section of the river. About a 25-mile trip.

**Springfield:** River landing and connection to Eureka Schoolhouse, the city and early Vermont settlements.

**Bellows Falls:** Architectural and riverside interest. This was the actual site of the first canal in this country.

### By rail:

**Rockingham:** Meeting House.

**Chester:** Station, stone houses, pleasant village and countryside.

**Ludlow:** Through the Green Mountains to view farms and scenery.

**Rutland** through Castleton and Fair Haven: Possible branch from Rutland down to Manchester and Equinox House, one of the first railroad summer resort hotels in the country. Also down to North Bennington. Restored station, mill buildings, Bennington and Old Bennington.

**Whitehall:** An entry point to the loop from New York State. Six miles by rail from Vermont border. This most interesting 19th century transportation town has a canal for its main street. Canal terminus and railroad transfer point to lake boats. Southern terminus of Lake Champlain.

### By boat:

**Lake Champlain:** North from Whitehall one-half mile with Vermont shore on the east bank. North past Benson Landing, Fort Ticonderoga, Mount Independence, Westport and Shelburne Bay.

**Burlington:** Restoration of waterfront historic district. Base for evening lake trips; transfer to railroad.

### By rail:

**Essex Junction:** Past Richmond and along the Winooski between Camel's Hump and Bolton Mountain. This is a spectacular rail route, cutting once again across the Green Mountains.

**Waterbury:** Station to be restored; crossroads for Stowe and Mad River Valleys.

**Montpelier:** State House, Pavilion Hotel and Museum. Potential historic districts. Possible trolley branch to Barre and restored opera house for performance during 1976.

**Northfield:** Important rail center with many interesting railroad buildings. Pleasant village which has taken advantage of its historic potential.

**Roxbury-Braintree Valley:** Unspoiled Vermont.

**Randolph:** Restored opera house, station and village center.

**White River Valley:** Royalton and Sharon.

**White River Junction:** Attractive station and related buildings that should be restored.

**Windsor:** Main loop completed.

## EXTENSION OF LOOP TO NORTH

### By rail:

**Norwich:** Thetford, Bradford, Wells River, McIndoe Falls along the Connecticut River Valley. Historic, architectural and scenic interest all along the way.

**St. Johnsbury:** Railroad Main Street below and



## AN HISTORIC TRANSPORTATION SYSTEM - ABOUT 1876

Old Main Street above, with operating hotel, the Athenaeum and the National History Museum. Future restoration potential and high existing interest. An alternative spur from St. Johnsbury travels north to Newport and Lake Memphremagog. St. Johnsbury and Lamoille Railroad to Hardwick, around the great Greensboro Bend near Caspian Lake.

**Wolcott:** Across farmland and through the covered railroad bridge.

**Morrisville:** Hyde Park, Johnson and Cambridge Junction, each with historic interest. Views of Mount Mansfield all along the way.

Side trip from Cambridge Junction and Jeffersonville (playhouse) up to Smuggler's Notch. North through undisturbed river valleys to Sheldon.

**St. Albans:** Important rail center.

**Swanton:** Alburg and Rouses Point—Canadian entry point.

### By boat:

**Lake Champlain:** South past Isle La Motte, North and South Hero Islands.

**Valcour Island:** Important naval battle site. Return to Burlington to complete the northern loop or continue down lake to Whitehall.



# A Guide for Development/Investment Architects

Harry A. Golemon, AIA

In recent years individual practitioners as well as The American Institute of Architects have responded to the fact that the traditional ways of practicing no longer meet all the needs of our growing and rapidly changing society. Even more significant, however, is the fact that the profession today more and more interrelates with other professions, businesses and, at times, even politics. This leads architects, and other design professionals as well, into many new and exciting endeavors. One such is in the development-investment building business, where the design professional's influence in early project decisions has generally been negligible.

Many architects now acquire ownership positions in investment projects, act as their own developers, or become key decision makers on a development team. Recognizing this trend, the Institute's Committee on Professional Consultants in 1968 began to pave the way for AIA action which would assist architects and other design professionals in becoming more meaningfully involved in the development building process.

In 1971, a task force to study the architect's potential role on the development team was appointed. That group initiated and guided the writing of *Development Building: The Team Approach* by C. W. Griffin (New York: John Wiley & Sons, Inc., 1972). This book explains the mechanics of the development building process and alerts design professionals to the promising opportunities for expanded practice inherent in the process.

Financing being a key element in development building, the AIA early this year created a task force on real estate financing, which consisted of Herbert E. Duncan Jr., AIA, chairman, and James J. Foley, FAIA. The task force was charged with preparation of a book on the subject. Contributing authors with expertise in special areas were enlisted by the editor in order to obtain the best available information pertaining to real estate financing. With the able staff assistance of Robert

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Allan Class, AIA, the task force guided the writing of *Financing Real Estate Development* (Englewood, N.J.: Aloray, Inc., 1974. Editor: Harry A. Golemon, AIA; contributing authors: Raymond L. Burroughs, AIA, Houston; David R. Dibner, AIA, Newark, New Jersey; Joseph Michael Fries, partner, Arent, Fox, Kintner, Plotkin & Kahn, Attorneys; Robert M. Gladstone, director of the board, Gladstone Associates, Economic Consultants; Maury Seldin, professor and director, Urban Development Studies, School of Business Administration, The American University, all of Washington, D.C., and Ronald S. Graybeal, president, National Real Estate Exchange, San Francisco). The book is directed and dedicated to design professionals, fledgling entrepreneurs and others interested in becoming involved in the exciting, challenging and rewarding business of development building.

Most other works on real estate are specialty books, many of them about the buying and selling of land. In contrast, *Financing Real Estate Development* is an information and how-to-do-it reference source on all aspects of financing. It covers the field comprehensively from financing dynamics to how to negotiate a mortgage loan and includes five economic case studies of real-life projects in which architects are equity participants.

*Financing dynamics:* No single factor in the building and development process is more fundamental than financing. It determines what, where, when and how much building will be accomplished. The concept of real estate financing, as used throughout this book, relates to the provision of necessary capital through an appropriate sequence of arrangements to pay for real estate projects. On a national basis the financing capital used in public, institutional and corporate projects significantly influences the nation's real estate values, the gross national product and the employment factors.

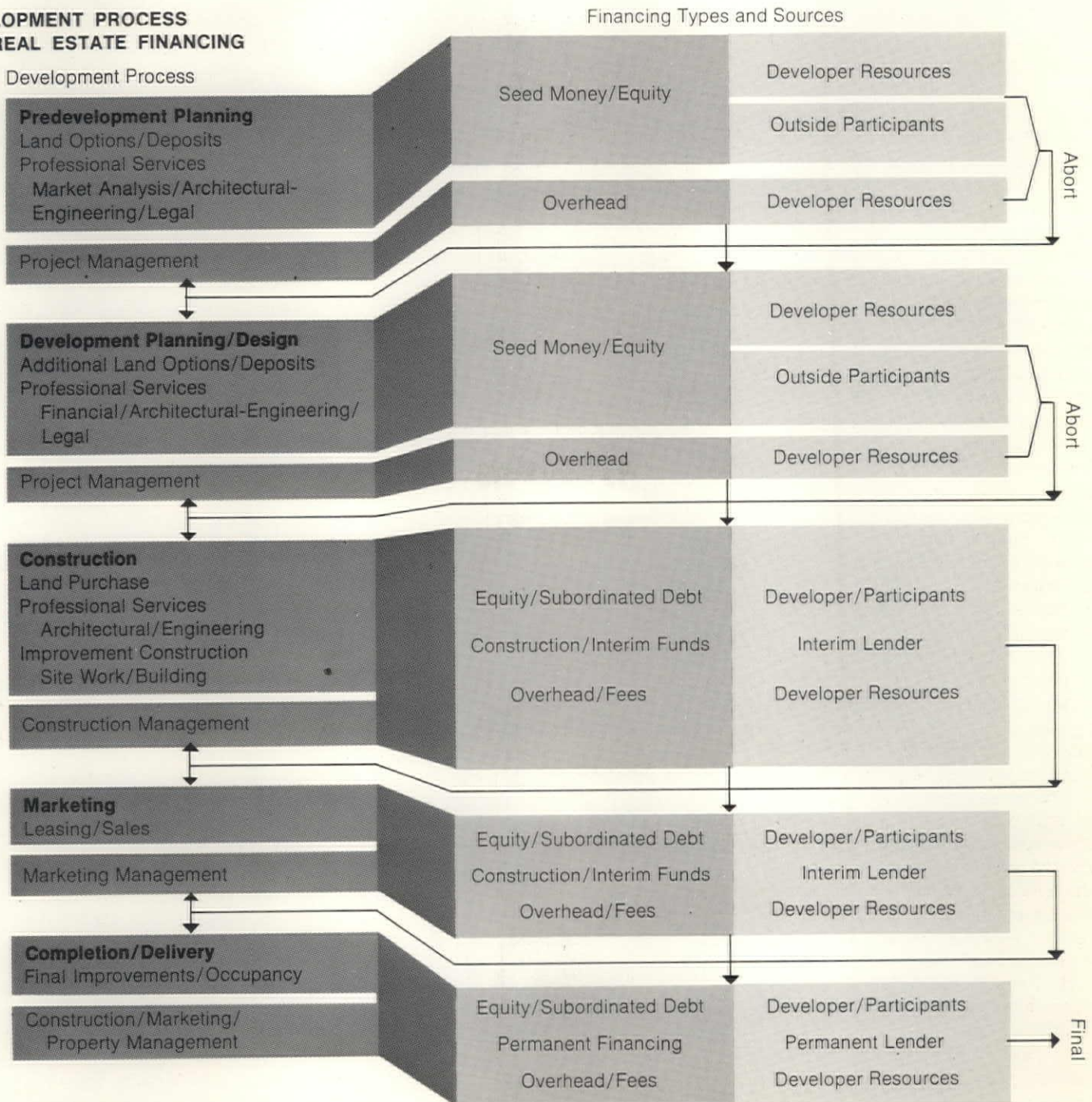
In addition, such agencies and organizations as the Governmental National Mortgage Association (GNMA) and the Federal National Mortgage Association (FNMA) play important roles in mortgage financing and have helped structure the real estate mortgage market in the



Forty percent of the Institute's membership is involved in development investment building, according to an AIA JOURNAL survey.

To the majority of these architects it is a new field. Now, full of information and how-to-do-it references, comes the Institute-sponsored book "Financing Real Estate Investment."

**DEVELOPMENT PROCESS AND REAL ESTATE FINANCING**



United States into one of the most effective financing mechanisms anywhere.

*Financing types:* All real estate development financing falls under two umbrellas: equity and debt. From under these two emerge permanent and interim financing and their relationships to project value

and project cost. Other arrangements, such as the standby commitment, gap financing and the various methods of land financing are viable ingredients of many development packages. The acquisition of the land alone makes possible several types of economic provisions such as re-

duction of front end cash commitments through joint ventures, land options, ground leases, deferred financing, land syndications, deed-and-purchase money mortgages and land contracts.

The experienced developer selects the methods that result in maximum leverage



**The volume covers the bases from financing dynamics to how to negotiate a mortgage loan; it will be available in January 1974.**

**This new field of architectural involvement holds promises not only for more wholesome development projects but also for a more interesting and rewarding practice for the design professional.**

of equity funds and maximum return on equity investment.

*Financing techniques:* It has been necessary in recent years to create new ways of financing different types of development projects, both small and large. Such techniques—sale/lease-back, sale/buy-back, wraparound mortgage, variable-rate mortgage and contingent interest—have created opportunities for the lender/investor to finance projects and in addition receive equity ownership and income participation in these same projects.

By using a variety of individual and combined techniques, the imaginative developer can create a financing package that produces maximum rate of return on an initial investment. The same possibilities hold true in refinancing existing projects.

*Financing sources:* The mortgage banker originates, sells and services mortgage loans by acting as an agent for the developer to the financial institutions, such as life insurance companies, commercial banks, savings and loan associations, mutual savings banks and real estate investment trusts. These institutions are all lenders for real estate development. Each has different policies, requirements and restrictions; some specialize in housing loans, some do not; federal and state regulations differ for different type institutions. Strengths of one institution may be weaknesses of another.

Federal government programs are also sources for grants and loans.

*Organizing for financing:* What are the financial goals? How much liability is acceptable? Is a partnership or a corporation the answer? What type of partnership or corporation is best?

Types of organizations can be evaluated and selected by each developer in order to reap the maximum economic benefits and get the minimum exposure to liability.

*Obtaining financing:* Two factors are always respected by the potential lender: professional preparation of material (the mortgage package) and a complete understanding by the developer of the lending process. Each mortgage package is different, depending upon the potential lender and the project. Generally, however, all mortgage packages contain similar information. The outlined example of one can

be helpful as a guide for any developer's submittal package. A mortgage loan application/negotiation is a detailed transaction as indicated by the eight sample negotiation letters between the developer and the lender.

*Financial risks and rewards:* Each developer, either through planning or intuition, has a risk/reward profile. Usually, the bigger the profit potential the greater the risk. The financial rewards from development can occur from value increases during preconstruction, from write-offs during construction, and from depreciation-protected income in the early phases of ownership. Each developer may strategically design his own risk/reward potential when he thoroughly understands the consequences.

*Tax consequences:* Federal tax legislation is constantly changing but broad tax objectives and opportunities may currently be obtained in real estate development. Generally, these advantages are available during development, financing, construction and ownership phases. Consequences and limitations of using tax write-offs are explained, as well as effects of mortgage and sale/lease-back financing, and tax consequences to the developer or professional service partner upon receipt of an equity interest in a real estate development.

*Computerized financial analyses:* Computer technology can be of help in analyzing potential development project economics. Rapid changes can be made to the input information, helping the developer in his decision making. The computer capability is demonstrated with an explanation of program input and analysis of the output information of a real project.

*Economic case studies:* Five case studies represent small to medium-size projects: an office building, a shopping center, a clinic/hospital, private multifamily housing and cooperative (Section 236 HUD Program) multifamily housing. All projects have architects as equity participants; all include the chronological history, the projection of direct and indirect costs, the *pro forma* income and expense, and the return on equity investment.

*The challenge:* Two major incentives motivate real estate development: return-

on-investment and tax shelter. In many instances these motivations lead to poor design, which need not and should not be the case.

Generally, large development projects are better designed than the smaller. This is probably because developers of the large projects are more experienced and sophisticated, the financial institutions involved more sensitive to quality design and more insistent that it be accomplished. However, most Americans live and work in small developments: housing, strip shopping centers, service stations, small office buildings, retail stores, discount houses and supermarkets. The design quality of projects of this nature generally can be ranked from mediocre to poor. There are exceptions, of course, and these usually stand out like gems among pebbles.

In investment projects the financial institution, the developer and the design professional share the responsibility of developing projects, whether large or small, which have a positive design impact on the community. The institution provides the money, the developer spends it, and the architect designs the product—obviously a team effort. Fortunately, or unfortunately, as the case may be, the product reflects the attitude of the total team.

Contemplate for a few moments what the environmental impact of privately financed projects might be if the institutions were more selective about how their money is spent, the developers more dedicated to balancing design quality and return-on-investment, and the design professionals better informed about the relationship of project economics and financing to project design. The result would undoubtedly be a significant change for the better in the physical environment of our cities and communities.

Considering that the US will probably rebuild itself between now and the year 2000, let us hope that these three most important parties in the development building process accept the responsibility of creating projects that result in design excellence as well as economic success. The book *Financing Real Estate Development* is a tool that can assist in accomplishing such goals. □



# Agree Cautiously!

Thomas Nathan, AIA

"A clear understanding between the architect and client as to their mutual relations and obligations is of the utmost importance." This simple sentence in *The Architect's Handbook of Professional Practice* (Washington, D.C.: The American Institute of Architects) introduces Chapter 9 on "Owner-Architect Agreements." A thorough explanation which covers the importance and need of the standard AIA owner-architect agreements is given. It should be read and understood by everyone who has the responsibility for entering into such agreements.

Certainly, many agreements have been made orally and in the form of letters or memos; no doubt many projects have been commissioned and executed without any agreement at all. As early as 1916, however, the AIA published its first standard owner-architect agreement form and has expanded, revised and refined this basic document numerous times in the intervening years, the latest edition having been issued in April 1970.

This edition is in three different formats: B131, the most commonly used form with a percentage of the construction cost forming the basis of compensation; B231, where the basis of compensation is a multiple of direct personnel expense; and B331, where the basis of compensation is a professional fee plus expense. (In the near future these will be reissued in a combined format.)

In addition to these standard formats, the Institute published recently Document B727 for "Special Services" to be used when none of the other types of agreements applies. Through their many refinements (frequently based on prior litigation or actual practice), these standard agreements have served the profession well, and there is no reason to believe that they will not continue to do so. It would seem, then, that a series of documents which originated almost 60 years ago, have been in common use and have been periodically updated and revised would satisfy and cover most situations. In most cases, they

**Mr. Nathan**, a member of the AIA Office Practice Committee, is a principal in the Memphis architectural and planning firm of Gassner Nathan Browne.

**The architect who writes his own contracts is inviting disaster.**

## Practice Aids 17

do, but in spite of the general excellence of the various documents available, for one reason or another an owner may prefer his own agreement, and the architect is given a document with which he is totally unfamiliar.

The reasons for not using the standard AIA owner-architect agreement are varied and many; some are justified, some are not. The most common deviations from the standard documents are made by municipal, state and federal governments; institutions, such as colleges and universities; and large business corporations. Any organization large enough to support a legal staff or to have legal counsel on a retainer basis will often originate its own documents and, through bureaucratic inertia or pride of authorship, will insist on their use, even if they are woefully outdated.

In some instances, such documents are excellent and kept current; others, such as Federal Housing Authority standard form 2719 are grossly inadequate and unfair. Agreements originating with the owner are often difficult to change or amend; to protect himself, the architect must be prepared to recognize his exposure and be able to convince his client of his position. For whatever reason, however, the use of non-AIA agreements seems to be on the increase, and the architect's knowledge of legal principles involving contracts becomes more critical. (I surveyed my own files for the past five years and found a 50-50 split between the AIA and non-AIA agreements; at least half of the AIA agreements were modified by the owner, the architect or both.)

Sometimes the architect finds himself in the situation where the owner requests that he prepare the agreement. The average layman's reaction to a multipage legal document drawn by the AIA for the architect's use is often one of suspicion. "I don't like these long complicated forms," the owner may say. "Just write me a letter or memo when you get a chance." This situation is most likely to occur on a smaller project, but the architect must remember that the size of the job has nothing to do with the chances of a misunderstanding or a lawsuit. Law books are full of legal actions which have resulted from

the most modest of undertakings. Writing your own contract is, of course, an invitation to potential disaster and should be avoided. This action may be compared to the attorney's designing his own office building and has approximately the same likelihood of success. The architect should insist on the use of the standard form or have his attorney draft an appropriate agreement.

For the average architect, therefore, the possibility of dealing with an unfamiliar document is fairly certain. When such a situation arises, what are the architect's options? Having just acquired a new project and/or client, the architect will be eager to indicate his willingness to cooperate, and in his enthusiasm about the project he is apt to sign immediately without more than a cursory examination of the agreement. He should, however, either present it to his attorney for scrutiny or be prepared himself to take the time to read it, analyze it and seek out potential misunderstandings and trouble spots. The former course is the recommended one, but the desire to expedite this initial step in a new relationship will usually result in the latter. When in doubt, the architect should never hesitate to consult an attorney; the expense can be worth a thousandfold in avoiding other legal fees.

In examining non-AIA owner-architect agreements, the architect should keep in mind that the basic pitfalls generally occur in one of three areas, and here he should exercise the maximum precaution. The first involves the definition of the project's scope and the services to be performed. The owner may tend to play down aspects of the project such as "minor alterations," which may, in fact, turn into time-consuming evaluations of existing conditions, suitability of mechanical or electrical systems and various alternate schemes, all of which may become essential to the proper programming and analysis of the project in its entirety. If the scope of the project is misunderstood at the outset, the architect may not be fully aware of the proper compensation clauses to cover such extra work when and if it occurs.

Another common problem is the gradual enlargement of what begins as a single building and grows into a master plan for



**Use the standard form or have an attorney draft an agreement; or take the time to study any other agreement, to analyze it and to seek out potential areas of misunderstanding.**

future related structures with all of the attendant problems and complications. The architect, essentially conscientious and anxious to render a thorough service, often finds himself unwittingly expanding the scope of a project without the proper safeguards. Graphics, interiors, special equipment, utility or handling systems and other related services should be recognized and defined as soon as possible as being in or out of the scope of the project to be undertaken. Therefore, a precise statement concerning the scope of the project, a distinction between "basic" and "additional" services and provisions for altering either should be an integral part of any agreement.

The greatest number of misunderstandings and disputes occur over the matter of compensation, and this part of the agreement should be given the closest attention. The architect, as well as the owner, should understand the basis upon which compensation will be made, and the terms should be set forth clearly. If the owner prefers the percentage of construction cost method, the architect should be sure that the construction cost is defined and that the various contingencies are covered in the event that the project is abandoned, postponed or changed radically during the development and the completion of the drawings. Because of vagueness in this area, the architect should not let himself enter into what is essentially a contingency contract, i.e., a contract which specifies or implies payment only if the project is built or the budget is met.

If a multiple of technical salaries or an hourly basis is used, the architect should be sure that a reasonable definition of "salary" is used that includes employee benefits. The AIA definition of "direct personnel expense" is excellent in this regard; if the architect agrees to anything less, he is probably short-changing himself. Employee benefits are an accepted fact of life in today's society, and all knowledgeable businessmen or contracting officers should be prepared to deal on this basis.

Another potential trouble spot in owner-drawn agreements is the inclusion of a clause which states that meeting the budget is a condition of the contract. This is

#### **CONTRACT CHECKLIST**

If a non-AIA architect-owner agreement is used, be sure that it is in writing, is properly signed and contains the following general parts:

- 1) Date
- 2) Names of parties to agreement
- 3) Definition and scope of project
- 4) Amount and method of compensation
- 5) Duties of parties
- 6) Signatures.

In addition, the following precautions should be observed:

##### **A. General:**

- 1) Signed agreement should be condition for starting work.
- 2) Provisions for extra or additional work should be incorporated into the written agreement.
- 3) The authority of party to contract for services should be verified.
- 4) The authority of individual to sign the agreement should be verified.

##### **B. Compensation:**

- 1) Compensation should be stated; do not agree to such phrases as "to be mutually agreed upon."
- 2) If basis of compensation is "lump

sum," be sure that the scope of the project is defined and allowance made for adjustment in compensation if the scope changes substantially.

3) If basis of compensation is "percentage," define the percentage of what; if the term "cost" is used, define it as well; it will vary during work progress.

4) If basis of compensation is "professional fee plus expenses," follow precaution for lump sum and be sure that expenses are defined.

5) If basis of compensation is "multiple of direct personnel expense," be sure direct personnel expense is defined and that other direct expenses are either reimbursable or paid by the owner.

6) When applicable, see that direct and indirect expenses are not confused.

7) Be sure method of payment is clearly set out and relates properly to scope of services.

8) Be sure method of payment covers the following contingencies:

- a) If project is abandoned before completion of drawings.
- b) If project is abandoned or de-

not in itself necessarily bad, but it is best avoided if possible. If it is included, the architect should be certain that it is accompanied by the proper tolerances and flexibilities, i.e., provisions for the budget to be amended should time, unforeseen conditions, changes in size or scope or other similar situations occur. And if the budget is exceeded by more than the allowable tolerance, the agreement should state what courses of action are then available to architect as well as to owner.

It is emphasized that this article is concerned primarily with work done in a "conventional" manner insofar as the traditional relationships among architect, owner and contractor are concerned. In design/build or negotiated contracts involving "guaranteed maximum" or "upset" costs, the standard contract forms do not apply, and special agreements must be drawn. Another precaution: Nonstandard agreement forms may contain provisions which are not covered by the architect's professional liability insurance. A periodic review of the exclusions in the insurance policy is a helpful reminder in this regard.

Another area regarding compensation in which the owner is likely to be unfamiliar (or unsympathetic) is that concerning the schedule of payments. The architect must make every effort to ensure that the agreement compensates him reasonably and periodically proportionately with the value of completed work. The owner has the right of approval of the work, but he should not be allowed to abuse this right by unlimited demands for resubmittals or by delaying decisions. Extra services, reimbursable expenses and any other miscellaneous costs to the project which the architect does not want to incur should be clearly defined as falling outside of his responsibilities.

Finally, that portion of the contract which addresses itself to the various duties of the parties is also an area filled with potential misunderstanding. In an owner-originated contract, there may be the tendency to minimize the duties of the owner while making those of the architect as general, wide in scope and inclusive as possible. The architect should examine very carefully exactly what his duties are



**A checklist of precautions gives the architect some basic idea of where he is going and the dangers to be avoided if he leaves the safe course of using B131.**

ferred because of: 1) change in owner's plans or schedule; 2) estimates or bids run too high; 3) owner loses sources of funds; 4) any other reason beyond the architect's control.

9) Do not agree to an indefinite or contingent payment based on owner's or contractor's action (taking title to land, securing zoning, obtaining funds, etc.).

10) Be sure compensation is collectible, i.e., party is solvent or in the case of foreign countries that funds are transferable to US banks.

11) Be sure there are provisions for additional work including unreasonable and unforeseeable time overrun of construction administration.

**C. Duties of Parties:**

1) Do not guarantee construction costs.

2) If meeting the budget is included as a condition of the contract, be sure that it is qualified as follows:

a) that it is realistic for time and place.

b) that it has some degree of latitude in its application.

c) that it is flexible to variations in the scope of the project.

d) that if exceeded, the architect

has the right to make revisions or adjustments with the owner's cooperation.

3) Do not guarantee accuracy of cost estimates.

4) Do not assume responsibility for topographic or survey information or soils reports.

5) Do not agree to provide services which you are not equipped to perform or which are not defined in the agreement.

6) Do not agree to "supervise" the construction.

7) Do not assume any responsibilities which are the contractor's.

8) Do not guarantee performance of any contractor, subcontractor or their employees.

9) Do not guarantee quality of workmanship.

10) Do not guarantee or certify to the use of funds paid to the contractor.

11) Do not agree to become liable to the owner for damages arising out of "stopping the work."

12) Do not agree to conditions in the owner-architect agreement which conflict with the General Conditions without specific stipulation.

13) Do not agree to owner's General Conditions without checking for differences with the AIA General Conditions, owner-architect agreements and owner-contractor agreements.

14) Be sure that the owner is aware of his duties as follows:

a) supplying the basic information

b) making timely decisions necessary to the proper fulfillment of the agreement

c) furnishing and paying for legal and accounting services

d) paying for all laboratory and other tests as required

e) providing information pertaining to and necessary for construction

f) abiding by all provisions as set forth in the General Conditions.

15) Do not agree to surrendering ownership of documents or the reuse of documents without appropriate safeguards and compensation.

**D. Conclusion:**

1) Use standard AIA documents whenever possible, modify them if necessary and consult an attorney when in doubt.

and should guard against agreeing to any which are clearly not in his best interest or outside his ability to perform. These run the gamut from "guaranteeing the cost" to becoming responsible for the performance of the contractors and subcontractors. In this regard, the architect should be on the lookout for omissions by the owner of duties which are his and which should be specifically included in the agreement. These include such items as furnishing the architect with the information he needs, for example a site survey; cooperating with the architect in the matter of decisions, approvals, etc.; and paying for miscellaneous testing and services which may occur before and during the construction process.

The inclusion or exclusion of normal engineering and special or other expert services should be carefully defined so that both architect and owner are in agreement concerning what services the architect provides and under what circumstances the owner supplies the necessary services. In his enthusiasm for the project, the architect may approach consultants if

he thinks that they are necessary, assuming that the owner will concur. Subsequently, however, the architect may discover that he acted hastily and without proper authority. Under these circumstances, his chances of reimbursement are diminished.

If in the final analysis the owner does impose an agreement on the architect which is less than desirable and if the architect is unsuccessful in getting it amended to his satisfaction, should he then refuse to enter into the agreement and thus run the risk of forfeiting the project? Probably not, but if the architect decides to proceed, depending upon the circumstances, he should be aware of the disadvantages in the contract and doubly aware of his vulnerability so that he will exert caution in his fulfillment of the agreement. When the architect leaves the well-traveled highways of B131 for the uncharted backroads of a bumpy and unfamiliar course, he must have a basic idea of where he is going and the dangers to be avoided. With this in mind the checklist of precautions has been developed.

If some of the items listed seem elementary or of a nit-picky nature, it must be remembered that they are grist for the legal mill. They have been the salient points in many court decisions both for and against the architect involved. Although the architect may win his case in court, he is still the loser in time, compensation, peace of mind and prestige. The architect, the owner and the profession are best served by avoiding these pitfalls altogether. □

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# Architects and Political Contributions

Joseph F. Thomas

The spectre of political contributions abuse has once again raised its head in a most incriminating manner. Recent allegations in Maryland have placed the architectural profession under severe public scrutiny. The grand jury investigation has obviously gone well beyond Baltimore County and the state of Maryland.

The Maryland probe is a culmination of a series of disclosures linking political contributions to the award of government contracts. It is a situation that often finds the architect the target of a very sophisticated form of extortion.

In January, The American Institute of Architects appointed a special task force, under the chairmanship of Ehrman B. Mitchell Jr., FAIA, to study political contributions and the award of government architectural/engineering contracts.

The task force upon commencing its study realized certain parameters and limitations within which it had to work. The initial limitation identified was the archaic method by which political campaigns are financed in the United States and the resulting propensity for wrongdoing.\* Secondly, federal law covers only elections for national office and not those for state and local positions. Since much of the abuse was found to occur within state and local governments, present or future federal law would not be totally effective in eradicating the problem.

With the realization that federal law does not apply to local and state elections and given the present manner of campaign financing the task force began weighing various solutions. One suggestion was that the Institute establish a donation ceiling for members wishing to make political contributions. The limitation would require full disclosure of the part of the membership.

This particular approach was rejected as impractical, unenforceable and possibly illegal. Although the AIA has a rea-

sonably effective procedure for enforcing its Standards of Ethical Practice, of necessity, it operates, without subpoena power, which creates the difficult evidentiary problem of proving that a particular contribution led to the award of a specific contract.

Even if such a limitation were enforceable upon the individual member, circumvention would be very easy and it would still leave the architect vulnerable to the unscrupulous politician. Our system is geared to protect individual rights and liberties. This includes the right to make political contributions. Therefore, the politician, the seeker of public office, should be the one to disclose contributions, not donors. Further, the task force felt that the architect has a right and a duty to participate fully in the political process — a right not to be abridged.

A proposed corollary to the above approach would call for the enactment of legislation within the states and municipalities prohibiting political donations by individuals or firms doing government work. This solution was given little credence by the task force for the reasons already stated: ease of circumvention, nonprotection of the architect from the politician and the infringement upon the architect's right to be involved in the political process.

The press and certain legislatures have called for competitive bidding to cure the problem of contracts being awarded in return for some form of consideration. This approach is fraught with problems. Aside from the arguments of professionalism and quality of the product, competitive bidding would tend to kill off all small firms and lead to solely giant ones. Pure competitive bidding would not result in solving the problem. As a system it is very easy to "beat." Witness bidders who come in low and then have prearranged overruns. The documentation and history of competitive bidding clearly indicate that politicians have mastered the "use" of this system of awarding contracts.

**Mr. Thomas**, an attorney, is assistant director of the Institute's Special Assessment Program and staff liaison for a task force on political contributions.

**Concerned for many years with abuses in A/E selection procedures, the AIA has developed recommendations through a special task force.**

Given the limitations of our system of financing public elections and desiring a program for immediate implementation, the task force decided upon a multilevel approach. At the heart of its recommendations, which were adopted at the September AIA Board meeting, was the idea that the selection process must be as *insulated* as possible from political pressure and as *open* as possible to public scrutiny.

Under our system of financing campaigns, only a selection method which significantly removes political influence from decision making will provide a viable solution (i.e., an open selection process in which nonpoliticians choose design professionals on the basis of proven ability and qualifications).

As an example, at the state level, an open designer-selection process could possibly work as follows:

The governor selects a predetermined number of individuals to serve upon a board which would award all state A/E contracts. The makeup would be representative of all interested parties. Professionals on the board would be chosen by the governor from a list supplied by the appropriate state societies, whose members would be confirmed by the state legislature. They would serve nonrenewable, fixed terms.

Required services would be published statewide. Architects would be requested to file information on the qualifications of their firms with the designer-selection board and to submit, for each project in which they have an interest, a letter requesting that they be considered.

The board would establish its own process for review and consideration which might include, in certain cases, interviews with selected architects and such on-the-spot evaluations of the architect's work as may be considered necessary. At the close of evaluation, the designer-selection board would select and rate, in order of preference, three firms. Then fee negotiation would begin with the highest ranked firm.

This kind of open selection process has a great deal of appeal. Not only would it diminish political influence within the selection process but it would also estab-

\*There are a number of bills before Congress that would establish public financing of elections. Clearly such legislation would solve many of the present abuses. However, it does not seem likely that such a law will be enacted in the near future.



lish the preferred method of selecting and compensating an architect in accordance with the 1972 Federal A/E Selection Law (Brooks Bill), and it would assure higher quality in public buildings. As a further benefit, the barriers to market entry for small and new firms would be significantly lowered.

The recommended multilevel approach also resulted in the clarification and strengthening of Standard 8 of the Standards of Ethical Practice. The revised standard reads:

"An architect may make contributions of service or anything of value to those endeavors which he deems worthy, but not for the purpose of securing a commission or influencing his engagement or employment.

"The architect has the right to participate in the political process, to contribute time and money to political campaigns and to attempt to influence legislation, executive decisions and appointments. However, the architect shall not contribute, or promise to contribute, either directly or indirectly, any gift or other considerations for present, past or future award of professional work."

Finally, guidelines for architects wishing to make political contributions were adopted at the AIA Board meeting in September. They are as follows:

"1. Every architect has the right to participate in the political process, to contribute his time and money to political campaigns, to attempt to influence legislation, executive decisions and appointments. However, contributing, paying, or making either directly or indirectly, any gift, or other consideration in order to secure from any individual, political party, political organization, or candidate for public office the award of professional work, is considered to be unethical conduct as set forth in Standard 8 of the Standards of Ethical Practice.

"2. Every architect making a political contribution shall do so publicly, in his own name, and as an individual citizen. (Federal law prohibits corporations from making political campaign contributions in a federal election.)

"3. Every architect has the right to refuse to contribute to any organization, political campaign, or candidate for office.

"4. An architect who believes that he has been denied professional work because of his refusal to contribute to a political activity or entity has a professional responsibility to report such circumstances to the Institute and other authorities as are appropriate.

"5. An architect who violates these recommendations and/or Standard 8 of The American Institute of Architects' Standards of Ethical Practice shall be (a) subject to disciplinary action by the Institute, and if appropriate, (b) reported to the public authorities." □

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# Memo on Fee Schedules

For many years component organizations of The American Institute of Architects have developed and published various forms of schedules to assist architects and clients in arriving at appropriate levels of compensation for architectural services. Generally, these schedules have been clearly labeled as recommended or suggested. However, they served as handy guides since they were based upon the experience of many architects practicing in the locality.

Because of increasing legal activity, both in the private sector and in the Department of Justice with regard to fee schedules published by professional organizations, the AIA began following the subject very closely in recent years. Then, in 1973, two events occurred: The first was an antitrust law suit won by a private citizen against a local bar association because of its members' adherence to its fee schedule; the second was an inquiry by the Department of Justice made to an AIA component because of its "recommended minimum fee schedule." Taken in the context of the general trend being observed by the AIA and its counsel, the following memorandum on fee schedules was sent under the signature of William L. Slayton, Hon. AIA, executive vice president of the Institute, to all AIA components:

"This communication is being sent as a result of the recommendation of legal counsel for the Institute that we bring to your attention certain developments in the federal antitrust field during the past two years.

"The Institute has for a long time counseled against the maintenance of a compensation or fee schedule which in any sense could appear to be obligatory because of mandatory language or use in a mandatory sense. It has now become clear that even schedules which are affirmatively permissive and advisory only (with the use of such terms as 'recommended' or 'suggested') may in fact be violative of the federal antitrust laws and conceivably state laws. This is because they lend themselves to adherence and thereby make possible uniformity of compensation which otherwise would not exist.

"In January of this year in the United

States District Court for the Eastern District of Virginia, a decision was made in the *Goldfarb* case (*Goldfarb v. Virginia State Bar, et al.* 355 F. Supp. 491, Eastern District of Virginia, 1973) to the general effect that professional legal services constitute 'trade' within the federal antitrust laws. The case held that so-called 'minimum fee schedules' which had been in use in Virginia violated the federal antitrust laws and were subject to injunction and to determination of damages against the defendant bar associations. The general nature of this decision is described in an editorial which appeared in the *American Bar Association Journal* of April 1973 (see AIA JOURNAL, Oct., p. 54).

"Over the past several years, the views of the US Department of Justice with reference to certain types of 'minimum fee schedules' have been made clear. This has been made particularly apparent by their proceedings against associations of real estate brokers, especially those involved in so-called multiple listing services against which the department has proceeded quite generally across the country. The department has obtained consent decrees by fairly short-term negotiation in many instances and has commenced, where necessary, injunction suits which have been quite uniformly disposed of favorably to the government.

"We have been advised that the Antitrust Division has directed inquiries during the past year to associations of lawyers in various localities in the United States, and there recently was a similar inquiry directed to one of the AIA components concerning its recommended minimum compensation schedule. This matter has been thoroughly reviewed by our legal counsel, who have suggested that we communicate directly to you in order to advise that there is strong legal opinion that certain types of so-called 'minimum fee schedules' are very possibly in violation of the law. It would be in order for any component which has a schedule in existence to have it reviewed by local legal counsel and possibly withdraw it.

"It is somewhat difficult to advise, our legal counsel tell us, specifically what is prohibited and what is permitted. However, a review of the opinion in the *Gold-*

*farb* case mentioned above should serve to assist your own legal counsel in advising you about the provisions of your fee or compensation schedule. It would appear from the opinion that not only a fee schedule which is mandatory or compulsory in any sense is prohibited, but also that any form of schedule would violate the law by the 'mere existence of an agreement which restricts competition by price fixing.' It is clear that the judge was satisfied that there was a violation if a fee schedule was of such a nature that it would be used by or adhered to by members of the bar in such a way as to tend to produce a more uniform price for legal services than would otherwise exist. He noted that "there is a significant degree of adherence to the minimum fee schedule. . . ." And, "There is no evidence that the promulgation of an advisory minimum fee schedule by the Fairfax Bar Association has affected prices adversely to customers." In other words, it seems definite that the judge was satisfied that there was a violation by reason of the mere tendency toward more uniform price, and he was not concerned with the question as to whether it was higher or lower than reasonable.

"In order to provide some guidance about methods of compensation and amounts of compensation without violating any law, we have asked counsel to indicate for us, so that you in turn can discuss the matter with your own attorneys, their views as to what criteria are applicable to compensation schedules. Their response included the following:

1. Compensation or fee schedules (whether relating to minimums, maximums or 'reasonable fees') are probably illegal if they a) are mandatory or compulsory or enforced by any sanctions; or b) are agreed upon by architects in such a way as to tend to bring about uniformity of compensation; or c) are designed to preclude or inhibit any particular method of establishing compensation.
2. Compensation or fee schedules which contain definite percentages, whether stated in figures or in graphic form and which give definite figures with the intention that the definite figures be adhered to by two or more architects in establishing their fees may well be illegal.



The subject of fee schedules, recommended or otherwise, developed by professional organizations is currently the focus of increasing interest in the Antitrust Division of the Department of Justice. The October issue of this magazine carried a reprint of a recent editorial published in the "American Bar

Association Journal" which discussed the implications of bar association fee schedules in light of antitrust law. As a result of this activity, the AIA recently sent a memorandum to all components to alert them on the subject.

3. Material such as AIA Document B551 *Statement of the Architect's Services* (June 19, 1972 printing) which describes in general the various methods by which architectural compensation can be negotiated between the owner and the architect, each operating freely and making his own individual decisions, is not believed to be illegal.
4. Utilization of fee schedules established by various governmental bodies as part of their official operation with respect to governmental procurement of architectural services is lawful.
5. In addition to the foregoing comments which apply basically to the problems relating to the federal antitrust laws, care should be taken where state antitrust laws exist to be certain that there is no violation of local law as distinguished from the federal law. It is our understanding that state antitrust laws in a form which might make them applicable to this situation exist in all US jurisdictions except Alaska, Delaware, Nevada, Oregon, Pennsylvania,

Rhode Island and West Virginia, and that Kentucky has constitutional provisions which create a somewhat ambiguous situation.

"In considering whether any action may be appropriate for a component to take with reference to withdrawing an existing schedule or to issuing some new form of generalized advice with reference to compensation, it is important that you obtain counsel from your own legal adviser. The component and its officers and other persons who may be charged with responsibility for fee or compensation schedules are subject not only to possible sanctions such as an injunction against future unlawful conduct but also may be liable for damages and criminal sanctions since the federal antitrust laws and many of the state laws are enforced as criminal statutes. It is partially because of the state restrictions that consultation with your legal counsel is so important.

"If we can be of any assistance, please contact the appropriate departments of the

Institute, and we urge you to consult directly and in depth with your own legal counsel with reference to these matters."

By coincidence, two days after the above memo was sent to all AIA components, Acting Attorney General (Antitrust Division) Bruce B. Wilson made some pertinent remarks before the US Senate Subcommittee on Representation of Citizen Interests. The title of Wilson's statement was "Minimum Schedules for Legal Fees." He said, "In reality these fee arrangements can be viewed as little more than classic cartel price fixing. As such they are per se violations of the antitrust laws." In addition, Wilson dismissed the notion that such schedules are merely suggested since they are often accompanied by the threat of disciplinary action against those who choose to undercut the suggested fees. He noted, "That the motives of the parties to a price-fixing agreement may be good or that the agreed upon price may be 'reasonable' offers no defense." □



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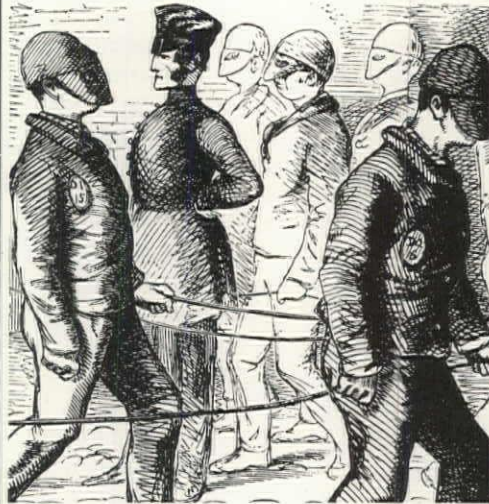
**The Human Cage: A Brief History of Prison Architecture.** Norman Johnston. New York: Walker & Co., 1973. 68 pp. \$5.95 hardbound, \$2.95 paperbound.  
**The New Red Barn: A Critical Look at the Modern American Prison.** William G. Nagel. New York: Walker & Co., 1973. 198 pp. \$12.50 hardbound, \$5.95 paperbound.

The criminal justice system, particularly the incarceration phase (usually referred to as "corrections," although it includes pretrial detention and postconviction detention or control), has become the social institution of great concern in the early 1970s. Spurred by community, campus and prison revolt, draft resisters, political assassinations and the increase in index crimes, Congress created the Law Enforcement Assistance Administration (LEAA) within the Department of Justice. This agency is now responsible for directing the flow of billions of dollars to all levels of government and many research organizations for the fight against crime.

Architects, as well as social scientists of every description, are being drawn into the correctional scene by this massive money assault on crime as they once were in education, mental health, public housing and health care. Those now involved with "correctional" reform face new challenges in an area traditionally difficult to investigate. The system's strong jurisdictional independence, impenetrable concern for security and the public's complacency for those incarcerated are in part responsible.

Society's current objectives for social control are not clear nor are the myriad underlying issues. In addition, these objectives and issues vary significantly by jurisdiction and personal perspective. Consequently, with little published, it has been difficult to follow the systemwide development of corrections, study the range of correctional philosophies and evaluate the success or failure of the treatment concepts and their architectural settings. For the interested citizen and the involved professional, these books are valuable access to a wide range of attitudes and facilities.

*The Human Cage and The New Red*



*Barn* were undertaken and financed by the American Foundation Inc., Institute of Corrections, as companion volumes. Understanding the rationale and historical development of cellular confinement as a treatment approach is an important tool for combatting the universal fear of change. Johnston's history in *The Human Cage* is a vivid reminder that the system we sometimes feel so sacrosanct was created by people, like ourselves, struggling for reform of the then existing horrors—corporal and capital punishment.

The reform effort in the early 1800s centered about very specific principles generally compatible with the new public sentiment and tolerances of the time. In Pennsylvania, correction was thought possible by removing the individual from society's influences and providing uninterrupted exposure to hard work and the Scriptures in silent, solitary confinement. In New York, hard labor in congregate silence was hoped to demonstrate the virtues of the work ethic while providing income for the state. Although these early penitentiaries failed to achieve their very clear objectives, they were more humane than dismemberment or death.

Unfortunately, the architectural concepts and penal routines for these prototype institutions have been copied, modified and mechanized by two centuries of architects and penologists in an attempt to achieve success with an infinite variety of new objectives. Johnston traces this development and corresponding rationale from "its antecedents in castle, dungeon

**Two companion volumes on our correctional systems are of import to architects, both as designers and as citizens.**

and fortress" to the "new breed of open, dispersed, minimum security facilities." His well-illustrated book clearly depicts the conceptual degeneration. A concern for solitary mortification and hard work turns to control of men in captivity.

*The New Red Barn* began with a request for LEAA to the American Foundation for a survey of new facilities and programs to determine the state of the art. The survey team included Alfred Gilbert and Francis Provost of Mitchell-Giurgola Associates; Stanton Felzer of Harry J. Woehr & Associates, psychological consultants; Jay Friedman, a doctoral student in social work; and William Nagel, who has a long and varied career in corrections, as director. As Nagel expressed their task, it was "our hope—even our expectation—that in one or several of them we would see the elements of a correctional facility that could 'safely hold' and at the same time 'correct.'"

After developing briefly, as background to their work, the numerous purposes of corrections—punishment, deterrence, education, rehabilitation, reintegration, etc.—Nagel presents the state of the art. Information gathered at over 100 institutions recently built in 26 states thoroughly describes the subjects of pretrial detention, security, housing, size, form, program, visiting, food, medicine, recreation, treatment philosophy, etc. Developed through observation, interview, photography and architectural plan reviews, the survey presents the study group's perspective, the correctional staff's perspective and, frequently, the inmates' perspective.

Exhausted and disappointed, Nagel recommends a moratorium on facility reconstruction rather than an endorsement of any efforts now being made. His conclusion to a long journey is that despite the many architectural disguises "the same old preoccupation—control" was at the heart of each facility and a prime concern for the staff. Convinced that the problem of deviant behavior does not lie exclusively within the individual as some disease or birth defect needing treatment in quarantined isolation, Nagel recommends and describes a wide range of non-



institutional alternatives. For the vast majority of offenders, these alternatives to incarceration would be available. Continued institutional control is recommended for only the repeat offender and the aggressively violent. To combat the underlying causes of crime, a "public health approach" toward solving the "problems of social and economic injustice" is recommended.

Although hesitating to do so, Nagel provides the salient parameters for designing and managing a humane jail/prison for those individuals whom society feels it can only tolerate with captivity.

Nagel and his staff have made a significant contribution to the literature of "corrections" with a comprehensive report on the architecture housing the conventional "correctional" wisdom. They have taken a courageous stand for a moratorium on construction at a time when federal priorities are shifting huge sums of money from other domestic programs to the criminal justice system, thereby creating pressures for new or replacement facilities. However, I feel that their task to survey contemporary correctional architecture, though thorough, may have slighted a greater responsibility: their candid evaluation of the correctional or treatment philosophies that spawn this new architecture. Impossible, maybe, but the volumes written analyzing quantum of data for fragile margins of success or failure by some nebulous mathematical system are not any more lucid to the citizen or the average professional, yet we are forced to endorse or participate in the treatment conspiracy. Nagel's evaluation supported by his easily conveyed values would have allowed us to share his journey in greater depth.

Several trends mentioned in the book are becoming increasingly popular with the paranoid correctional bureaucrats now sensitized by recent prison revolt. These trends are toward behavioral research/modification.

At first, this may sound like a noble goal, and it may be on certain levels, but in a free society is this in any form the proper domain of government? Facilities now exist, and more are in the planning stage at both the federal and state levels. Examples are now reaching the news media of how such facilities can abridge natural and constitutional law in the name of "medical/social/behavioral science."

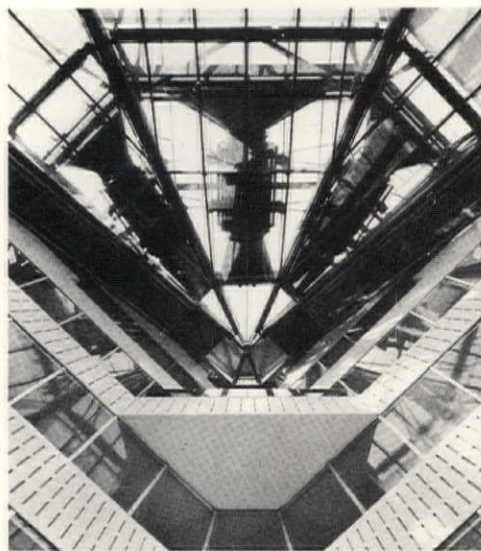
These examples approach Stanley Kubrick's *Clockwork Orange*, but there at least the treatment program was submitted to voluntarily. Facilities, such as the Patuxent Institute for Defective Delinquents in Jessup, Maryland, are run by doctors and social scientists. They have been responsible for long periods of preventive detention for anticipated deviant behavior while the staff attempts to reconstruct what they consider a more socially

acceptable citizen. These functionaries with wide discretionary power and personal bias determine a man's future, not in law and "due process." The potential development of facilities with techniques like these, that melt individuality into acceptable conformity for whoever sets the policy, is the real crisis in the future of social control.

Norman Johnston in concluding his history of prison architecture reminds architects how eagerly we used our long standing love for technology and mechanization to "brutalize and deprive of privacy, dignity and self-esteem" those whom society chose to sanction. Our hope for the future should be that we, as citizens and allied professionals, do not use tomorrow our new love for the behavioral sciences to deprive those whom society sanctions with permanent loss of themselves. Destruction of an individual, a minority opinion, a political perspective or a threatening subculture is too high a price to pay for domestic tranquility. *Roy S. Latka, architect, San Francisco*

**Architecture 2000.** Charles Jencks. New York: Praeger, 1971. 128 pp. \$7.50.

This is one book on the future that I was able to read. The author says that futurism often meets with scepticism and hostility, but this publication only aroused my enthusiasm. It is a good thought-straightener. Jencks reveals a convincing



clarity of vision as he discusses just how scientific predictions can be. He does not display any of the zealotry that makes me queasy about most predictions.

Jencks does not assume an inevitable acceleration of present trends, as such would require a closed system in which to operate. On the contrary, he says that other forces will balance a definite trend into a level of equilibrium. He has an extremely clever way with diagrams. He uses them and his words to develop the easy-to-buy concept of pulsations of trends. He gives credit for this concept to several people before him. According to this framework, the various ideas which

control actions will have their day, wane and then re-emerge in different forms.

This framework denies the inevitability of forces and, for architects, any necessities taught by architectural history. Jencks does not agree, for example, with the guilt-producing lectures of those who chide us architects for not keeping up with space technology. He believes that trends are inevitable only so long as they are unknown; otherwise they may be combatted. A prediction can produce certain forces working toward its fulfillment and, at the same time, can modify its result by stimulating counterforces. The human society by no means is a closed system. Jencks decries the prevalent beliefs that man is a victim of internal and/or external forces.

Although he does not stress it, this is indeed his point of view. We can and should have a conscious effect on the present and future. He is not for any of the one-sided trends that he could easily propagandize for his own benefit. He acknowledges instead the necessity for a balance between control and freedom, or predictability and chance.

Along with many others, Jencks foresees a rise in megastructures. However, he sees and warns about the concomitant rise in centralized bureaucratic controls. He also predicts counterforces to this trend which will cause it to subside later. These counterforces are generally placed by him in what he calls the unselfconscious tradition. This is the area in which we find few architects operating. Jencks says that it encompasses 80 percent of the world's efforts if limited to those *uninfluenced* by any architect. If defined as those not *designed* by an architect, it is 98 percent! He foresees no significant change in the magnitude of this area. Wouldn't it be grand if this *were* changed by his prediction, making us aware of it?

Suppose what would happen if instead of losing architectural graduates to other pursuits, we utilized them by their competing successfully with the nondesigners of the world. But the way would have to be greased with professional prestige and leadership. Since it is undoubtedly true, as Jencks shows, that we will have both urban sprawl and planned urbanism, the real problem will be to make both livable.

Jencks relieves me of feeling "out of it" over my lack of enthusiasm for the much heralded trends of the idea salesmen. I am happy to discover his convincing mind, and I can understand why this book has been quoted frequently. *John Blanton, AIA*

**American Space.** John Brinckerhoff Jackson. New York: Norton, 1972. 254 pp. \$2.95.

J. B. Jackson, of whom I will speak knowledgeably, is a person whom I know little about. He is (has been) a long-term resident of Santa Fe, New Mexico, and it was from there, between the years of 1952



and 1968, that he published *Landscape*, an obscure quarterly that is now defunct as far as I know. He has taught off and on at Cal Berkeley and is currently at the Harvard Carpenter Center for the Visual Arts under some sort of arrangement. Although he was graduated from Harvard as well (either in geography or landscape architecture), he has never been a "school-man" in the usual sense of the word. I think (have heard) that he is a man of independent means; he is now what we would call elderly (although I do not know his age); and he persists in driving a motorcycle. He even belongs to a motorcycle club. Once, in *Landscape*, he wrote an article on the esthetic experience of hot-rodding. From that, and evidence of people who have *actually* met him, I deduce that he is not without a mischievous streak. Maybe even cranky. But it shows in his writing, only after total immersion, as a nuance.

I totally immersed myself in 1966, my second year in architectural school. Someone in the studio was reading a current issue of *Landscape* one night and, after a clever bit of distracting, I was reading it. I was enthralled by the scope of what lay before me: a magazine expressing concern and interest in the entirety of the American landscape. *Everything*.

If I had up to then been interested in architecture because it was a tasteful marriage of "art and science," I was soon struck dumb by the presence of a single endeavor (let alone a single intellect) that could spot-weld together geography, architecture, economics, planning, pop culture, building science, sociology, morphology and history—and make it all stick. One of my more clever classmates was a master locksmith (who once made a key that would open every lock on every door in every national park), and he happened to have a key to the school library. Since *Landscape* began publication when I was 10, I had some reading to do. I finished the last issue just a half-hour before the library opened. That experience changed my whole attitude toward design and, to my surprise, as "architecture" (by itself) became less holy to me, my design work much improved.

*American Space* is a hefty environmental history of this country during the centennial years of 1865-76. If you want to even vaguely understand your country, I would suggest your reading it. When I think of all the poor freshmen across the country being force-fed some text on American history (wars, etc.) instead of reading this book, I, ummm, think about something else. Like the environmental lawyer who tells me at lunch that he's figured out the class action suit that will put us at peace again with Nature. Jackson understands what the American landscape means—and what its mutation through time portends—in a whole, round way.

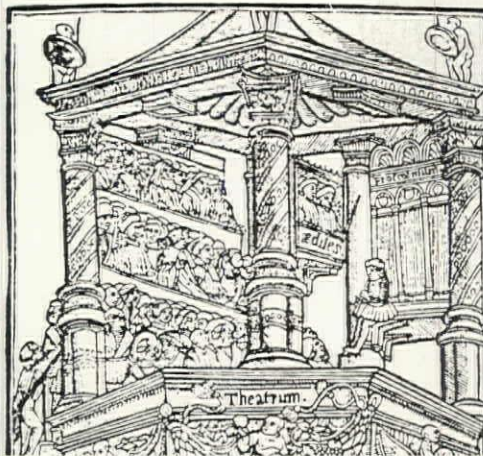
It's saddening, in a way, for reading this book makes you realize what a shrill, pimply beast the bulk of the current "environmental" movement is.

On the other hand, you may go in for amazing facts. *American Space* is full of amazing facts: The buffalo ranged to the Potomac. In 1868 the Kansas Pacific Railroad offered a day excursion ride whereupon customers paid \$10 to shoot the beasties from the car windows. By the 1890s, New England was clearcut. It's all second growth now. A great deal of the lasting damage done by the Union Army was through the casual use of the South's split-rail fencing for firewood. It virtually reduced the South's capacity for animal husbandry and agriculture back to 1776 levels for many years following the Civil War. The Chicago fire of 1871, which destroyed 2,200 acres of housing stock and which started in Mrs. O'Leary's barn, never reached the O'Leary house. It reached the houses of 98,000 other people though. Prefabricated industrialized housing was widely manufactured and shipped by rail throughout the US from 1867 on. Much of the Gold Rush architecture was shipped around the Horn, and most of the Civil War field hospitals were prefabbed.

Capitulate. Read this book. It will make you a better designer in a mysterious way that I (obviously) cannot explain. *Dave Clarke, Director, AIA Education Programs*

**Theatres: An Architectural and Cultural History.** Simon Tidworth. New York: Praeger, 1973. 224 pp. \$18.50.

Architecture and drama are sister arts, comments the author of this book. Some may question his subsequent observation, about sisters at least, when he goes on to



say that "like most sisters they fail to bring out the best in each other." Be that as it may, he has written an interesting and informative account of how the architecture of theaters and the drama unfolded in them have interacted in our long cultural history.

Tidworth, an English art specialist, starts his work with a study of Greek drama and goes on from there through the Roman inheritance, the Middle Ages, the

Renaissance and the 18th and 19th centuries on down to the experimental theaters of today. The works of such architects as Palladio, Inigo Jones, Louis Sullivan, Walter Gropius and Jorn Utzon is commented upon and illustrated with nearly 200 photographs, plans and diagrams. He finds the firm of Hardy, Holzman & Pfeiffer to be "one of the more interesting American teams." He comments that they "see their work as a series of experiments in involving an audience without incurring the charge of architectural formlessness."

Tidworth maintains that the opportunities of the theater today are boundless, "but whether it can ever aspire to the condition of ritual that the theater enjoyed in ancient Greece or the European Middle Ages (and which, it can be maintained, is enjoyed in the modern world by a great spectator sport like football) may fairly be doubted." The most crucial barrier, in Tidworth's opinion, is "that very urge to experiment, to innovate, to reflect new ideas, in which the modern theater places justification." We can't really participate in the drama, perhaps, because we are "looking for things to take our breath away."

**Archigram.** Edited by Peter Cook. New York: Praeger, 1973. 144 pp. \$12.50.

This is a compilation of articles from past issues of the magazine *Archigram*, the vehicle for the philosophy of London architects Warren Chalk, Peter Cook, Dennis Crompton, David Green, Ron Herron and Mike Webb. These are names currently known to the "in crowd" of architectural intelligentsia and the inhabitants of underground drafting rooms.

The book begins with four commercials, featuring such personalities as Peter Blake, on how important *Archigram* has been to them. After this, dare not like the book, on the threat of feeling inadequate; you get the real test with a look at what must have been the senior theses of Archigramites.

Cook states that he is preoccupied with "a search for ways out of the stagnation of the architectural scene, where the continuing *malaise* is not just with the mediocrity of the object, but, more seriously, with the self-satisfaction of the profession backing up such architecture."

This is not easy to argue with, but is what he has to offer better? The use of supertechnology to correct the errors of past technology creates an inhuman environment, and the projects presented lack human scale.

*Archigram* speaks to the issues of the day, month, year (?) and manages to be pertinent and fairly direct — if in a somewhat confused McLuhanese dialogue. The solution of these architects to the social and environmental problems of today is architecture as seen from a yellow sub-



marine. Watch out, you blue meanies of the architectural profession!

It seems the authors are trying so hard to be outrageous. Collages that attack the eye and soporific dialogue are used to illustrate the return to sophomore ideals. The rebellion-for-profit in architecture can be, and is, fun so long as it is on paper.

For *Archigram*, the challenge is to go from talking architecture to getting it built. If the authors should succeed, be prepared for an Orwellian people-propagandistic environment, and don't forget your number. *Steven H. Rosenfeld, Director, AIA Professional Programs*

### Two Brazilian Capitals: Architecture and Urbanism in Rio de Janeiro and Brasilia.

Norma Evenson. New Haven, Conn.: Yale University Press, 1973. 239 pp. \$19.50.

"The best indication of what people are is what they do, and one of the things they do is build cities," comments the author of this book, who is professor of architectural history at the University of California, Berkeley. This study of Rio de Janeiro and Brasilia and their planning and architecture is also an insight into the Brazilian people. In each of these functioning cities and symbolic capitals, says Professor Evenson, are "those qualities which both repel and attract, which inspire admiration for achievement and regret for promises unfulfilled."

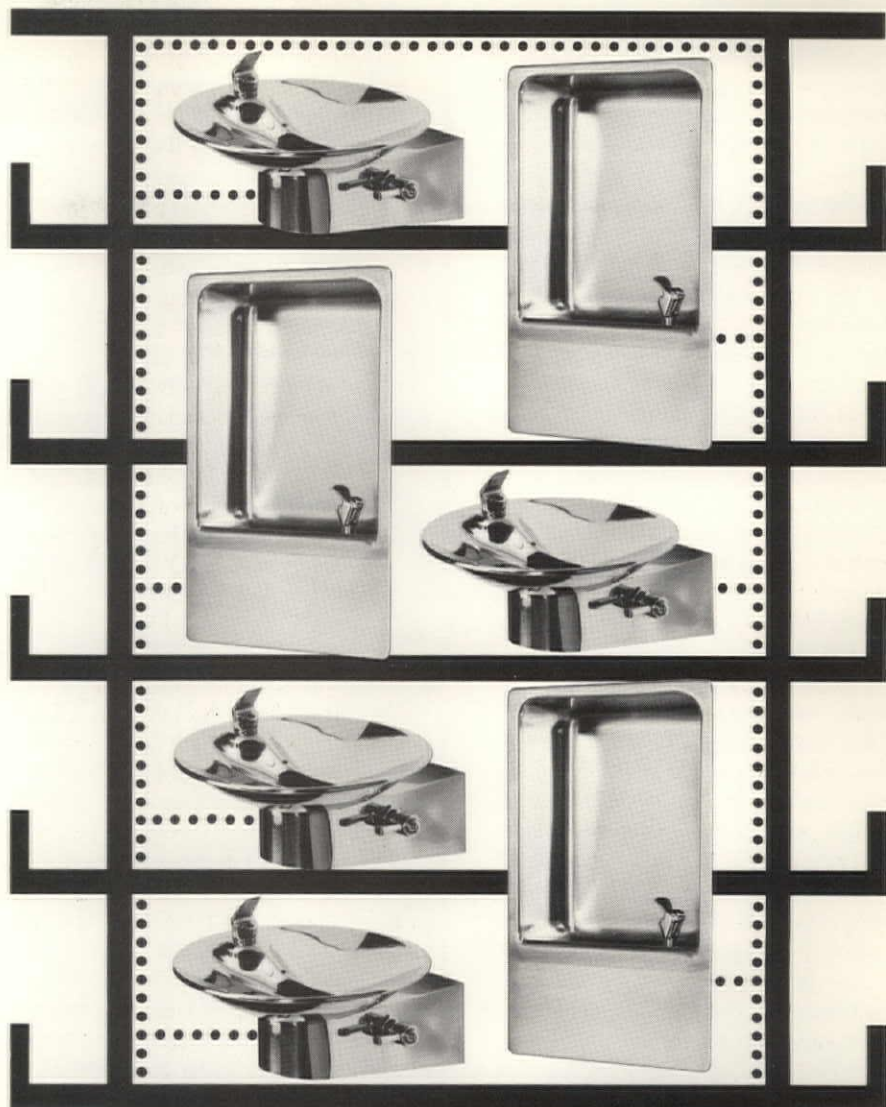
The growth of Rio is first considered. Then Brasilia is examined as the epitome of modern architecture in a country which has its own unique building conditions and architectural practices. The story of the competition for the design of this new town is particularly interesting. This is true as well of the last chapter on "Cities and Symbols." One cannot call Rio a "real city" nor Brasilia an "artificial" one, declares the author. Both are equally man-made creations, and Brasilia "takes its place as a visible witness to the flawed, aspiring human spirit." This study will afford much food for thought.

**Cathedral Architecture.** Hugh Braun. New York: Crane, Russak & Co., 1972. 272 pp. \$12.50.

The ancestry and development of the cathedrals of England are detailed in this book, whose author is a practitioner.

**Chicago On Foot: Walking Tours of Chicago's Architecture.** 2nd ed. Ira J. Bach. Chicago: J. Philip O'Hara, Inc., 1973. 370 pp. \$8.95 hardbound, \$6.95 paperbound.

The first edition of this book drew such a good response, says the author, that it was decided to update it and issue a new edition. There are 32 walks suggested which show Chicago as a great metropolis as well as a collection of neighborhoods. There is information for each building



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noted which gives its address, architects, date of erection or restoration and a brief description of its features. The book is copiously illustrated with photographs and maps. A general heading for each of the tours gives an indication of the walking time required and how to get to the particular area under consideration.

**New York City: A Photographic Portrait.**

170 prints by Victor Laredo, with captions by Thomas Reilly. New York: Dover, 1973. 137 pp. \$3.50.

Those who love the endless variety that is New York City will be interested in this book of beautiful photographs. As the publisher states, "A building takes years to construct but can be demolished in minutes. A photograph, taken in a second, can preserve the building for years. Sometimes its photographic portrait is all that endures of a great building." Most of the photographs in this volume were originally published in *New York People and Places* (Reinhold, 1964).

**Vällingby and Farsta—from Idea to Reality: The New Community Development Process in Stockholm.**

David Pass. Cambridge, Mass.: MIT Press, 1973. 190 pp. \$12.50.

The two suburbs of Stockholm—Vällingby and Farsta—are among 20 new communities that Stockholm has built since World War II. They have been praised widely, and the author of this book says that in them one sees no slums, no pollution, no garish commercial strips and that their physical planning "seems to have been almost a perfect textbook exercise."

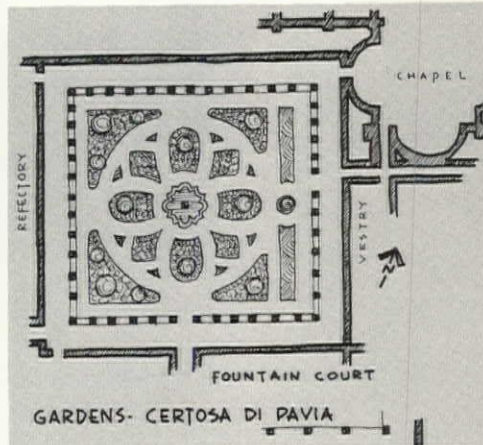
It is not their straightforward and traditional design and architecture that are remarkable, he comments, but what is noteworthy is the structure and development process—"the formal and informal rules and regulations, the way the game is played." It is this process which he examines with thoroughness.

Pass, who was project director and researcher at the Royal Institute of Technology in Stockholm at the time the book was written, sets the scene by giving a background to Stockholm's suburban planning and development policies and to the city's administrative and political framework. Then he presents an in-depth analysis of the two new communities during the period of 1945-60, concentrating on the patterns and characteristics of their development. He conducted more than 60 taped interviews with officials, financiers, developers and planners who were among those involved and uses the information he gained to show why and how the planning process developed. He examines proposals, compromises and decisions. The book is filled with schematic diagrams and other helpful documentary materials.

**A History of Landscape Architecture: The Relationship of People to Environment.**

G. B. Tobey. New York: American Elsevier Publishing Co., 1973. 305 pp. \$18.50.

Commencing with the story of the creation as recorded in Genesis, this book surveys the history of man's relationship to his environment from his very beginning to the present. A journey is made through all the kinds of spaces that man has occupied. As the preface states, this is "one man's interpretation of the history



of mankind" and the impact that man has had upon the surface features of the world.

The book will be of great interest to the student of landscape architecture. It is also of concern to the environmentalist. "While too many decisions are still being made on economic determinism alone," says the author, "we have reached a point in time where it lies within the power of coming generations to develop fully a land ethic in which man sees himself not as the dominant living species, but as a steward of all life."

**Man and His Urban Environment: A Manual of Specific Considerations for the Seventies and Beyond.**

Fred Smith. New York: Man and His Urban Environment Project, 1973. 57 pp. \$2.

This excellent publication is unfortunately mistitled. It is not a scientific or philosophical treatment of the interactions of man and his urban environment; and it is certainly not a manual of specific considerations for the '70s and beyond. Rather, the report is an intriguing glance at the potential of the new town movement in creating experiments for innovative approaches to urban problems.

As the author states, "The potential value of a new town is that it could provide us with a new slate. A concentration of people not yet burdened with vested interests, traditions and overpowering bureaucracy could conceivably make possible a city designed and built to accommodate an effective practical system. We must question why a city can't be created like any other work of man, with a long-range plan, clear objectives, a workable program for implementation and a point

at which the community would be finished, completely done."

Many urbanologists, of course, hold the opposite view. Because a new town is starting with a clean slate, they say, it is not possible to test innovative ideas to apply to existing cities; the parameters of the problems are completely different.

This publication is recommended to those interested in new community development and in particular how innovations and new communities may assist in solving some of the tougher problems of existing cities. *Michael B. Barker, Administrator, AIA Department of Environment and Design*

**Artists of the Old West.**

John C. Ewers. Enlarged ed. New York: Doubleday, 1973. 240 pp. \$22.50.

This handsome volume is filled with superb reproductions of the work of such noted American painters as Frederic Remington, Titian Peale and George Catlin. The artist-explorers who roamed the region west of the Mississippi have left us a heritage of rich paintings depicting buffaloes and their hunters, Indian traders and warriors, cowboys and gold seekers. Their paintings show the glorious landscape of great plains, broad rivers, soaring mountains and wildlife.

Selected because of their historical importance, the paintings and the lucid text will please those who are interested in the life of the Old West as well as art in America. The book was originally published in 1965. The reproductions were engraved and printed in Milan, Italy. This book will be a welcome Christmas gift.

**Perspectigraph.**

E. Lee Kennedy Jr., AIA. New York: The author, 1972. 26 pp. No price given.

Perspectigraph is a new means of executing perspective drawings. The system is coupled to a chart that "permits one to draw any perspective view, optically accurate" with simple drafting equipment.

**Victorian Taste.**

John Gloag. New York: Barnes & Noble, 1973. 175 pp. \$11.75.

This reprint of a book first published in 1962 is a description and analysis of the social aspects of architecture and industrial design from 1820 to 1900. American admirers of this articulate and versatile critic will be pleased that the book is now available in this country.

**Physical Settings and Organization Development.**

Fred I. Steele. Reading, Mass.: Addison-Wesley Publishing Co., 1973. 150 pp. \$3.50.

There's a subtle environmental crisis in our culture, says Steele, because people are usually in surroundings that are unhelpful or even detrimental to what they are trying to do. He thinks that this crisis is "much more subtle than poisoned water



or air." He wants us to take off our blinders about the impact that physical settings make on our lives and makes suggestions about how organizational decision makers can create physical environments that are more congruent with organization goals.

**Concepts in Architectural Acoustics.** M. David Egan. New York: McGraw-Hill, 1972. 200 pp. \$16.50.

There is no space occupied by man that does not have an acoustical environment. The aim of architectural acoustics, says Egan, is to make that environment best serve the functions for which it was intended. This book, aimed at the practitioner rather than the theoretician, gives the architect step-by-step procedures to follow in designing both enclosed and open plan spaces. It should be in every architect's office library.

Following an introductory chapter on the basic theory of acoustics, there are chapters on sound isolation, speech privacy, mechanical system noise and vibrations, room acoustics and sound reinforcing systems. The verbal explanations are few, the major emphasis being placed upon graphic displays of concepts, engineering data and problem-solving techniques. The author has found this approach appealing to his students at Clemson University's College of Architecture where he is an associate professor. It will be helpful as well to the practitioner "who needs comprehensive yet encapsulated treatments of the environmental sciences." Egan is also head of a consulting firm and worked for a time on the consulting staff of Bolt, Beranek & Newman, Inc., where he gained much experience in projects in architectural acoustics and noise control.

**Problems in Technical Illustration.** T. A. Thomas. New York: McGraw-Hill, 1972. 160 pp. \$3.50.

Designed to be used with the author's *Technical Illustration*, this workbook contains problems in drawing methods to help the student get a grasp of fundamental techniques. New methods for preparing 3-dimensional protractors are presented as well as scales for isometric, dimetric and trimetric drawings.

**Architectural Rendering: The Techniques of Contemporary Presentation.** 2nd ed. Albert O. Halse. New York: McGraw-Hill, 1972. 326 pp. \$18.50, AIA members; \$21.50, nonmembers.

The comprehensive information in this book on the many media and variety of techniques used in architectural rendering makes it valuable for professional delineators and students alike. The revised edition of a work first published in 1960, the book has been updated both in text and illustrative materials. The author, a member of the AIA, is associate professor of

architecture at Columbia University and a practicing architect who specializes in interior design and color consultation.

**The Fashionable Stone.** Kenneth Hudson. Park Ridge, N.J.: Noyes Press, 1972. 120 pp. \$10.

British limestones are the "fashionable stones" discussed here. The limestone belt extends across England and produces two famous building stones: Bath and Portland. Easily worked, the limestones can be found in many structures built over the centuries such as the colleges of Oxford and Cambridge, St. Paul's Cathedral, the Royal Crescent at Bath, etc.

Hudson, an industrial archeologist, considers the economics and techniques of quarrying and mining and writes interestingly of the history of limestones in building from Roman times to the 20th century.

**Elements of Structural Stability.** J. G. Croll and A. C. Walker. New York: Wiley, 1972. 223 pp. \$15.

The book is for students and engineers who are concerned about the design, construction and repair of thin structures. The authors outline the important aspects of buckling behavior and the current methodologies of nonlinear mechanics. □



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## LETTERS

**Architectural Archives:** I have just read with great interest the article by Francis D. Lethbridge, FAIA, entitled "The Honor Awards Program in Retrospect" in the May issue.

The proposal to establish an archives of American architecture is indeed a sound and timely one. Documentation of important buildings is fast disappearing. We became aware of the lack of such historic records last year and consequently formed the Northwest Architectural Archives for the collection and preservation of architectural records of all kinds. In addition, the archives serves as a comprehensive center where these documents may be studied by scholars and students interested in the architecture and history of the upper Midwest region.

If a collection such as Lethbridge has suggested were to be organized, we would be ready to offer any assistance and cooperation possible. We also strongly urge that the AIA give the most serious consideration to establishing such an archives as soon as possible and that, following its formation, sufficient moral and financial backing be given to enable the archives to carry out its program effectively and competently.

*Alan K. Lathrop*  
Curator

*Northwest Architectural Archive*  
*University of Minnesota*  
*Minneapolis*

**Tall Buildings in Japan:** It was a pleasure to read the January issue which featured "The Issue Is Tall Buildings" and related articles. I was so deeply impressed by the articles that I felt it invaluable important to share this important information with other members of our firm including the principals who are members of the Japan Architects Association, our counterpart to the AIA.

We want to translate the full texts of the articles into Japanese and publish them in our intra-office technical journal.

*Koichi Ichii, Assistant Chief*  
*Technical Information Division*  
*Nikken Sekkei Ltd.*  
*Osaka, Japan*

**Back to Simplified Procedures:** The article in the July issue on life-cycle costing has stimulated me to challenge some of the statements made. It appears to indicate that a critical attack on cost will expedite the quality of design.

Some architects are trying to bring new creativity into their projects without having a basis of good design principles. For example, some of them have designed and erected concrete structures when consideration should have been given to other surface finish materials. The use of other

materials has not been analyzed because a trend to use concrete has been initiated. A project in reinforced concrete, however, can be more costly, less satisfactory in quality and less flexible.

Computerized methods and complicated diagrams of explanation make the execution of design more troublesome and confusing and create costlier procedures.

In order to expedite the practice of architecture, it is necessary to make some reappraisals and to return to simplified procedures. It appears that the only mechanized or electronic improvement that is useful in current practice is the reproduction method of such means as Xeroxing.

I personally have attended courses and seminars on the practical application of computerized systems such as CPM and PERT until all the jargon has "come out of my ears."

To save time and money and to eliminate confusion and trouble, I recommend that we retain established and simplified methods of office procedure. If we concentrate on such matters as improving contract conditions with federal and state governments, improving relationships in the treatment of architects in government, creating a wider distribution of projects to a greater number of practitioners for the welfare of the profession and improving our own internal affairs in local AIA chapters, we will be a happier profession. Making matters more difficult is not improving practice conditions; rather it consumes untold time and retards the advancement of the profession.

*George Stephen Lewis, AIA*  
*Boston*

**August Draws Applause:** The articles by George Mann and James Diaz in your special issue on health care facilities were outstanding.

Mann's article pulled together the most significant legislation affecting hospital planning today. As such, it will be a standard reference for our students in the UCLA program in health facility architecture.

Diaz's article on physicians' office building design was also significant since it provides working details that can be used by others in the field. I commend both the author and his firm since they have maintained an attitude of sharing detailed working information with the profession for many years.

*Michael L. Bobrow, AIA*  
*Coordinator, Program in Health Facility*  
*Architecture at UCLA*  
*Los Angeles*

The AIA JOURNAL encourages expressions of opinions from its readers but reserves the right to edit for length and style. Address letters to the Editor at AIA Headquarters.

## EVENTS

**Nov. 18-24:** International Building and Construction Exhibition, Olympia, London.

**Nov. 27-29:** Building Research Institute Fall Conferences, Sheraton-Park Hotel, Washington, D.C.

**Nov. 27-29:** Annual Industrialized Building Exposition and Congress, McCormick Place, Chicago.

**Nov. 28:** Proposals due, Research on Subsystems and Systems for the Application of Solar Energy to the Heating and Cooling of Buildings. Contact: National Science Foundation, Research Applications Directorate, 1800 G St. N.W., Washington, D.C. 20550.

**Nov. 29-Dec. 1:** Associated Councils of the Arts Seminar on the Operation and Planning of Arts Centers, Manger Riverside Inn, Tampa, Fla.

**Dec. 15:** Entries due, One-Stage International Competition for the Building of a Library in Damascus, Syria. Contact: Comité de l'Aménagement de Bibliothèque Publique de Dams, Ministère des Travaux Publics et des Ressources Hydrauliques, Damascus, Syria.

**Dec. 17-24:** World Congress of Engineers and Architects, Tel-Aviv, Israel.

**Dec. 31:** Entries due, World Environment Photography Contest. Contact: United Nation World Photo Contest, Palais des Nations, CH-1211, Geneva 10, Switzerland.

**Jan. 10-12:** Grassroots Conference East, L'Enfant Plaza Hotel, Washington, D.C.

**Jan. 15:** Applications due, Grants Program on City Options. Contact: National Endowment for the Arts, Architecture + Environmental Arts Section, Washington, D.C. 20506.

**Jan. 15:** Entries due, Student Competition on Combining Energy and Design. Contact: AS Competition, Association of Student Chapters/AIA, 1735 New York Ave. N.W., Washington, D.C. 20006.

**Jan. 17-19:** Grassroots Conference West, Vacation Village, San Diego, Calif.

**Jan. 21-23:** Grassroots Conference Central, Crown Center, Kansas City, Mo.

**Jan. 22:** Nomination forms postmarked, R. S. Reynolds Memorial Award for Distinguished Architecture Using Aluminum. Contact: Maria Murray, AIA Headquarters, 1735 New York Ave. N.W., Washington, D.C. 20006.

**Jan. 31:** Entries due, National Plywood Design Awards Program. Contact: American Plywood Association, 1119 A St., Tacoma, Wash. 98401.

**Mar. 1:** Abstracts due, Papers to Be Presented at a Conference on Tall Buildings: Planning, Design and Construction, Nov. 14-15, 1974, Nashville, Tenn. Contact: Dr. Fred Beaufait, Vanderbilt University, Box 1533, Station B. Nashville, Tenn. 37235. □



**An architect can expand his practice by becoming a member of the development team.**

**The architect must be a leader of the development team.**

**True**

**False**

**If you marked those statements true or false, sign up now for the AIA Development Team Conference Feb. 8 and 9, 1974, in New Orleans, La.**

If you are one of the many architects who think the statements above are true, the AIA Development Team Conference can show you how to get in—and stay in—project development. The conference is specially structured to give appropriate information and skills to people with no experience (a "Track A" participant), some experience ("Track B"), and lots of experience ("Track C") in project development. No matter what your track, you'll get a chance to explore future business linkages and to sharpen your ability to evaluate the financial feasibility of projects.

If you think the statements are false, come to the conference anyway. You may change your mind after meeting experts in project development, working on project development deals, figuring out project feasibility, evaluating projects, and participating in other conference activities. At least you'll have given this new practice opportunity a fair chance. Not sure if the statements are true? By all means sign up. You can test your assumptions, learn new skills, get new information, same as everyone else.

A brochure describing the conference fully and containing registration information is being sent to every AIA member. Sign up as soon as you get the brochure, since registration is limited to 350 AIA members (or members of their staffs) on a first-come basis. If the brochure hasn't come to your attention, write the AIA Development Team Conference at headquarters; we'll send you one.



## GOING ON

going on from page 7

sign/build approach to enable all factors to be considered prior to embarking on a project on that basis."

The task force, however, has recognized the distinction between design/build as a generic term for single point responsibility and design/build/bid as a device by clients to place definitive controls on critical parameters of their projects. As a departure from the traditional sequence of a client retaining an architect for professional design services, and then soliciting competitive construction bids based on clearly defined design requirements, there are inherent risks and conflicts of interest resulting from a combined legal responsibility for design and construction.

Furthermore, the task force "recognizes that cost and time guarantees based on vague performance criteria may well result in a diminution of design standards and construction quality. By committing funds for construction before design requirements are well defined, there may be little or no legal recourse after deficiencies appear in a facility constructed on the basis of the wide latitude in discretion allowed to meet oftentimes inadequate criteria."

The task force points out that such factors as the uncompensated cost of preparing proposals, potential liability for construction failures, nonavailability of adequate professional liability insurance, reduction or elimination of design innovation and potential conflicts of interest must be considered.

The task force, which will make another report to the December AIA Board meeting, is chaired by David A. Pugh, FAIA, Institute vice president. Other members are Carl L. Bradley, FAIA, Robert A. Burley, AIA, and Herbert E. Duncan, AIA, directors of the East Central States, New England and Central States, respectively; and Institute staffers Arthur T. Kornblut, AIA, administrator, Professional Services, and Wayne Schiffelbein, director, Federal Agency Liaison, Government Affairs.

(An article on the design/build/bid process by Ewing H. Miller, FAIA, chairman of the AIA Committee of Architecture for Education, was published in the October AIA JOURNAL, p. 40.)

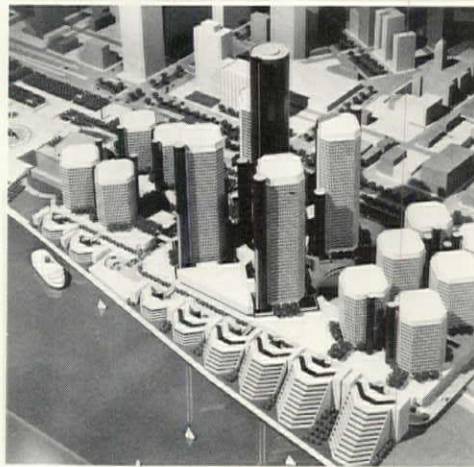
### Detroit's Renaissance Center Achieves Wide Private Sector Participation

Over the next 10 years a 33-acre site on Detroit's riverfront will be developed in stages at a cost of about \$500 million. The development, Renaissance Center, will be a third again as large as New York City's Rockefeller Center. The site was

once occupied by run-down warehouses and a railroad yard. Because the site encompasses location of the original settlement that became Detroit, it has archeological significance, and an investigation will be conducted by a team under the direction of the Detroit Historical Society.

Ground was broken in May for phase 1 of the project. The master plan is the design of John Portman, FAIA, who says that Renaissance Center will be the culmination of his people-oriented philosophy of architecture. Phase 1 of the center consists of five towers—a hotel and four office buildings—which will cover some 14 acres. The glass-walled hotel, Michigan's tallest, will contain 1,500 guest rooms. The four 39-story octagonal office towers will contain 2.29 million square feet of rentable space.

Covered walkways and bridges will connect the buildings. There will be external elevators and a six-story atrium



*Renaissance Center marks the fifth major transition for choice land along one of the world's busiest waterways.*

structure in the core of the development to serve both as hotel lobby and as the "city square." The towers will rise from a massive landscaped podium structure positioned over the streets crossing the site. It will contain shops, restaurants and entertainment facilities.

It is anticipated that 240 apartment and condominium units overlooking the river will be built concurrently with the commercial structures. Estimated cost for the first phase of Renaissance Center is \$235 million. Phases 2 and 3 of construction will include 10 office buildings and an expansion of the podium structure and more apartment and condominium units.

Last year General Motors Corporation and Ford Motor Company invested \$6 million each in phase 1 of the project, and in less than four weeks two-thirds of the \$35 million equity capital had been raised. The land for phase 1 was made available by Ford at cost. In May of this year Henry Ford II announced that investments by 47 Detroit-oriented companies totaled more than \$33 million in

equity capital. The Renaissance Center Partnership is said to be the largest investment group ever assembled for a major redevelopment project. The project is supervised by the Detroit Downtown Development Corp., a subsidiary of Ford Motor Land Development Corp. Ford has bought and will hold the land for the second and third phases and will make it available to the partnership at cost.

### National Competition Is Proposed To Redesign Future Federal City

Legislation has been introduced on Capitol Hill which would establish a national competition to redesign L'Enfant's original 1792 plan for Washington, D.C., with \$250,000 going to the first place winner. The bill, prepared by Congressman Joel T. Broyhill (R.Va.), calls for a total of \$335,000 in cash tax-free awards to be shared by three participants.

The top five designs and models would be displayed in the nation's capital during the 1976 bicentennial celebration. The final grand scheme depicting the Federal City in the year 2076 would be conceived by the National Capital Planning Commission from a composite design of all of the best features of the winning entries. The commission also would have overall supervision of the project, for which a budget exceeding \$2 million has been proposed.

Broyhill's legislation provides for all to compete across the nation, whether student, professional or an architectural or planning firm. The winners would be selected by 12 jurors: four to be appointed by the House, four by the Senate and four by the President. At least two of the Presidential appointees would be local residents.

The Congressman pointed out that "an important part of this plan is to encourage and solicit new and innovative designs which would guide the planners and development of the nation's capital through the next 100 years. It is also hoped that the resulting new ideas generated by this project would be applicable to other cities in their continuing search for urban form and efficient functions."

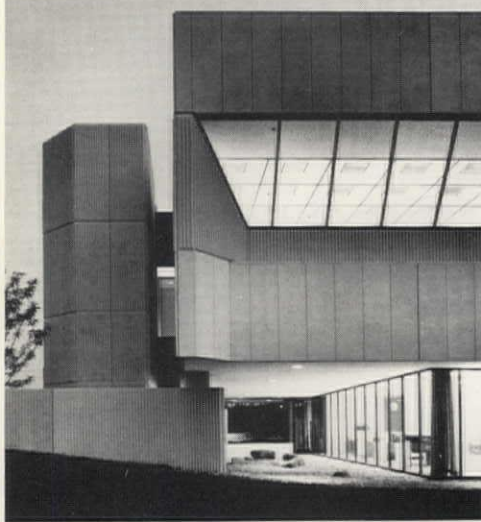
### 'Overall Excellence' Is Jury Comment For Entries in PCI Awards Program

During its annual convention held in Chicago in September, the Prestressed Concrete Institute announced the winners in its 1973 awards program. Chosen were an airport complex, a single family residence, a parking structure, two office buildings, a school, a religious complex, a utilities plant, a municipal center, a public housing project, seven bridges and a pedestrian overpass. The 17 winning architects and engineers received their awards in special ceremonies.

"The large number of winners," said S. Scott Ferebee, FAIA, president of the



AIA and chairman of the jury, "reflects the overall excellence of the entries. . . . This speaks well of the precast prestressed concrete industry." Other jurors were MacDonald G. Becket, AIA; John E. Rinne, president of the American Society of Civil Engineers; C.F.T. Rounthwaite, president of the Royal Architectural Institute of Canada; James F. Shivler, president of the National Society of Profes-



Variety of winners is shown by an airlines reservation center (upper left); a residence (lower left); a convention/cultural center (upper right); and a law building (lower right).

sional Engineers; and W. Jack Wilkes, chief, Bridge Division, Federal Highway Administration.

The seven winning bridges are located in various parts of this country and Canada. Other winning structures are:

- Atlanta Steam Heat Generating Plant, Atlanta. Architect and engineer: Lockwood Greene Engineers, Inc.
- Christian Science Church Center, Boston. Architect: I.M. Pei & Partners; Araldo Cossutta, associated architects.
- Dallas/Fort Worth Airport. Architects, terminal complex: joint venture of Hellmuth, Obata & Kassabaum, Inc., and Brodsky, Hopf & Adler; Harrell & Hamilton, Preston M. Geren Jr., associated architects. Architects, control tower: Welton Becket & Associates.
- Hancock Place Garage, Boston. Archi-

tect and engineer, co-principals in design: Nichols, Norton & Zaldastani, Inc./I.M. Pei & Partners.

- The Law Building, Greeley, Colo. Architect: Larry E. Steel, AIA.
- Mount Royal College, Calgary, Alberta, Canada. Architect and engineer: Stevenson, Raines, Barrett, Hutton, Seton & Partners.
- Operation Breakthrough, Macon, Ga. Architect: Keyes, Lethbridge & Condon; Sulton & Campbell, associated architects.
- SCOPE/Convention and Cultural Center, Norfolk, Va. Architect: Williams & Tazewell & Associates, Inc.
- Syd Solomon residence, Sarasota, Fla. Architect: Gene Leedy.
- United Airlines Regional Reservation Center, Dearborn, Mich. Architect: Rossetti Associates Inc.

### Parameters of Construction Management Are Spelled Out in New AIA Document

A Standard Form of Agreement Between Owner and Construction Manager, which has been in the development process for nearly two years, is scheduled for publication by December.

Approved by the AIA Board at its September meeting, the form (B801) is a professional service agreement which closely parallels the owner-architect agreement with only minor overlap. The construction management agreement form provides the architect with a contract which he can employ if he chooses to offer this service, or one that he can comfortably recommend to a client for use when a third party furnishes this service.

The primary services rendered cover scheduling, cost control and the coordination of contractors on the construction site. The CM can provide general conditions items as a reimbursable expense.

### Engineering Firm Invites Correspondence About Lighting Design and Installation

The consulting engineering firm of Ross & Baruzzini, Inc., in St. Louis, has a contract from the General Services Administration which will lead to recommendations to providing effective lighting while minimizing energy usage.

The study has been underway for four months and has included surveys of existing lighting conditions in selected federal office buildings and courthouses. A report on the conditions found has been made to GSA as well as a second one which covers the state of the art and makes projection for future developments. The next phase will result in a report to GSA for revising existing lighting specifications and design criteria as may be appropriate.

The consulting engineers are interested in corresponding or meeting with any person who is concerned with energy economizing techniques or equipment related to lighting design and installation. Correspondence may be addressed to Ross & Baruzzini, Inc., 7912 Bonhomme Ave., St. Louis, Mo. 63105.

### Standards for Conservation of Energy Requested by State Building Officials

It is estimated that one-third of all energy consumed in this country is used in buildings and that about 30 to 50 percent of this is wasted. Conservation measures could extend existing supplies of energy now and in the future to control the ever-increasing demand and could produce savings worth billions of dollars.

Toward this end, the National Conference of States on Building Codes and Standards has requested the National Bureau of Standards to develop an interim standard for energy conservation in buildings. Aided by a task force comprised of the conference, the AIA, the American Society of Heating, Refrigerating and Air



Conditioning Engineers and the Consulting Engineers Council, personnel of the NBS Center for Building Technology will prepare a draft interim standard by early 1974.

The conference, an organization which represents all 50 states, has been increasingly concerned over the lack of standard practices needed to conserve energy in buildings. The objective of the proposed standard is to bring consideration for energy conservation into the design process for building shapes and orientation, insulation, fenestration and mechanical and electrical systems. A workshop to discuss approaches concerning the standard and its implementation will be held at NBS this month.

Despite the fact that scattered energy shortages throughout the US have emphasized the need to conserve energy in building practices, there are no present standard guidelines for energy conservation in buildings.

### **Regional Center for Building Industry Aids Professionals in Philadelphia**

John W. Wade, AIA, in the January 1972 AIA JOURNAL called for an institution to be established for the design professions where there would be easy access to information and a wide range of services for the professional. The Center for Planning, Design and Construction, located in the Architects Building in Philadelphia, is answering the challenge on a regional basis.

Formed by the Philadelphia Chapter AIA in collaboration with other organizations, the center offers its membership such benefits as a special library, product information, product demonstrations, referral and reference services, computer services, the conduct and administration of research programs and educational workshops. Although the center says that its projects, programs and services to benefit both member organizations and the public "are still in their embryonic state," it has survived its first year and has many plans for the future. It aims "to offer to the nation an example of what a regional service center for the building industry can be."

Present members of the center include the Philadelphia Chapter AIA, the American Institute of Planners, the American Society of Landscape Architects, the General Building Contractors Association, the T-Square Atelier, the Construction Specifications Institute, the American Institute of Interior Designers, the Electrical Association of Philadelphia and the Producers' Council, Inc. It is actively seeking membership by all organizations in the Delaware Valley which are concerned with the built environment.

More information about the center may be obtained by sending inquiries to 117 S. 17th St., Philadelphia, Pa. 19103.

### **Louisville's New River City Mall Is Called 'A Place for People'**

Louisville, Kentucky, is out to prove that inner city malls are beneficial to both business and people. The city's new River City Mall, dedicated recently, is the spine of the retail activities in the downtown. It is located on Fourth Street, running from Liberty Street, three blocks from the Ohio River, to Broadway.

The mall is about 2,500 feet long and averages 60 feet in width. It is paved with brick and textured concrete; trees, plantings, sculpture, reflecting pools, play areas for children and canopied shelters are



*Louisville claims the third largest pedestrian mall in the United States.*

scattered throughout. At a recent Bluegrass Festival more than 3,000 people jammed in one block caused sales to soar by 20 percent.

River City Mall, originally recommended by Victor Gruen Associates in an overall plan for the two-mile-square center city, is the design of Ryan Associated Architects and landscape planners Johnson, Johnson & Roy. It was built at a cost of about \$1.7 million to be financed by tax-free municipal bonds.

### **Enhancement of a Community's Setting Is Focus of 'City Options' Grants**

Last year the National Endowment for the Arts initiated a program whose aim was to help solve this country's urban problems. The first theme on "City Edges" was concerned with urban boundary conditions. This year's theme is "City Options," and the focus will be upon those special settings within a city that provide distinctive character and identity.

The Endowment is now accepting applications from individual and nonprofit

organizations for the new grants program. The deadline for receipt of applications is January 15. All grants except those to individuals are made on a matching basis. Grants to individuals will not exceed \$10,000 in most cases. Professional offices are not eligible for grants, but applications may be submitted by state and local governmental entities, universities or groups that possess tax-exempt, non-profit status. Such grants will not exceed \$50,000.

The aim of the program is "to foster those qualities that humanize the urban setting in communities of all sizes. A city option may be a plan to preserve the charm or integrity of a city's past, or a study of something new, involving a unique community attribute as yet unexplored; it may concentrate on a single detail within an urban network, or it may encompass the network itself. Objects, amenities, public spaces, design awareness programs, graphic information systems, neighborhood character; any of these could form the basis for a city option."

Application forms may be obtained from City Options, Architecture + Environmental Arts, National Endowment for the Arts, Washington, D.C. 20506.

### **Long Hair Subject of Dispute; Firm to Undergo Full-Scale Trial**

Before a firm tells an employee how long to wear his hair, it had better look at what's happening to an engineering/surveying firm which in 1971 told its all-male field employees to keep their hair short enough to miss the shirt collar.

This advice, given in a recent issue of *PEPP Practice News* (Professional Engineers in Private Practice), is a commentary on long hair styles. The firm in question told its personnel to wear respectable and reasonably clean work clothes, to keep the hair short enough and combed out of the face and to be clean-shaven or else have the sideburns, goatees, etc., neatly trimmed. When some of the men refused to comply, they were fired.

The affected employees then brought action against the firm alleging sex discrimination in violation of the Civil Rights Act of 1964. They claimed that females were given more privileges with regard to hair styles.

The US District Court, District of Maryland, held that summary judgment by the firm was not warranted. Now the firm must undergo a full-scale trial and the possibility of subsequent appeals, PEPP reports.

### **Nearly 1,500 Architects in Government Listed in New Institute Publication**

The first listing of architects employed by federal, state and local governmental bodies has been prepared by the Federal



Agency Liaison division of the AIA Department of Government Affairs. Titled *Architects in Government Roster*, it contains the names and business addresses of nearly 1,500 architects.

The roster will be updated in the future, and any architect employed in government whose name is not listed is urged to let the Institute know.

The book, which costs \$3, may be obtained from the Order Fulfillment Department, AIA Headquarters, 1735 New York Ave. N.W., Washington, D.C. 20006.

#### New 'Ecological' Building Material Used in Picnic Pavilion for Denver

A picnic pavilion, whose panels are a combination of 14 colors and textures selected to blend with the environment, was officially opened in Denver recently. It was presented to the city as a gift from the Glass Container Manufacturers Institute, which built it as a demonstration project.

The pavilion is made of 1,534 panels of a new construction material called Thixite, made from crushed waste glass, building rubble and small amounts of clay and dye. The material was developed by the Colorado School of Mines Research Institute in association with GCM. The pavilion was built "to demonstrate the practicality of the new 'ecological' building material and to provide experience in

manufacturing substantial volume," GCM explains.

The open air structure, designed by Maxwell Saul, AIA, of Denver, is 36 feet



*Pavilion that ecology built is offering Denverites a new picnic spot.*

long and 27 feet wide. It overlooks a meadow and lake in Washington Park. Research, development and construction costs are estimated at \$80,000.

The architect explains that Thixite was used as both supporting and decorative members of the picnic pavilion; the only non-Thixite materials are two steel roof girders, steel roof supports and some cement blocks used in the roof pillars. GCM is now studying long-range plans to introduce Thixite to the construction industry.

#### Five Architects Receive Top Honors In Red Cedar/AIA Awards Program

The Red Cedar Shingle & Handsplit Shake Bureau and the AIA sponsor an annual architectural awards program to honor architects or projects which have demonstrated design excellence and significant functional or esthetic uses of cedar shingles or shakes. There were 252 final entries in the 1973 program from which the jury selected five projects for first awards and 16 for merit awards in five of the eight entry categories.

First award recipients are:

- John Hackler & Co. for the Pierson Hills low cost housing development in Peoria, Ill. (residential/multifamily category)
- Leonard Veitzer, AIA, for Collwood Townhouse Apartments in San Diego (residential/multifamily)
- Gary L. Michael, AIA, for the Zach residence and studio in Elmira, Ore. (residential/single family)
- Walz-MacLeod for the Johnston residence in Muir Beach, Calif. (vacation homes)
- Rowland-Miller Associates for the Hall residence at Sea Ranch, Calif. (vacation homes).

Awards of merit in the residential/multifamily category went to William Kessler & Associates, Inc., for public housing in Wayne, Mich.; Bissell/August

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Associates for the 60-01 Apartments in Redmond, Wash.; and Bulkley, Sazevich & Associates for Friendship Village, San Francisco.

Three merit awards were presented also in the residential/single family category to Alfredo De Vido, AIA, for Michel house, Southhold, N.Y.; Bull/Field/Volkman/Stockwell for a California residence; and Bahri & Associates for the Bahri residence in Putnam Valley, N.Y.

There were two merit awards in the vacation homes category. The winners are Venturi & Rauch (with the assistance of Terry Vaughn; project architect Christopher Holland) for the Trubek and Wislocki houses in Nantucket Island, Mass.; and Rodney Wright, AIA, for Hawkweed farm in Osseo, Wis.

One merit award was presented in the interiors category, the winner being Oda/McCarty Architects, for the McCarty residence in Hilo, Hawaii.

Finally, seven awards were given in the commercial/institutional category as follows: Aotani & Oka Architects, Inc., Interisland Terminal, Ke-Ahole, Kailua, Kona, Hawaii; Boyle Engineering Corp., San Diego Zoo skyfari cable lift (John P. Barbarino, AIA, project engineer); Anderson Notter Associates, Brockton Art Center-Fuller Memorial, Brockton, Mass.; Peter Hemingway, architect, Central Pentecostal Tabernacle, Edmonton, Alberta, Canada; Robinson & Mills, Borel's Restaurant, San Mateo, Calif.; Calvin/Gorasht Architects, Lake Wilderness Park/waterfront development, Maple Valley, Wash.; and Russell Gibson von Dohlen, AIA, Church of St. Peter Claver, West Hartford, Conn.

Chairman of the jury was Clovis Heim-sath, AIA, Houston. Serving with him were Richard Foster, AIA, Greenwich, Conn., and Saul Zaik, FAIA, Portland, Ore.

#### **Air Rights Used for Government Center, City Hall Will Span Federal Freeway**

Fall River, Mass., saw its original city hall demolished to accommodate federal highway I-195. It had been situated in the heart of the city for 110 years. Now the city has broken ground for a new municipal government center which will span the sixlane highway. The \$6.5 million complex will contain a six-story administration building and a connecting two-story city council unit.

The construction project climaxes 10 years of planning, and sometimes frustration, to overcome obstacles inherent in the air rights concept and to arrive at an economically feasible plan. The new city hall is the design of Continental Engineering Corporation of Fall River. Twelve huge trusses will be erected over the highway to support the complex. The tunnel formed by the construction will be 580 feet long, and its 290 fixtures will produce

more light in the tunnel than is found in the average school classroom.

The buildings will be in a plazalike setting 10 feet above local street level. The main building will have 115,000 square feet of floor space. An exhibit area will be provided in the main entrance lobby. The two-story City Council Building will be connected to the main structure by an enclosed pedestrian bridge. This unit will



*Precast concrete and reflective glass make up government center's exterior over freeway.*

have 10,000 square feet of space. The bridge itself will contain staff offices.

Fall River's Mayor Wilfred C. Driscoll hailed the project as one that will reunite the downtown area. He said that it is only the beginning of a massive rejuvenation of the downtown. New construction amounting to about \$70 million is planned in the 32-acre core of the city.

#### **New Program by Council on the Arts Will Enhance Community Environment**

Is the environment an art form? Can a whole community be considered as an artist? The New York State Council on the Arts believes that the answers to both questions is affirmative and has initiated a new program called "Architecture and Environmental Arts" to help communities throughout the state enhance their neighborhoods.

"When an urban or rural community establishes new uses for old, abandoned structures or prevents a highway from tearing through a beautiful cemetery or plants and cares for trees . . . these are highly creative activities which properly fall within the province of the arts," says Eric Larrabee, executive director of the council.

In its first five months of operation, the program has committed nearly \$237,000 to 32 organizations. One project will plan for architectural and site restoration of six pre-1825 buildings to counter a threat by highway and strip development. Another will train low income youths to care for newly planted trees and teach them about the urban environment. Other projects are

documentary in nature. For example, one will develop a library of slides of city and state cast iron buildings.

Constance Eiseman, director of the program, says that the aim is to make grassroots organizations their own experts in community enhancement. Larrabee comments that the program is a reaffirmation of the belief that art is a part of everything else.

#### **Young Professionals Invited to Enter Competition for a Health Care Center**

A competition for a hypothetical neighborhood health care center is being sponsored by the National Institute of Architectural Education with the support of the New York Chapter AIA's Hospitals and Health Committee. The program offers the young architectural professional the opportunity to probe a basic and important contemporary design problem. It is open to all persons in the architectural field who are under 35 years of age on January 1 and who are not enrolled in a full-time architectural academic program.

The competition, called the Hiron's Prize, offers \$1,500 for first place and \$500 for second. The entry may be completed any time between November 1 and April 1. The deadline for submitting entries is April 1. Entrants will be judged by a joint NIAE and AIA jury in May; winners will be published nationally.

A copy of the program may be obtained from Byron Bell, chairman, Committee on Scholarships and Awards, NIAE, 20 W. 40th St., New York, N.Y. 10018.

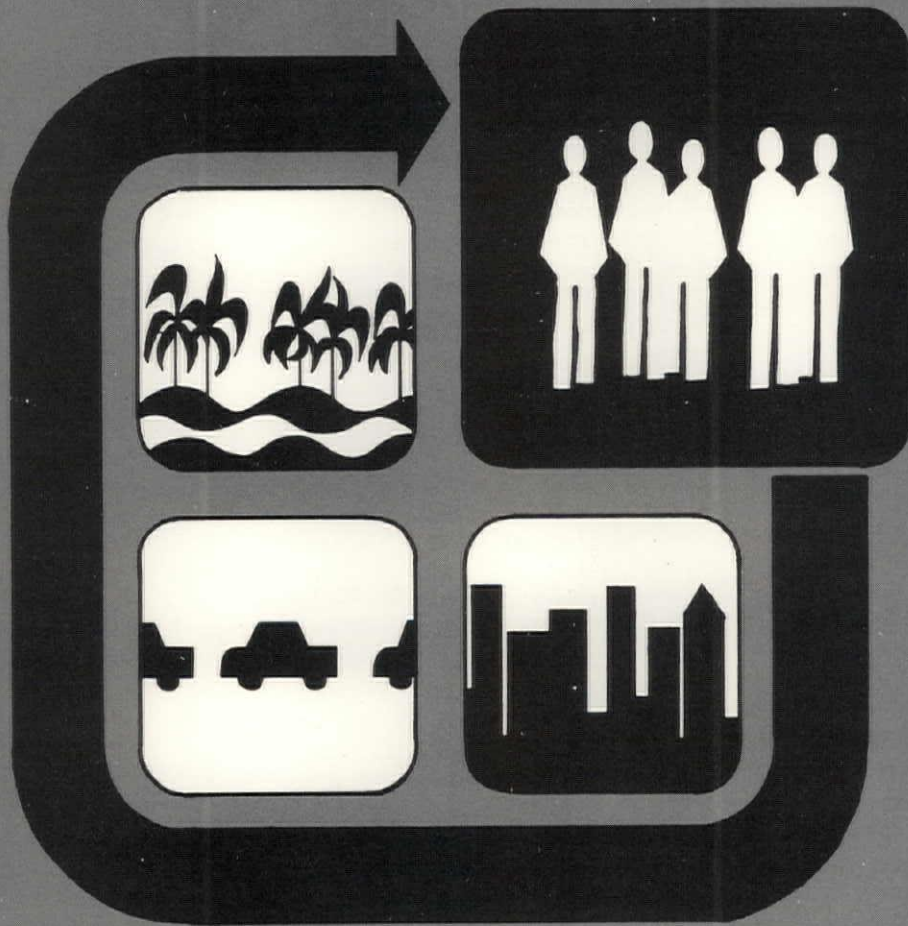
#### **Building Team Conference Goes Local, Will Move to Grassroots Level in 1974**

Over the past three years, the Building Team Conference has been presented at the national level, and meetings were held in Detroit, Houston and Chicago. The Producers' Council, Inc., administrator of each of the successful sessions, has now shifted the 1974 conference to the grassroots level. *continued on page 60*



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The council will work in conjunction with its 51 chapters, and meetings will take place across the nation throughout the 1973-74 program year. Subjects to be considered will include construction management, value analysis, legal liability, project financing, etc. There also will be "problem solving" programs in such areas as fire safety, energy conservation and building security and maintenance. Audiences will include architects, engineers, contractors, plant administrators, owners and government officials.

John R. Baldwin, council president, comments that "now is the time to bring . . . vital information to a broader cross-section of the industry . . . to more individuals within the larger firms . . . to medium size . . . and smaller firms." It is anticipated that a national conference will be held in 1975.

### Architecture's Professional Growth Will Be Revealed in Latrobe Papers

The Maryland Historical Society has received a \$140,000 bicentennial grant from the National Endowment for the Humanities to support the next two years' work of an editing and publishing project on the papers of Benjamin Henry Latrobe. The papers, drawings and paintings of Latrobe, who is called the father of professional architecture in America, constitute one of the finest extant literary and visual descriptions of the young American Republic.

Publication plans call for a microfilm edition of all Latrobe materials to be completed early in 1974. Yale University Press will publish Latrobe "Virginia Journals" and a portfolio of his watercolors and sketches in 1975.

The major Latrobe collection, at the Maryland Historical Society, includes over 30 architectural drawings; 23 journals in which he recorded his observations from 1796 to 1820; 14 sketchbooks; and 19 volumes of correspondence, containing over 5,000 letters written by Latrobe. Only portions of this material have been published previously.

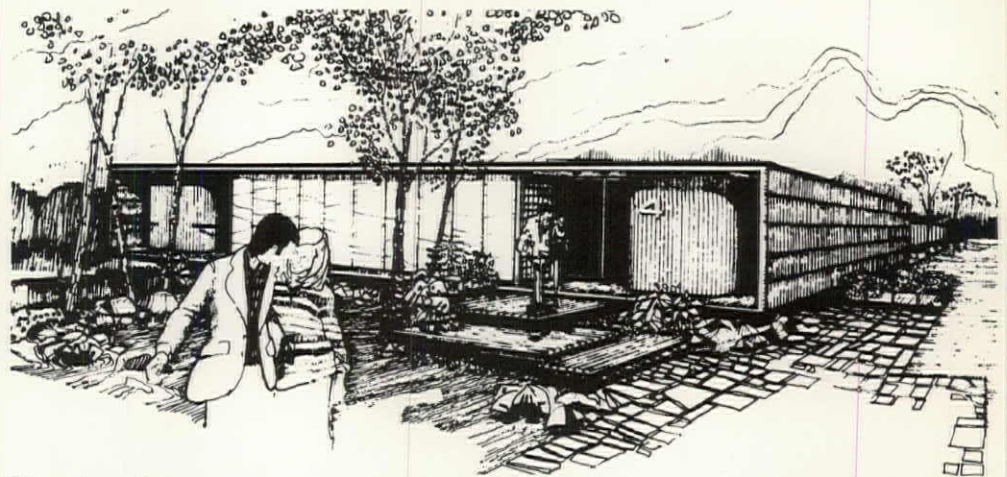
The entire editing and publishing project will take eight years. Editor in chief is Edward C. Carter II, a professor of American history at the Catholic University in Washington, D.C. The publication of the papers "will provide the foundation for the study of the growth of professional architecture in America."

### Mobile Homes Awards Program Doubles Entries in Second Year of Operation

Robert L. Turner, a Cleveland industrial designer, is the first prize winner in the second annual design awards program for Transhelter products sponsored by the Reynolds Metals Co. The jury praised the mobile home for its "innovative use of textured aluminum siding."

Second prize winner is Los Angeles

architect Uri Hung. The third place award is a joint entry submitted by Duane A. Kell and Craig E. Rafferty of St. Paul, Minn. Fourth place goes to Vijay Kale of Lefrak City, N.Y., and fifth place to Ralph Stivison of Houston. The four sixth place winners are Isadore Shank, St. Louis; Joseph Lombardo, Palo Alto, Calif.;



First place design consists of a simple form with a large open area at both front and rear.

Nobuo Kusmi and John H. Raup, both of New York City.

The awards program, which supports the industry's "progressive trend toward more attractive exterior styling," drew 483 entries as opposed to 220 entries in last year's program.

Two members of the AIA, Samuel A. Anderson III and Edward A. Smith III, were joined on the jury by three members of the Design Council of Industrialized Housing: Robert J. Vahsholtz, Gary T. New and Charles W. Sawyer.

### St. Francis Presides at the Ballpark, Known and Loved by San Franciscans

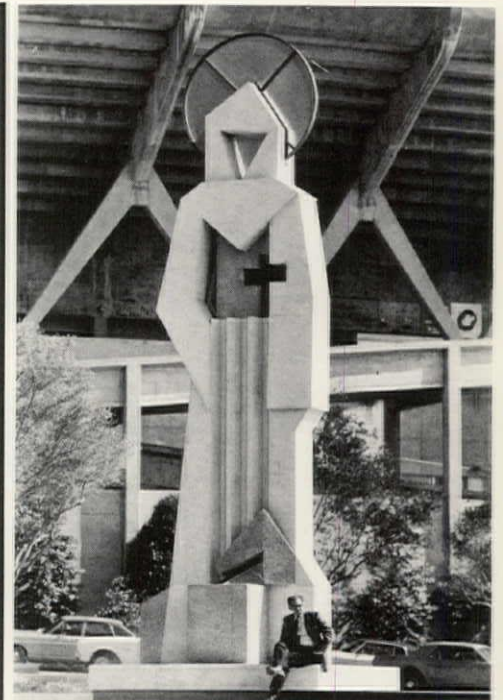
When the City of San Francisco engaged the architectural/planning firm of John S. Bolles Associates to complete the baseball stadium at Candlestick Park, which had been begun more than 15 years before, the firm willingly complied with the requirement that 1 percent of the costs be used for art.

John S. Bolles, FAIA, who is an advocate of art in architecture (September, p. 18), selected artist Ruth Cravath to take up a long dormant project for a concrete sculpture of St. Francis of Assisi. It now stands in a small plaza outside the stadium where it is admired by thousands of baseball enthusiasts and can be seen by people coming into the city from the airport. It complements the stadium, which is in itself a major sculptural form.

When Bolles first worked on the stadium, then called Harney Stadium in honor of its developer Charles Harney, he had had no difficulties in convincing devout Catholic San Franciscans and Harney, the major supplier of concrete to the Bay area, to approve plans for a large concrete statue of the city's patron saint, St. Francis of Assisi. He had selected sculptor

Cravath to design it, and working drawings made from models and sketches that she provided were done in the firm's office. But funds ran out, and the project was abandoned.

When the city decided to complete Candlestick Park, it was natural to turn to the sculptor again. Now, thanks to the



Baseball fans are greeted by this sculpture.

city's rule about funds for art, St. Francis stands in all his glory before the stadium. He is called "St. Francis at the Ballpark" by newspaper reporters. There are many statues of St. Francis in the city, but Ruth Cravath's work of art is probably the best known, and it is certainly the largest. San Francisco is named for the saint by the Spaniards, who founded an outpost along the mission trails leading from Mexico northward.

### Detroit's Old Buildings Get Color, Mayor's Program Helps Merchants

Nearly two years ago Detroit's Mayor Roman S. Gribbs established a team known as the Mayor's Merchants Assistance Program as part of the city's Office



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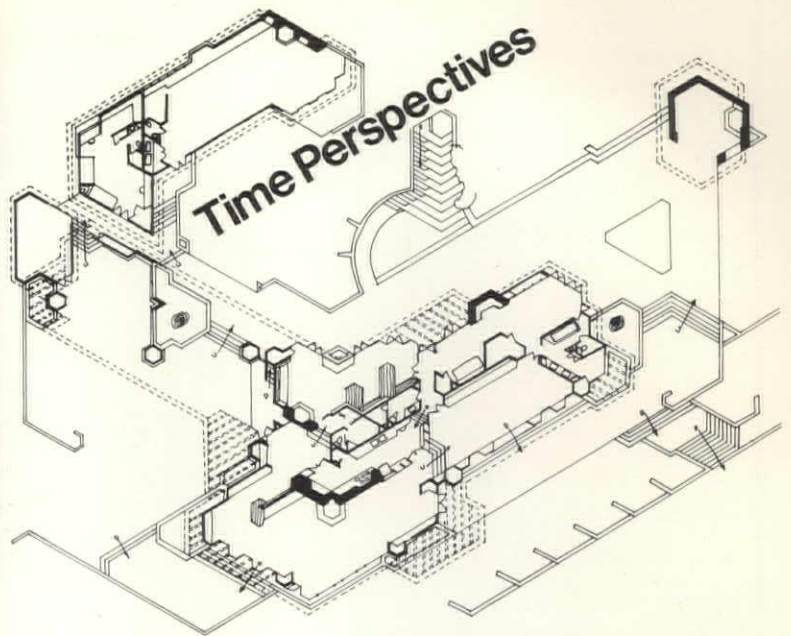
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of Industrial and Commercial Development. MMAP is directed by architect Alex Pollock who gained prominence with a brilliantly colored mural for Detroit's Eastern Market.

If a merchant wants to rejuvenate a building or an area, MMAP will help him; and there's no charge for the service. The action program places emphasis on good design and its execution. The team will meet with a merchants' group to find out their needs and problems. Then it makes a design recommendation and contacts all affected city departments for necessary approvals. The team then makes



Mural sparks the 37-year-old structure.

the working drawings, gets cost estimates, suggests competent contractors for bidding purposes, assists in obtaining permits, makes periodic inspections to assure compliance with the drawings and arranges to have the new improvement covered by the media.

MMAP has designed murals for a number of merchants to perk up old buildings, and it has created structural designs to help revitalize strip commercial areas. Among its recent work is a mural for the Everfresh Company. MMAP's answer to the problem of making a drab building more colorful was a bright mural of giant oranges and lemons painted over a dull green exterior of the 100-foot-wide, 36-year-old structure. Designed by Joe Orloff, the mural brings new life into the area and lets passersby know just what kind of business goes on inside the building.

#### Winner of the AIA Gold Medal in 1969, Creative Practitioner and Educator

In 1969 the AIA awarded its highest honor, the Gold Medal, to William Wilson Wurster, FAIA, who combined a distinguished practice with equally distinguished accomplishments as an educator. He and the late San Francisco architect Bernard Maybeck have been the only architects with offices west of Chicago to receive the medal.

Wurster, who died on September 19 at the age of 77, started practice in San Francisco in 1926. In 1946 he formed a partnership with Theodore Bernardi, FAIA, and Donn Emmons, FAIA, which became known internationally as Wurster,

Bernardi & Emmons, Inc. Among its projects are Ghirardelli Square, the Golden Gateway complex and the Bank of America headquarters building in San Francisco, the Center for Advanced Study in the Behavioral Sciences in Palo Alto, Calif., the US Consulate in Hong Kong and many other institutional and commercial complexes, housing projects and individual residences.

The firm has won more than a hundred design awards, and in 1965 the AIA presented its annual Architectural Firm Award to Wurster, Bernardi & Emmons. The firm was cited for its "great and continuing body of finely conceived and beautifully detailed work."

In 1943 Wurster was coordinator of design, Department of Architecture, Yale University, and dean of the School of Architecture and Planning at Massachusetts Institute of Technology from 1944 to 1950. In 1950 he became dean of the College of Architecture at the University of California and in 1959 established the nation's first College of Environmental Design at the University of California. He served as dean of the new college until 1963.

He was chairman of the Architects' Advisory Committee of the National Housing Agency in 1942; chairman of the National Capitol Park and Planning Commission, 1949-50; and a member of the Architectural Advisory Panel, Department of State, Office of Foreign Buildings, 1958-63.

Wurster was a frequent contributor to professional publications. His many honors included an honorary doctor of laws degree from the University of California, the Distinguished Service Citation from the California Council AIA and Man of the Year Achievement Award from the Building Industry Conference Board. He was a fellow of the American Academy of Arts and Sciences and of the Royal Academy of Fine Arts of Denmark.

Wurster was married in 1940 to the internationally known city planning authority and author, Catherine Bauer.

#### Deaths

ROSS W. BARRY, Greenvale, N.Y.  
 J. MURRELL BENNETT, FAIA, Dallas  
 ELMO C. BRUNER, Las Vegas, Nev.  
 CHARLES F. CELLARIUS, FAIA, Cincinnati  
 PAUL CERRINA, New Rochelle, N.Y.  
 JOHN B. DANNA SR., Dallas  
 ERNEST R. ERICKSON, Evanston, Ill.  
 GEORGE M. JONES, Chicago  
 L. MILTON KING, Monroe, La.  
 WILLIAM H. O'DELL, Detroit  
 IRVING PORTER, Dallas  
 RALPH S. STOETZEL, Chicago  
 ARTHUR E. THOMAS, FAIA, Dallas  
 ALEXANDER S. TIMOSHENKO, Washington, D.C.  
 MICHAEL TRAFICANTE, East Providence, R.I.

#### Newslines

**How many people commute to work?** Maybe not as many as you think. According to the Bureau of the Census, nearly 60 percent of the 26 million workers who live in the suburbs also work there, and only 15 percent of the workers who live in central cities work in the suburbs. More complete information is given in "Patterns of Commuting in Large Metropolitan Areas: 1970," available for 20 cents from the US Government Printing Office, Washington, D.C. 20402. The order number is PC(S1)-45.

**The New York Chapter AIA** has awarded the 1973 Arnold W. Brunner Scholarship to Jerzy E. Glowczewski. He is presently a professor of macroplanning, ecology and land development at Pratt Institute's School of Architecture.

**The Greater Miami Chamber of Commerce** has created a New Neighborhood Action Committee to work toward the improvement of the total environment of residential areas. Chairman is Ralph Warburton, AIA, senior partner of Ferendino/Grafton/Spillis/Candela in Coral Gables, Fla. He is also chairman of the Department of Architecture and Architectural Engineering, University of Miami.

**Jaquelin Taylor Robertson, AIA**, who was one of the authors of the first report of the AIA Task Force on National Policy, has resigned as a New York City planning commissioner, having been elected president of the Planning and Design Group of Arlen Realty & Development Corporation. He will serve also as vice president of planning for the Manhattan-based organization.

**A new magazine** launched in September is called *American Metric Journal*. The bimonthly publication costs \$35 per year and may be subscribed to by writing AMJ Publishing Co., Drawer L, Tazana, Calif. 91356.

**A digest of wind engineering research** will be published in 1974 by the University of Hawaii at Manoa. Information is requested about current research work in this area. Contact Arthur N. L. Chiu, project director, Spalding Hall 357, 2540 Maile Way, Honolulu, Hawaii 96822.

**Signs in the national parks** will soon include metric as well as standard distance measurements for the convenience of foreign visitors. The US is the only major nation in the world which has not decided to "go metric."

**Gershon Canaan, AIA**, is a diplomat/architect. He has served in Dallas as consul of the Federal Republic of Ger-



many since 1963. He was chairman of the Texas German Day Council from 1963 to 1972. This year the organization, which represents over 1 million Texans of German descent, made him honorary chairman of the annual German Day in Texas. In recognition of his "great achievements and dynamic leadership," he was awarded the first gold medal of the council in 1972.

**The selection of school sites** is an integral part of the total educational planning process. Criteria are outlined in a pamphlet called "Site Selection." A free copy may be obtained from the ERIC Clearinghouse on Educational Management, University of Oregon, Eugene, Ore. 97403.

**S. Scott Ferebee Jr., FAIA**, president of the AIA, has been invested as an honorary fellow of the Royal Architectural Institute of Canada.

**An environmental planning award** was presented to William D. Ruckelshaus by the Victor Gruen Foundation for Environmental Planning. The recipient, former administrator of the Environmental Protection Agency, was Deputy General Attorney of the US. The award is given for "outstanding service to humanity." The foundation was established by Victor Gruen, FAIA, founder of the firm of

Victor Gruen Associates, from which he retired in 1968.

**Five architects** represented this country at the 15th Triennale in Milan, Italy, recently. They are AIA members Peter Eisenman, Michael Graves, John Hejduk, Richard Meier and the office of Charles Gwathmey, AIA, & Robert Seigel. All work or have their offices in New York City except for Graves, who is located in Princeton, N.J. They were chosen because their work "represents a significant and emerging direction in American architecture." The Triennale is an international exhibition of architecture, industrial design and decorative arts. The five presented their individual work and ideas in models, slides and a film.

**Howard R. Lane, AIA**, Los Angeles architect, has been named to the Steering Committee of the International Joint Committee for Planning and Design of Tall Buildings. He is one of three architects in the world on the committee, the other two being AIA members Frank L. Codella and James McArthur, both of Charles Luckman Associates in New York City.

**Kenzo Tange, Hon. FAIA**, of Japan, has been awarded the 1973 Grand Medal of Gold by the French Academy of Architecture.

**Three new tools** to help manufacturers communicate information about increasingly complex products for progressively industrialized construction projects have been developed by Sweet's GuideLines. They are "Construction Matrix," "Sweet's GuideLines Master Format" and "Sweet's GuideLines Master Grid." They provide a systematic, logical and fairly simple procedure to produce information that professional users need in order to make sound decisions on product selections. Copies may be obtained from Ms. Miriam S. Eldar, Sweet's GuideLines Manager, McGraw-Hill Information Systems Co., 1221 Avenue of the Americas, New York, N.Y. 10020.

**Arnold G. Gangnes, AIA**, who heads the firm of Arnold G. Gangnes & Associates in Seattle, has been appointed as special adviser to the President's Committee on Mental Retardation.

**New technical information** is available through the weekly government abstracts of the Department of Commerce. Newsletters on "Building Technology" may be subscribed to for \$17.50 per year; the annual subscription to "Urban Technology" is \$35. A free brochure called "NTIS Information Services" will be sent to any inquirer by writing to NTIS, Department of Commerce, Springfield, Va. 22151. □

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