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Circle 1 on inquiry card
Letters

Just a note to let you know how much I enjoy the look of RECORD now that its new format has a chance to settle in. It's too bad that the people in a magazine's art department are rarely recognized for the important work they do in making the magazine's substance sit comfortably on the printed page. Without casting any aspersions on the architect, photographer, journalist or editor, I have a hunch RECORD's architecture would never feel as anywhere good as your architecture's talents and skills.

Elliot Willensky, Architect
New York City

If I was invited to the home of Robert Venturi and Denise Scott Brown [RECORD, September 1983, pages 108-113], I would say, "Wow! This is a wonderful place to live—warm, elegant and humane." These interiors will look almost as attractive without the photographer leaves and the inhabitants begin to move things around and pile "a bit more stuff" here and there. I would hope that someday we could develop an esthetic that did not require faked interiors as a requirement for publication, an esthetic as together and thought-provoking. It seems especially applicable to our Southwestern campuses and the region's propensity for urban sprawl. I couldn't agree more—it's about time we concentrated on reuse and what Mrs. Gaskie referred to as "lost amenities," rather than to continue the haphazard and often inferior growth pattern we have followed. The pictures accompanying the article are spectacular—a reminder that good photographs are the key to good architectural reporting.

Mercedes Disney
Marketing Manager
Anderson DeBartolo Pan Inc.
Architecture & Engineering
Tacson

As a Muslim I was disturbed by the visage of Sherefredin's White Mosque in Visoko, Yugoslavia, shown in RECORD, March 1984, pages 102-103. I believe the mosque: the humbling yet elevating experience of worshipping, shoulders physically touching shoulders of other Muslims of any nationality, race or financial status as they bow down and prostrate themselves in unison, thus manifesting their equality and brotherhood before God.

The small rectangular mihrab doesn't help acoustically in reinforcing the reverberation of the Imam's recital as he leads the prayer. The absence of windows makes me wonder how the months on a hazy, summer day during a crowded Friday congregational prayer in Ramadan when the breath odors of the fasting worshippers are very pronounced. Since the five daily prayers are reckoned by the sun's position, the absence of windows also denies the worshippers who may not own watches their most natural chronometer.

To be fair, the architect's use of skylights is innovative.
Abdulvett Elmi
Midland, Wisconsin

Corrections

F. Douglas Adams should have been included as a member of Architectural Resources Cambridge Inc.'s project team for the design of the Albany Campus Center at Russell Sage College [RECORD, November 1988, pages 102-103].

The interior of the Merc, Sharp & Dohme offices [RECORD, September 1983-II, pages 102-107] were designed by ISD, Inc., and MBS/Architects & Planners, with Herbert Beckhard as partner-in-charge.

Calendar

Through April 15
Exhibit, The Architect's Design: Drawings, Models and Monographs from the Architectural Archives of the University of Pennsylvania; at the Arthur Ross Gallery, University of Pennsylvania, Furness Building, South 34th St. Philadelphia.

February 13 to March 10
Architecture Exhibits: Photographs, Drawings, Models of work by Marquis Associates, Architects/Planners/Interior Designers, in celebration of the firm's 30 years in practice, at the American Institute of Architects, 790 Market St., San Francisco.

February 17-27
Solar Tour to Israel, a tour of Israeli solar technology and manufacturer operations. For information: Jordan College Energy Institute, 1557 Mile Rd., Comstock Park, Mich. 49321 (616/784-7595).

March 6-31

March 18-20

March 18 to May 24
Exhibit, The Product of Design: An Exploration of the Industrial Design Process, funded by the New York State Council on the Arts, Westchester Arts Council of the Fund for the Arts, the Heckscher Foundation for Children, and Exxon; at the Katonah Gallery, 28 Bedford St., Katonah, N. Y.

April 14-18

April 27-29

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Finne • Lyman • Finne • Reese, Architects-Engineers
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Roof: J. Strober and Sons, Ringoes, New Jersey

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Architects: Harry Weese and Associates
Chicago, Illinois, Washington, D.C.
Roofers: Mathy Company, Fairfax, Virginia

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Letters/calendar, 4
Editorial: Searching for software: a request for information, 9

Business
News, 21
Computers: The need for graphic standards, 23
Computers: The latest efforts to upgrade the Initial Graphics Exchange Specification, 25
Management: Don't think becoming a preservationist relieves liability perils, 29
Marketing: Clients' needs are the target, 33
Architectural education:
NCARB—Who we are, what we do, 37
Architectural education: a practitioner's personal view, 41

Design
News, 49
Design awards/competitions, 58
Observations:
“A worm’s eye view of recent architectural history,” 69
by Denise Scott Brown
Cartoon, 69

Building Types Study 597: Religious buildings, 93
St. Matthew’s Parish Church, Pacific Palisades, California, 94
by Moore Ruble Yudell, Architects & Planners, Architects

Christ the King Lutheran Church, Houston, 104
by Charles Tapley Associates, Inc., Architects

Immanuel Episcopal Church, New Castle, Delaware, 108
by John Miron Associates, Architects

The Quadrangle: A Center for African, Near Eastern and Asian Cultures at the Smithsonian Institution, 112
by Shepley Bulfinch Richardson and Abbott, Architects

The Asia Society, New York City, 122
by Edvard Larrabee Barnes Associates, Architects

The Vintage Club, Indian Wells, California, 128
by Fisher-Friedman Associates, Architects

Hillclimb Court Condominiums, Seattle, 134
by Olson/Walker Architects

Engineering
The telling detail, I: houses by Hugh Newell Jacobsen, 138

New products, 146
Product literature, 151
Manufacturer sources, 157
Classified advertising, 182
Advertising index, 196
Reader service card, 199

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United Grocers Ltd., warehouse; general contractor, S&F Sacramento; steel fabricator, Palm Iron & Bridge, Sacramento; engineers, Kaiser Engineers; architects, Edward A. Bonelli & Associates.

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Searching for software:
A request for information

Less than a year ago, in an editorial admitting that I was one of those who had secretly hoped to make it to early retirement without actually understanding much about computers, I confessed it was clear that simply was not possible; indeed that every professional (specifically including those in small firms) really did need to take the time now to understand what the computer can do for the business of creating architecture. The question is how.

There are of course a plethora of meetings, seminars, conferences, and conventions related to computer use; an increasing number of books being published, at least some of which recognize the fact that the reader is not a computer expert coming in; an increasing number of consultants, and service bureaus, and training programs put on by the manufacturers; and a major growth in newsletters and in the number of organizations relating to computer use by architects and engineers. They are all good ways to help you get started.

But... I want to explore the how-do-you-get-started question from a specific point of view. While I'm still not much of a computer expert, I have learned the fundamental fact that the computer can't do a thing for an architect (or anyone else) without the right software to program the computer—that is, tell the computer what to do, how to do it, and when to do it. To my simple mind, a good listing of software programs that are available specifically for architects and the engineers who work with architects, together with a brief and concise description of the tasks that can be accomplished with each specific program, would form an excellent way for architects to gain a clearer understanding of just what they can and should expect from a computer.

Therefore... Herewith a request for letters from any and all sources of software specifically programmed for architects: software suppliers, computer (hardware) manufacturers, service bureaus, systems vendors, time-sharing services, service bureaus, architectural firms interested in selling the software they have developed in-house, consultants, and, indeed any other source.

I'd like to know about sources for three kinds of software:
1. Software performing nondrafting or drawing functions specifically related to architectural firms—for example: spec writing, energy audits, simple structural calculations, costing, construction management, facilities management, code management, solar studies, cost control, programming, project-control management, materials takeoffs... and what else?
2. Software specifically programmed for CAD—software useful in working drawings, or in design and exploration of design alternatives.
3. Software (and this may prove too long a list to publish completely) programmed for uses that are not necessarily specific to an architectural firm but related to similar small-office operations—such as word processing, accounting, cash flow.

If you would write to me—Walter F. Wagner, Jr., ARCHITECTURAL RECORD, 1221 Avenue of the Americas, New York, N.Y. 10020—Attention: Software survey—we'll follow up with a detailed questionnaire, asking among other things for:
1. Specific descriptions of the capabilities of each piece of software you have available;
2. Whether it is provided only with a hardware system; is available for sale or lease; or available only through a time-sharing or service bureau;
3. What specific hardware it is compatible with, and
4. Some idea of cost.

Harry Mileaf, McGraw-Hill's resident expert in computer use for architects, wrote in an article for us: "The soft spot is software." Our hope for the survey that will grow out of this request for information is to provide architects with a meaningful way to search for the software (and then the computer system) to best meet their needs. I think it will be a useful way (among other things) for small firms to get started—to understand just what they can do with the tools of the computer revolution. Please let me hear from you.

You'll hear back. W.W.
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Circle 11 on inquiry card
The National Trust announces grants and requests nominations for awards

The Travelers Corporation is investing $1 million with the National Trust for Historic Preservation for the purpose of creating a joint mortgage program providing low-cost loans to upgrade existing low- and moderate-income housing in selected cities throughout the United States.

The Department of Agriculture has announced that it will fund a trust program to educate small- and moderate-income housing in their communities. The amount of the grant is $200,000.

The trust also is requesting nominations for Preservation Honor Awards to be given out at the annual membership meeting in May. Awards will go to individuals and organizations making significant contributions to preservation. The trust also announces the creation of "Preservation Week" to "focus attention on preservation in the United States."

The new mandate by Congress for the Export-Import Bank—go out and push American exports and never mind Bank profitability—is music to the ears of the building industry, which has long complained about the Bank's cavalier attitude toward helping sell American construction and design services.

Riding on the coattails of new International Monetary Fund legislation providing an additional $4.4 billion for IMF and $19.6 billion housing authorization bill just before recess last December, Congress extended the Bank's charter for another three years. Congress told the Bank in no uncertain terms that promoting the export of goods and services by offering fully competitive financing came first, and that operating the Bank in the black was a distant second.

The Bank was told to set up a program of mixed financing, using both their own credits and lower-interest money from the Agency for International Development to meet similar foreign funding head-on. Congress also requested the Bank to re-establish a 12-member advisory committee, including representatives from service industries such as the building professions, as well as small business and to treat service industry exports on an equal basis with manufactured goods.

All of this had long been sought by builders, architects and engineers. Bank officials say it encourages full competition now. But a certain measure of mistrust still prevails—more so among contractors than among architects and engineers.

Construction industry sources say the Bank's chairman, William H. Draper, a Reagan appointee, throughout the last year or so had insisted the Bank was in there competing efficiently with the rest of the world for international orders when in fact it wasn't. "The bottom line was that we're supposed to be the people to be helped, but we weren't," says a staffer for the National Construction Association, an organization of big American firms that represents a lot of foreign work. While the Bank did modify its approach somewhat during 1983 and did become attuned to industry needs, the feeling was that it wasn't enough and the Bank was not sufficiently competitive and cooperative.

Architectural and engineering sources are more restrained in their assessment. While they agree that the Bank did not do enough in recent years in funding feasibility studies of major foreign infrastructure projects—winning a feasibility study is often the first step for a nation to win a big piece of the foreign contract—they are more inclined to give the Bank the benefit of the doubt for the time being. A staffer for the American Consulting Engineering Council, which worked with the American Institute of Architects on the issue, says one of the litmus tests will be what the Bank will in fact do about mixed credits, for instance. "Let's see what happens before we throw stones," he says.

Robert Djerjian, managing partner of Haines, Lundberg, Wachler in New York, acknowledges that getting the Bank's support for design services "has always been a difficult issue. Its financing has always been much more important to builders," he says, but there are some ramifications for architects and engineers as well. Basically, he is happy that the new legislation recognizes "the fact that exports of services are important per se, but so far it's a little late and not that important to make us jump up and down."

Nevertheless, Djerjian thinks the new language could be of some help to bring in architects early as part of the designing foreign projects—for feasibility studies, for instance. Early involvement of architects would be useful because "we could give a little bit more direction" in high-tech areas; Djerjian says the requirements of high-tech equipment influence the design of telecommunications, medical and research facilities, for instance. Since most American firms specify American equipment and are familiar with what's available, they could play a significant role not only in the design itself, but also in the export of American-made equipment.

James R. Sharpe, the Bank's senior vice president for direct credit and financial assistance, believes the Bank has already turned around. Sharpe, a former construction executive who moved over from the Commerce Department, points out that a year ago, admits the Bank was not a big help in export promotion when the cost of money was much higher and foreign competitors just about totally subsidized their exports. But new financing ground rules based on market interest rates within the Organization of Economic Cooperation and Development (of which the United States is a member) plus the new legislation, which is "more of a confirmation" rather than anything basically new, according to Sharpe, "represents a measure of change." Part of the Bank's problem has been "not to communicate sufficiently to the export community what it has to offer," he says.

Still, the industry is not totally convinced. The Bank "has improved," says a construction industry executive. If there was a communication failure, it was the Bank's failure to listen. "Their failure to react to messages from the industry is the reason why industry went to Congress," he says. Peter Hoffmann, World News, Washington, D.C.

Income/expense statistics show marketing trends in real estate

Studies available from the Institute of Real Estate Management (a division of the National Association of Realtors) report statistics useful in figuring the profitability of projects in planning. The 1983 Income/Expense Analysis Office Buildings compares rents (up 7.5 and eight per cent respectively) and shows where these costs are likely to go: 34 per cent for utilities, 27 per cent for maintenance and repair and 18.4 per cent for taxes. These studies, along with Expense Analysis Condominiums, Cooperatives and Planned Unit Developments are available from the Institute at 430 North Michigan Avenue, Chicago, Ill., 60611 (312/661-1930).
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Circle 12 on inquiry card
Computers: The need for graphic standards

The experienced authors offer helpful directions on where we may go

By Jon H. Pittman and John C. Dill

Design is an information-intensive process. The architect is constantly engaged in collecting, refining, organizing, and presenting information. In fact, architecture can be viewed as information management.

Architects collect information from clients in the form of programmatic data and generate information in the form of design and production documents. In addition, they must provide information to other parties, collect information from other parties, and attempt to organize and filter information from other parties (see Figure A).

Information is exchanged between many different parties in many different forms

The individuals and groups who must exchange information during the design and construction process include (as shown in Figure A) the architect, client, building user(s), consultants, engineers, planning agencies, construction managers, contractors, subcontractors, suppliers, community organizations and regulatory agencies. In addition, the client may request additional information such as "as-built" drawings, used to be used for facility management after the project has been completed. It is also common for architects to enter into joint ventures with other architects for specific projects. The joint firms must, obviously, exchange information throughout the design process.

Traditionally, architectural information has been transferred in a variety of forms, including sketches, working drawings, written specifications, telephone conversations, change orders, shop drawings, correspondence, photographs, physical models, renderings, computer printouts, building code, product catalog, and supplier quotations. Using these forms and others, individuals and groups involved in the design process compiled information in the form most convenient for their own needs. Others who had to use information prepared by one group had to extract the information they needed and perhaps organize it into a different format.

Although the process of differentiating, extracting, integrating and organizing information is slow by traditional method, it is a task for which humans are very well suited. People are very adept at picking a meaningful pattern out of an extremely ambiguous field of information.

With computers, the need becomes finding a way to exchange information among various systems

Now, with the increased use of computers in the design and construction process, the opportunity to exchange data through computers has presented itself. However, new problems have emerged with this opportunity. Although computers can handle raw data at much faster rates than humans, they are not as adept at extracting useful information from varied sources and integrating it into a meaningful form.

Each computer manufacturer and computer software developer, as well as each group of users, has his own conceptual model of the way data is organized and related in the computer. The type of data that is stored and the ways in which data is stored in one computer or software system is invariably different from other systems. This poses a "Tower of Babel" problem. Many individuals are trying to use computers to work toward a common goal without having common communication.

As the architecture profession begins to use computers more and more in architectural practice (and as our clients and colleagues increase their use of computers), the need to exchange information in digital form will increase. This will require that some standard be established to ensure that information produced by one group and computer system is meaningful to other groups and systems.

To address this issue, several attempts have been made to develop a standard for exchange of information among computer systems. It is important that architects be aware of these efforts so they may provide input to the formation of these standards and so they will be aware of the need for the products that they purchase to support them.

To help make architects aware of these efforts and some of the issues surrounding them, let's explore exchange information in more detail, the ways in which computers exchange information, the concept of an information standard, and finally some examples of information exchange specifications.

How information is exchanged among computer systems affects their usefulness

For purposes of this discussion, our goal is somehow to transmit a drawing and associated information from one system to another. Since this information will be in a computer file of some kind, the task becomes one of:

• transmitting a file from one system to another, and
• ensuring that the contents of the file can be "understood" by the application program in the receiving system.

Although the thrust of this article is the latter and might be called "information transfer," the former, which we could call "data transfer," is certainly a necessary component. How do we do data transfer?

In practice, certainly, is to copy the data onto paper, as a printout, or digitizing in a drawing. Although highly inefficient and error-prone, this scheme has actually been used many times in the past, even in production systems in very large companies.

A much more effective means is to copy the data onto some electronic storage medium that can be carried between computer systems, such as a floppy disk or magnetic tape. Here, of course, we must ensure that a compatible format is used. In other methods if the sending system uses a 1600 bpi, 9-track unlabeled tape with 80 character records, the receiving system must be able to read such records. Further, both systems must use the same encoding scheme, either ASCII (e.g. the number 142 represented as the character string '142') or binary (142 represented as '1001101').

A still more effective scheme is a data link, transmitting the data over a communications link, such as a telephone line or a direct wire. Similar incompatibility issues occur here, too. Economic issues are important. For example, using a dial telephone network to transmit a 4-million-byte file from Chicago to Los Angeles at 1200 bits per second would take well over 10 hours, even assuming no errors, and be considerably more expensive than mailing a tape, even using an overnight service. Using a high-speed data link (e.g. ARPA-NET) would reduce the time but increase the cost. If file transfers occur often, on the other hand, the network may be economical.

The subject of networking and data transmission is too large and complex to be more than mentioned here. For further reading see any standard introductory text.

What is an information exchange standard, and why do we need one?

In architectural practice, each firm has its own standards and methods. The ways in which architects describe building details, lay out a drawing, and relate various drawings to each other and to contract documents may be quite similar from firm to firm, but with subtle differences. The standards for a given firm have evolved over time and have been shaped by a variety of factors to fit the needs of architects and their clients.

In a similar way, the developers of computer-aided design systems have evolved unique ways of organizing information influenced by the type of hardware, the software, the type of data used by the system, the needs of the users of the system, and methods for generating data used by the
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The general meaning of the Japanese. With each translation, Japanese translator available, let's use the analogy of a computers, one encounters the correspondence in translation. Some information would be lost.

English and then from English to were available. The Russian colleague. Suppose that the Russian scientist who wishes to system "A," even more information between two systems to transfer the information to system "B." With each translate the information on "A" into a neutral form. The neutral form is, in effect, the form described by the information exchange specification. One must then translate the information to system "B." With each translation some information may be lost. If one wishes to then transfer the information back to system "A" even more information may be lost.

Let's look at some problems involved in defining an information exchange standard Let's use the analogy of a Russian scientist who wishes to send a document to a Japanese colleague. Suppose that the Russian did not have a Russian-Japanese translator available, but that a Russian-English and an English-Japanese translator were available. The Russian would have to have the document translated from Russian to English and then from English to Japanese, agreed upon; translation, some information would be lost. Each language has a particular set of concepts that can be expressed, but there is not necessarily a one-to-one correspondence in translation. The general meaning of the document can probably remain intact after the translation but subtle nuances may be lost.

In trying to exchange information between two computers, one encounters the same problems as the Russian scientist. However, the problem is likely to be worse since human languages are very rich and complex and can express one concept in a variety of ways whereas the computer may not have such a wide range of alternatives available to represent information.

Architectural design is an iterative process. An architect generates a design solution, evaluates that solution, and successively refines it until it "fits" the design criteria. Many people, including the client, contractors, engineers, architects, planning boards, etc., may be a part of this process. If the parties involved in the design process have from them, it is probable that they will wish to use them. Thus design information may go through many translations, potentially losing information through each. It is clear that, if care is not taken, the original meaning of the design information could be lost in much the same way that information is lost or distorted beyond recognition in the old party game in which a sentence is passed around a circle of people by having each person whisper to the next in the circle. One may ask why a single such standard is necessary. Why not write a translator between each pair of CAD systems? There are two reasons why this is impractical. First, there are a large number of CAD systems on the market. To allow each system to exchange data with any other CAD system on the market, a large number of translators would be needed. If we know that there are "n" CAD systems on the market, n(x-n-1) translators would be needed to exchange data exchanged between the systems.

Each time a new system came on the market, a new set of translators would have to be developed. In addition, as each CAD system developer upgraded his products, the translators would have to be upgraded as well. It is clear that this would be a monumental task. With one information exchange standard, each manufacturer would be responsible for maintaining a translator to and from the standard format, thus resulting in only 2xN translators (see Figure C).

The second reason for a single, neutral standard is that manufacturers of various CAD systems are competitors. They, in all probability, engineer internal information structures as proprietary. To write a translator between any two CAD systems, it is necessary to have a detailed knowledge of each system's data storage structures and mechanisms. CAD system developers might understandably be hesitant to divulge such information to their competitors. With a single standard in the public domain, CAD-system developers could develop their own translators, thus providing data transfer capability while ensuring that knowledge of the internal workings of their system remains confidential. Thus, it is clear that a single information exchange standard is the most reasonable approach to exchange of architectural CAD data.

An information exchange standard should allow one to transfer data as much information as possible between computers. Obviously, the more information that can be described by a standard, the more that can be transferred. Care must be taken to ensure that information stored implicitly in the structure or arrangement of information as well as the information that is explicitly defined is transferred.

To summarize, an information exchange standard is a format upon which architects have agreed to transfer information from one CAD system to another. There is currently no information exchange standard for architectural CAD data, but several potential standards are evolving. It will be to the architect's long-term benefit to participate in their formation.

What efforts are under way to develop an information exchange standard? Several attempts have been made to develop information exchange structures. Some are important to the architect. Let's look at IGES, perhaps the most advanced of these standards used to transfer CAD data, the data transfer capabilities of two commonly used standards for computer graphics, and finally a data transfer specification for architectural design computer systems.

- IGES—Initial Graphics Exchange Specification. IGES is specifically tailored to the exchange of CAD data.

Development of IGES began in January 1980 by a technical committee composed of CAD/ CAM system developers and coordinated by the National Bureau of Standards. IGES Version 1.0 was adopted by ANSI and American National Standards Institute in September 1981. The original goal of IGES was to provide "a data format for product design and manufacturing information created and stored in a CAD/CAM system in computer-readable form. IGES allows CAD data to be stored in neutral form (a generic format not specific to any given CAD system) and to be translated from one CAD system to another. The first version of IGES was large companies that had developed special-purpose software in-house and who wanted to create integrated CAD systems with that software and/or to use that software in conjunction with a turnkey system. In addition, CAD system developers began to implement IGES translators for their systems. Currently, 32 CAD-system suppliers have committed themselves to supplying IGES translators for their products. These suppliers include several major CAD system developers for the architectural market.

Version 1.0 of IGES was primarily aimed at the general CAD/CAM community and allowed for the representation of geometric data such as size, shape, and position. Version 2.0 of IGES included extensions to accommodate printed circuit board technology and description of finite elements.

IGES tries to provide a very general format for the storage and transmission of computer-aided-design data. Each piece of data in an IGES file is represented by an entity. An entity may be one of three types: geometric, topologic, or associative. A geometric entity describes the physical shape and size of the object being represented. Topologic entities include points, lines, curves, surfaces, and planes. Annotation entities allow notations to be given for the object being described. They provide further
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A report on the latest efforts to upgrade the Initial Graphics Exchange Specification

At the end of 1983, a group of those interested in developing extensions to IGES for architecture, engineering, and construction applications met in Gaithersburg, Maryland. The group consisted of some 35 representatives from architecture, engineering, and construction communities, and the academic community. The group discussed the existing IGES specification and how it might meet the data transfer needs of the marketplace and will increase the capability to transfer information to other systems.

The need to transfer data between computers is clear in many applications. Architects increasingly rely on computers for drafting, engineering analysis, inventory, and other computer-aided design functions, the need to transfer architectural information between computers will be felt. The development of data exchange standards will make today's architects more intelligent in the CAD marketplace and will increase the probability that future CAD systems will meet the needs of architectural practice in years to come.

Mr. Pittman is a member of the computer group at Hellmuth, Obata, and Kassaham, 100 North Broadway, St. Louis, Mo. 63102 or Dave Jordani, Ellerbe Associates, One AppleTree Square, Minneapolis, Minn. 55420.

It is encouraging that an AEC working group on IGES is being formed. It will certainly benefit the architectural profession and the architectural profession. With this in mind, what can members of the architectural profession do to ensure that a data exchange standard will meet their needs? The steps one can take include the following:

• Define one's current and future needs for information exchange.

What type of data is now on your computer system? What type of information do you foresee having on your computer system in the near future? With whom might you wish to exchange information? What will be done with the information once it is exchanged? Attempting to answer these questions may help clarify one's own needs for data exchange capabilities between two or more computers.

• Ask your computer suppliers if the CAD system supports IGES. If the answer is yes, ask how far along the are they in implementing their IGES interface. If no, ask if they are not being supported. If your suppliers do not support IGES or some other common information exchange standard, they may be trying to "lock" you in to using only their products.

While this may be good for them, it is certainly not in your best interests. Many architects have been disappointed by CAD systems that have not performed to their satisfaction. The capability to transfer information to another system can give one more flexibility in choosing systems.

What designers can do to help the cause and themselves

The process of defining a standard for information exchange deals with technical issues outside the area of expertise of most architects. The standard that results from such a process, however, has far-reaching implications for the architectural profession. With this in mind, what can members of the architecture profession do to ensure that a data exchange standard will meet the needs of these professionals? The steps one can take include the following:

• Make your data exchange needs known to your computer suppliers.

• Make your data exchange needs known to the American Institute of Architects to have a voice in the definition of computer data exchange specifications.

• Make your data exchange needs known to the National Technical Information Service.

• Make your data exchange needs known to your local AIA chapter.

• Make your data exchange needs known to your state AIA board.

• Make your data exchange needs known to your national AIA board.

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Management:

Don't think becoming a preservationist relieves liability perils

By Robert Steven Anderson

As curators of our architectural heritage, preservationists render a broad range of conservation, design and consulting services. Some preservationists are also architects; many are not. All face increased exposure to malpractice liability as their nascent profession gains visibility and influence.

Architectural preservationists are endeavoring to persuade clients and potential clients that they are professionals, and to distinguish the service they offer from what can be obtained from an architect, a former architectural historian or restoration contractor without special training in preservation. Preservationists' increasing success in that effort is cheering news, for they have worked hard for that recognition and stand to gain from it, financially and spiritually. Yet there is a downside: To the degree preservationists succeed in establishing themselves as a distinct profession, they are also increasing their exposure to malpractice liability.

Thirty years ago, the terms "architectural conservator" or "preservationist" called to mind the few architects, archaeologists, historians and classicists who studied, catalogued and, occasionally, restored old structures—as well as public advocates (blue-haired ladies in tennis shoes included) who campaigned to save specific heritage, preservationists render the "profession of science or learning gained by a master or the exercise of a kind of work which has for its purpose at the end of the last century, when that profession was at a comparable stage of development and self-definition.

How, in particular, are preservationists opening themselves to liability? Various intangible factors, including greater visibility, will increase the likelihood of preservationists being sued. Achievement of professional status by preservationists may also bring into play less favorable statutes of limitation and broader exposure toward third parties. Most importantly, the performance of preservationists, qua professionals, will be judged against higher standards. There are two reasons for this.

First, the work product of preservationists will be judged against the standards set by their peers, i.e. other university-trained preservationists, rather than against the work product of contractors, architects or others engaged in the same or similar tasks but not holding themselves out as having had specialized preservation training. The principle can be illustrated by the following analogy: Assume that I ask my daughter's pediatrician not only that there will be no loss of blood, but also that there will be no peaks and valleys. If I go to a hair stylist, I expect the result will be stylish, and that a particularly stubborn cowlick will be rendered invisible.

Although all three undertook the same basic task, i.e. giving me a haircut, I expected different levels of competence of the three. The lawyer expects less than the surgeon's warrants that he is competent to perform the specialized services ordinarily associated with that occupation. He is required to exercise in his work the degree of skill and knowledge commonly possessed by members of that occupation. If harm results because he does not have, or does not exercise, that degree of skill and knowledge, he will be liable, even if his work is comparable to that of the present occupation, the doing of basic tasks.

The second reason that attainment of professional status is likely to increase preservationists' liability is that professional status per se excites higher expectations. "Profession" is defined in Webster's Third New International Dictionary as: "A calling requiring specialized knowledge and often long and intensive preparation, including instruction in skills and methods as well in the scientific, historical, or scholarly principle underlying such skills and methods, maintaining by force of organization or concerted option high standards of achievement and conduct, and setting its members to continued study and to a kind of work which has for its prime purpose the rendering of a public service."

The public expects, and is legally entitled to expect, that the services of a professional will measure up to Webster's definition. I expect of my daughter's pediatrician not only that he met his qualifications 20 years ago, but that he has kept abreast of developments in his field. If I retain another lawyer to render an opinion, I expect his opinion will be based not only on experience, but also on whatever research is necessary or appropriate.

The demands made of professionals can be illustrated by a hypothetical case: A recent owner of a 19th-century apartment house finds the south facade developing large patches of a white powdery substance and selects two consultants with different credentials to diagnose the problem. Consultant 1 is a waterproofing contractor with experience in cleaning and restoring older buildings. Consultant 2 is a 1970 graduate...
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of the historic preservation program of XYZ University’s graduate school of architecture. His name showed up before the qualifications for the project, his postgraduate studies and the several articles he has authored on preservation subjects.

Both consultants give the same diagnostic: "Mister, you’ve got a water problem." Rain water is getting into the masonry and dissolving salts, is drawn to the surface by evaporation and deposits them. If you want to stop the efflorescence, you will have to keep water from entering the masonry. Clean it and apply a moisture barrier." End of diagnosis.

The owner thanks them both, pays them and hires a contractor, whom he tells to do whatever is necessary to keep water out of the building’s walls. A lot of money is spent for cleaning and water-repellent coating. Next February, the efflorescence returns and the faces of some of the bricks are popping off. The owner sues his two consultants.

In the pretrial proceedings, it is established that the salts forming the original efflorescence came from a chemical cleaner the previous owner had used just before putting the building on the market. Neither consultant had conducted any investigation that might have disclosed the earlier cleaning, nor had either consultant made any laboratory analysis of the building’s brick or mortar or of the surface deposits. The trial begins. To prevail against either consultant, the owner must prove that the consultant was negligent, i.e. that he failed to identify the root cause of the building’s efflorescence because he failed to exercise the care, skill and competence commonly exercised by members of his particular occupation.

The case against consultant 1, the waterproofing contractor, is a poor one. There may be difficulty in getting another waterproofing contractor, qualified as an expert witness to testify about standard practices in that amorphous industry. Even if the contractor can identify that hurdle, the testimony of his expert is likely to consist of the expert’s own view of what investigations should be made before being taken, dressed up with unsupported assertions that such an investigation is a norm of the industry. Testimony of that kind, if admitted at all, is vulnerable to cross-examination and is not very persuasive. Consultant 1’s defense is a simple one. He is a waterproofing contractor; if the building owner wanted the services of a chemist or private eye, he should have hired one.

Consultant 2, on the other hand, presents a sharper target, likely to be judged against a standard that is readily ascertainable. The expert witness whom the owner uses in this case, let us assume, is a member of the faculty of the preservation program at XYZ University.

The witness opens his testimony by explaining to the court why it should conclude that university-trained architectural preservationists constitute a discrete profession, and being able to back up that statement with specific criteria—concludes by stating that, had the consultant exercised the skill and learning common to members of his profession, he would have realized that the problem could likely have been cured by application of a poultice or, perhaps, by several good washings with a garden hose.

Whether the second consultant would have been able to save the same consultant that professional negligence is alleged, and being able to back up that statement with specific criteria—concludes by stating that, had the consultant exercised the skill and learning common to members of his profession, he would have realized that the problem could likely have been cured by application of a poultice or, perhaps, by several good washings with a garden hose.

The second consultant was hired once the owner realized that the problem could likely have been cured by application of a poultice or, perhaps, by several good washings with a garden hose.

What liability insurance is available for preservation consultants? Typically, a professional looks to insurance for two types of protection: (1) indemnification for a judgment against him or for a sum he must pay in settlement, and (2) defense in the legal proceedings against him, including payment of legal fees and expenses.

An architectural preservation consultant can purchase the same insurance policies that contractors rely on to protect them from claims of negligence. Such policies including comprehensive general liability will protect against claims for ordinary negligence, i.e. negligence of a nonprofessional nature. The rub comes when a claim is made alleging professional negligence, i.e. negligence of a professional nature. The insurance industry may be unlikely to invest time and effort in designing a professional liability policy for preservationists, including doing the necessary actuarial work, until the developments occur: there is broad market demand for such insurance, and clear lines are drawn around the professional, so that insurers can ascertain easily who is within the profession and who is not. State licensing or, perhaps, a national organization with restrictive membership qualifications could satisfy that second requirement.

Licensing and professional organizations with restricted membership are hot topics of debate among preservationists and are not likely to come for several years. What is the consulting preservationist to do now to achieve some measure of protection? There are quite a number of things, many of which are the beginning steps toward an August 1983 issue of RECORD (see page 39).

Consulting contracts must be carefully drawn, especially as they define responsibilities and the service to be rendered. Projects with high potential for producing lawsuits should be avoided, as should litigation-prone clients. Thought should be given to incorporation to protect personal assets from judgments based on theories of derivative liability. On the insurance front, consideration should be given to asking the carrier to agree in advance on a definition of "professional services," perhaps one limiting its meaning to services that legally can be rendered only by a licensed professional in the jurisdiction of the preservationist’s practice. Most importantly, however, preservationists must become aware of the dimensions of their negligence liability exposure so that at the risk of their own professional planning can proceed on a realistic basis.

Mr. Anderson is an attorney practicing in New York City. He is associated with preservation through a number of activities, including representation of the Center for Building Conservation and affiliation with RESTORE, a skills-training program directed by his wife Jan.

Management continued
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2. Uniform Bldg. Code
3. ASTM E 580-78

Circle 18 on inquiry card
Marketing: Clients' needs are the target

The Society of Marketing Professional Services celebrates ten years of progress with the recent awards for excellence in marketing techniques

By Ernest Burden

At the tenth anniversary convention of the Society for Marketing Professional Services held in Dallas last year, 40 awards were presented to representatives of architectural, engineering, interior-design, construction-management and landscape architecture firms.

Over the decade, the society’s competition has developed from a single category contest for newsletter only, to the 11 category competition of today. It is now the major vehicle in which design firms can put their marketing tools against the standards being set within their own industry.

Chaired for the third year by Nadene Barna of The Falotick, Klein Partnership Inc. and Ernest Burden, New York marketing communications consultant and author of this article, the program drew 300 entries from the current 2,800 members.

Of the 300 design firms that submitted their marketing materials for judging, 10 firms received awards.

The emphasis is finally being placed on the message rather than the medium. This year’s winners demonstrated the growing use of client testimonial and client-targeted messages. This could be the result of a change in the way design firms perceive what clients want to see, the result of several years of a buyer’s market, or both.

In any case, recognizing the client was the focus of most winning programs. And rightly so.

In the print categories, well-targeted and client-oriented pieces were favored by all juries.

In the two audio-visual categories, five of the seven winners featured client testimonials or natural dialogue from members of the firm rather than the traditional canned approach using narrators.

The audio-visual entries were straightforward rather than the “razzle-dazzle” of previous years. As a result, the entries were less spectacular from a media point of view, but more direct in purpose.

Broad criteria made the awards most selective.

The entries were judged in 10 cities nationwide, and jurors were more selective than in previous years in designating winners. One reason for this greater selectivity was the inclusion in the juries of communication experts from other industries, who brought with them their own high standards. As a result, awards were not given in all categories.

Outside jurors who participated in print media judging included Andrew Sparks, editor of the Atlanta Journal & Construction; Jo Ann Truffelman, manager for print and production services, Coca-Cola USA, and John Berry, director of corporate communications, Herman Miller Inc.

Jury for the audio-visual category included William Raczek, director of design, Department of General Services, New York City; Paul Rozyszpal, chief of project operations and branch of GSA; and Douglas Brenner, senior editor, Architectural Record.

Advertising is a prime example of where an outside perspective is needed. “Our industry is only pioneering in advertising and should be judged each year by those with broad experience,” stated competition chair Nadene Barna.

“After all,” said Barna, “when we send a brochure to a prospective client, we compete with all the mail he receives. The same is true in advertising space. Our material must meet the standards of major advertisers if we are to favorably compete.”

Category 1: Company brochures

Jury chairman Joseph Huttie Jr. of Ellerbe Associates Inc. and his fellow jurors felt that only one brochure of the 85 entries should be awarded a major prize. That winner was the brochure of Anshen & Allen Architects of San Francisco.

It was the only entry with that very necessary characteristic, a strong marketing and design concept. It also exhibited a sense of humor and whimsy that appealed to the jury. Said Huttie, “They didn’t use the standard design industry approach of showing all their work and hoping the client sees something he likes.”

Category 2: Special market brochures

The most successful entries in this judging, chaired by Robert Skunda of Dewberry & Davis, were those that had a strong theme and were directed at a highly specialized market. While considering graphics and writing excellence, the jury was more concerned with the over-all concept and creativity of carrying it out.

Most firms designed their special market brochures as a spin-off or extension of a general capabilities brochure rather than clearly identifying the special market and creatively zeroes in on it.

“The writing,” reported Skunda, “was in general misdirected. Many firms are still taking the passive approach to selling themselves rather than explaining how their services will benefit the client.”

Many of the brochures still read as though written for peers, with technical descriptions of capabilities and services.

Category 3: Annual reports

Despite the apparent large investments in time and money on such projects, an impressive brochure could be noted. The most successful entries featured client testimonials and client-targeted marketing tools against the standards. As a result, awards were made to 10 firms.

“I was in general agreement,” said the judge, “the firms filling out the entire spectrum of work.”

“Most firms designed their annual reports to meet the needs of the client,” said Huttie. “This was the result of a change in the way design firms perceive what clients want to see.”

Category 4: Newsletters and magazines

Ten of the 32 submissions contained articles of real interest to the readers and had high quality graphics and photography. Many firms are now including general interest articles relevant to their particular fields to gain the attention of the target audience.

There is also a trend to theme issues oriented to a specific market segment and away from the all-purpose newsletter.

The jury, chaired by Sally Rasmussen of Jova/Daniels/Busby, found that even the many fine technically competent pieces all began to look alike after the first dozen, which is the same reaction one can expect from clients. “What impressed us, then,” noted Rasmussen, “was the competitive edge, the pieces that stood out by using a creative concept, outstanding photography or a well-targeted message.

Category 5: Corporate identity programs

Few design firms are using corporate identity programs to project a unique character and distinguish themselves from their competition.

Jerry Corbin of Corbin Design believes firms are willing to make the necessary commitment to carry out a complete corporate identity.
Trilogy called for intelligent flexibility.

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program where consistency and completeness become major criteria.

Category 6: Direct mail  
Most entries were brochures and one-time mailings rather than annual mailing campaigns, and ranged from brochures and promotion announcements through Rolodex cards, Form 325s and a box pop-up. They tended more to the self-promotion of the design firm than to the interests of the prospective clients, an indication of the need for greater attention among design firms to their market planning.

The jury, chaired by Darlene Weidert of Gensler and Associates/Architects, applied strict state-of-the-art criteria to entrants, knowing that mailing pieces have heavy competition every day in the client’s mail.

Category 7: Special events  
As unsolicited communications, special-event pieces begin in a weak position among all the other competing appeals for the client’s attention. As in the other categories, the entries that spoke to the client’s interest were more effective than those simply stating a self-oriented message.

The jury, chaired by Ellen Flynn-Heapes of C.W. Penfress and Associates, P.C., reacted far more positively to the person-to-person effort than the spare minimalist style or cool abstractions. Also, the highly designed pieces did not inspire the confidence that the slightly more conservative, yet attractive, pieces did.

As with most printed promotional material, the jury (as is the case with clients) preferred limited use of text. Chances of getting your message to the client are much higher with less of his time and commitment required to read a short, clear piece.

Category 8: Corporate advertising programs  
Advertising continues to be an area of inexperience among design firms for which the trouble begins early with failure to be specific in the objective of the advertising. Without a well-defined objective, it simply isn’t possible to create effective advertising.

With a well-defined objective, the next essential is to have a creative strategy to support it. This combination was difficult, if not impossible, to find in this category.

awards competition. Jury chair Joann Stone of Boswell Byers & Stone also noted an “excessive amount of noncredible chest-thumping.”

Category 9: Communications programs  
The winner in this category, Harley Ellington Pierce Yee Associates, was the smallest firm entering—indicating that big bucks are not required to do quality communications material. The winning program involved well-targeted plans for finding and reaching the audience with excellent implementation and follow-through, all major criteria of a program that works—as this one did with five new commissions resulting from the program.

One encouraging note from jury chair Rolf A. Pueessler of C.H. Draper & McKeen was the better quality of the targeted pieces over last year.

Categories 10 and 11: Audio-visual presentations  
Audio-visual entries this year reflected greater professionalism and more attention to techniques, a sign that the individual is becoming comfortable with this medium as a marketing tool. Jury chair Rose Reichman, of Parsons Brinkerhoff noted, "The programs were more targeted to specific client groups. This clearly indicates the importance of knowing your audience and developing presentations that meet their needs."

There is a continuing trend toward the use of personalized messages with natural dialogue spoken by key executives and/or testimonials by satisfied clients. Most of the winners successfully used this technique.

The summary of ten years’ progress is effective communication  
This year’s award winners truly reflected some of the significant changes that have happened over the last decade in marketing trends and techniques. These changes are definitely in the client’s favor, but in turn make for better communication between design firms and clients. For example, brochures are no longer voluminous “picture books” of a firm’s work, or a company catalog of every service the firm offers. Rather, they are sleek in graphic design, have fewer pages, much less text, better photography and are targeted to specific markets and audiences.

Newsletters are no longer typewritten tabloids where the only focus is internal. They are now periodic extensions of the firm’s promotional activities, second only to the brochure. A brochure or print piece may only command 15 or 20 seconds of the client’s attention before it is filed away, whereas an audio-visual program usually lasts five minutes or longer. Therefore, an AV program with good visual and narrative information remains an excellent method of communicating with clients, when you get your foot through the door.

The big change has been the dramatic shift from slide shows to video format among entrants in the competition.

Although only a few firms have reached the level of full corporate identity programs, many are viewing that as the next logical step, as design firms take on more of the traditional customs of corporate businesses.

The award winners in the various categories are:

Company brochures:  
1st: Anahum & Allen, Architects  
2nd: Haines Lundberg Waechler  
3rd: Turley Harris and Li Architects, P.A.

Company brochures:  
1st: Anahum & Allen, Architects  
2nd: Haines Lundberg Waechler  
3rd: Turley Harris and Li Architects, P.A.

The Society for Marketing Professional Services, 1407 Towpath, Alexandria, Va., 22314, 703/749-6117.

Mr. Burden heads the firm of Burden Associates, in New York, and is an architect who specializes in design-communications consultation. He is an author and publisher of The Communicator’s ADvisor, a newsletter on interview strategies, client criteria, presentation techniques and print media.

Burden is a member of the SMPS and author of several books, including Architectural Delineation and Design Presentation, both published by McGraw-Hill.
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NCARB: Who we are, what we do

Success now looms nearer for NCARB, after its many years of effort to achieve nationwide reciprocity of architectural registration by developing acceptable standards in the “four E’s” of the professional path: education, experience, examination and enforcement.

As names go, let us agree that ours—“the National Council of Architectural Registration Boards”—lacks the catchiness ever to win instant recognition among the American public. Yet by the same token it deserves credit for describing precisely what the organization is: namely, a council of the legally constituted architectural registration boards of all 50 states, plus those of the District of Columbia, Guam, Puerto Rico, and the Virgin Islands.

NCARB, known to many as simply “the Council,” is unique among a number of collateral organizations of the architectural profession in two notable respects. Though it has by far the longest span of time in existence, it possesses the largest constituency. Its 54 member registration boards are its only members, and its most important constituency is the entire American public.

How, you may wonder, is it that so few presume to serve so many? A ready answer can be found in the following four words, which state its purpose in these few words: “The mission of the Council shall be to work together as a council of member boards to safeguard the health, safety and welfare of the public, and to assist member boards in carrying out their duties.” It is important to remind ourselves as architects that under the Constitution of the United States, the police power “to guard the health, safety and welfare of the public, and to assist member boards in carrying out their duties.”

What are NCARB's key objectives? Reciprocity is first. Thus, as today, NCARB's key objectives included reciprocal registration, uniformity of examination, interchange of information among the member boards and, as the founders wrote, “other matters of interest to the various committees and improving the general educational standards of the architectural profession in the United States.”

Of these objectives, none exceeds reciprocal registration in importance. In his report to the 1985 NCARB annual meeting, the Council’s executive director, Sam Balen, reported that by early 1984, there will be approximately 22,815 NCARB certificate holders in the United States. He estimated that this figure represents roughly 35 percent of all registered architects in active practice.

Why are so many architects certificate holders and what does it mean? The main reason is that the certificate now enables an architect to gain registration, quickly and without further examination, in all but a few states. The instrument that the Council has developed for special cases to make possible is the Council Record, sometimes called “the Blue Cover.” When a person is issued a certificate, this is done with the understanding that NCARB will act in confidence as a recordkeeper in compiling and maintaining the ongoing documentation of the certificate holder's professional activities. This compilation, the Council states with such laws when Mr. Hall's pioneering handfult met.)

The following year in the month of May, a second meeting in place was to be Washington, D.C. There, in the American architects’ symbol-building, a development committee was formed, with the recommendation that education was needed for the architectural profession in the United States.

Thus the real challenge facing NCARB is that of the Council's executive director, Sam Balen, in 1983 NCARB annual meeting, the Council's executive director, Sam Balen, reported that by early 1984, there will be approximately 22,815 NCARB certificate holders in the United States. He estimated that this figure represents roughly 35 percent of all registered architects in active practice.

An accredited professional degree is now required

The first new development is the apparent reconciliation by NCARB of its oldest and most divisive issue: namely, the question of whether or not a person seeking an NCARB certificate must hold a professional degree from an NCARB accredited architectural education program. One needs to know that the Council voted to adopt the degree requirement at its 1980 annual meeting, similar resolutions previously had been twice adopted—and twice rescinded. Thus the challenge facing the Council was figuring out how to make the latest degree requirement stick. The Council, by the nature of its mission, must strive for a substantial consensus. Though each member board has a single vote, the full membership is sensitive to the fact that a change in the standards for NCARB certification effectively changes the rules by which a registered architect is free to practice in another state; thus if a single state refuses, as a result of the change, to accept the NCARB certificate, the entire structure of interstate registration is impinged.

The degree requirement is at last being made to stick—and in a way that, for the first time, the Council’s mission to safeguard the public interest. Effective July 1, the educational standard for certification will be an NCARB accredited professional degree in architecture. We anticipate that all but a small fraction of those applying for the certificate in the years just ahead will be professional degree-holders.

But an alternate is being developed for special cases

What about those who make up this small fraction who don’t have the right degree? They, too, will be provided an opportunity to satisfy the new NCARB educational standard. At the 1983 annual meeting, the non-degree-holders process was examined. The committee is composed of architects and educators who were appointed on the strength of their demonstrated expertise in architectural education, as well as their notable services in this area. The committee has been meeting in Washington, D.C. There, in the American architects' symbol-building, a development committee was formed, with the recommendation that education was needed for the architectural profession in the United States.

Though Sid Frier cannot tip the committee's hand, he has made two promises. "We are not putting NCARB in the education business, but we are not doing anything that would jeopardize our hard-won educational standard for certification—and that's an architectural education received in an accredited program." I anticipate that the Education Evaluation Committee will create a review board with considerable responsibility for developing such "education criteria" has been in the hands of a committee of NCARB's immediate past president, Sid Frier. The committee is composed of architects and educators who were appointed on the strength of their demonstrated expertise in architectural education, as well as their notable services in this area. The committee has been meeting in Washington, D.C. There, in the American architects' symbol-building, a development committee was formed, with the recommendation that education was needed for the architectural profession in the United States.

The committee will then prepare recommendations for all key aspects of the non-degree-holder's process for member board action at the 1984 annual meeting. Though Sid Frier cannot tip his committee's hand, he has made two promises. "We are not putting NCARB in the education business, but we are not doing anything that would jeopardize our hard-won educational standard for certification—and that's an architectural education received in an accredited program." I anticipate that the Education Evaluation Committee will create a review board with considerable responsibility for developing such "education criteria" has been in the hands of a committee of NCARB's immediate past president, Sid Frier. The committee is composed of architects and educators who were appointed on the strength of their demonstrated expertise in architectural education, as well as their notable services in this area.
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Evaluation Committee's recommendations will be seriously considered as proposed at next June's annual meeting in Portland, Oregon. Should these recommendations be adopted, NCARB will have arrived at a goal that a long succession of Council leaders have hoped to reach. For it is the professional degree that will give us the uniformity we have worked for. It will strengthen our national system of reciprocal registration and therefore assist the member boards in serving the certificate holders and, of course, the public.

A new exam is now accepted by all for registration

Along with the new education standard, NCARB has also created a new single examination. As many architects will remember, various jurisdictions have until recently required all registration candidates to sit for a qualifying test, regardless of their educational background; others, of course, administered this test for candidates who lacked an accredited professional degree. Such disparities complicated the Council's mission to maintain reciprocal registration.

But now, after a prodigious effort undertaken in a short time frame, we have a single, universal examination. Its title, the Architect Registration Examination, or A.R.E., describes exactly what it is. It was first given in June 1983. Reporting on the new exam's development to the NCARB annual meeting, A.R.E. Chairman Edgar Beery, a former member of the Virginia Board, said, "Over 50 dedicated architectural education staff and a very active group of self-serving bias. So President Kirk last year appointed a "validation panel" of 12 registered architects to evaluate all nine divisions of the 1983 edition of the A.R.E., as well as the 1984 exam specification. The specific criteria for selecting the "validators" is significant. The panel comprised two members each from NCARB's six regions. They are associated with firms ranging in office size from two to over 200, and they range in experience from one person who has practiced for only two years to a senior partner in one of the older firms in the United States. The single most important criterion is that the validators "are not now, nor have been, members of the National Council of Architectural Registration Boards." The NCARB Validation Committee, chaired by Robert Tessier, a current architect member of the Massachusetts Board, has as its primary duty the recording of the panel's comments. Tessier notes that the results of the validation will be entirely and exclusively those of the panel. It is expected that these results will be presented to the Council's spring regionals.

Cooperation spurs the intern program—but more is needed

Another major development is the progress the profession's collaborative organizations have achieved recently in working together. These are, of course, the organizations comprising the Five Presidents' Council—namely, NCARB, AIA, the Associated Student Chapters/AIA, the Associated Collegiate Schools of Architecture, and the National Architectural Accrediting Board.

What has happened, essentially, is that all five bodies have learned through a kind of collaborative on-the-job training regimen where their mutual interests generally superimpose themselves and, equally important, where their vested interests tend to dovetail. It has taken two factors to make this spirit of cooperation a reality: first, an enlightened leadership over the last several years, and the other has been the recognition of tasks that not only needed doing but could only be done by everyone's pitching in. Among the numerous collaborative enterprises of recent days, two are particularly worth citing: They are the Intern-建筑师 Development Program (IDP), and the Special Committee of the NAAB.

Before a pilot IDP was launched in the early 1970s, so little was known about the nature and quality of internship that Charles Bloomfield, NCARB's president in 1976-77 and doubtless the IDP's prime instigator, called it "the gap." Typically, young people were lost track of for several years after earning their degree; they reappeared again only when they applied to their state board to take the exam. What they had been doing, or not doing, to gain the experience required of them and constitutes for licensing was a matter of serious concern to NCARB and AIA. In the past two or three years—since students beyond the third year have been allowed to earn and gain credit for IDP "value units"—both the schools and the students have also recognized the IDP's relevance.

As an architect and a spokesman for NCARB, I am a believer in the IDP. I have seen that the program's requirements, having been tested and refined through nearly a decade of nurturing by the IDP Coordinating Committee, are producing better-qualified young architects. My firm is convinced that IDP participation is advantageous to the development of intern-architects that we make it a condition of employment. The program is strongly endorsed by all of our collateral organizations, and I urge that registered architects give it the support it deserves. Far from "costing" you time and money, as we sometimes hear from the ill-informed, the IDP-attached intern represents a solid long-term investment in professional talent.

New school accreditation criteria is another development

Less well known than the IDP but no less significant is the Special Committee of the NAAB which was appointed to evaluate the entire architectural school accreditation process. The committee's makeup was prestigious and broad-based. Its members were presidents or past presidents of AIA, NCARB, ACSA, and NAAB, with the exception of an ASC/AIA person who also served on the NAAB board. The Special Committee's major recommendation, which was subsequently adopted by the NAAB board, calls for the implementation by NAAB of the committee's "achievement-oriented performance criteria" which would be applied for "the purposes of evaluating the performance of all candidates and thereby the effectiveness of the (school) program." This marks the first time ever that the accrediting process has been structured to evaluate the academic program on the basis of its graduating students' performance.

But the public interest always comes first with NCARB

From NCARB's point of view, the public interest is accommodated to a far greater degree through an internship program that is firmly based on training criteria that can be uniformly applied by all 54 member boards. Similarly, it is well within the Council's responsibility to concern itself with the quality of architectural education. It is a major part of our work to prepare a national examination for all registration candidates. To accomplish this important task, we must be able to interact with the educators and other collaborators involved.

While the public may be our largest constituency, we have other constituencies, too, within the profession. And we prize our good relations with all of them. Most of the men and women who serve on their state registration boards—NCARB's member boards—are registered architects. The remaining members are public members. We are all sworn to safeguard the public health, safety and welfare. It is perhaps unclear to some in the architectural profession that when we are doing the Council's work, we are public servants first and architects second. We may belong to the AIA, we may be architectural educators, practitioners or salaried workers in the public or private sectors. And we are proud of our profession and wish it well. But when the issues are clear and the public interest is paramount, NCARB is bound to resolve them to the public's benefit.
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Architectural education: A practitioner's personal view

By James J. Foley

Most architects have opinions about politics, art or any other subject including the state of architectural education in the United States. Consistent with that broad statement, the following are my views on the state of architectural education in general— with emphasis on Ohio in particular. During my tenure as a member of the board of directors of the American Institute of Architects, followed by a term as a member of the board and then as president of the National Architectural Accrediting Board, for U. S. schools which is creative and interested with the slow but sure change in architectural education and the relationship of the profession with academia. I feel that this change is positive and is still under way. My opinions are personal. However, they are the result of some experience in the academic arena and are influenced by 30 years of private practice—which is about to come to a planned termination.

Today's students are clever, quick—and serious

In Ohio, we are experiencing a phenomenal improvement in the knowledge and skills of the incoming students. They are clever, quick, worldly and are well informed about architectural affairs across the land— as well as to the students of, say, 15 years ago. Fortunately, most have abandoned the view that the super architect (which some want to be) drives around in a Ferrari, has seven different “dates” (one for each night of the week) in a personal penthouse on the top floor of the most expensive building in town. This is the TV syndrome, and while still popular, is not why the average student of today is studying architecture. Eventually, the students are more interested in improving the lot of fellow citizens while engaging in a profession which is creative, exciting and on the cutting edge of tomorrow. If lucky, or unlucky perhaps, this TV architectural personality may evolve. However, that is not the major point.

I believe that the profession can be thankful and look forward to a positive future because of the changing student body. I am de-emphasizing architecture in favor of social rhetoric are also better by being a better trained professional.

If the student of today is indeed this serious-minded seeker of education and training, we should look at the schools that provide it. How well are they equipped, both physically and mentally, to do the job? What commitment do they have to architecture in both the narrowest and broadest sense? Are the schools up-to-speed, so to speak, with the demands of today’s practice? I can only generalize about my geographical area and obviously my views may or may not coincide with other parts of the country. Just what is happening in architectural education in Ohio?

What kind of school should one choose

Ohio has four accredited schools of architecture and I believe that they tend to serve four very different constituencies—and this is indeed fortunate. It is possible in Ohio to pick and choose, within limits, the kind of architectural exposure you want, assuming that you know the difference. That in itself is a problem; many cannot differentiate among the various academic thrusts because they have no basis for evaluation. They have no single source for this information. There is a need for someone to make available to that vast consuming public a reference that will help guide the student in the choice of school. Which school is practical oriented; which is strictly design; which emphasizes physical planning versus social planning and the like? It would be difficult and possibly unfair to grade or categorize the different schools; but it may be a real service to guide students in terms of interest, and aim them toward the institution that parallels their interest.

As I have tried here to do this for the four schools of architecture in Ohio—Kent State University, the Ohio State University, the University of Cincinnati, and Miami University. A few short years ago Ohio University in Athens also had an architectural program; however, when they had accreditation problems they dropped it.

At the expense of offending some and pleasing others, the following views are mine. I do not believe that they are shared by a majority of practitioners in Ohio. I have not intentionally set out to discredit any of the fine schools or their faculties.

The University of Cincinnati combines study with work

What kind of school is the University of Cincinnati? On balance, I think it is a very good school with an innovative work-study program. UC has no problem placing its graduates, who are well trained for entry in the profession when they complete the fundamental educational program. All students go to school for a given period of months, followed by a similar period of actual on-the-job experience in an office. UC has done a good job of preparing the students for on-the-job experience. Last year I had in my office a student by the name of Larry Cunningham, and I can report from actual experience that he will one day be an asset to an architectural firm—maybe his own. After he finished, here he went back to school for another term, and I understand that he then went with The Architects Collaborative in Cambridge for additional experience. The point of noting this is that I feel that Larry is getting a good, broad-based education and he will enter the profession on a higher plane than the average graduate. The problem (if indeed it is a problem) with this type of program is that it does take more time and money to complete—but many argue that it is time and money well spent. I feel the program is well balanced between design and practice, and produces a well-rounded architect within the capability limits of each student.

Miami University stresses design

Miami University, located in Oxford, Ohio (which is between Cincinnati and Dayton), is physically well positioned. Many natives think of the idyllic setting of this quiet, serene college town (most of the time) as the perfect setting for a transition into adulthood. But, what about the architectural program?

I believe that Miami marches to a different drummer—and there certainly is room within the profession for that. In my opinion, they tend to overemphasize the design studio aspect at the expense of more fundamental values. They seem to engage in a design frenzy with the help of the guru. (There, I have said it). As I stated earlier, these views are subjective and I am sure that I will be challenged by Dean Hayden May, who can and, I hope, will challenge my statements. In any event, I feel that Miami turns out a middle-of-the-road graduate who needs shaping and, in terms of understanding that a building has to stand up and not leak—and that building codes, whether or not you like them (and who does?), are indeed a constraint upon the design effort. You may argue that this part of the educational experience can be acquired on-the-job in an office—which is true—but it means that this type of graduate starts at a different threshold within the profession.

Kent State University offers a non-nonsense balance

Some of you may remember Kent State, in Kent, Ohio, for another reason that is part of its past. You should also know that the architectural program, founded and nurtured for many years by Joe Morbito, is a fundamentally sound program based on the fact that Joe was a practitioner in good standing, who knew what the student had to know to succeed. From the time Western Reserve gave up its architectural program, Kent State has serviced the northeastern part of our state as the training ground for architects.

In my view, the program integrates the constraints of design with the real world of
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practice and, while essentially continuing the basic philosophy of Joe Morbito, is now under the leadership of Peter Armstrong. It seems to be the consensus of the architectural community that Kent State is a good, solid school with a non-nonsense program. What more is there to say?

Ohio State University integrates building techniques with design

The fourth architectural program in Ohio is in Columbus, at the Ohio State University. The school of architecture is part of the college of engineering. This organizational structure has meant many things to the architectural program, both good and not so good. When you consider the power politics of a university setting, this structure has given the school of architecture much clout which it would not have had if it were standing alone. At Ohio State, the engineering college is outstanding and has a worldwide reputation that is highly respected within the university. Dean Glower of the college of engineering is sympathetic to the needs of architecture and lends his support. This has meant a great deal in terms of faculty salaries and other day-to-day operational needs of the school.

On the other hand, within the architectural community there is the ongoing concern that architecture may succumb to an engineering emphasis at the expense of design. As a matter of fact, such is not the case. The college administration wants the school of architecture to be the very best, and has given it every support and academic freedom to reach this goal; architecture has total control over all of its curriculum matters, but can and does draw upon the great resources at the disposal of the college of engineering.

Historically, the architectural program at Ohio State has been a fundamentally sound one, although it has not yet attained the status of excellence consistent with university and college goals. A number of years ago, in an attempt to remedy this situation, the program was restructured, and numerous changes were made within the faculty and curriculum—which re-oriented the program toward urbanism as a main thrust. In so doing, too much emphasis was placed on the rhetorical side of architecture, at the expense of the practical aspects. For example, courses such as "the political determinants of architecture," plus "the social determinants of architecture" were over-emphasized. While important, they did not further the education in basic architectural terms—given the limited amount of time available. To accommodate these courses, "structures" (other than a basic introductory course) was made an elective, which gave the students an opportunity to avoid rigorous courses—which naturally they elected to do at the expense of their well-rounded education.

This narrow emphasis on urban design, at the expense of the fundamental skills required in architectural practice, led to the decision that the program required another new direction. The school of architecture, under the directorship of Jerrold Voss, now has three departments: architecture, landscape architecture, and regional planning. This seems to be an ideal composition whereby each department can draw on the strengths of others and in fact, such is the case.

After redirecting the emphasis that the architectural program at Ohio should take, Robert S. Livesey was appointed chairman of the Department of Architecture. His credentials are impressive, with a balance between professional practice and teaching that gives me reason to believe Ohio State is in good hands.

Livesey believes that architecture is multidisciplined, and he will concentrate on a balanced program. There is a basic body of knowledge which must be studied and not dabbed with. In the past, teaching assistants assumed a major teaching load in the design studios. Livesey plans to get the faculty back into the studios. He plans to use the design studios to apply the information from the other disciplines and synthesize design with this practical knowledge. Space planning and arrangements are not enough; the student must know that buildings are a product, so to speak, and must serve the needs of the client and public in general. In addition to this, the student must be exposed to management considerations, including time and resources. The student must have knowledge of history to avoid re-inventing the architectural wheel. This new program will integrate the technique of building with the art of design. The student will be taught how to put it all together, with the ultimate goal being that elusive concept called architecture. How can you argue with that goal?

We all recognize that the practice of architecture involves art, science and business, which can be defined many different ways by different people. This new program at Ohio State will give carefully measured quantities of each, in a matrix that synthesizes the total. Good design is the goal, nurtured and supported by technology, blended with knowledge of the workings of our free enterprise system.

Ohio State was also fortunate to receive a large grant from IBM for a further integrative program in computers and their application to architecture. The computer is viewed here as a tool and not an end unto itself. If a student is interested in the high-tech use of computers in architecture, this facet of the program is very strong.

What should schools teach

In terms of architectural education in general, I hold that there are three levels of attainment. They are skill, understanding and knowledge. The dictionary defines skill as "the ability to use one's knowledge effectively and readily in execution and performance; distinction, mastery." That says it all. While a suitable goal, I am not sure that the university should be charged with this assignment. This level of attainment will probably be realized by native ability or practice, without university input—assuming that the basic ingredients are there.

On the other hand, understanding is the responsibility of the university and the student, with particular emphasis on the student. Again, Webster says that this is "to have thorough or technical acquaintance with, or expertise, in the practice of" and further states "a mental grasp, comprehension, and the power of comprehending." In my view, understanding is the keystone of an educational program.

My definition of knowledge is quite narrow and is not totally in agreement with the broad scope of the dictionary. I prefer the specific definition of Webster, which states "the fact or condition of being aware of something." The student should have an awareness of finance and its impact upon design without necessarily understanding the inner workings of the free enterprise system. The same for other support disciplines.

No one ever said that it is easy to teach architecture. There is just too much to do and learn—and so little time to do it. The architect of today is expected to be an artist, demonstrate the expertise of a scientist and operate as a businessman. This is a formidable assignment to accomplish in a few short years, during which the student is also infused with social sciences, language, and all of the other things which an architectural student is expected to appreciate. Maybe it just cannot be done in a structured way. Perhaps the student should be given a palette of tools, left to choose those which are comfortable and which can be mastered, then turned loose to develop the skills of the craft through experience and actual use. But this method may be a little hazardous, and in our litigious society could completely inundate the courts. It also may be expensive tuition.

What conclusions can one assume

I cannot speak for architectural education across the land, but in Ohio it is alive and healthy. Enrollment is up and support for higher education at the government level is improving. There is a healthy diversification of programs available, and there is a continuing dialogue between the schools and the practicing profession. I don't think we can relax, but speaking for this practitioner, we can feel comfortable.
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Circle 31 on inquiry card.
Canada announces plans for two major museum projects

The Canadian government recently unveiled models of two new buildings for the National Gallery of Canada and the National Museum of Man. Designed by Moshe Safdie & Associates in collaboration with the Parkin Partnership, the National Gallery in Ottawa (photo top) will house 323,000 square feet of space for the display of the country's largest collection of Canadian, American, and European art. The sandstone and glass museum will be located across the street from the Gothic Revival Notre-Dame Basilica on a promontory in the Ottawa River overlooking Parliament Hill. An entrance pavilion near the Basilica opens onto a glazed ramp leading to the Great Hall—a contemporary glass version of Canada's Parliamentary Library which serves as an entry foyer to two floors of galleries grouped around three courts (photo left). The 420,000-square-foot National Museum of Man (photo above) will be situated directly across the river from the Safdie complex in Hull, Quebec. Designed by Douglas Cardinal, Ltd., in joint venture with Tétreault, Parent, Languedoc & Associates, the striking new museum of Canadian anthropology, history, and folk art will be, according to Cardinal, "a symbolic form [that] will speak of the emergence of this continent, its features sculpted by the winds, the rivers, the glaciers." Within the structure's undulating masonry shell the architects have designed vast, flexible halls of varying heights where museum curators will fabricate contextual settings for the collections.

Architectural Record February 1984 49
Knoll

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There is a popular myth in business: Fatigue is the sign of hard work and high productivity. Knoll and designer Niels Diffrient know fatigue is the enemy of productivity, and so explode that myth with the Diffrient chair. This is seating that beautifully combines everything the research of the last 30 years has revealed about comfort and productivity with everything Knoll and the designer know about aesthetics. Another myth: Knoll makes only very expensive office furniture. The Diffrient Management chair puts another myth to rest. Knoll International, The Knoll Building, 655 Madison Avenue, NY, NY 10021.
A riverfront park for New York is proposed

Three conceptual alternatives for Westway State Park, a 93-acre public waterfront greenspace that will extend along the Hudson River from the edge of Battery Park City in lower Manhattan northward to 34th Street, were recently unveiled by New York Governor Mario Cuomo. The park is an integral part of the controversial Westway project, a proposal to build on Hudson River landfill a depressed and covered interstate motor route that would replace the razed West Side Highway. Designed by Clarke & Rapuano in joint venture with Venturi, Rauch and Scott Brown, the three alternatives all feature a linear configuration of continuous waterfront esplanades over the highway combined with open play areas, piazas for public events, and recreational facilities. Because the entire Westway proposal must still face a variety of review processes and impact studies, work on the park is not expected to begin until 1989. In the meantime the architects' drawings are available for public viewing during business hours at the offices of the Westway Management Group, 5 Penn Plaza, New York City.

Three conceptual alternatives for a riverfront park, part of the controversial Hudson River from the edge of that will extend along the public waterfront greenspace Westway State Park, a 93-acre Westway project, a proposal to Street, were recently unveiled by 34th Manhattan northward to Battery Park City in lower is proposed for New York California architecture and international stature of at 2:30 Charles Gandee will chair painting, design, light, and living; on the California difference in will moderate a panel discussion 22 at 11:30 Stanley Abercrombie at the West Hollywood will be held at the Blue Whale or Auditorium. On "Thursday, March 17, 1984," a reference to Los Angeles' role as host to the 1984 Olympic Games. The conference will feature a series of programs called International Nature, Products, Places and Reputations—developed by PDC2, the West Coast contract furniture manufacturers association—that will highlight work by important architects and designers with special emphasis on California's influence on the design world. Most West Week programming will be held at the Blue Whale or at the West Hollywood Auditorium. On Thursday, March 22 at 11:30 Stanley Abercrombie will moderate a panel discussion on the California difference in painting, design, light, and living. At 2:30 Charles Gandee will chair a general discussion on the international nature of California architecture and design; at 4:00 Lella Vignelli will introduce Joseph D'Urso and his work while at 5:00 Pilar Viladas will do the same for Robert A.M. Stern; and at 6:00 an historical review moderated by Charles Jencks will include D'Urso, Vignelli, Bruce Graham, Hans Hollein, and Wolf Von Eckardt. On Friday at 1:00 Hollein will chair a charrette of California design including participants Andrew Baty, Eric Moss, Rob Quigley, and Johannes Van Tilburg; at 2:45 Carol and Roy Deomani will present their Venice beach house by Robert Graham; at 4:00 Von Eckardt and Bruce Graham will discuss the recent work of Skidmore, Owings & Merrill; and at 5:00 Abercrombie and Robert Siegel will review the architecture of Gwathmey Siegel & Associates. On Saturday at 12:00 Stern will discuss the work of Hans Hollein with the Viennese architect. Later that afternoon there will be two multi-image audio-visual presentations—the first an exploration of Los Angeles' emerging identity between 1932 and 1984, and the second a preview of the architectural, interior, and graphic designs created for this year's Olympics. At 7:00 that evening the Los Angeles Museum of Contemporary Art will host a reception at the museum's new temporary headquarters. For fuller details on dates and times of these and other programs, write to the Office of Public Relations, Pacific Design Center, 8687 Melrose Avenue, Los Angeles, Calif. 90069, or call 213/697-8680. RECORD will feature complete coverage of West Week activities in the New products section of the May issue.

The origins of modern Chicago are examined in "Compact Comfort: Apartments and Bungalows in Chicago, 1880-1940," currently on view through April 17 at the Chicago Historical Society. Organized by Society curators Wim de Wit and Sabra Clark, the exhibit features models, drawings, historic photographs, period real-estate brochures, and advertisements that illustrate how a wave of new residential construction in the early 20th century transformed Chicago from a city of mansions and row houses into a community dominated by smaller, more efficient apartments, flats, and bungalows. A central theme of the exhibit is the influence of the Arts & Crafts and Domestic Science movements on residential architecture of the period.

Continuing the pattern developed over the past few years, West Week 1984 will combine a contract market of the 30 member firms housed at the Pacific Design Center with a major symposium on current design ideas and philosophies. The theme of this year's event, scheduled for March 22-24 at the landmark West Hollywood center, is "Gateway to the World," a reference to Los Angeles' role as host to the 1984 Olympic Games. The conference will feature a series of programs called International Nature, Products, Places and Reputations—developed by PDC2, the West Coast contract furniture manufacturers association—that will highlight work by important architects and designers with special emphasis on California's influence on the design world.

West Week '84 to examine the design world according to California

Modern living, Chicago style

The Shen Zhen Development Center in southeastern China (People's Republic) is a 35-story mixed-use facility consisting of a 200-room hotel and ten floors of office space for international oil companies and other foreign firms. The competition-winning tower of aluminum and silver reflective glass was designed by Caudill Rowlett Scott.
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Circle 32 on inquiry card
Alexandria: commercial contextualism

Located on a prominent corner site in the Old Town section of Alexandria, 1101 King Street is a seven-story office and retail condominium complex designed by Zinser & Dunn Associates to blend in with the brick architecture of this historic Washington suburb. Although the architects have dubbed the 200,000-square-foot structure "Edwardian," the building exhibits a variety of details that, in truth, defy any specific stylistic classification. No matter: 1101 King Street represents a continuing trend by architects and developers working in older urban and suburban areas to plan projects that defer to their surroundings. The question of style in this case is less critical than the issue of compatibility.

Boston: common sense

The Boston Redevelopment Authority has announced plans for a mixed-use residential and commercial complex on the last developable parcel fronting the Boston Public Garden. The 493,000-square-foot, red-brick and stone structure by The Architects Collaborative features a seven-story office and retail block along the Garden backed by a 12-story condominium wing.

Miami: reclaiming the waterfront

Although the commercial rejuvenation of Miami over the last ten years has enhanced the city's reputation as an international business center, little has been done to help a declining downtown shopping district compete with the retail malls that dot this sprawling metropolitan area. That situation may soon change if a proposal by the Rouse Company, the people who brought you Harborplace in Baltimore, Faneuil Hall Marketplace in Boston, and South Street Seaport in New York, sees the light of day. Working with architects Benjamin Thompson & Associates and Spillis Candela & Partners, Rouse seeks to redevelop verdant, but rundown Bayfront Park into a retail market known as the Bayside Specialty Center. The 225,000-square-foot, C-shaped complex on Biscayne Bay will include two-story north and south pavilions housing space for 200 small merchants; a central market square; a landscaped pier/park sheltering a marina; and a terraced garage for 1,200 cars. There are provisions to link the center to the rest of downtown via an extension of the city's elevated rapid transit system.

Dallas: ever bigger, ever higher

Allied Bank Tower is the first phase of a development project located on the northern edge of downtown Dallas that eventually will consist of three office buildings and a luxury hotel. For the proposal's initial stages two sculpted 60-story towers sheathed in reflective glass will be set at right angles to each other on a landscaped plaza. Each building will house 1.2 million square feet of office space and will be, at 720 feet tall, among the city's loftiest skyscrapers. Architects for the project are I.M. Pei & Partners in joint venture with Harry Weese & Associates and the landscape architecture firm of Kiley-Walker.
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AIA honors ten

Ten men and women have been elected honorary members of the American Institute of Architects in recognition of their contributions to the architectural profession or related fields. The individuals are James Marston Fitch, founder of the country’s first graduate program in historic preservation at Columbia University; Mildred Friedman, design curator at the Walker Art Center in Minneapolis; Gerald D. Hines, owner of a Houston-based development firm known for its architecturally distinguished projects; Lee Edward Koppelman, executive director of the Long Island Regional Planning Board; U.S. Sen. Daniel Patrick Moynihan (D-N.Y.), author and chief sponsor of the Public Buildings Act of 1978; Michael J. Pittas, director of the Design Arts Program at the National Endowment for the Arts; John F. Robin, chairman of Pittsburgh’s Urban Redevelopment Authority; Leon R. Strauss, founder and head of Pantheon Corporation, a St. Louis development firm; U.S. Rep. Sidney R. Yates (D-Ill.), a major supporter in Congress of Rep. Sidney R. Yates (D-Ill.), a major supporter in Congress of the National Endowment for the Arts; and Kathleen Davis, executive director of the Orange County Chapter/AIA.

Raymond Hood is focus of Whitney show

The skyscrapers of Raymond Hood, one of America’s best-known architects of the 1920s and 1930s, are the subject of an exhibition currently on view through March 7 at the midtown branch of the Whitney Museum of American Art in New York. Curated by Carol Willis, "Raymond Hood: City of Towers" is a collection of 24 drawings and photographs that illustrate how five of the architect’s most distinguished buildings—the Tribune Tower in Chicago and the American Radiator, Daily News, McGraw-Hill, and RCA buildings in New York—exemplified the ornamented vertical tower as the ideal skyscraper form versus the setback structures advocated by many of Hood’s contemporaries. The show also includes sketches of Hood’s visionary proposals.

One man’s follies

Although the bucolic Berkshire foothills of northwestern Connecticut have inspired many artistic creations over the years, few are as evocative as the pair of wood constructions recently erected by Mike Cadwell, a young architect from New Haven. Cadwell calls his structures lyrics, and he has named them according to the seasons. The spring lyric (photo left) is a "bridge-box" that contains two rooftop banquettes and a tall ladderback chair from which a waterfall is visible; the fall lyric (photo right) is an "ark-tower" housing a fold-down desk in its prow and cabinets within thick walls. As contemporary adaptations of the historic architectural folly, the lyrics are "buildings without a program but with an emotive or imaginative intent," according to Cadwell.
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When a versatile solar control glass was needed for the uniquely designed Arco Centre office complex in Long Beach, California, Ford Sunglas Reflective was chosen. The two fourteen-story towers feature a four-side structural silicone glazing system which creates the striking visual effect of a continuous glass skin. The Arco Centre complex contains 240,000 square feet of Sunglas Reflective, making it the largest building project of its type to feature this glazing system.
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Circle 35 on inquiry card
1. Orchard Lofts Unit #2, Chicago, Illinois; Schroeder/Guerts Associates, Architects. The problem facing the architects was how to convert a freestanding, two-story masonry and timber factory building and an adjoining 45-foot-wide lot into six town houses and two apartments. The solution, exemplified by the winning design pictured above, was to place a three-story "house" into the interior that defines a central lightwell, provides vertical circulation, and divides the living space from the kitchen and the master bedroom from the study.

2. Area 2 Police Center, Chicago, Illinois; City of Chicago, Bureau of Architecture, with Murphy/Jahn, Architects (see RECORD, January 1983, pages 105-107). Located near the industrial warehouses of the city's Pullman district, this low-slung facility consolidates several interrelated police and court functions. Public entry into the complex is through a courtyard adorned by a suspended acrylic sculpture. In order to create a feeling of openness not generally associated with buildings of this type, the architects made extensive use of glass blocks and bands of clear glass that alternate with blue insulated metal panels.

3. Private Residence, Winnetka, Illinois; David Hovey, Architect. An industrial esthetic inspired both the interior and exterior of a 3,400-square-foot residence for the architect and his family. Clad in 3/4-inch-thick cement fiberboard sheets, the structure is entered through a landscaped courtyard enclosed by a high corrugated metal wall. In order to provide an open living area uninterrupted by load-bearing elements, the architect utilized exposed, punched steel joists that were painted red to contrast with the silver color of a galvanized steel deck.

4. North Shore Congregation Israel Addition, Glencoe, Illinois; Hammond Beeby and Babka, Architects (see RECORD, June 1983, pages 104-113). The existing synagogue by Minoru Yamasaki is situated on a bluff overlooking Lake Michigan and consists of a 1,000-seat sanctuary and administrative and school space. The new addition houses a circular 300-seat sanctuary, social hall, study, reception room, and kitchen. Its volume balances that of the earlier school wing, while its dignified dark brown brick facade matches the masonry of the existing structure.

5. Pinewood Farm Addition, Shields Township, Illinois; Frederick Phillips & Associates, Architects. Although this one-and-one-half-story wing exhibits a strongly individual architectural presence, its sympathetic forms and materials harmonize well with an existing farmhouse. High windows and narrow openings allow light to penetrate the structure but ensure privacy near the front door. A circular drum housing a stair to the basement was inspired by silos and other storage facilities on the property.
A housing complex for the elderly in Arlington Heights, a public works maintenance center in Evanston, and an addition to a synagogue in Glencoe were among the winning entries in the 1983 Distinguished Building Awards program of the Chicago Chapter, AIA. Jurors Gunnar Birkerts, FAIA, Malcolm Holzman, FAIA, and Robert A.M. Stern, AIA, chose the ten designs illustrated below from 80 submitted projects that had been completed between January 1, 1980 and May 31, 1983. Although this year's Chicago winners exemplify the city's continuing importance as a center for architectural thought and practice, the 1983 awards programs sponsored by the San Francisco, Georgia, and Gulf States AIA chapters, covered on pages 60-63, reveal the strength of regional architecture both in new and adaptive reuse projects.

6. Evanston Terrace, Evanston, Illinois; Booth/Hansen & Associates, Architects. English terrace housing inspired the design of a residential development that fills a long narrow site on a busy Evanston street. The complex comprises 43 units, each 16 feet wide, grouped around a central mews. The architects sought to distinguish the individual units by varying facade colors, wall planes, and planting beds. Face brick, stone trim, and wood windows were selected to harmonize with nearby 1920s-vintage apartment buildings.

7. 320 North Michigan Avenue, Chicago, Illinois; Booth/Hansen & Associates, Architects. Tripartite Chicago-style fenestration and strongly molded masonry ornamentation link this slender 48-foot-wide residential tower to the city's distinguished architectural past. The 70-unit structure terminates in terraced penthouses and a peak-roofed glass dormer—elements that help establish the appropriate domestic character of garden and house. The architects avoided blank side walls by replicating the modular grid of the street-facing windows in patterned concrete.

8. Evanston Public Works Service Center, Evanston, Illinois; Sisko/Lubotsky Associates and Consoer/Morgan, Architects. This 140,000-square-foot complex consolidates Evanston's parks, forestry, streets, sanitation, and building maintenance departments. The architects selected red brick and limestone to harmonize with the building's immediate neighbors. By framing the large vehicular portals with decorative concrete, they sought to soften the severe lines of the utilitarian facility.

9. Edgewood Homes, Highland Park, Illinois; Booth/Hansen & Associates, Architects. This privately developed housing complex consists of 43 single-story attached and detached residences strung out along a winding suburban street. Clustered around automobile courtyards, the buildings have brick and limestone-trimmed exteriors with wood frame and drywall interiors left unfinished for customizing by the owners. Although two different floor plans respond to particular relationships of entry and view, all units share a common planning, construction, and proportional module.

10. Linden Place, Arlington Heights, Illinois; Nagle Hartray & Associates, Ltd., Architects. A four-foot by 12-foot module was used in the design of a subsidized residential development consisting of a four-story, 110-unit structure for housing the elderly and 80 two-story town houses. Working within a tight budget that averaged $44 per square foot, the architects sought to enliven the complex by modestly varying the brickwork, both in color and detailing, and by employing cut stone trim.
San Francisco Chapter/AIA
1983 Honor Awards

1. 750 Bush Street Condominiums, San Francisco, California; Donald MacDonald, Architect. Located on a steep hill near downtown, this 16-story, 60-unit condominium tower is extensively glazed to take full advantage of its south-facing site. The architect placed apartment living areas in the building's brightly lit front, while bedrooms are at the rear, away from traffic noise. The jury's verdict: "A stylish fit for the Nob Hill apartment house district that exploits the view potential of its location."

2. 90 New Montgomery Street, San Francisco, California; Gensler & Associates, Architects. A 15-story office building was planned for one of the few remaining areas of the city's financial district still characterized by low- and mid-rise structures of the early 20th century. The design objective was to create a contemporary building that deferred to the traditional architecture of its surroundings. Although the jurors felt that a glazed dormer atop the structure seemed somewhat unrelated to the overall design, they called the project "a successful effort to fit a new office tower into an historic context by [using] the scale and detail of its older neighbors."

3. Hall House, Blue Lake Springs, California; Donald MacDonald, Architect. A mountainous site in northern California is minimally disturbed by a three-bedroom, two-bath vacation house that employs the technology commonly used to erect ski-lift towers—i.e. a simple system of prefabricated Cor-ten steel members transported to the site and set into six concrete footings. The jurors called the project "a strong constructivist solution designed for easy erection in a remote area."

4. Sundome, San Francisco, California; Reid & Tarics Associates, Architects. This proposal for a solid-dome stadium cover addresses the city's need for an all-weather athletic facility to replace windswept, fog-bound Candlestick Park. The architects' solution is a fixed roof with clerestory windows that are calculated to emit no direct sunlight onto the playing field. The jurors found the idea "striking," but questioned the effect that patterns of light might have on the players' performance.
Taking its cue from a similar event held in Iowa, the San Francisco Chapter, AIA selected the theme of “Unbuilt Architecture” for its annual Honor Awards program in 1983. Illustrated here are nine of the 15 winning designs by Bay Area architects that were chosen from 96 entries. “The chief criterion for premiating these projects,” noted juror Sally B. Woodbridge, “was our feeling that they would have contributed positively to the environment if they were built. Although we had no prior intention to choose a range of projects, we found that our final selection reflected the variety of building types submitted, from residential to commercial and mixed-use, and from large-scale urban design to adaptive reuse of historic structures.” In addition to Woodbridge, an architectural writer, the jury consisted of Donna Logan, FAIA, of Elbasani, Logan & Severin, and Harold P. Stump, professor emeritus at the University of California, Berkeley.

5. Jessie Street Substation Renovation, San Francisco, California; Werner & Sullivan, Architects. This project was a proposal for the adaptive reuse of the former Pacific Gas & Electric substation, built in 1906. Conceived as a gateway linking downtown’s refurbished Market Street to the Yerba Buena urban renewal area, the building was to be developed with a central pedestrian atrium flanked by ground-floor retail space and upper-story offices. The jury commended the project as a “respectful retrofitting of a city landmark.”

6. Pacific Edgewater Club, San Francisco, California; Pflueger Architects. Designed by Timothy Pflueger in 1927 for a spectacular site overlooking Point Lobos, this dramatic scheme for a private club died when the developer fled the country with money he had collected from proposed members. The jury applauded the entry as “unique among the submissions, a genuine period piece. This project’s colorful history and fine free-hand drawings [by Hugh Ferriss] made us long for more.”

7. 600 Harrison Street, San Francisco, California; Tai Associates, Architects. The towerlike forms that articulate the street facades of this block-long office and retail complex are based on the profile of an existing corner structure. The architects achieved additional contextual harmony by breaking up the building’s volume into four separate units and by varying colors and materials. The jury praised the design for its “rhythmic form and merciful scale.”

8. Columbia Plaza Headquarters Branch, Denver, Colorado; Robbins & Ream, Architects. The San Francisco jurors were intrigued by the opportunities, as well as the problems, involved in utilizing a sloping glazed roof under the intense Colorado sun. They admired the strong formalism of the building’s cylindrical concrete shell—an especially novel design solution, they observed, for a financial institution in a city where most banks are housed in rectilinear office towers.

9. Budrow House, Santa Cruz County, California; Lyndon/ Buchanan Associates, Architects. The house was designed for a small projecting ledge in the coastal mountains south of San Francisco to take advantage of dramatic views of oak-forested valleys and Monterey Bay. The focal point of the dwelling is a tall, glass-roofed orangerie that mediates between the tight rectangular forms of the house and the more loosely arrayed terraces, courtyards, and slopes of the landscape. The jury called the project “a distinguished villa which, while drawing on many sources, reveals the vitality of Bay Area traditions.”
Five projects by four Atlanta firms were cited in the 1983 awards program of the Georgia Association, AIA. Jurors for the eleventh annual event were Jaquelin T. Robertson, FAIA, dean of the University of Virginia School of Architecture; Andres Duany, AIA, of Andres Duany & Elizabeth Plater-Zyberk, Architects; W.G. Clark, AIA; Harry C. Wolf, of Wolf Associates; Peter Eisenman, FAIA, of Eisenman/Robertson, Architects; and Robert Duppi, chairman of the graduate program at the University of Virginia School of Architecture.

1. MARTA Peachtree Center Station, Atlanta, Georgia; Toombs, Amisano & Wells, Architects. The jury praised the granite-walled rapid-transit facility for its "technological sophistication combined with an overpowering idea of place, history, and archaeology. The juxtaposition of the manmade and natural order of things makes poetry of all the rest. Clearly a project of national significance."

2. Edison Mall Renovation, Ft. Myers, Florida; Cooper, Carry & Associates, Architects. In order to upgrade an existing 18-year-old strip shopping center into a regional mall, the architects placed a new two-story top-lit arcade along the building's western facade that unifies small store frontages and shades shoppers from the Florida sun.

3. The Mall at Green Hills Renovation, Nashville, Tennessee; Cooper, Carry & Associates, Architects. The architects converted a postwar linear shopping center into an enclosed mall by capping an existing open-air service alley with pyramidal skylights and furnishing new courtyards with trees, seasonal plantings, fountains, and seating.

4. Academy of Medicine Expansion, Atlanta, Georgia; Surber Barber Mooney, Architects. The jury called the architects' expansion scheme "a restrained reworking of an extraordinarily refined building. Their hand is best seen as it reinforces the original qualities—a sublimation of ego that represents a cultural maturity rarely encountered in adaptive reuse projects."

5. Tallahassee City Hall, Tallahassee, Florida; Heery & Heery, Architects. The jurors lauded the "inherent urbanism" of a brick-clad structure that is intended to serve as a link between Tallahassee's small-scale central business district and the adjacent State Capitol complex. A two-story screen relates to the established facades of the historic downtown and serves as a public door at the end of the city's Jefferson Street axis. "A handsome product," noted the jury.
Two honor awards and three citations were given in the 1983 Gulf States Regional Design Awards program for architects practicing in Mississippi, Alabama, Arkansas, Louisiana, and Tennessee. The jury consisted of Washingtonians Warren Cox, FAIA, chairman of Hartman-Cox Architects; Michael Pittas, director of the Design Arts Program at the National Endowment for the Arts; and Donald Canty, editor-in-chief of Architecture.

1. Raceland Bank & Trust Company, Thibodaux, Louisiana; Ernest E. Verges & Associates, Architects (Honor Award). The jury praised the architect for his restraint in the conversion of a late Victorian-style house into a branch bank. The exterior of the residence was largely intact, with the exception of a drive-in motor facility and vault added at the rear that exhibit the wood architectural details of the original structure.

2. Private Residence, Hogeye, Arkansas; Fay Jones & Associates, Architects (Honor Award). This year-round rural retreat was designed to harmonize with the surrounding landscape and require minimal energy usage. A red-cedar and fieldstone exterior satisfies the former requirement, while ceiling fans, skylights, strategically placed windows and seasonal shading mechanisms sharply reduce the building's dependence on artificial heating and cooling systems.

3. Fire Station No. 25, Jackson, Mississippi; Canizaro-Trigiani, Architects (Citation). The architects' use of red-painted metal panels impressed the jury as particularly appropriate for this building type: "It looks like a fire station," they observed. The sloping shed roof over the living quarters is meant to recall the forms of barns found in this semirural area of Jackson.

4. The Guest House in Natchez, Natchez, Mississippi; David Peabody, Architect (Citation). The program called for the conversion of a former Elks Club building into an 18-room annex to a nearby hotel. While most of the original building was preserved, the architect added a copper-roofed glass dining wing that the jury praised for its "discerning use of material and sensitive detailing."

5. Jefferson Davis County Jail, Prentiss, Mississippi; Dean/ Dade & Dean, Architects (Citation). An addition to an existing early 20th-century county courthouse and jail, this 22-space detention facility exhibits the simplified classical detailing and materials of its adjacent architectural predecessors. The jury lauded the complex for contributing "something of quality to the street"—unusual, they felt, for a county-owned structure.
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"A worm's eye view of recent architectural history"

By Denise Scott Brown

An account has been recently published of the archaeological excavation of a North American motel. 1 The time is the year 4022; the motel was obliterared in 1985 by an inundation of junk mail. We are shown sketches of the site, and discovered and hypothetical reconstructions of its artifacts in use. A lady of vaguely Minoan (or is it merely sub-Minoan?) origin is wearing a toilet seat around her neck. Suspended above it is a bath stopper on its chain. From her ears hang toothbrushes. The text refers to the toilet seat as an item of ancient ritual, the bath plug as "an exquisite silver chain and pendant," and the toothbrushes as "magnificent plasticus ear ornaments."

Things are rarely what they seem and history is almost always written wrong. Part of the humor in the fake account of the motel excavation lies in the narrator's certainty of his historical facts and the pompousness with which the wrong assumptions are delivered. We should thank David Macaulay for his hilarious contribution to archaeological cartography, but we should not take his lessons too seriously, for his misrepresentation of 1980s motel history is wrong in the wrong way. Although set in the distant future, this reconstruction cannot be wrong in the way that future reconstructions will be wrong, because Macaulay cannot not know how future conditions will influence future historians' perceptions of the present. His point of departure is, in fact, historical rather than futurist. He describes today from the viewpoint of the fairly recent past, deriving inspiration from the excavation of the tomb of Tutankhamen in the 1920s. There are references to this expedition. Names of participants are the same. The motel is called the "Motel of the Mysteries," Boston: Houghton Mifflin Company, 1979. 2

2The title of the book appears to be a reference to the Villa of the Mysteries Motel in Pompeii.

"I am grateful to Professor Thomas Hine, Professor Geoffrey Snore, and Robert Venturi for helping to true my sight-lines through commenting on my early texts."

1982 by Denise Scott Brown, Denise Scott Brown is a partner in the firm of Venturi, Rauch and Scott Brown.

The sociology of architectural ideas

For architectural thought to receive approval in America, it must come from, or at least proceed via, Europe and preferably Great Britain. The reverse is not true. European architects have traditionally believed that not much can come out of America, and English architects have expressed this opinion with vehemence.

American architects are still colonials to be treated as upstairs tenants downstairs, with noblesse oblige. Philip Johnson may not realize how little he did for James Stirling's reputation in England, when he told an English audience that the English architect was more admired in America than he was at home. There is one exception to this rule. When a respected English architect or critic goes "out there" to America and picks up something interesting that the natives have not noticed, the English will listen and admire. Therefore, Cedric Price was allowed to have discovered Los Angeles in 1961 and Rayner Banham felt able to add the Santa Monica pier to the seven wonders of the world, particularly as most of his compatriots had not seen it. Actually, Melvin Webber discovered Los Angeles before Cedric Price, and Esther McCoy discovered the Santa Monica pier, before that.

American architects who want to achieve success in America must somehow contrive to have their work discovered in Europe, preferably in England. It was certainly necessary to invent Charles Jencks. There was genius in the added touch that he was an expatiate, a sort of an architect's Henry James, steeped in the small change of architecture. Limping or swooping, architectural thought has crossed the Atlantic, both ways, many times. One of the most famous crossings was of the International Style via Johnson and Hitchcock, in 1932. An interesting double crossing, so to speak, was of American transportation planning of the 1950s. Unimpressive to American architects in situ in Chicago or Detroit, it was acceded a civil reception when it returned from London in the form of the Buchanan study. In this case, the American architects were right the first time. American transportation planning of the 1950s died a well-deserved death in the 1960s. (Yes, of course I am oversimplifying.)

There have been more cross-fertilizations between Europe and America than those documented by the historians, probably because most
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architectural historians are less peripatetic intellectually than some architects. This is an unfortunate gap, as the architectural history of neither computation can be understood without reference to the other.

Whichever way they crossed, transatlantic Brutalist ideas were not fully applicable when they landed. American and European cultures were never the same—the Americans left Europe because they were different in the first place and the societies have been diverging for more than two hundred years. The vision of Ville Radieuse did harm in Europe but much more harm in America. The schlock of Las Vegas was soon done and luscious when translated into a Milanese supermarket; it has lost the animus of its aggressive ancestor.

**Brutalists and others**

The New Brutalism was a more diversified movement than is generally recognized. Brutalism, a word the historian thought more architectural groups than is generally known. The early 1950s was a time of currents and eddies in English architecture. The rigors of war were over but so was the reaction to them in the folderol of the Festival of Britain. A great generation of ex-servicemen had passed through the architectural schools, and the social concern that they brought with them had left with them. Flurries of intellectual fog furled through architectural London much as they do through New York today. In 1953, I first heard rumors that something strong and good had come out of an architecture school near Newcastle. It was strong, good, working class, socially concerned, and lively. It was an architectural preview of what the Beatles did later out of Liverpool. Newcastle, in the persons of Alan Hand and Peter Siddoway, emerged shortly thereafter in London and settled in as a center of architectural crosscurrents that were defined as a new school of thought.

Many people appeared to be involved in the New Brutalism, even in the early stages before the formation of Team 10. Not only architects, but architectural historians, some engineers, some artists, and an intense group of students of the Regional Association, joined the debate. However, the Brutalists had a talent for architectural executions surpassing even that of the other architects around them. Members of the group continually defined each other as in or not in, or accused each other of selling out or of not being completely up to snuff. It was difficult to know who was a paid Brutalist. Brutalist architecture was modest, enigmatic, intriguing and ugly (hence "Brutalist"). Brutalist writings on Brutalism by others, were obscure and added to the problem. However, it became clear that we were to go back to the mid-1930s, to a period when architects were social revolutionaries and "humanism" was not a code word for going soft. Young architects became scholars of the early Modern Movement. Peter Land tried to plot the trajectory of early Modern house in Paris; Donald Appleyard left for Holland and De Stijl architecture. In England, architects sought out the work of Connell and Ward and made pilgrimages to the chemical factory of Sir Owen Williams, in Beeston. I persuaded the South Africans, mid-1950s, Norman Hanson, to lend photographs of his early work for exhibition at the AA. I was sadly surprised to find he was an architectural recidivist.

**The International Style crossed the Atlantic twice**

In England, the mid-1950s, some White Cubist Modern architecture lasted a long while and some still love it. Its influence on Brutalist architecture waned, however, when Jim Stirling brought back slides of the Maison Jaoul from Paris and showed them in London in late 1952. Thereafter, Brutalists' interest shifted to the postwar architecture of Le Corbusier and the 19th century, brick buildings of the English industrial Midlands. But by this time Colin Rowe had left for America. Had he waited, the New York Whites might have been the New York Browns instead.

As it was, through Rowe, we had a second coming of the International Style to the New World. This reincarnation was more tied to the social reality or symbolic meaning of early European functionalist architecture than was the first coming and for the same reasons.

Colin Rowe, from his outpost of Empire at Cornell, kept his particular manner of collecting the most of the early Brutalist flag flying in America long after it was down in England. His influence radiated southward to architectural enclaves in New York and Connecticut, reaching as far as Princeton, till at last a third generation of architects tired of white walls as their parents had done before them, and the Whites joined the Multi-coloreded, the Postmodernists, and the Radical Eclectics. One of the last American Whites has recently designed and built a Bauhauslike building in Germany.

Now that the second coming of the style is almost history, architectural historians should compare the first and the second International Styles. I think they would find that the American, East Coast version of the 1970s is both larger and more loose-limbed than the poised, taut town houses of the 1920s that the Whites learned from in Paris, Rotterdam, and Sintra and their symbolic meanings are quite different. Some White architecture looks like International Style architecture with glandular problems.

**The many borrowed dimensions of Louis I. Kahn**

In England, the mid-1950s, I saw an article on a surprising and beautiful American building. It was a Brutalist building. Given one view of America, we were not supposed to see such sympathetic architectural here and we had never heard of the architect, although he appeared to be quite old. We, if course, in our 1920s. The architect was Louis I. Kahn and the building was the Trenton Bath House. I don't know when Kahn first met Team 10, but when I talked with him in 1958, Kahn knew the work of the Smithsons. Through the Smithsons and Team 10 he probably saw the Open Air School by Johannes Duiker in Amsterdam before he designed the Richards Medical Research Building. This school was an icon of the Brutalists.

Influences upon the work of Louis Kahn were many and shifting. Because they span two continents and several fields they are difficult to trace. The importance of Buckminster Fuller, Robert Le Ricolais, and laboratory spaces," with their uninterpreted floors, nondirectional shapes, and perimeter columns, seem closely related to Mies's "generalized spaces," which have similar perimeter supports and nonstructural internal walls. But beyond this, "God is in the details" as much in Kahn's concrete, brick, and glass as in Mies's steel and glass. The detailing of the Richards Emergency Laboratory is carefully detailed. Although its dimensions are broader, it is reminiscent of jewelry design in the same constructivist way that Mies's detailing is.

Kahn's urban projects for Philadelphia should be understood against the background of the Liberal Democratic reform movement in Philadelphia in the 1940s and 1950s. Reform government brought idealistic public servants to the city. They put Philadelphia at the forefront of city planning in America and helped to renew the architecture school at the University of Pennsylvania by promoting the appointment of an eager young dean out of Harvard. Urban questionnaires were issued among city agencies and private groups and in the University. Kahn was a member of the Citizens' Council on City Planning and of the advisory board for the Penn Center project. So was Robert B. Mitchell, chairman of the City Planning Commission and later chairman of the City Planning Department at Penn. When I studied urban transportation with Mitchell at Penn, I realized that Kahn's beautiful plan for Philadelphia, where expressways were called "rivers" and the grid of streets became "harbors, canals, and docks," was in fact a metaphor for policies recommended by Mitchell and the Citizen's Council, for separating traffic according to type on Philadelphia streets.

Kahn's other Philadelphia projects, the Municipal Building, Independence Mall, and the later plans for parking and streets, were mostly real projects and some of them came to fruition, although not designed by Kahn. He must ardently wish to be their designer. Unfortunately the reformers, even at the height of their power, did not list architectural patronage among their priorities. Kahn did not receive honor commensurate with his talent in Philadelphia. Social historians should assess how much of the blame for this lay with the character of Philadelphia and the ambitions of Edmund Bacon, and the working methods of Louis Kahn.

When I reached Penn in late 1958, the medical labs were about to start construction and Kahn was deeply involved in historical architecture. His students would
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Kahn to be on his thesis jury at Princeton. Kahn was impressed with the performance of the older architect in mind. After Bob had worked for Oscar Stonorov for a year, Kahn recommended him to Eero Saarinen, who spent the next two and a half years in Saarinen's office. Kahn was on the jury when Bob won the Rome Prize. On his return in 1966, Bob worked for Kahn for nine months. At the same time he was Lou's teaching assistant at Penn. In 1967 Bob left Kahn's office to start his own practice. He and Kahn were on the faculty at Penn and maintained the friendship that was cemented when Bob returned from Rome. They talked a great deal. Bob was often in Lou's office to give critiques. He shared his recent experience in Rome with the older architect and it is probably from these talks that Lou's real interest in material dates, despite the earlier and beautiful historical sketches that he made while in Europe. Bob's ideas and the source buildings he discussed with Lou were later to have circulation in Complexity and Contradiction in Architecture.

Kahn had a need to use colleagues, often younger architects, as a sounding board for his ideas. Visiting students would be accorded precious time in his office while frustrated draftspeople were left hanging. As a young faculty member, I was, on occasion, the recipient of long, one-sided telephone calls from Lou. A Philadelphia architect, Santo Lipari, seems to have been another friend for late evening conversations. Philadelphia taxi drivers, who were his local conveyance, tell of Lou's extended monologues while riding home at night. His two afternoons a week at Penn probably provided the most creative outlet for this need. Studio was an important butress of Lou's emotional life. I met him at Penn on the day President Kennedy was killed. This was a Friday and not Kahn's regular studio day, but he came to Penn when he heard the news because that was the only way he could go to be. The communication did not go only one way. Although Lou appeared to do most of the talking, he got ideas from his students and young colleagues, just as he had earlier from Fuller, Le Corbusier, and Venturi. I know this personally to be true as I was surprised (and flustered) to hear Lou deliver as his own, thoughts that I had shared with him. Two that come to mind are, "campus architecture should be kitsch," and "every architect puts a chapel somewhere in each building." I noticed too that my suggestions were included in a recent version of and Bob's site plan for the Salk Center. Therefore I believe Bob's claim that, despite his initial position as disciple and protege of Lou, the architectural influences went in both directions: that is, that Bob taught Lou as much as he learned from him and that the last phase of Kahn's architectural career should be seen as under the influence of Venturi. This influence was not so much upon the vocabulary as upon the relationship of forms. In particular, Lou learned from Bob about Mannerist exception, distortion, and inflection in form. He learned "his" philosophy of light in buildings, as well as the notion of a "thingy" as source. Through Bob, he investigated the layering of enclosed spaces and the layered juxtaposition of walls and openings, and he discovered that light windows could be in the wall again. He played on these themes in his important late buildings, particularly those in the colony of the Salk Center.

Bob was never acknowledged. Kahn acknowledged the collaboration of Venturi in print. His influence I ever heard him acknowledge verbally was Le Corbusier's. During the Depression Kahn was among the many unemployed architects who were sustained by Federal projects. His assignment involved library research which led him to read and examine all the works of Le Corbusier. He said this was his starting point as a modern architect.

Lou was a great artist. The influences I have described probably account for the changes that were visible in his architecture over the years, but they were well incorporated. The work is one and it is his. Nevertheless, the sources and influences should be known and understood by architectural historians and architects. The Solitary Genius theory of architecture is usually a distortion that disregards the facts and harms the profession, particularly the students and young architects. The fact that Lou acknowledged few of his borrowings and probably not the most important ones, finally clouded the friendship between Bob and Lou. Their work had already diverged. Although Bob's modest practice limited his opportunities to use the ideas he had shared with Lou, when such opportunities came, Bob proved that he was not merely "squashed Kahn." When Bob and I took the road to symbolism by turning to Las Vegas, there was no way for Kahn to follow. The older architect was perplexed at the younger's disaffection. He tried to discover its cause. He sent a message to Bob that there was "truth" in Las Vegas. When Lou died, Bob cried. I think he felt he had lost an architectural mother.

A great Kahn idea for which I see no obvious source is "serving" and "served" spaces. Lou said the idea came to him suddenly and unexpectedly while working on a problem. He said he wished that he had thought of it before designing the Yale art gallery, and that if he had, the gallery would have been a different building.
Durasan. Anything else is just an imitator.

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evolve during the Depression. Lewis Mumford, who taught at Penn in the 1950s, strengthened the social-housing-New Deal connection, which had led the English Garden City Movement and American reactions to it in the work of Clarence Stein and Henry Wright.

Perkins's new school resembled the Harvard school upon which it was based. However, the seeds of the dissolution of such schools were within it, even as it was first founded, and the further addition of faculty members from different backgrounds eventually exploded the Harvard model. In that explosion originated some of the most important schools of thought in architecture and planning in the 1960s and 1970s.

The first major deviation was Kahn. He was too great a giant and is still too crotchety to have a clear understanding of his role within architecture in general and in Philadelphia in particular. The tides of his work and thought washed over the whole School of Fine Arts. Immediate results on the students' drawing boards were grids of servant and served spaces and, later, strange and mannered geometries, more imposed upon than evolved from the problem, more heavy-handed than Kahn would have coun tenanced in his own work, and somewhat disturbing to him. Kahn taught only in the master's class. He served on juries in the regular architecture program as well as in civic design and landscape architecture, but his influence was felt mostly through his followers who taught in other studios in the school. Kept away from the mainstream of the accreditation process, and in some uneasy balance with the CIAM-New Deal axis of the rest of the school, Lou formed one strong corner of Penn's unsteady, oscillating triangle. His ideas affected everything at Penn from social planning to doorknob design, but it was difficult for students to resolve what he stood for with what they learned elsewhere in the school. I think the resolution can be seen in their subsequent careers.

All that has changed in the planning department. It spread to the civic design program, but was held at bay by the architects who went about their business as usual. At faculty meetings, planners accused architects of being arrogant, but even the most churlish social planners didn't know where to put Lou Kahn. Although he called a pox on all their houses, he seemed to have everyone's respect. In the midst of this argument, computers moved in, bewitching the planners but not yet the architects. The battle shifted from one between architects and humanists to one between humanists and technocrats, with architects caught in the middle.

I sat in the middle between architects and planners, pulled and buffeted. Each side seemed so right except when it was all wrong. How could the protagonists be so one-sided? My New Brutalist background tied in equally well with Kahn and Gans. The esthetic impulse that the social planners went to lengths to negate did not seem inadmissible, or indeed deniable, to me, nor was it necessarily elitist and undemocratic. On the other hand, how could the faculty in the architecture department turn their backs on what the planners were saying? If for no other reason than to keep their esthetic eyes fresh, the architects needed their systems broken by the social reality the planners represented.

All that has changed in planning today. The schools are again teaching "traditional skills" and "generalist planning"; "physical bias" has returned to the programs. Robert B. Mitchell, now retired, recently said, "Maybe Lou Kahn had a point. I think his artistic vision was needed." But despite a brief and faddish fling in the 1960s with "humanist" planning toward urban renewal, the architects have become more academic than professional, with the result that the social planners are closer to the social sciences bias. The first result was to raise the intellectual level of the school of planning far above that of the school of architecture. Other nonarchitect planners were added and the department of planning was poised for a takeover by the social sciences.

Influences upon our work

The work of our firm will be misunderstood and wrongly placed until it is seen in a

Architectural Record February 1981 75
Computers cut costs in Los Angeles building.

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broader intellectual context than is usual in architectural discussion today. This context spans architectural philosophies on both sides of the Atlantic, including but also antedating those of the Modern Movement, and it encompasses areas of history and social thought that lie beyond the purview of most architectural critiques. This is not the time, and I am not qualified, to attempt a definitive hagiography of influences upon us. Such a project should be undertaken a decade hence. However, our perception of the matter is source material for future historians: the more so as our views on the subject probably differ from those of today's scribes and critics. Our personal and provisional list would embrace several major categories. First, are historical sources.

Learning from history

Bob's passion for history started in his early childhood, as an interest in clothing styles and in local Philadelphia architecture. Bob's ability to date both is almost as perfect from 1750 onward. At Princeton, he steeped himself in the lectures of Donald Drew Egbert, who was a social as well as an architectural historian and a scholar rather than a critic. The early history of the Modern Movement was important to Bob as a young architect, and so were the historical sources referred to in Space, Time and Architecture. Travel in Europe and residence in Rome enlarged this vision of history and brought into question some Modern interpretations. At the same time new interpretations preceeding and antecedents, developing thereby a complexity in the work of Mannerists. Bob had a special penchant for the latter. Reading Mannerist analysis of Palladio's Mannerism and to an appreciation of English influence tended to be overwhelming. A few great teachers in my youth suggested that the real challenge to creativity lay at home and that we would be better artists if we would look around us at the American landscape and learn. At the same time, the clash of cultures in southern Africa, which is everywhere known by its terrible side, had another face. Interactions between artistic cultures, black and white or overseas and local, produced an exciting art. African indigenous art inspired high-culture artists, white and black. But to me, an influence that went the other way produced an art which (as Kahn would have said) architects consider ugly. At Penn in the late 1960s, I found among social planners such as Gans and Davidoff an intention, similar to mine, to study questions open-mindedly— in their case, social questions, but also architectural phenomena termed ugly by architects, for example, Levittown and Los Angeles. When Bob and I met, as Penn faculty members in 1969, our shared historical interests, parallel study travels, and similar early professional experiences led us to form a friendship and a professional collaboration. While I struggled, as a young professor, with the threatening but challenging implications of social planning theory for architecture, I found Bob was the only member of the Penn architecture faculty who sympathized. I moved to California in 1965, primarily to experience an evolving urbanism that was under discussion among planners long before Tom Wolfe or Reyner Banham drew attention to it. From UCLA I invited Bob Venturi to come and learn from Las Vegas with me.

Learning from the cultural landscape

Another important piece in my personal mosaic is my childhood and youth in Africa. The cultural cross influences that I have described on two sides of the Atlantic had their counterpart between southern Africa and England; however, in Africa, the influence tended to be overwhelming. A few great teachers in my youth suggested that the real challenge to creativity lay at home and that we would be better artists if we would look around us at the African landscape and learn. At the same time, the clash of cultures in southern Africa, which is everywhere known by its terrible side, had another face. Interactions between artistic cultures, black and white or overseas and local, produced an exciting art. African indigenous art inspired high-culture artists, white and black. But to me, an influence that went the other way produced an art which (as Kahn would have said) architects consider ugly. At Penn in the late 1960s, I found among social planners such as Gans and Davidoff an intention, similar to mine, to study questions open-mindedly—in their case, social questions, but also architectural phenomena termed ugly by architects, for example, Levittown and Los Angeles. When Bob and I met, as Penn faculty members in 1969, our shared historical interests, parallel study travels, and similar early professional experiences led us to form a friendship and a professional collaboration. While I struggled, as a young professor, with the complexity and contradiction in Architecture, I found Bob was the only member of the Penn architecture faculty who sympathized. I moved to California in 1965, primarily to experience an evolving urbanism that was under discussion among planners long before Tom Wolfe or Reyner Banham drew attention to it. From UCLA I invited Bob Venturi to come and learn from Las Vegas with me.

Architectural Record February 1984 77
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content and method of Bob's study of architecture. Phil continues to provide a font of helpful advice to both of us and sympathetic criticism of Bob's writing style. He shares as well, our interest in pop culture.

David Crane was a good friend to Bob and was the first member of the architectural establishment to recognize and proclaim his ability. With an eye for architecture, a nose for the new, a trained intuition, and no failure of nerve, Scully comes as near as one can, in the unclear currency of post-modern and Postmodern architecture, to inheriting Gedion's role. Bob first read Scully's *The Shingle Style* in Rome and found it a revelation. Its documentation of mannerly Mannerism, of orderly houses that allowed for exceptions and free contractions, of buildings that were not—but were almost—symmetrical, provided early and most meaningful lessons in the handling of complexity.

Robin Middleton was my professional mentor when we were both 17, and has continued as an architectural friend. His fund of historical sources and special interest to Bob and me is unending. Arthur Korn had a profoundly personal influence on my professional life, and so did Charles Seeger, an ethnomusicologist. David Crane was important to me in the same way that Martin Wagner was to him. Bob and I both gratefully acknowledge help from J.B. Jackson in understanding the cultural and social meaning of the everyday landscape. For both of us, parental relationships were artistically important. Bob's parents' wish that their prenatal child become an architect was echoed postnatally by Bob by the time he was four. He imbibed his father's interest in architecture and also, surely, Robert Senior's unfulfilled desire to be an architect. Vanna Venturi's clothes, and literature profoundly influenced our drawing style, and also, surely, Robert Senior's sophisticated taste in furnishing, and other buildings and houses completed in itself. Our child has influenced our drawing style, through the children's books we bought for him that he did not read. He is interested in the breaking of systems and deflection that a child represents. Our children, through the emotional growth and enlarging of self that parenthood has meant. As parents we wear to a frazzled yet grown into our full stride.

In the late 1960s I had an intellectual group life at all today, it is with our colleagues in our office. They are an important source of ideas and information and our chief sounding board. This unusual community of labor and philosophy consolidates our endeavor. Bob and I would be abstract indeed without their contribution. They are among the most talented young architects of their time. On their own, their reputations would rival those of their contemporaries whose work is now regularly published. Clients too have exerted a strong influence on our thinking. Most have been time-shields and colleagues as we have worked together. This is too brief a lexicon of half a century of sources and influences that are added constantly. All are abiding, but, like books in a library, some are more dog-eared than others and some are more dusty.

**Book learning**

A stroll through our library, actual and metaphorical, could disclose worn copies of the writings of Frank Lloyd Wright and Le Corbusier and marked-up chapters of *Space, Time and Architecture*? There are all manner of histories, architectural and otherwise, travel books, biographies, and diaries (those by Santayana are well thumbed). Early picture books of famous cities and places, particularly in Italy, were inherited from Bob's parents. Our *Team 10 Primer* and the Aldo van Eyck issues of *Dutch Fiction* are worn but dusty, and so are Reyner Banham's *Theory and Design of the First Machine Age* and the townscapes series in The *Architectural Review*. A few rows of planning and sociology texts are neither dusty nor dog-eared, and the J.B. Jackson years of *Less Wipe shows a well recent use. They share a shelf with several books by Herbert Gans, some early essays by Tom Hanson, and Philip Wagner's *The Human Use of the Earth*.

Architectural journals pile up in our office but few are more than skimmed. Phil has read to me the *New Republic* in 1960 and I have continued to take it through all its vicissitudes. It sits beside the Sunday paper with the best social and political writing. The *Architectural Review* or *The New Republic* is now regularly published. In *Futurism and the International Avantgarde* by Anne d'Harnoncourt, *The Life and Work of John Nash, Architect* by John Summerson, and *The Utopian Craftsmen* by Lionel Lambourne. Also there are *Consumer Reports*, *David Copperfield* (in hopes that our child will read it), and the puzzle pages of *The Philadelphia Inquirer*. Picture books that stay open in the studio now are on Schinkel, English country houses, Georgian silver, American Colonial interiors, Arts and Crafts furniture and objects, Robert and James Adam, and Josef Frank. There are several issues of *Modo*, three thumbpered volumes of the architecture of Sir Edwin Lutyens, and Burnham's *Plan of Chicago*.

The letterboxes at our office are a source of cross-fertilization as people put in clippings and photocopies for others to see. The topics range from headlines on Westway to political analyses by the War Resisters League. They may include a Martin Pawley arrowhead from the *BURLY* or John Summerson's *Architectural Review of Books*, W. Antiques, *New York Times*, *Vogue*, *New York* magazine, *Architectural Record*, *Architectural Forum*, *Forum*, *Copperjield*, *The English House* and also, surely, Robert Senior's unfulfilled desire to be an architect. Vanna Venturi's clothes, and literature profoundly influenced our drawing style, and also, surely, Robert Senior's sophisticated taste in furnishing, and other buildings and houses completed in itself. Our child has influenced our drawing style, through the children's books we bought for him that he did not read. He is interested in the breaking of systems and deflection that a child represents. Our children, through the emotional growth and enlarging of self that parenthood has meant. As parents we wear to a frazzled yet grown into our full stride.

**Learning from...**

Bob and I have used the prefix "Learning from..." to formulate theoretical positions based on many sources. We even have a book, named *Looking for Everything*. As they are for most people, our sources are a rich mix, richer than I have been able to document. In short, it is difficult to assign relative weights to the various influences, just as it is difficult to label present-day architects or place them in the different social sciences and care even less. Although it is 20 years since the social movements of the 1960s, I have yet to see a serious attempt by an architectural critic to gauge the impact of social planning thought on the work of architects, ourselves or others. Yet subsequent currents, particularly the historical nostalgia of the 1970s, found early champions ready to proclaim schools and invent names, *nude Radical Eclecticism*. Gaps in social insight are responsible, too, for a lack of critical evaluation of the cultural relevance of our historical borrowings. Cultural interpretations of taste and behavior are derived by some social scientists and ignored by most architects, and the word "relevance" has a quaint, old-fashioned, 1960s ring. Yet cultural relevance, Bob and I believe, is an important attribute of good architecture. Criteria of relevance guide our choice of historical references in design: no Levittown in Connecticut. (Again, I oversimplify. The Ledolcian account of relevance is a quaint, old-fashioned, 1960s ring. Yet cultural relevance, Bob and I believe, is an important attribute of good architecture. Criteria of relevance guide our choice of historical references in design: no Levittown in Connecticut. (Again, I oversimplify. The Ledolcian account of relevance is a quaint, old-fashioned, 1960s ring. Yet cultural relevance, Bob and I believe, is an important attribute of good architecture. Criteria of relevance guide our choice of historical references in design: no Levittown in Connecticut. (Again, I oversimplify. 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Architectural Record February 1981 79
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Our work should be seen whole. Our research should be matched to our design. Our planning and urban design should be compared with our architecture. The social comment in Learning from Las Vegas should strip metaphor from the architectural prescriptions. Such an overview would suggest a reinterpretation of our architectural preoccupations and support our claim that we are not Postmodernists, except perhaps in the theological sense.

...Each other
Finally, although this is not the way history has been written, Bob and I have probably learned as much from each other as from anyone else. And those influences go both ways. Historians who ignore this fact will miss the point of our work and will write not history but plasticus.

Intuitions about the different pasts
Although this history will always be written "wrong," in the sense that it will be revised to suit the needs of different generations, it may also be inaccurate, and pompously so at that. I have on occasion found myself questioning architectural history as I have read it, sensing false bias merely because perspectives have changed old preoccupations.

In the case of Charles Rennie and Margaret Macdonald Mackintosh, a feminist perspective and changing ideas on the value of decoration have rendered suspect the judgment of historians. Charles Rennie is reported to have said Margaret Macdonald was a more talented artist than she was. Some of his drawings were made by her collaborators. She was very clearly a better artist than he was. The couple was reported to be the architectural prescriptions. Such an overview would suggest a reinterpretation of our architectural preoccupations and support our claim that we are not Postmodernists, except perhaps in the theological sense.

While on the subject of FLW, we should reassess our attitude toward Olgianna, the architect, as the feminists have done with Mrs. Portnay. We should ask why brilliant women of her generation are more likely to have their own art work demand the services and ambition she offered? Olgianna has probably been unfairly treated by history. Gaudi should now be reassessed, not as an outsider of European Art Nouveau but against his own background, which included great architects and designers of the Catalan school, such as Domenech i Montaner and Gaspar Homar. Architects who visit only the Great Building of Gaudi in Barcelona will lose other architecture that is particularly interesting today. We should explore further the symbolism of these architects' decoration and understand it in relation to the avant-garde and Catalan nationalism of their time.

Finally, Lewis Mumford. He is too famous to be referred to as a forgotten hero but his influence on our thoughts about the future had been insufficiently acknowledged. He has written upon an unhesitatingly wide number of subjects. He lies at the root of much of today's social and architectural thinking that we can comprehend. History praises the great specialists but omits the generalists because their comings and goings are often too complex to document. This is perhaps the reason for the silence around Mumford in architecture and planning today. He is another link across the Atlantic. His discipleship of Patrick Geddes and his involvement with the English Garden City movement brought these ideas to America, influencing the work of Clarence Stein and Henry Wright and the urban programs of the New Deal. When I was a student, his humanity was scorned by technocrats, both architectural and social. They got along with him of course. It has a large, "Wrightian" roof with extended eaves, common in Germany at the time, and a Charles Rennie Mackintosh-like dining room and staircase. It was constructed in 1910. It is unlikely that the German sources from which it was derived could have included the Wasmuth Portfolio.
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The editors of ARCHITECTURAL RECORD announce the 15th Annual RECORD INTERIORS Awards. Architects and interior designers are invited to submit recently completed interior design projects in all categories: work previously published in other national design magazines is disqualified. There are no entry forms or fees; however, submissions must include photographs (transparencies), floor plans, and a project description—bound firmly in an 8½-by-11-in. folder—and be postmarked no later than April 15, 1984. The winning entries will be featured in the 1984 September RECORD INTERIORS. Other submissions will be either returned or scheduled for publication in a future issue.

Submissions should be mailed to:
Charles K. Gandee
ARCHITECTURAL RECORD
1221 Avenue of the Americas
New York, New York 10020
Return to tradition

When asked to comment on what *Newsweek* magazine recently termed a "counterrevolution" in ecclesiastical architecture, the Reverend Arnold A. Fenton, rector of St. Matthew's Parish Church (cover and below), simply noted: "I haven't been asked to do a wedding in a bowling alley for a long time." While Father Fenton's response is oblique, it nonetheless captures the essence of the change in attitude between the American religious community of the '60s and '70s, and the American religious community of the '80s. The secular trend that swept churches and synagogues during the last two decades (inspiring congregations to seek social and political "relevance" in nontraditional religious practices) has ended. Not surprisingly, the nontraditional ecclesiastical architecture spawned during the period has also gone the way of the folk mass and the "Peace" and "Love" banners. In short, people once again want to be married in a church, not in a bowling alley; and people once again want said churches to look like churches.

Though the three churches included in this portfolio are unique responses to their place, the circumstances of their construction, and the aspirations of the congregations who built them, they all bespeak a return to traditional religious imagery. Father Fenton's St. Matthew's Parish Church, for example, is a contemporary California hybrid of the classic nave-and-transept model, designed by architects Moore Ruble Yudell in "collaboration" with 200 members of the Pacific Palisades parish. Immanuel Episcopal Church in old New Castle, Delaware, on the other hand, is a meticulous, if not-quite-faithful reconstruction of an 18th-century church destroyed by fire. And Charles Tapley & Associates' sanctuary addition to Christ the King Lutheran Church in Houston was designed not only to accommodate that inner-city congregation's modest expansion, but also the "Normanesque, proto-Gothic" building it adjoins.

Happily, none of the three look "counterrevolutionary." They look like churches. *Charles K. Gandee*
When the vestry of St. Matthew's Parish Church drew up a contract for Charles Moore to design their new, $2.2-million sanctuary, they included a proviso stipulating that construction would not begin until two-thirds of St. Matthew's 350 parishioners approved the schematic design. Though many of his colleagues would have balked, Moore signed without flinching. He knew he'd get the vote. He'd let the parishioners design the building.

Some 200 members of the Pacific Palisades parish eagerly participated in the four design workshops Moore and partners John Ruble and Buzz Yudell conducted in the St. Matthew's Parish School gymnasium. The agenda included every conceivable planning and design issue, from siting and seating to finances and finishes. While the mixture of three architects, a full retinue of consultants, and 200 end-users is surely a volatile one, in his article recounting the Sunday-afternoon workshops (pages 102-103) Moore fails to mention a single explosion. We can attribute this omission either to Moore's selective recall, or to his insistence on a clear definition of roles: it was the parishioners' responsibility to "define"; the architects', to "refine." Moore cautions would-be participatory designers: "The secret of making all this work is not to be committed beforehand to some scheme you feel obliged to defend...otherwise, [the architect] is just going to be in constant conflict with the people who are forming their own minds."

Not surprisingly, the parishioners were divided in their "definition" of a new sanctuary: one faction argued for a lofty, symmetrical church with a minimum of glass and wood; another, for a rustic, informal building with generous views to the southern California landscape. The solution these two factions and the architects finally arrived at mingles contemporary and traditional forms: intimate amphitheater seating and a hybrid nave-and-transept enclosure. Although Father Arnold A. Fenton, rector of St. Matthew's, is generous in his praise of the new church, the process by which it was conceived is, in his opinion, not without its price: "Four years, and we're not done yet!"

Thinking it over, however, Father Fenton adds, "If it lasts 300 years, who cares?"

There is a happy postscript to the vestry's original contract with the architects. When Moore Ruble Yudell presented the schematic design to their constituency, they didn't receive 66 per cent of the vote, they received 83 per cent. C.K.G.
Unless you're looking at the roof or the axonometric, you won't know there is a cruciform at the heart of St. Matthew's Parish Church, for the classic ecclesiastical shape is carefully hidden behind a series of low, hipped-roof additions to its base. According to the architects, this "modified Latin cross" parti (emphasis on the modified) is a direct response to the client's request for semicircular seating in a traditionally configured sanctuary. But not only do the heavily glazed additions neatly accommodate the preferred plan, they also introduce a domestic scale to the otherwise grandly scaled sanctuary, a fact not unwelcome to a congregation divided between the desire for intimacy and the desire for awe-inspiring grandeur.
Rather than point out to the congregation that their request for a primarily wood interior was incompatible with their request for superb acoustics, the architects devised a battens-and-wainscoting system—applied to four-inch-thick plaster walls—which creates the desired appearance without compromising the desired acoustics (photo right). Because St. Matthew's choir serves not to perform but to help the congregation sing the liturgy, they (and a 36-foot-high pipe organ) have been situated at the rear of the nave, on axis with the altar (plan right). Both altar and choir are grandly framed by ornamented steel "triumphal arches" that also carry the sanctuary's major structural support—a crossing of two steel trusses (sections right). Although there are few windows in the nave, the west (altar) elevation is nearly transparent. The heavy glazing responds not only to the view of a cloister, but to the fact that St. Matthew's has no air conditioning: operable windows work in conjunction with operable ridge skylights to cross-ventilate the church. Though the rector, Father Arnold A. Fenton, appreciates the energy savings, he does report: "The congregation is easily distracted by the view during sermons."
Though there is little overtly ecclesiastical about the exterior of St. Matthew’s, (at least from Bienveneda Avenue), the congregation doesn’t mind—for they preferred their church to be as unobtrusive as possible in its primarily residential environs. Assisting in the cause is consultant Tina Beebe’s monochromatic green palette; as time goes by, and the landscaping matures, St. Matthew’s will further meld with the verdant southern California landscape.

St. Matthew’s Parish Church
Pacific Palisades, California
Owner:
Parish of St. Matthew
Architects:
Moore Ruble Yudell, Architects & Planners—Charles W. Moore, John Ruble, Buzz Yudell, project designers; John Ruble, project manager; J. Timothy Felchlin, associate project manager; Robert Flock, Andra Georges, Shinji Isozaki, Peter Zingg, project staff
Engineers:
Kurily & Szymanski (structural); Sullivan & Associates (mechanical); Amelect, Inc. (electrical)
Consultants:
Jim Burns (planning); Tina Beebe (color/interiors); Campbell and Campbell (landscape); Richard C. Peters (lighting); Jane Marquis (stained glass)
General contractor:
Meskell and Sons
Working together
to make something

By Charles W. Moore, FAIA

Charles Moore would have us believe that he and partners John Ruble and Buzz Yudell did not design St. Matthew's Parish Church. And though we may be suspicious of the claim (could 200 parishioners possibly have designed the $2.2-million sanctuary?), we are nonetheless intrigued by the argument. C.K.G.

The Episcopal Church encompasses a broad variety of theological views—generally classified as high church and low church. In addition to differences in the formality of service, there are differences in matters affecting design—for example, whether a crucifix or a cross is used, whether Stations of the Cross are included, and whether a reredos or rood screen is provided.

The members of the Parish of St. Matthew in Pacific Palisades, an elegant section of the Los Angeles basin on the way to Malibu, embrace a particularly wide variety of views about theology (and every other subject). So when their old A-frame church, designed by Quincy Jones, was consumed in a forest fire, there were a great many opinions about what the new church should be like: how big it should be; where on a beautiful 37-acre site it should be located; how much reference it should have to a prayer garden that was an important part of the earlier building...indeed what the whole should look like.

The committee formed to search for an architect wrote into its rules that the new building—its siting, its detail, and its plan—would have to have a two-thirds positive vote of the congregation. We were selected (partly because we were among the few architects willing to accept in our contract the two-thirds mandate, but we were sufficiently excited about doing the church to accept that challenge). It seemed to us that the only hope for getting a two-thirds agreement was that the building should be designed not by a group of architects and then "sold" to the parish, but rather that it should be designed by all the members of the parish who were interested in participating.

We went about setting up four, all-day Sunday workshops, spaced about a month apart. Between 150 and 200 people from a parish of 350 or so came each time. To lead the workshops, we invited our friend Jim Burns, who, with Lawrence Halprin, had invented the "Take-Part" workshop process with which we were familiar.

The first workshop, on a sunny Sunday, was devoted to what we call in our California mellow speak an "awareness walk," in which everybody who participated filled up a workbook with observations about the many places on the property where a new church might be sited.

Later on that day, people were provided with a set of sixth-grade materials that we had assembled—Fruit-Loops, parsley, cellophane, and the like, to make models of the church they wanted.

A month later, we returned with a model kit of parts, including groups of pews, altar, bell tower, choir and other elements, interior and exterior, that had been mentioned by them in the models that constituted the churches of their images. That was the magic day. There were seven tables of 15 to 20 parishioners each; each table went away with the pieces that we had made of their images, and each table came back with (miraculously) the same plan—a half-circle or half-ellipse of pews around the altar to put the parishioners as close to the altar as possible in order to share in a service that all wanted to share in. But the pews did not go more than half-way around, since by that time the people were quite vocal that they did not wish to look at the altar and see fellow parishioners beyond. Some wanted to see the prayer garden beyond, others were anxious to see the rector and others officiating without the distraction of the beautiful southern...
California morning outside. This was the first of a series of issues that needed to be resolved.

But the magic of that day was that all seven tables had basically the same plan. They differed in their location of the choir and in numbers of other details, but those were all things the architects could be counted on to help work out. That was the same day that we made what has now become almost a standard with us, a kind of Rorschach test of 80 slides of churches around the world with a chance for everybody to say “I do or do not like this” (that gets that off their chests), and second to say “I do or do not regard this as appropriate for St. Matthew’s.” There were curious results. Most of the older members of the parish had been asking for a natural wood church, as their old church had been wood and they loved it. But the church that got the most votes as being suitable for St. Matthew’s was Alvar Aalto’s Vuoksenniska Church at Imatra, Finland, which is white [masonry] but has trees just outside. The church least highly regarded as a model for St. Matthew’s was St. Peter’s in Rome, for reasons perhaps doctrinal as well as architectural. We used these results at the next workshop, partly to show the group what they liked, and partly to guide us in developing the building.

The third meeting, a month later, involved our arriving with a series of similar half-elliptical plans, and a set of large-scale models of buildings that would fit over those plans. In the course of that day the parishioners present were asked to develop the plan they wanted, the roof shape they wanted, and a set of instructions to the architects. We were excited that five of the six tables that were present picked the same roof, a modified Latin cross with long dormers for transepts, and a gabled nave. That presented us with the very interesting task of putting a Latin cross roof on a half-elliptical floor plan—which is exactly what we proceeded to do, adding chapel, baptistry, ancillary rooms, and an outdoor patio for social events.

The fourth session was mostly for us to describe the penultimate scheme to the parish to get suggestions in detail. The comments were particularly interesting since they had to satisfy people who wanted a simple parish church, as well as other people who wanted a noble, almost cathedral-like space. The church, therefore, had to seem intimate on the outside. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or critical role of wondering whether what’s already in front of them is all right or not. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or critical role of wondering whether what’s already in front of them is all right or not. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or critical role of wondering whether what’s already in front of them is all right or not. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or critical role of wondering whether what’s already in front of them is all right or not. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or critical role of wondering whether what’s already in front of them is all right or not. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or critical role of wondering whether what’s already in front of them is all right or not. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or critical role of wondering whether what’s already in front of them is all right or not. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or critical role of wondering whether what’s already in front of them is all right or not. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or critical role of wondering whether what’s already in front of them is all right or not. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or critical role of wondering whether what’s already in front of them is all right or not. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or critical role of wondering whether what’s already in front of them is all right or not.

The committees worked long and hard to make the endless decisions about precisely what would go where, and what could be afforded within a budget that was dependent not only upon financial realism, but on the level of enthusiasm of everybody, since the money for things people really wanted would come from the people themselves. Very serious effort went into this and the results seem to be rewarding to the people involved. But it certainly was the case, and we thought it dramatically so at St. Matthew’s, that people creating something, working together to make something, have a much easier time working with each other and find the experience far more exciting and positive than people on committees, who are cast automatically into a kind of critical role of wondering whether what’s already in front of them is all right or not. We haven’t learned yet how to make use of this dramatic difference in people’s levels of creativity or production, but, for us at least, this rewarding experience of working with people has given us some insights.

Perhaps it’s curious that as the church was finished and consecrated, the biggest thrill for us was the sound of the music that has, as someone said after our first concert, a medieval quality. We knew what the church was going to look like, but the magic of the sound was a great surprise.
The vitality of the familiar

The most immediate physical fact to influence the design of the new Christ the King Lutheran Church in Houston was the presence of the existing church, an outgrown building described by the architect as "a small, Normanesque, proto-Gothic stone structure with considerable visual quality." In deference to the older building, which remains as the parish hall, the new stone walls echo the old, composed of rock-faced gray Texas limestone flecked with fossilized shells.

Stylistically, the new church incorporates an assortment of remembered religious buildings: the ceiling of the nave suggests the hammer-beam roofs of English Gothic, the curved north front with its oeil-de-boeuf recalls the English Renaissance. This stylistic mixture of chronologically progressive styles was deliberately effected to reflect the progressive growth and change of the congregation.

The unusual plan of the sanctuary—a rectangular Romanesque basilica with rounded corners at the floor, a Gothic cruciform with dormered transepts at the roof—derived from liturgical usages developed by the congregation in its old church. To foster a sense of intimate community, worshipers sit on all four sides of the altar, which occupies a place directly below the rooftop crossing. Pews brought from the old church seat most of the communicants along the long walls, while chairs at the ends of the nave accommodate overflow and the choir; the musicians thus become, literally as well as symbolically, part of the congregation. Chairs and liturgical furniture can be moved to create an aisle for special occasions.

While the form of the church roof owes its steep pitch and high ridge to the trussed ceiling and dormered transepts, the low flaring eaves take their scale from the parish hall. Acoustical concerns also figured largely in shaping the church. Not only do the choir and organist take their music seriously; the congregation actively seeks outside groups to perform in the church. The relative narrowness and height of the nave thence emerged from a need to put the hard plaster walls in close opposition so that music rises to the wood ceiling deck and trusses and then from all directions to the listeners' ears.

A new arcade ties the two buildings together and gives covered access to the narthex. The arcade also composes one side of a three-sided courtyard, which offers the surrounding residential neighborhood a quiet view and at the same time imposes a quiet distance between congregants and worldly traffic. G. A.
With small-town scale and familiar materials, architect Charles Tapley reasserted the importance of religious building in a residential neighborhood at Christ the King Lutheran Church in Houston. The complex combines old and new buildings as well as old and new styles: in the photograph at bottom opposite, the new church is seen at left and the old church, now the parish hall, is seen at right. Though more stately in size and demeanor, the new building extends the character of the old with Texas fossil limestone masonry and steeply sloped tiled roofs and hip capping. (The congregation has had to delay construction of the open metalwork steeple.)
A buttressed arcade (above) leads from the old church to a new entrance door with beveled limestone surround. The narthex within houses a small chapel for daily services during the week. The interior of the nave (opposite) is less modest than its plain white walls and wood decked ceiling at first suggest: wood arches and tie beams overhead evoke the antiquity and importance of Gothic hammer-beam roofs, and the intarsia and brass liturgical furniture—altar, communion railing, pulpit and baptismal font—were designed by the architects to assume a similarly contrasting grandeur. (The small building next door, as shown in the plan, belongs to the church, which currently leases it to a florist.)
Christ the King Lutheran Church
Houston
Owner:
Christ the King Lutheran Church
Architects:
Charles Tapley Associates, Inc.—
Charles Tapley, partner-in-charge;
Gerald Moorhead, project architect
Engineers:
Walter P. Moore & Associates
(structural); Howard Pieper &
Associates (mechanical/electrical);
Boner Associates (acoustics)

Interiors:
Charles Tapley Associates, Inc.
Landscape:
Charles Tapley Associates, Inc.
General contractor:
W. J. Hessert Construction Co., Inc.
Risen from the ashes

Four years ago this month, sparks from a marsh fire blew onto the wooden roof shingles of Immanuel Episcopal Church in New Castle, Delaware, igniting a blaze that rapidly consumed all but the exterior masonry walls of nave, chancel, transept, and bell tower (photo left). Founded at the turn of the 18th century, Immanuel is said to be this country’s oldest Episcopal church in continuous use, a heritage that steeled the emotional resolve of parishioners to salvage the charred shell, even though firemen and local authorities urged immediate demolition.

The instability of the ruin made the task of rebuilding particularly arduous, requiring the architect to piece together fragments of the past while upgrading the entire structure and mechanical systems to current standards. As groundwork for this process, John Milner Associates measured, drew, and labeled all debris, and conducted thorough archaeological and documentary research. Their investigations yielded detailed accounts of three major phases of church construction, in 1703, 1820 and 1860, and determined the original character of vanished elements such as oak roof trusses, steeple framing, and Georgian pew layouts. Fortuitous discoveries exposed by fire damage included gravestones that had long been hidden under raised floors, and a pew end buried behind chancel paneling.

The parish Reconstruction Committee and Milner Associates decided against restoring the building to its exact appearance just before the fire, since by 1980 some of the most distinguished architectural features—especially in the interior—had been destroyed or marred by Victorian and 20th-century alterations. If a pure restoration were possible, it was agreed, the ideal period to recreate would be circa 1820-22, when William Strickland substantially expanded the church. However, because modern liturgical procedure, optimum seating capacity, and organ and choir placement necessitated the retention of a polygonal apse and other extensions dating from 1860 and later, the architects arrived at a workable compromise that manifests the building’s complex history. The exterior of the church nearly reproduces its prefire state, with new stucco matched to surviving wall surfaces and a clay tile nave roof that simulates wood shingles. Behind the familiar facades, a hodgepodge of mismatched millwork and fixtures has been replaced with a pristine interior—part restoration, part adaptation—that evokes the neoclassical spirit of the 1820s (photos overleaf). From on high, bells recast in England ring the changes once again. D.B.

As originally constructed in 1703, the church was a simple box facing the public green; 19th-century expansions produced a cruciform layout. The present image of untouched antiquity belies the massive reconstruction that followed a fire in 1980. Tower walls were stabilized with a steel frame, weak joints at the intersection of nave and transepts were reinforced with structural ties, and a full complement of mechanical services was inserted. Owing to concern over the increased weight of new clay roof tiles (10 times heavier than the wood shingles they replaced), John Milner Associates installed steel rafters and a four-foot-deep steel box truss along the wave roof ridge to relieve unstable walls. Steeple shingles, which could not be simulated in tile, are wood with a fireproof asbestos felt backing.
The most obvious modifications to the interior are a new semidomed chancel (opposite) and an organ case (below), both designed by John Milner Associates. The chancel of 1820-22 had a flat rear wall flush with the transepts that did not conform to present-day liturgical usage. Similarly, historic organ cases could not accommodate a new instrument acquired by the church. Other architectural details were based on remnants found in the church, or on similar elements in contemporary buildings. Furnishings are antiques or exact reproductions of period models. Dick Armstrong, project manager for contractor J.E. Healy & Sons, describes the hand-wrought millwork as "once-in-a-lifetime."

Immanuel Episcopal Church
New Castle, Delaware
Owner:
Vestry of Immanuel Church
Architects:
John Milner Associates, Inc.—Allan H. Steenhusen, project manager; David Hollenberg, project architect; Alice Kent Schooler, architectural historian; Daniel G. Roberts, project archaeologist
Engineers:
Keast & Hood (structural); Richard C. Sokoloski, P.E., Consulting Engineer (mechanical)
Consultant:
Planning Systems Incorporated (change-ringing bells; acoustical control)
General contractor:
J.E. Healy & Sons
Buried treasure

Construction is now under way for the Smithsonian Institution's Center for African, Near Eastern and Asian Culture. Known as the Quadrangle Project, it will provide 368,000 square feet for the National Museum of African Art, presently housed in a series of row houses on Capitol Hill; the Arthur M. Sackler Gallery, which will be a repository of Oriental and Near Eastern art placed adjacent to the collection of Eastern art in the Freer Gallery; and space for conferences, major traveling exhibitions, classrooms and offices.

To be completed by early 1986, 96 per cent of the space is to be built underground. The center will have only three elements visible in light and air—two pavilions and a kiosk which will ornament a handsome garden in a space already partially framed by the original Smithsonian Building, the Arts and Industries Building and the Freer Gallery of Art.

The fact that the Smithsonian's two new major museums are for the most part to be hidden underneath a garden is a victory for the various national and local watchdog organizations determined that the quadrangle behind the Smithsonian should remain predominately as open space. This group comprises a formidable list: The Sierra Club, Don't Tear It Down Committee, The Victorian Society in America, Committee of One Hundred on the Federal City, National Advisory Council on Historic Preservation, Joint Committee on Landmarks for the District of Columbia, National Capital Planning Commission and the United States Commission of Fine Arts. The botanical solution is a victory as well for the Smithsonian and its secretary S. Dillon Ripley, who were willing to preserve as much of the open space as possible but not at the expense of a properly functioning museum.

The triumph was handed to the advisory and regulatory bodies and to the Smithsonian by the latter's architects, Shepley Bulfinch Richardson and Abbott, and specifically by the design team headed by Jean Paul Carlhian, Richard Potter and Robert Holloran. After many trips back to the drafting board and model shop to refine the concept, the architects have achieved what appears to be a highly successful solution to the immensely complex problem of making a major museum work underground. Additionally they have invented three elegant garden structures (sketch at left and detail opposite), which by possessing their own enchantment should successfully lure the museum public downward to the subterranean treasure trove.

And the garden itself will be marvelous. In the words of design partner Carlhian: "We have tried to encompass, within a unified whole, three basic aspects of the history of landscape architecture—the western half representing the Oriental approach, the center parterre embodying Victorian concepts, and the eastern half alluding to Islamic thoughts. We think we have resolved the conflict between the NCPC's desire to see the garden remain open and unified, the Smithsonian's desire to maintain the east and west theme gardens as appropriate settings for the pavilions, and the Fine Arts Commission's concern that the 19th-century-style parterre, similar to the one that had existed in the Victorian Garden before construction began, be effectively contained by appropriate plant material."

A $3-million pledge from Enid A. Haupt will finance the design and construction of the garden, which will also serve as an interlink with the Mall and Independence Avenue by means of a system of winding walkways. The project itself will cost $75 million and Congress has agreed in principle to sharing this cost equally with the Smithsonian, which has secured commitments of almost $35 million from foreign governments and the private sector. Mildred F. Schmertz
Two new museums for the Smithsonian Institution
Washington, D.C.
Shepley Bulfinch Richardson and Abbott, Architects

All drawings by SBRA except as noted.
The 1.2-acre quadrangular site is defined by three registered landmarks: on the north by the original Smithsonian Building (the "Castle") designed by James Renwick (1849), on the east by the Arts and Industries Building (1881) designed by Claus and Schulze, and on the west by the Freer Gallery of Art (1923) designed by Charles A. Platt. To the south, on the opposite side of Independence Avenue and spanning Tenth Street, is the Forestal Building (1970) by Curtis and Davis, Fordyce and Hamby Associates, and Frank Grad & Sons. The scheme consists of a pair of small pavilions, symmetrically disposed on either side of the north-south axis of Tenth Street along the north side of Independence Avenue. The pavilions serve as entrances to three stories of underground facilities while respecting the
presence of a majestic European linden towards the northeast corner of the site. The pavilion to the west announces the presence below grade of the Arthur M. Sackler Gallery of Near Eastern and Asian art. Its opposite to the east welcomes visitors to the National Museum of African Art. The pavilions are referred to as the Oriental and the African. An open gap of approximately 175 feet offers an uninterrupted view of the Castle, from the center line of Independence Avenue. In an earlier scheme, the above-grade structures consisted of a set of exhibition galleries and ancillary structures. Opposition from the various review committees wishing to keep the quadrangle as an uninterrupted garden caused SBR&A to transform these facilities into a pair of grand vestibules, serving as an appropriate monumental introduction to the treasures below grade. Said Carlhian: “We saw this as a basic and unprecedented challenge. It is not an easy architectural problem to lead uninitiated visitors in a downward procession—traditionally identified with visits to bargain basements. Ceremonial introductions to hallowed destinations are traditionally upward—achieved through the awe-inspiring thrust of a splendid indoor staircase or a vast outdoor flight of steps.” As the drawings on the following pages will reveal, the spaces that comprise the entrance sequences within and below each pavilion are the most deliberately complicated and skillfully elaborated elements of the design.

Architectural Record February 1984
The two small pavilions, 43 by 94 feet in plan, are relatively low (averaging 37 feet high), yet will screen the lower levels of the Forrestal Building as viewed from the gardens to the east and west of the principal axial vista, reducing as Carthian puts it, "the adverse effect of such an overbearing structure whose north facade remains always ominously dark." (See section at the middle of the opposite page.) The pavilions carry out their architectural obligation to bring about a happy reconciliation between the Victorian styles of the Castle and the Arts and Industries Building on one hand and the Neoclassic Freer on the other. Extensive analysis of the three surrounding landmarks and studious scrutiny of their proportions led to delicate adjustments in the positioning of the pavilions and to subtle refinements in their architectural expression. Because 96 per cent of the total space required by the program will be located below ground within a three-story building called upon to bear the unusually heavy load of a tree-planted garden, a construction system of relatively short spans was called for. A 90-foot-square grid, having proved to be the most
rational and economical answer, became the generating factor in the over-all dimensioning of the pavilions and of their internal organization. The next decision was how best to locate this grid within a space boasting two nonparallel facades, a tree whose root formation had to be protected, and the fragile footings of the two Victorian landmarks. Consistent with the demands of a large mechanical room, the grid was positioned so as to allow an exact alignment of the east-west center line of the African pavilion with the middle of the center bay of the southwest wing of the Arts and Industries Building in a precise 90-degree relationship with its facade. The two pavilions, thus positioned in the quadrangle, allow an unimpeded view of the Castle's south facade.
According to Carthian, a principal clue to the discovery of a correct proportional system and an appropriate architectural expression for the pavilions was to be found in the roof lines of the landmark structures. "The Arts and Industries Building features a series of asserting pyramidal roof forms while the Freer sits contentedly within the confines of a Renaissance palazzo flat-roof container. We decided on a series of cupolas for the roof of one of the pavilions as a gesture to the Freer. The cupola, as everyone knows, is a feature often identified with Italian Renaissance and Baroque masterpieces. Furthermore, the Freer's facade, based upon a module of circular arches, provides additional justification for the dome treatment." The other pavilion will be roofed by six pyramids as a gesture to the Arts and Industries Building. Curiously, SBR&A have put the domes on the pavilion next to the Arts and Industries Building and the pyramids on the pavilion that neighbors the Freer. The architects are apparently saying that since Charles Platt in 1923 could juxtapose a cream-colored granite Florentine palazzo against red-brick Victorians and get away with it, a little juxtaposing of their own would be more truly contextual. As seen in the drawings below, the center portion of the east facade of the Freer relates to the pavilion modules, as do the seven-arch proportions of the southwest wing of the Arts and Industries Building. The cornice line of both pavilions is 24 feet above grade, roughly in alignment with significant bandings on the adjoining landmarks.
The scale of the pavilions, despite their small size, is monumental. The facades were proportioned after the 30-foot structural grid, the over-all footprint, and the average height of 27 feet had been chosen. The cornice height for both pavilions was determined by the desirable hemispherical shape for the domes on the African pavilion. A set of proportional relationships, based on the golden mean, was applied to the module using the square and its diagonals as a generator. The arched openings are based on the classical doctrines of the 17th-century French mathematician and engineer Nicolas-Francois Blondel. The proportions of the Oriental pavilion are similar, except that the openings were given a pyramidal configuration in deference to the pyramidal outline of the roof.
The sections below and the pavilion floor plans opposite indicate the configurations of two of the three grand staircases within the quadrangle development. For both pavilions, descent starts in a straight run framed in limestone. The stairs then split into a pair of smaller runs which form a monumental descent within a central skylit shaft sheathed in limestone. The steps follow a diagonal pattern within the Oriental portion of the museum and a circular one within the African. The skylight surmounting each staircase will be reinforced along its periphery by a battery of powerful incandescent downlights, which will bathe the limestone facing with such a level of brilliant intensity as to turn it into a rallying point of light. As can be seen in the ceiling plans (opposite page top) the shelled and pyramidal ceilings will be coffered. At the northwest corner of the garden will be a kiosk to serve as the public entrance to the third basement level, which will often function as an education and conference center during hours when the rest of the museum is closed. Its stair (opposite page bottom right) will be located within a solid limestone cylinder around which the columns and steps uncoil, serpentine fashion. Carlihian acknowledges that Donato Bramante's Tempietto of St. Peter as well as a sketch for a garden pavilion by Humphry Repton were much in his mind when he designed the kiosk and stair.
The Quadrangle: A Center for African, Near Eastern and Asian Cultures at the Smithsonian Institution, Washington, D.C.

Architects: Shepley Bulfinch Richardson and Abbott—Jean Paul Carlhian, design partner; Richard Potter, partner-in-charge; Robert Hollaran, project architect

Design concept: Junzo Yoshimura, Tokyo, Japan, HAIA

Engineers: Ewell W. Finley, P.C. (structural); Mueser, Rutledge, Johnston & DeSimone (geotechnical); Shooshanian Engineering Associates, Inc. (mechanical/electrical)

Consultants: E. Versus Johnson & Associates (program); Lester Collins (landscape)

Landscape architect: Sasaki Associates

Contractor: Blake Construction Company

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1. Exhibition
2. Visitor service
3. Exhibition support
4. Collection support
5. Freer connection
6. General support
7. Education
8. Research
9. Administration
10. Collection storage
11. Education center auditorium
12. Mechanical
13. Education center
14. Membership
15. International center
16. Visitor information
17. Mall
18. Smithsonian Institution Traveling Exhibits Service

Third Basement

Ground Floor
Bowing to the East

Though never among the cultists of modernism, architect Edward Larrabee Barnes has certainly been among the convinced. So his comment that his design for the Park Avenue headquarters of The Asia Society was shaped by its "subject matter" as much as by formal and functional considerations commands attention.

Founded by the late John D. Rockefeller III, The Asia Society seeks to heighten American consciousness of Asian life and culture. Its new building is both the administrative focus of the society's informational programs and the locus of its cultural offerings, most notably a stunning collection of Asian art.

This multiplicity of function is expressed in a building that combines three lower floors of public space, including a below-grade auditorium as well as galleries for the society's permanent art holdings and visiting exhibitions, with five floors of office space and an upper level given over to meeting rooms—a triad reflected in the facade's division into the classical formation of base, shaft, and capital.

More importantly (and more subtly), though, the facade also reflects the building's broader subject matter: Asia itself. Traveling in India shortly before the project was commissioned, Barnes was struck by the pervasive use in Muslim architecture of surface ornament formed by contrasting materials set flush and patterned in reverses and checkerboards. His reinterpretation of this decorative device for the Asia Society building, which is clad in reversed fields and columns of polished and thermal-finished granite, is strikingly effective not only for its Eastern overtones but because it simultaneously emphasizes and refutes the classical triad of the principal facade through the far-from-classical tension set up by the visual discontinuity of the columns.

The timely influence of Barnes's Eastern sojourn is also felt in the entrance gallery (photos overleaf), which announces immediately the building's character—at once a repository for art and a hub for cultural and informational exchange. Functionally, this quality is reflected in the introductory space by the presence of both a bookshop offering works on Asian art and affairs and a mezzanine gallery displaying monumental stone sculptures. But it is the display aspect that dominates spatially. Giving rein to the impulse to evoke the settings for which such sculptures were created, Barnes fashioned here a lofty vaulted room that purposely recalls the similarly vaulted rock tombs of India. (The ceiling curve is also very much a formal element, however, as is evident from its repetition in the curve of the cantilevered mezzanine and in the recurring lunar windows that punctuate the building facade.) To the same end the sculptures are bathed in a warm but subdued light and surrounded by the rich, almost rosy, sand tones that characterize all the building's public areas, as well as its quintessentially public facades.

Nor did Barnes slight the Western component of his "subject matter"—a corner site on a still-cohesive stretch of upper Park Avenue—though in this case the structure pays its respects to its various neighbors through its massing and composition. On Park Avenue, which Barnes sees as "a major hallway," the building presents a strong formal facade that maintains the street line and reasserts the height of older buildings nearby. On the side street, however, the mass fades away, stepping back to create a second-level garden terrace that complements the handsome old houses on the tree-lined block.

The sycamores that, along with a wisteria-laden trellis, shade the terrace are in fact indicative of the grace with which the Asia Society headquarters makes its bow to the East while remaining firmly rooted in its surround: no exotic Asiatic specimens these, but common New York street trees. Margaret Gaekie
In the entrance gallery, large sculptures, most of Indian origin, are displayed beneath a vaulted ceiling that combines with soft lighting and an earthy background (including floors, stairs, and elevator-bank walls of red Indian sandstone) to recall their native settings. The vault also deletes the sharp juncture between wall and ceiling and with it the irritating seam that might otherwise appear to slice through the figures as glimpsed from below—much as a photographer poses a model against a curving white-paper ground. The other ground-floor gallery, devoted to temporary exhibits, is by contrast the more usual neutral “white-on-white” box, while the second-level gallery that houses the bulk of the society’s holdings was rendered by gallery director Allen Wardwell in rich settings of wood and suede.
To host the busy round of lectures, seminars, and conferences that are a key component of The Asia Society’s mission of information exchange, the new headquarters boasts in addition to a below-grade 200-seat auditorium—suitable for lectures and films as well as performances of music, dance, and drama—a top-floor suite dedicated to meeting rooms for groups of all sizes. At the core of the suite is a members’ lounge (below) guarded by two pedestaled leogriphs, the totem of the society. In a variation on the palette established in Barnes’s public areas, interior design consultant Todd Williams, who also executed the interiors of the office floors, has here set a rug woven in China to an antique pattern against an elegant floor of rosewood inlaid with brass strips. Silk wall coverings are carried
through from the lounge to the adjoining board room on the south (below) and the larger conference-seminar room on the north (bottom opposite), both of which can be set off by sliding doors. Although the dominant feature of the conference room is the curve of the lunar window, additional accents are the grace notes of incidental jade-green lacquer wall panels and chair seats set against the rosy apricot of walls and carpets. In the wing off the main meeting area are offices, storage spaces, a serving pantry, and a small seminar room whose curving inner wall repeats the arc of yet another lunar window.

The Asia Society
New York City

Owner:
The Asia Society

Architects:
Edward Larrabee Barnes
Associates—John M. Y. Lee, partner-in-charge; Richard M. Ridge, project architect

Engineers:
Severud-Perrone-Stregezdy-Sturm
(structural); Lehr Associates

Consultants:
Todd Williams (interiors); Donald L. Bliss (lighting); Will Szabo Associates (audiovisual); Joseph M. Chapman (security); Kiyoshi Kanai (graphics); Braungart-Lorelli Associates (theater); Zion & Breen Associates (landscape)

Contractor:
Morse/Diesel, Inc.

Architectural Record February 1984
Desert fantasy
The Vintage Club
Indian Wells, California
Fisher-Friedman Associates,
Architects
It could almost be a mirage. From one angle, it's a cluster of pyramids rising incongruously from an expanse of green. From a distance, it's a line of peaks nestled at the foot of the Santa Rosa Mountains. And close up, it dissolves into an airy pavilion floating on a shimmering lake. It's no accident that the Vintage Club combines elements of desert, mountain and seaside resorts. As the focal point of a golf-oriented community in Indian Wells, California, a few miles southeast of Palm Springs, it is the playground of those who are wealthy enough or influential enough to expect to be spared such choices.

From the moment a visitor arrives, he hears the sound of water—cascading down the facades of gatehouse and clubhouse, tumbling over weirs, rushing from fountains inside the building and out. He enters the clubhouse over one bridge (photo below) and leaves it on his golf cart over another (photo below right). For the clubhouse sits amidst seven acres of man-made lakes—the ultimate luxury in the desert, but in this instance a practicality as well: the lakes provide cooling for the air conditioning, serve as a reservoir for golf course irrigation, and as retention ponds for runoff from sudden downpours. But most important, the lakes turn the Vintage Club into an oasis—a fitting place to escape the rigors of everyday life.

The main public areas of the 84,000-square-foot clubhouse—including the dining room, the men's grill and the main lounge—have glass walls overlooking the lake (and, of course, the golf course beyond). To allow diners in all parts of the dining area to enjoy the views, five different levels—one of them so low that the water outside is at tabletop height—were created. Lattice screens slide to create intimate spaces without obstructing the views. Despite its lacustrine setting, the clubhouse also celebrates its mountain and desert environs. The two-story concrete structure, with travertine infill, is organized on a 24-foot grid covered by a series of wood-framed pyramidal roofs that echo the nearby mountains, as do the surrounding smaller pyramids, of Douglas fir glulams and concrete, that act as trellises and sunscreens. All of the materials—from sun-bleached trellises to matching concrete structure; plum-colored slate floors; pale oak interior appointments; carpets custom-designed in mauves, pinks, beiges and taupes; and chairs of wicker and cane—were chosen to echo the desert and mountain colors. The effect is understated and serene, in contrast to the extravagant green golf course and glittering water just outside. *Natalie Gerardi*
Partial site plan (below left) shows clubhouse (1) oriented east-west with its main entrance on axis with Eisenhower Mountain (not shown) and set into an artificial lake system. From restaurant and lounge areas, visitors can view play on the 18-hole Scottish-style "mountain" course (2). To the south of the clubhouse complex is a second 18-hole course (3) with desert landscaping. Both were designed by Tom Fazio. Now under construction is a swim and tennis complex (4) that will include an Olympic-size pool and a tournament court with stadium seating. Housing includes sixplexes (5) and patio homes (6) built by the developer and custom homes built on lots along the perimeter of both golf courses (not shown on plan). The entire development covers 712 acres and has 30 acres of lakes.
Sun shading posed a problem that was solved inside the building with movable lattice screens (visible in lounge area, photo 3), and outside with concrete-and-wood trellis pyramids (3, 5, 6 and 8). Additional shading will come when climbing plants (visible in photo 6) mature. Indoor-outdoor feeling of clubhouse is evident in dining room (4) and main lounge (7). Note the extensive butt glazing (set off by a spandrel painted in an auto body shop to achieve the desired BMW color) and the skylights, which were covered with latticework in keeping with outdoor trellises. Outdoor dining is available on shaded patios and on a peninsula that juts into the lake (8). Photos 2 and 5 show the golf starter's box, which extends over the lake from the pro shop. Lower floor of the building is used for administration offices, golf cart storage, maintenance, etc.
With excusable hyperbole, Rick Sundberg of Olson/Walker Architects once called the vacant lot where Hillclimb Court now stands "the world's crummiest site to put a building on." Few architects would disagree that this 27,000-square-foot plot of land near Seattle's waterfront is indeed dauntingly steep, or that the noisy viaduct of the Alaska Way at its western boundary, a hulking eyesore that nearly blocks the view over Puget Sound, is a serious handicap. The City of Seattle, former owner of the property, programmed this location for a 200-car parking garage to serve the bustling Pike Place Market, a short walk uphill to the east via Pike Hillclimb, a public stairway linking marketplace and waterfront (see site plan). Municipal authorities welcomed development proposals that combined parking with other uses, so long as no structure would exceed prescribed height limits or disrupt the visual continuity of older buildings in the Pike Place Market Urban Renewal District.

The successful scheme advanced by Olson/Walker and the Cornerstone Development Company masses four stories of parking within the 45-foot grade-change as a podium, above which a roughly U-shaped complex of 35 condominium units and two street-level shops encloses a garden courtyard (plan and section overleaf). This introverted layout creates a quiet haven that turns its back on the roaring traffic of the viaduct. Because the courtyard is accessible only through the eastern gatehouse pavilion, yet visible from many levels of the Hillclimb steps (photos below and opposite), it is at once a private domain and an ornament to the city. Only the uppermost apartments are high enough for views over the highway towards the water (photo below), but everyone surveys the inner garden from balconies, terraces, or floor-to-ceiling windows. Though both structure and materials recall local industrial prototypes, the general effect of a low-rise domestic enclave with a fountain at its center was modeled on the squares of European hill towns.

A poured-in-place reinforced concrete frame—exposed indoors and out—strengthens the apparent continuity of individual living quarters and the communal garden, and relates Hillclimb Court to similarly constructed loft buildings nearby. Glass block walls afford privacy and muffle street noise, while storefront glazing sections (in both residential and retail areas), pipe railings, and corrugated metal enrich a palette of tough but comely materials. Olson/Walker accomplished its modest triumph over urban adversity at a cost of $55 per square foot. D.B.
Olson/Walker Architects have modified the familiar structures and materials of Seattle's market district to shape a congenial setting for domestic and retail uses. Terraced plantings, stepped massing, and zigzag window bands reflect the form of the neighboring Pike Place Hillclimb stairs. Curved walls on the gatehouse, the rosy hue of corrugated metal panels, translucent screens of glass block, and bush plantings relieve the hard-edged masonry grid. Olson/Walker also softened interior and exterior concrete surfaces by sandblasting and staining them. Like the rooftop flues (reminiscent of English rowhouse chimney pots) that echo industrial smokestacks on the downtown skyline, Hillclimb Court's oversize framing members and fenestration fit in with old loft buildings around Pike Place Market. The vitality of the marketplace and extensive rehabilitation in adjoining blocks have made the Hillclimb one of Seattle's busiest pedestrian thoroughfares.

Victor Gardaya photos except where noted.
The 35 condominium units range in size from 520 to 1,150 square feet, and offer seven options for single-level and duplex layouts. Fireplaces are standard equipment, and every apartment has at least one courtyard view (as seen from the living room of a ground-floor duplex, photo opposite right). No less distinctive are the spaces allocated for commercial use, such as the glass-walled winding stairway in the entry pavilion (photo opposite left) that leads to a second-story office suite. Intent on avoiding the monotony and disorientation of many apartment complexes, Olson/Walker faced front doors onto the courtyard or balconies rather than into corridors. Where it was impossible to avoid exposure to the elevated highway, vine-clad trellises screen the view (below). Mechanical shafts are encased in corrugated metal painted a shade of dusty pink that the architects selected through on-site experimentation.
Hillclimb Court Condominiums
Seattle, Washington

Owner:
Cornerstone Development Company

Architects:
Olson/Walker Architects P.S.—
Gordon Walker and James W. P.
Olson, principals; Richard
Sundberg, project architect;
Richard Wordell, Tom Rasmack,
Todd Heitseman, project team

Engineers:
Ratti/Pomatti Associates P. S.
(structural); Stern Associates
(mechanical); Sparling & Associates
(electrical); Towne Richards &
Chaudiere Inc. (acoustical)

Landscape architects:
Thomas L. Berger & Associates

Interior design/model units:
Jean Jongeward

General contractor:
Gall Landau Young

LEVEL THREE
For architecture as an art, the building is the medium. The art includes such weighty visual and conceptual concerns as form and context, to be sure, but the medium, like all other artistic media, requires technical expertness beyond the ordinary if the artist is to convince others of his mastery.

Hugh Newell Jacobsen spends much of his artistic vigor on such aspects of architecture as composition, massing, reference and jokes—remember the telescoping house with one modern side and one Colonial side? (If not, see RECORD, mid-May 1981, and below.) But he does not expect a first-rate building to take shape merely from a good idea and joie de vivre. Good detailing is equally important.

Thoughtful detailing may involve such grave issues as the design of an entire wall, where questions inevitably arise about the effective joining of disparate materials, about the admission of natural ventilation to combat condensation and the simultaneous exclusion of rainwater and bugs, about the incorporation of mechanical necessities like outdoor illumination and air-conditioning ducts. Details may even affect a building’s physique: by day, a grid of metal mullions supporting a reflective glass curtain wall establishes one rhythm; by night, the lighted reveals of deep internal structural fins establish a far different rhythm (again, see below).

Jacobsen is not an architect who delights in the exposure of technical tricks. He wants them invisible, so that the building appears a seamless, slightly magical whole. Thus gutters hide within walls behind parapets, and venting slots seem to be scribed ornament below the eaves.

This passion for detailing—and invisibility—encompasses smaller, everyday elements as well. These devices often look deceptively artless. Typically, Jacobsen’s tall doors have no bucks or visible tracks overhead—no disfiguring hardware on the smooth ceiling, please. If a return air plenum should be needed, evenly spaced wood strips can serve both air conditioning and esthetics at the same time.

Joie de vivre itself demands most careful detailing. A mirror-lined oriel is only a fetching notion until the designer figures out which materials to use and what dimensions to give them and how to turn the corners cleanly.

All of Jacobsen’s details shown on these pages were designed for houses. In next month’s issue, we shall publish still other details for nonresidential buildings. Grace Anderson
Typical hinged doors

structural-floor plate
blocking
pocket door track
1/2-in. gypsum board
drywall casing bead
wood trim
1-1/2-in. door

CONCEALED POCKET DOOR HEAD

TYPICAL INTERIOR DOOR

7/8-in. edge-banded plywood, painted
1/2-in. plywood backing

Egg-crate bookcase

EGG-CRATE BOOKCASE
Continuous metal ridge roof vent
Shingle
Building paper
3/4-in. plywood deck
Vent space
Ridge beam
Tin-enclosed insulation
1/2-in. gypsum board
Blocking
Metal bead

Ceiling ridge with open seam

2x4 studs
Interior, painted black
1/2-in. gypsum board with drywall beads
3/4-in. wood strips, spaced 1/4-in. apart

Vertical slats for air return

2x4 framing

1/4-in. wood stretcher, painted black, with magnetic catch

Return air grille

Aluminum frame
Thincok caulk
1-in. insulated glass
Condensate gutter
1/2-in. gypsum board
Stainless steel curb flashing (extends 16 in. under shingles)
2x10 framing

Skylights
Fascia with continuous vent slot

1x2 purlin

stainless steel flashing
(extends 16 in. under shingles)

cedar shingle

3/4-in. wood fascia
with flashing reglet,
Thiokol caulk,
3/4-in. continuous vent slot

1/2-in. plywood sheathing
with 2-in. dia. air holes
24 in. on center

1/4-in. wood trim

1-in. insulated glass

sill

stainless steel flashing

edge-banded 3/4-in. plywood

2x10 rough framing

3/8-in. wood fascia

shims

1/2-in. plywood

sliding glass door

hardwood floor

plywood subfloor

sliding door track

stainless steel flashing

treated wood deck

CMU

AXONOMETRIC SECTIONAL DETAIL OF HOUSE WALL
asphalt shingle roof

7/8-in. plywood roof deck

vent space

gutter strap, 24 in. on center

9-in. foil-enclosed insulation

1x2 furring

insulation stop

Thickel caulk

stainless steel preformed gutter

3/8-in. plywood

1/4-in. wood fascia board with flashing reglet

continuous air slot with black insect screen

continuous stainless steel flashing

1/2-in. plywood sheathing

vertical 1&g 1x4 siding on building paper

6-in. foil-enclosed fiberglass insulation

1/2-in. gypsum board

AXONOMETRIC SECTIONAL DETAIL OF CONCEALED GUTTER

Wall with concealed gutter and vent slot
five-ply built-up roof
vent space
stainless steel flashing cap
1/4-in. plywood deck
9-in. foil-enclosed fibreglass
steel beam
1/4-in. plywood fascia
blocking
Venetian blind
1/2-in. gypsum board

Steel and glass wall

stainless steel flashing
aluminum glazing frame
1-in. insulated glass
4-in. dia. steel column
1/4-in. steel stiffener
bluestone floor
1 1/2-in. setting bed
1/4-in. plywood subfloor
aluminum glazing frame
exterior downlight

AXONOMETRIC SECTIONAL DETAIL OF HOUSE WALL

carpet
2x10 joist
CMU
bluestone terrace on 4-in. slab

Architectural Record February 1964
New products

A new generation of high-security cylindrical locksets
Long regarded as one of the most conservative segments of the American building-supply industry, manufacturers of door hardware are being pushed to develop more technologically sophisticated products by the combined forces of a rising national crime rate and increasingly stringent state codes for handicapped accessibility. The recently introduced Corbin 700 and Russwin 900 Series SecurityBolt locksets address these concerns. Designed for a variety of commercial, residential, and institutional installations, the cylindrical locksets feature a unique single-bolt mechanism that not only operates in a 1/2-in. throw latch position, but also can be extended to a 1-in. deadbolt position by key or inside turnpiece. The units are manufactured of cast bronze and stainless steel and fit a standard 161 cylindrical door cutout. Their lever-handle mechanisms—available in either straight or return design—are said to withstand 1,000 lb of vertical torque, yet need only a 20-deg rotation to retract the bolt. The lock meets the revised building requirements of the American National Standards Institute, which state a preference for lever, push-type, or U-shaped handles over knobs, as well as most Federal and state handicapped regulations. Russwin and Corbin Divs./Emhart Hardware Group, Berlin, Conn. Circle 300 on reader service card

Reinterpreting the acoustical ceiling grid
Suprajine is the latest manifestation of manufacturers’ persistent quest to combine the cost-effectiveness and flexibility of lay-in ceiling panels with an uninterrupted, monolithic appearance. The new commercial system by Armstrong incorporates intricately scored geometric patterns on 2-ft-square tegular panels that are supported by a narrow 3/16-in.-wide metal grid that virtually disappears into the score lines. The five available panel designs illustrated at right include Suprajine 1100, four 12-in. by 12-in. modules narrowly scored into 1-in. by 1-in. squares; Suprajine 1200, four 12-in. by 12-in. modules scored into 2-in. by 3-in. squares; Suprajine 1600, four 12-in. by 12-in. modules scored into 6-in. by 6-in. squares; Suprajine 2000 panels scored into 2-in. linear strips; and Suprajine 2200 panels scored into 2-in. squares. Panel and grid systems are offered in matching colors of white, adobe, and parchment. Armstrong World Industries, Inc., Lancaster, Pa. Circle 301 on reader service card

For more information, circle item numbers on Reader Service Card, pages 199-200

More products on page 155
Industrial luminaire
A 12-page color brochure featuring the Prismpack IV luminaire for industrial and commercial uses highlights a quick-disconnect hanger said to simplify installation and maintenance. Information on optional equipment is included. Manville Products Corp., Denver, Colo.
Circle 400 on reader service card

Solid state trip
Industrial luminaire
A 12-page color brochure featuring the Prismpack IV luminaire for industrial and commercial uses highlights a quick-disconnect hanger said to simplify installation and maintenance. Information on optional equipment is included. Manville Products Corp., Denver, Colo.
Circle 400 on reader service card

Soft wiring
A 12-page color brochure features 1-in.-high connectors that provide up to a three-phase, five-wire power distribution system. Switching for the twopart system is achieved by adding three interlocking components only where needed. The Miller Co., Meriden, Conn.
Circle 401 on reader service card

Circuit breakers
Solid state trip circuit breakers in 1600, 2000, 2500 and 3000 amp frames are described in a 20-page bulletin. Information on applications and selection of the UL-listed SE breakers, dimensions, and specifications are included. Charts show characteristic tripping curves. Square D Co., Lexington, Ky.
Circle 402 on reader service card

Security
Controlled access systems with infrared encoded cards are shown in an 8-page color brochure. Systems featured range from the CardAccess 50 for a single door to the CardAccess 300 with 250 card readers for up to 40,000 cards and 32 access levels. Continental Instruments Corp., Westbury, N.Y.
Circle 403 on reader service card

Glazing
An integrated glazing system for standard, custom, structural or light architectural applications is featured in a 12-page color brochure. Applications, including silicone systems, are shown in photos of installations. Services to architects are described. Lord & Burnham Co., Ltd., St. Catharines, Ontario.
Circle 404 on reader service card

Wood office system
Managerial and clerical settings of the Valencia line of shelves, credenzas, desks, and glass, wood and fabric panels are shown in photos in a 20-page color brochure. Drawings with dimensions and information on finishes and wire management are included. Steelcase, Inc., Grand Rapids, Mich.
Circle 405 on reader service card

Roof windows and skylights
Both esthetic and practical uses of roof windows and skylights are illustrated and described in a 24-page color brochure. Photos of installations highlight options available in a variety of different models. Section details and tables of dimensions are included. Velux-America, Inc., Greenwood, S.C.
Circle 406 on reader service card

Tiles
Glazed, ceramic and quarry tiles are featured in a 40-page color catalog. Detail and installation photos depict a variety of colors and patterns, while sizes are listed for both tiles and trim. Among the new products shown are tiles designed to aid the visually impaired. American Olean Tile Co., Lansdale, Pa.
Circle 407 on reader service card

Outdoor luminaires
Installations of Somerset area luminaires in groupings of up to four units are shown in a 6-page color brochure. A diagram and detail photos illustrate weatherproof construction. Schematics for mounting designs and spacing charts are included. Manville Service Center, Denver, Colo.
Circle 408 on reader service card

Accent lighting
Lytespan low-voltage fixtures are featured in a 16-page color brochure. Each model is shown in a selection of finishes while dimensions, available filters, and lens types are listed. Track selection and lighting design guides and performance data are included. Lightolier, Inc., Jersey City, N.J.
Circle 409 on reader service card

Fire protection
A 28-page color catalog describes and illustrates five basic sprinkler systems. Information on applications, operation, component requirements, and accessories is included. Photos show available components while diagrams illustrate valve constructions. The Viking Corp., Hastings, Mich.
Circle 410 on reader service card

Lamps
Metalarc and Super Metalarc lamps for indoor and outdoor application are featured in an 8-page color brochure. Photos show typical installations and charts compare these lamps to mercury and incandescent lamps. GTE Lighting Products, Danvers, Mass.
Circle 411 on reader service card

More literature on page 153
For over 40 years, Velux has made only Roof Windows and Skylights.

That's what makes us the world leader.

It is also your assurance of the highest standard of excellence consistent with your architectural design.

As specialists in roof windows and skylights, we have committed our craftsmanship, energy, and resources to creating products of unmatched superiority in materials and performance.

This commitment to quality shows up as more and more architects and builders worldwide use versatile Velux roof windows and skylights in a wide range of applications. The reason is quite simple. Velux delivers roof windows and skylights that contribute to the excellence of your work while allowing you to remain practical about costs.

For a free, full-color, 24-page brochure as well as a complete price list, please fill out this coupon and send it to us. We will respond within 24 hours of receiving it.

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Greenwood, SC 29648

VELUX-CANADA INC.
16805 Hymus Blvd.
Kirkland, P.Q. Canada H9H3L4

See Sweet's 7.8/Veld 8.16/Vel

Circle 51 on inquiry card
Accents and cladding
Steel-O-Bond, a composite of two thin sheets of stainless steel with a polyethylene core, is featured in photos and diagrams in an 8-page color brochure. As described, it can be shaped to specifications for exterior and interior use. Performance data are included. Consolidated Aluminum, St. Louis, Mo.
Circle 112 on reader service card

Redwood lighting fixtures
Incandescent, fluorescent and HPS fixtures in wall mount, post mount and bollard designs are shown in photos and diagrams in a 36-page catalog. Mounting details and light patterns are illustrated. Matching receptacles, planters and benches are included. Columbia Cascade Timber Co., Portland, Ore.
Circle 413 on reader service card

Door
The CorriDoor, designed for high volume interior use such as in hotels and offices, is featured in a 6-page color brochure. A diagram showing the door’s steel construction and commercial weight hardware, frame details and specifications are included. Republic Builders Products Corp., McKenzie, Tenn.
Circle 414 on reader service card

Insulation
A 4-page color brochure in Arabic and English covers three polyurethane insulation systems for use in the Middle East. Systems featured are rigid spray foam for roofs, walls and pipes; poured insulation for cavities in masonry walls; and sandwich panels for walls and roofs. The Upjohn Co., Kalamazoo, Mich.
Circle 415 on reader service card

Folding doors
Folding doors and partitions in veneers, vinyls and laminates are shown in photos of installations in a 12-page color brochure. Specifications, mounting details, and available finishes and surfaces are included. Caneled, mirrored and glassed panels are highlighted. Panelfold, Inc., Miami, Fla.
Circle 416 on reader service card

Acoustical walls
A 12-page color brochure features two fabric-covered glass fiber wall treatments designed to be both visually appealing and acoustically efficient. Information on installation and maintenance is included as well as a chart of fabric colors. Owens-Corning Fiberglas Corp., Toledo, Ohio.
Circle 417 on reader service card

Automatic doors
Sliding and swinging doors, ICU/CCU manual hospital sliders and UL-rated fire door packages are featured in a 12-page color catalog. VistorPulse, an LCD sensor-controlled door is highlighted. Photos and diagrams show installations and operation. Besam, Inc., East Windsor, N.J.
Circle 418 on reader service card

Victorian staircases
The Barclay 5-ft-diameter spiral and Kensington straight cast iron staircases are featured in a 24-page catalog, which also includes plaster moldings, brass rail fittings and shower kits for bathtubs. Photos, old drawings and dimensions are included. Steptoe and Wife Antiques, Ltd., Willowdale, Ontario.
Circle 419 on reader service card

Insulation
Nailboard, a combination of foil-faced foam insulation and nailable waferboard for use in roofs, floors and walls, is covered in a 4-page color brochure. Composition, physical properties, code compliance and installation instructions are included, as well as sizes and thermal values. NRG Barriers, Inc., Sanford, Me.
Circle 420 on reader service card

Mechanical systems insulation
Armajex insulation for pipes, tanks, vessels and equipment for air conditioning, refrigeration and plumbing is described and illustrated in an 8-page brochure. Photos show installations and tables list physical properties and thickness recommendations. Armstrong World Industries, Inc., Lancaster, Pa.
Circle 421 on reader service card

Interior wall treatments
Pre-finished hardboard planks and panels offering options in texture, scoring, and woodgrain designs are featured in a 12-page color brochure. Products are shown in both installation and close-up photos. Specifications are included. Masonite Corp., Dover, Ohio.
Circle 422 on reader service card

Window insulation
Custom-fitted interior window insulating systems of hard, clear acrylic plastic with rigid vinyl frames are featured in a 4-page color brochure. A chart lists performance data for each system available. 3M Energy Control Products, St. Paul, Minn.
Circle 423 on reader service card
MERILLAT INTRODUCES "OMNI."

We've solved the three problems of European styled cabinetry: price, installation and alignment.

Price: Imagine, a European look cabinet with all the Merillat quality features at a fraction of the European price.

Installation: Omni cabinetry features a solid oak front frame which allows ease of installation. Omni will arrive "on the job" ready to install because Merillat's front frame double dowelled construction withstands the stress of shipping.

Alignment: Omni doors are precision aligned at the factory. Fine tuning in the field is easy because Omni cabinetry features a unique four-way hinge with "micrometer type" adjustability.

For full details on the new Omni product line contact Merillat today.

Merillat Industries, Inc., Adrian, Michigan 49221

Circle 50 on Reader Service Card.
Glazed block
Spectra-Glaze Reflecto-Lite glazed concrete blocks feature images that change with the light and move as people pass by. Blocks come in 60 standard colors in all standard shapes. Corner and trim pieces are also available. The Burns & Russell Co., Baltimore, Md. Circle 302 on reader service card

Tissue holder
A toilet tissue holder is made of steel tubing coated with baked enamel, polished chrome or polished brass. Other items in the Be Bro line include towel bars, shelves and hooks. Watercolors, Inc., Garrison-on-Hudson, N.Y. Circle 305 on reader service card

Roofing tiles
Mission S Class A-rated concrete roofing tiles measure 16½ by 13 in. and weigh approximately 10 lb each. A 100-sf installation, including trim, weighs approximately 900 lb. They feature a high barrel design and come in a variety of colors. Monier Co., Orange, Calif. Circle 306 on reader service card

Fireplace insert
A UL-approved fireplace insert fits hearth openings from 24 to 29 in. high and from 28 to 42 in. wide with a minimum depth of 16¼ in. It features a 190 cfm rheostat-controlled blower, a 22-in. cast iron grate, and a 10-gauge steel firebox. Preway Inc., Wisconsin Rapids, Wis. Circle 307 on reader service card

Panel-hung drafting board
A panel-hung drafting board is mounted on a track and may be adjusted to any angle. It has a white laminated surface and extruded pencil tray. The board comes in 2 sizes: 39 by 42 in., and 30 by 48 in. When not in use, it can be folded up against the wall. All-Steel, Inc., Aurora, Ill. Circle 303 on reader service card

Wall cladding
TECH WALL panels are made of .120-in. aluminum and feature two joint sealing systems designed to ensure watertightness. A drainage system guides internal condensation to the outside. Panels come in a variety of finishes, including clear, anodized, and duranodic. Conspec Systems, Inc., Cranford, N.J. Circle 304 on reader service card

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PROFESSIONAL QUALITY is the hallmark of all Rauland Sound Systems, with their millions of watts of proved experience behind them. That's why they are widely specified for performing arts centers, public buildings and institutions, stadiums, schools, churches, health care facilities, business and industry— wherever superior, ultra-reliable sound reinforcement is a rigid requirement.

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Outstanding structural integrity.

On every project, whether it's high rise, small or the unusual, you need a window system you can trust.

At Wausau Metals, we believe structural integrity is so important we go beyond recommended AAMA quality standards. We design window and curtain wall systems for you that will perform beautifully under the most extreme conditions, years and years after your project is completed.

Our own certified test lab, supervised by experts in testing and trouble shooting, maintains these strict standards.

It's another reason why more and more architects across the country are putting their trust in Wausau for high performance window and curtain wall systems.

Look for us in Sweet's to find the Wausau Metals Representative nearest you. Or, call or write us today for assistance in your next window design.

Our solid growth is built on trust.
**Fiberglass insulation**

A 4-page color brochure features CertaSpray, a spray-on fiberglass insulation that has an R-value of R-4 per in. A series of charts covers fire resistance, sound transmission, and noise reduction coefficient ratings. Code compliances are also included. CertainTeed Corp., Valley Forge, Pa. Circle 122 on reader service card

**Lamps**

A 4-page color brochure describes the Tru-Aim series of low-voltage tungsten halogen lamps for downlighting and spotlighting applications in stores, museums, galleries, and restaurants. A chart outlines specifications of the 10-lamp line, which includes spot, medium flood, and flood models. GTE Lighting, Danvers, Mass. Circle 125 on reader service card

**Acoustical ceilings**

Acoustical ceiling panels with sound-control and thermal-insulation properties are featured in a 12-page color brochure. The literature illustrates available sizes, colors, and textures of five product series and includes a chart for each ceiling type that shows its light reflectance rating, sound absorption coefficients, and surface burning characteristics. Owens-Corning Fiberglas Corp., Toledo, Ohio. Circle 126 on reader service card

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**Manufacturer sources**

For your convenience in locating building materials and other products shown in this month's feature articles, RECORD has asked the architects to identify the products specified.

Pages 94-101
St. Matthews Parish Church by Moore Ruble Yudell


Pages 104-107
Christ the King Lutheran Church by Charles Tapley Associates, Inc.


Pages 108-111
Immanuel Episcopal Church by John Miller Associates, Inc.


Pages 134-137
Hillclimb Court, Seattle by Olson/Walker Partners


Page 137 (left)—Glass block: PPG. Stenciled hardwood flooring: Larry Luneceford.

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"Kalwall, the most highly insulating light transmitting material."


Kalwall CORPORATION

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Circle 54 on inquiry card
No matter whose electronic equipment is used, be it Apple® to Xerox®, or Digital® to Wang®, Ultronic 9000 systems furniture supports it all. It is the most versatile, adjustable and comprehensive system to house everything from everybody...VDT units to printers.

Ultronic 9000 also helps increase the productivity of the people who operate the equipment and increases your design options in planning today's electronic offices.

For further information on Ultronic 9000, visit one of our Regional Offices or contact your Steelcase Representative. For worldwide product, service or sales information, write Steelcase Inc., Grand Rapids. MI 49501. Or, call toll-free 800-447-4700.

**Ultronic 9000 from Steelcase. It supports whichever button is pressed.**

Steelcase

Circle 55 on inquiry card
Corian. The solid solution

Tough, non-porous CORIAN® resists wear in high-usage areas of virtually every shape and size.

Designing for problem areas such as those found in laboratories, banks or hotels requires a surface material that offers maximum design flexibility, durability and minimal maintenance. DuPont CORIAN gives you all three, beautifully.

Unlike laminates or gel-coated products, CORIAN is solid. Its color and pattern go all the way through. CORIAN is tough and non-porous, so it can shrug off the daily grind of high usage. Ordinary stains wipe right off. Stubborn stains (even cigarette burns) rub off easily with cleanser. And fine sandpaper will remove accidental cuts without marring the beauty of CORIAN.

Like fine hardwood, CORIAN can be worked and shaped to fit most areas, even problem spaces. And you can combine CORIAN with many other materials for more individual designs (as shown below).

Send for more information on CORIAN.


*CORIAN is a registered Du Pont trademark for its building products. Only DuPont makes CORIAN.

Circle 56 on inquiry card
Foam-filled weather-stripping—Prevents drafts.
Our door has one of the best air infiltration ratings in the industry.

Optional true divided lites (available with single glazing or insulating glass).

Lexan® sill—Wears longer than wood or metal. Never needs maintenance. 1,400 times better insulating properties than aluminum.

2¾ inch backset—Accommodates most any style of lock.

THIS KIND OF PATIO DOOR ISN’T NEW
THIS KIND OF QUALITY IS.

Admittedly, there are other swinging patio doors available. But none of them are made as well as a Marvin Terrace Door. The wood is Ponderosa pine, chosen for its excellent insulating properties and the way in which it accepts a beautiful stain-and-varnish or paint finish.

Depending on the door size, we use four or five hinges. These hinges cost us more, but they make the door last longer and operate more smoothly. And instead of wood or aluminum, we make the sill of Lexan®. It never needs maintenance, its insulating properties are 1,400 times that of aluminum, and it’s virtually indestructible.

MARVIN SLAMS THE DOOR ON RISING ENERGY COSTS.

The Marvin Terrace Door is one of the most energy efficient patio doors you can buy. Open and close it once, and you’ll see why. You almost have the feeling you’re operating a refrigerator door.

The foam-filled weather-stripping all but eliminates drafts. In air infiltration tests, our door was found to be one of the best in the industry.

The wood frame is not only more attractive than metal it’s still the best insulating material...
for problem areas.

Because of its beauty and toughness, CORIAN® was used for these stylish counters in an El Paso, Texas, bank.

With CORIAN®, stubborn stains and cigarette burns are removed with cleanser. Cuts and scratches can be sanded away.

CORIAN® is solid all the way through. Combine it with other materials for unique edge treatments.

CORIAN
Solid Beauty That Lasts.
Unlike other doors, there are no finger joints used anywhere.

Ponderosa pine—Chosen for its excellent insulating properties and beauty.

Optional Low-E glass—Greatly reduces loss of heat or air conditioning.

Additional hinges—Greater durability and smoother operation.

Extra wide stiles—For greater strength and better looks.

that can be used for doors.

Insulating glass is standard. And the new energy-saving Low-E glass is available as an option. It allows light to pass through it, but heat is reflected. So heating and cooling costs are significantly reduced.

OPTIONS. OPTIONS. AND MORE OPTIONS.

In addition to the option of Low-E glass, you can order your Marvin Terrace Door with true divided lites for a look of authenticity in renovated older homes or in certain styles of new homes. And you can add a storm panel for energy efficiency.

For an efficient modern look, you may want to choose solar bronze glazing.

And a Cathedral style is available for a very distinctive look in both new and old architecture.

Unlike some other doors, you also have a choice of hardware. The Marvin Terrace Door is designed with a 2 3/4 inch backset that will accommodate most any style of lock. You can even order the door unbored. So you can use any lockset you want to match the rest of the hardware in your home.

And since our screen or optional combination storm/screen is placed a reasonable distance from the door itself, the handle doesn't have to be of the small "knuckle-busting" variety.

As for sizes, nobody offers you more to choose from. Our door is available in both 6'8" and 8' heights and a surprising variety of widths.

For more information, send us the coupon, or call 1-800-346-5128 toll-free. In Minnesota, call 1-800-552-1167.

Send to: Marvin Doors Warroad, MN 56763

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Company
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City
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MARVIN DOORS. WOOD HAS NEVER LOOKED BETTER.

Circle 57 on inquiry card
Fastdraft is the automated drawing system that doesn't slow you down in order to speed you up. Easy to learn and easy to use, the IBM's 7361 Fastdraft System was designed by drafting technicians for drafting technicians.

And this means productivity. Drafting technicians new to Fastdraft found that after three to four weeks of learning they exceeded their previous rates of output. And within two months, they were two to four times as fast as before. Some tasks, such as drawing changes, were completed many times faster.

Priced at under $100,000 for two workstations, Fastdraft is a complete turnkey system with powerful drafting commands including the capability to generate isometric views.

The system uses a light pen, which functions as merely an extension of the drafting pencil. The entire system interacts with the technician, using ergonomics (the science
Fastdraft.

of making tools fit their human users) to keep functions simple and natural. Fastdraft is a one-vendor system. IBM provides and services every component in it. And, if you know IBM, you know that means uniquely fast response, competent service, and full customer support.

For more information, or to arrange to see Fastdraft in action, return the coupon.

IBM

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400 Parson's Pond Drive
Franklin Lakes, N.J. 07417

Please send me more information on the IBM 7361 Fastdraft System.

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Title
Company
Address
City State Zip
Phone

Circle 58 on inquiry card
Sweet's new Section 1.9, "Computers in Design/Construction"—developed in conjunction with Datapro Research Corporation, and appearing in all 1984 Sweet's Editions—contains comprehensive information on:

- Everything necessary to choose the right equipment and software. Datapro Research Corporation is the most widely accepted and respected source of up-to-date information on data processing products and services, and their special expertise has been combined with Sweet's unmatched knowledge of the construction industry to provide 56 pages of indispensable editorial information on all aspects of computer products selection and applications. In addition, this special Sweet's section contains detailed catalog information (on computer systems, CAD and software) from a variety of manufacturers.

**The editorial content of Sweet's new Computer Section:**

- "Three Approaches to Using Computers." (In-house computers vs. computer service bureaus vs. remote computing services.)
- "How to Select a Timesharing or Remote Computing Services Vendor." (The benefits that can be gained—and the pitfalls to watch out for.)
- "Word Processing Systems." (Standalone equipment, multi-terminal word processors and wp/dp systems—from A to Z.)
- "Personal Computers." (Their continuing evolution, their various office applications, and how-to-buy guidelines.)
- "How to Evaluate a Personal Computer for Word Processing Applications." (The computer, the keyboard, the video display, the storage medium, the software, the documentation, and service and support.)
- "All About CAD." (What computer-aided design systems consist of, and what they can do.)
- "How to Buy Software Packages." (More than 25,000 packages are now available. This report explains how to go about selecting and buying the right ones.)

**The manufacturers with 1984 catalogs in Sweet's new Computer Section:**

- Bausch & Lomb
- Carrier Air Conditioning Co
- Cost Information Systems Division, McGraw-Hill Information Systems Company
- Holguin and Associates, Inc
- IBM
- Summagraphics Corp

Products and services detailed in these manufacturers' catalogs make Sweet's new computer section even more valuable to construction industry professionals!

*Catalogs appear in following Sweet's editions:
1—General Building & Renovation, Engineering & Retrofit;
2—General Building & Renovation, Industrial Construction & Renovation, Mechanical Engineering & Retrofit;
3—All editions;
4—All editions except Contract Interiors;
5—General Building & Renovation, Mechanical Engineering & Retrofit;
My name isn’t Bruning . . .

It’s Fred Deinzer, but it might as well be Bruning, because I’m one of hundreds of field people who are dedicated to the business as if we were members of the family. It’s that spirit that has helped Bruning lead the industry for almost 90 years. We’ve been first in equipment, first in supplies, first in service. What does all this mean to you? It means you are assured of greater satisfaction in products tailored for your needs . . . 12 different diazo machine models to choose from, 21 different “sepia” intermediates, 38 different vellums and films, new “pin-bar” supplies . . . and many more. Why not get acquainted with our machine line? Send in the coupon today.

Get a FREE perpetual calendar with a demonstration of a Bruning diazo machine. Printed on 24”x36” Sure Scale film, the calendar will be a handsome and useful addition to your office. You can even use it to make diazo copies.

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Circle 59 on inquiry card Architectural Record February 1984 167
Make it more receptive.

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2. Insulation 1-1/2 inches deep
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Circle 61 on inquiry card

Circle 62 on inquiry card
APA systems can save you money on construction, from foundations to roofing. So, if you've got designs on cutting costs, start by cutting this coupon. And mail it to: American Plywood Association, P.O. Box 11700, Tacoma, WA 98411.

I'm eager to cut building costs. Please send me the booklets I have circled below:

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"18 years' service and still counting. That's the performance record of single-ply roofing of Hypalon."

—John Breitenstein, DuPont

"Single-ply roofing membranes of HYPALON synthetic rubber have been weathering everything under the sun for the past 18 years," says John Breitenstein, Programs Manager. "That's because HYPALON is a high-performance rubber with durability benefits that meet the most demanding roof requirements."

A single-ply membrane of HYPALON is installed quickly and easily. Since it is thermoplastic when put down, seams are as strong and reliable as the membrane. The membrane gradually cures in place to produce an integral, tough, strong elastomeric roofing surface.

Roofing membranes of HYPALON also offer:
- Reflective white color for energy efficiency.
- Resistance to flame propagation.
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- Serviceability over a temperature range from -40°C (-40°F) to 93°C (200°F).
- Colorability for a range of aesthetic designs.

Specify HYPALON—made only by DuPont—for durable, low-maintenance roofing membranes. Call toll free, 800-441-7111, ext. 44, for further information. Or for free literature, write: Du Pont Company, Room X-40097, Wilmington, DE 19898.

*DuPont manufactures HYPALON, not single-ply roofing membranes or systems.

Circle 63 on inquiry card
At Pepperdine, Laminated Glass gets high marks for noise control.

The beautiful, all-glass skin of Pepperdine University Plaza was all that separated the university administrative offices from the roar of this busy LA freeway. However, that thickness exceeded weight limitations of the building design.

So 3/8-inch laminated glass, with a Saflex interlayer by Monsanto, was proposed as a solution. Laminated glass achieved the STC requirements of 36-38 with half the thickness and weight.

The configuration for the all-glass building is detailed in the illustration:

And the Pepperdine University Plaza building went up quiet, beautiful...and not overweight.

If your building has a weighty sound control problem, write us for more information on laminated glass acoustical control. Monsanto Polymer Products Company, Dept. 804, 800 N. Lindbergh Blvd., St. Louis, Missouri 63167.

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There's no 'or equal' for performance

Bioguard: antimicrobial
carpet tech from Lees

The Cypress Fairbanks Medical Center provides patient care within a state-of-the-art health care environment. Bioguard antimicrobial carpets by Lees cover floors in patient rooms, corridors, lounges, and offices.


Appearance. Dense construction in Antron® nylon by DuPont makes a durable, easily maintained wear surface. Antxon resists dirt and also offers permanent static protection. Modular systems. Antimicrobial protection is available in carpet tiles as well as broadloom.

Call toll-free. For illustrated brochure, test data, specification information, call 800/353-5647. From within Pennsylvania, call collect 215/666-9406.

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Circle 65 on inquiry card
Now the Intelligent Elevator™ puts you in command

You're in command at the planning stage
Our free Traffic Analysis will show you how the elevator system you've planned for your next building will perform before you build it. We'll compare your projected system with similar buildings, and make design recommendations for maximum efficiency and cost effectiveness.

You're in command at the design stage
U.S. Elevator's microprocessor-controlled Intelligent Elevators™ allow creative design solutions by reducing machine room space, creating a more effective elevator system that may require fewer elevators, less energy and lower operating costs.

You're in command at the post-construction stage
And now we've added an interactive brain to our Intelligent Elevator system. Our new FLITE COMMAND™ system allows you and your client to analyze and fine-tune your elevator system under actual building traffic conditions after the building is occupied.

Put your client in command for the life of his building
Your client will be glad you specified an elevator system that can be in constant touch with his building manager. Our unique Building Executive Elevator Position ("BEEP") display shows the position, direction and status of all elevators at all times. And it can provide up-to-date performance data to the building manager or directly to a U.S. Elevator service center via our Remote Performance Monitor.

Call your U.S. Elevator representative for a FREE traffic analysis!
Tell us about your next building project. We'll study your requirements and provide a complete, computerized traffic analysis that will ensure that your building has the Intelligent Elevator system it deserves.
Partition walls may change to meet new needs.

A continuous band of Pella Clad Windows insures that new rooms won’t be left in the dark.

Few buildings are as complex as health care facilities. Not only must they meet today’s functional requirements as efficiently as possible, but ideally they should be able to adapt to new procedures in health care delivery. This need for versatility is especially true in ancillary services, and here at United and Children’s Hospital, long, almost continuous bands of Pella Clad Windows assure that changes in partition walls will create new rooms that still meet code requirements for light and ventilation.

Part of the territory of design for complex functions is a complicated building form. The long horizontals of reflective glass wrap their way around corners visually uniting the various building shapes.

Pella Clad Windows were specified for a number of other reasons, too. The Clad System allows versatility in joining together fixed and venting windows. Solid wood construction offers energy efficiency without complicated thermal breaks. And maintenance costs will be lower because windows can be washed from the inside.

The best of wood and aluminum in a commercial window. The Pella Clad System combines the best features of wood with the best features of aluminum, asking each material to do only what it does best. Solid wood construction offers outstanding thermal performance, strength, and beauty. Aluminum cladding offers superior protection from the elements, and an efficient mullion system.

And now you can specify Pella Windows prefinished on the interior with two coats of acrylic and a top coat of urethane. This extra-cost option offers a window that’s virtually complete the moment it’s installed.

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<tr>
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Advertising index

Bold face—page number
Italics—Reader Service number

A
Aluminum Association, 184
Amarilite/Arco Metals Co., 48, 49 [G]
(601) 393-2110
American Olean Tile Co., 147 to
158, 23 [G]
(215) 856-1111
American Plywood Association, 169
Amoco Fabric Company, 28, 14 [E]
(404) 966-6935
Andersen Corp., 98-97; 46 [G-L]
Architectural Complements, 19; 6 [G]
(617) 492-4900
Asa, Inc., 28; 18 [G]
(312) 965-3774
Atlas Door Corp., 168; 62 [G]
(201) 572-5700
Aztech International, 178; 70 [E]
(1-800) 545-8306

B
Bilco Co., 185; 76 [G-I-L-E]
(203) 934-6363
Bosal Co., W.R., 72; 42 [G]
(704) 225-1021
Bruning CAD, Cov III; 91
(918) 661-5291
Bruning Div. AM International, 167; 55
(312) 353-2900
Bush Chemical USA, 22; 12 [G-D]
(404) 255-0999
Burlington/Lees Carpets, 172; 65
(1-800) 523-3647
Burnaby Corp., 70; 40 [G-E]
(203) 888-4444

C
Cabot, Samuel, Inc., 52; 23 [G-L]
(617) 723-7740
Carlisle Syntec Systems, Div. Carlisle Corp., 84; 36 [G-I-E]
(1-800) 233-0551
Chicago Faucet Co., 20; 11 [D-E]
(312) 694-4400
Clearprint Paper Co., 188; 77
(415) 562-7752
Columbia Lighting, Inc., Subs. US Industries, 196; 89
(509) 224-7000
Construction Specialties, Inc., 24; 13 [G-E]
Corporveld, Inc., 8; 4
(412) 777-3970
Couples Products, 48; 31 [G]
(314) 781-0729

D
Dover Corp., 70 [G]
(601) 393-2110
Dow Corning Corp., 78; 42 [I-E]
Dupont-Corian, 160-161; 56 [D-I]
(1-800) 545-5281
Dupont Co. Hypalon, 170; 63 [D-I]
(1-800) 441-7111
Dupont-Textile Fibers, 14-15; 8

E
Engineered Components, Inc., 325B; 20 [G-I]
(713) 499-6611
Envirowax, Inc., 176; 68
(815) 624-8300
Executive Management Systems, Inc., 18; 10
(1-800) USA-0700

F
Firestone Industrial Products, 195; 87 [G-I-E]
(1-800) 428-4442
Follane Steel Corp., 6; 3 [G]
(1-800) 624-9066
Ford Glass Division of Ford Motor Corp., 56-57; 25 [G-I-L-E]
(333) 568-7500
Future Coatings, Inc., 189; 79
(314) 321-4100

G
Gamelite, Inc., 91; 48 [G]
(205) 545-5610
General Electric Advanced Lighting, 38; 22
Grace, W.B. & Co., 30; 16, 82-83; 44 [G]
(617) 876-1400

H
Hartco, 187; 76 [G-D-L]
(615) 369-5826
Haworth, Inc., 34; 21
(516) 392-5961
Heliow Industries, Inc., 177; 69
(415) 887-4800
Hopson Windows, 179; 71 [G]
(713) 693-5124

I
IBM Corporate/Information Systems, 164-165; 58 [I-E-L]
Imurco, Inc., 44-45; 26 [G]
(414) 383-4039
Insulated Panel Systems, 32B; 19
(713) 499-6541

K
Kalwall Corp., 157; 54 [G]
(609) 627-3861
Karastan Rug Mills, Cov II-1
Kawneer Company, Inc., 88-89; 47 [G]
Kentile Floors, Inc., Cov IV; 92
G-I-G
Knoll International, 50; 75
Kroin, 19; 6 [G]
(617) 492-4000

L
Laminators Safety Glass Association, 32; 17
LeFebure, 193; 83 [G]
(319) 599-7551
Levolor Lorrentzien, Inc., 68; 29 [G]
(201) 469-8400

M
(303) 677-7400
Marley Cooling Tower Co., 180; 72
(913) 362-1519
Marvin Windows, 182-183; 57 [G]
(1-800) 346-5125
Mayline Co., 198; 90
(414) 457-5337
McNichols Company, 46; 28
(1-800) 207-3820
Merilit Industries, Inc., 154; 50 [L]
(517) 263-0711
Monsanto Co., 171; 64 [G-E]
(314) 694-2672

N
Neenah Foundry, 197; 89 [G-E]
(414) 725-7060
Nucor Corp., Div. Vulcanics, 84-85; 43 [G]

O
Owens Corning Fiberglas Corp., 2-3; 2 [G-I-L-E-D]
(1-800) 338-3747

P
Panellift, Inc., 40; 24 [G-L]
Peerless Electric Co., 57; 99
Pella Rolyscreen Co., 174-175; 67
[G-D-L]

R
Rambusch, 194; 85
(212) 675-6000
Rauland-Borg Corp., 155; 82
(312) 257-1300
Ryder Purdy Lumber Co., 197; 88 [G]
(203) 388-4405

S
Sanite International Corporation, 5; 2
(713) 688-1882
Sargent & Co., 36; 22 [G]
(303) 528-2515
Sauer Mfg. Co., 46; 29 [G]
(1-800) 527-1530
Simplex Ceilings Corp., 32, 18 [G-E]
(203) 884-0008
Sitework, Inc., 168; 69 [G-I]
(1-800) 221-1448
Sloan Valve Co., 67; 28 [E-I]
Software Arts, Inc., 16-11; 6
(601) 393-0000
Steamist Co., Inc., 181; 24 [L]
(201) 933-0700
Steeleaze, Inc., 158-159; 55
(1-800) 447-4700
Sto Industries, 32; 127 [G]
(802) 775-4117
Sun Systems Prefabricated Solar Greenhouses, 168; 61 [G-L]
(1-800) 645-4500
Sweets Division McGraw-Hill Information Services Co., 166

T
Tandy, 191; 41
Temcor, 46; 27 [G-I]
Tie & Thomas & Betts, 16-17; 9
(5-I-E)
(201) 685-1600
Thoro System Products, 42; 25 [G]
(1-800) 257-1570
Trus Joist Corp., 192; 82
(203) 375-4450

U
United States Gypsum Co., 65-66; 47
(312) 321-4100
U.S. Elevator Subs. Cubic Corp., 178; 66
(619) 490-1000

V
Velux-America, Inc., 152; 57 [G]
Ventarama Skylight Corp., 180; 72
(5-I-E)
(316) 931-0202
Vintage Properties/Vintage Club, 54; 24
(619) 346-5566
Von Duprin, Inc., 92; 49 [I-E]
(317) 307-5521

W
Wausau Metals Co., 156; 53 [G]
(715) 845-2161
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