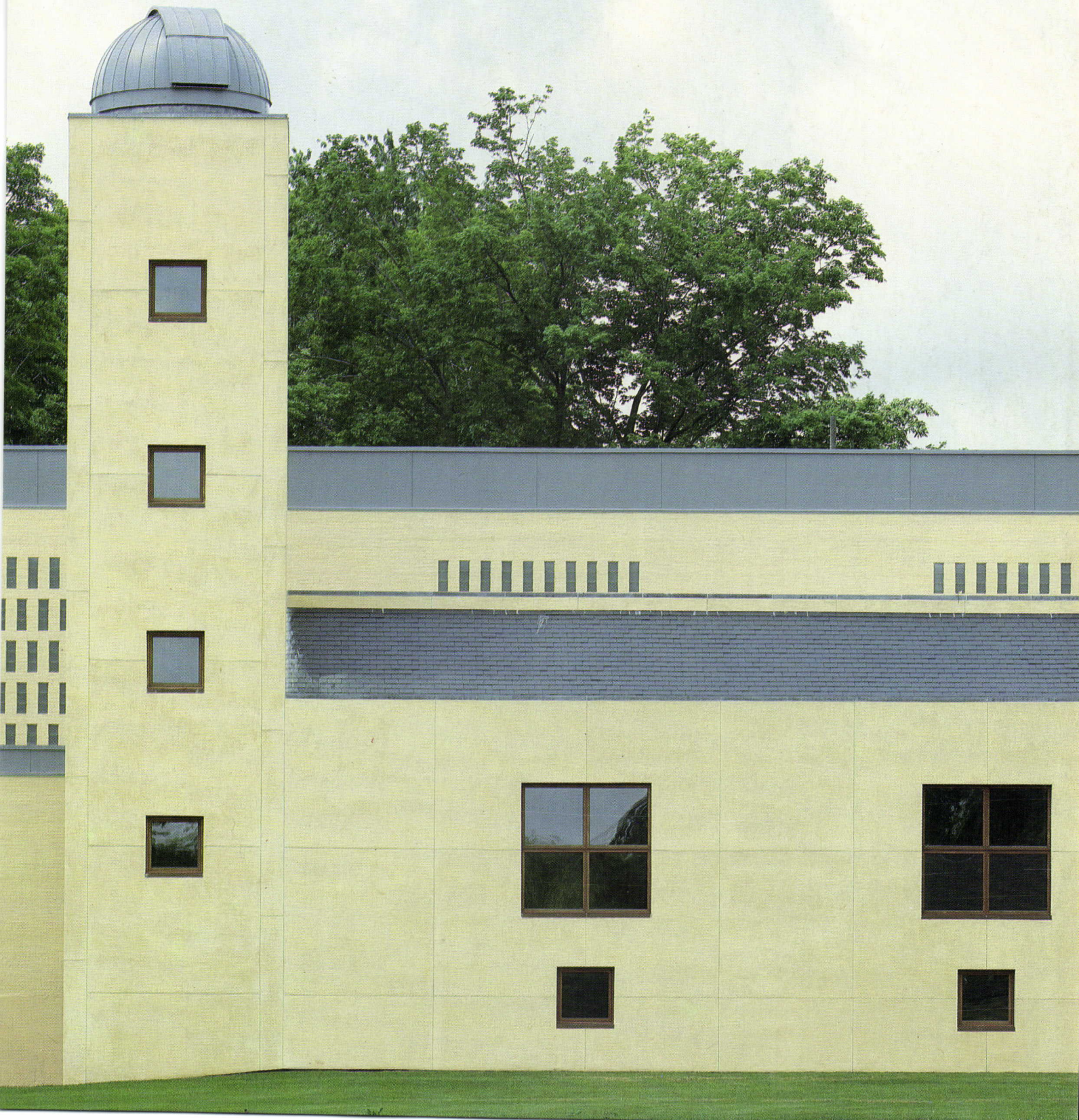


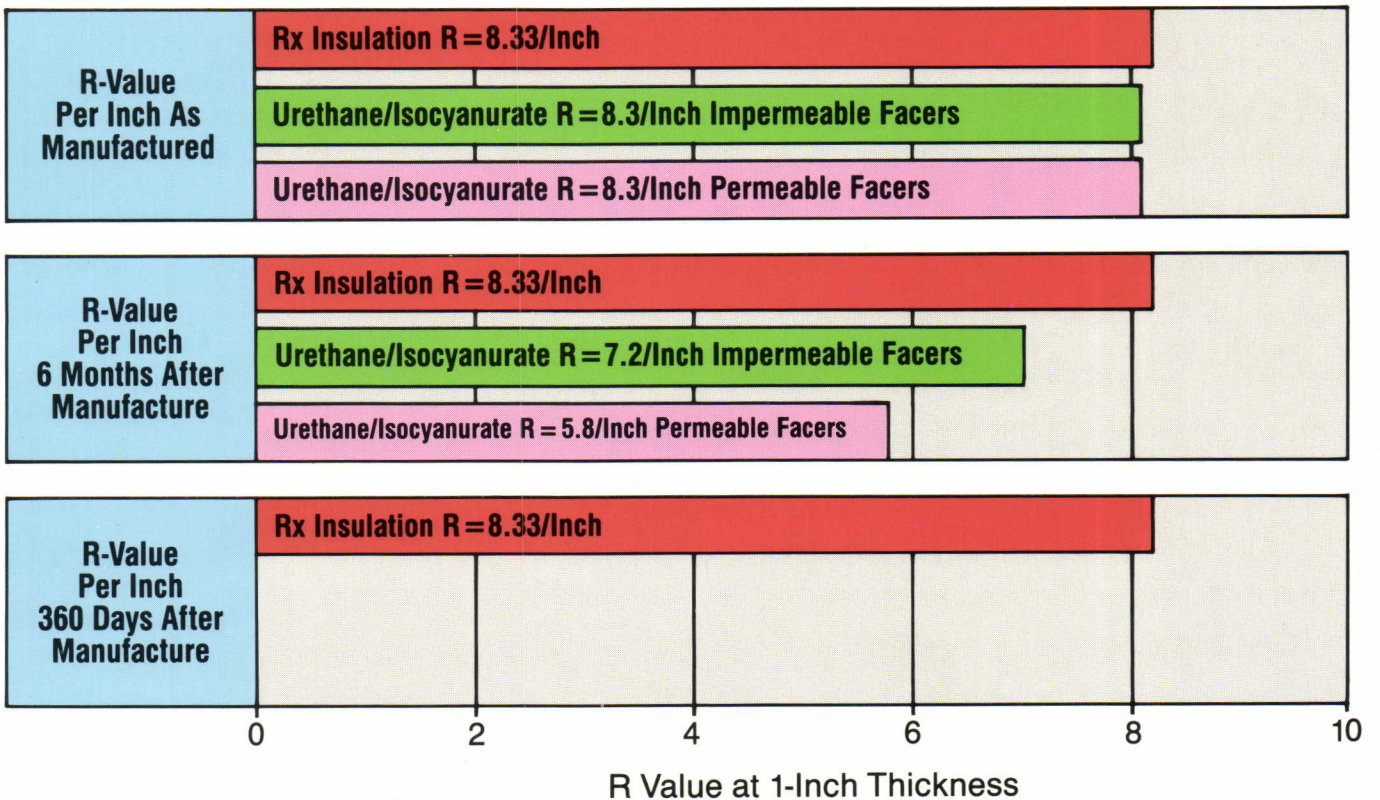
ARCHITECTURAL RECORD

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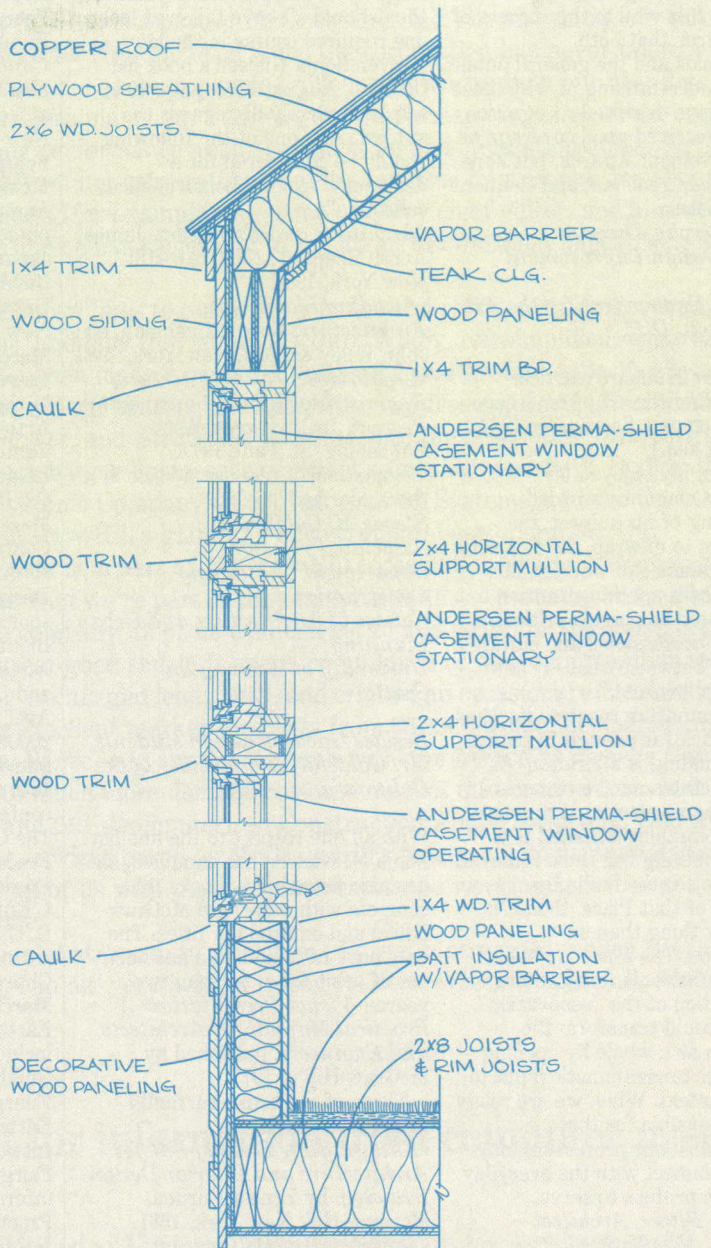
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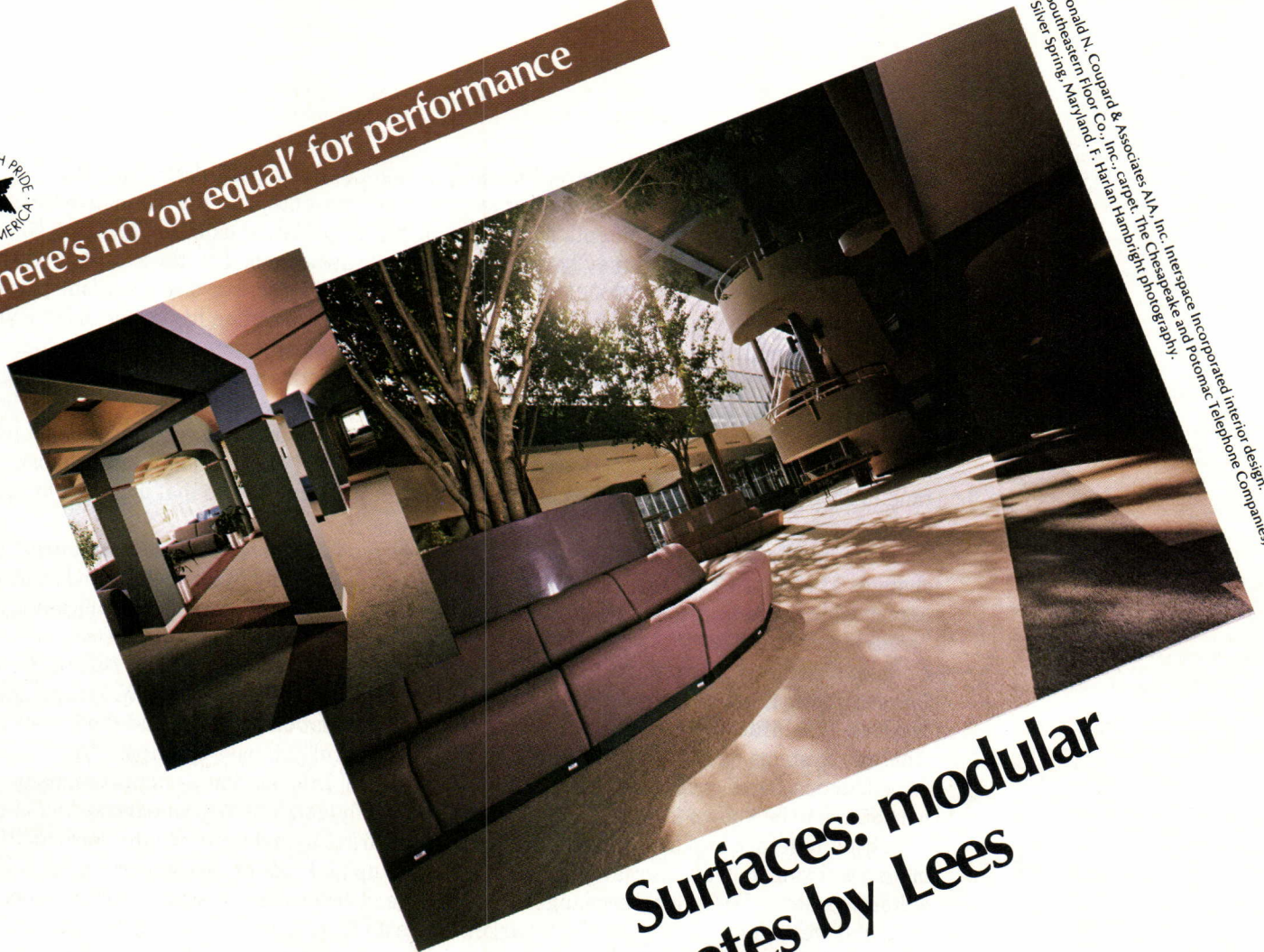
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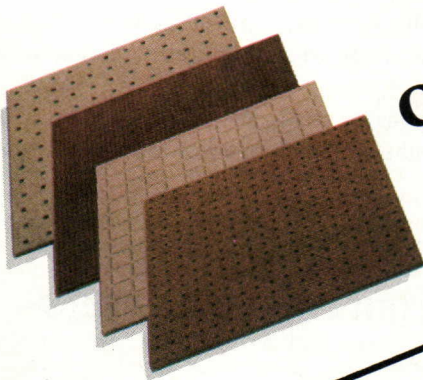


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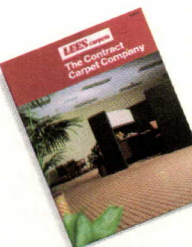
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National Trust show of products and services draws large crowds

Sponsored by the National Trust for Historic Preservation as an adjunct to its national convention late last year in Baltimore, REHABITAT displayed the products and services of some 100 companies to 9,000 visitors in three days. The companies specialize in such rehabilitation products as reproduction hardware and windows and chemical masonry cleaners, and such services as financing and syndication of renovation projects qualifying for preservation tax incentives (see RECORD, May 1984, page 35 for current status). The show will be held again in conjunction with the National Preservation Conference in Seattle on October 9-13, 1985. For information, contact Kate Merlino at the Trust, 1785 Massachusetts Avenue, N. W., Washington, D. C. 20036 (202/673-4141).

Construction contracting up eight per cent

The construction sector broke out of a two-month slump in November with an eight per cent gain in contracting for new projects, as determined by the F. W. Dodge Division of McGraw-Hill Information Systems Company.

The start of \$16.9 billion of new construction of all kinds lifted the seasonally adjusted figure. The Dodge Index of total construction contract value stood at 158 (1977 = 100), against October's 146. The rebound, which followed two months of sluggishness, was paced by nonresidential construction.

The unadjusted total of November's nonresidential building was \$6.4 billion. Large gains in industrial building (up 20 per cent) dominated. Part of November's strength in commercial and industrial building, however, was offset by an eight per cent decline in institutional contracting.

According to George A. Christie, vice president and chief economist for F. W. Dodge, "November's unexpected strength in new starts of offices and factories was inconsistent with the economy's slowdown. It suggests that proposals for tax reform in fiscal 1986 may have the perverse effect of enticing the start of a lot of new capacity in 1985 in order to qualify for more advantageous capital recovery regulations."

New and existing embassies to change for better security

Sometime this spring, the State Department expects to get \$256 million to beef up the security of threatened embassies and other posts around the world.

Capitol Hill, acting quickly in the wake of last September's terrorist attack on the American embassy in Beirut, approved a total of \$366 million to minimize the effects of future attacks on such buildings, mainly in the Middle East and Central America. While the total number of terrorist incidents in 1983 was up only slightly over 1982, it was up a calamitous 128 per cent in the Middle East. And there were a record 652 persons killed.

Most of the money will be spent on some 70 unspecified posts and will include renovation and new construction at 13 posts with the most severe problems—as well as a \$1 million research project to design a model embassy of the future. The National Research Council has set up an 11-member committee to define a research agenda and design criteria for future embassies.

Stuart L. Knoop, vice president of Oudens & Knoop, Washington architects who have advised the State Department on embassy security for about two decades, says future embassies will feature a lot less glass and a lot fewer windows, but he doesn't believe that they have to look like bunkers. Nor should they, he says, because the U. S. government wants to project an open image abroad.

Architects should be consulted as early as the site selection process, he believes. Embassies should be located away from potential trouble sites where mobs are prone to gather—main thoroughfares, parks, universities. Nor should they be close to massive population centers, on one-way roads or

AIA research and design conference set

The first annual conference on the architectural applications of design and technology research will be held in Los Angeles on March 14-18 and will cover new approaches to energy use, rehabilitation, life safety, and evolving facility types. For more information, contact the AIA Foundation at 1735 New York Avenue, N. W., Washington, D. C. 20006 (202/626-7500).

straight, wide roads that invite a high-speed crash through barriers.

As positive prototypes, he points to those buildings that for technical reasons have few or no windows but that are nevertheless architecturally pleasing—such as museums. Future embassies as well as remodelings will make as much security use as possible of landscaping and earth berms. Ground-floor parking garages that could harbor a dynamite-laden truck won't be used in future designs.

Rearranging the embassy's interior in novel ways also enhances security. Ambassadors may have to give up panoramic views and move deep into the interior for greater protection, putting "less sensitive" embassy functions on the building's perimeter.

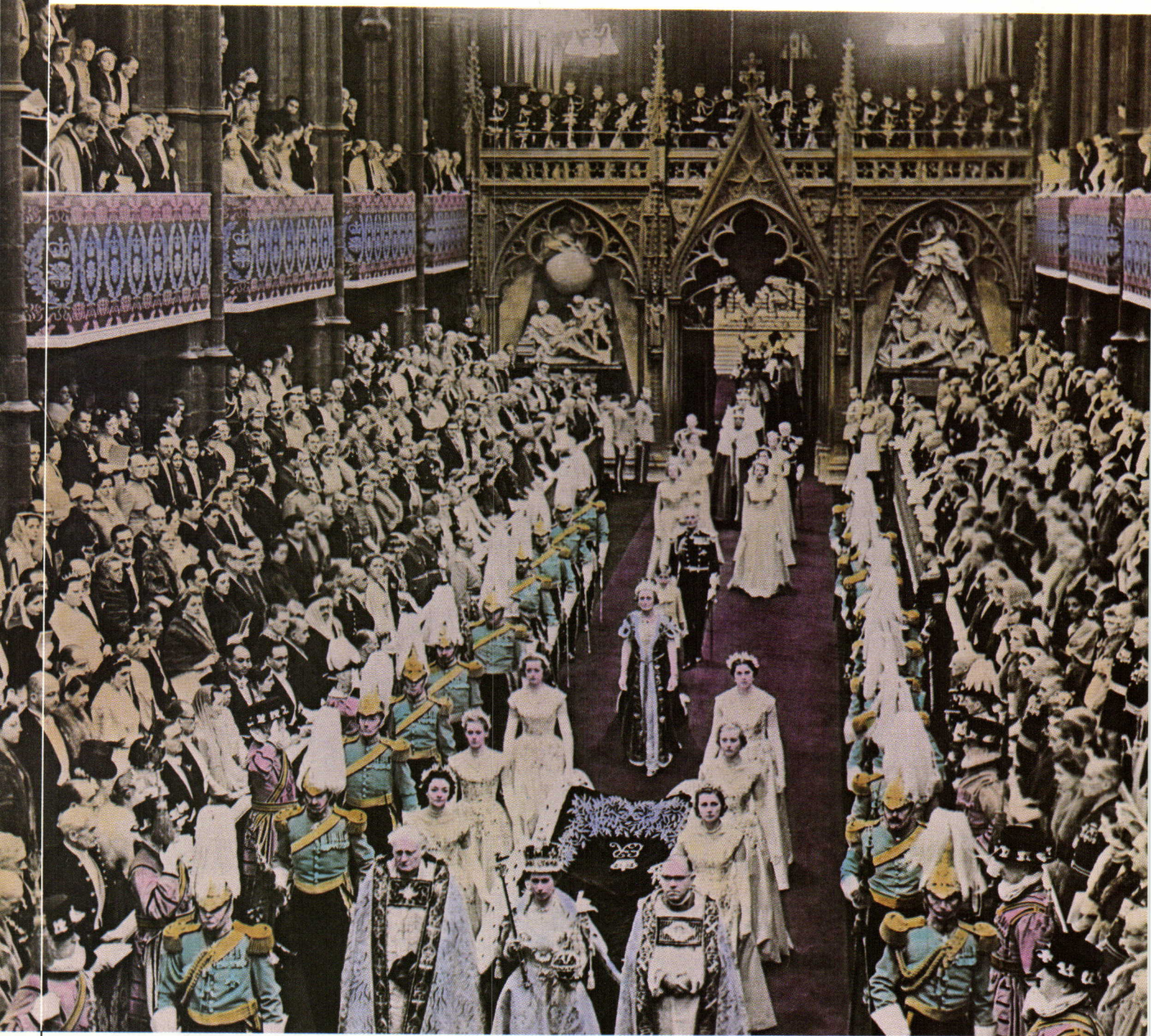
Existing embassy buildings, some of them fine old classic structures such as the Talleyrand Annex of the embassy in Paris, an historical landmark, and the embassies in Vienna and Ottawa, pose special problems. Knoop wants "to preserve as much as possible" and to make new security features unobtrusive. Opaque materials such as curtains "go a long way." Another possibility is to keep windows in place but install a wall on the inside, preserving outward appearances. "Half the battle is not to present a target," he says.

Even windowless cubes can be made attractive. Knoop cites one of his own structures, the U. S. Trade Center in Mexico City, as an example. Opened in 1972, it has few openings and features a black structural-steel-bar screen as an ornamental element. Quips Knoop: "The skill of dealing with a blank wall is part of the architect's art." Peter Hoffmann, *World News*, Washington, D. C.

Health-care construction emphasis changing

McGraw-Hill's Health Care Information Services division reports that starts worth \$1.6 billion occurred in 1984's third quarter. These will provide five million square feet of hospitals and 11.6 million square feet of other medical buildings. While this is a decline from 1983's peak, it is still above average and represents a shift from hospital to long-term-care construction.

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Marketing continued.

The jury system in architecture and interior design schools gives many designers a head start on presenting ideas to a potentially hostile audience. If that wasn't enough for you or if you didn't have the opportunity to master your fears in school, don't wait until your next interview to worry about it. Many courses offered these days can put that torture behind you.

The success of an interview lies in your ability of personal communication

The secret of the successful project interview is to seduce prospective clients into sharing their hopes and dreams with you, to draw out their emotional expectations. Some designers do that through a natural empathy. For the rest of us the gift of "charm" can be mastered just the way any other behavioral trait is modified or gained. First, you have to *want* to change your normal response. Second, with the help of a professional, or perhaps just a patient friend, practice asking questions, listening creatively, and putting yourself in another's place.

Ann Boyar of Jaffe Acoustics: "Don't sell yourself. Get a client because you can supply his needs. *Listen* to him to learn his needs. *Then* indicate ability to fulfill them.

"I always put myself in the position of the client," says New York City design consultant Pamela Waters. "I listen to him and try to solve not just the problem he brought me but four others at the same time. Since I understand real estate—maintenance, operations, and management—I can tailor design solutions to those areas. That's how I gain confidence."

Architect Jim Mitchell of Jordan/Mitchell tells how his firm does it: "At the initial interview our normal approach is to *listen* to the client rather than to present our credentials. Our basic assumption is that we wouldn't be there if we weren't qualified. Of course we take promotional material and examples of our work (color prints) which we show if that becomes important. But mainly we develop personal contact with the decision maker."

The idea of showing your wares only when asked may seem such a radical notion that you will not be comfortable with it. If so, then at least you might consider restructuring your presentation. Offer it not as a slide lecture—the conventional approach—but as a matrix for eliciting questions. Since the issue is to get the prospects to talk, the answer may be to request a response to each slide as it appears on the screen or to each presentation board as you put it on the easel. Limit yourself to two or three descriptive phrases and then a question related to the prospects: "Here's a conference room we did for a firm of spaghetti merchants. We used wooden doweling to symbolize their product. Have you thought about how you want your conference room to look?"

Believe it or not, it is easier to get people to talk about their own interests than to pay attention to an elaborate "dog-and-pony show" (that expression does a wonderful job of illuminating the pomposity of most slide shows). And it's a lot less

expensive too. Furthermore, you have an opportunity through your questions to express sincere interest in the prospect's problems and enthusiasm for solving them. In short, questions, not answers, should be your style during an interview, unless you are specifically asked to present a statement about your firm.

Finally learn to ask your questions "in the client's language," not in the convoluted jargon of design. Let them realize that you've put some effort in preparing for the interview by asking precise questions about their program, their site, their manufacturing process, their advertising approach, or whatever you can find out about ahead of time. Tell them about similar jobs you've handled, but as those solutions relate to their needs, not about abstract concepts or the prizes won. Pay attention, ask questions, let them know you care about their project.

A few reinforcements of the value of design services can help the cause along

If marketing is the process of identifying business opportunities, then selling is the art of convincing an individual or a group that employment of your services is necessary to their own success. That is, convincing them that "good design" pays off. You will have interviews in which the prospect is fully prepared to hire a designer and others where he or she is not at all certain that designer services are worth their cost. In each case, the interview gives you the chance to "educate" the potential client. That does not mean lecturing but again responding to their needs in a sympathetic, vigorous fashion.

For the more sophisticated client, the need to explain design will be less; in that case there is the possibility of beginning the design process during the interview itself. By raising questions based upon your own research into their circumstances, you can discover preferences and desires that, before the client's eyes, begin to take visual shape. Some interior designers are able, after a few words from the prospect, to paint a beguiling picture of the proposed space with nothing but words.

It is best that you not draw anything to leave behind. Rather, the idea is to use your facility with a pen to illustrate concepts or ideas about the client's problem that make it seem as though you have begun to design. It is to give an impression of openness and generosity that will convince the prospect that you care about getting the job more than others.

For the first-time design client, that technique may not be enough to make the difference. Interiors and graphics designer Gere Kavanaugh, who frequently does product design, suggests that the answer here lies in demonstrating for commercial clients that good design can make money for them. Although it applies as well to other design disciplines, it is not an argument that can be made convincingly without preparation. If you have done similar work before, then be ready to show figures that



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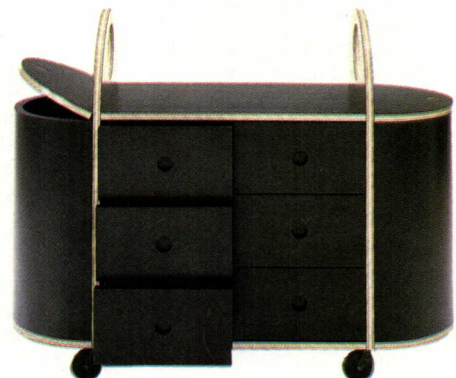
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prove economic effectiveness. If not, use your pre-interview research to develop a hypothetical pro-forma statement (income versus expense) based on the client's annual report or other financial data. If you are careful not to make extravagant claims for it, such an argument will persuade them that quality design is a worthwhile investment.

But in the end, it is the level on which you communicate that determines success

Several designers—Pamela Waters, Gail Biddison, Gere Kavanaugh, and Ralph Appelbaum—say that they can feel almost immediately whether a potential client is right for their firm or not. Each claims to have learned the hard way that when the “chemistry” is missing, the project is, if not doomed, then likely to result in difficulties.

It is easy enough to say that a wise designer will pay attention to bad vibrations and avoid such jobs. But what about the cases where things feel a bit strange during the interview, but for other reasons you would like to do the job anyway. The answer lies in trying to find out why the prospect is behaving in a way that makes you uncomfortable. The bold approach is to ask straight out: “What is it about our presentation that you don't like?” A more conservative technique is to frame questions that draw out the other person's feelings rather than factual answers. It may be that your personal style or your work does not appeal to the individual and you are best off knowing that. But chances are that external matters, such as doubts about the project itself or its cost, are causing the awkward response. In that case, you can help the prospect face them and maybe in the process win trust.

Some of us have a smoother delivery than others, with charming little jokes always on the tip of the tongue. Whether this is your gift or not, by adopting a light-hearted, easy-going attitude you can help those people who find designers intimidating to relax and enjoy the possibility of working with one.

For those of us who deal with corporate or institutional clients, an especially delicate interviewing situation can arise when the executive with whom we have formerly worked is replaced by someone new. One reason for keeping close touch with former clients is to learn of such changes even before they are consummated. The value of an inside “contact”—someone you can count on for information about the latest developments and what they mean—is immeasurable.

There are times, of course, when the new vice president has a favorite design firm he or she wants to bring in, and there is almost nothing you can do about it. Nonetheless, it is important that you approach the new person seriously, offer your services, and try to find out what the policy changes are likely to be. Don't burn bridges that took a long time to build or fail to present yourself for further consideration at such a time.

And don't expect that you will not be judged on a competitive basis

In every field of design today, competitive interviews have become the norm. Once again, research is a key to success.

As Judith Chafee points out: “My policy is to find out the names of the competing firms. Then I can anticipate the kind of presentation they will give and what points they will stress. I then try to take a different approach to the subject. By removing opportunities for direct comparison, I hope to make the choice cleaner.”

Ed Mills says: “We handle the interview no differently if other firms are competing. If we know any of the competitors, we say complimentary things about them if we say anything at all, since we believe it is important to never criticize other architects publicly.”

The constant effort of writing proposals and furnishing estimates for the cost of providing service and product is extremely taxing for a small firm. However, Infield + D'Astolfo has found the discipline valuable in the long run. It has forced them to sharpen their proposals and to define their own image more precisely. To differentiate themselves from their competitors, they have learned to speak the clients' language. They tell prospects that the principals will be doing the work, not a staff member the prospect never met.

Sometimes an interview makes it obvious that the client does not yet know what he or she (or they) want. Either they have not thought out their needs and goals—or factors beyond their control have not been adequately researched. In any case a final decision on choosing the designer will be postponed. That is when the clever professional will propose doing a study that will clarify the issues. Perhaps the client will have thought of sponsoring research before the meeting, but it is in the nature of design training that we can think complex problems through right before their eyes—and create a job for ourselves during the interview.

Interiors consultant Jeanne Hartnett has made feasibility-studies capability an important part of her marketing approach. For a fixed fee, her firm offers to do that type of work on the expectation that “if we perform satisfactorily they will wish to proceed with the balance of the work; if they do not go ahead, we help them see that they have risked minimum dollars on that one phase.”

Museum planner Ralph Appelbaum has developed his own approach to convincing potential clients of his firm's value. For museums and institutions distant from his New York City office, he offers one or two paid “consultancies” during which he helps them figure out their problem. By “figure out,” Ralph means that he will apply his particular discipline to it; he shows the client what they must do, how his firm could fit in, and where the process will take them. And after he has briefed himself on the project this way, he can make “a more intimate pitch” for the work. Recently after



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Marketing continued

two days on one such consultancy in the southwest, he was asked to take on the project.

As with any of the professions today, designers tend to believe that the world revolves around their own discipline. They are encouraged to focus on it single-mindedly in school, to look up to the "stars" who are adulated in professional journals, and to seek out peers for social companionship.

This narrow focus leads designers to expect that everybody else will care about their esthetic perceptions and understand their jargon and that clients will be happy to see their work from the point of view of "design." Not only are all these notions false, but pursuit of them is almost guaranteed to cost you potential commissions and, even if you get a few jobs, to cause endless communication difficulties. Remember, practicing design is a business, not an elegant hobby. Learn to see things like a client.

And then, of course, there is follow up, follow up, follow up

Many designers do not send a letter or otherwise communicate with the individuals whom they have just interviewed. They think that would appear "pushy" and offend the prospect. They sit by the telephone and wait; the person interviewed never calls and perhaps, even worse, the timid designer never finds out why.

Just as follow up is a crucial ingredient in the early stages of marketing, it can make the difference here between getting the job and losing it. If you accept the premise that a designer ought to go after work, then a strong response after an interview should seem as logical as going to the meeting itself. It shows you want the job.

A pleasant note thanking the interview committee for its attention is better than no letter at all. But a letter that also reviews the issues discussed during the meeting has two advantages: First it records in a concise way the content of the interview (which can be helpful to the interviewers themselves); and second it gives you an opportunity to comment on the items as you report them.

"After the interview," says Koster, "we send a letter strengthening points we made (or covering those we missed). Sometimes we send a different letter to each interviewer on the committee appealing to his or her special interest as expressed in questions or responses during the meeting. We have learned that often they compare these letters and in that way get a broader understanding of our firm."

Obviously that kind of response calls for a great deal of sensitivity during the interview itself, very good notes or a tape that can be analyzed later, as well as enough time spent composing and typing each letter. Yet it seems inexpensive if it sways an uncertain committee in your direction. Keep in mind that a group of people who intend to hire a designer will probably spend at least as much time talking about it together later as they did in the interview

themselves. Any way that you can put your firm forward during those discussions is fair game. If you have a "supporter" on the committee, that will no doubt help your case. Be sure to furnish him or her with a good set of notes based on your response to the interview so that any points you thought of afterward can be aired.

Assuming however that you have no such advantage, the follow-up letter should be a report-like statement of two or three pages. Each concern raised during the interview is listed with a short statement of how your firm will specifically address it. This varies from one discipline to another, but in most cases it is appropriate to include design ideas about the project in the letter. Diagrams that may have been sketched in the meeting can be cleaned up a bit; relationships between parts of the project can be illustrated; emphases and proportions included. Everything short of actually revealing your design solution can be useful.

If you have done everything right, you can now hope to be invited to do a proposal

There are two principal distinctions between a follow-up letter and a proposal: First the prospective client must request that you submit a proposal before you do so. Second you must definitely include a fee.

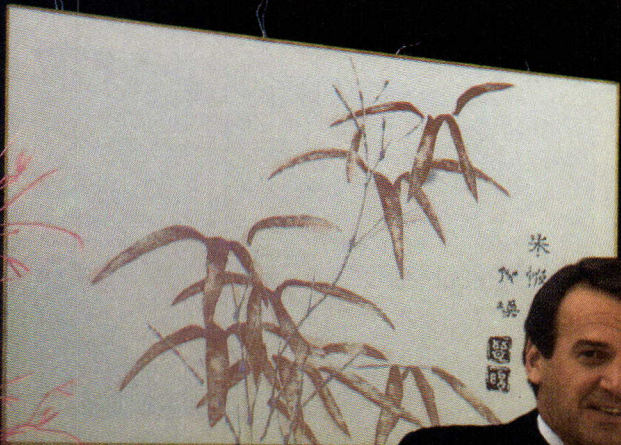
There are four elements in the normal proposal: (1) statement of your firm's qualifications and relevant experience; (2) your understanding of the scope of the project, including tentative budget; (3) management process you will follow, including tentative schedule; and (4) fee statement. These elements need not necessarily be done in that order. Some designers prefer to place their statement of how they understand the nature and scope of the project right up front, leaving the qualification data and personnel resumes to last.

Mills finds that it takes his firm anywhere from one to ten hours to prepare proposals, perhaps expedited by a standard format that his firm has evolved over the past four and a half years of practice. Other offices say that it takes considerably longer: Mitchell tries to put off the proposal until several meetings after the initial interviews have been held. There are two advantages: You will have learned so much more about the client needs that the statement can be shorter and simpler than if you must speculate on their goals; also you are more certain that the job is likely to come your way.

Institutional clients usually demand a complete statement as part of the designer selection process. If you make the short list, a formal proposal is required. Kenneth Arutunian's landscape design firm, AKA, has developed an in-house method for preparing them that delivers a booklet designed to compete with the proposals of large northern California landscape architecture "corporations." These can take "several days of preparation." For example, for the renovation of an existing university amphitheater, AKA submitted a



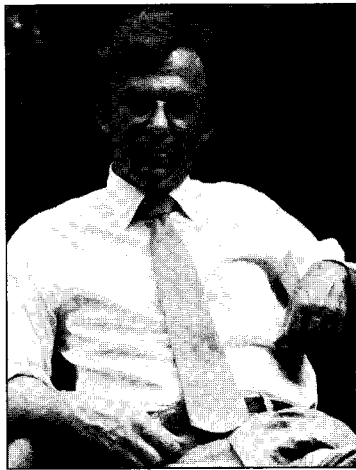
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Architectural education: Why can't Johnny learn to read?*

By Peter Forbes



For the past year ARCHITECTURAL RECORD has published a series of thoughtful articles on architectural education. Many intelligent people with considerable sense of mission have presented carefully articulated ideas about the educational process: curricula, intern development, accreditation and the like. A few brave voices, John Hedjuk comes specifically to mind, have spoken of the art of architecture. A few have even hinted that, perhaps, architecture can't be taught. Prior to embarking on this effort I have read all the articles in the series; some with interest, parts of others with sympathy, but all with a vague sense of discontent. Some basic point was being missed.

Is where one learns the real problem?

Although I have taught, and still do teach, in formal settings, I am a practitioner—a simple barefoot architect with the bias of a village blacksmith: don't build unless you know why the building needs building, and if it can't be built—which is a different thing from not being built—it doesn't do anybody any good. Interestingly, it is those two issues, knowing why and knowing how, that divide the entire profession. All of the articles on architectural education maintained that the training of architects involves exposure to ideas and techniques and then time to practice them. But does this process stop after five years or at the end of graduate school? There seems to be some degree of consensus that new graduates, so-called interns, are still learning—or why have the internship period? But have older practitioners stopped learning, or is their education restricted to such occult practices as how to get work? Do architectural academies provide adequate discourse, thought and learning? Are architectural offices necessarily antithetical to discourse, thought, and learning? Which of those two institutions should be invested with the responsibility for teaching why, and which for teaching how? And yet I wonder if the issue of where different aspects of architecture are learned is the real problem. I would propose that our profession's conception that architectural education is divisible into segments of "training" rather than a continuum of intellectual pursuit constitutes a much more severe stumbling block to the development of architects. The relevant question cannot be where or even when something in architecture is learned, for the simple reason that the learning about any aspect of architecture never really stops. What is important, therefore, is the development of an intellectual

From a wide background of practice and teaching, Peter Forbes contends that it is "too easy an out" to regard the dilemma of architectural education as finite—or even neatly segmented: it is a lifetime pursuit

capability to engage any issue at any point in an architect's career. As in the classic case of reading disability (hence the title of this piece), it is the form which understanding takes rather than the content of material to be learned that is critical. The difficult question, and I certainly am not confident of the answer, is how to induce the necessary intellectual curiosity and impetus to learn that this notion of architectural education requires.

School and office training must interrelate

Taxing as the question may be, there are a number of clear problems that can be more easily addressed. For example, behind the disparate and conflicting positions of educators and practitioners lurk two pernicious ideologies that must be dispelled before anyone can proceed to a constructive solution. The first is that the people who teach and the people who practice are gripped with a passionate territorial imperative. There is in both cases a sense of "the easy days are over, boys, and we better get the wagons into a circle." At its worst, the arguments of the two camps degenerate into accusations of irrelevance on one hand and plunderers of cheap labor on the other. Unfortunately, even at best, that curiously American syndrome of academic versus "practical" suspicion short-circuits the natural flow of people and ideas.

Architectural schools should interrelate with the university

The second ideological pitfall is best described as the Henry Ford approach to learning which is, again, endemic in American education: an isolation of ideas, disciplines, faculties, and outside resources which are only to be applied serially and discretely to the educatee. In a conversation this fall with the notable semiologist (and, now, best-selling author) Umberto Eco, he contrasted this, as he called it, "factory approach" to the "labyrinthian" interactions of European universities and their allied professions. Eco noted that although he had been teaching for years in Philosophy Hall adjacent to Avery Hall, Columbia University's school of architecture, not until his novel, *The Name of the Rose*, was published did any architectural students or faculty visit his classes. The greatest strength of my undergraduate alma mater, the University of Michigan, was the availability of courses open to students from any department. Sadly, this is now noticeably less true, not only by bureaucratic predilection, but through the vast dispersal of the campus. Logistics

have defeated discourse.

Within the architectural discipline, fragmentation is carried even further into sub-ideological fiefdoms. What should induce interesting argument and intellectual exchange seems, rather, to construct carefully guarded territories of belief, each bounded by thickets of semantic concertina wire. Looking on from an increasingly disengaged position, the architectural practitioner, mystified by the whirling rhetoric of academia, becomes even more suspicious and polarized from intellectual exchange. It is a sorry state of affairs and one that bodes no good for what we all profess to care about—architecture. Remember architecture? That's what we're supposed to be doing.

Inquiring minds and diverse backgrounds are needed

What is the solution to this destructive dilemma? In an attempt to answer, or at least to begin to grapple with, this question, I considered the attributes of my own staff members and how together we shape our working and learning environment. My office is small—six to ten people in Boston and New York. I work very closely with each individual, very much as in an atelier, but my role models for this organization are Mies's office (which was larger and more structured) and Walter Netsch's studio within Skidmore, Owings & Merrill in the late '60s, so I don't think our size and informality need invalidate the findings. Without question, the most productive, greatest contributors in my office are people with bright, inquiring minds and *diverse backgrounds in the arts and sciences*. Some have extensive formal education in the liberal arts while others have made concerted efforts to get it on their own. They are articulate, witty, irreverent and have a profound conviction that a hard question is more valid than an easy answer. They are, each in his or her own way, passionate about architecture and intolerant of an architect who is not. I have learned that, independent of training, after three years everybody has nearly equal technical skills; that is, they can all draw well and have a competent understanding of building technology. Similarly, given an inquiring mind, within two years there is a broad, common architectural and theoretical vocabulary. Books and magazines are circulated throughout the office, lectures attended and discussed, theories—architectural and not—are in a constant state of vivisection. Certain schools may give some individuals slight initial advantage in one or another area,

Peter Forbes is a practicing architect with offices in Boston, New York City, and Southwest Harbor, Maine. Since 1974 he has been a visiting lecturer and critic at the University of Michigan, the University of Virginia, Harvard University, and Virginia Polytechnic Institute and State University. From 1975 to 1977 he was Director of Continuing Education at The Boston Architectural Center. In 1982 he was a studio critic at the Catholic University of America's European Studies Program in Rome. He is a Fellow of The American Institute of Architects.

**With appropriate credit and apologies to Rudolph Flesch, author of Why Can't Johnny Read?*

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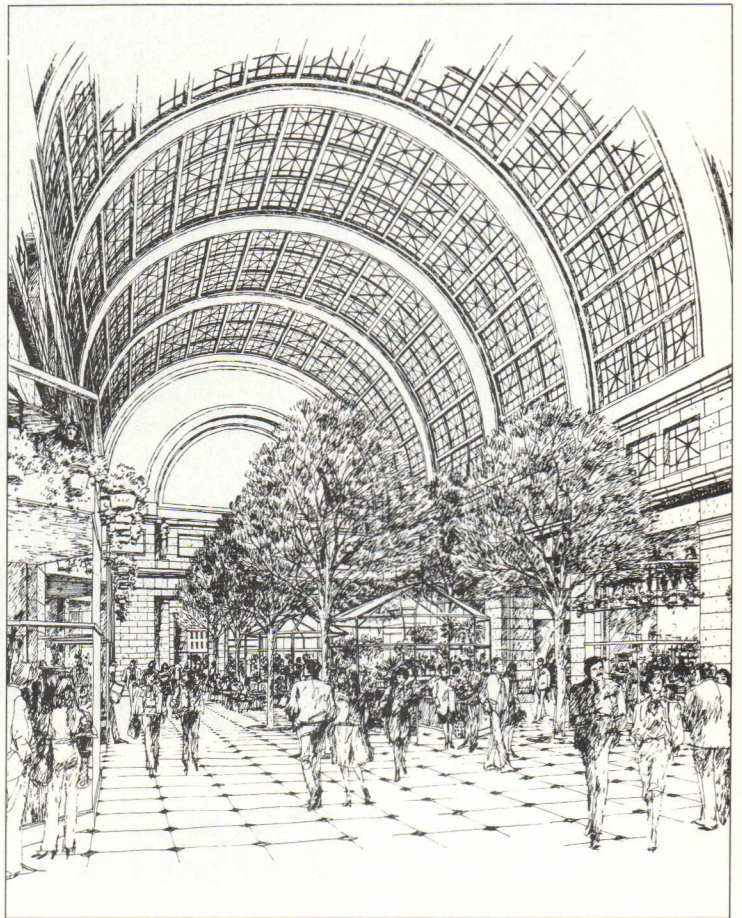
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Washington's Union Station: At last, back on the right track

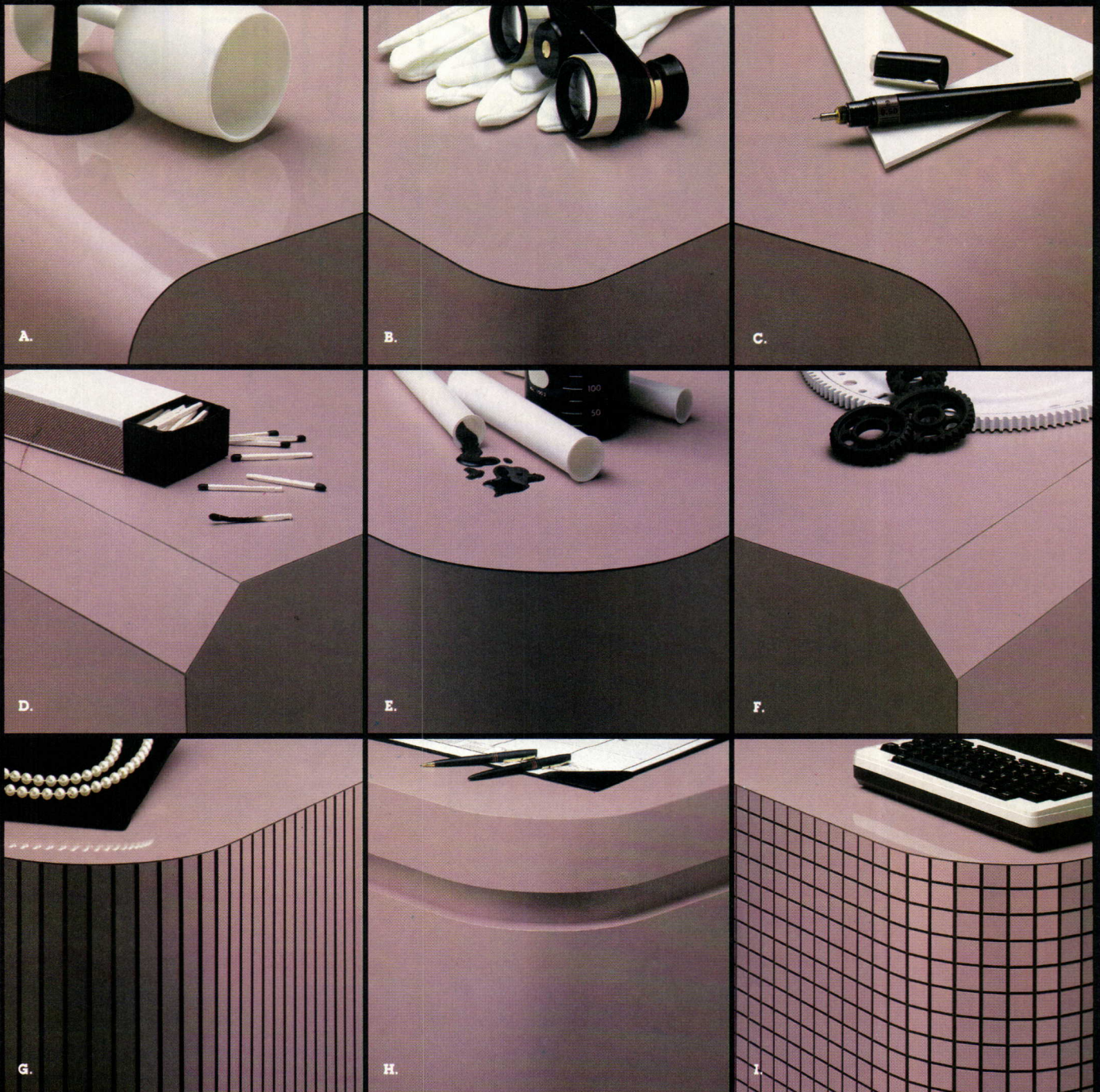


The recent history of Washington's Union Station, the great Beaux-Arts railroad depot designed in 1907 by Daniel Burnham, is not a happy story. Following the decline of intercity rail travel in the 1960s, Congress authorized renovation of the structure into a national visitor center and 4,000-car parking garage. Cost overruns led to a termination of work on the garage in 1976, and structural defects shut down the visitor center in 1981. Although Amtrak has continued to operate a passenger facility in the station, Burnham's majestic coffered spaces, inspired by the great baths of Imperial Rome, have been closed to the public. Now the good news: the Union Station Redevelopment Corporation has concluded a limited competition by selecting a development team called Union Station Venture to complete the five-level parking garage and integrate the Amtrak station with a vast new network of shops and restaurants planned for the vaulted main and lower concourses (drawing right). Patterned loosely on Boston's Faneuil Hall Marketplace, the project is a joint venture of Benjamin Thompson & Associates, who are responsible for the design of the retail areas, and Harry Weese & Associates, who will oversee structural and mechanical repairs.



Competition calendar

- The St. Louis Chapter/AIA is sponsoring a national architectural photography contest open to all AIA members. Entrants may submit up to five 35 mm color slides. Cash prizes totaling \$2,000 will be awarded, and the winning submissions will be organized into a traveling exhibition. Entry deadline is March 1. For information contact the AIA Photo Contest, St. Louis Chapter/AIA, 919 Olive St., St. Louis, Mo. 63101 (314/621-3484).
- The Storefront Gallery is seeking entries to an open, non-competitive exhibition entitled "The Homeless at Home" that seeks design solutions for structures that might provide shelter for people living on the streets of New York. All entries will be exhibited, and selected submissions will be published in a book. Entry deadline is April 30. For information contact Storefront, 51 Prince St., New York, N.Y. 10012 (212/431-5795).
- The National Building Museum is inviting architects, artists, and students to submit designs for a modular terra-cotta panel that could be used for either decorative purposes or wall cladding. Six top entrants will each receive \$750, and The Ludowici Celadon Company will manufacture and market the premiated designs. Entry deadline is May 1. Write Contemporary Terra Cotta Competition, National Building Museum, 440 G Street N.W., Washington, D.C. 20001.
- The Royal Institute of British Architects has announced an international student competition that calls for the design of a small art gallery to display the work of artists David Hockney and Anthony Caro. Entry deadline is May 2. For information contact the RIBA Education Department, 66 Portland Place, London W1N 4AD, England.
- The Institute of Business Designers and Wilsonart are sponsoring a national competition for students in all the design disciplines. The design problem is a 4,100-square-foot restaurant adjacent to an athletic club. Prizes totaling \$750 will be awarded. For information contact Margo Jones, c/o Thompson, Ventulett, Stainback & Associates, 1200 N. Omni International, Atlanta, Ga. 30334.



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West Week '85 will examine the human factor in architecture and design

One of the surest signs of spring in southern California is West Week, the annual contract market and design conference scheduled for March 27-29. West Week has evolved over the years into an important meeting ground for architects, interior designers, and facilities planners who come to Los Angeles to view the newest contract furnishings by manufacturers located in the Pacific Design Center and to attend a series of lectures, symposiums, and exhibitions. The theme of West Week 1985 is "Form and Purpose," a reference to the title of a book by architect Moshe Safdie, one of the major speakers at this year's conference. As in the past, West Week will feature design programs sponsored by the PDC itself, in addition to a symposium entitled "Transformations of Architecture: Space and Light" that has been organized by PDC 2, the West Coast contract furniture manufacturers' association. The following events, all to be held at the PDC or at the nearby West Hollywood Auditorium, will be of particular interest to architects:

Wednesday, March 27

10:00-11:00 a.m.: Lecture by Jonas Salk, founding director of The Salk Institute, on Form & Purpose in the Evolution of Mankind.

11:30 a.m.-12:30 p.m.: Lecture by architect Moshe Safdie on Form & Purpose in Architecture.

1:15-2:15 p.m.: Lecture by Doris B. Holleb, director of the Metropolitan Institute at the University of Chicago, on Form & Purpose in the City.

2:45-3:45 p.m.: Peter Blake, chairman of the department of architecture and planning at Catholic University, will head a panel discussion among the day's three speakers.

4:00-5:30 p.m.: Panel on the state

of the art of lighting, chaired by Beverly Russell, editor of *Interiors*.
Thursday, March 28

9:00 a.m.-8:00 p.m.: Show rooms open for product viewing.

10:30 a.m.-12:00 p.m.: Panel on the relation of architecture to light, chaired by Stanley Abercrombie, editor of *Interior Design*.

12:30-1:30 p.m.: Lecture on historic restoration by architect Robert Venturi.

1:45-2:45 p.m.: Lecture on combating the stresses of contemporary life by designer Angelo Donghia.

3:00-5:00 p.m.: Panel discussion on the integration of architecture and art, co-chaired by Joseph Giovannini, architecture writer for *The New York Times*, and Julia Brown, curator at the Los Angeles Museum of Contemporary Art.

Friday, March 29

9:00 a.m.-5:00 p.m.: Show rooms open for product viewing.

8:30 a.m.-12:00 p.m.: A business conference developed by PDC 2 for executives, facilities managers, and government officials headquartered in the Western states will feature a major speech by William F. Buckley, Jr., and panels chaired by Wolf Von Eckardt, architecture critic of *Time*, and Warren Bennis of the U. S. C. School of Business Administration.

2:30-4:30 p.m.: Panel on architecture as urban theater chaired by Charles Gandee of *Architectural Record*, Sam Hall Kaplan of the *Los Angeles Times*, and Pilar Viladas of *Progressive Architecture*. Architects Jon Jerde and James Wines will be featured.

For a complete schedule of West Week events, contact the PDC Public Relations Office, 8687 Melrose Ave., Los Angeles, Calif. 90069 (213/657-0800). RECORD will feature coverage of West Week in the May issue.

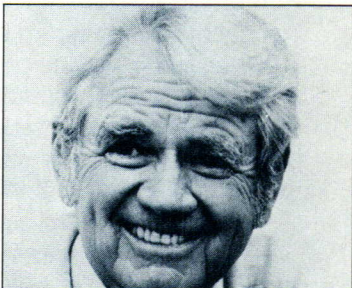
Once more onto a religious battlefield: A new proposal for the St. Bart's tower



Historic preservation is an ongoing battle in New York, and nowhere is the war to save the city's architectural legacy more heated than in development-conscious midtown Manhattan, where no building—not even a landmark church—is sacred. The current struggle pits local preservationists against the rector and vestry of St. Bartholomew's Church, the neo-Byzantine religious complex located on prime real estate at Park Avenue and East 50th Street, who want to raze its community house, designed in 1927 by Bertram Goodhue, and replace it with a revenue-producing office building. When the church fathers came to the city's Landmarks Preservation Commission over a year ago with a proposal for a 59-story, 716,000-square-foot tower sheathed in glass, the government agency rejected the design as unsympathetic to the integrity of the church, which is cherished by many as one of the few low-rise buildings remaining on the densely built-up Park Avenue corridor. The controversy goes beyond the architectural significance of the threatened community house and includes such broader issues as how to balance development with open space in midtown and whether financially hard-pressed churches should be exempt from landmark laws.

Undaunted by its initial rejection and claiming that construction of the new building will provide the funds to enable the church to carry out its humanitarian programs, St. Bart's recently presented a modified version of the office tower to the Commission. Designed by Peter Capone of Edward Durell Stone Associates, the new proposal pictured above is smaller (340,000 square feet), shorter (47 stories), and planned with a series of setbacks that seem inspired by the stepped office buildings of the 1920s and '30s. Limestone at the base and brick and glass on the tower replace the original all-glass scheme and are meant to harmonize with the structure's immediate context, which includes not just the church, but also the neo-Gothic General Electric Building next door and the Art Deco Waldorf-Astoria Hotel across the street. Although the architect claims that the revised proposal "reflects a sensitive and compatible awareness to the landmark church," others question the wisdom of *any* tall building on the narrow site. The Landmarks Preservation Commission is expected to render a decision within two months; for its part, St. Bart's has vowed to oppose the landmarking of *all* churches and carry its case to the Supreme Court if the project is again rejected.

William Caudill is AIA Gold Medal recipient



William W. Caudill, a pioneer in the team approach to design and co-founder of one of the world's largest architecture firms, has been selected as the 45th recipient of the AIA Gold Medal, the highest award the profession can bestow. Caudill, who died in 1983 at the age of 69, was cited by the Institute for his contributions both as a designer and as an educator. In the former category, Caudill guided an

architectural practice that began in 1946 as a two-person firm in Austin specializing in the innovative design of open-plan schools. After World War II it grew into the Houston-based CRS Group, which at the time of his death employed 1,500 in offices throughout the world. In his role as an educator, Caudill was professor of architecture at Rice University, and he served as the school's director from 1961 to 1969.



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Report from West Berlin: An ambitious urban renewal plan is creating much-needed housing— and considerable controversy

By Peter Hoffmann

What was supposed to be a dignified formal ceremony last September celebrating IBA, West Berlin's ongoing \$1 billion urban renewal project, turned out to be a raucous, anarchistic happening. As the first of the official speakers, including the city's top housing official and West Germany's equivalent of HUD secretary, began reading their carefully crafted texts, interspersed by hymnic music from a brass ensemble and men's choir, and while West German president Richard von Weizsäcker slumped resignedly in his front-row seat (as a former mayor of the city he probably had an inkling of impending trouble), the galleries of the splendid Philharmonie concert hall suddenly exploded. Urban squatters, "Greens," and assorted fringe groups let fly with a cacophony of catcalls and whistles, drowning out words and music. Banners unfurled from the rafters, young men and women threw down leaflets protesting city housing policies, and firecrackers exploded, filling the huge hall with acrid smoke as two dozen police moved in—not to arrest the troublemakers but rather to persuade them, unsuccessfully, to desist.

"That's typical for Berlin," said a rueful Josef Paul Kleihues, the architect in charge of IBA's new-construction projects, as he surveyed the peaceful party *Szene* after the debacle. There, both the city's establishment and those self-same protesters were united in sipping city-furnished dry whites and munching municipal hors d'oeuvres. "A lot of them (the protesters) had been officially invited," he added. By demonstrating, the protestors were questioning whether the city's current administration was truly committed to carrying out the housing policies originally developed by IBA.

During the heyday of student revolts in the late '60s, police had shot and killed demonstrators. In the late '70s, as dilapidated apartment buildings were razed to make way for expensive urban renewal projects or American-style freeways, as many as 10,000 urban squatters in need of cheap living space clashed in pitched street battles with the police.

Ultimately it began to sink in that hardheaded confrontation with poor people trying somehow to solve their housing problems would not do. The new accommodation produced more tolerance of squatters' taking over empty buildings to fix them up, and eventually official cooperation on the borough level, especially in low-income areas like Kreuzberg and SO 36 heavy with Turks and other foreign workers.

In the late 1970s Kleihues began to float the idea of urban renewal in Berlin on a smaller scale—not all-encompassing mega-plans to chart the course of an architecturally glorious future, but "modest individual solutions for the repair of destroyed city squares, damaged boulevards, and endangered neighborhoods," as he put it in an early article. The basic idea was "Reparatur" (repair) and "behutsame Stadterneuerung" (careful city restoration), largely based on the city's historic patterns. It involved both the sprucing up of 100-year-old apartment blocks as well as new infill construction of urban real estate razed either by World War II bombs or by post-war automobile-intoxicated planners.

The IBA program

IBA, which stands for *Internationale Bau Ausstellung* (International Building Exhibition), was formally launched in 1979. It is somewhat of a misnomer in translation because it is not an exhibition as such but the reconstruction of a strip of urban wasteland running close to the Berlin Wall roughly four miles long and one-half mile wide, plus two discontinuous locations, one on a lake in the north, Tegeler See, and the other a central square, Prager Platz. Unlike Berlin's *Interbau* of 1957, in which such architectural superstars of the day as Aalto, Le Corbusier, Niemeyer and Gropius built a scattered set of high-rise apartment buildings from scratch in a pristine park setting, demonstrating what was then the state of the art, the plan here is to rebuild and restore a blitzed part of the city—possibly a model effort for other cities with similar problems.

Organizationally, IBA is divided into two categories: "city new construction" headed by Kleihues, and "city renovation" headed by another architect, Hardt-Walther Hämer. The two complement each other—Kleihues has been described as the city's "plastic surgeon," and Hämer as a "psychosomatically oriented internist."

The financial outlays are stupendous, even by American standards. Kleihues says spending for new construction alone is expected to total DM 1.5-2 billion (about \$500-750 million at current rates of exchange), 75 per cent publicly financed to build some 2,000 new apartments, plus societal infrastructure projects—new schools, kindergartens, playgrounds, parks. So far about DM 250 million (\$84 million) has been spent. Hämer originally was assured about DM 1 billion (\$330 million), plus "sweat equity" by and active consultation with tenants, to fix up more than 2,800 apartments

by this year and slightly more than 7,700 apartments by 1987. But as of late September, he began to fear that the city's ruling Christian Democratic bureaucracy and other politicians in the name of privatization of IBA were trying to reduce his program drastically, destroying once more the hard-won trust of affected tenants.

During a recent visit to West Berlin, McGraw-Hill World News correspondent Peter Hoffmann surveyed some of the completed projects of the Internationale Bau Ausstellung (IBA), the massive redevelopment program that is changing the face of vast portions of the city. Hoffmann also attended a two-day conference entitled "Berlin-New York: Expression of Identity through Architecture and Urban Planning," and he spoke with several architects and IBA officials about the success of the Berlin program and how it compares to American urban housing policy. His report follows.

Problems in the midst of progress

The original IBA timetable had called for completion of the entire project within five years. But it soon became obvious that the 1984 goal was impossible to meet, and the deadline was extended to 1987. IBA planners then decided to give some sort of mid-project accounting last September in the form of more than two dozen high-gloss architecture-related events—exhibits, symposia, and congresses by the International Union of Architects and the International Committee of Architectural Critics.

Hämer's concern is explained by the administrative independence of IBA's 50-person staff, a publicly funded planning group, from the city's housing bureaucracy. The city administrators distrust the freewheeling style of Kleihues' and Hämer's people, who exude an aura of '60s antiestablishmentarianism. A German architecture magazine recently said to Berlin's *Beamte* (civil servants), "IBA's people and their ideas looked like exotics, kooks, nuts, and they were treated as such. But maybe you have to be as obsessed as the IBA crew to get anything moving at all. . . . As of today IBA has moved a lot, has created a lot of much-needed disquiet." IBA's multi-year budget of DM 85 million (\$27 million) is for planning and consultation work only, with actual construction handled by both private and publicly owned developers, Kleihues says.

Inevitably, IBA attracted many renowned international architects—not the megastars of corporate architecture like Johnson and Pei, but people in the forefront of architectural thinking. The American contingent includes John Hejduk, Raimund Abraham, Diana Agrest, Peter Eisenman, Emilio Ambasz, Daniel Libeskind, and Moore/Ruble/Yudell. From Europe, Britain's James Stirling, Luxembourg's Rob Krier, Portugal's Alvaro Siza, Austria's Hans Hollein, Italy's Aldo Rossi, a firm from socialist Czechoslovakia, and others have submitted designs or acted as IBA consultants.

Although it is hard to say at this stage whether IBA will be a success, some critics have already charged overreaching, confusion, and misdirection. Of Kleihues' 101 new-construction projects, only 10 were completed or nearly completed by

the end of 1984, according to an IBA map. Again judging by the map, most of Hämer's 57 renovation projects apparently were well on their way to completion.

The American reaction

During a two-day symposium at the Aspen Institute's West Berlin branch that tried to explore architectural identity questions between Berlin and New York, American Emilio Ambasz observed that what he had seen of IBA so far was "enlightened, but [there is] nothing that catches my breath." Ambasz added he hoped for "two or three magic events" in terms of architectural greatness before IBA ends. Diana Agrest praised the quality of construction in what are after all low-rental public housing apartments as "better than [in] luxury apartments I have seen elsewhere." She added, "I see a concern about spaces and environment that I haven't seen in a long time. From that we can learn."

Barbara Jakobson, a trustee of the Museum of Modern Art, pointed out that New York's Lower East Side needed such a "gentle" urban renewal and restoration program just as badly as Berlin. Her fellow Americans added that given the present withdrawal of Federal subsidies for almost all forms of low-income housing in the United States, strategies similar to IBA's will not occur. This caused near-credulity among the European participants, who seemed to believe that an IBA-type of program would be feasible in the United States, considering America's vast material, financial, and managerial resources. Stuart Sloame, Assistant Secretary for Program Development of HUD, confirmed that official U. S. policy is to end all Federal housing subsidies. Sloame's remarks drew angry responses from the Americans present, who took advantage of the opportunity to scold him for representing an administration that simply doesn't care what happens to the cities. (The Europeans appeared amused at the clash between the good-guy architects and the bad-guy bureaucrat on their own Central European turf.)

Chairing the final session, Hejduk reiterated that America, and especially New York, faced "overwhelming" urban problems, compounded by the priorities of the U.S. government. "We have not achieved the level of urban rebuilding that our colleagues here in Berlin [have]." Fixing Sloame with a steely stare across the conference table, Hejduk said, "I hope that you as a representative of the U. S. government will take away some feeling of this concern."



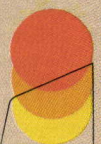
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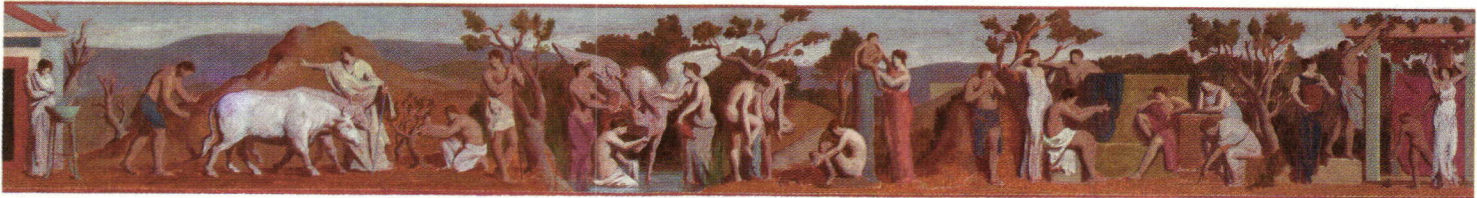
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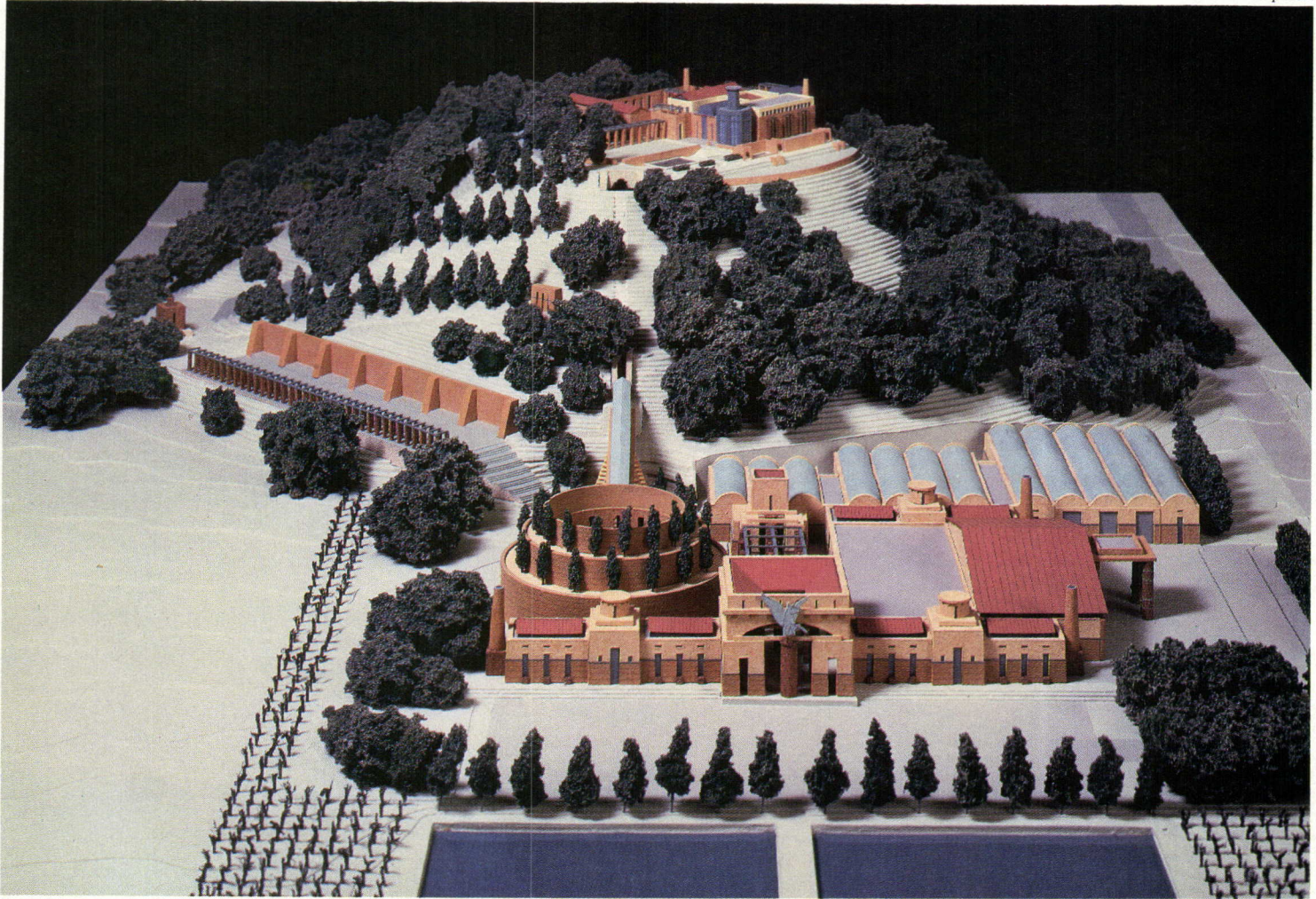
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**Design awards/competitions:
 Domaine Clos Pegase
 Design Competition**

The artist/architect team of Michael Graves and Edward Schmidt has won a competition to design Domaine Clos Pegase, a building ensemble comprising a new winery, sculpture garden, and residence planned for a hilltop setting in the northern California town of Calistoga. The owners of the site, Jan and Mitsuko Shrem, are prominent international book publishers and art collectors who maintain homes in Paris and San Francisco. They were inspired to name the winery complex after Odilon Redon's Pegasus, a favorite painting in their collection.



Proto Acme photos

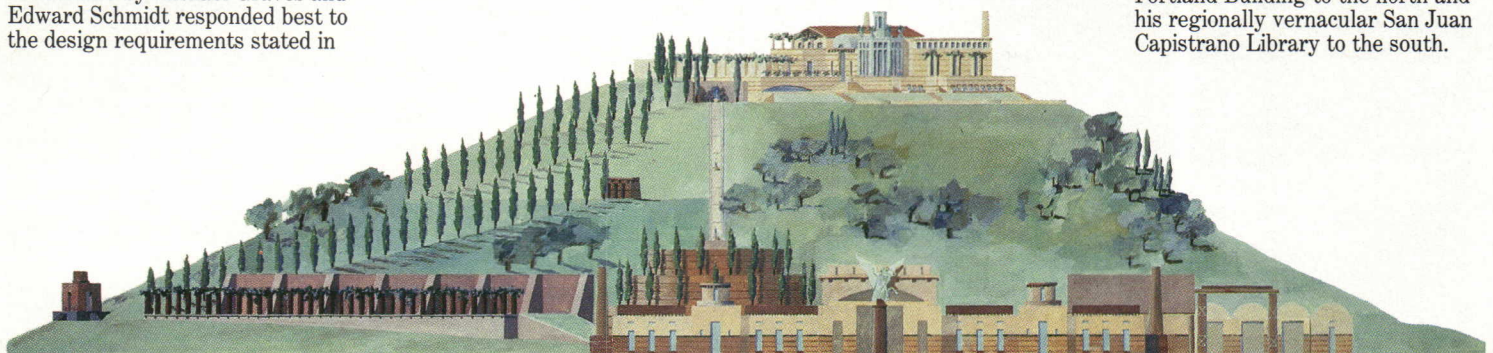


In their report the jurors praised all five finalists for creating mature, innovative designs. "The owner," they observed, "could build any one of [them] and have an epoch-making winery, sculpture garden, and residence unmatched in the complex relationship of uses, site, ambiance, and spirit." The report added that the scheme by Michael Graves and Edward Schmidt responded best to the design requirements stated in

the competition brief: i.e., to integrate the diverse components of the program into the landscape while clearly delineating public and private functions. Views of the Graves/Schmidt model (above) and

site elevation (below) reveal a building ensemble characterized by an intricate pattern of circulation within a carefully conceived site plan—"a brilliant and powerful piece of work," in the jury's words.

The premiated proposal incorporates classically embellished buildings with timber post-and-lintel construction, stucco walls, and red tile roofs—an intriguing design hybrid that will occupy the geographical and spiritual middle ground between Graves's archetypically post-Modern Portland Building to the north and his regionally vernacular San Juan Capistrano Library to the south.



Organized by the San Francisco Museum of Modern Art, the competition required that all entries consist of an architect and artist working in collaboration. Five teams of finalists were chosen from 90 entries and asked to submit plans, drawings, and a model. The winning Graves/Schmidt team will enter a contract with the Shrems to develop the project to completion. Their premiated design, illustrated below and on the following page, was selected by a jury consisting of Mary Livingstone Beebe, director of the Stuart Collection; Craig Hodgetts, an architect in

Los Angeles; Henry T. Hopkins, director of the San Francisco Museum of Modern Art; Robert Mondavi, chairman of the board of Mondavi Vineyards; and Hideo Sasaki, founder of Sasaki Associates. The jury also named four equal runner-up proposals, submitted by Andrew Batey and Mark Mack with Peter Saari; Robert Mangurian with James Turrell; Stanley Saitowitz, Toby Levy, and Pat O'Brien with Elyn Zimmerman; and Dan Solomon, Ricardo Bofill, Patrick Dillon, and Barbara Stauffacher Solomon with Ed Carpenter.

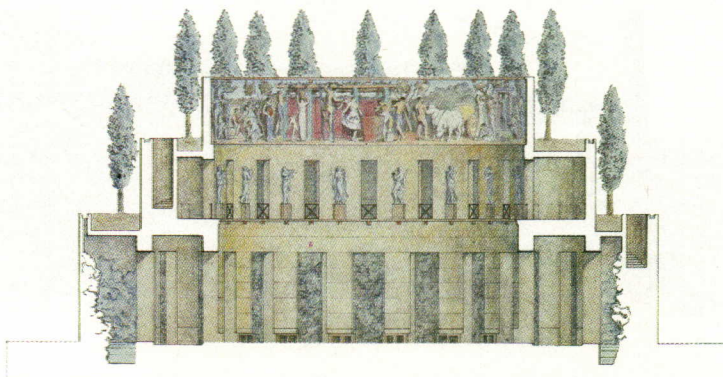


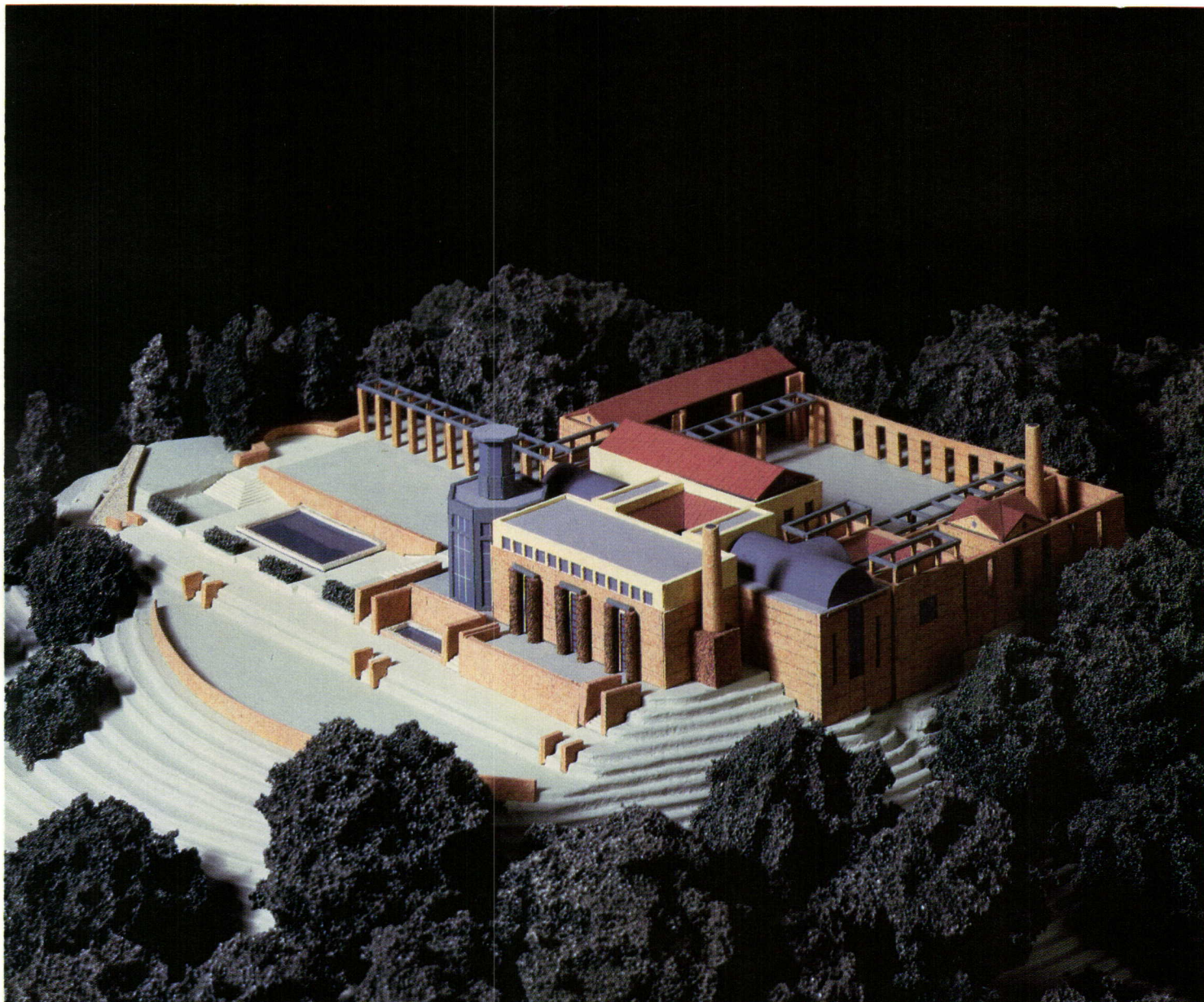
According to the winning design team, the architecture of the complex is meant "to evoke memories of a European ancestry," as well as provide a narrative and esthetic setting where "the stories of winemaking and habitation can best be told." A sculpture of Pegasus above the doorway marks the formal entrance to the winery, which is situated at the base of a knoll and is divided into public and

production areas. Visitors to the complex are greeted by an enclosed atrium, beyond which a trellised courtyard opens onto the so-called "Mountain of Pegasus," a stepped, open rotunda whose exterior

terraces are planted with poplars (section below). Edward Schmidt's study (top) depicting the year-long winemaking cycle from planting to drinking will become a neoclassical painted frieze adorning the inside

walls of this structure. If the rotunda conjures up images of ancient cultures, a barrel-vaulted wine storage and production facility (right in model view above) exhibits a somewhat more prosaic, industrial appearance. References to arcadia return beyond the winery proper, where a formal sculpture court nestled against the hill leads to a pavilion, sculpture meadow, and garden amphitheater. A tree-lined,





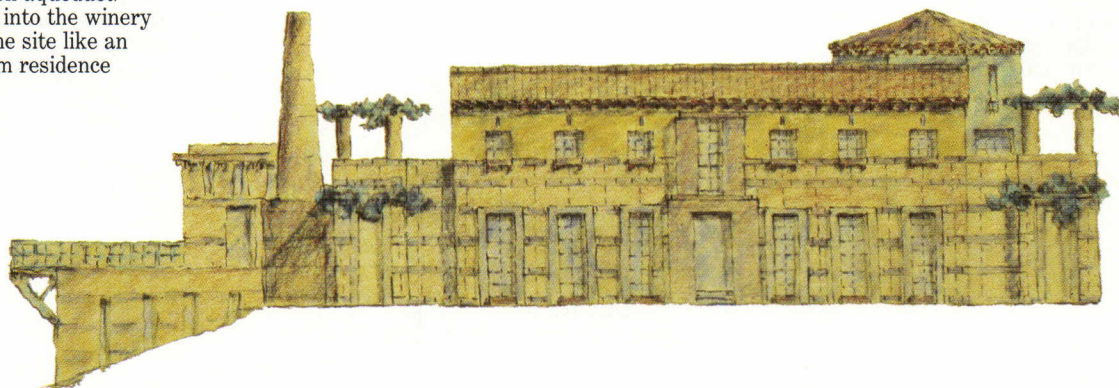
Proto Acme photos

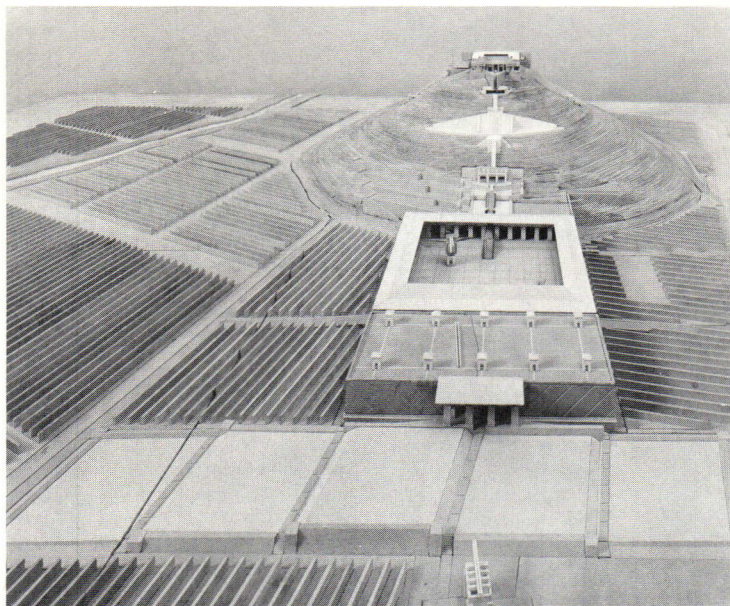
switchback path climbs the hill and offers views of the vineyards and the surrounding Napa Valley landscape. This walkway terminates at the "Grotto of Pegasus," the source of a complex water element that runs from the brow of the hilltop, down a water stair, and across a combination aqueduct/covered footbridge into the winery below. Crowning the site like an acropolis, the Shrem residence

(model above and elevation study below) is essentially a scaled-down version of the winery and features a series of pavilions articulated by wall columns and linked by pergolas. The stucco-clad residence responds to rather specific competition guidelines that called

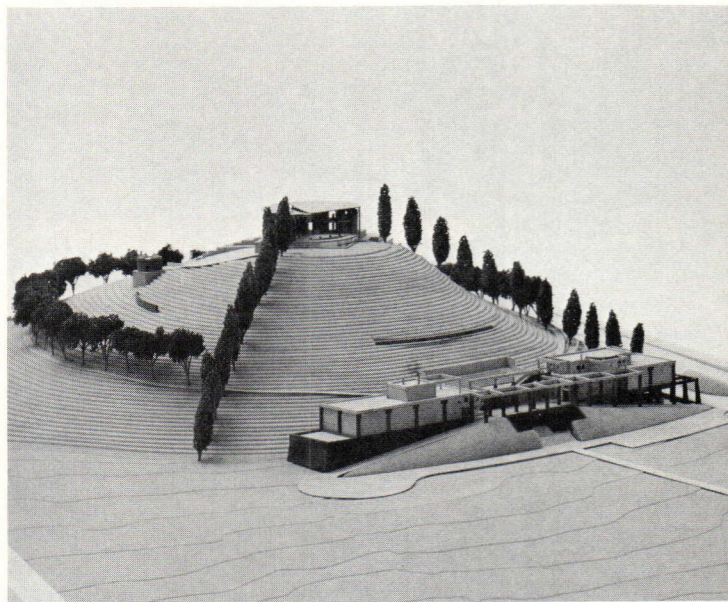
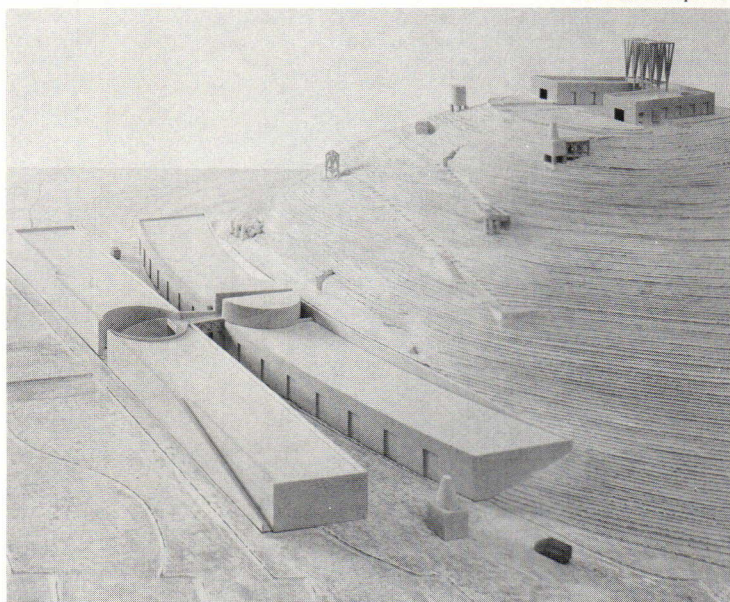
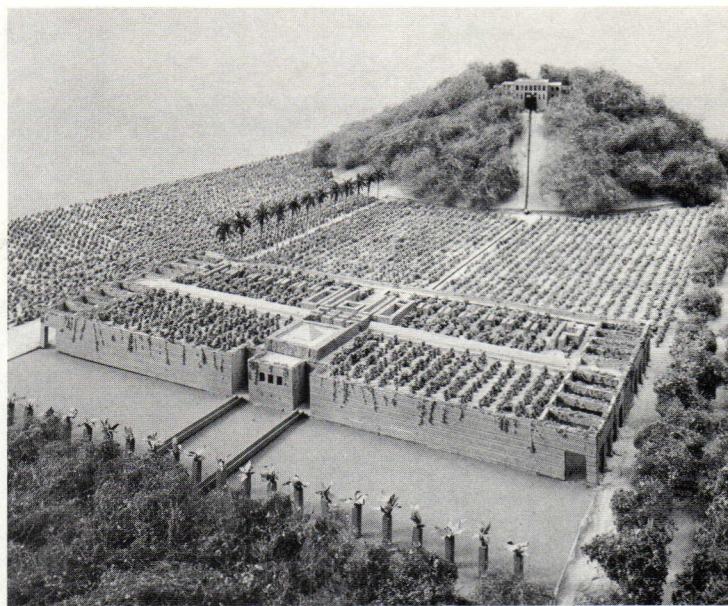
for a "rustic aspect" (rough wood structural members and floors paved in large ceramic tile squares) and provisions for the display of the clients' painting collection. The owners also required that the house incorporate such design elements as a central atrium, a pottery

workshop, and a Japanese bath with a full-height glass wall looking out into a winter garden. This last feature was designed as a two-story lanterned octagon that acts as a circulation hinge between the living and dining rooms.





Ben Blackwell photos



Runner-up proposals

The plan set forth by the team of Robert Mangurian and James Turrell (top left) called for a bold central axis that forms a processional pathway ascending the hill from the winery to the residence. Spare masonry buildings for both phases of the complex are set around large open courtyards. According to the team, the natural landscape and light are used as sources for metaphysical experience: the knoll is marked by seven elements of discovery, while tunnels in the hillside would channel light during the spring and fall equinoxes up to rooms in the house. The scheme by Andrew Batey, Mark Mack, and Peter Saari (above

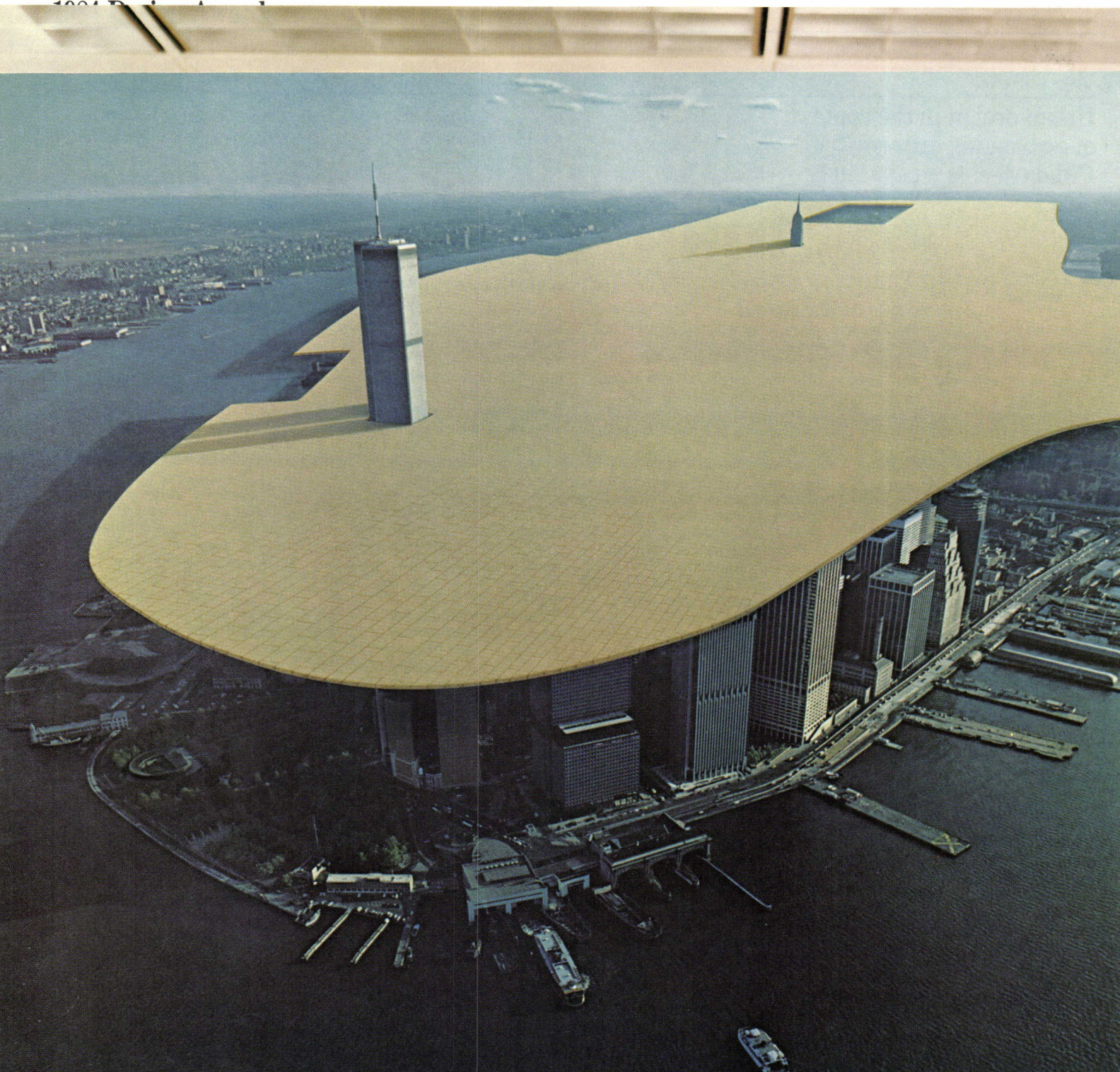
left) features a prominent switchback path whose turns are defined by such architectural follies as a sculpture pavilion, grotto, and tented wine-tasting room. Set at the base of the hill, the winery consists of two long buildings connected by an elevated walkway and entered through an open rotunda. The two wings of the house enclose a central courtyard that is bordered by interior art galleries. A trellised tower crowns the residence. The team of Dan Solomon, Ricardo Bofill, Patrick Dillon, Barbara Stauffacher Solomon, and Ed Carpenter proposed a highly contextual scheme (top right) that includes a low rectangular winery with colonnaded wings on either side and a rooftop sculpture garden emerging directly from surrounding aerating ponds.

Unique among the entries in its distinct separation of winery from residence, this proposal exhibits a lavish use of leaded glass, particularly in the winery, where a two-level pedestrian and vehicular street is crowned by a glass skylight of geometric forms. The house is a classical villa with French doors opening onto terraces. The entry of Stanley Saitowitz, Toby Levy, Pat O'Brien, and Elyn Zimmerman (above right) treated the knoll as a circular form with a wedge removed; unlike their colleagues, this team utilized the back side of the hill as the setting for the winter garden and pottery studio. A skirt of trees that both delineates the base of the hill and encloses a sculpture garden is

completed by a rectilinear winery building. A circular copper-roofed residence has a wedge-shaped courtyard that aligns with two rows of poplars descending the slope.

In order to show the collaborative nature of each competition entry, the San Francisco Museum of Modern Art will feature all five finalist projects in an exhibition entitled "art + architecture + landscape," scheduled for June of this year. Curated by Helene Fried, the exhibit will be accompanied by a catalog and is being planned to coincide with the national convention of the American Institute of Architects. *P. M. S.*

called "commendable," and about theater reuse proposals in general.



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technologists, economists, and managers. More and more women are entering professional careers on the same basis as men. Today most young white-collar families net two incomes. Women either sacrifice childbearing for careers, or they postpone having children until they have established career lines. These young, affluent families are not wanting to be out in the sticks; rather, they are responding to the range of cultural and recreational options—the museums, orchestras, restaurants, and shops—that can be found only in big cities.

A few short years ago it seemed that the older industrial cities, particularly those in the Northeast, would never be able to compete with the Sunbelt. Yet today the so-called “rust belt” cities are making a powerful comeback. One reason is that history in the Northeast is much richer, more basically real. Ethnic roots, it turns out, go deep into popular culture. The older neighborhoods, in spite of post-World War II vicissitudes, never entirely lost the holism of tree-lined residential and shopping streets, churches, and public schools. Is it an accident, I wonder, that the finest symphonies, public art collections, and repertory theaters are to be found in such “problem” cities as Philadelphia, Chicago, Cleveland, Pittsburgh, and Buffalo?

That elusive characteristic—quality of life—emerges as a key determinant in the fierce competition between cities to reinforce their corporations and entice new investment. While urban designers and architects have creative parts to play, they cannot be effective without another kind of design—the design of public policy. Just as blight causes neighborhood corrosion, uncontrolled gentrification causes displacement and undermines the rich pluralism that is a basic feature of urban life. Pittsburgh’s public policies of neighborhood reinforcement, enabling low- and moderate-income homeowners to be gentrifiers through tax-exempt financing and other subsidy incentives, have become a national model.

There can be no doubt that these policies pay off. To give some idea of the change that is going on: in 1960 the Pittsburgh metropolitan area employed 750,000 people; today, in spite of the sharp decline in metals-related industry, over a million are employed, with a market swing toward white-collar jobs. Between 1970 and 1980, moreover, only Houston, Dallas, and Anaheim outranked Pittsburgh among the nation’s major cities in per-capita income growth. Now the leading city in the Northeast in terms of livability, once-smoky Pittsburgh has come a long way.

Indeed, as it gears itself up for the next wave of competition for new investment, Pittsburgh has enviable assets. The major corporations are committed to staying and expanding here, and in the service industries growth is steady and strong. Specialization in its universities—engineering, economics, and industrial management at Carnegie-Mellon, medicine and health management at the University of Pittsburgh—is already drawing new industries to an area superbly located as a hub for air travel. And the decline of 19th-century industries and rail yards has left a heritage of huge riverfront landholdings in the hands of a few corporate owners, giving the public and private sectors the chance to develop comprehensive urban design plans and policies for the next rounds of growth—right in the heart of the city.

The Institute for Urban Design has been quick to recognize that other cities are faced with the same challenges. By dividing its conference in Pittsburgh into a series of parallel workshops dealing with railroad land, riverfront land, and industrial land, Institute director Ann Ferebee was able to provide comparative case histories of Pittsburgh and other cities. Conferees heard about development strategies for 74 acres of railroad land in the center of New Orleans; urban designs for the Berkeley, California, waterfront; comprehensive redesigns for London’s docklands; and recycling the Franz Joseph Station in Vienna. To give point to the workshops, each series was designed to address such particular aspects of these case histories as land acquisition, finance, image, and marketing. And the conference culminated with a workshop on quality of life and the reinforcement of neighborhoods.

A powerful conference keynote speech was made by architect and urban designer Richard Weinstein. The “establishment,” he pointed out, in the public as well as private sector, builds most feverishly when its values are called into question. There is no doubt that Pittsburgh’s evolution has been boosted ironically by the demise of its heavy, 19th-century industry, and with it a profound sociological reformation. For urban designers, the message of this conference was clear and compelling: understand the forces of change that are occurring in the cities we inherit, and help to make them work.

David Lewis, FAIA, is a founding partner of UDA Architects, a 20-year-old firm in Pittsburgh that was one of the first practices in the country to address architecture within the framework of urban design.

1. North Shore Center in Pittsburgh is an example of the reclamation of river frontage for new offices, restaurants, and a marina. The complex is situated behind the new Allegheny Landing sculpture park.
2. Planned as part of downtown Pittsburgh’s Renaissance II redevelopment program, Liberty Grant Plaza is a mixed-use complex that will include a

luxury convention hotel, office tower, retail shops, underground parking, and landscaped plazas.
3. A row of restored town houses lines Liverpool Street in Manchester, an integrated inner-city neighborhood in Pittsburgh.



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Books

Reviewed by Roger Kimball

Architecture as Art: An Esthetic Analysis, by Stanley Abercrombie. New York: Van Nostrand Reinhold, 1984, \$25.50.

In this slim and lucidly written volume, architect Stanley Abercrombie seeks to exhibit the distinctively artistic or esthetic value of architecture, "to find in architecture some manner or characteristic or relationship... that is attached only to esthetic quality." He thus leaves to one side the "mundane" concerns that constitute so much of the day-to-day practice of architecture. What is the best place for the elevators? What building materials are appropriate and feasible? What will the client think of this design for the atrium? In *Architecture as Art*, Abercrombie brackets such questions and concentrates on the less calculable, but no less engaging, question of architecture's esthetic merit, on its existence as a genre of fine art. "Architecture," he writes, "is building raised to the level of art."

Of course, not every building qualifies as a work of art. And Abercrombie is the first to admit that it is neither possible nor desirable to furnish strict criteria for determining what is to count as art. Yet it is part of his task in this book to evoke the real, if often elusive, distinction between architecture and "mere building."

He begins by providing us with an inventory of architecture's esthetic vocabulary. In chapters on "The Size of Architecture," "The Shape of Architecture," and "The Shapes within Architecture," he reviews the basic esthetic tools that architecture has at its disposal. He reminds us, for example, that the sheer size of monumental structures—St. Peter's, the Pyramids, the Eiffel Tower—can contribute greatly to the impression of grandeur, strength, or awesomeness that they make. Were these structures to be reduced to a tenth or a hundredth of their size, Abercrombie observes, they "would lose not just quantity but also quality: Their power over our emotions would be substantially weakened."

On the other hand, Abercrombie cautions, size alone does not guarantee effect. For him, a case in point is The World Trade Center in New York. In his view it fails "to enter the ranks of impressive architecture," largely because the refined, elegant detailing of the towers, at odds with their bold vertical thrust, diminishes the

impact of their extraordinary height. In support, Abercrombie quotes Ada Louise Huxtable, who described the towers as "a conundrum: the daintiest big buildings in the world."

Abercrombie continues with a brief but thoughtful chapter on "Placement," which explores the way successful architecture relates to its environment—the surrounding landscape, neighboring buildings—and transforms empty space into meaningful, humanized place. And chapters on "Function," "Perception," "The Meaning of Architecture," and "Architectural Order" extend his analysis of architecture's distinctively esthetic qualities, showing in more detail how architecture affects us in ways that go beyond questions of efficiency or practical utility.

Readers conversant with the literature of architectural theory will find the bulk of Abercrombie's observations about the way architecture exercises an esthetic claim on us familiar, even commonplace. *Architecture as Art* does not possess the speculative daring of Norberg-Schulz's *Intentions in Architecture*, say, or the brash originality of Venturi's *Learning from Las Vegas*, or the scholarly depth of Rudolph Wittkower's *Architectural Principles in the Age of Humanism*.

But Abercrombie's sober and companionable approach makes the book a useful introduction to the esthetic resources of architecture. His clear-eyed discussion of the significance of various systems of proportions and measurement—systems based on the golden section, the Fibonacci series, musical analogies, etc.—is especially refreshing. "It is a shame," reflects the author, "that the proponents of proportioning systems have so often exaggerated their claims that the whole subject has become suspect, for there is a genuine and fundamental justification for such systems' use: that the use of a proportioning system—any proportioning system—can give to a building an orderly relationship between its parts that, even if only dimly perceived, is visually satisfying."

Also visually satisfying is Abercrombie's deft use of photographs. It seems like a simple thing, but many books about architecture, including some good ones, fail to provide photographs that clearly illustrate the point they are meant to exemplify. It is a special pleasure, then, to discover a book that is graced with so many clear, intelligently chosen photographs (many of them by the author) that admirably illustrate the text.

But however much we applaud Abercrombie's efforts to call attention to the artistic dimension of architecture, we may want to take exception to the view of art that informs his analysis. In its theoretical presuppositions, *Architecture as Art* remains faithful to the traditional, essentially formalist view of art that has been the mainstay of esthetic theory at least since Kant. Putting to one side the practical questions of use and moral value, this view of art regards esthetic experience as autonomous and self-sufficient, and thus opposes any attempt to measure art by extra-esthetic criteria. Despite his disavowal of "art for art's sake," the view of art implicit in Abercrombie's argument commits him to this essentially esthetic view of architecture. "In the perfect work," he writes, "the content would be so inherent, so intimately engaged by structure and mass, that the building and its meaning would be indivisible." From this point of view, architecture, like painting, sculpture, or any of the other fine arts, qualifies as art to the extent that it spurns practical, logistical, and financial concerns as esthetically irrelevant.

But it is not at all clear that the terms we have traditionally used to describe art provide the best vocabulary for understanding the artistic significance of architecture. In the other arts, the emphasis has tended to be on closure, unity, completeness, self-sufficiency. But do we want architecture to be closed, unified, complete, self-sufficient? We who live and work and play in the products of architecture are always changing, never complete. For us, a "perfect" work in Abercrombie's sense would be tyrannical, dictating through its formal strength what should be left open and provisional. As Kant noted, the "chief point" in architecture is "a certain use of the artistic object." This is not to deny architecture's status as a work of art, only its status as a self-sufficient work of art—a work that pleases, as Kant puts it, through its form alone. Abercrombie is probably correct in concluding that architecture is "our biggest, toughest, most complex, most permanent, and most powerful art." But architecture merits that praise precisely because it resists the strictures, and the perfections, that we have become accustomed to impute to art.

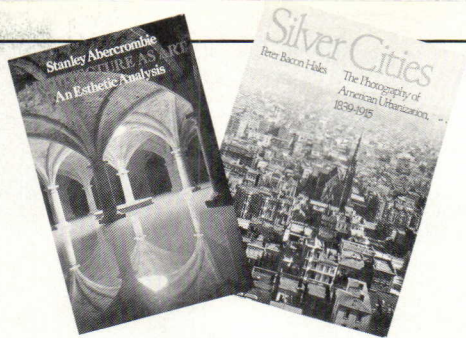
Silver Cities: The Photography of American Urbanization, 1839-1915, by Peter B. Hales. Philadelphia: Temple University Press, 1984, \$47.95.

How did 19th- and early 20th-century American photographers deal with the subject of the city? In *Silver Cities*, historian Peter Hales provides a thoughtful and meticulously researched answer to this question. Beginning in 1839, when the daguerreotype process was introduced to America, he traces its development through 1915, "the approximate date of America's irrevocable urbanization."

Hales reviews the signal technological and stylistic breakthroughs that occurred in this formative period of photography's evolution, showing, for example, how the emergence of reproducible photographic images in the 1850s made photography's emancipation from the "fine art" ethos of traditional esthetics possible. But perhaps his chief interest is in the social dimension of photography: in photography's enormous potential both as an idealizing booster of prevailing social values and attitudes and, on the other hand, its ability to present us with images that expose, question, and criticize those values. Indeed, in chronicling "the story of photography's interaction with American urban culture," Hales has produced as much a work of cultural as photographic history.

His first three chapters detail the growth of American urban photography from the early experiments of Edward Anthony and Samuel F. B. Morse through the consolidation of "grand-style" photography in the last decades of the 19th century. Hales examines the pioneering contributions of Southworth and Hawes, Victor Prevost, George Fardon, and others, encapsulating the history of the young art form as it developed in San Francisco, Denver, Chicago, Boston, and New York. His account culminates in a detailed examination of C. D. Arnold and his monumental, idealizing pictures of the World's Columbian Exposition in Chicago (1892-95).

But the centerpiece of *Silver Cities* is Hales's long and eloquent appreciation of the Danish-born New York photographer, writer, and social activist Jacob Riis. A newspaper reporter by trade, Riis was one of the first to enlist photography in the campaign for social reform. By subtly exploiting photography's reputation as a neutral "transcriber" of reality, Riis, Hales writes, "succeeded in creating a new photographic style which could account for the





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Observations continued

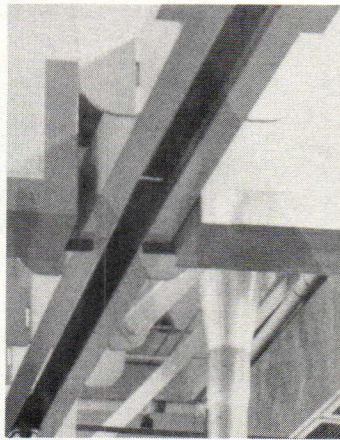
pressing realities of immigration, poverty, social threat, and uncontrollable growth. He broke down the traditional *cordon sanitaire* of urban photography and thereby added significantly to the existing taxonomy of the urban genre."

Beginning with his pathbreaking study of urban poverty, *How the Other Half Lives* (1890), Riis confronted his viewers with an image of the city that contrasted starkly with the glorified vision purveyed by grand-style photography and the City Beautiful movement. Instead of images of monumental, neoclassical facades, Riis's work is filled with images of ragpickers, crowded slum tenements, sweatshops, and other scenes of urban squalor—images, as Hales puts it, that demanded "of his middle-class Victorian audience a complete and active commitment to the cause of social justice and economic reform."

Riis's photographs are among the most moving and memorable of the more than 200 photographs that Hales has chosen to illustrate *Silver Cities*. And like Hales's text, the book's photographs—which include three fascinating fold-out panoramic views of 19th-century New York and San Francisco—will capture the imagination of anyone who is interested in the history, growth, and reception of urban life in America.

But all this is not to say that the book is above criticism. For one thing, Hales repeatedly tends to overstate his case, exaggerating the importance—and the self-consciousness—of photography in this rapidly changing, tumultuous period. Thus he suggests, for example, that the photographers under study here did not merely reflect their culture, but "were also transformers of their culture, and generators of a new culture." But even the photography of Jacob Riis was not *that* potent. And one will look in vain, I think, for the influence of de Saussure's *Course in General Linguistics* or Roland Barthes's *Mythologies*, both of which Hales claims as "starting points" for his interest in photography. Their invocation seems to be little more than intellectual window-dressing. Still, in the face of a work of such painstaking and sensitive scholarship, these objections seem to be hardly more than quibbles.

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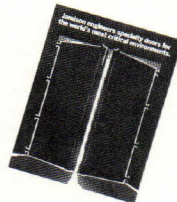
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Photography: H. Durston Saylor
Interior Design: Lew Dolin



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Sheltered independence: Life after 65

The euphemistic and often condescending labels we attach to the more than 25 million of us who are over 65—the aging (who isn't?), the elderly, senior citizens—tend to obscure the truth that this is by no means a homogeneous demographic group, nor for the most part does it conform to the common stereotypes of age. The span between 65 and 85, for instance, is as broad as that between 25 and 45, and as fraught with life changes. And that full-generation span encompasses individuals as various as those within any age cohort.

To the extent that generalizations can be made, older people are becoming younger. They live longer, remain vigorous and active (and, often, employed) longer, and so can longer sustain independent lives. And though the still-too-frequent exceptions are a national scandal, social security, private pensions, and accrued assets increasingly assure that old need not be synonymous with poor. As a result, a growing school of thought rejects what it sees as the indiscriminate lumping together of younger and older, fit and less fit, over-65s, holding that the very concept of "housing for the elderly" implies a benign form of ghettoization that should be foregone in favor of more flexible and diverse approaches to satisfying individual needs for support.

The case can be made. But we all face as we age a diminution of our physical, social, and economic resources—all of which are closely tied to shelter—that soon or late calls for living arrangements providing the "protected independence" afforded by congregate housing.

In a very real sense, the issue of housing for the elderly is but a subset of the larger issue of "affordable housing," which is affecting Americans of all ages and incomes. So it is ironic that more than a decade of Federal support for elderly housing, which despite painfully stringent budget and design constraints spawned some of the most promising developments to date in the realm of livable low-cost housing, should now be drawing to an end. The HUD Section 8 rent-subsidy program that made possible all but one of the projects shown in this study is being phased out save for existing housing, and the companion Section 202 low-interest loan program has been so hedged by directives aimed at "cost containment" that architects despair of producing any but the meanest shoe-box shelter under the current directives mandating "modest" design.

Federal policy, of course, is never writ in stone, and alternative public and private sources of funding are already emerging to fill the gap, albeit at greater cost. Moreover, projects like the life-care community shown as part of this Building Types Study suggest that the absence of rigid design guidelines can free architects to create silk-purse communities on sow's-ear budgets. Optimists can hope that in the face of growing demand, the momentum of exploration into the art of affordable housing for the old and for all will continue. We can all hope so. *Margaret Gaskie*

A neighborhood restored

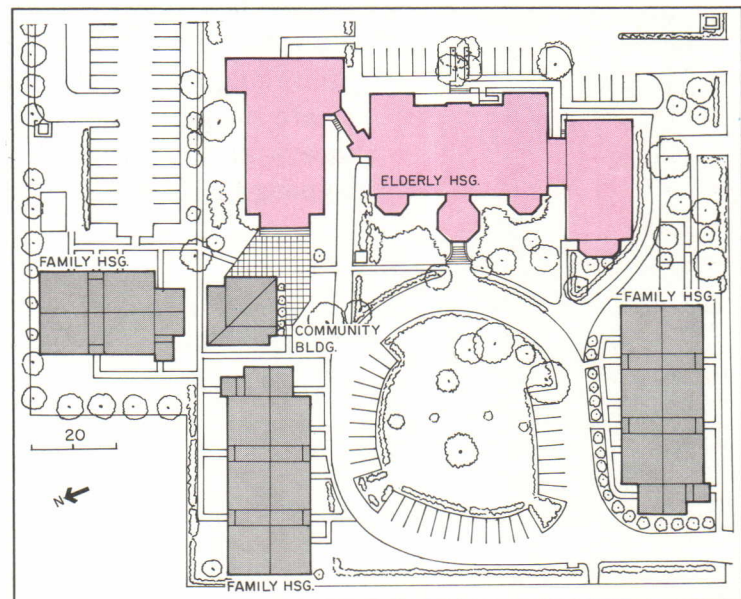
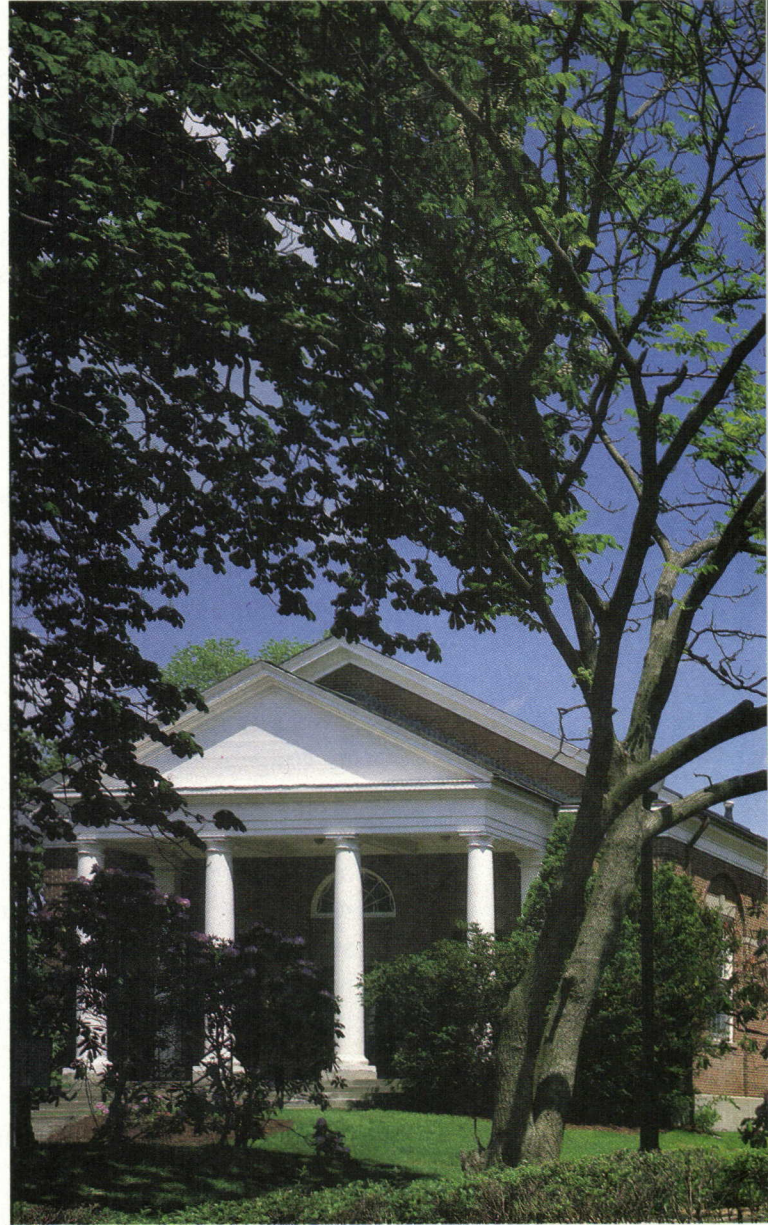
Lafayette Place
Fall River, Massachusetts
Boston Architectural Team, Inc.,
Architects

Fall River, Massachusetts, where, as the old jingle would have it, "Lizzie Borden took an axe. . .," made national headlines again in May 1982 when a historic church burned to the ground in a wind-whipped blaze that ravaged a three-block area, leaving more than 100 families homeless. Sensing both need and opportunity, local interests promptly acquired for replacement housing the property facing the devastated church, the former convent of the Sisters of Jesus and Mary.

Just as promptly, architect Philip Hresko (then with the Boston Architectural Team) turned to the task of converting the existing buildings on the site into 74 apartments for the elderly and shoehorning into the 3.7-acre site itself 51 new units for families—a mix approximating that of the households displaced by the fire. The existing buildings were the convent proper, an 1887 French-Second-Empire-by-way-of-Quebec female academy; a circa 1860 wood-frame farmhouse; an undistinguished annex clumsily appended to the convent in 1925; and a pillar-porticoed neo-Georgian auditorium added in 1936.

Because the ensemble, including its luxuriant grounds, was listed on the National Register of Historic Places, not only were major exterior changes precluded, but the multifamily housing (plus parking) had to be slipped into the tight parcel with minimal violation to the landscape. And of course the new construction was to be compatible both with the stew of standing buildings (by dictate of the historic commission) and (by dictum of the architect) with a surrounding residential neighborhood dominated by the clapboard "triple-deckers" typical of industrial New England. "To solve all the technical problems, meet the budget, meet the timetable, hold it all together—and still make architecture. . .," says Philip Hresko laconically, "was a challenge."

The challenge was heightened by the eccentricities of the old buildings, but, as is often the case, the constraints inspired an ingenuity that produced apartments more interesting and varied than the rigidly repetitive units usual in such housing. The convent proper, for example, originally built with classrooms on the two lower floors and rooms for nuns and students above, boasted lofty ceilings that invest the dexterously inserted small units with a welcome air of spaciousness, while the most problematic element in the group, the auditorium, was carved into two-story "townhouses" highly popular among tenants. (How many architects are publicly bussed by residents grateful for a space that "feels like my own house"?) Even the painstaking effort to preserve the plantings and other features of the grounds while adding new buildings yielded dividends: in the mature landscape, even the latest additions share in the project's rootedness and sure sense of place. Adds Hresko, "We only lost one tree."





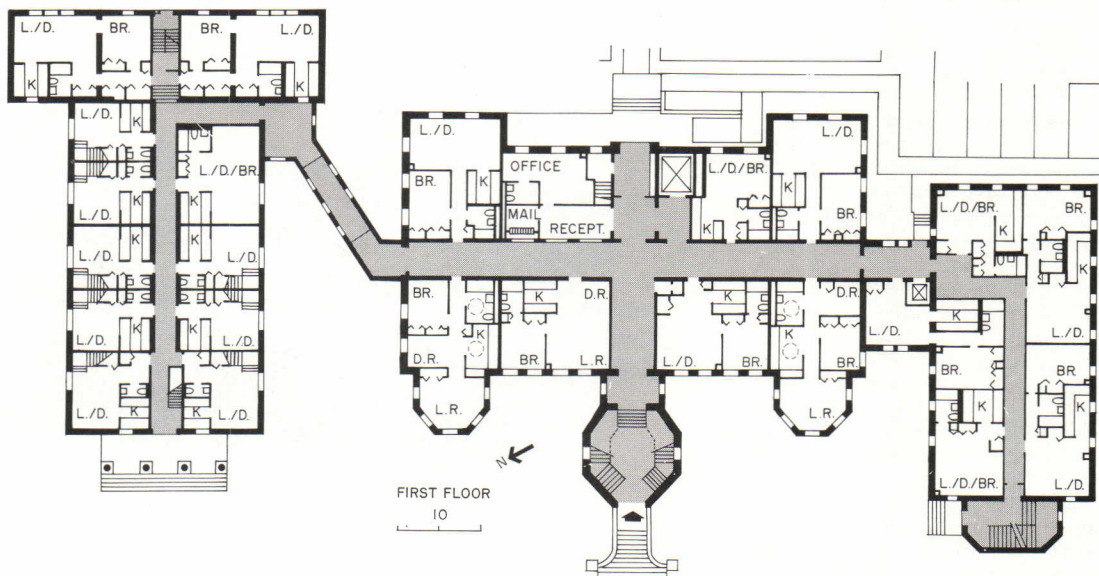
The problem of placing new buildings and parking on the cramped site was eased by acquisition of a parcel adjoining the convent property, permitting the family apartments to be disposed at a comfortable distance from the elderly housed in the original structures. The added two-thirds acre also made it possible to protect the convent's circular drive, winding paths, stately trees, and (with judicious transplanting) rare species of rhododendrons. With exterior changes limited to a fifth-floor penthouse over the annex and new dormers in the attic, the convent looks today essentially as it did when built (vignette at right). (The octagonal lobby replacing the original entry stair was an early accretion.) Even the windows were preserved, though backed for energy conservation by new windows inside.



Providing an economically viable mix of studio (19) and single-bedroom (55) apartments for the elderly required wresting from the existing buildings on the convent site every square foot of available space—including some that at first appeared only marginally usable. Because the 1925 annex, built in a less expansive period and as dormitory rather than classroom space, had lower floor-to-floor

heights than the convent proper, its roofline approximately coincided with the convent's attic floor, suggesting the ready addition of six penthouse units over the original fourth floor. (Ironically, the architects' proposal to encompass the penthouse in a mansard compatible with that of the convent was turned down by the state historic commission in favor of a "modern" hip-roofed addition.) A less obvious

solution was resorted to in the case of the adjacent auditorium (left in plan below and at right in photo top right opposite), where the need to preserve the original two-story, arched, double-hung windows precluded insertion of a second floor of apartments. Instead, the designers composed within the double-height shell cathedral-ceilinged, skylit mini-townhouses with bedroom lofts—among the most sought-after



units in the complex. Other serendipities emerging from the original buildings' quirks include the bay-windowed apartments in the old convent, in one of which an altar stair left in place produced a stepped living area (photo below). Similarly, the venerable farmhouse (left in photo top right opposite) was re-sited and converted to a community building for the project's families. The nearby family

rowhouses (photo lower right below)—three stories of two-bedroom flats joined by entry stairwells and flanked by lower three-bedroom duplexes—borrow from both the convent's white-trimmed rosy brick and the clapboard and shingle-roofed porches of the neighborhood triple-deckers to achieve in combination with the lush plantings of the site an air of rooted longevity.



Lafayette Place
 Fall River, Massachusetts
Owner:
 Flint-Lafayette Limited
 Partnership, a joint venture of
 Claremont Development Associates,
 Inc. and J. Karam Management, Inc.
Architects:
 Boston Architectural Team, Inc. —
 Philip Hresko, principal; David
 Clark, job captain

Engineers:
 Wayne Weaver Associates
 (structural); RJC Engineering
 (mechanical); Garcia Engineering
 (plumbing); Johnson & Stover
 (electrical); Charles Rowley (site)
Consultants:
 Adner/Woodman (interiors); Philip
 Hresko (landscape)
Contractor:
 Marshall Contractors, Inc.

A private hilltop village

Duncaster Life Care Center
Bloomfield, Connecticut
Stecker LaBau Arneill McManus Architects, Inc., Architects

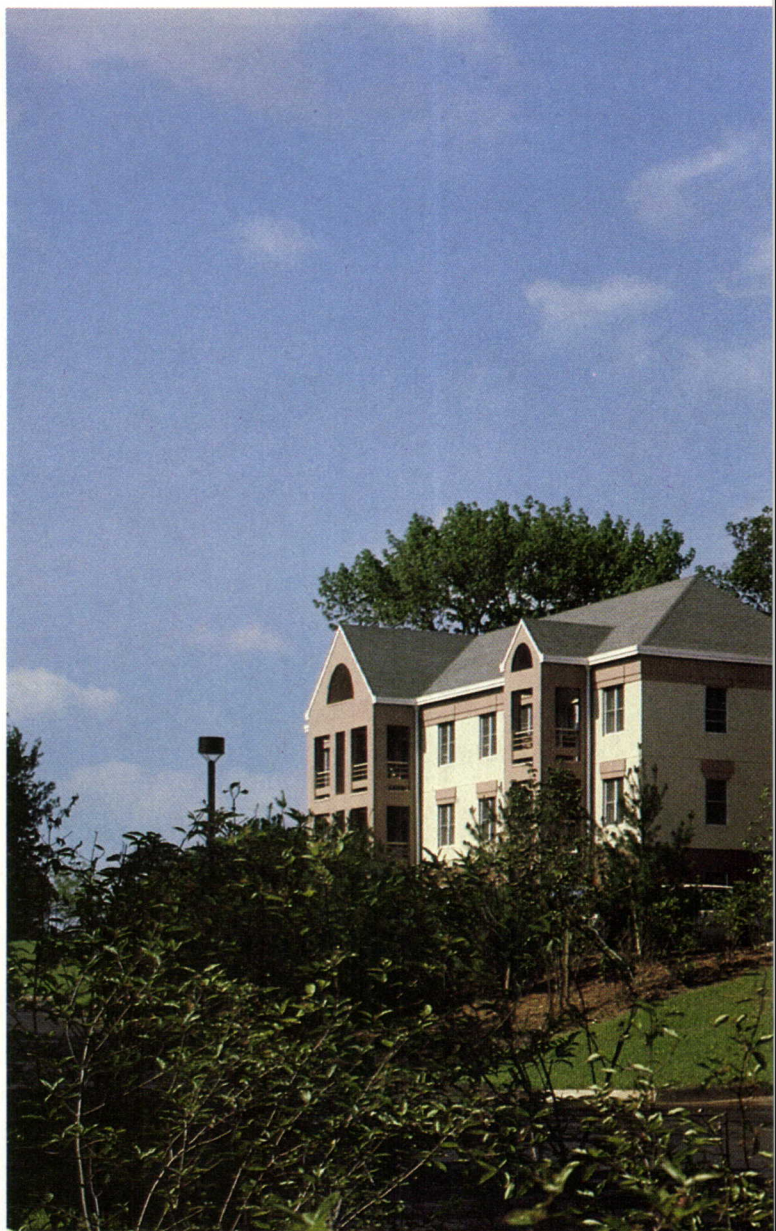
The well-to-do age too. Nor are they immune to the loneliness, anxiety, and physical failings that plague the elderly poor. And while housing for the elderly is often thought of as synonymous with subsidized housing, the graying of America (and the near-demise of government funding) is spurring the development of private alternatives.

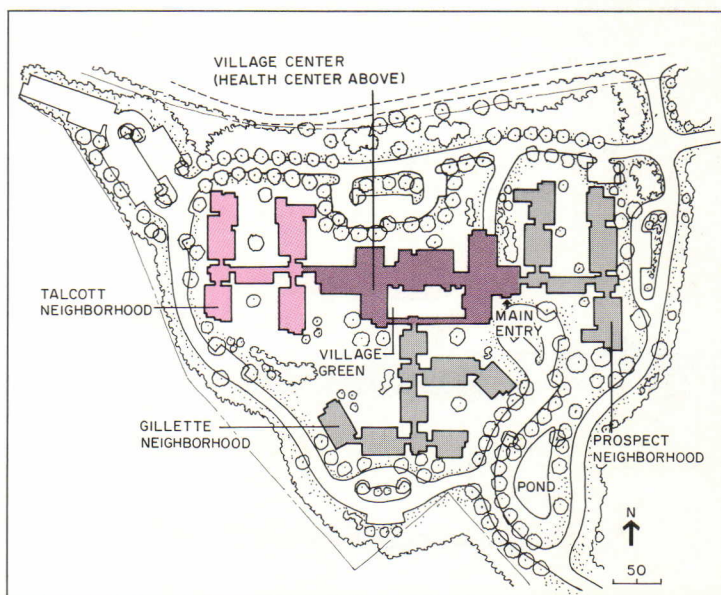
A top-of-the-line example is the Duncaster Life Care Center, a retirement community crowning 72 acres of meadows and woodlands nestled at the foot of Talcott Mountain in Bloomfield, Connecticut. Set well back from the main road, the complex recalls on first approach the serendipitous building assemblages of Northern European hill towns. But despite the image, the composition is far from casual.

The heart of Duncaster is a village center with an extensive array of common facilities ringing an open town green and lining the "promenades" that link the center with three neighborhoods radiating from it. The naturally sloping site—which, senior designer Bruce Arneill says, was also "contoured to the hilt"—was exploited not only to achieve the rambling quality of the individual neighborhoods but to make the level of the village center the vertical as well as the horizontal core of the central building. Thus service areas could be hidden away beneath this median level, and the health center placed over it. (In keeping with the life care community's emphasis on helping older people to live independently while providing back-up, non-acute medical care, the on-campus medical resources include two 30-bed nursing units, an outpatient clinic, and supporting dining and recreational facilities.)

In the residential neighborhoods, individual identity is asserted by distinctive building footprints and separate brick-porticoed entrances. To lend visual interest and reduce the apparent scale of a complex comprising 216 units for some 300 residents, unit groupings within each neighborhood are treated as discrete buildings reminiscent of the suburban homes many occupants have left behind. In the same spirit, both interior and exterior detailing derive from traditional forms, the "houses" being defined by gabled balcony bays and wall surfaces articulated into the familiar elements of base, lintel, and cornice to reinforce the residential scale.

Except for brick walls that demark public areas and brick arches that announce the main portals and gateways of the village, "it was all done," Arneill points out, "with steel studs and Dryvit." And therein perhaps lies a moral. Freed from the onerous restrictions imposed on Federally subsidized housing—though not from budget constraints—Arneill was able, despite the inevitable compromises, to bring to the Duncaster community an extraordinary degree of comfort and amenity. He did so at a project cost of \$56.56 per square foot.





Not least among Duncaster's amenities is an exceptional setting used to full advantage through a strong master plan that clarifies and reinforces the village image evoked by its appealing low-key architecture. The neighborhood cores, sited to follow the contours of the land, provide a variety of views of the surrounding landscape and define sheltered courts that affirm the units' residential scale. The site

plan also develops a variety of opportunities for outdoor recreation in the form of walks, trails, and landscaped "resting places," as well as areas for group activities and gardening that supplement those of the town green with its attached greenhouse.

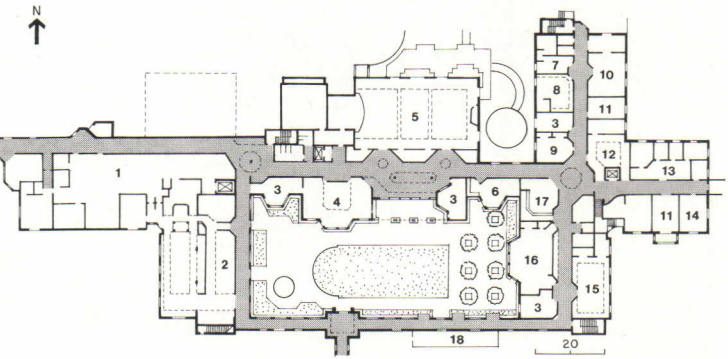
The individual units within each neighborhood (see plan of Talcott Village at bottom) group thoughtfully planned and generously sized one- and two-bedroom and studio apartments whose projecting balconies form full-height pedimented bays (photo below left) that combine with setbacks and diverse roof profiles to give each "house" a sense of separate identity. Inside, apart from variations in

apartment layout and orientation, the wings are personalized and identified by carefully furnished sitting areas and special objects—a painting, loveseat, or important table—in the elevator lobbies, in lieu of the more usual—and less readily recognizable—numbering, color-coding, or graphics. (A similar thoughtful touch is the provision outside each apartment of a well-lit recessed vestibule where the

occupant can place a "signature" piece of art or furniture.) The neighborhoods converge on the village center, which embraces the town green (below) with a spectrum of common facilities (see plan at bottom of page), including dining rooms (lower photo below), living and social areas, meeting and activity rooms, and "downtown" gathering places near the post office, village store, and town library.



- | | | |
|---------------|-----------------|-----------------------|
| 1. Kitchen | 7. Photo | 13. Resident services |
| 2. Dining | 8. Beauty | 14. Music |
| 3. Parlor | 9. Sewing/cards | 15. Exercise |
| 4. Library | 10. Woodworking | 16. Studio |
| 5. Auditorium | 11. Conference | 17. Mail |
| 6. Snack bar | 12. Shop | 18. Greenhouse |



Throughout, the emphasis on satisfying the special needs of elderly people while establishing a homelike ambiance is reflected in the careful attention to lighting, materials and textures, color, and furnishings typified by the reception lobby (photo below) from which an elegant stair rises to the community level. (Furnishings in this and other public spaces are supplemented by fine art and antiques contributed by

residents.) Above the central community level is the health center (bottom photo), with its own discreetly separated entrance.



*Duncaster Life Care Center
Bloomfield, Connecticut*

Owner:

Duncaster, Inc.

Architects:

*Stecker LaBau Arneill McManus
Architects, Inc.—David N. LaBau,
partner-in-charge; Bruce P. Arneill,
partner-in-charge of planning and
senior designer; James M. McManus,
project manager; Peter H. Nuelson,
Russell L. Stecker, Allyn C.*

*Wadhams, project team; Dale
Combelic, interiors*

Engineers:

*Burton & Van Houten Engineers,
Inc. (structural/mechanical)*

Consultants:

*General Health Management, Inc.
(management); Edward Cape
Associates (landscape); Green
Designs (site planning)*

Contractor:

General Contracting Company, Inc.

Howard Kaplan photos



Regional recall

Park Glen
Taylorville, Illinois
Nagle, Hartray & Associates Ltd., Architects

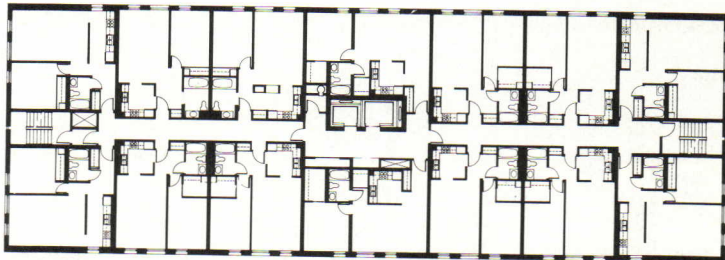
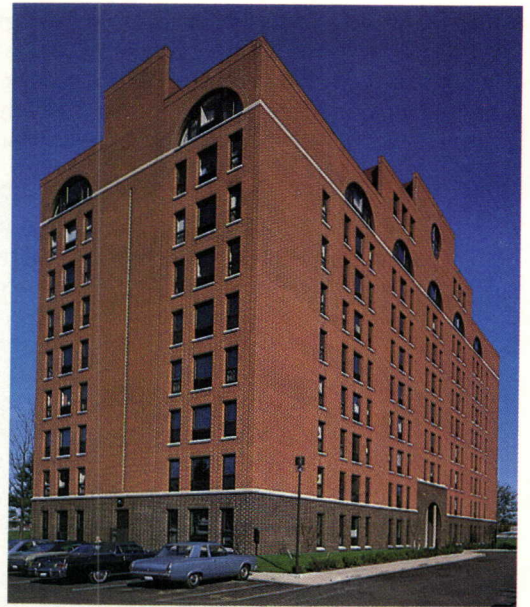
James Nagle likes brick, a material he considers both substantial and "forgiving." And he is an unabashed devotee of the early 20th-century brick apartment and commercial buildings still abundant in his native Chicago and throughout the Midwest. So when commissioned to design the Park Glen housing for the elderly in Taylorville, a Central Illinois town with a population of 11,000, he turned naturally to that vocabulary, a regional style that was also well-represented locally and therefore comfortably familiar to the potential residents of the project.

The choice was reinforced by the site, a 1.8-acre plot that virtually dictated a self-contained mid-rise solution with a building mass in keeping with its historic precedents. In addition, while the site itself was a wooded oasis ringed by commercial development and a nearby school and hospital, Taylorville and its environs are notably flat and featureless, suggesting a building designed to take advantage of both the seclusion of the parklike setting and the views of the surrounding countryside afforded by a building of even moderate height.

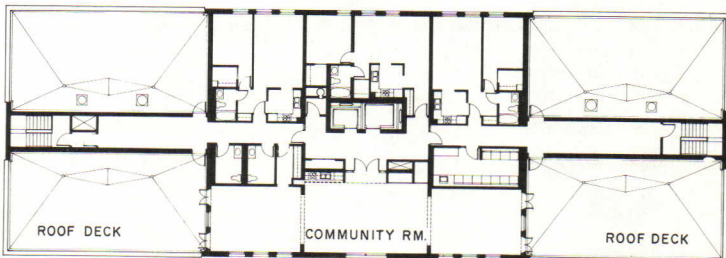
Although the requirement for a self-contained structure limited the opportunities for providing the range of indoor and outdoor spaces available in the more typical garden-apartment complexes for the aging, Nagle endeavored to overcome this with a variety of unit types within the building's total complement of 123 one-bedroom apartments and two two-bedroom apartments (typical floor plan below). Moreover, all units have a minimum (all-but-unknown in this type of housing) of 625 square feet of living space, supplemented by common spaces including a penthouse community room.

More remarkably, this was accomplished within a budget of \$45 a square foot, thanks largely to a structure of masonry bearing walls and precast concrete floor plank found to be economical even at a building height of eleven stories. The building's post-and-lintel bones were clad in oversize, 4- by 12-in brick for a comparable saving in masonry work. To articulate the large wall surfaces, the base is rendered in milk-chocolate brick to contrast with the rosy brick above, and facades are accented by limestone sills and trim, with brick soldier coursing at the window heads and the two-story entry arch (a grand gesture somewhat deflated by paired columns interrupting the sweep of the arch).

Although the building is in fact longer than high, it is given a visual lift by arched heads over vertical window banks and by a stepped center section enclosing a tripartite common room made up of two low spaces flanking a central area that boasts a high arched ceiling and a large oculus that precisely frames the tower of the town courthouse (photo right)—an exclamation point in the unbroken landscape beyond. "On a clear day," Nagle paraphrases, "you can see Missouri."



TYPICAL FLOOR



TENTH FLOOR AND ROOF



Park Glen
Taylorville, Illinois
Owner:
New Frontier Developments
Sponsor:
Illinois Housing Development Authority
Architects:
Nagle, Hartray & Associates Ltd.—James Nagle, principal-in-charge; Dirk Danker, project architect
Associated architects:
Carl Fischer Associates
Engineers:
Cohen-Barreto-Marchertas Inc. (structural); H.S. Nachman Associates (mechanical/electrical)
Contractor:
Jones-Blythe Construction Company

In the manner of a manor

Michael R. Koury Terrace
Torrington, Connecticut
Ulrich Franzen & Associates, Architects

The rich effects simply achieved that mark the exterior of the community building, with its plywood pediment and arcade of mock-Corinthian wood columns, carry through to the main meeting room (bottom photo), where Franzen sought a "lodge feeling" through the use of an open-raftered cathedral ceiling and stud-framed side aisles that set off circulation paths from the lounge area. Architect Franzen's emphasis

on providing variety in open as well as enclosed spaces is reflected in the sheltered but lively courtyard (photo opposite) with cozy seating groups around a central fountain fashioned from an old millstone found on the property. On a more intimate scale, the required fire stairs for each building were oversized and shielded by pierced plywood screens to provide verandahs for each floor (photo bottom opposite).



*Michael R. Koury Terrace
Torrington, Connecticut*

Owner:
*Housing Authority of the City of
Torrington*

Architects:
*Ulrich Franzen & Associates—
Ulrich Franzen; Thomas Thornton,
project architect; Philip Logan,
project assistant*

Engineers:
*John L. Altieri (mechanical/
electrical); Tor Shapiro Associates,
Division of Geiger
Berger Associates (structural)*

Consultants:
*Peter G. Rolland & Associates
(landscape); David Crego
(construction administration)*

Contractor:
Keenan & Navarro Builders, Inc.



Cape Cod congenial

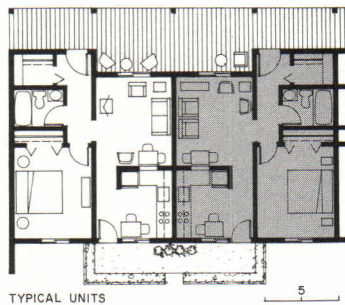


Tucked beneath the towering trees of a pine forest "cleared just enough," says architect Joan E. Goody, "to fit the buildings in," the Village at Fawcett's Pond, with its rough-cedar-clad apartment structures in earthy tones of sage and brown and gray relieved by fresh white trim, is more expressive of its Cape Cod setting than is its surround, where mixed commercial development has largely supplanted the cottages that once gave Hyannis its special flavor.

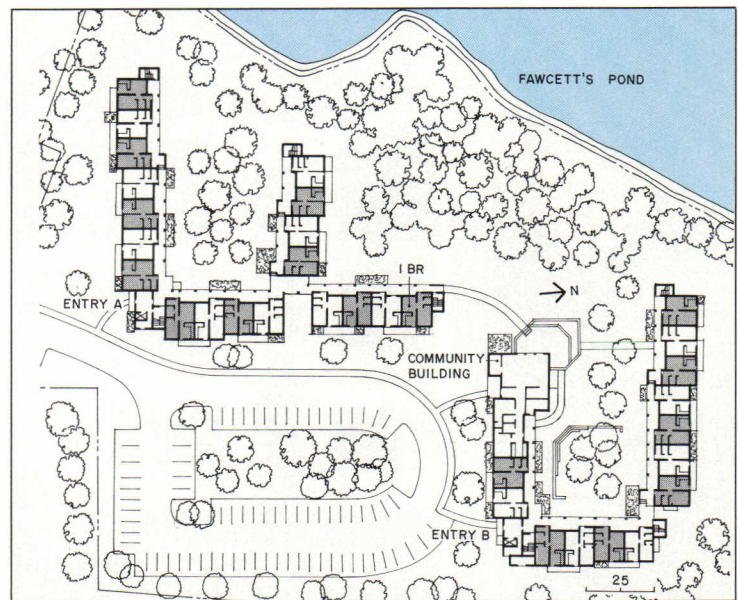
Nor is this merely a bow to "tradition." The familiar images are but one of the contrivances Goody has used to enhance the sense of community she believes to be of first importance in housing the elderly, most of whom, she points out, live alone and have left their homes and familiar neighborhoods. Isolated from family and former friends, the elderly tend to cloister themselves in their apartments, but can be coaxed into social interaction by subtle physical arrangements.

A key device, for example, is the way the site plan groups the housing units and relates them to one another. At the Village, the buildings, which contain a total of 100 one-bedroom apartments (see typical plan below left), are arranged to form three-sided courtyards oriented toward the nearby pond and areas for outdoor group activities. Within these neighborhood groupings, interconnected galleries and covered walkways facing the pond double as "hallways" and as front porches where residents can sit to enjoy the view or chat with passing neighbors. Here, as in the small, centrally located community building, which includes a social hall, crafts room, laundry, office, attached greenhouse, and an outdoor terrace looking out to both courtyard and pond, the emphasis is on providing what Goody calls "encounter points," where residents can meet casually.

By making the route from lobby to apartment door a short sheltered walk, the outdoor galleries also permit the apartments in the rambling three-story buildings to be served by only two elevators. As a further bonus, confining the circulation to the building exteriors made it possible to design the apartments as floor-through units with two exposures and provide larger-than-average kitchens and entries, while staggering pairs of units created semiprivate front stoops sheltered from the direct path of traffic. Living rooms overlook the galleries and views beyond; the rear kitchens and bedrooms look out on the surrounding forest. Off the kitchens, garden patios and upper-story balconies provide private "backyards" and space for outdoor dining. The complex as a whole combines the qualities of a rural site enjoying woods and water with the communality of a small Cape Cod village. As one dapper gentleman remarked en route to lunch with "a very fine lady on the second floor": "This is the nicest place I've ever lived."



TYPICAL UNITS





*The Village at Fawcett's Pond
Hyannis, Massachusetts*

Owner:
Corcoran, Mullins, Jennison, Inc.

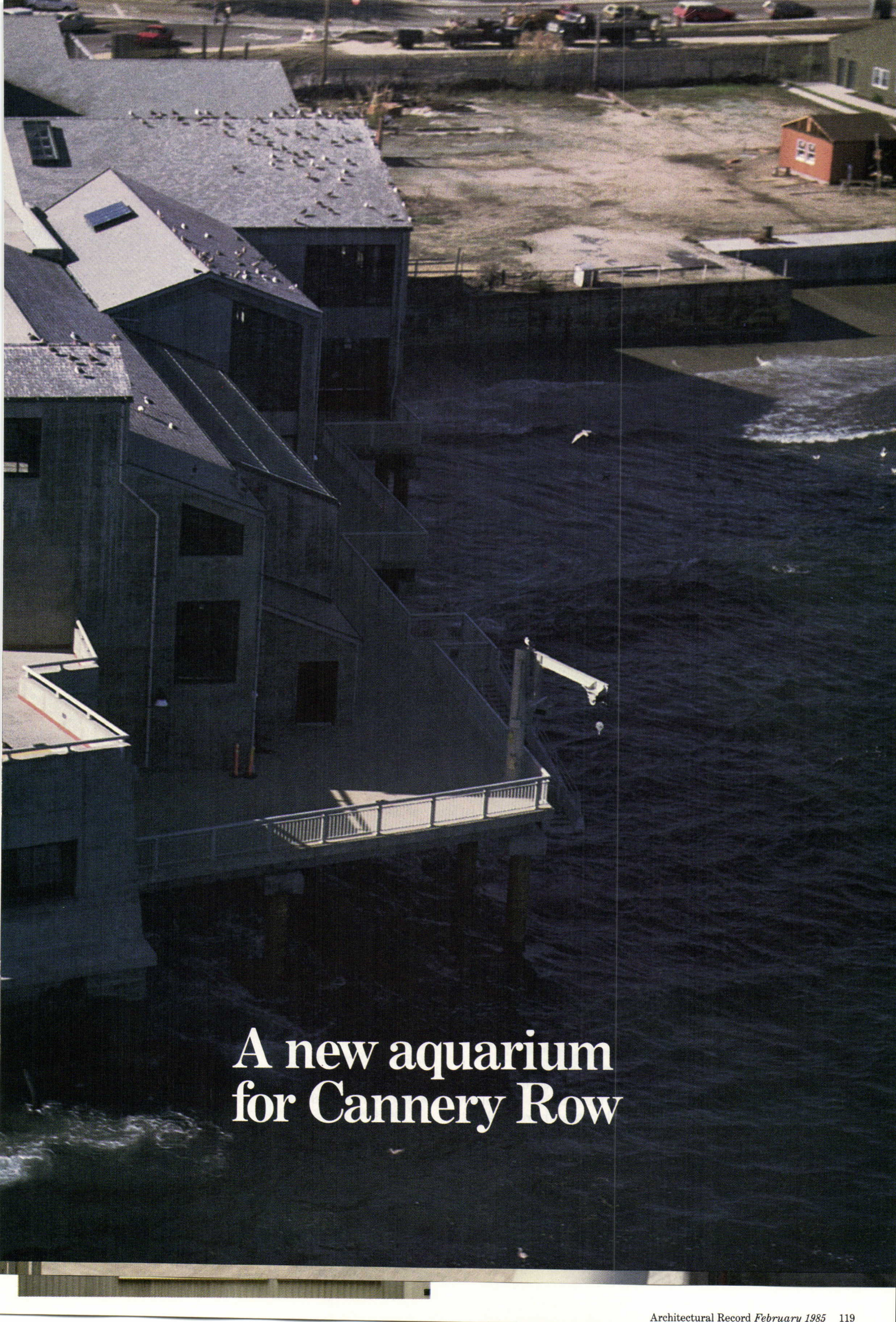
Architects:
*Goody, Clancy & Associates, Inc.—
Joan E. Goody, principal-in-charge;
Susan Pranger, William Lynn
Holland, project team*

Engineers:
*Wayne L. Weaver & Associates, Inc.
(structural); Atkinson/Schotter
(mechanical); Verne Norman
Associates (electrical); H.W. Moore
Associates (site)*

Contractor:
Corcoran, Mullins, Jennison, Inc.

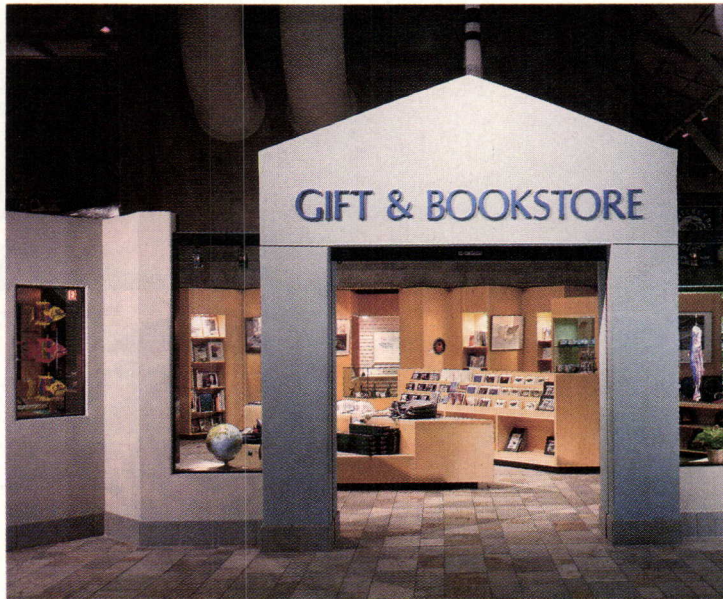
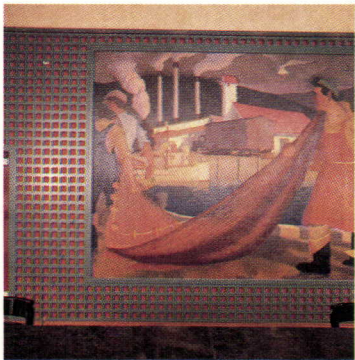
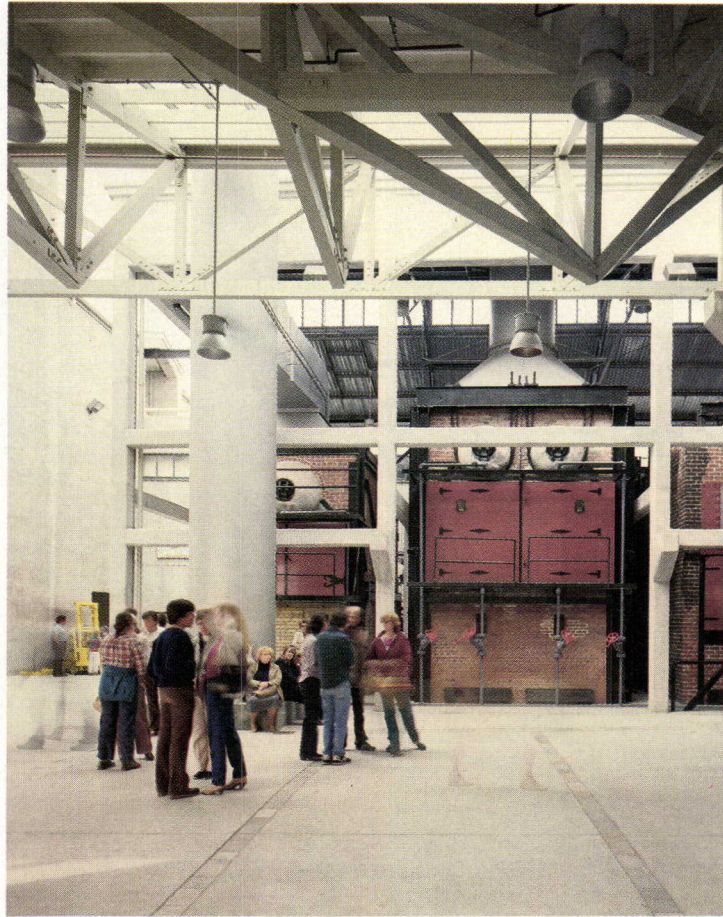


Monterey Bay Aquarium
Monterey, California
Esherick, Homsey, Dodge & Davis, Architects

An aerial photograph showing a row of modern, multi-story buildings with dark roofs and light-colored facades, built on stilts over the ocean. The buildings are arranged in a line, and the ocean is visible below them. In the background, there is a parking lot with several cars and a small red building. The overall scene is a coastal development.

A new aquarium for Cannery Row

The Marine Mammal Hall (opposite page) is spanned by wooden trusses approximately 28 feet wide, as were the wings of the old cannery. The floors are quartzite from Mozambique chosen for their even color. Most of the exhibition galleries are dark, to give the visitor the impression that he and the fish are together in the deep. Daylit spaces, as in this hall, are illuminated by great walls of industrial sash, interrupted by large glass panels which afford vistas of the aquarium's incomparable outdoor exhibit, Monterey Bay itself. Swimming below the exposed ductwork are life-size models of whales and other large sea mammals constructed of foam and fiberglass. Suspended at the rear is a felucca, a working replica of the Italian fishing boats popular on the Pacific Coast between 1880 and the turn of the century. At the entrance of the aquarium are three reconstituted boilers, relics from the Hovden Cannery (right). Turning, one encounters the inappropriately post-Modern gift and bookstore (below right), which in addition, crowds and overdominates its space. The dining room (detail below) features a WPA mural by James Fitzgerald which includes the cannery. It once hung in the local post office.





The Monterey Bay tank (below) displays large sharks, bat rays, and numerous other open ocean fish as scuba divers would see them. Four

the brim of the tank (below right) through a special window which allows them to watch the aquarists feeding the fish. A crane lowers large

dive into the tank. Both the Monterey Bay tank and the Kelp Forest tank are huge, the former holding 326,000 gallons of water and the latter

A lesson in deportment

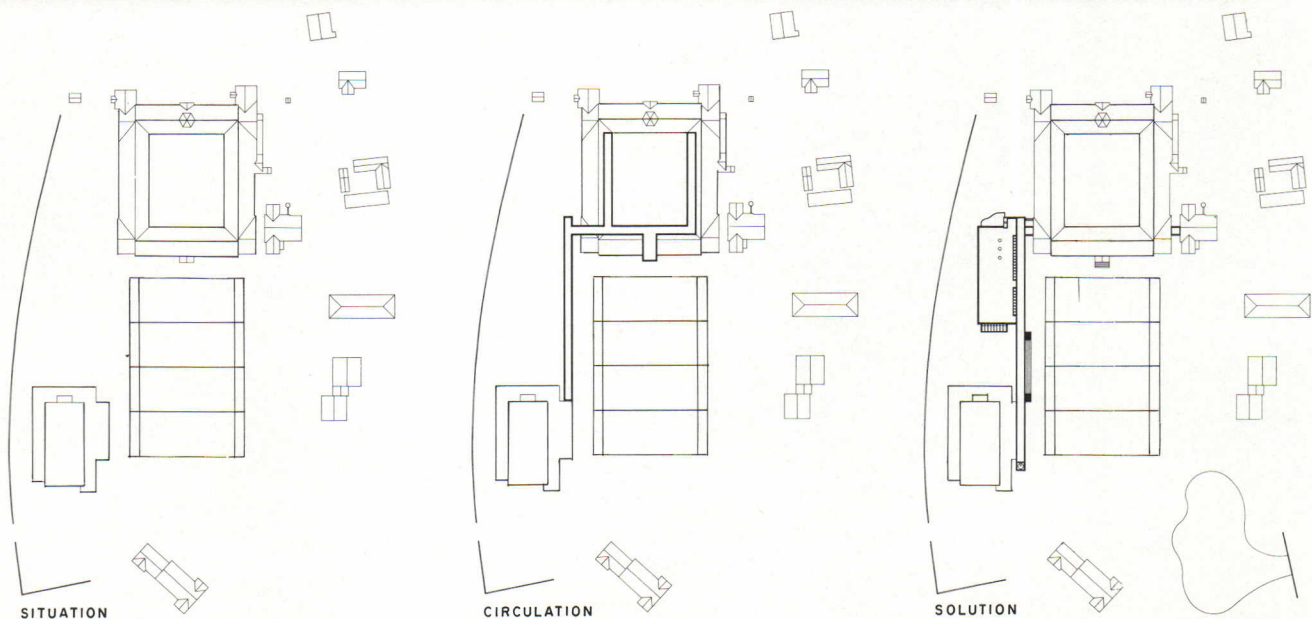


Additions to Westover School
Middlebury, Connecticut
Gwathmey Siegel & Associates, Architects



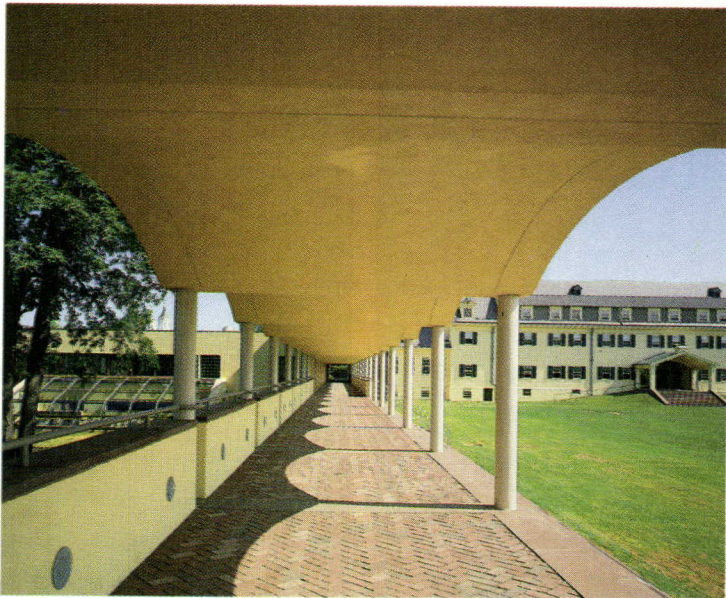
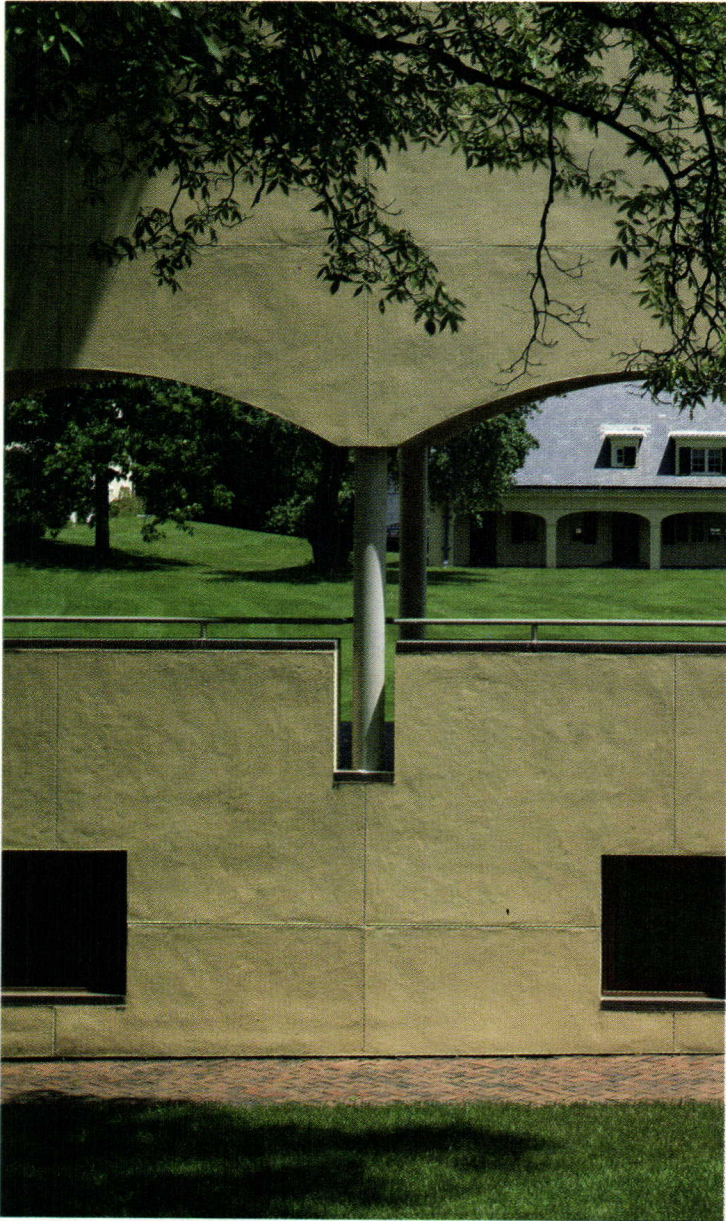
If the eastern view of Gwathmey Siegel & Associates' addition to Westover School is all contextual sweetness and light (previous spread), the northwestern view (photo below). The building that houses the new library and science facility is as formally distinct as it could be from the building to which it is attached by covered bridge. The architects refer to the structure as a

"loft"—a designation perhaps inspired by a flat roof, a high ceiling, and a simple rectangular form. Yet if it is a loft it is an extraordinary one, owing to the intricacy of the planning moves taking place within. Those moves are partially revealed on the north elevation (photo below), where the building's horizontal and vertical layering is articulated in the irregular fenestration. What at first appears to be a simple stucco box,



hidden—not unlike the gymnasium—behind the arcade, soon becomes very complex: as you penetrate the building you move from layer to changing layer. The sequence develops incrementally, from the arcade's fairly solid public playing field elevation to the library/classrooms' fairly transparent private garden facade (photo right). Note the piano-shaped periodical room attached to the

midsection of the "loft"; it is a "bay window" in the garden, according to Gwathmey Siegel, "the object in the space." (A counterpart "bay window/object in the space" greenhouse takes its place on the south.) Standing in the new arcade looking north (photo bottom), one can neatly contrast the old Westover School with the new Westover School. And the inspiration for all those arches? Photo below.



"How does an architect engender respect for place in a new building?" asks architect Charles Gwathmey, and then he instantly supplies the answer: "With materials, craftsmanship, and detail." Though rhetorical, Gwathmey's point is well taken, for students, like the rest of us, can be counted on to respond to the physical evidence of care and concern in architecture. At Westover, Gwathmey Siegel & Associates sought to garner that frequently elusive respect by stretching the \$125-per-square-foot budget as far as it would go. What the architects, and the students, gained (in addition to the ne plus ultra construction that has characterized this firm's work for at least a decade) was mahogany furniture, fenestration, and cabinetry. Crafted by a local woodworker, and installed under the watchful eye of project architect Paul Aferiat, the woodwork provides the new building an almost instant venerability, or at least a material richness all too rare in institutional buildings. The benefit of that richness can be gleaned by looking west across the glazed shelving units dividing the classrooms from the faculty offices and prep areas (facing page), southwest toward the cabinets and cupboards lining the classroom walls (bottom right), or south along the perfectly assembled grid composing the window wall (top right). "Students treat mahogany paneling and cabinetwork differently from painted gypboard and metal door bucks," adds partner Siegel. Which is but one of the lessons taught at Westover School.

*Additions to Westover School
Middlebury, Connecticut*

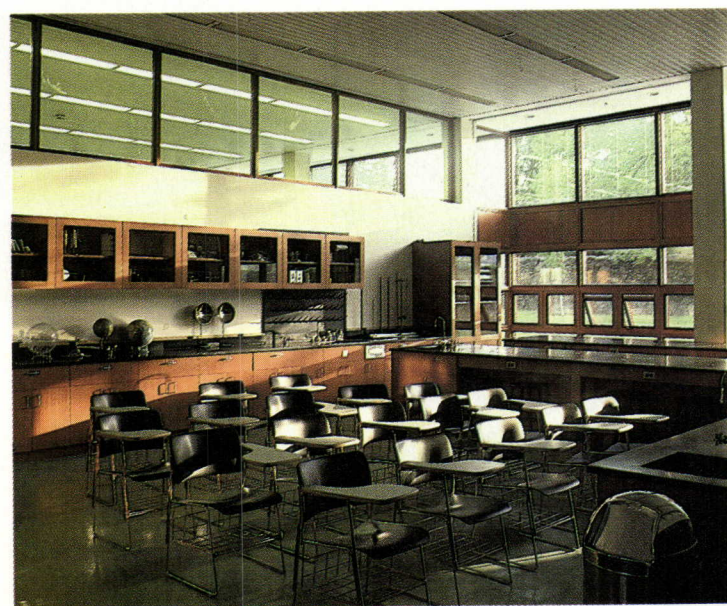
Owner:
Westover School

Architects:
Gwathmey Siegel & Associates—
Jacob Alspector, associate-in-charge;
Paul Aferiat, project architect;
Howard Goldstein, David Knowlton,
Thomas Wittrock, project team

Engineers:
Geiger Berger Associates
(structural); Flack & Kurtz
Consulting Engineers (mechanical)

Consultant:
Glen Fries (landscape architect)

General contractor:
F. B. Mattson Company

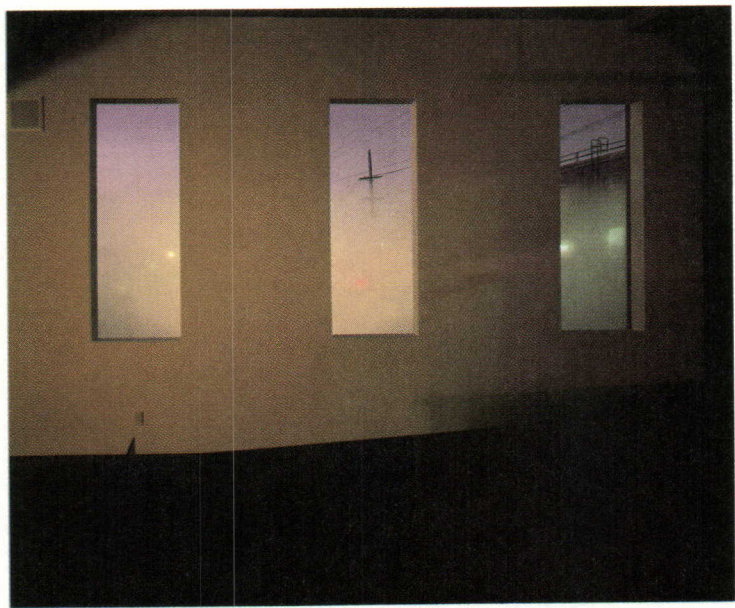




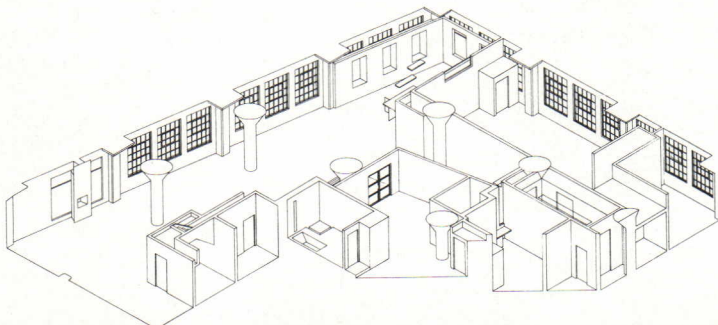




Kitchen windows were sandblasted on site to grade from translucent to clear, creating the illusion of a perpetual cloud hovering outdoors (top photo near right). Besides affording privacy, this device suggests transcendence of the ruder realities of civilization, like the mist-shrouded hermitages in Chinese paintings. At dusk, the west-facing brick wall of a nearby factory reflects a tawny glow through these panes. At night, one can ponder the contrast of city lights and glowing embers in the living room hearth (opposite). Bronze panels on the chimneypiece extend one-half inch beyond the adjacent window surrounds, whose embrasures are knife-edged to further negate the effect of mass. The irregular "found" marble top of a custom-built coffee table (presented to the clients by Fisher and Orr) mirrors the field of minuscule numbers etched into the burnished fireplace. This juxtaposition of contingency and exactitude, natural and man-made, also carries into the master bathroom (below right). In the shower stall, a rough slab of slate rests on river stones within a grid of slate tiles. Both the shower spray and the bronze waterfall above the tub are sources of vapor-borne negative ions, which are believed to induce relaxation. "I'm very interested in how moving water can calm you," says Orr. "We're mostly water anyway."



Vena-Mondt Studio/Residence
 Los Angeles, California
Designers:
Frederick Fisher, Architect, and Eric Orr, Artist—David Ross, project architect, associate; Undine Pröhl, project assistant
Engineers:
Gordon Polon (structural); Ashley Martin (mechanical)
Lighting consultant:
David Steinitz
Special construction:
Jan Cousineau, Murray Harreschou, Ric Saboya, Bill Nicholas, Laurence Armstrong
General contractor:
Decoma Construction

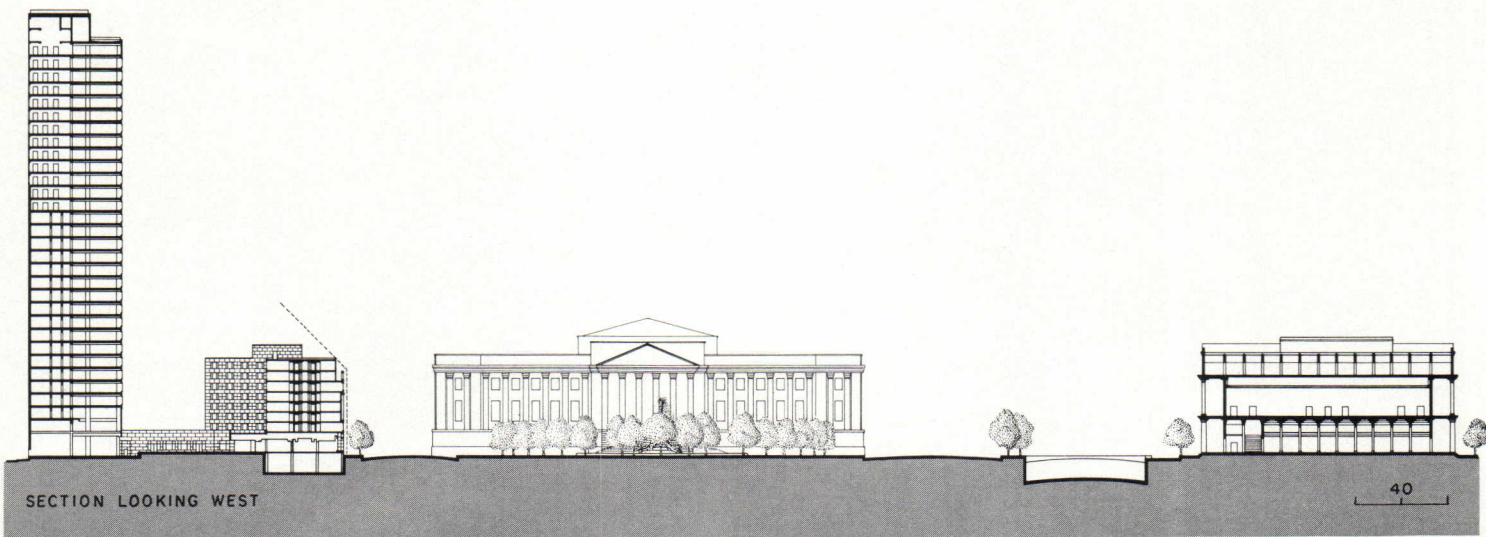




The duality of One Logan Square is easily read from across the square (directly below), the eight-story Beaux-Arts-like hotel standing clearly apart from the darker office building behind it. Architect Arthur May deliberately underplayed the polished granite skin of the office building to establish a backdrop for the more elaborately finished hotel. The "back" of the office building,

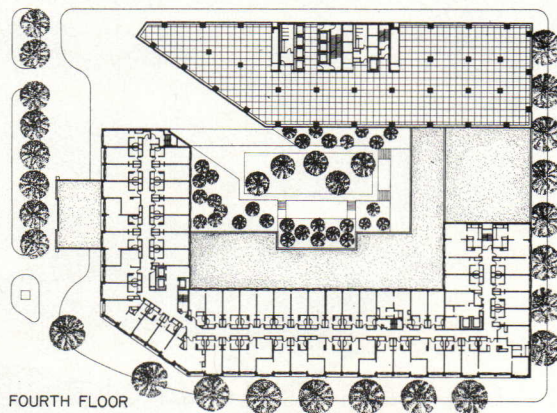
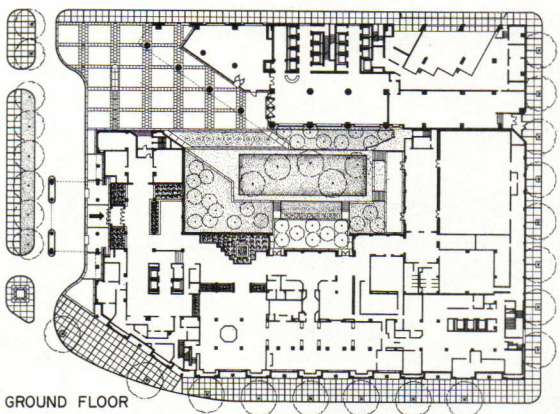
downtown, asserts itself a little more forcefully: the offset core, with its vertical rows of windows for the elevator lobbies, is made evident with flame-treated granite, the same material polished for the dark spandrels on either side (photograph opposite). The architectural context of Logan Square mingles a variety of styles and materials—a little Georgian, a little neoclassical, a little brick, a little marble, even a

Barbara Karant



modern concrete building two doors away from the new hotel. But apart from a cylindrical hotel just off the square, the mélange strikes a remarkably coherent balance, to which One Logan Square conforms with its low height, flat roof, pedestrian scale and traditional-seeming style. The office building, which is occupied chiefly by law firms, has proved so successful that Two Logan Square is in the works.

Norman McGrath





One Logan Square



Norman McGrath



Norman McGrath

Because Philadelphia zoning rules commanded that any sheer vertical wall be set at least 200 feet back from Logan Square, the new office tower stands well to the rear of the hotel. The pleasant consequence of this enforced separation of the two buildings is a large courtyard shared by hotel and office tower. Visitors enter through a small forecourt that serves both the office building and a subsidiary entrance to the hotel

(opposite). An attractive but effective fountained moat discourages casual invasion of the hotel's lawn. In fine weather, hotel guests can dine al fresco on a deck above a waterfall (at top above). By installing glass along one wall of the office building lobby, May opened a view to grass, trees and cascade. Such a view provides all the decoration the lobby needs, except for the large bronze sculpture commissioned from Joel Shapiro.

Despite its apparent simplicity, the hotel facade at One Logan Square was detailed to a fare-thee-well, given myriad planes to enhance shadows. Some rooms on the middle floors, for instance, occupy recesses 2 1/2 feet deep, surrounded by granite polished to exaggerate the effect of shadow. Niches at sidewalk level, which may contain large dining-room windows or just flower boxes, are set in 5 feet. Squared-off protrusions of varying depths—sills, lintels, ornamental girdles on columns—add their accents to the composition of shadows. May took special pains with the height of sills for the first-floor dining-room windows (opposite). Taking as his model the Edwardian Room of New York's Plaza Hotel and measuring in situ there the distance between sidewalk and sill, he gave diners in Philadelphia superb sightlines past the deep reveals: only the tops of heads and cars in front of the windows, but a panorama of trees and planting across the street.

*One Logan Square
Philadelphia*

Owners:

*One Logan Square Associates;
Philadelphia Investment Corp. (a
subsidiary of INA); Four Seasons
Hotels Limited*

Architects:

*Kohn Pedersen Fox Associates PC—
A. Eugene Kohn, partner-in-charge;
Arthur May, partner-in-charge of
design; Robert Cioppa,
administrative partner; Mark
Strauss, project planner; Myron
Sigal, project manager; Tim Hartley,
James Outen, job captains before
construction; Dow Jarrett, job
captain during construction;
Anthony Pelecchia, senior designer;
Megan Walker, John Lucas, Andrea
Simitch, design team; Kohn
Pedersen Fox Conway Associates,
planners*

Engineers:

*The Office of Irwin Cantor
(structural); The F&K Group
(mechanical/electrical)*

Landscape architects:

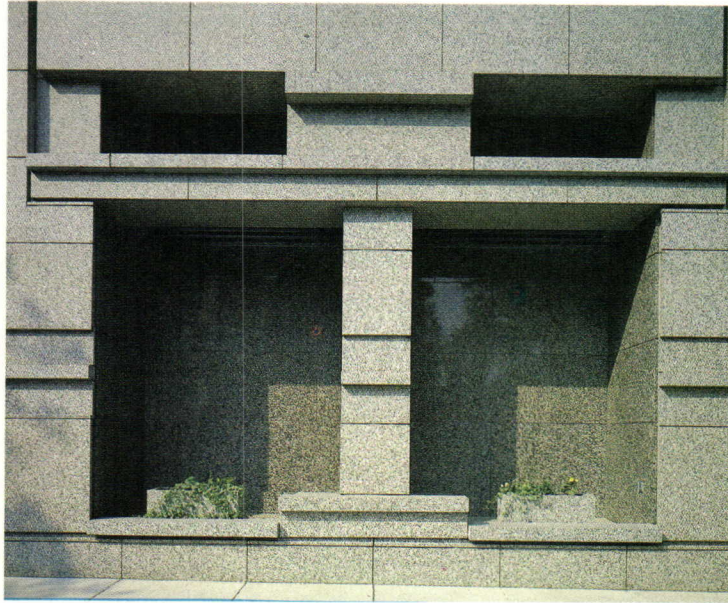
Zion & Breen Associates

Consultant:

*Howard Branston Lighting Design
(lighting)*

General contractor:

Turner Construction Company



Norman McGrath



Barbara Karrant





William J. LeMessurier's super-tall structures: architecture/engineering

The first of this two-part article on LeMessurier's super-tall structures (RECORD, January 1985) was subtitled "A search for the ideal," because it outlined principles in the fields of physics, esthetics, and economics upon which the engineer bases his designs. A presentation of two projects—the Bank of the Southwest in Houston, and the InterFirst Plaza of the Dallas Main Center—was part of that article. This month, five additional projects are shown. Seen together, the seven structures constitute a unified, highly disciplined, and remarkably eloquent series. In studying these buildings, it is interesting to consider the relationship between the engineering and architectural form. In most ways, the relationship is direct.

With regard to plan, the placement of the structures corresponds, in fact marks, the partition of space according to use. The structure of each project falls into one or more of three zones: the building envelope; the inner dimension of the outer zone of offices; the boundary of the core. The Federal Reserve Bank, described later in this article, exemplifies the use of structure as envelope where both columns and wall system form the structural basis of a totally uninterrupted office floor. In the InterFirst Plaza of the Dallas Main Center (RECORD, January 1985, pages 150-151) the columns, working with the trusses as a two-way rigid frame, were placed 20 feet inside the envelope to define the primary band of office rental space. In a number of projects where multi-floor diagonal bracing is used as a shear system, such as in the Bank of the Southwest (RECORD, January 1985, pages 148-149), their intersection defines the buildings' cores. Or, in the case of the Singapore Treasury Building, also described in this article, the core wall itself is the primary structure. Thus, in each of the seven projects, all structural elements participate in the rational division of space according to function.

Of course, the volumetric form of each structure strictly outlines the final massing for its building—skyscrapers do not lend themselves to treatment as billboard architecture. A less regimented, and therefore more interpretative, relationship exists between the structural elevation and "figuration" of the facade that ranges from the literal exposure of structural elements to total obscuration. In the case of the InterFirst Plaza shown last month, the serene, repetitive module of the rigid frame structure, though covered, is echoed in the reflective glass curtain wall. The facade of the Federal Reserve Bank in New York is even more true to the structure and more dynamic in its engineering. In this project, the columns and structural wall system *are* the facade, with infill elements—such as the fenestration that varies in width in response to the tapering of columns—playing a well-tuned "second fiddle." But a building like Citicorp, which is discussed here, reveals very little about its eloquent structure. While the four columns are exposed at the base, and the transfer beam (truss) is articulated, the lyric eight-story triangular braces are buried beneath the wraparound skin. Of course, a building possessing a graceful structure is not obligated to express it. However, an intrigue persists with the four projects in LeMessurier's series that, like Citicorp, incorporate a multi-story, triangulated module. These systems possess a harmony of form made symphonic with a complexity of scale, a scale derived from the overlapping of a secondary structure (the floors) within the primary structure of the bracing. And one wonders what style of facade might emerge if the rhythm of the structure were expressed, or what interior spatial configuration might be suggested.

The seven super-tall buildings by LeMessurier show him to be a stylist, but not in the sense that they demonstrate a fashionable flair. Rather, they speak of his personal approach as a form-giver, and of a unique poetry resulting from one man's search for a resolution between the forces of nature, the character of concrete and steel, the requisite form of a function, and the imperatives of economy. One can imagine that an architect who works with this highly accomplished engineer has a true design collaborator. *Darl Rastorfer*

Opposite page: Citicorp under construction.

Erewhon Center

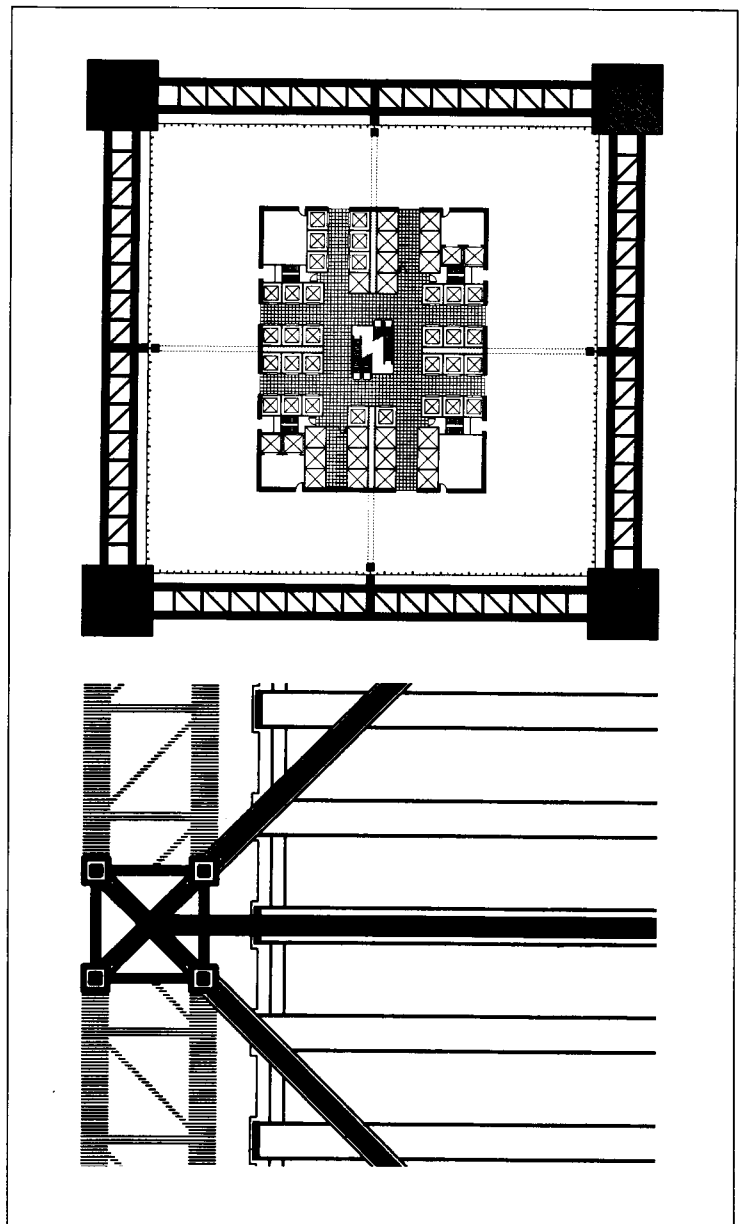
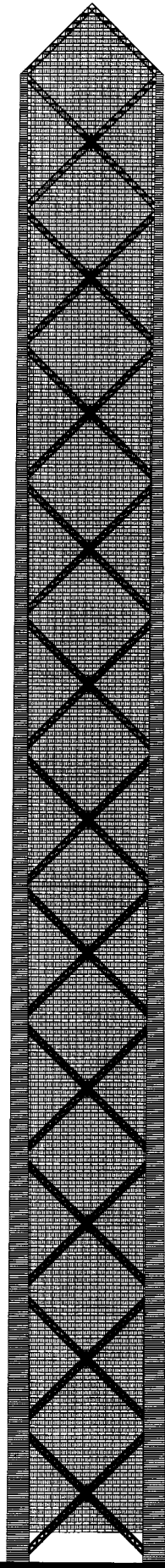
Frank Lloyd Wright made a famous drawing of a mile-high building which, at 1/16 in. scale, was over 27 ft tall. Ever since, people have continued to ask, "How tall a building can be built?" The question is unanswerable without defining what is meant by a "building." There really is no limit if the building's footprint grows in proportion to its height. But, if we expect most human occupants to be reasonably close to natural light and views, buildings much fatter than the Sears Tower (225 ft wide) or the World Trade Center towers at 208 ft have problems with interior planning. As an exercise, LeMessurier, following Wright's lead, studied the practicality of a 207-story, half-mile-high building, keeping the plan dimensions in the same family as the Sears Tower and the World Trade Center.

The dominant consideration was to make the building so rigid that it would not experience extreme dynamic excitation from upper-level hurricane winds. The design was based on achieving a natural period of vibration of 10 seconds, which should keep the building safe in sustained winds of 140 miles per hour.

The immense rigidity required made it mandatory to have the most efficient bending system possible. For a square building, this leads to the choice of four columns at the corners. These columns would be built of high-strength concrete and measure 40 ft square at the ground and 13 ft 4 in. at their tops. The columns are connected by a most efficient web system that also allows light into the building. This system is made of steel diagonals at 45 deg angles.

The interior framing combines rigid frames and diagonal braces to carry all gravity loads to the four columns. The glass-and-metal skin is far enough inside the main structural system so that window-washing platforms can move freely up and down.

Engineer and architect: William J. LeMessurier
Stories: 207
Height: 2,760 ft above grade



LeMessurier's theoretical study for a half-mile building places the primary structural elements on the outboard side of the glass-and-metal skin (see elevation at left, and typical floor plan extreme top). This position maximizes the effectiveness of the system in resisting bending

stresses and thus accords a natural period of vibration for the building that is acceptable. Because it is in part on the outside, figuration of the facade and that of the structure are one and the same. Above: section detail of shear bracing at the envelope's midpoint.

The Federal Reserve Bank of New York Bank of New York New York City

Kevin Roche John Dinkeloo Associates

The Federal Reserve Bank of New York was to be built on a small, irregularly shaped site across a narrow street from the existing bank. In order to receive permission from the city to build the amount of office space this downtown Manhattan building was to enclose, nearly all the space at the street was to be devoted to public use. The scheme developed by architect Kevin Roche raised the building 165 ft on four concrete piers, thus opening the ground level to light and air for use as a civic plaza.

The project shown at right was the third and final scheme proposed by the architect and engineer. The first two employed steel structural systems. The client found these buildings too costly; therefore, the all-concrete structure was designed. Construction bids for this building were \$25 million less than the previous designs. Unfortunately, this scheme was not carried through by the client either, and the building remains unbuilt.

The structural system for the office floors works as a suspended tube. Whereas conventional tubes, working as four planes of a continuous rigid frame, take all gravity and wind forces down to the ground, in the Federal Reserve Bank, the tube's lower terminus is a huge beam that works with the "legs" of the tower as a separate rigid frame.

Gravity loads are picked up at every floor by the four columns. As the columns penetrate the height of the building exterior, they taper in response to the decreased distribution of load—a clear expression in the facade of structural forces.

Both LeMessurier and Roche felt a great sense of accomplishment with this project and, understandably, regret that it was never realized. It was designed in 1975, and LeMessurier regards it historically as, "the last gasp of the International Style."

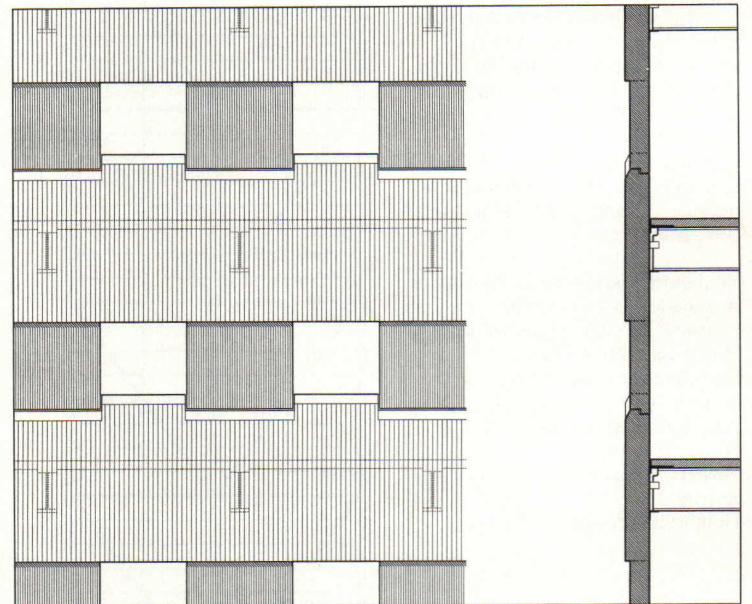
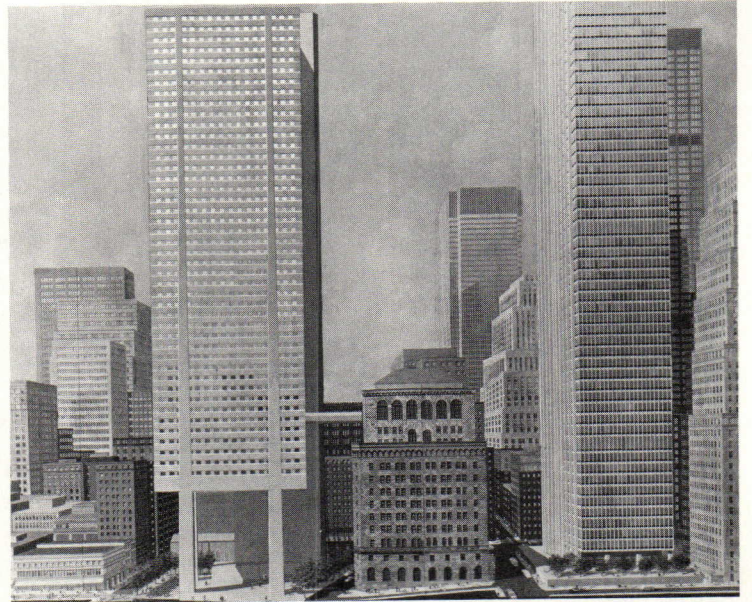
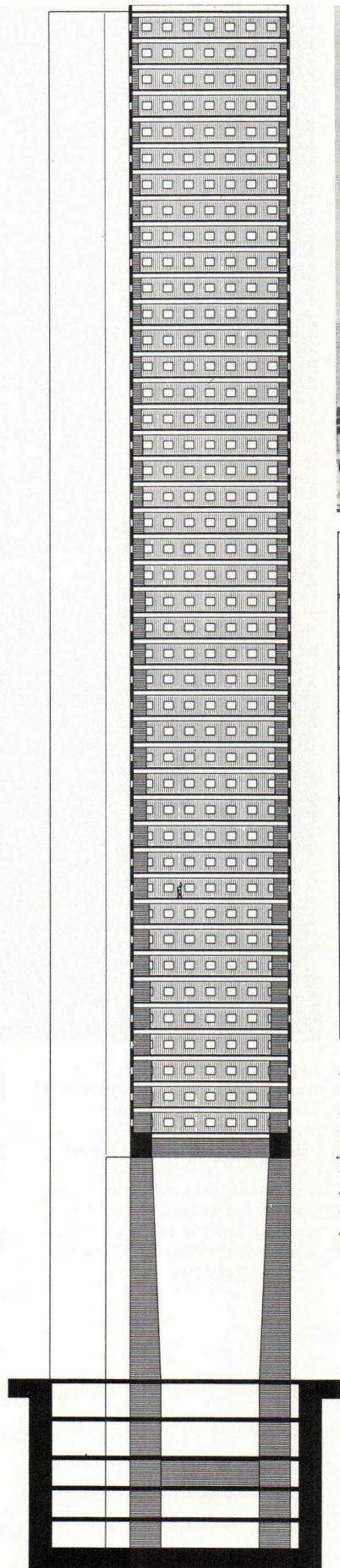
Structural engineer: LeMessurier/SCI, Cambridge

Architects: Kevin Roche John Dinkeloo and Associates

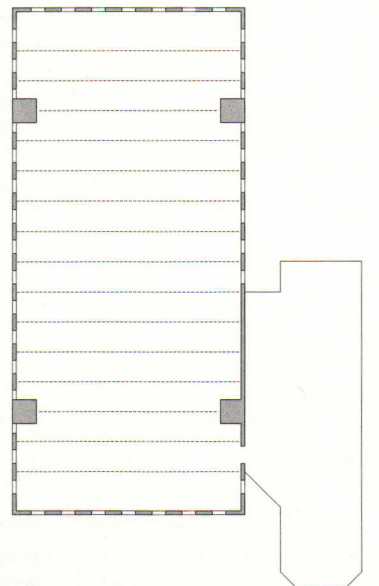
Client: The Federal Reserve Bank of New York

Stories: 43

Height: 670 ft above grade



A typical office plan (right) shows that the service core of the Federal Reserve Bank is pulled outside the office area. The building is raised on four 165-ft columns to create a sunlit civic plaza at the street (see structural section left, and rendered elevation top right). Above: partial section and elevation of the reinforced concrete wall system.



Citicorp Center New York City

The tower at Citicorp Center was designed in response to an unusual site constraint (see RECORD, mid-August 1976). St. Peter's Church owned a corner of the block and wished to build a new building. The church sold its air rights but would not allow columns from the office building to penetrate its area. The tower was therefore supported by four exterior columns, with each one at the center of one side of a square. The four columns together carry one half of the building's weight; the remaining half is carried by the central elevator core.

Since it was necessary to cantilever the entire building 76 ft each way from the centered columns, a gravity system of diagonal members in compression restrained by horizontals in tension was chosen. The system, designed to resist gravity, was also ideal for resisting wind shear.

The wind shear system must interconnect columns on opposite sides of the tower so that the structure actually works in three dimensions, wrapping around the corners. At the bottom of the tower, the wind shear is transferred through the lowest floor to the elevator core, which has diagonal bracing to carry the wind shear to the ground.

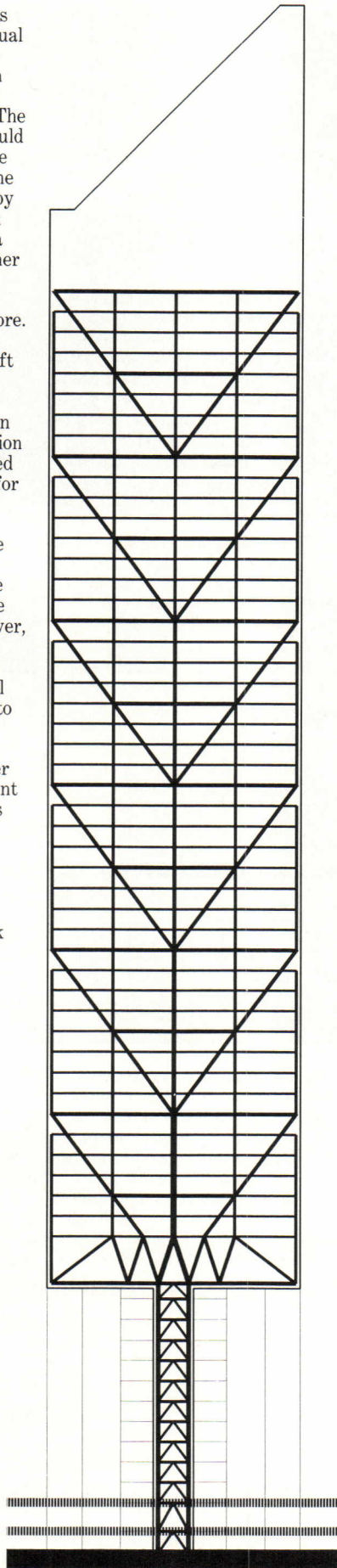
Structural engineers: LeMessurier Associates/SCI, Cambridge, in joint venture with The Office of James Ruderman, New York

Architects: The Stubbins Associates, Cambridge, in association with Emery Roth & Sons, New York

Owner: Citibank N. A., New York

Stories: 52

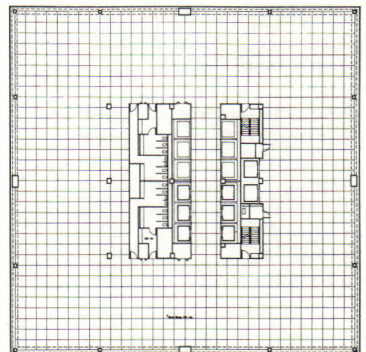
Height: 914 ft above grade



Edward Jacoby



Aside from the expression of the transfer truss and four columns, the character of the structure is not expressed in the facade (elevation above). Chronologically, Citicorp was the first building in this series to use diagonal cross-bracing for shear in a way that gathers several floors together into a single module (see section, left). Right: typical office plan.



The Singapore Treasury Building

Singapore

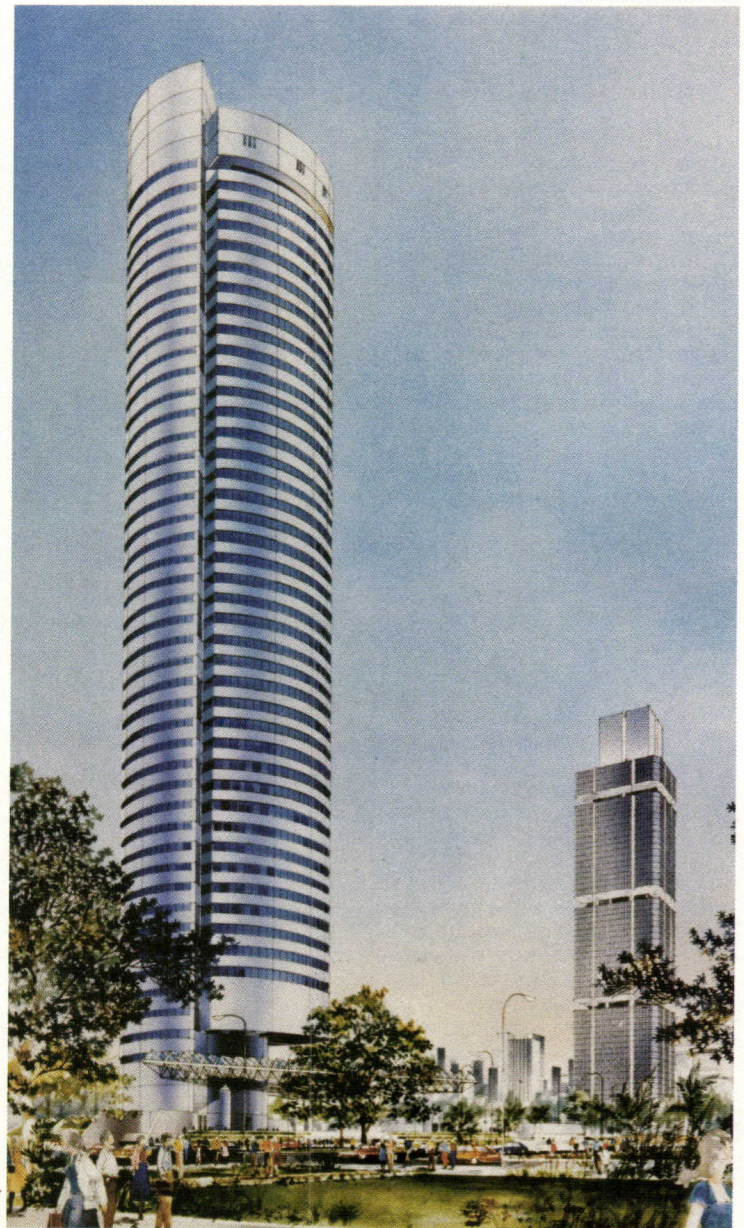
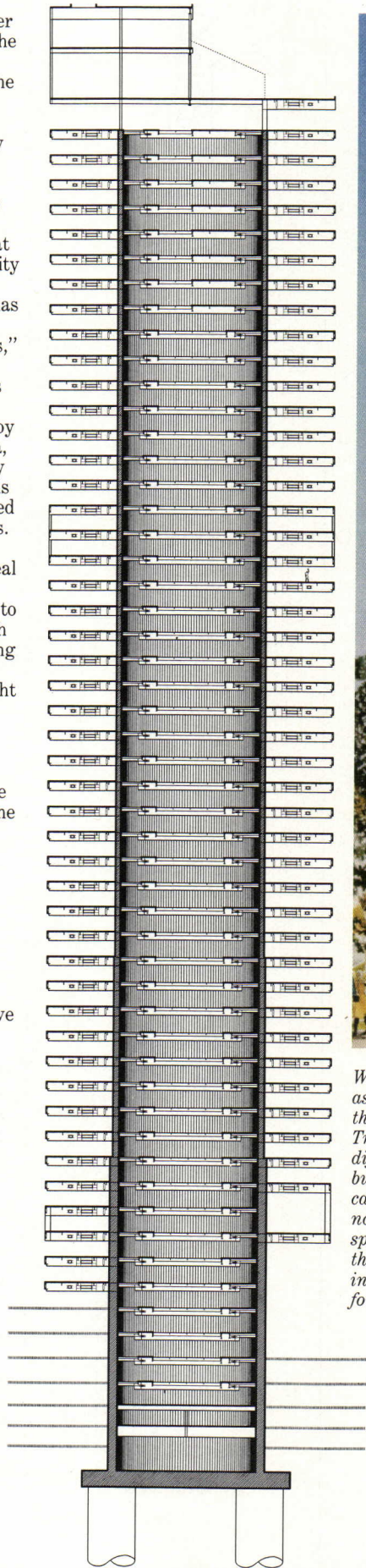
The Stubbins Associates

This cylindrical tower at the center of Singapore will, for a time, be the tallest building in Asia. Its structure is very different from the other buildings by LeMessurier shown in this series because all gravity loads and bending rigidity are concentrated on the inner cylindrical wall of concrete surrounding the service core. The bending system is not as rigid as might be achieved with columns at the perimeter, but the shear rigidity is very high. With only four openings per floor, the core wall has close to the ideal shear rigidity index of 100 (see "On shear stress," in last month's issue).

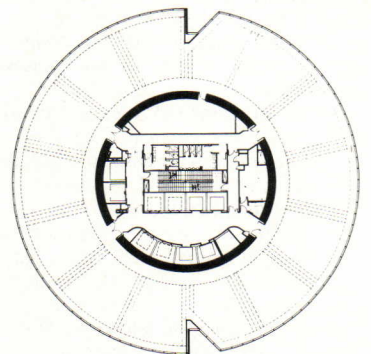
What matters in any building is its over-all rigidity. That is, low bending rigidity can be balanced by high shear rigidity, and vice versa, to achieve a suitable design. Many lower buildings have wind systems for bending and shear concentrated in fixed walls around service cores. The Singapore Treasury Building extends this form to its logical ideal by carrying *all loads* with the concrete core wall and using steel to cantilever the floor 40 ft. Although not suitable for a mile-high building as Frank Lloyd Wright proposed, this "core only" system is just right at one-seventh of a mile.

The building is well along in construction and is using an erection sequence very much like that for the InterFirst Plaza of the Dallas Main Center. The steel frame is erected first, with temporary supports at the outer ends of the cantilevers. The cantilevers are welded at their inner ends to vertical steel columns, which are subsequently encased in the concrete core wall.

Structural engineer: LeMessurier Associates/SCI, Cambridge, and Ove Arup & Partners, Singapore
Architects: The Stubbins Associates, Cambridge, and Architects 61, Singapore
Owner: The Singapore Treasury Building (Private) Ltd.
Stories: 52
Height: 751 ft above grade



With a cylindrical concrete core wall as the primary structural element, the section of the Singapore Treasury Building (left) offers a different image than the other buildings in this series. Since 40-ft cantilevers support the office area, no vertical supports obstruct the space (see plan, right). As a result, the uninterrupted band of windows in the elevation (above) is true to form.

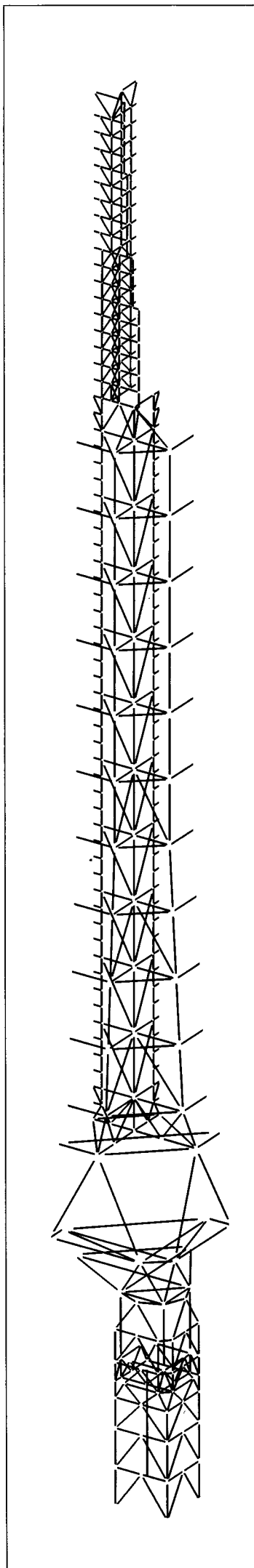


383 Madison Avenue New York City

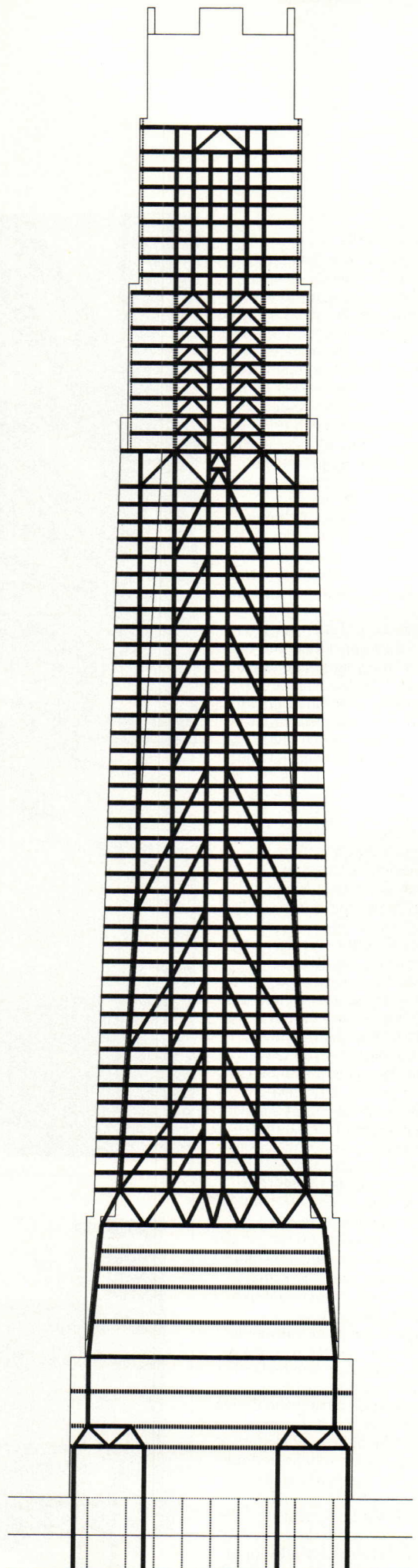
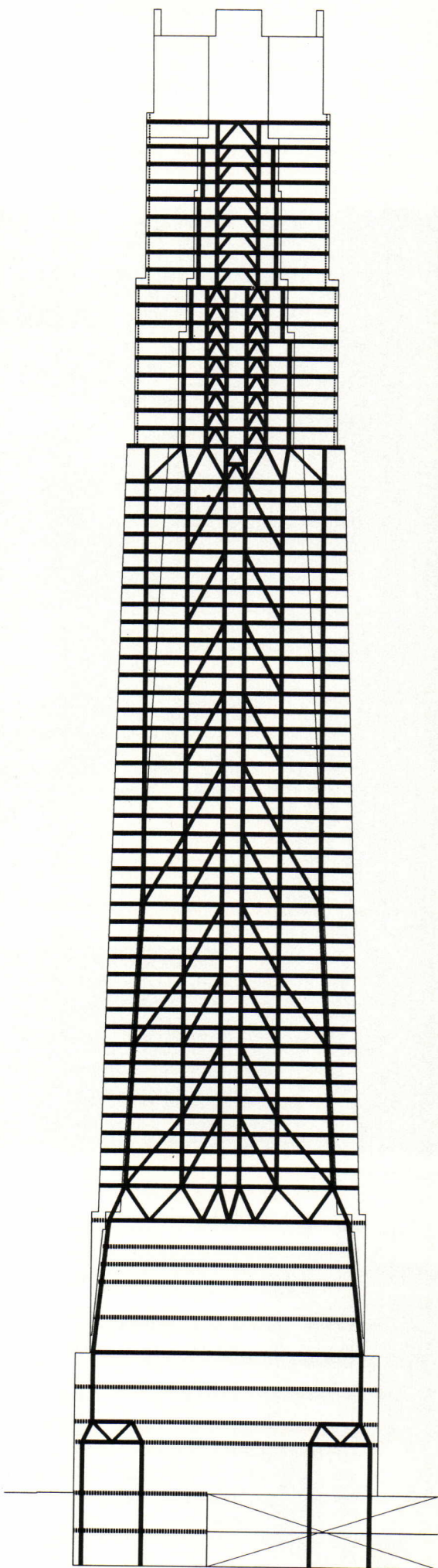
LeMessurier's most recent super-tall building design is a proposal for a site in Manhattan. The architects for the project, Kohn Pedersen Fox Associates, took great care to maintain all necessary setbacks in the building envelope to conform to municipal codes while providing their client with a maximum "as of right" envelope. The resulting taperings and setbacks suggested two possible structural solutions. First, the building could be supported by columns placed around the periphery at about 10 ft on center. This was rejected for two major reasons: It would lead to a nightmare of geometric complexity since the building slopes inward as it rises, making each office floor unique. (Office floors are planned in the shape of a Greek cross intersected by a square service core.) And, placing columns at the building's edge would restrict window access. A second and more favorable approach was to pull the structure within the building interior at a dimension useful as an office module. With this approach, the engineer designed the structure with diagonal members that will take shear and transfer gravity loads to points at every eighth floor. Like the bracing in the Bank of the Southwest, the shear structure for the 383 Madison Avenue tower will cross to define the service core, thus optimizing the congruence of an architectural and engineering form. (In confining the structure to the interior, the architects were afforded greater liberty in organizing the facade.)

The structure will use both high-strength reinforced concrete and steel. The first 10 stories above grade are to be used as trading floors with clear spans. These floors correspond to the zone in the tower where the strain from wind forces are at their greatest. Here, concrete will be used, since concrete is considerably more rigid per dollar than steel. Steel will be used below grade because concrete would require sections too thick to thread through the subway tunnels the building must negotiate to reach its foundation. The steel above the trading floors is tied together approximately two-thirds up the building at a "shoulder" truss that binds the lower structure together and serves as a platform upon which, in effect, an additional 20-story steel building is stacked.

Structural engineers: LeMessurier Associates/SCL, Cambridge, in association with Weiskopf & Pickworth, New York
Architects: Kohn Pedersen Fox Associates PC, New York
Owner: 383 Madison Associates
Stories: 70
Height: 1,040 ft above grade



The two major constraining factors cited by the engineer as influential to the design were the building setbacks designated by code, and the need for clear-span trading floors at the base (see sections opposite page). The necessity of straddling subway tracks at the foundation posed a third constraint. The design that resulted divides the building above grade into three distinct zones: the concrete trading floors; mid-level office floors tied together at the top by a "shoulder" truss; and 20 stories of additional space resting on the shoulder. The drawing at left is a structural axonometric of one quarter of the tower. Because the building has not been presented for review and approval by the civic institutions responsible, no plans or architectural elevations are shown. Complete coverage of the project will appear in an upcoming issue of RECORD.



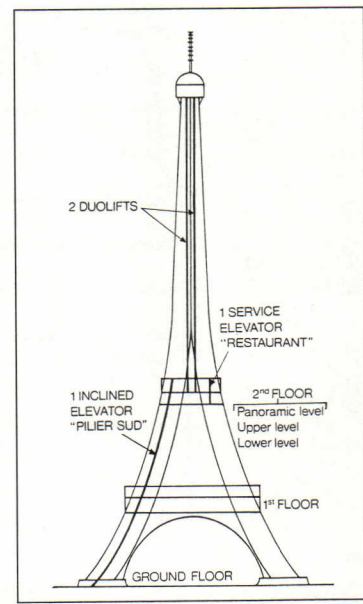
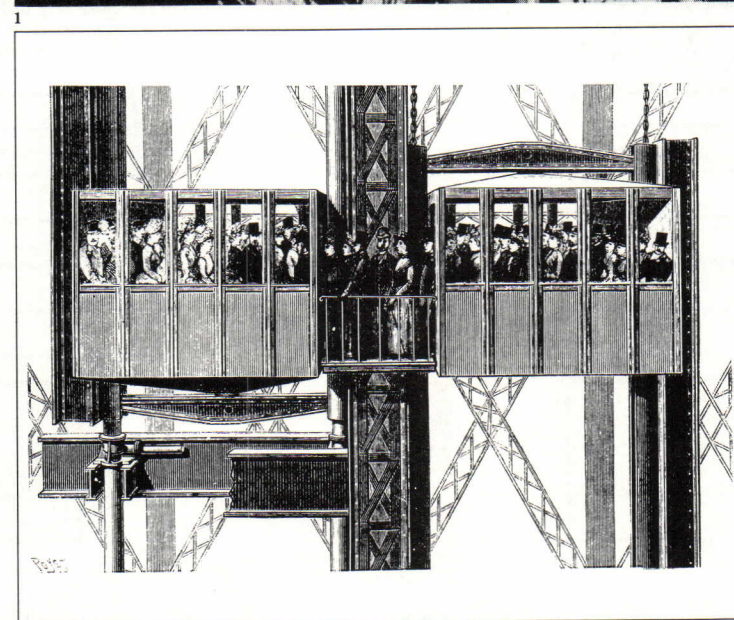
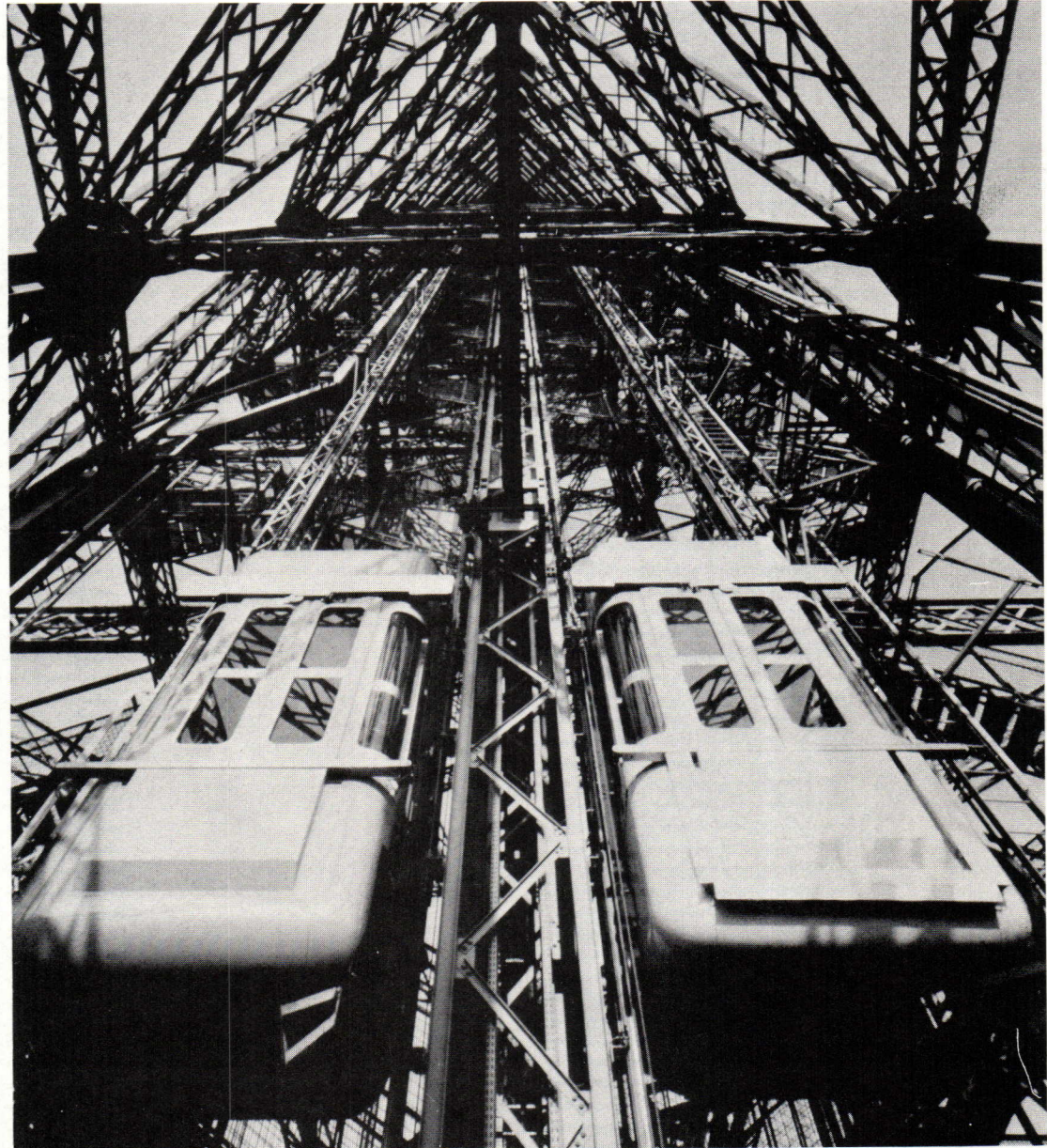
Going up?

When Gustave Eiffel's tower opened as part of the 1889 Paris International Exhibition, it was enough of an engineering feat that the hydraulic lifts designed by Léon Edoux were able to reach the 1,040-ft summit, much less provide year-round service. Not everyone was as enthusiastic about the tower as its designers: the "hollow candlestick" was libeled by the French press and condemned not only by neighboring residents but also by prominent intellectuals and statesmen as a disfigurement of Paris and a dishonor to the people of France. While such publicity was bound to attract crowds, not everyone was willing to make the journey to the top, fearing that the tower was sure to collapse.

Although the Eiffel Tower has survived public opposition and two world wars, the years have taken their toll. In 1980 the Société Nationale de la Tour Eiffel began a major reconstruction program to reduce the weight of the tower and improve access to the second and third levels. The original elevators could no longer handle the influx of tourists, and, after 95 years, they were suffering from old age and overexposure. Ascinter Otis, the French division of Otis and a descendent of Edoux's company, was asked to develop a scheme for reservicing the tower.

Two new duolifts—a set of two 40-passenger cabins forming counterweights—were designed to travel between the second and third levels (1). Where passengers previously had to change cars midway (2), they now can travel express to the top at a rate of 1.8 meters per second. Otis also developed an elevator that travels the inclined plane of the south leg to the Jules Verne restaurant on the second level—an intricate job that had to accommodate the shift in slope from 55 to 77 deg (3). Up to 10 passengers can travel in this elevator at a speed of 1.6 meters per second. Now all the elevators can be used year-round, and the Eiffel Tower is no longer restricted to a seven-month tourist season.

Although the new elevators are a solution for the specific weather conditions and usage demands of the Eiffel Tower, the technical innovations made during the design process are applicable in other situations. The balancing system of the duolifts can be substituted for the traditional pendant cable systems that are not operable during high winds. Similar duolifts and inclined elevators are currently under consideration for interior and exterior projects in France and the United States. Otis, Div. of United Technologies Corp., Hartford, Conn. Circle 300 on reader service card



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Past as prologue

In 1903 Josef Hoffmann and Kolo Moser founded the Wiener Werkstätte—a workshop for the production of furniture, textiles, and tableware—on the same premise that had spurred the earlier formation of the Vienna Secession. The Viennese artists and intellectuals of the Secession had banded together under the motto “To the Age Its Art, to Art Its Freedom,” intending to find a remedy for the eclectic hangover that was afflicting their architectural peers. The new style that they advocated demanded a more spartan regime than what had flourished during the past 35 years along Vienna’s *Ringstrasse*. The Classical Revival Parliament Building, the neo-Baroque Opera House, and the neo-Gothic Votive Church all represented, to the Secessionists, wanton reveling in the past. Such rampant revivals must be replaced, they contended, by a single style more appropriate for the new century.

Through the Wiener Werkstätte Hoffmann and his collaborators put their new ideas into production. The patterns that they designed—for furniture or wall inlays, and for fabrics—incorporated both the fluid, organic shapes of the Art Nouveau and the regulating lines of the grid.

Although the Werkstätte disbanded 50 years ago, for several years its mill has been producing half-a-dozen different upholstery patterns for Hoffmann furniture in International Contract Furnishing’s “great masters” collection. For some time it was rumored that this very same mill possessed the Werkstätte papers and had purchased the rights to manufacture all of the designs. What was not known, until recently, was how many designs, in addition to those under production and those illustrated in various monographs on the Werkstätte’s work, existed.

When Sina Pearson, the president of Unika-Vaev, ICF’s textile division, was granted access to the mill’s archives, she found hundreds of designs, including sketches on scraps of paper and napkins (testimony to the heated discussions that took place over the drawing boards in the workshops and over cups of coffee in the local *Kaffehaus*), and frayed samples—most of which had never before been produced.

Thus the *Archives Collection* was inspired, beginning with an assortment of eight patterns that will be officially introduced this month. Unika-Vaev has paid careful attention to matching the colorations of the original samples or, if no samples existed, being true to the descriptions that

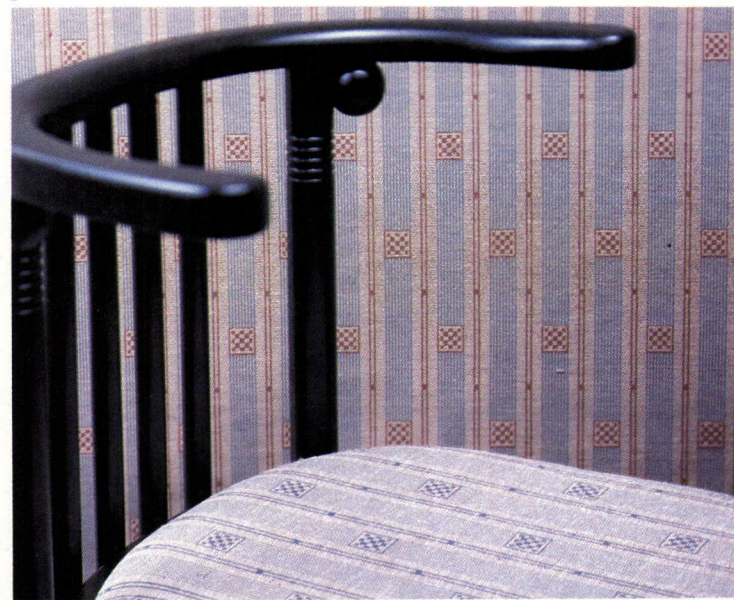
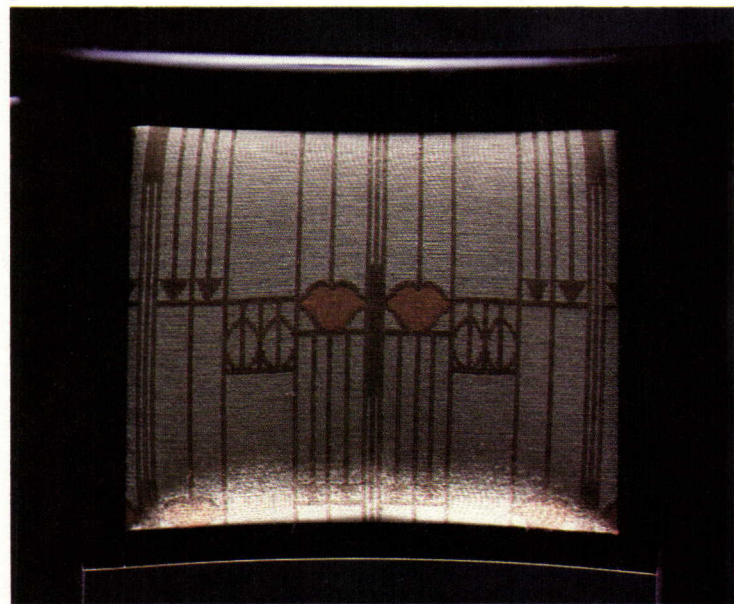
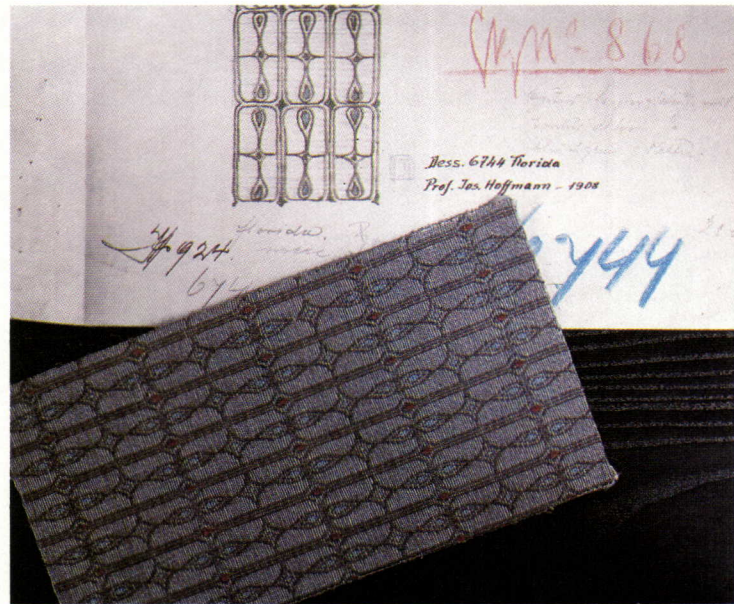
accompanied the sketches. Current production of the *Florida* pattern, for example, is based entirely on Hoffmann’s drawing and its caption (1). Other Hoffmann patterns feature themes that he explored in his architecture as well. In *Schachbrett* (chessboard) the grid is incorporated into a decorative quadrature motif that was the dominant theme in the dining room of the Palais Stoclet in Brussels, a major commission in Hoffmann’s career. In *Notschrei* (cry of distress), *Sehnsucht* (longing), and *Paradis*, the grid frames different shapes and makes a module that can be reiterated *ad infinitum*.

Hoffmann’s mentor, Otto Wagner, also designed fabrics for the Wiener Werkstätte. Although he was a generation older than Hoffmann, he was as eager as his younger colleague to forsake the credibility that historical references might lend his work. Unlike other architects who were far too well versed in ancient architecture, the members of the Werkstätte felt no obligation to relate their work to history and, as Wagner’s *Kleines Quadrat* shows, moved instead toward abstraction.

The members of the Werkstätte chose to look to modern technology as the prototype for their style. Their concern with the assimilation of new building materials into the production process almost sanctions the modifications necessary for the current production of their fabrics, which are now woven in combinations of cotton, viscose and polyester, and are intended for heavy-duty contract use.

The *Archives Collection* is not intended to be self-supporting, but is being put into production as a souvenir of the Werkstätte and a tribute to the timelessness of its members’ designs. Over the next two years, Unika-Vaev plans to expand the collection to include 30 to 40 patterns. Ironically, a group that was fervently against revivalism has now become the subject of its own. *K. D. S.* Unika-Vaev, Div. of ICF, Inc., New York City.

Circle 301 on reader service card
More products on page 171



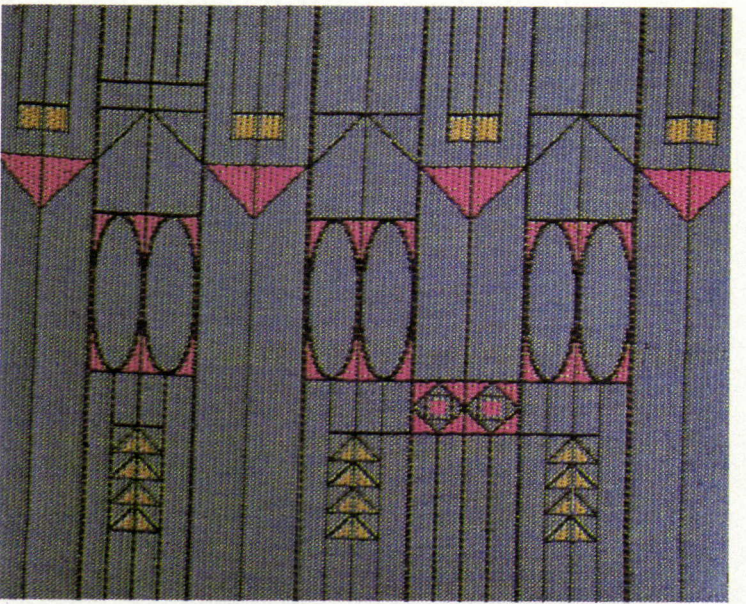
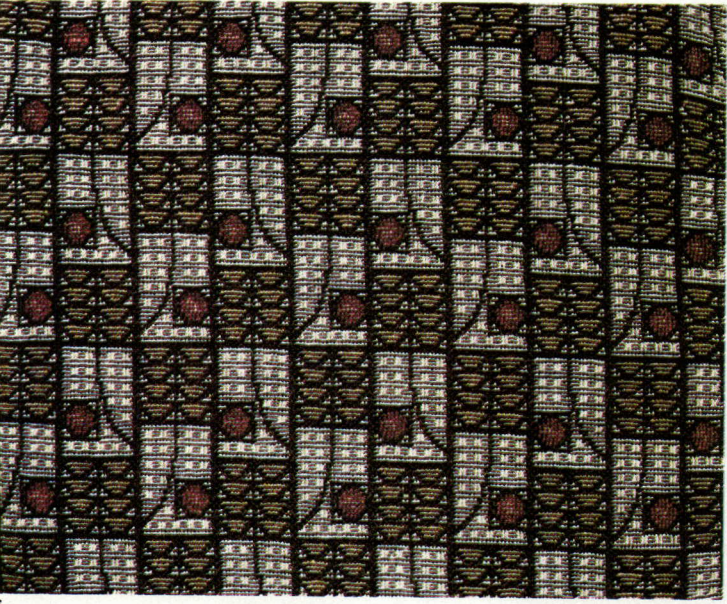
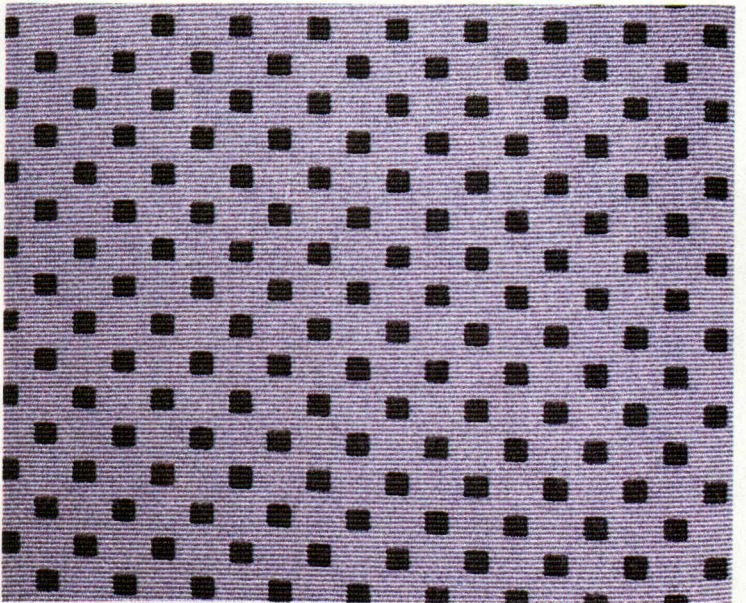
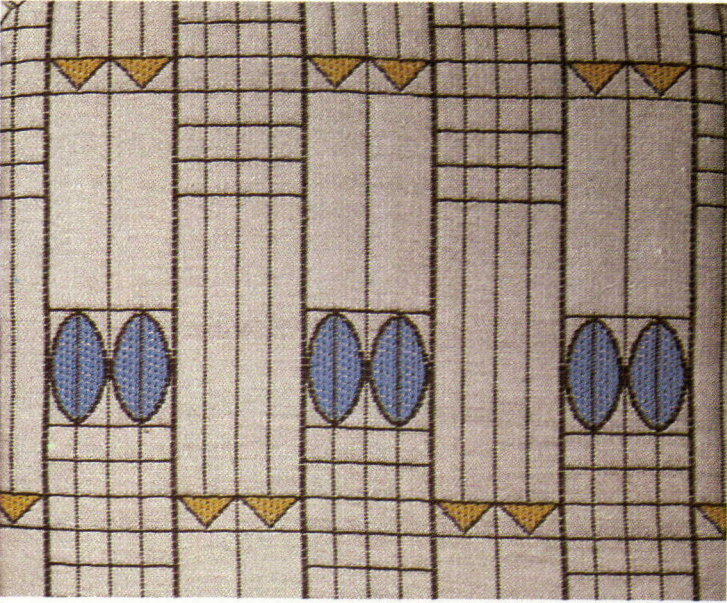
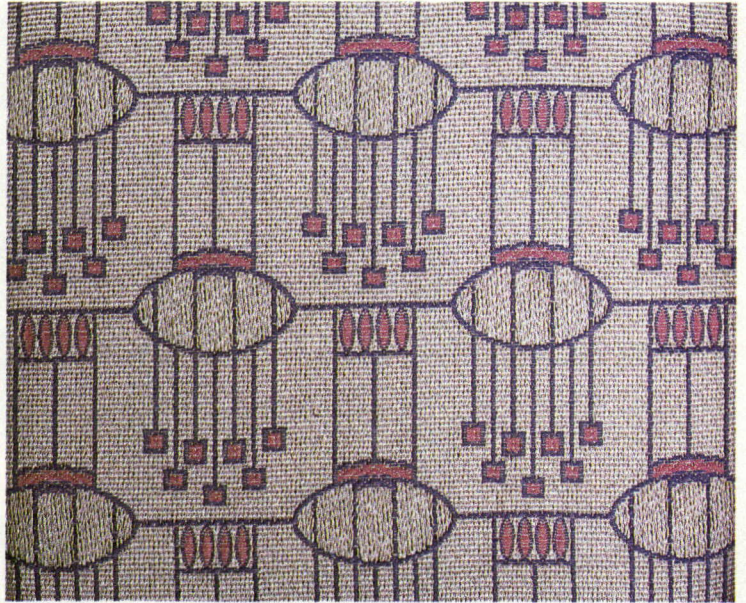
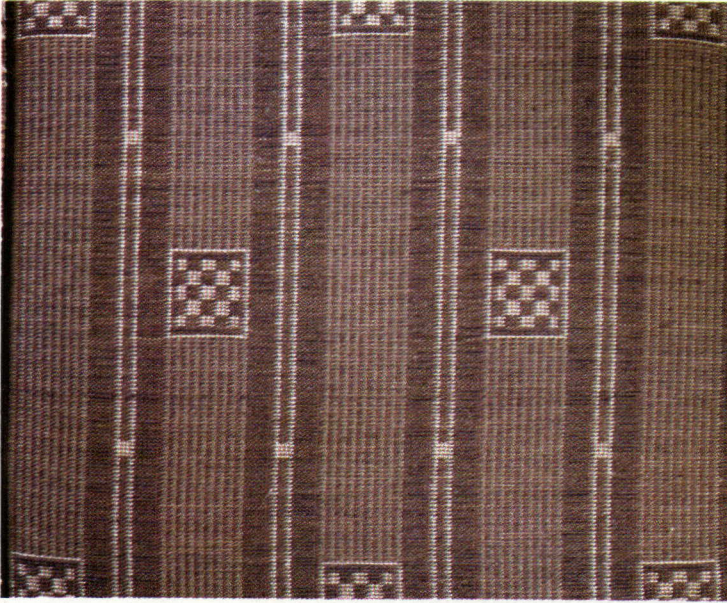
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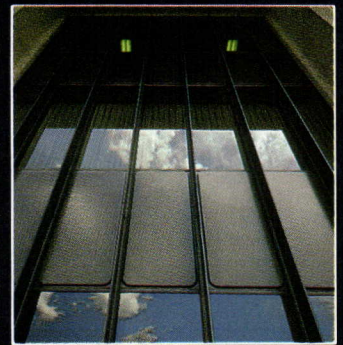
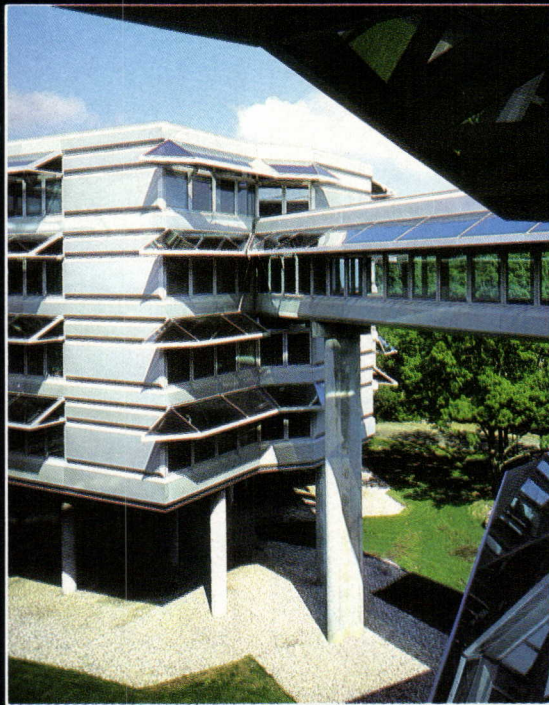
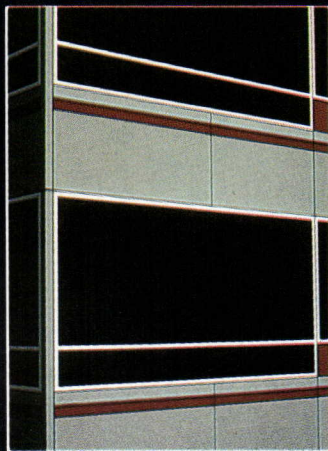
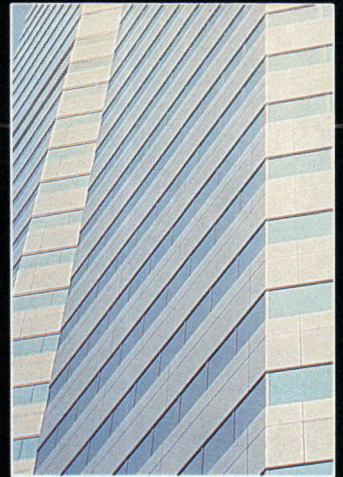
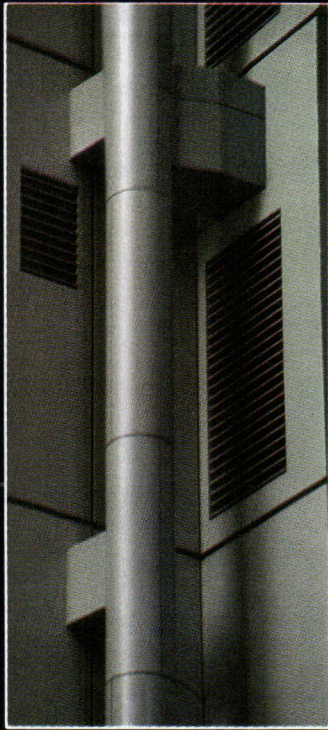
Peter Page

Peter Page

1. Florida, Josef Hoffmann
2. Notschrei, Josef Hoffmann
3. Schachbrett, Josef Hoffmann
4. Schachbrett, Josef Hoffmann
5. Sehnsucht, Josef Hoffmann
6. Paradis, Josef Hoffmann

7. Lampen, Otto Prutscher
8. Kleines Quadrat, Otto Wagner
9. Aristide, Otto Prutscher





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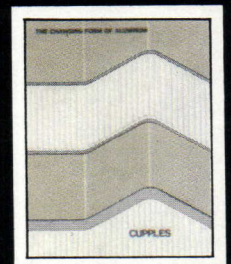
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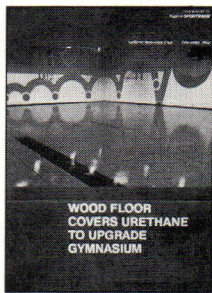


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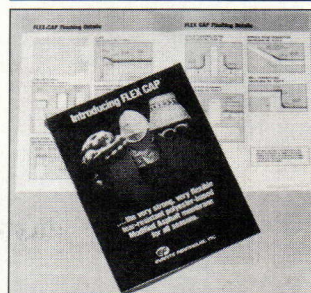
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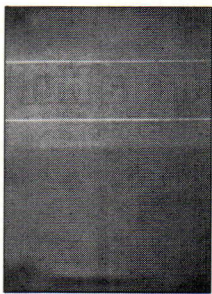
Circle 66 on inquiry card



Wood floors
The installation of the *Sportwood* maple floor system over an existing urethane gymnasium floor is reviewed in a 4-page color brochure. The application of adhesives to secure the wood strips—available in 5/16-in. and 11/16-in. thicknesses—is described. Maintenance requirements are discussed. Robbins, Inc., Cincinnati.
Circle 400 on reader service card



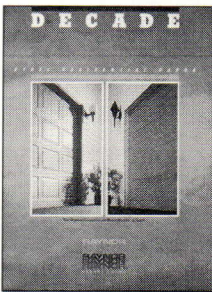
Roofing membrane
Flex Cap, a new polyester-based roofing membrane intended for use in harsh climates, is described in a 12-page color brochure. The construction of the membrane, which consists of non-combustible ceramic mineral granules and a sand backing to permit hot asphalt bonding, is reviewed. Evanite Permaglas, Inc., Corvallis, Ore.
Circle 406 on reader service card



Roofing and siding panels
A 16-page brochure reviews the manufacturer's line of *Tuff-Span* roofing and siding panels, beams, roof decks, and related accessories. The *Super-Tuff* proprietary process, which combines straight glass fibers with fire-retardant and corrosion-resistant resins, is reviewed. Composite Technology, Inc., Fort Worth.
Circle 401 on reader service card



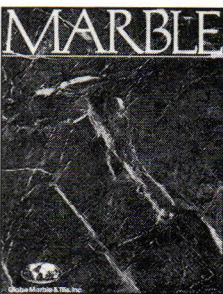
Roof system
A 12-page color brochure features the *Ultra-Dek 124* standing seam roof system. The installation of the panels, which snap together at the sides, is reviewed. Diagrams show construction details of eave, ridge, and corner conditions in both metal and conventional building applications. Metal Building Components, Inc., Houston.
Circle 407 on reader service card



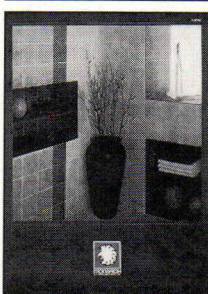
Garage doors
A line of steel residential garage doors is shown in an 8-page color brochure. The *Decade R/P* raised panel model and the *Decade R/S* rough-sawn embossed model are described in the literature. The operation of the manufacturer's electric door opener is reviewed. Raynor Manufacturing Co., Dixon, Ill.
Circle 402 on reader service card



Floor box
The manufacturer's new *Concealed Service* floor box, designed to deliver power, phone, and data wire services from standard underfloor conduits, is featured in a 4-page color brochure. The connection of wires and communication cables through a retractable exit in the floor box cover is described. Midland-Ross Corp., Pittsburgh.
Circle 408 on reader service card



Marble
The manufacturer's line of polished marble tiles is featured in an 8-page color brochure. The tiles are available in a standard 12-in. by 12-in. size; several can be specified in a 6-in. by 6-in. size. Travertine, agglomerate, granite, and split-faced, sawn-back marble tiles are also shown. Globe Marble & Tile, Inc., North Hollywood, Calif.
Circle 403 on reader service card



Tile
The manufacturer's 16-page color catalog shows installations of ceramic wall and floor tile. The new *Shadow Series*, available in 6- by 6-in. and 6- by 4 1/4-in. sizes, is featured. Other new models, including lines imported from Japan and Italy, are described. Monarch Tile Manufacturing, Inc., San Angelo, Tex.
Circle 409 on reader service card



Metal coating system
A 6-page color brochure features the new *Versacor PF* protective coating system for metal building components. The finish is said to withstand the effects of acid rain and industrial pollutants, and to resist fading and chalking. The 15 available coating colors are shown. H. H. Robertson Co., Pittsburgh.
Circle 404 on reader service card



Solar storage tanks
A 4-page color brochure describes *Sun-Lite* non-pressurized cylindrical tanks designed to absorb and store solar energy and transmit natural daylight through an adjacent solar window. The fiberglass construction of the tanks is reviewed. Solar Components Corp., Manchester, N. H.
Circle 410 on reader service card



Oak floor
The manufacturer's line of kiln-dried, milled, and sanded oak floors is featured in a 20-page color brochure. Several plank and parquet lines for flooring or wallcovering applications are described and illustrated in the literature. Adhesives, trowels, and floor care products are reviewed. Bruce Hardwood Floors, Dallas.
Circle 405 on reader service card



Lighting specification
A 14-page color brochure outlines the effect of various lighting sources on color. Topics such as the international C.I.E. color triangle, chromaticity, color rendering, spectral power distribution curves, and color matching and selection are discussed in the literature. General Electric, Cleveland.
Circle 411 on reader service card
More literature on page 169



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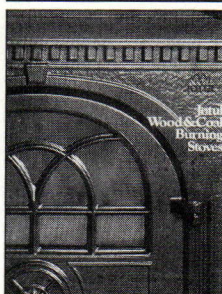
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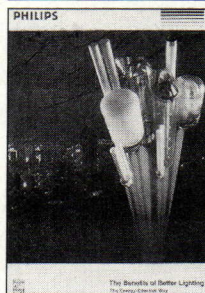


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Wood and coal stoves

A 12-page color brochure features the manufacturer's line of wood- and coal-burning stoves. The construction of the stoves, made of 100 per cent cast iron with a porcelain enamel finish, is described. Photos show the different models, including several available with cookplates. Jotul U.S.A., Inc., Portland, Maine.
Circle 412 on reader service card



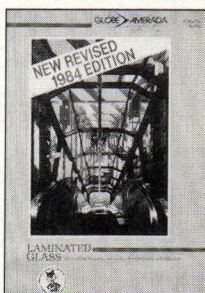
Lighting

A 20-page color brochure reviews four principal criteria—including the amount and balance of lighting, glare, and color rendering—to be considered in the selection of lighting equipment. Photos show several lighting projects that use the manufacturer's products. Phillips, Eindhoven, Holland.
Circle 418 on reader service card



Overlay drafting

The manufacturer's system for overlay drafting is described in a 16-page color brochure. Features of the system, including accuracy of up to .002 in. and the "locking" of polyester film artwork sheets into a pin registration system to protect film from warping, are reviewed. Bishop Graphics, Westlake Village, Calif.
Circle 413 on reader service card



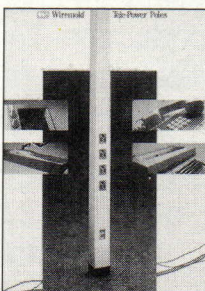
Laminated glass

The manufacturer's line of laminated glass, constructed of two or more layers of glass and one or more interlayers of polyvinyl butryral plastic, is reviewed in a 16-page color brochure. Thicknesses and visible light transmission of each product are listed. Globe-Amerada Glass Co., Elk Grove Village, Ill.
Circle 419 on reader service card



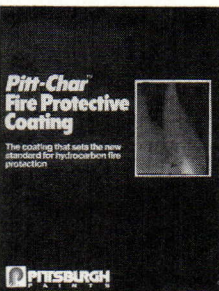
Chair

The *Barto* chair designed by Dick Schultz is featured in a 6-page color brochure. The construction of the chair's flexible back, which consists of a series of elastic straps stretched across a U-shaped steel frame, is described in the literature. A selection of Irish wool upholstery is shown. Domore Corp., Elkhart, Ind.
Circle 414 on reader service card



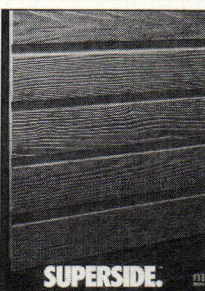
Wiring

An 8-page color brochure describes and illustrates *Tele-Power* poles, which are designed to carry wiring for computer terminals, telephones, desk lighting, and additional desk top electrical equipment. Specifications for 28 styles and sizes are provided. The Wiremold Co., West Hartford, Conn.
Circle 420 on reader service card



Fire protective coating

Pitt-Char fire protective coating, designed to be applied to pipe supporting elements in petroleum, petro-chemical, and chemical plants, is reviewed in a 6-page color brochure. The reaction of the coating and its transformation into a protective char during a fire is described. PPG Industries, Inc., Pittsburgh.
Circle 415 on reader service card



Siding

SuperSide 1/2-in.-thick hardboard siding, previously available only in the West, is featured in a 6-page color brochure. Details on the manufacturer's limited warranty against buckling, hail damage, checking, chipping, cracking, or splitting are included in the literature. Masonite Corp., Chicago.
Circle 421 on reader service card



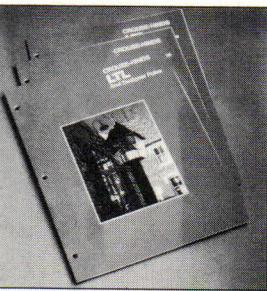
Door closers

An 8-page color brochure reviews the manufacturer's line of hydraulic door closers. Photos and descriptions of surface-applied door closers, transom-concealed door closers, fire door controls, and floor springs and accessories are included in the literature. Dorma Door Controls Inc., Reamstown, Pa.
Circle 416 on reader service card



Vinyl flooring

An 8-page color catalog features the manufacturer's *Conductible* line of static-conductive vinyl flooring. General properties of static-conductive flooring are reviewed in the literature. Product specifications and installation and maintenance information are included. Vinyl Plastics, Inc., Sheboygan, Wis.
Circle 422 on reader service card



Luminaire

The manufacturer's 4-page brochure features the new *LTL* aluminum and acrylic luminaire for small area, walkway, and roadway lighting applications. The construction of housing, reflector, and base is described in the literature. Crouse-Hinds Lighting, Inc., Vicksburg, Miss.
Circle 417 on reader service card



Solar greenhouses

The manufacturer's line of greenhouses, designed for commercial, institutional, and residential applications, is featured in a 12-page color brochure. Photos illustrate several available models, along with installation accessories. Thermal characteristics and specifications are included. Sun System, Commack, N. Y.
Circle 423 on reader service card

The right reflective glass.

Whether your building is low-rise, high-rise, or mid-rise, Solarban® coated glasses from PPG offer you design flexibility along with insulating options.

A wide spectrum of effects. There are many Solarban coated glasses: many colors and reflectances. And by combining the Solarban coated glasses with different kinds of substrates, the result is dozens of effects to choose from.

Aesthetics plus energy management. Any building is more valuable if it is built with an eye to energy savings. Solarban coated glasses offer that without sacrificing design options. With low shading coefficients. A range of light transmittance. And a range of outdoor reflectance.

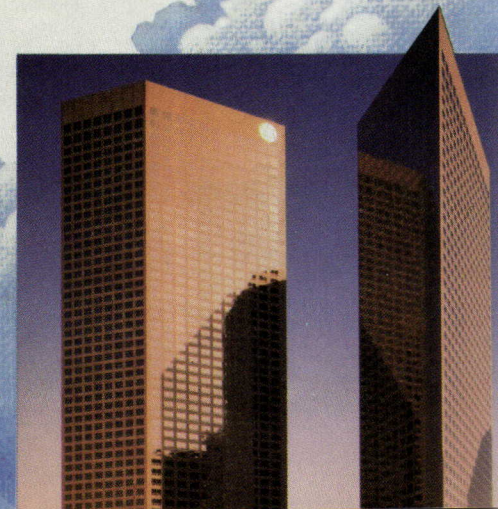
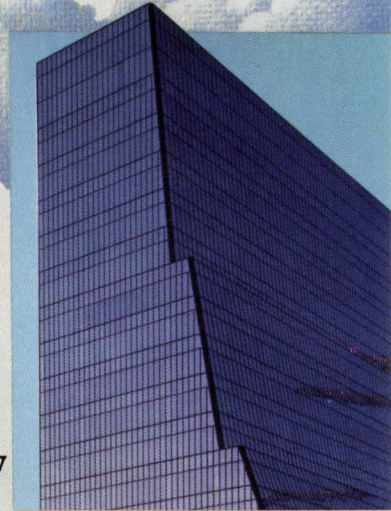
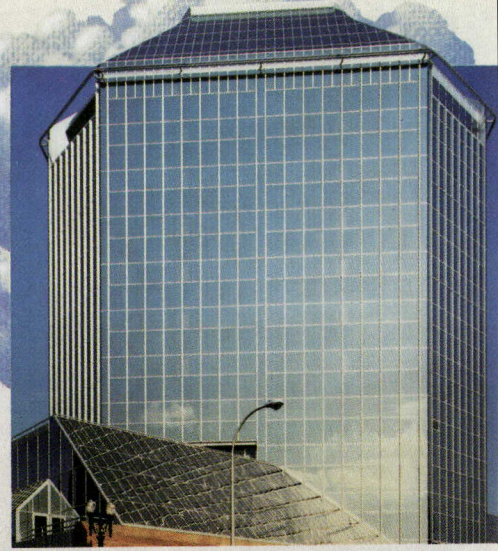
Solarban coated glass in insulating units.

Solarban Twindow® units are high performance insulating glass. They reduce solar heat gain and limit heat transfer by conduction. You can achieve a multiplicity of effects through the way you match substrates and coating surfaces.

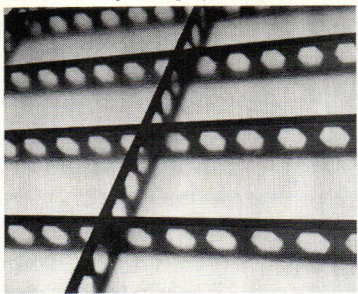
PPG has the right glass. To find out more about how PPG's Solarban coated glass maximizes aesthetic options while offering the good sense of energy management features, write us.

PPG Industries, Inc., Glass Group Advertising,
One PPG Place, Pittsburgh, PA 15272.

The right glass. The right support.
Right to the last detail.

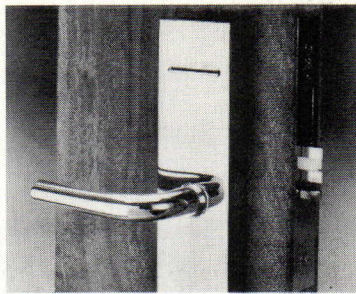


Circle 68 on inquiry card



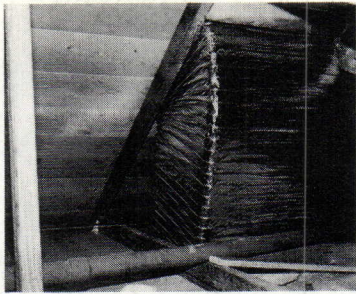
Translucent panels

LightWall translucent panels are made with reinforced polyester facings. A series of geometric openings in the panels' aluminum I-beam grids are said to create changing levels of diffused, low-shade light. The panels are available in 2 3/4-in. or 4 1/2-in. thicknesses. EXTECH/Exterior Technologies, Inc., Pittsburgh. Circle 302 on reader service card



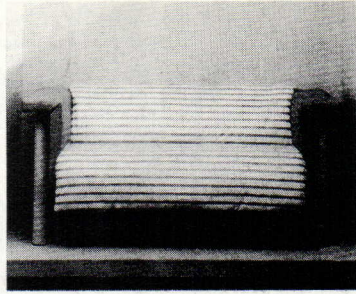
Electronic security system

The manufacturer's new *INN-LOC* electronic security system for hotels features a heavy-duty mortise lockset with a locking mechanism controlled by a microprocessor. The lock is activated by a magnetically encoded plastic keycard. Each card has several levels of coding. Russwin, Div. of Emhart Hardware Group, Berlin, Conn. Circle 305 on reader service card



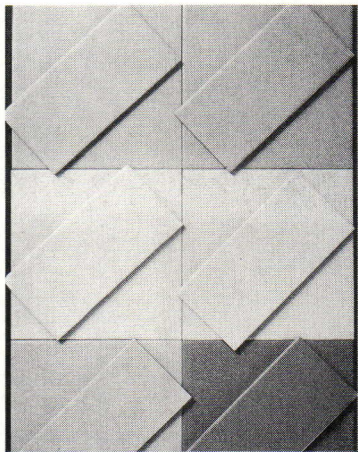
Skylight shaft

The manufacturer's new *Skyflex* flexible skylight shaft is intended for residential attic and drop-ceiling installations. The shaft, available in two extendable lengths, is designed to bridge the attic space between the ceiling and roof openings. A prismatic lens in the shaft acts as a diffuser. Kenergy Corp., Orlando, Fla. Circle 306 on reader service card



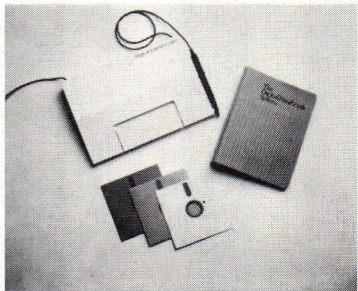
Sofa

The *Capitolo* furniture collection designed by Aldo Rossi and Luca Meda includes an armchair and a two- and three-seat sofa (shown). The metal frame of the sofa supports cushioning that can be upholstered in a selection of fabrics or leathers. Domus Italia, Inc., Manhasset, N. Y. Circle 307 on reader service card Continued on page 173



Floor tile

Dura-Pavers glazed ceramic tiles are guaranteed by the manufacturer against glaze wear for 25 years. The tiles are intended for heavy traffic installations and have a textured non-slip surface. Available in six neutral colors, the tiles come in 4- by 8-in., 8- by 8-in., and 12- by 12-in. sizes. International American Ceramics, Inc., Tulsa. Circle 303 on reader service card



Digitizing device

Digital Paintbrush is a high-resolution digitizing device that consists of a pen barrel, a tip/cursor control for drawing and menu selection, and a barrel switch for menu removal and retrieval. Two potentiometers, connected to the pen via control lines, reproduce drawings onto an adjacent screen. The Computer Colorworks, Div. of Jandel Corp., Sausalito, Calif. Circle 304 on reader service card

BEROL® CASSETTE™

The new mechanical pencil with a cartridge refill system.

The Berol CASSETTE Pencil is a breakthrough in mechanical pencil technology. Just take an easy-loading, long-lasting cartridge of 15 leads and slide it in like a ballpoint refill! It's clean and simple and you never have to fool with one-at-a-time leads. The special "shock-absorber" cushioned point helps reduce lead breakage. And the automatic push-button lead advance keeps you writing. Berol CASSETTE . . . it's the most innovative mechanical pencil since mechanical pencils were invented. Ask for it wherever fine writing instruments are sold.

"Shock-absorber" cushioned point reduces lead breakage.

Automatic push-button lead advance.

Available in .5mm and .7mm lead diameters.

Cassette cartridge holds 15 leads plus eraser.

Berol®

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Danbury, Connecticut 06810

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Circle 69 on inquiry card

STANLEY'S NEW SLIDING DOOR SYSTEM CHANGES THE WAY YOU LOOK AT ENTRANCES.

Introducing Dura-Glide.™ The all-new sliding door system so advanced it sets unmatched standards for reliability and low cost of ownership.

With this state-of-the-art product introduction, Stanley combines the latest electronic technology with proven dependability to provide both owners and users with the industry's finest, most convenient sliding door package.

New design features give Dura-Glide an open and shut superiority over any other unit on the market. A Pozi-Trac™ position encoder, for example, precisely calculates door location without switches. This slashes service problems 30% to 40%.

New automatic swing door sensor, too.

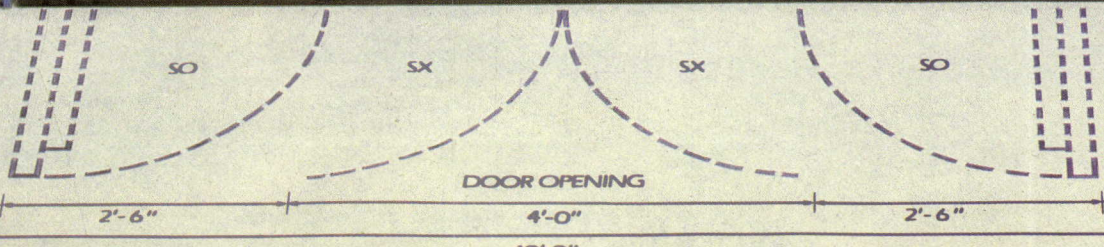
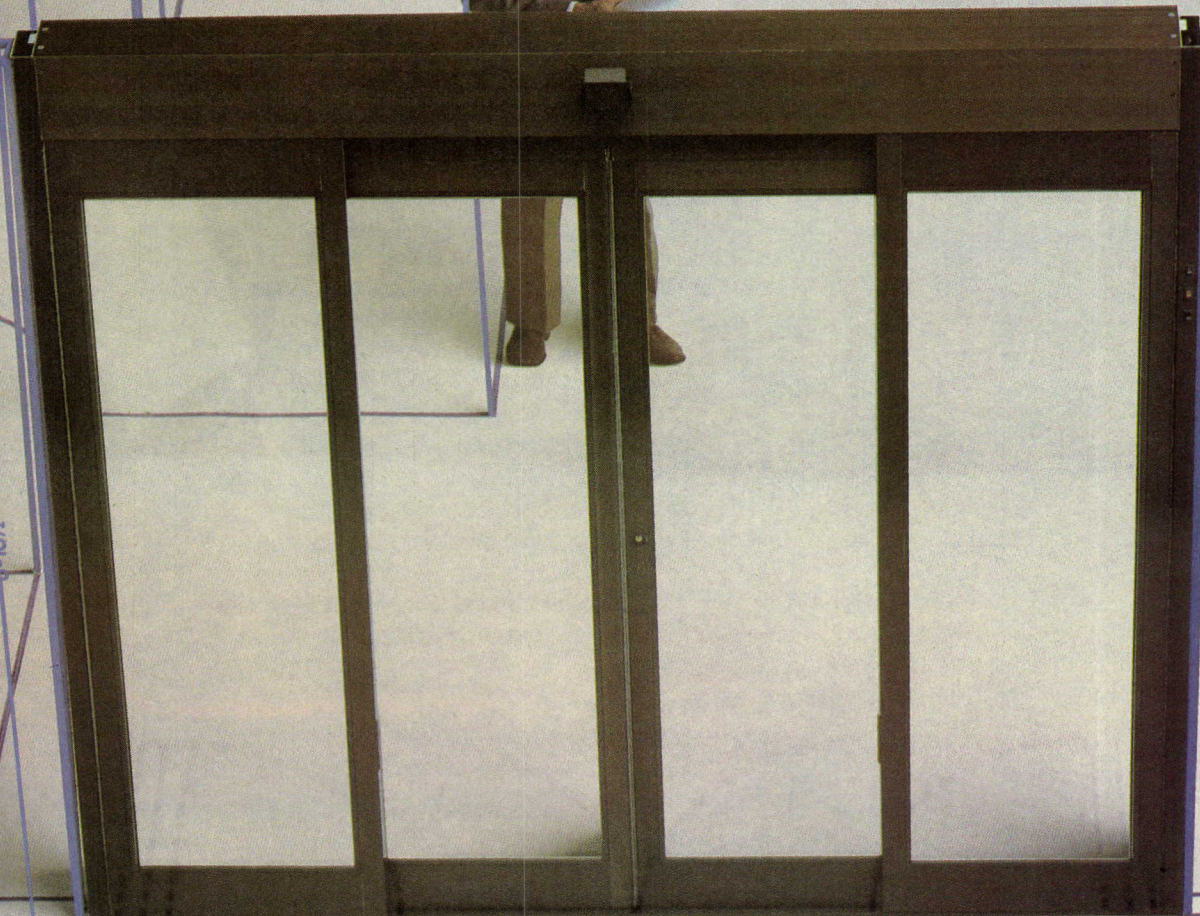
With the same state-of-the-art technology, we have developed the Sentrex™ swing door sensor. Its new infrared sensing device eliminates the need for mats and helps give the entrance a cleaner, sleeker look. This unique design is additional proof of Stanley's leadership in the door automation world.

If you're ready to step into tomorrow, get more information today. Call toll-free, 1-800-232-3663. Or write to Stanley Magic-Door,® Division of The Stanley Works, Farmington, CT 06032.

STANLEY

helps you do things right.®

5 LOBBY PLAN
1/8" = 1'-0"



EMERGENCY BREAK
ON BOTH
SWING OUT PANEL
AND SLIDING DOOR

Circle 70 on inquiry



Acrylic sealant

The manufacturer's new 738 acrylic sealant was designed not to harden or lose its adhesion after exposure to extreme temperatures. The product is intended for use in cap beads, perimeter sealing, and for door, window, and masonry intersections. The sealant is said to resist ultraviolet light. Protective Treatments, Inc., Dayton, Ohio. *Circle 308 on reader service card*



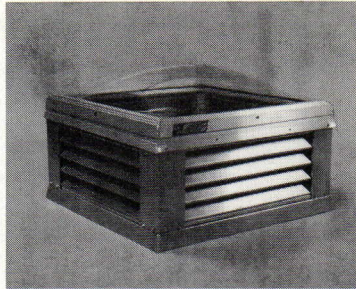
Fiberglass cornices

The manufacturer's custom-made fiberglass cornices and balustrades are intended for use in commercial renovation work. Built-in stiffeners and ribs are said to eliminate the need for framing on the building and to allow the cornices to be bolted or screwed directly onto the facade. Pigments in the gelcoat can be specified in a selection of colors. Fibertech Corp., Clemson, S. C. *Circle 309 on reader service card*



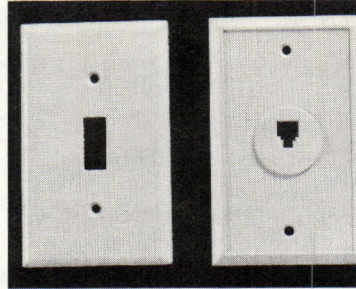
Radiant heater

The manufacturer's new model 705 portable heating panel has 700 watts of power. The panel has a crystalline surface that is said to provide 80 per cent radiant and 20 per cent convective heat. Aztech International, Ltd., Albuquerque. *Circle 310 on reader service card*



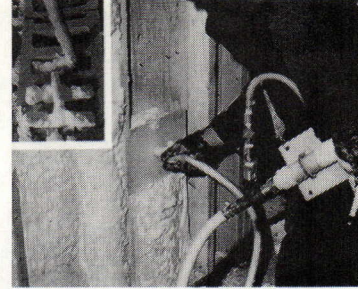
Vented skylight

The *Horizonvent* vented skylight is designed to be curb-mounted with extruded aluminum corner posts. The louvers are said to allow continuous ventilation, and the wire mesh screen is intended to prevent infiltration of dust and insects. The skylight is available in a mill finish or in baked enamel custom colors. O'Keeffe's Inc., San Francisco. *Circle 311 on reader service card*



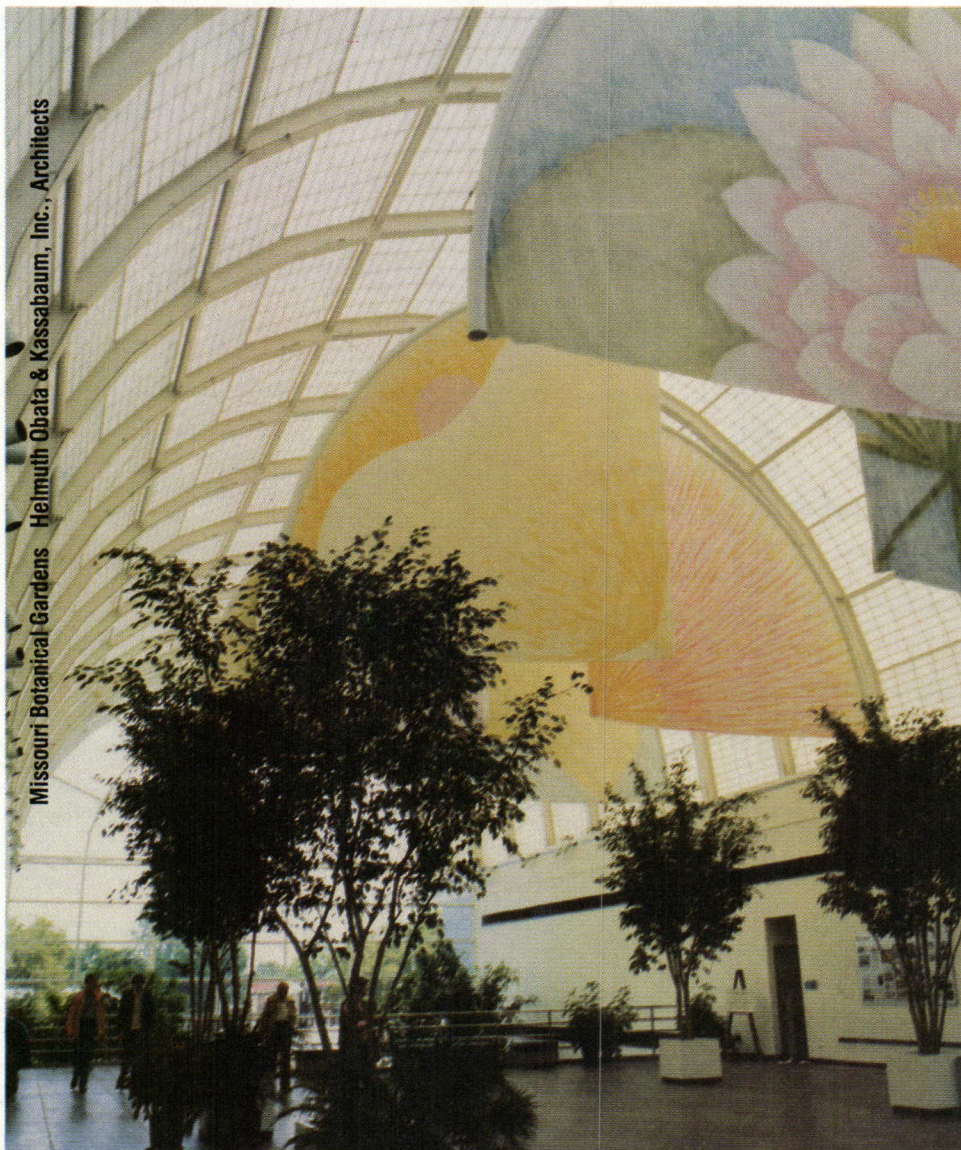
Telephone wiring devices

The new *Ivory II* line features telephone wiring devices that are now available in the same color as standard electrical faceplates. The line is an addition to the manufacturer's collection of 1,200 modular and non-modular telecommunications wiring devices. Suttle Apparatus Corp., Lawrenceville, Ill. *Circle 312 on reader service card*



Thermal and acoustic insulation

The manufacturer's new thermal and acoustic insulation is made without formaldehyde, polyurethane, or asbestos. When installed in wall or partition cavities, the insulation is said to reduce resonance vibration levels and to resist expansion and settling. Kasko Industries, Inc., New Canaan, Conn. *Circle 313 on reader service card*
Continued on page 175



Missouri Botanical Gardens Helmut Obata & Kassabaum, Inc., Architects

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

See Sweet's 8.14/KaL, 7.8/KaL, 13.11a/Ka, 13.2c/Stu.

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Circle 71 on inquiry card

ARE THERE REALLY ANY GOOD REASONS LEFT TO SIDE WITH WOOD?



There was just one: appearance. But now, Wolverine Technologies Inc. has eliminated that reason with Restoration Series Three.™

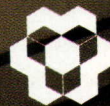
This is solid vinyl siding so beautifully crafted, you can't tell it from painted wood.

So technologically superior, it comes with a lifetime warranty.*

Its 3-inch exposure has the authentic appearance of clapboard siding. Its smooth, flat finish comes in natural colors that quietly please.

Of course, there are none of the maintenance problems of painted wood. Not ever.

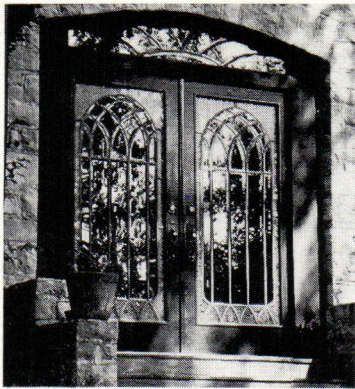
See for yourself. Send for information or call Jackie at 800-521-9020 for the name of your nearby representative.



Wolverine Technologies
Building Products Division

*Some restrictions may apply. See warranty for details.

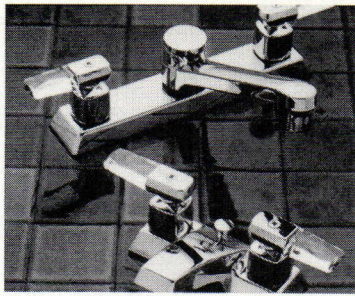
Circle 72 on inquiry card



Decorative glass

The manufacturer's thermally insulated, safety-tempered stained and leaded beveled glass can be used in entry doors (shown), atriums, and skylights. The stained glass has a lead adhesive, said to create a lead-to-glass molecular bond that prevents separation resulting from temperature extremes. Premium Art Glass, Div. of Hordis Brothers, Inc., Blacklick, Ohio.

Circle 314 on reader service card



Lavatory faucets

The manufacturer's two new faucets, the standard 7902 model and the 7907 faucet with a triple-action aerator that swivels, are part of the *Wing-Handle* line. The faucets come with a washerless cartridge system and with flow-control aerators that limit water flow to 2.5 gpm. Moen Group, Div. of Stanadyne, Elyria, Ohio.

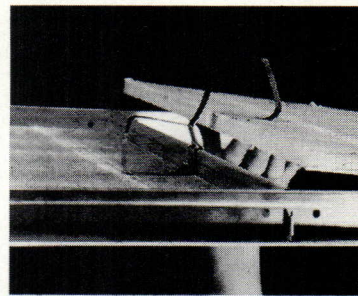
Circle 317 on reader service card



Iron fence

The *Metalist* fence features cast-iron ornaments, heavy-gauge posts, sculptured channels, and solid, square pickets. The fence is available in 6-, 8-, or 10-ft lengths and in heights of 3, 4, 5, or 6 ft. The fence can be specified with flanged posts for surface mounting or plain posts for in-ground mounting in concrete. Gilpin, Inc., Decatur, Ind.

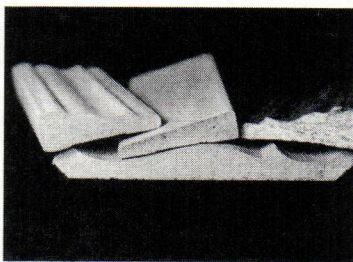
Circle 318 on reader service card



Ceiling panel clip

The new *Keep Clip* is designed to keep the ceiling panels of standard lay-in ceiling systems in place. The clip comes in two sizes and can be used with panels from 1/2-in. to 2-in. thick. A coated clip can be specified for use with laminate-backed panels. American Retention Components, Chicago.

Circle 319 on reader service card
Continued on page 177



Hardwood veneer

The manufacturer's new *VeneerWrap* is a hardwood veneer molding produced from a selection of hardwoods that are bonded to industrial-grade particle board. The moldings are said to be resistant to warping, shrinking, and denting. They can be fastened without pre-drilling. Other *VeneerWrap* products, including shelves and tongue-and-groove paneling, can be stained and varnished like hardwood. Wahpeton Canvas Co., Wahpeton, N. D.

Circle 315 on reader service card



Forced-air heating

The *Register* zonal electric forced-air heating system is intended for installation in single-family residences, multifamily units, mobile homes, hotels, and commercial structures. Each unit comes with an integral junction box, a 14- by 7 3/8-in. finished wall grid, and an individually controlled thermostat. Cadet Manufacturing Co., Vancouver, Wash.

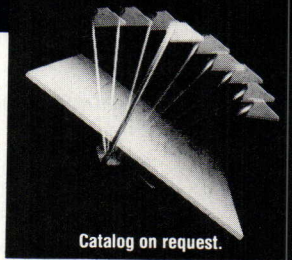
Circle 316 on reader service card

INTRODUCING THE NEW PLAN HOLD

396SL Striplite

Edge-to-edge task lighting

See what you're drawing instead of working in shadows. Striplite's positive positioning directs ideal light for any board angle. And,



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it attaches to any drafting table, can be used with all drafting equipment. See the best today... see the Plan Hold Striplite.

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A TIMES MIRROR COMPANY

Dealers in All Major U.S. Cities and Canada
Circle 73 on inquiry card

What's so different about this metering faucet?



It works!

The Bradley 90-75

Until Bradley designed the 90-75, savings from metering faucets seldom outweighed the headaches.

Faucets that turn off too quickly or stay on too long, sprays that either splash or dribble, maintenance that never seems to end – the Bradley 90-75 has eliminated these headaches once and for all. It works!

Unlike many faucet designs that severely restrict an orifice to vary their metering cycles, the 90-75 utilizes a generously sized bypass orifice and variable piston stroke. The orifice is protected from waterborne sediment by two filters; one at the stop and one within the cartridge. This unique configuration assures consistent timing – at water pressures from 20 to 100 psi.



All working parts, including the flow control, are contained in a compact cartridge.

Because it's hidden inside the faucet, the cartridge can't be removed by vandals. Yet if maintenance is ever needed, a new cartridge can be popped

into place in seconds – just about as easily as you'd change a flashlight battery.

The 90-75 keeps a reliable rose spray pattern, thanks to a unique self-cleaning feature. Every time the faucet is turned on, water pressure forces a rubber diaphragm inside the spray former to "flex" off any mineral deposits. So the nonsplash action *stays* nonsplash.

Easy to adjust, the 90-75 can be set for cycles from 5 to 20 seconds by turning a screw – without turning off the water.



And because it's so easy to activate, the 90-75 meets all barrier-free codes.

These are just a few of the ways our 90-75 meters water better. Find out the rest by returning the coupon, by calling 1 414 251-6000, or by contacting your Bradley Representative.

I'd like to know more.

- Send me the comprehensive Bradley brochure with acetate overlays showing exactly how the 90-75 gets the job done better.
- Have a Bradley representative call to show me how the 90-75 works better.

Name/Title _____

Company _____

Address _____

City _____ State _____ Zip _____

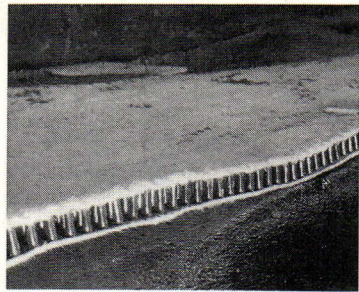
Telephone _____

Return coupon to: Bradley Corporation,
Dept. A, 9101 Fountain Blvd.
Menomonee Falls, WI 53051.

Bradley 90-75 is a trade name and not an ASHRAE designation.

Bradley CORPORATION 
We get the job done better.

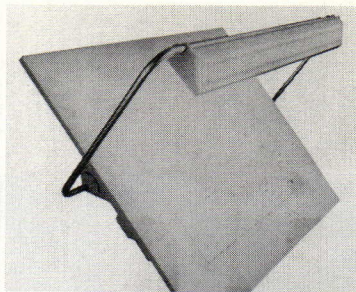
Circle 74 on inquiry card



Drainage system

The manufacturer's new *Hydraway* drain is designed to prevent water from entering building basements or foundations. The drain consists of heavy-duty filter fabric that is bonded to an internal supporting core. Water passes through the filter fabric, flows into the core conduit and around the perimeter of the foundation or basement wall, and empties into a drain outlet system such as a storm sewer.

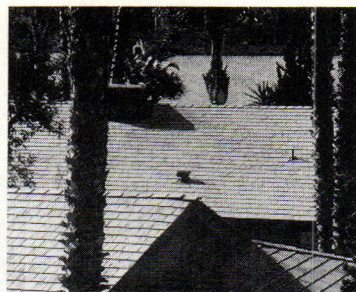
Monsanto Co., St. Louis.
Circle 320 on reader service card



Task lighting

The *Striplite* task light is intended for use on drafting and drawing tables. The fixture has an aluminum reflector and a white fluorescent lamp shielded by a patterned acrylic diffuser to provide glare-free light. The fixture can rotate 104 deg and has a gas cylinder-gravity latch that holds a selected position.

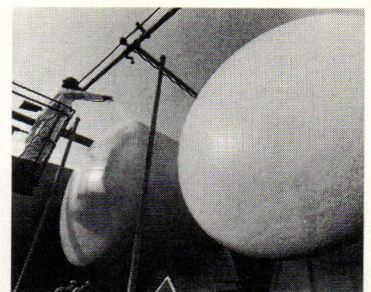
Plan Hold Corp., Irvine, Calif.
Circle 323 on reader service card



Roofing shingles

Woodruf is a roofing product made from natural wood fibers that are compressed under pressure and molded into 12-in. by 48-in. shingles. The shingles are 50 per cent denser than natural wood and are said to withstand temperature extremes.

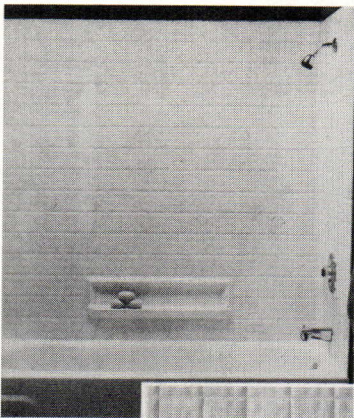
Only eight nails or staples are required to fasten each square of 36 shingles. Masonite Corp., Chicago.
Circle 324 on reader service card



Protective paint

A European-designed protective paint that is intended to resist metal corrosion is now available in the United States. The paint is made with *Pliolite* resins and is intended for use on steel bridges, chemical and industrial storage tanks, railway cars, and ship hulls.

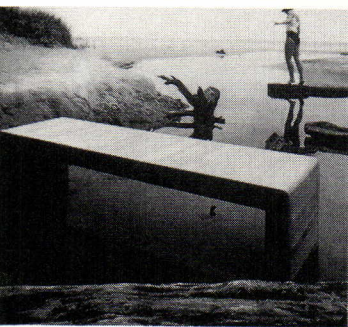
Goodyear, Akron, Ohio.
Circle 325 on reader service card
Continued on page 179



Fiberglass tile

The manufacturer's new *SwanTile* features a chip- and scratch-resistant surface with the color molded throughout. The 3-panel tub surround shown is said to be easier to install, clean and maintain than ceramic tile. The material has a 20-year limited warranty.

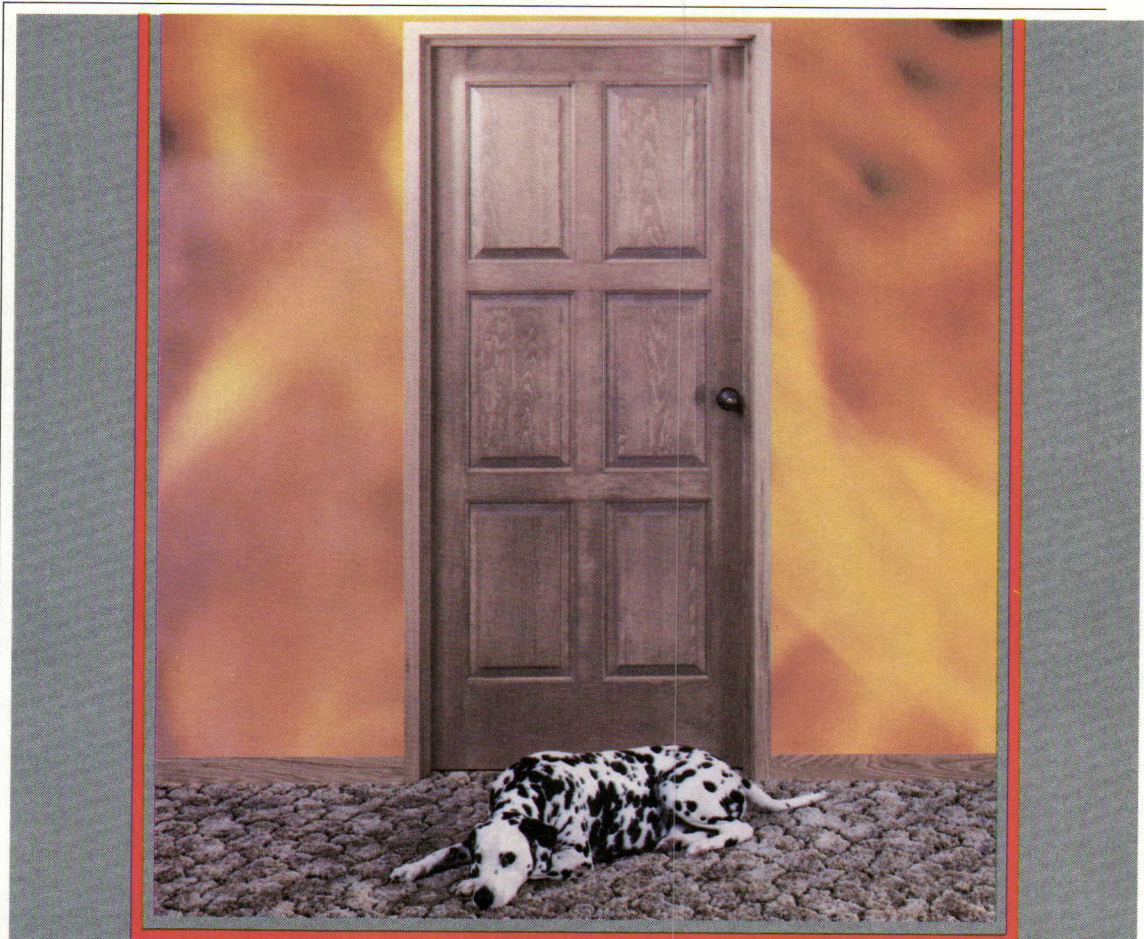
The Swan Corp., St. Louis.
Circle 321 on reader service card



Bench

The new *Alameda* bench is part of the manufacturer's line of interior and exterior furnishings. The bench features solid-oak construction and is specifically intended for use in interior public areas, such as malls.

Landscape Forms, Inc., Kalamazoo, Mich.
Circle 322 on reader service card



Uncompromising Solution:

Hardwood door frames.
20-minute fire rating.

Preserve design aesthetics and still meet 20-minute fire code with Guardwood® solid hardwood frames and casings. Your imagination is limitless with over 50 of the world's finest hardwood species to select from. Design any grain, tone, color or mood and we'll meet your specifications.

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Circle 75 on inquiry card



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DUROCKTM the new tile backer board



BEST WAY. Portland cement mortar over lath was great when labor costs and time delays were acceptable.



NEW BEST WAY. Same kind of strong, water-resistant performance, now in quickly-installed cement panels.

Affordable again! Water-resistant cement backing for ceramic tile!

Now, U.S.G. brings back the "good old days" when you could OVERbuild without concern for cost. DUROCKTM backer boards are cast portland cement reinforced with fiber glass for superb water-resistance. Easy installation means lower in-place costs. Bonus: fire and sound-control rated systems. ■ Available from ceramic tile distributors. Or write us at 101 S. Wacker Dr., Chicago, IL 60606, Dept. # AR 285 Available in Canada from Canadian Gypsum Company, Ltd.

UNITED STATES GYPSUM
BUILDING AMERICA

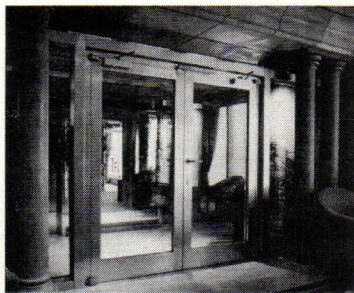
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Circle 76 on inquiry card



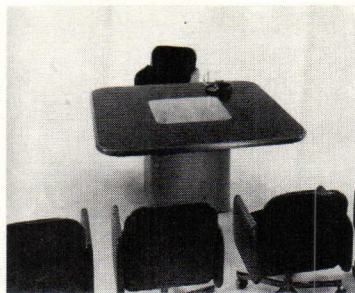
Glazing product

The manufacturer's new *Lexan XL Extended Life Glazing* is intended for applications in areas with high ultraviolet exposure. The glazing, which can be pre-formed to curves, comes in thicknesses from .06- to .50-in. It is available in bronze, gray, and clear or in custom-specified colors. General Electric Co., Plastics Group, Pittsfield, Mass.
 Circle 326 on reader service card



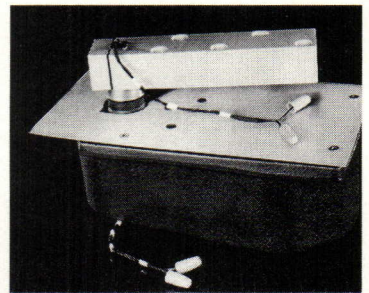
Glass wall system

A new fire-protective glass wall system consists of two parts: European-made *Contraflam* glass, which features a 60-minute fire-rating, and a framing system made from a composite of several hardwoods and metals. The system is available with open clear glass areas of up to 4 by 7 ft. Kleiber & Schulz, Inc., Melville, N. Y.
 Circle 329 on reader service card



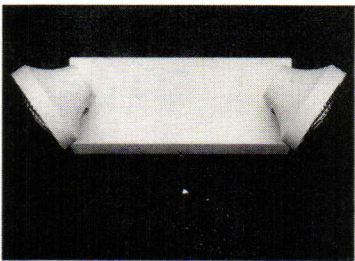
Table

A new table features a square top with rounded edges and two contrasting natural wood veneers. The center panel is the same shape and size as the table's base. The two veneers can be chosen from a selection of 13 woods, including walnut, oak, mahogany, and cherry. Intrex Furniture, Div. of Habitat International, New York City.
 Circle 330 on reader service card



Floor closer

The new *L28* center-hung electric floor closer for single-acting doors makes possible locking and unlocking of the deadbolt from a remote position. The floor closer is designed for installation at the center point of the door and the jamb. Rixson-Firemark, Div. of Conrac Corp., Franklin Park, Ill.
 Circle 331 on reader service card
 Continued on page 181



Emergency lighting

The new *EEL* emergency light provides solid-state-controlled lighting when normal power is interrupted. During a power failure, the lamps remain on for a minimum of 1 1/2 hours; after power is restored, the lamps switch off to be recharged. The galvanized steel housing has a vinyl-coated finish. Elan Emergency Lighting, Div. of Altus Corp., San Jose, Calif.
 Circle 327 on reader service card

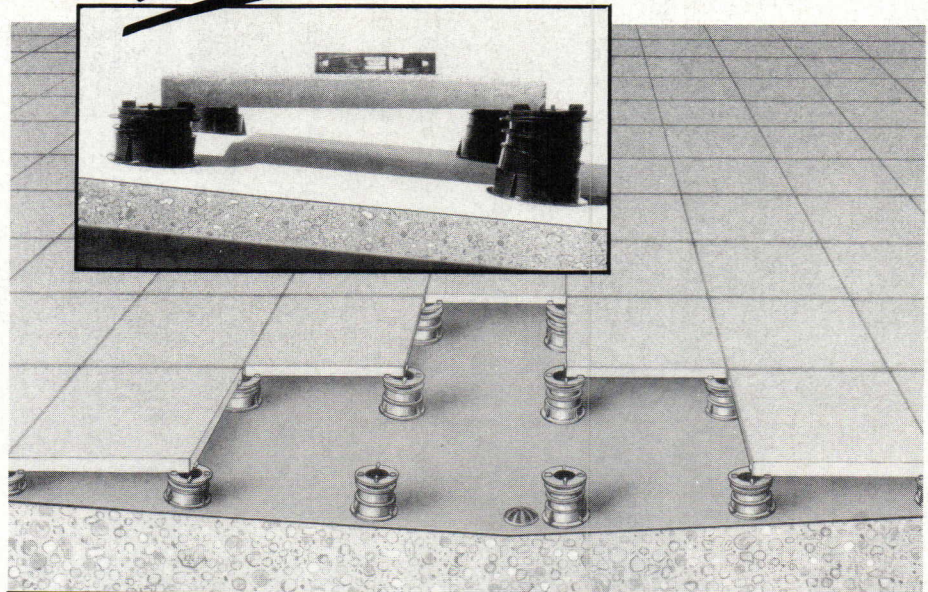


Fire alarm

The *Stopper II* fire alarm is designed to prevent false alarms in schools, hospitals, and public buildings. When the *Lexan* alarm shield is lifted, a warning horn is sounded that is intended to discourage unnecessary pulling of the actual alarm activator. Safety Technology International, Inc., Waterford, Mich.
 Circle 328 on reader service card

Unique Roof Deck Leveling...Adapts To Pitch And Height Variations...

NEW Terr-adjust™
A Part Of Terra System One



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The Glidden program is a complete building restoration package. You deal with only one source for all your cleaning, restoration and application materials.

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It's an ideal opportunity for painting contractors to expand their business.

For more about Glidden's Restoration/Rehabilitation Program, contact us.



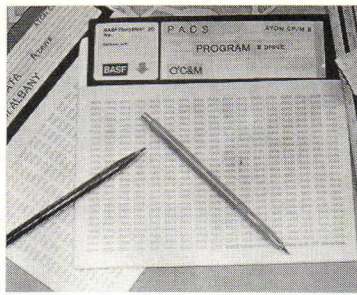
Before and after comparison of Glidden's restoration system.



Circle 78 on inquiry card

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ARCHITECTURAL & MAINTENANCE
SCM CORPORATION, CLEVELAND, OHIO 44115

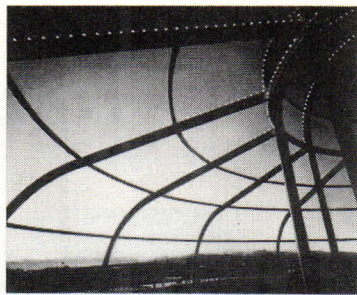




Software

Project Accounting and Control System is a microcomputer software program intended to help architects organize office operation and project cost data. Features of the system include automatic monthly billing for each project, and project-fee estimation, budgeting, and scheduling. Dimension 4 Microcomputer Services Inc., Albany, N. Y.

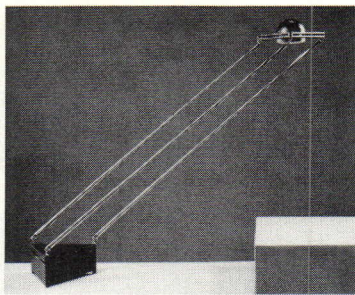
Circle 332 on reader service card



Decorative lighting

The manufacturer's low-voltage, decorative lighting can be used in exterior and interior applications. Standard extrusions come in round, square, tapered, and square cross-section configurations, or can be custom-specified in almost any other shape. Four different finishes are available. Sentinal Lighting, Los Angeles.

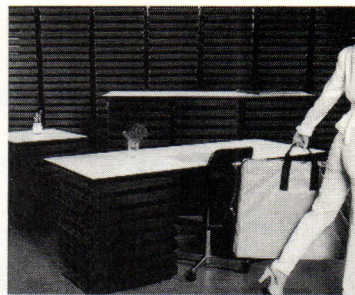
Circle 335 on reader service card



Lamp

The *Kandido* halogen lamp was designed by Ferdinand Porsche. The lamp features three rods that extend, retract, and rotate, allowing the lamp to be adjusted to different heights and the light to be aimed in different directions. Nessen Lamps, Bronx, N. Y.

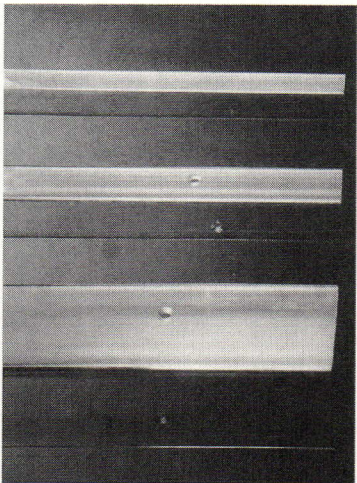
Circle 336 on reader service card



Flat files

Plumline modular flat-file systems are made up of base units and box-drawers with interlocking steel-rod frames. The base units are available in 21- by 25- by 2-in. or 25- by 37- by 2-in. sizes. The box-drawers are made of pressure-treated fiber and have metal corners.

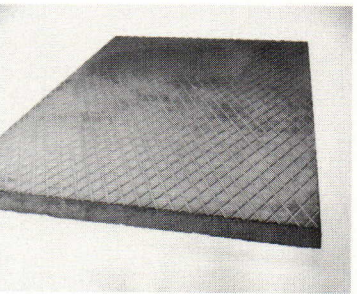
Wave Pad, San Francisco.
Circle 337 on reader service card
Continued on page 183



Corner guards

New clear and colored *Lexan* corner guards have been added to the manufacturer's line of stainless steel guards. The corner guards are available in 1 1/8- by 1 1/8-in. and 2 1/2- by 2 1/2-in. sizes. Installation fasteners are supplied. Tubular Specialties Manufacturing, Inc., Los Angeles.

Circle 333 on reader service card



Roof paver system

Boardwalk is a fiberglass-reinforced concrete paver system intended to provide walk and work surfaces on roofing membranes. The polystyrene base eliminates direct contact between concrete, and the roofing membrane, and drainage slots permit the pads to be placed alongside one another.

DiversiTech Corp., Conyers, Ga.
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value during installation. It's pre-finished, so there's no need for on-site sanding, staining or finishing. Hartco's precision-tapered tongues and grooves provide a smooth floor, even over a slightly uneven subfloor.

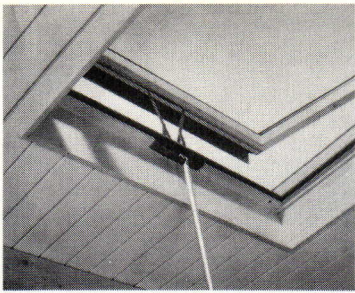
For more information about Hartco Solid Oak Parquet, see

Architect & Interior Designer: Swanke Hayden Connell Architects, New York. Architect in Charge of Design: Der Scutt, New York. Flooring Contractor: V.A. Enterprises, Hasbrouck Heights, N.J. Flooring: Hartco Solid Oak Parquet.

Sweet's 9.22/Hat. Or contact Hartco, Inc., Oneida, Tennessee 37841. Telephone (615) 569-8526.

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Ventilating skylight

The manufacturer's new model VS ventilating skylight is now available with a through-screen scissor operator that secures the bottom sash at two points and is said to make operation smoother. It is intended for overhead applications where cleaning from the inside is not required. The rod control comes in a standard length of 4 ft and is available with 2 ft extensions.

Velux-America Inc.,
Greenwood, S. C.

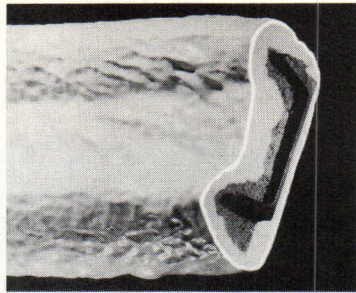
Circle 338 on reader service card



Bathroom fixtures

The manufacturer's *Ellisse* line, which includes a pedestal lavatory, a countertop lavatory, a one-piece toilet, and a bidet, is now available with in-glaze decoration. Designed by Tricia Stainton, the patterns are made by the movement of the glaze during the firing process. American-Standard, New Brunswick, N. J.

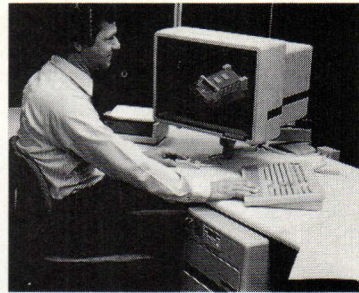
Circle 341 on reader service card



Asbestos encapsulation

The new *Staytex* encapsulation system features a spray-on polymer composite that forms a permanent 1/2-in.-thick shell around several forms of asbestos. In addition to lowering asbestos fiber content in existing installations, the composite is said to provide thermal insulation and fire resistance. Barrier Systems, Inc., Cleveland.

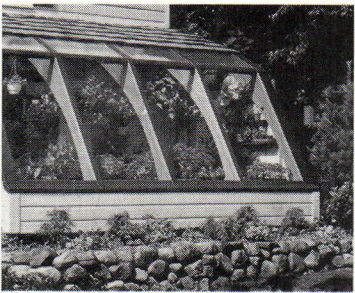
Circle 342 on reader service card



Workstation

The new *Spectra II* turnkey system features a 19-in. 16-color monitor with 1024 by 768 resolution. System components include a floating point processor and a 14.5-megabyte hard disk. The selection menu, located on the same screen as the graphics, is operated by a mechanical mouse. BruningCAD, Tulsa.

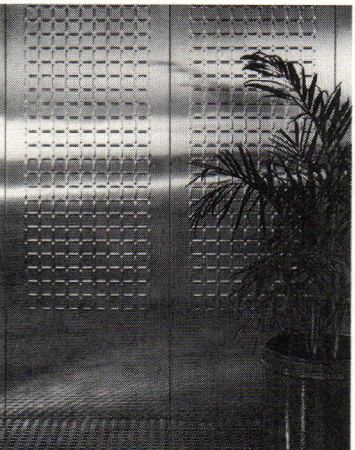
Circle 343 on reader service card



Solar greenhouses

The south-facing panels of the manufacturer's *SunRoom* are sloped at 60 deg. Solar energy is gathered in translucent fiberglass columns and is absorbed by the insulated masonry floor. When the interior temperature reaches a selected level, a heat transfer system automatically transfers heat to adjacent spaces. A ventilation system removes excess heat. Garden Way SunRoom/Solar Greenhouse, Charlotte, Vt.

Circle 339 on reader service card



Embossed metal

Eleven new geometric patterns have been added to the manufacturer's line of embossed metal cladding. Intended for installation on interior walls, doors, counters, and elevator doors and cabs, the metal panels are customized for each application. Special wall clips are provided. Forms + Surfaces, Santa Barbara, Calif.

Circle 340 on reader service card

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MARVIN SLAMS THE DOOR ON RISING ENERGY COSTS.

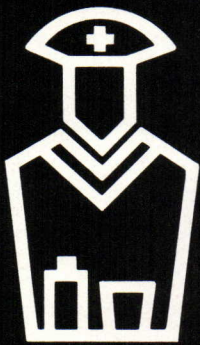
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Manufacturer
sources

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 96-99

Lafayette Place

by Boston Architectural Team, Inc.

Pages 96-97—Shingle roofing: Celotex.

Page 98—Street lights: Welsbach.

Page 99—(left) Interior windows: Acorn

Building Components, Inc. Ceiling: U. S.

Gypsum (QT Finish). (lower right) Double-

hung windows: Acorn Building

Components, Inc. Round-top windows:

Brockway-Smith.

Pages 100-101

North Barelax Project for the Elderly

by Westwork Architects

Page 100—Floodlights: Architectural Area

Lighting. Benches: Landscape Structures.

Stucco siding: El Rey Stucco. Windows:

Jordan. Shingle roofing: Allied (Stick

Tight).

Pages 102-105

Duncaster Life Care Center

by Stecker LaBau Arneill McManus

Architects, Inc.

Pages 102-103—Exterior finish system:

Dryvit. Double-hung windows: Caradeo.

Page 105—Custom carpeting: J & J

Industries.

Pages 106-107

Park Glen

by Nagle, Hartray & Associates Ltd.

Page 106—Brick: Cantex (Saxon four-inch

Classic). Operating windows: Howard

Windows. Fixed-round and half-round

windows: PPG. Entrance and door pulls:

PPG. Sills and banding: Indiana Limestone.

Page 107—(top) Area lighting: Kim

Lighting. Glass block: Pittsburgh Corning.

(bottom) Carpeting: J & J Industries. Wall

finish: Durabond Paint Manufacturing

Corp.

Pages 108-111

Michael R. Koury Terrace

by Ulrich Franzen & Associates

Pages 108-109—Aluminum siding: Alcoa.

Roof ventilator: Greenheck. Site lighting:

McGraw-Edison. Awning and casement

windows: Andersen Corp. (Perma-Shield).

Wood columns: Somerset Door & Column

Co. Asphalt shingles: GAF Corp.

(Timberline). Built-up roofing: Celotex

Corp. Sheet metal roofing: Ball Corp.

(Microzinc).

Page 110—(lower) Paints and stains:

Glidden. Parquet flooring: Arco/Chemical

Co. (PermaGrain).

Page 111—Fountain: Custom by architects.

Wood exterior doors: Sun-Dor-Co. Special

shape wood windows: J. Zeluck, Inc. Fire

alarm system: Edwards.

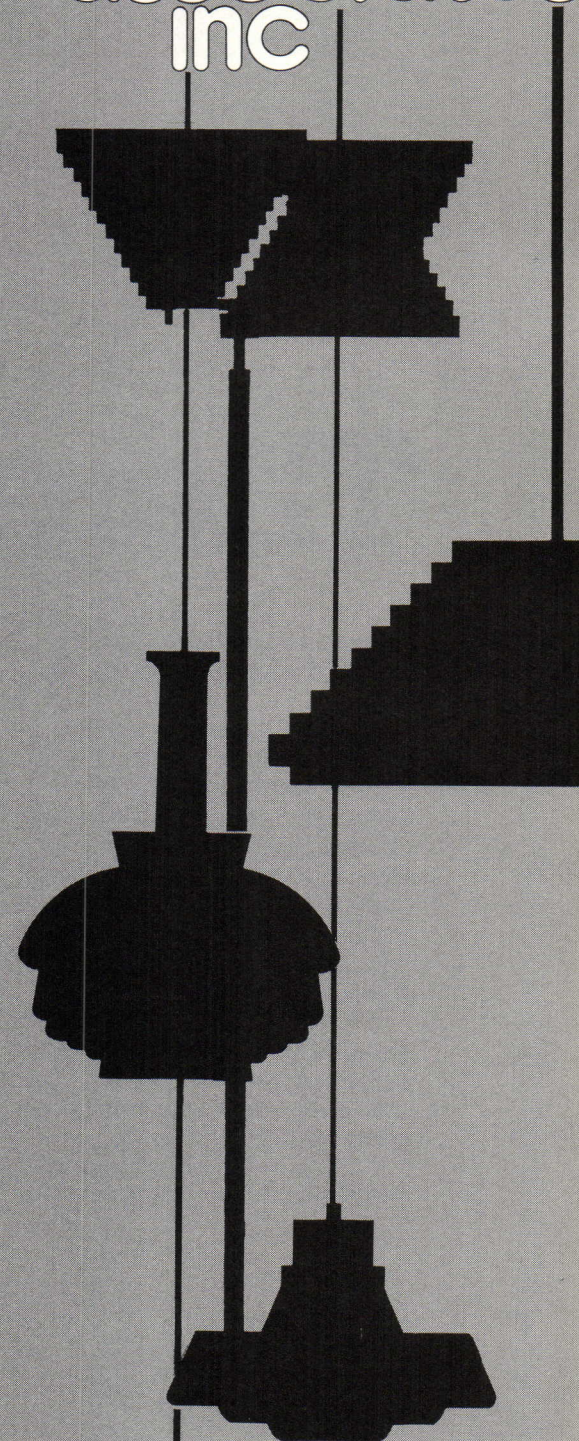
Continued on page 197

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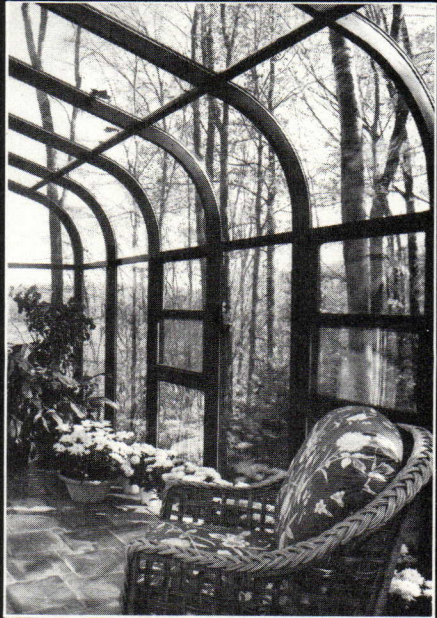
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Circle 91 on inquiry card

Manufacturer sources

Pages 112-113

The Village at Fawcett's Pond
by Goody Clancy & Associates, Inc.

Page 112—Roofing: GAF (Walnut Brown blend). Atlantic white cedar siding: MacMillan Bloedel. All exterior stains and paint: Glidden Coatings & Resins. Sliding glass doors and windows: Peco. Skylights: Velux-America, Inc. Site furniture: Bench Manufacturing Co.

Pages 114-123

Monterey Bay Aquarium
by Esherick, Homsey, Dodge & Davis, Architects

Pages 114-115—Cement shingle roofing: Suprdur. Fiber cement siding: Gold Bond Building Div., National Gypsum. Windows (throughout): Hope's Architectural Products, Inc.

Page 117—Exterior light fixtures: Daylight, Prescolite.

Page 118—Street lighting: Architectural Area Lighting.

Pages 120-121—Quartzite flooring: Marlin Granite (Duro-cal).

Pages 124-133

Westover School and Whittaker Science Center

by Gwathmey Siegel & Associates

Pages 124-125—Concrete, cast stone: W. N. Russell Corp. Stucco: U. S. Gypsum. Slate roofing: Evergreen Slate Co. Observatory dome: Ash Manufacturing Co. Sheet membrane roofing: Carlisle SynTec Systems. Sheet metal coping: Follansbee Steel Corp.

Page 127—Pipe railings: Waterbury Iron Works. Brick pavers: Belden Stark.

Page 128—Windows (throughout): Duratherm Window Corp. Glazing: LOF. Dome skylight: Wasco Products, Inc. Outdoor lighting: McPhilben.

Page 129—Exterior wood doors:

Duratherm Window Corp. Hinges: Hager.

Page 131—(top) Library shelving: Wilson Library Book Stacks. Casework: Custom by architect, fabricated by Ambroziatis.

Carpeting: Stratton Industries. Gypsum drywall: Gold Bond Building Products.

Linear aluminum ceiling: Alcan Building Products.

Automatic sprinklers: Central Sprinkler Corp.

Windsor chairs: F. W. Lombard Co.

Recessed downlights: Halo.

(bottom, left and right) Metal frame

skylights: Fisher Skylights.

Paints (throughout): Benjamin Moore.

Wood stain: Samuel Cabot, Inc.

Page 132—(bottom) Tablet desks: G. F.

Business Equipment. Laboratory counters

and cabinets: Collegedale Casework. Pulls:

Stanley. Faucets: Chicago Faucet. Flooring:

General Polymers. Trash receptacle:

Lawson. Lay-in lighting: Alcan Building

Products. Laboratory equipment: Jewett.

Bliinds: Levolor Lorentzen, Inc.

Page 133—Fume hood: Collegedale

Casework. Doorpulls: Schlage. Stools:

F. W. Lombard Co.

Continued on page 199

*The flexibility of
structural steel...*

Why steel-frame structures are renewable resources.

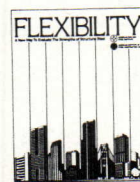
Structures, as expressions of human needs, are subject to the same pressure of change as other aspects of our society are today. Structures that cannot be economically changed or modified, die. Their potential value is lost... and this process is accelerating. Which, of course, is one reason the inherent *flexibility* of steel construction is an important element in present day planning and design.

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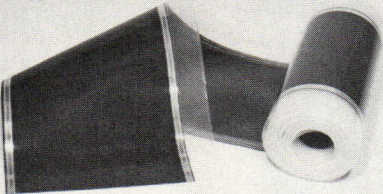
Manufacturer sources

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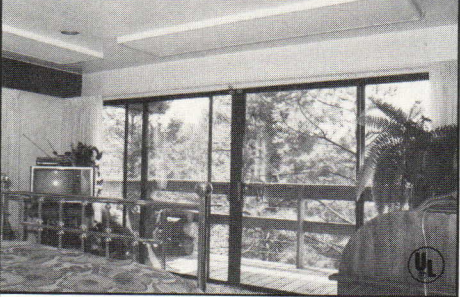
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Circle 94 on inquiry card

Pages 134-141

Vena-Mondt Studio/Residence by Frederick Fisher, Architect, and Eric Orr, Artist

Page 135—Steel windows: Torrance Windows.

Page 136—Metal door: J-Door. Custom etching: Aero-chem. Locksets: Sargent & Co. Hinges: McKinney.

Page 137—Lighting fixtures: F. I. R. E. Ltd. Carpet: Robertex. Lead drywall (anechoic chamber): Ray-Bar.

Page 138—Kitchen island: Custom by Fisher/Orr, fabricated by Murray Harreschou, Ric Saboya. Paints and stains (throughout): Pittsburgh. Stair surface, polished concrete with Green Verde marble: Western Marble. Skylights: Aluminex.

Page 139—Cabinets: Custom by Dan Graef and Tamura Woodcraft. Kitchen sink: Elkay. Refrigeration equipment: Sub-Zero. Oven: Modern Maid. Range: Chambers. Dishwasher: Thermador.

Page 140—(lower) Water closet: American Standard. Tub, custom spa: Bill Jance. Valves, heads and faucets: Chicago Faucet. Slate and ceramic tile: American Olean Tile Co.

Page 141—Coffee table: Custom by Fisher/Orr. Fireplace: Fabricated by Murray Harreschou, Ric Saboya.

Pages 142-149

One Logan Square by Kohn Pedersen Fox Associates PC

Page 142—Hotel operable windows: Wausau Windows. Storefront units and hotel entrance: National. All granite: Cold Spring Granite Co., installed by Cleveland Marble & Mosaic Co.

Page 143—Fixed office windows: Chromalloy. Glazing: LOF. Inverted roof membrane assembly (IRMA): American Hydrotech. Hotel roof: Carlisle SynTec Systems. Canopy roof: Dex-O-Tex.

Page 146—Fountain: Custom by CMS Collaborative, installed by Harkins Plumbing. Railing system: Pinter Zwicker. Signage: Design by Howard Branstor, fabricated by Arrow.

Page 147—(bottom) Wood and granite bench: Alexander Woodwork Co. Cove lighting: Sternor.



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