

Progressive Architecture

October 1981



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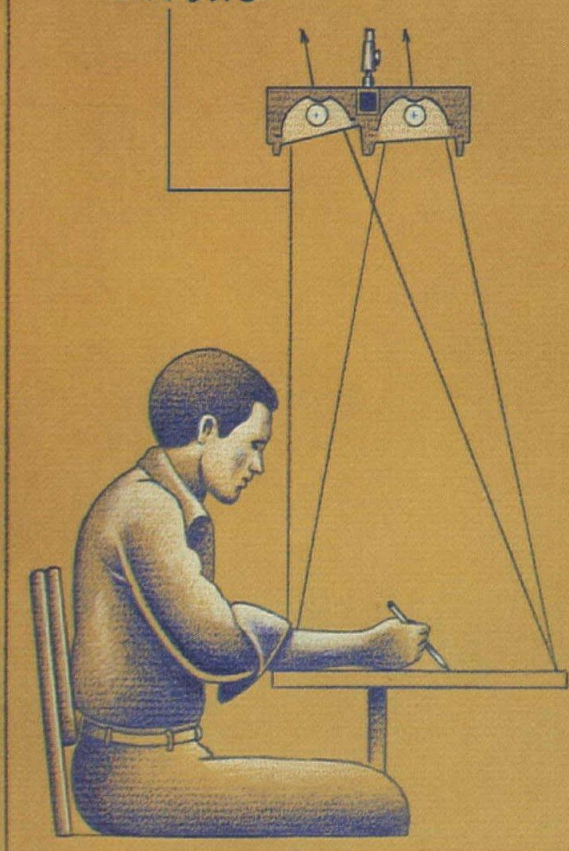
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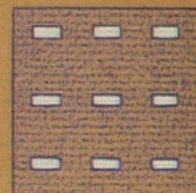
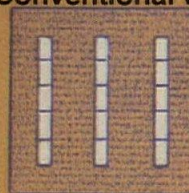
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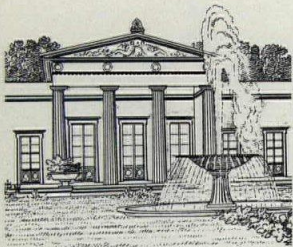
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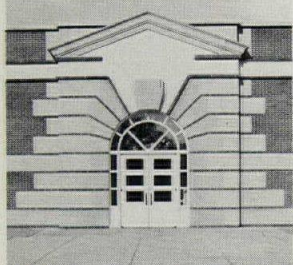
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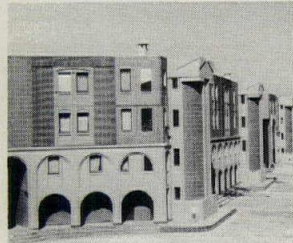




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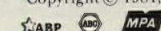
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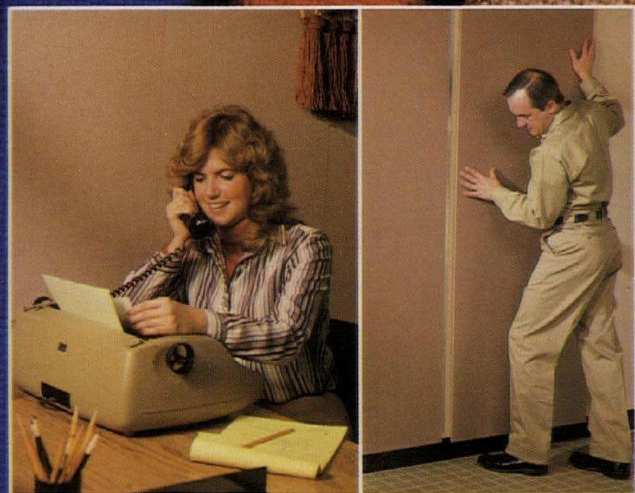
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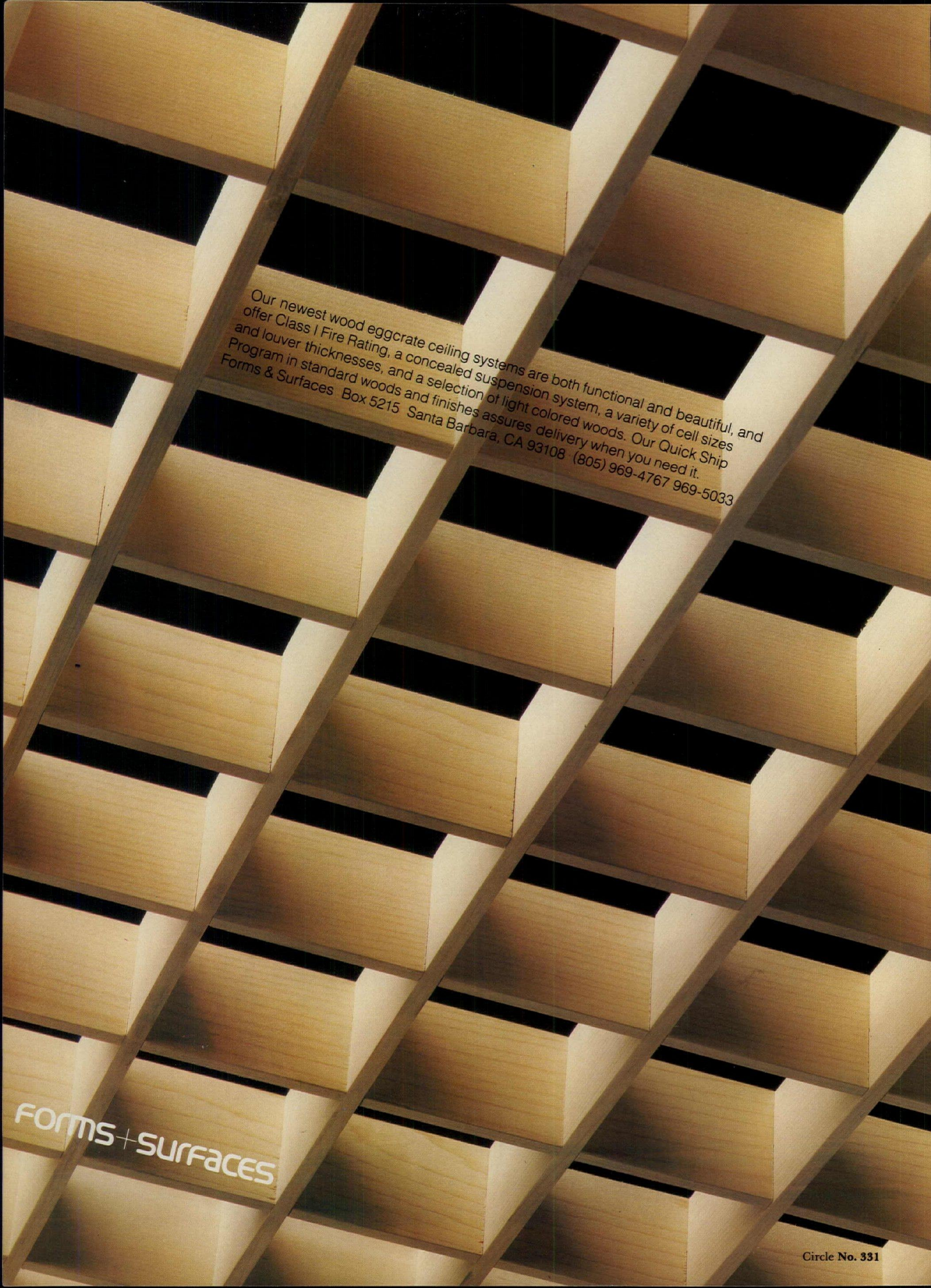
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Classicism, last time around

The current return to Classical precedents upsets a familiar historical pattern. A recollection of the Classical revival of 20 years ago may be instructive.

Although the architects involved in today's reemergence of Classicism would hardly acknowledge the connection, those of us who remember the early 1960s must compare current efforts with the Classical fling that occurred then.

The differences are obvious: The Classical phase that peaked about 20 years ago was seen as another step—or misstep—in the evolution of Modernism. It maintained the tenets of the Modern Movement by shunning ornament and direct historical borrowings, by abjuring mass and bearing walls, by being ahistorical and nonintellectual. The object was simply to regain the "delight" that Modernism then seemed to lack—by permitting symmetrical façades and porticos, using repetitive structure ornamentally, like the columns and entablatures of Classicism. Prime examples were the New Delhi Embassy (1958), the Ahmanson Center, Los Angeles (1970), and Kennedy Center in Washington (1971) by Edward D. Stone, the civic landmarks of Brasilia (1957–63) by Oscar Niemeyer, and Lincoln Center in New York (1962–68) by such stars as Philip Johnson, Eero Saarinen, Pietro Belluschi, and Gordon Bunshaft, with Harrison & Abramovitz.

It now seems clear that much of the motivation to go Classical that time around grew out of the need, *then new*, for Modern architects to build major civic and cultural monuments. (Hadh't the UN Headquarters, involving Harrison with another all-star design team, discredited Corbusian Modernism for monumental commissions? Did Lincoln Center subsequently kill off the Classicized Modernism approach?)

Even in the Classicism of circa 1960, there was an intellectual undercurrent, evident mainly in the works and words of Philip Johnson. His major Classicized works—the museums at Lincoln, Ne, and Ft. Worth and his New York State Theater at Lincoln Center—were generally understood then (if not generally applauded) as descending from the symmetrical, Classically composed late work of Mies Van der Rohe and thence from

Schinkel. Actually, Johnson had been trying out Classicism at a small scale during the 1950s—in his own guest house, for instance, and the Port Chester synagogue—both paying homage to John Soane. As Colin Rowe pointed out in his essays of the 1950s (in *Mathematics of the Ideal Villa, and Other Essays*, 1976, MIT Press), Johnson and some of his contemporaries had been playing with various Classical prototypes, then generally disdained by the Moderns. Even the history-minded Johnson executed many of his Classical compositions with swelling and tapering forms characteristic of 1950s appliance design.

This time around, we have arrived at a revival of Classicism by an entirely different route—not as a byway in the evolution of Modernism, but as part of the rebellion against it. Now ornament not only belongs to the movement, but precedes it, in the disembodied Classical motifs in works of Venturi, Moore, Stern, and others. If we can accept Classical devices distorted and displaced, why not take them straight and as part of a formal order? And in today's intellectual climate, that order is getting some respectful study.

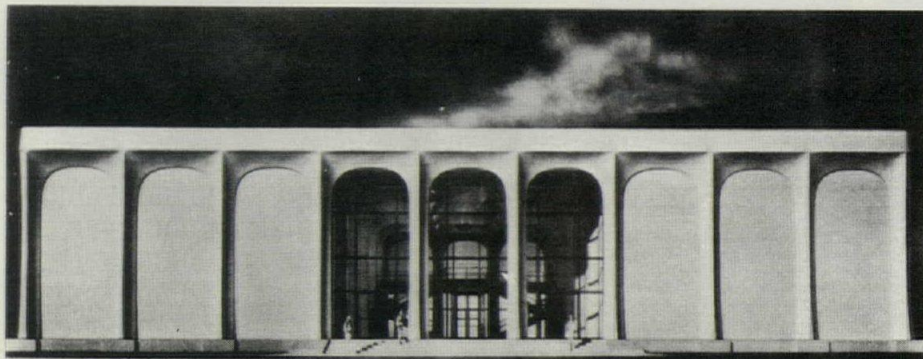
Finally, the time is coming for some convergence between the Classical mavericks of Modernism and the "Classical underground" (see Introduction, p. 71) that has been quietly maintaining Beaux-Arts traditions for decades. But not quite yet; most of the architects represented in this issue would disown the others who have been included.

The last time around, Classicized Modernism didn't last long. It took only a few buildings like Stone's Kennedy Center to discredit the overtly Classical approach. Some aspects of Classicism—the symmetrical façade, for instance, and the uniformly walled plaza—survived to blend into—and dilute—mainstream Modernism.

The current wave of Classicism, despite its stronger intellectual underpinning and its more receptive cultural climate, is unlikely to have much more lasting effect. Even the strongest talents in this issue (you decide who they are) are handicapped by today's building practices and the now ingrained prejudice against literal Classicism. And what they do must stand up to comparison with Pre-Modern work—again fully appreciated—by masters such as Lutyens or the Americans Pope, Brown, Adler, and Schutze. Today's Classicism will neither supplant Modernism nor revolutionize it. At best, it will yield a deeper understanding of the purposes and potentials of our architecture.

John Morris Diefen

Model photo of Philip Johnson's Sheldon Art Gallery, Lincoln, Ne (below), was an illustration for Reyner Banham's "Neoclassicism" entry in the Encyclopaedia of Modern Architecture (1963, Thames & Hudson). Banham noted then a resurgence in the U.S. of Beaux-Arts tradition "that had been only thinly buried by the dominance of Gropius, Sert, Breuer, and Mies." He cited the appearance of "contrived symmetrical plans and even Doric columns" among the P/A Award winners of 1962.



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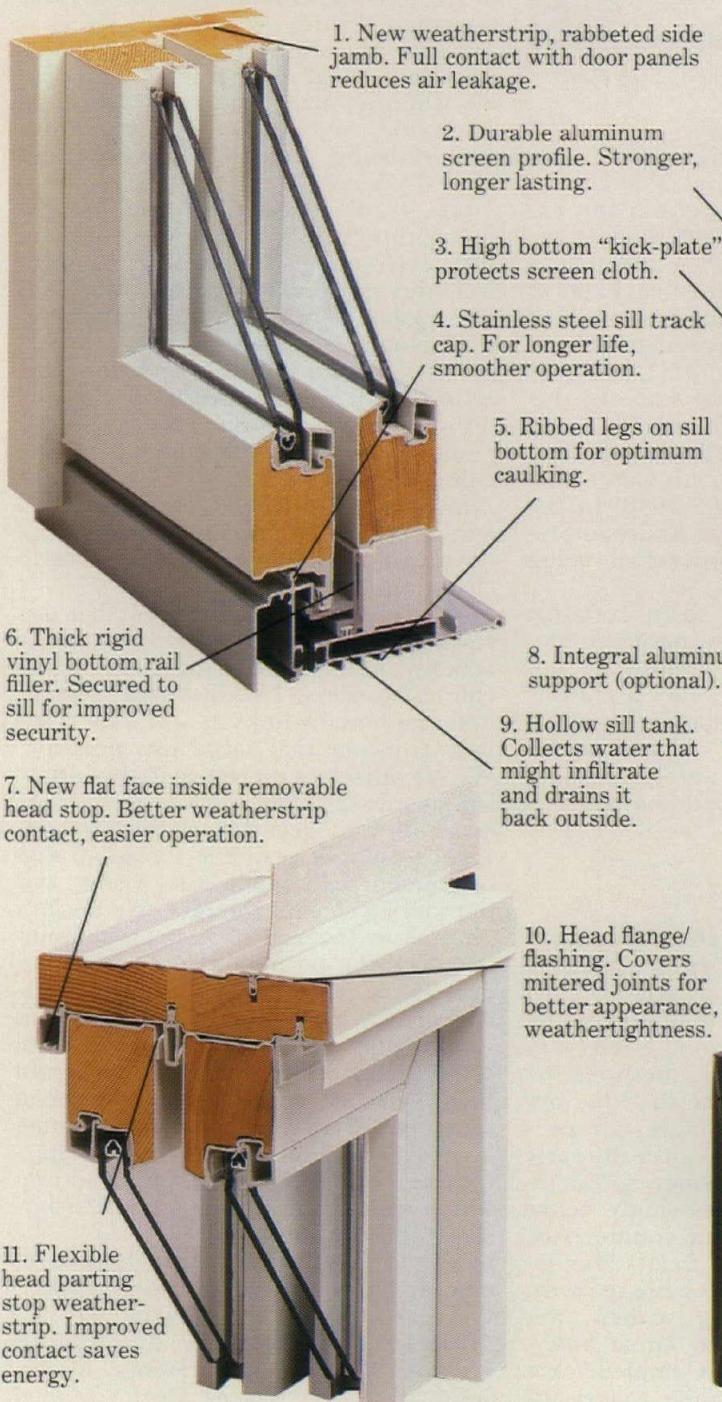
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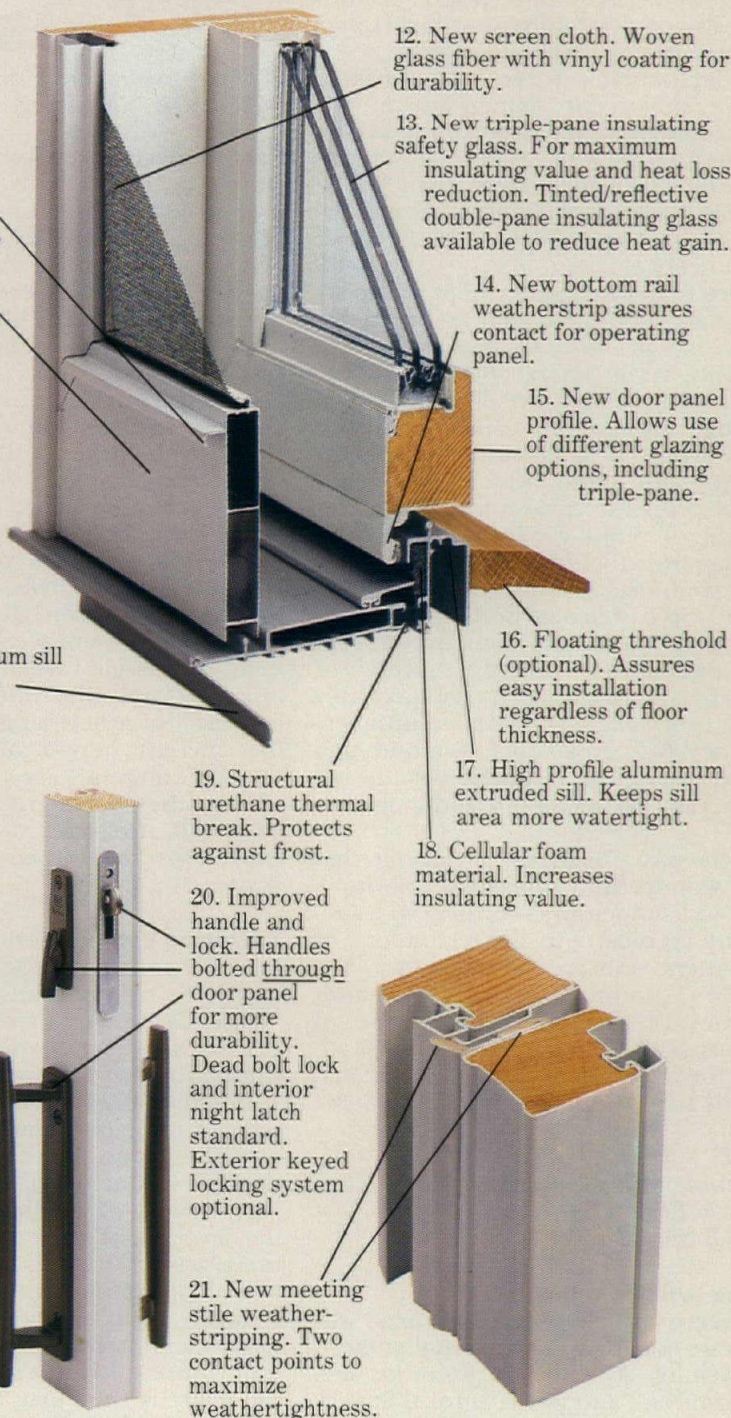
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Views

Fabric structures no 'bubbles'

We were delighted to see *Progressive Architecture* once again bring attention to permanent fabric architecture by pointing up the energy efficiency of the Stephen C. O'Connell Activities Center at the University of Florida. But we were genuinely perplexed at your choice of title, "Mr. Bubble," which seemed somehow to thrust the field back into the realm of swimming pool covers and standard indoor tennis facilities.

Understandably we're a bit sensitive on the subject of nomenclature. It's been a long haul to convince the public that the "permanent" in permanent fabric architecture means just that. Usage such as "tents" and "bubbles" somehow does not transmit the concept we most wish to convey.

More than ever, permanent fabric architecture should be seen as the viable alternative in wide span architecture. Not only are its characteristics productive of wonderful effects like all natural lighting and energy efficient climate control, but its safety aspects in comparison with other wide span forms should propel it to the forefront as the medium of choice for future large scale installations in which wide span advantages are indicated.

We would welcome some public discussion of the whole controversy that has newly arisen over the "safety" of wide span architecture. As you probably know, wide span was discussed unfavorably on ABC's 20/20 about a month ago without any clear distinction made between varieties of design and construction.

In the past, *Progressive Architecture* has been wonderfully supportive of our—and our competitors'—efforts to establish the credibility of the technology of permanent fabric construction. "Mr. Bubble's" connotations notwithstanding, we are genuinely appreciative of that support. Should you decide to address the current "wide span" brouhaha, we'd be happy to help out in any way we could.

Lora E. Spiller
Communications Manager
Chemical Fabrics Corp.
North Bennington, Vt

Scarpa articles remembered

The recent article on Carlo Scarpa was that rare pleasure: exceptional subject, fine writing. As with Lou Kahn his success came late and perhaps for that very reason his work, like Lou's, will last longer than some of the instant successes of today.

How about a major article on another exceptional Italian designer, Ettore Sottsass, one of the most imaginative and sophisticated men of our time?

Many of us would thank you for cov-

ering more substantive and fewer trendy examples.

Fred Bassetti
Bassetti Norton Metler Architects
Seattle, Wa



USO recreation room, Pennsylvania Railroad Station, Harrisburg.

Post-Modern precursor?

During a recent lecture at The Catholic University, Michael Schwarting expressed his belief that Post-Modernism first occurred in the 1930s and that it has been developing ever since. Later in the same lecture, he showed a slide of his own work in The Italian Trade Center in New York (P/A 8:81, p. 97). It occurred to me then that some of this work looked familiar. When the same view was published in P/A this month, I was able to compare it to this view of the USO recreation room (c. 1940) in the Harrisburg, Pennsylvania Railroad Station which is in the process of being renovated by our firm.

This comparison of form certainly does not represent a continuous refinement of a single formal philosophy, but more probably illustrates how architects in search of a new language of form in the current period of relaxed architectural dogma, are simply groping where others have groped before.

Richard B. Aschman
Harry Weese & Associates
Washington, DC

Furniture competition afterthoughts

I returned this week from Chicago, where I received an award for my "Motel Chair" entry (pink plastic) in the P/A furniture competition. I felt very stimulated and filled with questions.

Initially, it bothered me that the jury seemed to be interested merely in technical discussions. Perhaps after the early decision was made that American furniture design was embarrassingly below the level of its European counterpart, there wasn't much more to talk about.

Well, I was filled with a sense of irony. I mean, what was going on here, another manifestation of the "Great American Cultural Inferiority Complex?" Yet the irony is this: that while Americans quiver in their boots at the mere thought of European intellectual judgment, Europeans secretly are peeking through the keyhole, feasting on stolen glimpses of the American vitality in art and design.

Fundamentally, though, it must be a problem within the American con-

sciousness, rather than ancient cultural imperialism, oppressing from without. It is a political question, but its answer may be in the sphere of inner politics. If this were a prologue to a manifesto, it would continue like this:

"Manifesto for the Liberation of American Design Consciousness from the Fear of the Reputation of European Good Taste."

Article 1: We support the validity of our own cultural experience since our own experience is the only one, in fact, that we can have.

Article 2: We reject the process where a trashy stylistic idea, like American jeans, is transported to the Land of Superior Taste, manicured, generally beaten to death, and finally sold back to us at twice the original price.

Article 3: We support global consciousness, but recognize that it is only possible when an artist or a culture is in its own reality and not in the hopeless fantasy of being someone or somewhere else.

Article 4: We reject the fetish for just doing things well; it is not enough. In the development of European modernism, the spirituality of early Mies was dropped and forgotten, leaving a beautiful, bloodless corpse.

Article 5: We support the courage of any artist to find his or her own voice or any distinct culture to locate and express its reality, however tasteless that is to the ruling culture.

Article 6: We reject as reactionary an aesthetic position that resists the natural development of art, corresponding to changing reality.

Article 7: We support the view that this revolution of thought is not new and is actually an ever-recurring stage in the cultural process. This historical connection emotionally links us with other artists in history that faced this question. We see ourselves therefore in the historical process and not outside it.

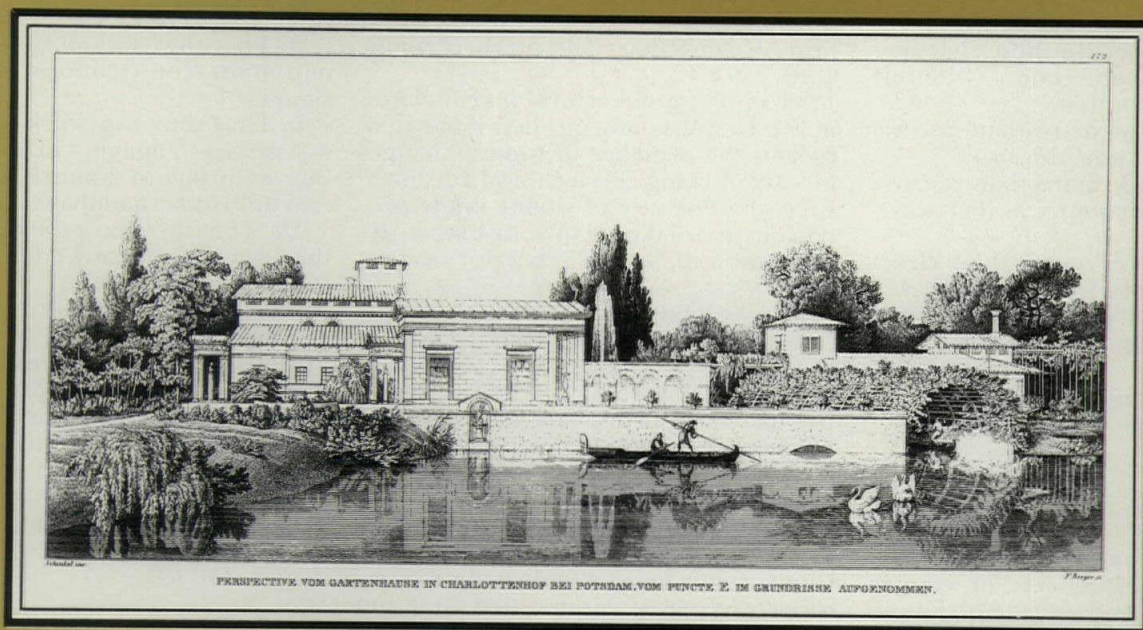
Article 8: We reject the pressure to conform to empty aesthetic formulae that originated with intellectual vision and not merely elegant thought. We declare an end to the era of aesthetics dominated by the tyranny of the brain and declare the dawn of a new era which encourages work from the intelligent, unsentimental heart. American bad taste came from foreign imitation, not from being in its reality. Francis Bacon searched for a way to make paint "come across directly on the nervous system," independent of the brain. Painting which appeals only to the brain is inconsequential and boring.

Article 9: We support tough, aware, emotional work. We support passion. Our passion is for the present.

Article 10: Our heroes are: Frank Lloyd Wright, Minor White, Henry Miller, John Berger, Bruce Goff, Marcel Proust, Robert Smithson, Georgia O'Keeffe, James Stirling, Alfred Steiglitz.

"I do not oppose form, but only form as a goal . . . Form as a goal always ends in formalism, for this striving is directed not towards an inside, but towards an [Views continued on page 12]

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outside. But only a living inside has a living outside. Only intensity of life has intensity of form."

Vincas Meilus
Architect
Brooklyn, NY

Re: Items shown in article about Conceptual Furniture Competition (P/A, May 1981)—Disappointed!

I was hoping to see a selection of "progressive" objects that fit the needs of "today"—rather than those that simply amuse and/or entertain . . . Surely we need more than that.

I was hoping for more than decorative, functionless "pop" forms.

I was hoping for more than creative exercises using "furniture" as their starting point.

I was hoping for more than clever combinations of old forms and styles.

I was hoping for more than regurgitated Mackintosh, El Lissitzky, Duchamp, or Beuys.

I need new forms—discovery and originality—please.

Philip Salmon
Designer
Toronto

Learning from competitions

Your bringing the subject of competitions is timely and welcome. Let us hear some opinions.

I believe architectural competitions to be the only professional way for architects to compete. In addition, architectural competitions create the healthy renovation of ideas that nourish the profession and bring out not only the best solutions expected, but the unexpected.

In order to have good architecture we have to have an enlightened public. Good competitions are usually controversial and bring out the discussion that enlightens us all. But there is something else: There was a time in which architectural ideas were tried in one-family residences. Young men made their fame in the forties, fifties and sixties. Stubbins, Rudolph, Pei, Johnson and others that you know, started by designing small houses and are now designing skyscrapers. The one-family residence, individually designed by architects, is on its way to becoming a rarity in this country, as already happened in Europe. There is no fertile ground anymore in which new talents can find the opportunity that others had before. Today, young architects are forced to work in offices others founded and developed in which ideas are hashed and rehashed. Europe, on the other hand, has had a tradition of competitions that inject new concepts into the architectural stream and make the old firms move forward and adapt or die. Some time ago I had the opportunity of visiting a group of nine French architects, no more than thirty years old, who had been selected in a competition to design a complete city outside of Paris. The list of interesting ideas that have come out of compe-

titions in the world is too long and probably well-known to you for me to give examples; but in Finland, Sweden, Germany, France, Italy and in Spain, competitions are now creating the ideas with which architects will be working in the future.

I have heard the argument that young firms without experience cannot perform properly in developing large projects. This is true and the rules of competitions should state that if the winners do not qualify because of lack of experience or office facilities, they should join forces with a firm that does, but with a firm of their choice and on their conditions.

I feel that architectural inventiveness in the U.S.A. is now needed more than ever in the presence of radical changes in ways of living and technical advances. I feel that the lack of vitality in the profession is making inventiveness deteriorate into "artistic" exterior decoration.

The AIA position, opposed to competitions and in favor of acting as a lobby for the large architectural firms with influence in Washington, makes it useful for those firms, but useless to the profession.

Jorge Arango, Architect
Miami, FL

Your thoughtful examination of design competitions helps illuminate one of architecture's least appreciated and too frequently misused methods. In that respect I would like to comment on the composition of juries, particularly the jury for the recent Vietnam Veterans Memorial Competition.

In P/A's coverage of that competition (June 1981, pp. 34 & 38) P/A described the VVM jury as "... generally elderly, middle of the road . . ."; P/A implied that the jury, by its composition was not to seek "... aesthetically far-out solutions . . ." This view is misleading, and casts an unfair shadow over a jury that performed admirably. The basis of selecting the VVM jurors had nothing to do with inclinations towards the far-out, or the far-in. We sought a jury that would look at any and all designs, whether near or far, and judge them on their merits, on design excellence seen large. Before selecting jurors, we drew up the following list of juror qualifications, a list which future competition sponsors may find useful.

The qualifications of jurors should be:

1 That they are accomplished practitioners or figures in the design community; that they are prestigious and respected persons; that they are respected by both the competitors and the sponsors.

2 That they are persons who, by their accomplishments and reputation, inspire competitors to do what they feel is best, believing that their designs will be judged fairly, on their own merits, not on stylistic predilection, reflection, or "quotation."

3 That they are persons who can judge the appropriateness of a design in relation to the design subject, its setting, and its moment in design evolution.

4 That they can judge the feasibility of a design—its "buildability," likely cost, durability, maintainability, etc.

5 That they can judge the appropriateness of a design in relation to local objectives and the responsibilities of local review authorities in furthering those objectives.

6 That they can judge the real qualities of a design as it is presented in simple competition format.

7 That they can judge the entire range of design themes and philosophies, as those are currently practiced.

8 That they will attract the broadest and most conscientious range of designers.

9 That they can work constructively as a group—engaging in intense debate, but not prone to domination or sway by any individual member.

10 That they have the ability to grasp the essence of any design concept, through its depiction, in competition format, rapidly and fully.

There are several corollaries to these qualifications, but their essence is clear. A good jury must be capable, experienced, and open minded. As such, a good jury is one of the five cornerstones of a good competition: the others being a good client, a good subject, a good program, and good management.

Paul D. Spreiregen, FAIA
Washington, DC

Correction

The artist who painted the murals in the central crossing of The Plaza Pasadena is Terry Schoonhoven. We regret that his name was misspelled in the article appearing in July P/A.

Credit extended

The Ribbon chair and Networks chair shown in P/A, Sept. 1981, p. 195, were the work of four designers: Eric Chan, Thomas Nicholson, Terence Main, and Laura Main.

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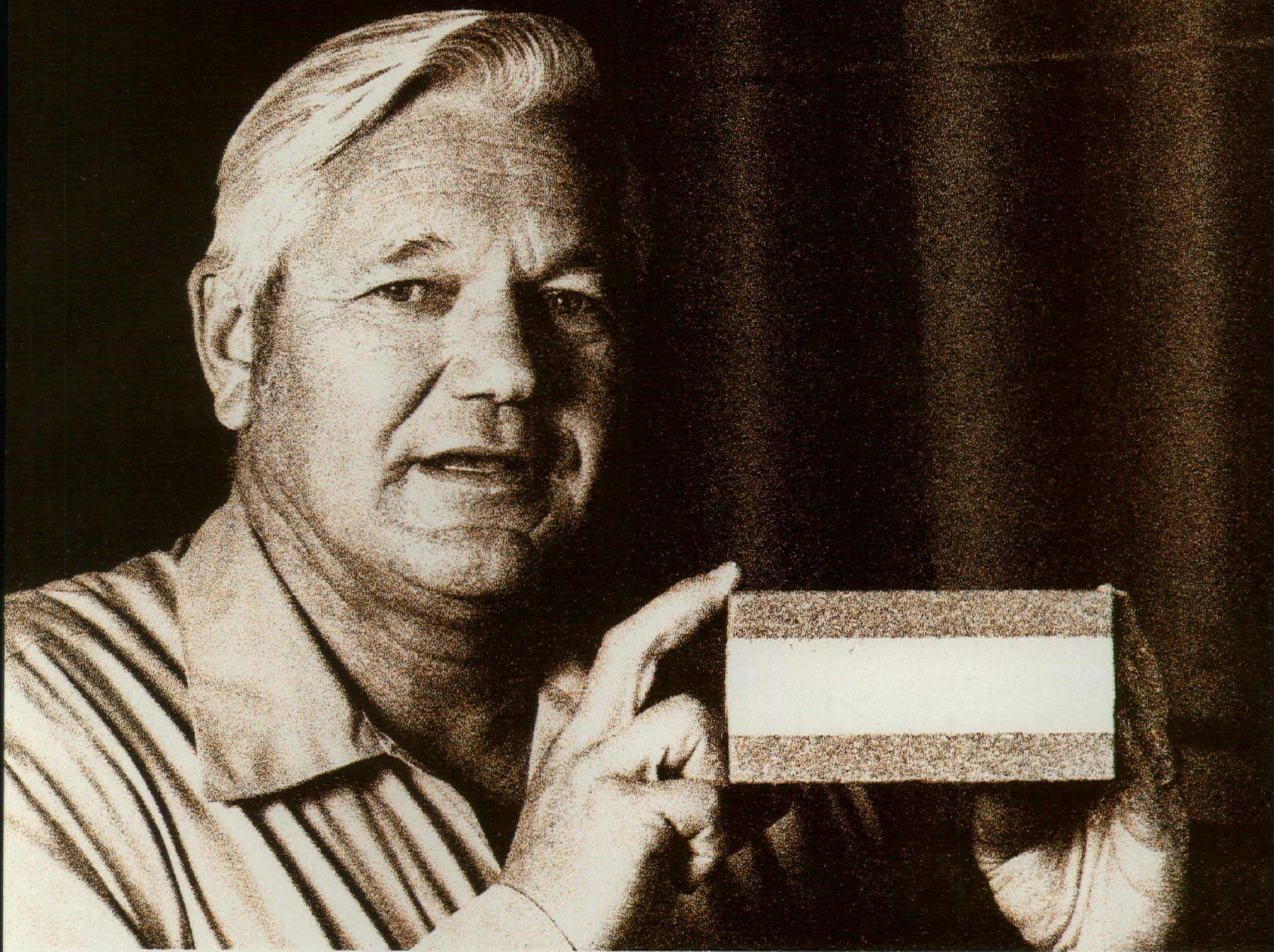
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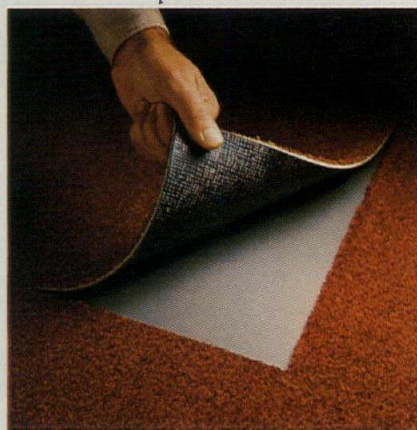
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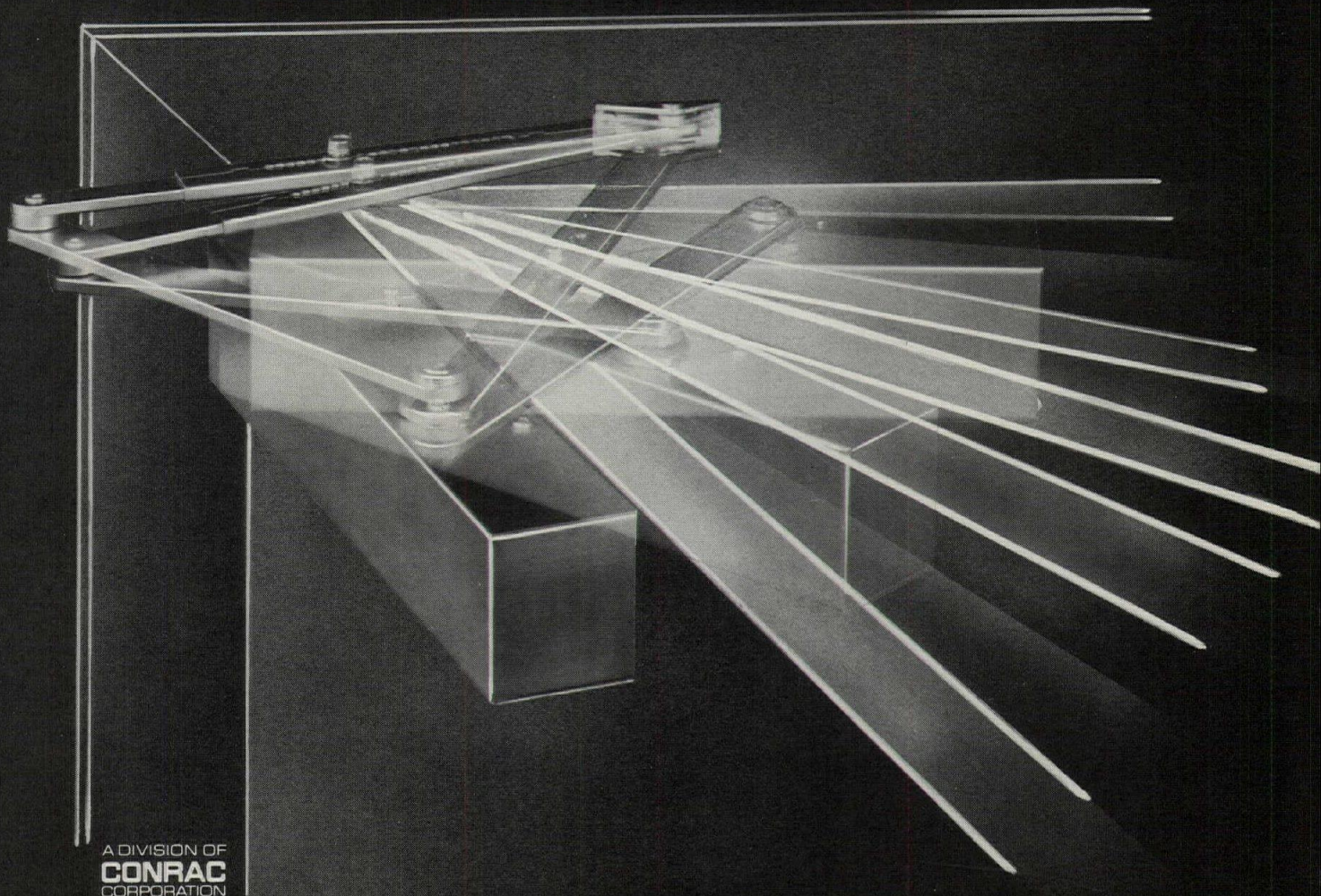
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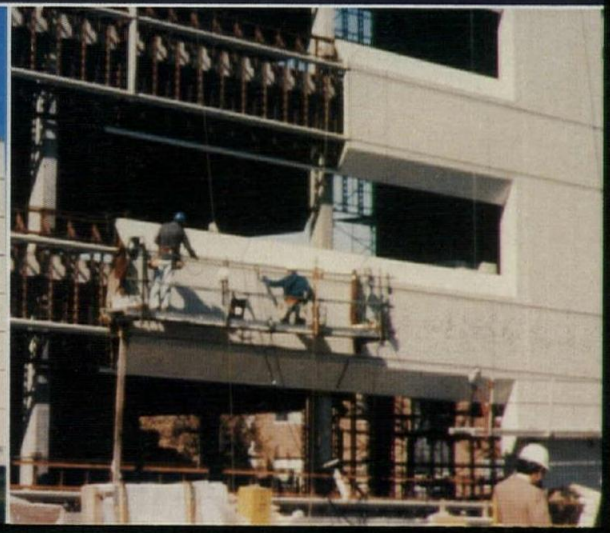
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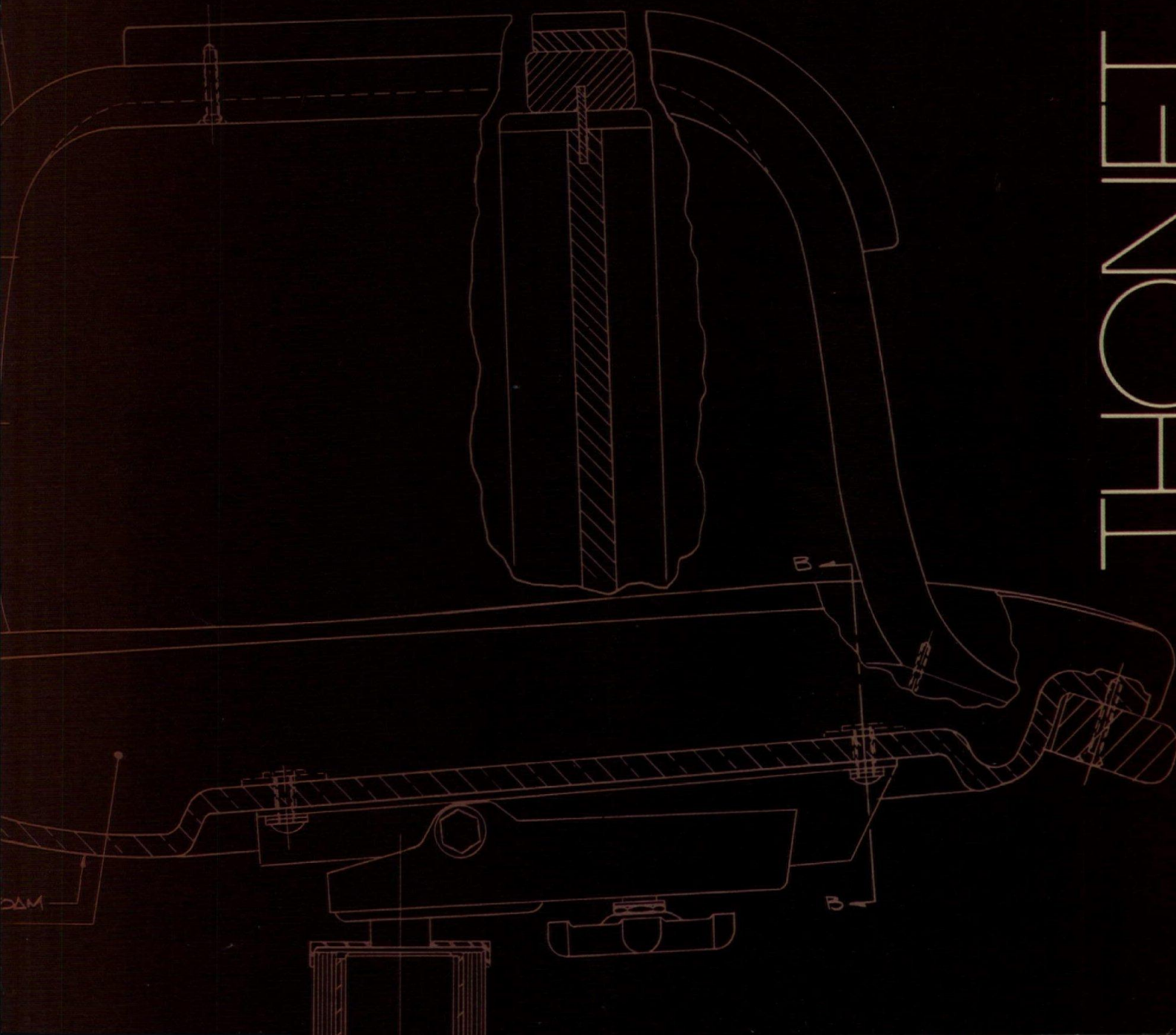
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Designer Don Petitt has combined simplicity of function with elegance of form to create the MGT™ System of swivel seating for Thonet. Exposed oak veneer molded plywood frames enhanced by smartly

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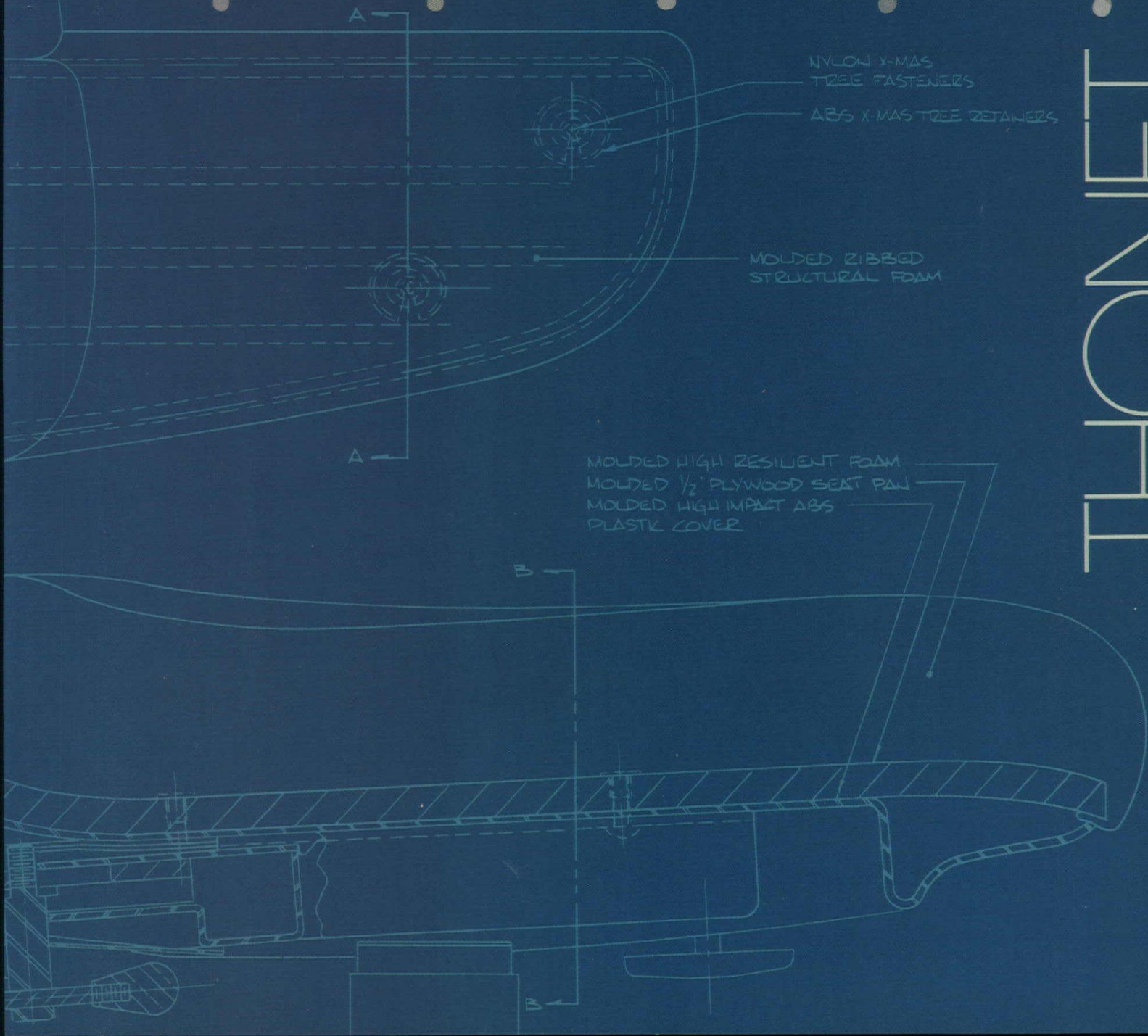
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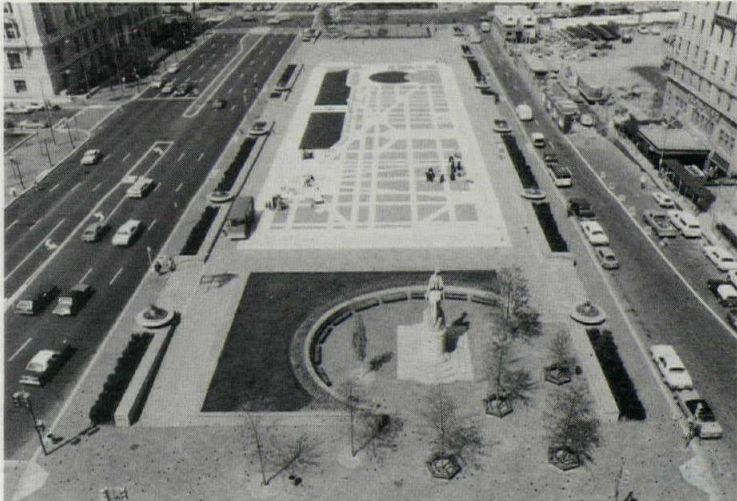
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PA News report



Washington's Western Plaza: bare remnants

It has been almost two decades since President Kennedy's inaugural parade sparked a campaign to make Pennsylvania Avenue into a grand boulevard. And so far almost nothing has gone right.

To a history of grim mistakes (the FBI Building) and indefinite delays, the Western Plaza adds a particularly poignant note. Intended to create a climactic public space—reclaimed from a snarl of traffic lanes—Western Plaza is a product of exceptional design talent misapplied and brilliant ideas thwarted.

The history of Western Plaza is fairly well known: how architects Venturi & Rauch (now Venturi, Rauch, & Scott Brown) were asked to work on the project, along with landscape architects M. Paul Friedberg & Associates and sculptor Richard Serra; how Friedberg ended up doing the "Pershing Park" portion west of 14th Street; how the Venturi firm, with George E. Patton, Inc., got Western Plaza proper; how Serra quit; how the pair of 86-ft-high pylons and the miniatures of the White House and Capitol were stripped from the Venturi & Rauch/Patton proposal (P/A, May 1979, pp. 110-113).

Knowing this background makes a visit to the actual outcome that much more painful. The central portion of Western Plaza is occupied by a platform on which a portion of the L'Enfant plan of the city has been reproduced in marble and granite paving, with manicured grass for the Mall; inscribed in the stone are both labels from the original plan



and statements about Washington by various historical figures. The gentle wit and refined execution of this section make it all the sadder that the miniatures of Capitol and White House are not there to give it all another dimension and provide symbols visible from surrounding streets. The pylons are not missed on the plaza itself—and might have seemed incongruous with the other elements here; it is in the long view down the avenue where they could have made a contribution.

Top left: Western Plaza, looking westward. Top right: Pershing Park, looking southward. Above: detail of Western Plaza.

Another disappointment is the presence of two unrelated fragments of plaza at either end of the maplike platform. At one end is a perfectly decent little planter-and-seat arrangement around the existing Pulaski statue—harmless but seemingly oblivious to the more inventive goings-on adjoining it. At the opposite end is an odd-shaped reflecting pool—its sheet of dark water curving over a meticulous granite lip—like a fragment misplaced from one of

the vast plazas by I.M. Pei & Partners.

Across 14th Street is the utterly different world of Pershing Park by Friedberg & Partners and Jerome Lindsey Associates. Behind the berms that line most of its perimeter with courteous, neutral greenery, there is a heart of familiar Friedberg landscaping—stone step-seating forming an irregular amphitheater around a sunken pool, water falling into the pool from an elevated block that can easily be imagined converted to a stage for musicians or mimes. The sense that this is a cozy, berm-enclosed setting for public activities is confirmed by a little kiosk of tinted plastic in a metal frame—intended, apparently, to have a Victorian delicacy, but looking only flimsy.

But what is this piece of picturesque landscaping doing in the very center of official Washington, between the stern façades of the Federal Triangle and the monumental portico of Mills's Treasury? And what will happen to this semienclosed space—a welcome noon-time oasis for workers—when the area goes dead at dusk? (Delay in restoring the Willard Hotel, fronting the plaza, now seems interminable.)

What is hardest to accept is the sheer disparity within what started out to be one major "plaza." Observers a few years hence will never believe that these motley fragments were all produced at the same time for one powerful public client. [JMD]

Time ran out at the Biltmore

For 68 years, the Biltmore Hotel, on 44th Street and Vanderbilt Avenue, has been an effective, if unofficial, major New York landmark. With the nearby

Commodore Hotel (which has already been stripped and glass-clad as the new Grand Hyatt Hotel), Grand Central Terminal, and a number of other buildings also designed by the firm of Warren & Wetmore, it formed a rich and cohesive urban complex. As Carter Horsley recently noted in *The New York Times*, the collection of intricately detailed masonry structures was only to be surpassed later by Rockefeller Center further Uptown on Fifth Avenue.

The Biltmore, long the headquarters of the New York Democratic Party and the unofficial headquarters of the preppy and Ivy League contingents in the city, was best known for its gracious lobby entrance and the lavish Palm Court. For decades, friends have arranged rendezvous by saying, "Let's meet under the clock." No one ever had to say which clock.

It is gone now. In July the owners—the Milstein family—announced plans to strip the building to its steel frame and to re-clad it in granite and glass for Bank of America's New York headquarters. Although the Landmark Commission had known of the plans and had been studying the building to designate appropriate areas, on the evening of Friday, Aug. 14, the owners closed the doors and brought in workers to begin demolishing the interiors. The clock was the first thing to go, according to one report.

After two restraining orders brought by preservation groups, and after considerable demolition had already been carried out, the work was finally halted, and an agreement was reached between the owners and the preservationists. According to the accord, the lobby will be retained, and the Palm Court and its clock will be restored to "reasonable approximation" (whatever that implies) of what they were before. The agreement is contingent upon the Landmark Commission's not granting landmark

status to—and hence relinquishing any possible control over—the grand ballroom.

The question here is not whether the Biltmore is a great work of architecture suitable for landmark designation; by most accounts, it is not. It is, however, a very good building that forms part of an important urban texture, and that adds up to considerably more than the sum of its parts. With the Commodore now gone, with the nearby Abercrombie and Fitch store now atrociously refaced, and with the Biltmore soon to follow suit, a delicate urban fabric that was once one of grace and charm has been irreparably assaulted. Token preservation will not mitigate New York's unhappy proliferation of bland, inhumane boxes. [DM]

AIA settles Mardirosian lawsuit

The American Institute of Architects announced last month that it has reached an agreement to end a legal dispute with Washington, DC, architect Aram H. Mardirosian, who was suspended from the AIA in 1977 for alleged violation of the "supplanting" clause then in effect as part of the AIA's mandatory code of ethics. Mardirosian will dismiss lawsuits against the AIA, its directors and officers, and members of the now-defunct national judicial board that had suspended him. The AIA will pay Mardirosian \$700,000 in three installments over two years and will expunge its records of his suspension. The AIA will also provide \$60,000 to help defray legal expenses for Seymour Auerbach, another Washington, DC, architect, who had charged Mardirosian with the violation.

Mardirosian's suspension from AIA membership for one year came after he was found to have violated a rule that prohibited members from seeking work for which another architect had already been employed. The rule stipulated that the original architect's commission first had to be terminated by the client and he then had to be informed that another architect was seeking the work. At issue in the case was a contract for design of the Union Station National Visitor Center, a project which itself is besieged by a host of problems and disputes unrelated to this one.

The AIA was careful to put the best face possible on the settlement, perhaps anticipating that some of its members might view it as giving in to pressures that have moved the organization reluctantly to its current voluntary ethics. "I myself have come full circle on this," said AIA president R. Randall Vosbeck. A member of AIA's board since the time the suit began, Vosbeck said he originally had "vowed to fight to the end" the AIA's right to have and enforce mandatory ethics. "But society has changed," he said, "and with it the whole attitude toward the professions."

[News report continued on page 33]



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"Under the Clock" at the Biltmore Hotel.

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Rising above the Vancouver waterfront are two prominent Dover Elevator installations—the new Daon Centre and, mirrored in its facade, the Marine Building across the street. The 21 floors of the Daon Centre are served by 4 Gearless Dover elevators. The Marine Building, a 50-year landmark in downtown Vancouver, has been enhanced by a modernization program incorporating the advanced Dover Trafomatic 2000 I.C. computer control. For more information on Dover Elevators or Dover Modernization Programs, write Dover Corporation, Elevator Division, Dept. 680, P.O. Box 2177, Memphis, Tennessee 38101. In Canada: Dover Corporation (Canada) Limited, Elevator Division, 126 John Street, Toronto, Ontario M5V 2E3.

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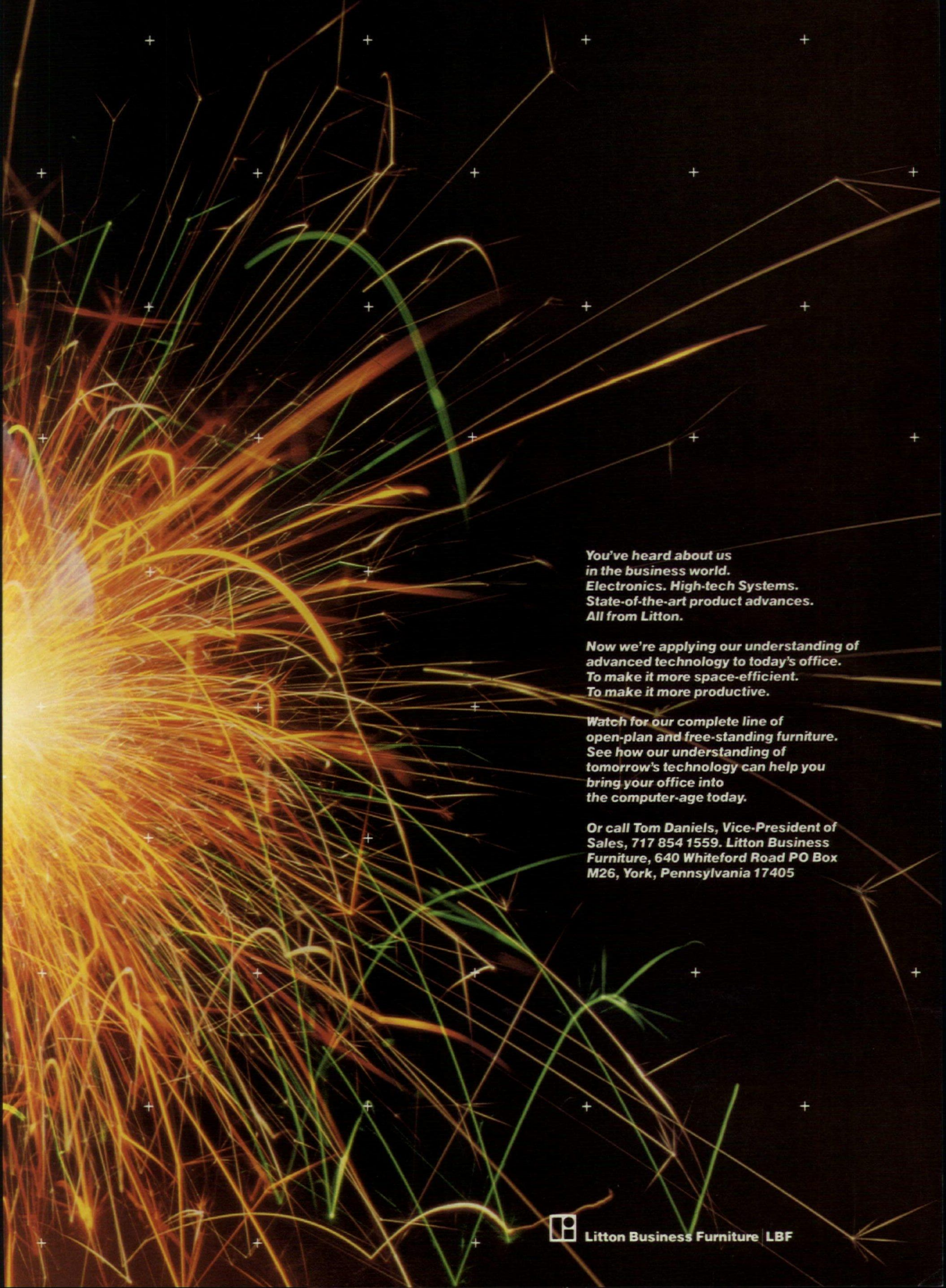
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Photo: Aldo Ballo
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According to AIA executive vice president David O. Meeker, Jr., a determining factor in the decision to settle was a 1979 ruling by federal judge John J. Sirica, which found that the AIA's supplanting rule was an "unreasonable restraint on competition" and constituted a violation of the Sherman Antitrust Act. Claims against the AIA in the case totaled over \$5 million, and any damage awards could have been trebled under antitrust law. The AIA could also have been liable for Mardirosian's legal fees had the case for damages gone to trial. He will pay legal expenses from the \$700,000 award.

Both Mardirosian and Auerbach are at present members in good standing of the AIA. The AIA, evidently relieved that the case had come to an end, will pay the settlement out of reserves and insurance coverage. Vosbeck stressed that the costs can be met "without serious curtailment of Institute services and programs." Asked to comment on what recourse an AIA member would have today if confronted with a similar situation, Meeker stated that "arguments within our membership are not about the ethics themselves, but about how they should be applied," suggesting that members would voluntarily avoid conduct formerly discouraged by binding ethics. AIA legal counsel Alan B. Stover acknowledged, however, that the Institute could no longer take action on such matters. "The only recourse would be litigation in the courts," he said.

[Thomas Vonier]

The skywalk collapse

Crown Center Corporation has announced the October 1 reopening of the Kansas City Hyatt Regency Hotel, whose lobby has been redesigned by New York architect Edward Larrabee Barnes.

The collapse of two walkways in the atrium of the year-old Kansas City Hyatt Regency Hotel, during a dance held in July, caused 111 deaths (more than the combined deaths resulting from the fires at the M-G-M Grand Hotel and the Las Vegas Hilton) and nearly 200 injuries. It also raised questions about structural details, code standards, construction inspection procedures, and post-failure investigations.

The hotel was designed by a joint venture of three local architects, Patty Berkebile Nelson Associates, Duncan Architects, and Monroe & Lefebvre Architects. (John Portman, who introduced the atrium theme to Hyatt, has not designed a Hyatt hotel since 1973.) The hotel's structural engineer was Gillum Colaco Associates, St. Louis; contractor was Eldridge & Sons Construction Co.; construction manager was Concordia Project Management; hotel owner is the Crown Center Redevelopment Corp., a wholly owned subsidiary of Hallmark Cards; and the facility's operator is Hyatt Hotels Corp.

The hotel's four-story open lobby connects a 40-story, 733-room hotel tower and a 4-story conference/restaurant wing. Three 8.7-ft-wide, 120-ft-long open walkway bridges transected the lobby at the second, third, and fourth levels, the highest bridge being directly over the lowest, and the middle one being 13 ft to one side. The highest bridge was suspended from the ceiling by steel rods, and the lowest was suspended by rods from the highest, using a detail apparently changed from the architectural drawings, resulting in an increase in the stress on one of the structural elements that failed.

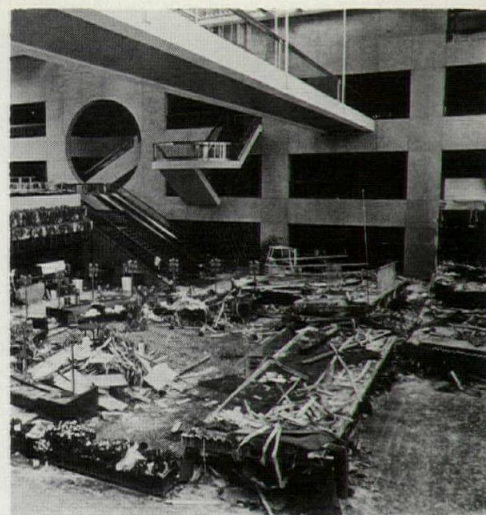
The city's set of structural and architectural drawings are reported to show that the walkway floors were supported at each edge by four consecutive 16-in.-deep, 30-ft-long wide-flange sections, welded at their ends to transverse box beams—the box beams supporting the bridges at three evenly spaced points. Each end of each box beam was suspended from a 1¼-in. steel rod passing through a hole threaded through the box beam's welded seam, and these six rods, together with the balcony connection at either end of bridge (a fixed joint at one end, an expansion joint at the other, according to the drawings), supported the walkways.

Questionable details

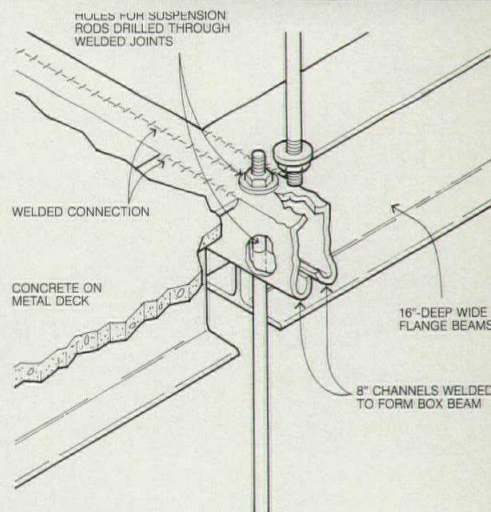
The architectural drawings reportedly indicate that at each support point a single rod would have passed from the ceiling, through the top box beam, and on to the lowest box beam, with a nut and washer under each box beam to hold the floors' weight. Instead, in fact, the rods were not continuously aligned vertically: the rod connecting the lowest beam to the highest was placed a few inches to one side of the upper rod, complicating the simplest possible support condition.

Furthermore, points out P/A Technics Editor Richard Rush, the actual box beam/bolt detail was a poor choice. It makes perfect sense to weld two channels together along their flanges to create a box beam: the weld lines are either in compression or tension and, ideally, would not even contain significant shear forces. But if the beam is to be hung, where should the bolt holes be? The welds of a box beam are obviously placed on the exterior beam surface, but to achieve a flat surface for the bolt's washer (which reduces punching shear by extending the area of contact) the weld must be ground flat, reducing the weld depth. It is certainly possible to create a weld of sufficient strength to hold the bolt, but why start with such a weak detailing alternative?

In a better but more expensive detail, suggests Rush, plates would be welded to the bottom of the beam, in preparation for the hole and bolt; or the number of bolts would be doubled so that holes can be drilled on either side of the joint, in the solid part of the flanges.



Associated Press



BOX BEAM DETAIL

Adapted from the Kansas City Star

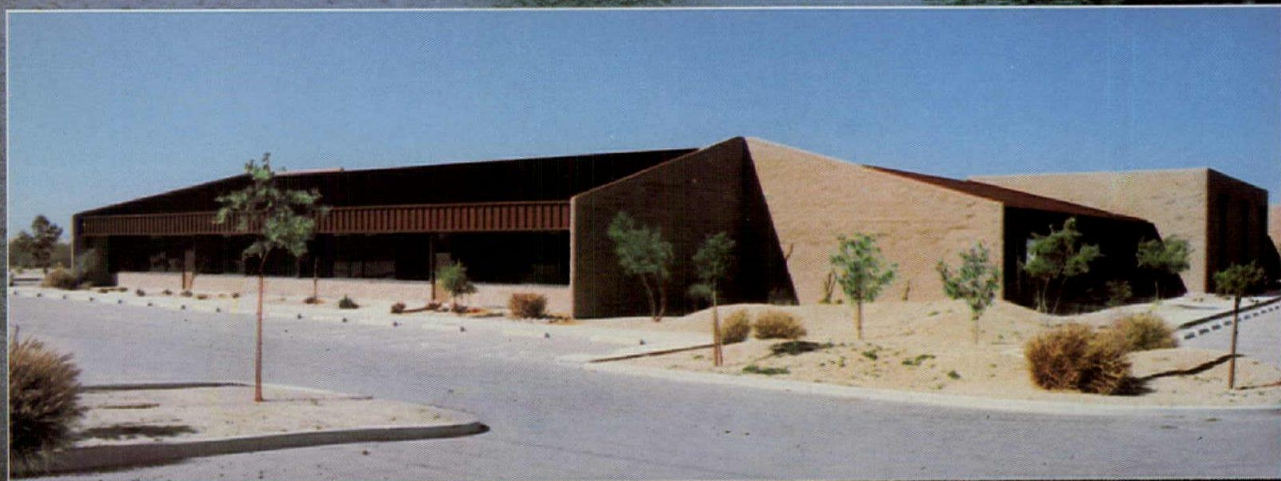
There is also question as to the adequacy of the depth of the welds, according to experts consulted by the *Kansas City Star*. And Wayne Lischka, a structural engineer hired by that newspaper to advise on technical questions, is quoted as suggesting that the washer was too thin and did little to stop the rod from pulling through the beam (a situation that would have been avoided by the use of a plate, as Rush suggests). Lischka also noticed indications that the holes may have been cut by gas torches, a method which weakens the metal and which was in contradiction to the construction specifications. Bogdan Kuzmanovic, a University of Kansas civil engineering professor hired by the *Kansas City Times* to help interpret the catastrophe, even suggests that two of the bolts may have never had washers.

A question of code

Experts, noting the deformation of the uncollapsed middle bridge, agree that the process was gradual, and that the movement of people only triggered the inevitable. But the adequacy of the major building codes is being questioned, as they do not specifically address "sky bridges." The Building Officials Code Administrators (BOCA) code, the Standard Building Code (SBC), and the Uniform Building Code (UBC, in effect in Kansas City, Mo) all treat walkways in hotels as corridors serving public areas or exit facilities, with a design live load of 100 psf. While

[News report continued on page 36]

LAKEWOOD BUSINESS PARK, BRADENTON, FL
 Building owner: Stephen A. Wilson, Bradenton, FL
 Architect: Jerry N. Zoller, A.I.A., P.A., Bradenton, FL



AIRPORT BUSINESS CENTER, TUCSON, AZ
 Building owner: Valley Industrial Parks Co.
 Architect: The M Group, Tucson, AZ



WOLF POINT INDUSTRIAL PARK, TULSA, OK
 Building owner: Eve Incorporated, Tulsa, OK
 Architect: Caldwell, George & Associates, Bartlesville, OK



TUCKER INDUSTRIAL PARK,
 TUCKER, GA
 Building owner: Our Way, Inc., Tucker, GA
 Architect: William Breen, Decatur, GA

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safety factors actually multiply this by about two, the codes assume people will be walking, not dancing, along the corridor. William J. Tangye, director of engineering services for the SBC, is quoted as saying that the codes allow local officials to adjust the requirements if the corridor is used for other purposes, such as dancing. Myron Calkins, Kansas City director of public works, believes that the code makers should—and will—review the codes.

Inspections

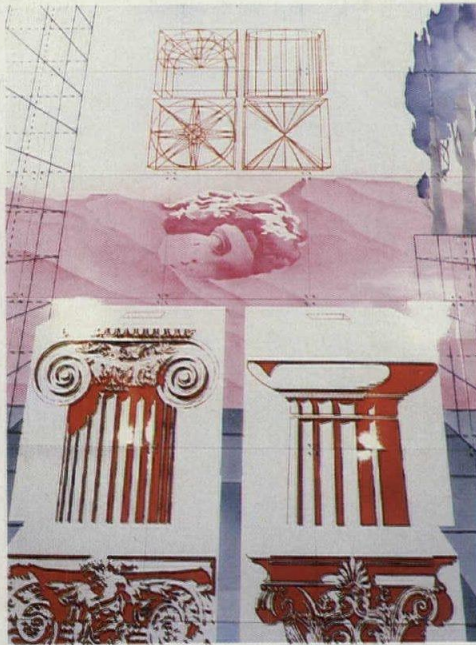
The effectiveness of independent and city inspections during construction is also under fire, as is the procedure for authorizing changes after building plans have been approved. General Testing was hired to inspect welds and concrete quality, and H R Inspection Service inspected the structural steel and concrete repair work in 1979, after a section of the hotel's atrium roof fell during construction. But city inspectors never examine welds at construction sites, according to a quote by Kansas City codes administrator Jack White, as they are not trained to do so. In fact, the ability of city building inspectors to police construction is limited: in New York, for example, there is no structural engineer among the building inspectors. And Irwin Fruchtmann, New York City Commissioner of Buildings, points out in *The New York Times* that with today's sophisticated computer-developed structures, his department cannot check out every last detail.

As to the changes made in the original suspension rod detail, all parties are avoiding responsibility. Once a building design has been approved by the city, says Kansas City's Calkins, the project's architect is authorized to change it in ways that, in his opinion, do not violate the building code. And with a project management company involved in the construction as well as an architectural firm, there is question as to which party had overall responsibility for supervision.

Investigations

It is difficult to pinpoint any one cause for the failure, but obviously investigations are crucial to reduce the likelihood of similar disasters. It is strange, then, in the week following the Hyatt tragedy, that the Kansas City Council refused (in a 12-1 vote) to adopt Mayor Richard Berkley's idea for an independent investigation of the tragedy. *The Kansas City Star* and *The Kansas City Times* quickly stepped into the fray, hiring specialists to provide analyses. Another curious fact was the speedy removal during the night of the uncollapsed walkway to "avoid further danger." It would certainly have provided positive data.

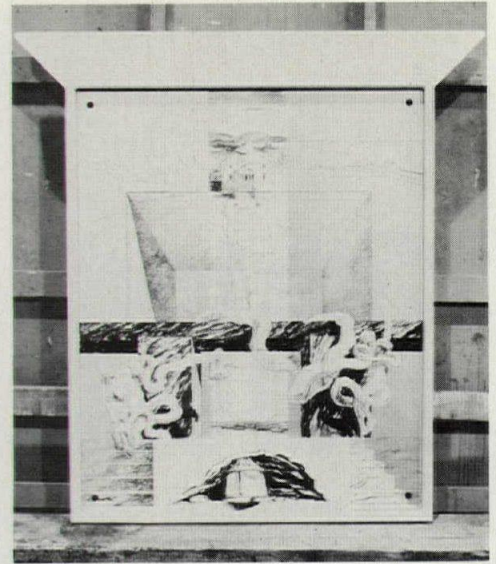
Time may reveal more possible causes for the failure, but will also obscure facts. And it will reduce attention to the sad event—a diminution of publicity that all involved parties hope for, but that will not benefit the public.



GRAU murals play on worlds

Spatially separated views and temporally disparate architectural worlds meet and tantalize commuters, in two murals designed and produced by the Italian studio GRAU for the portal to housing by architect Henri Ciriani at Marnes la Vallée (P/A, Sept. 1980, p. 58), six miles east of Paris. The medium of the murals—prefired porcelain on metal—creates an iridescence that illuminates the space, as does the message of each. The larger mural, grand in scale (20' x 24') like the portal itself, is placed at the intersection of two main circulation paths, and depicts a window where none exists. The smaller mural (30" x 40") explores the nature/architecture dialogue while highlighting the real view through the portal, that of a "valley" between nearby buildings and nature beyond.

The large mural, designed by GRAU member Allesandro Anselmi and produced with the help of Pierluigi Eroli and Enzo Rosato in the Cinecittà Studios in Rome, is made up of 28 square sections to facilitate firing and transportation. The square shapes also echo the cubic motif of Marnes la Vallée's architecture, but the depiction itself is very Italian. A dreamer's head emerges from a scene of nature, and is caught between two ways of seeing the classical orders. Four orders are rendered diagrammatically, in such a way as to capture "all the possible organizations of architectural space," according to the designer, who compares his process of abstraction of the orders to Charles Moore's at New Orleans' Piazza D'Italia, where the technological product, metal, is used instead of the traditional stone.



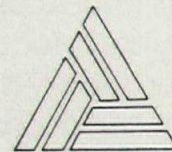
Part of the large mural (left). Above, the small mural.

The smaller mural, designed by Franco Pierluisi, represents the struggle between nature and architecture. Two figures are caught between Palladio's Villa Rotonda in the distance and a primitive hut below ground, and must be saved by a Palladian figure (Laocöte's father figure). A mechanical perspective grid is omnipresent; a balustrade represents the reality of architecture today.

The designs were reproduced on the panels with careful workmanship, acrylic paint being applied by air brush to the masked metal sections.

To designer Anselmi, the murals' myths are part of the thread of Western culture. Nature emerging from man's mind? Or architecture emerging from nature? Anselmi's dreamer's eyes are blank. [P.J.L. Brown]

P.J.L. Brown, a graduate student of architecture at the University of Washington, Seattle, has been doing research in Rome.



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Dwelling in the Urban Community

The Associated Collegiate Schools of Architecture joined with the San Francisco Center for Architecture and Urban Studies to stage an engrossing conference titled "Dwelling in the Urban Community," July 23-25, in San Francisco. In the Corbusian setting of Paffard Clay's 1968 addition to the city's Art Institute, an audience lured from all over the western U.S. and British Columbia listened to Donlyn Lyndon, [News report continued on page 40]



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Roger Montgomery, John Pastier, Glen Small, Susan Poniz, Norbert Schoenauer, Jerry Finrow, Lucien Kroll, Ricardo Bofill, and Ralph Erskine present—in that order—their ideas on the subject and their work. It was a heady experience. Despite architects' habit of broadening any theme to take in the whole universe of creation, the problems of designing humane habitations were addressed at length. Case studies ranging from the design of communities in the sub-Arctic by Norbert Schoenauer and Ralph Erskine to community design in the Algerian desert by Ricardo Bofill bracketed projects from the temperate zones in the U.S. and Europe.

Evident throughout the conference was the polarity between those who practice architecture primarily as a social activity that creates well-crafted products and those who are primarily devoted to aesthetic form-making. The first category was well represented by Jerry Finrow's presentation of community design in Oregon based on the methodology of Christopher Alexander's *The Pattern Language*. Through scrupulous attention to participatory process in setting up user groups, preparing drawings to be shared as basic design documents in all meetings, and faithful consultation of the established patterns, Finrow and his partner, Bob Harris, have built communities with both public and private funds that demonstrate the effectiveness of this approach in making amenable dwelling places.

In Lucien Kroll's work, user participation was balanced with a keen interest in aesthetic expression and form. Using nature as a model, Kroll demonstrated the architect's role in the continuous process of transforming the urban fabric. The most convincing examples were those in which additions to Modern European social housing projects simulated the transformation of rock by lichen.

The most controversial speaker was Ricardo Bofill. His rhetorical style was redolent of the kind of bombast about art and sacrifice that so puzzles the nonarchitectural world. In stating that he does not respond to established needs but intends rather to create new needs through his work, Bofill affirmed his belief that art is key to the process of creating community. He also harped on the value of returning to the primitive world of appropriate technology.

Ralph Erskine, the final speaker, affirmed the Modern Movement stance of serving the whole society by finding reasonable solutions to problems and making art out of them. Equal in length to Bofill's presentation, Erskine's projects ranged similarly from design under the most stringent climatic conditions to work in industrial England in the community of Byker. Though Erskine dis-

paraged style as such, his work revealed an interest in form that related it to Kroll's.

The ratio between questions and answers produced by such conferences is always hard to determine. Though there are probably as many answers as there are situations, it was refreshing to see evidence of positive responses to what often appear to be intractable problems. Real, not token, participatory design and attention to the process of design rather than the product emerge as proven approaches. As to art, there is no arguing against the need for it, but Erskine's definition of the mission of architects puts this need in perspective: "The architects' role is to find which dream they believe in and use their art to serve that dream."

Smooth management by Jerry Gast and Richard McCommons plus a clarifying apposition among presenters helped to make this an important conference among conferences. [Sally Woodbridge]

ACSA Energy Institute at MIT

The Association of Collegiate Schools of Architecture, with support from the U.S. Department of Energy, conducted the fourth annual Summer Institute on Energy and Design for faculty in schools of architecture, holding forth for five days at the Massachusetts Institute of Technology. The 45 educators attending this year's program heard talks by AIA president R. Randall Vosbeck, Richard G. Stein, FAIA, Richard D. Rush, AIA, Robert A.M. Stern, FAIA, Fred S. Dubin, P.E., and many others. They also worked with innovative educational materials devised by colleagues from MIT, the University of Oregon and Georgia Tech. The program enters its fifth year in 1982, having reached faculty members from nearly all of the country's 92 professional programs in architecture. DOE's Buildings Division director, John H. Cable, AIA, says that he views the program as "one of our most successful efforts to build a long-term capacity for technical progress in the design professions." Institute attendees have gone on to integrate program experience with their teaching and research activities. ACSA estimates that thousands of architecture students (and many professionals, through continuing education programs offered at some schools) have benefited from the program. [T. Vonier]

Thomas Vonier appointed P/A correspondent

Architect Thomas Vonier of Washington, DC, has joined the roster of P/A correspondents. After studying architecture at Washington University, St. Louis, and receiving M. Arch. from University of Wisconsin-Milwaukee, Vonier spent three years as a program director for the AIA Research Corp., concentrating mainly on projects involving energy use in the built environment.

He has worked for architectural firms in Vienna, London, and the U.S. and was for two years associated with Windworks. Now he heads the firm of Thomas Vonier Associates, in Washington, practicing in the areas of architectural design and research; he is also a principal of the Urban Development Partnership, Washington, and the Leadenhall Group, Baltimore, both active in the purchase and restoration of old buildings.

Vonier will be reporting for P/A mainly on the activities and policies of the federal government and professional organizations. Veteran P/A correspondent Carleton Knight III—who is also editor of *Preservation News*—will continue to write on preservation matters and on architectural design in the Washington area.

New zoning in New York

The following is excerpted from the Oct. 1, 1981, issue of Skyline, and represents the major portion of an article by its editor, Suzanne Stephens.

Flatly put, much of the problem with zoning has occurred in the values and attitudes that have shaped zoning through the years. Valuing light and air the first time around (1916) produced setback buildings that were criticized as being boring "wedding cakes." When plazas were valued (1961), the results were usually disappointingly bleak stretches of pavement. When the full gamut of bonusable amenities (late 1960s and 1970s) was assessed, their final results were often just blank non-spaces. The problem for the most part lies not in what zoning wants to keep, but how zoning—usually written to define things quantitatively—can assure a qualitative response.

FAR changes

To deter the proliferation of larger and bulkier buildings in East Midtown and to redirect growth to the lower density West Midtown area, the City Planning Department now proposes keeping the base FAR all over the East Midtown area at 15, with limited incentives that would allow extra floor space to total an FAR of 18 instead of the 21.6 allowed on Fifth Avenue. The mid-blocks of the East Side, however, will be kept at the lower FAR of 12, while mid-blocks on the West Side will be allowed an FAR of 15.

Frankly this isn't much of a "lid" on East Side growth, except for keeping down large assemblages more tempting under one FAR. The base FAR is 15 now; if the developer wants to build on the East Side, he'll just restrict his choice of amenities to the ones the city allows, and still build to an FAR of 16 (as-of-right) and 18 (with special permit), the FAR of the IBM and AT&T buildings. It is probable, however, that since the

[News report continued on page 44]

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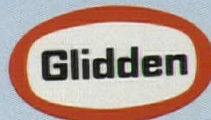
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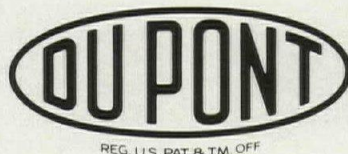
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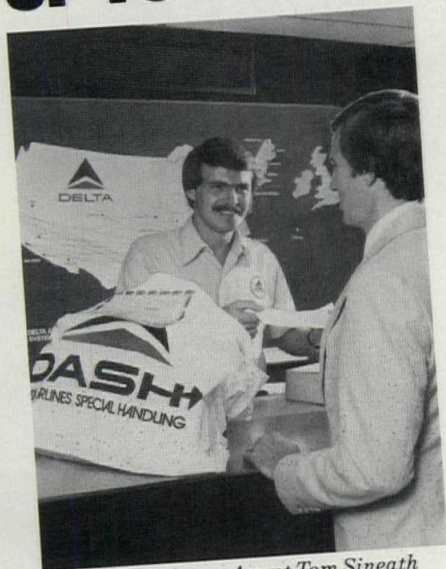


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News report continued from page 40

city is offering a base FAR of 18 plus tax abatements and more incentives on the west side of Midtown, it will be able to spur growth there too. Highrise growth will be evenly spread out.

The pattern of lower buildings along Midtown cross streets owes much to happenstance: the shorter length of the blocks along the avenues, along with the 1961 setback provisions which were tied to the width of the street, meant that it was easier to assemble land and build taller towers on the avenues. The shift in scale and ambiance between new glassy towers on avenues and low-rise brownstones and townhouses on side streets has made Midtown a rich and varied perceptual experience—one that city planners began to acknowledge too late.

Still, most of the blocks of townhouses reach an FAR of only about 6, although zoning currently permits an FAR of 15 there. Even the Museum of Modern Art's 48-story condominium tower, 621 ft tall on a narrow side street, keeps within its lower FAR of 10, since its zoning lot encompasses the MoMA sculpture garden and the older Museum. Now the low-scale texture—or what is left of it—will not be much safer with an FAR of 12. In recognition of this, the City Planning Department has set aside a few special blocks.

The change in FAR between mid-block and avenue actually attempts to solve the problem that has arisen in the last few years over zoning-lot mergers. Developers have often bought the air rights of low-rise mid-block buildings and then bargained with city planners to allow them to count the land on which the buildings stood as part of their zoning lot, in order to beef up the numbers in the FAR formula. When this practice, exemplified by the weighty 44-story Fisher building on 54th Street, was applied to mid-blocks, the effect was visible. With the proposed planning changes, developers would not be able to shift the same amount of floor area earned on the avenue to mid-block assemblage, a factor that will keep large-scale development down and encourage smaller towers on smaller lots. The irony, of course, is that zoning-lot mergers do help retain older buildings. The builder may be less inclined to tear down a brownstone if he cannot only buy its air rights, but also use its lot size for his own zoning lot.

The city also proposes certain "growth corridors" in Midtown: between 39th and 34th Streets on Fifth; 42nd to 34th on Sixth; and along 34th from Fifth to Eighth Avenues. The FAR, now at 10 in those areas, would be allowed to go to 15. These growth corridors, replete with tax abatements, will no doubt begin to reflect the change in FAR soon enough. The stores in the mapped growth area, such as Lord & Taylor's at 38th Street, will probably feel the pressure first—not just because the FAR differential makes that much difference to developers. But the tax

abatements, plus the fact that stores lie on large parcels of already-assembled land, will be very enticing.

Incentive zoning gets toned down

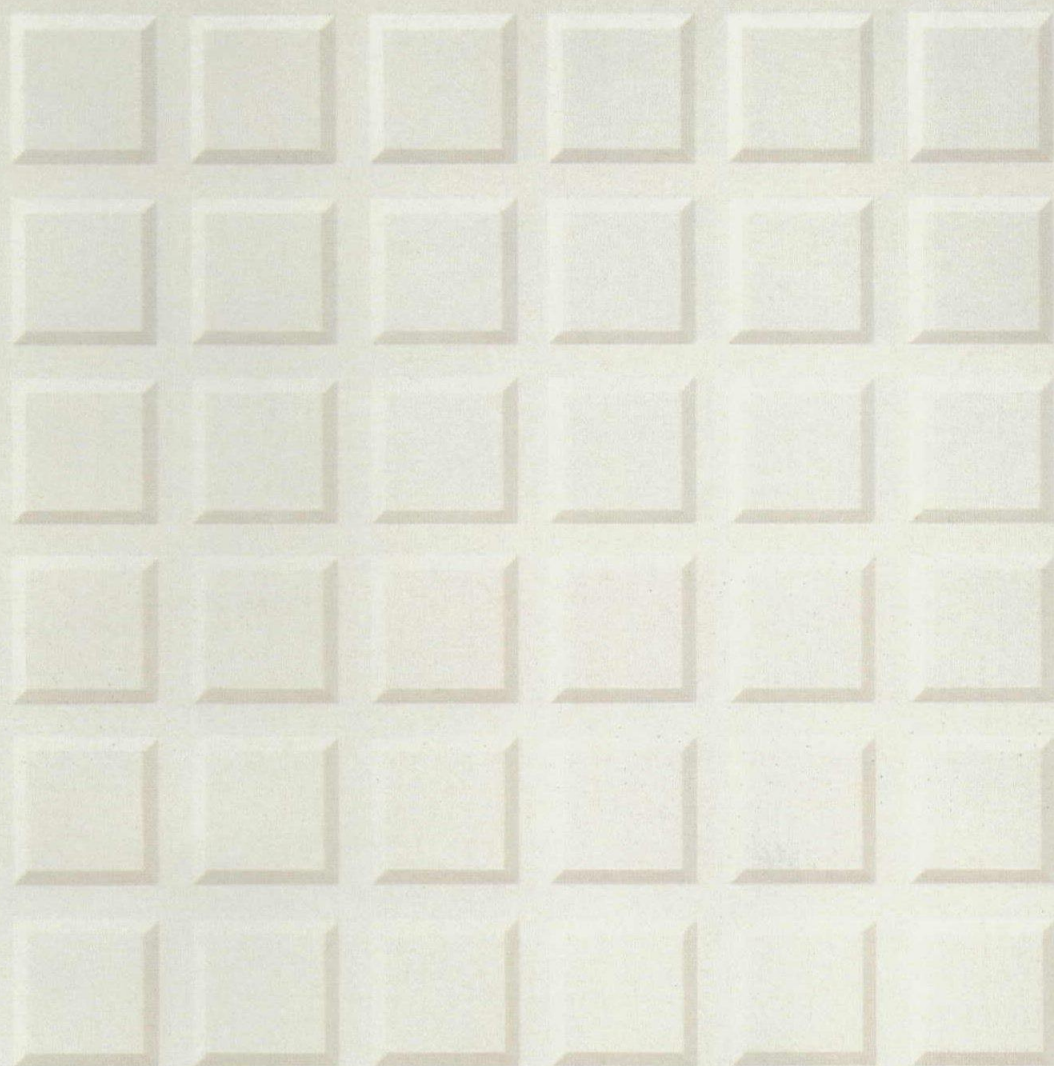
A major change integrally related to FAR concerns the practice of giving extra floor area to developers in return for "public amenities." In the new zoning proposal, the type of amenities for which the developer would receive floor area would be restricted to three types of amenities: the plaza, a staple since 1961, but now more refined; an "urban park"—open space not necessarily contiguous with new development, but that may be used for an air-rights transfer under the same ownership, and with a special permit; a special permit that will be given to "superior" subway connections.

These amenities should be tested, however. The new provisions, for example, allow the plaza to be glassed over—an idea that should first be tried out with the IBM plaza, when finished, before being put into law. Moreover, plazas may end up having adverse effects on cross streets, where they will have to be placed, since most new buildings will be required to extend out to the lot line in order to maintain the "street wall" on the avenues. When a few plazas exist, such as Greenacre Park and Paley Park (both contained, small, and well planned), they add to the side-street character. But if open plazas proliferate on side streets, they could end up looking like so many missing teeth.

Certain controls would be mandatory, for which no bonuses are given. Requiring that the base of the building maintain the existing street wall on designated avenues and that retail facilities be kept in some new development are two such provisions. "Special District" status on Fifth Avenue and in the theater district stays, but the Fifth Avenue FAR of 21.6 will be dropped. New for this district is a requirement that light-colored masonry cover at least 20 percent of the building up to the 85-ft height in order to maintain the character of the avenue.

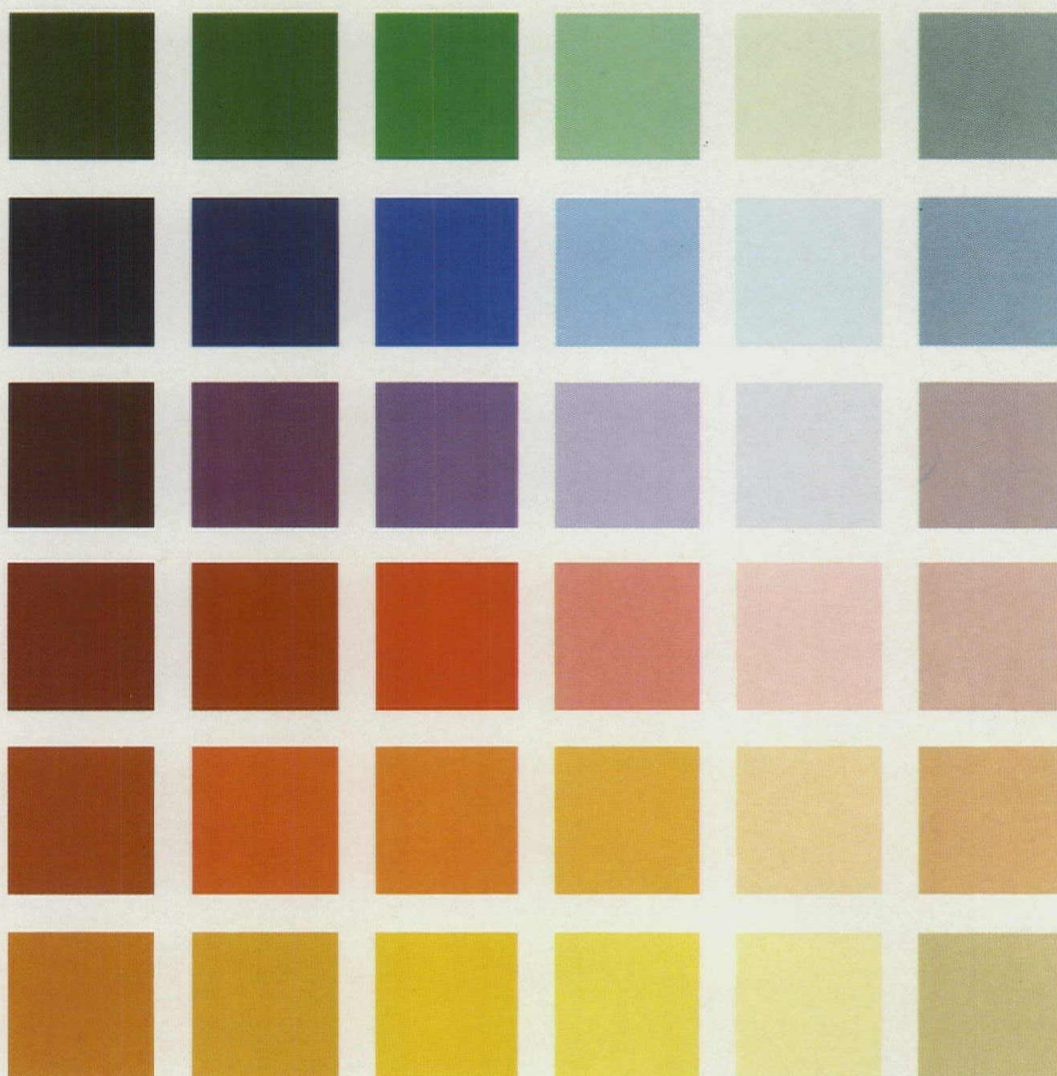
The theater district would be allowed more possibilities for bonuses than the East Side, and its upper FAR limit of 21.6 would be kept—to be used for the transfer of unused air rights from adjacent theaters, the rehabilitation of nearby theaters, and the inclusion of new theaters in the new buildings, or for the creation of "Through-Block Galleries." The City Planning Department has gone so far as to list 36 theaters that cannot be demolished without special City Planning approval.

But how do you build new office buildings and save old theaters without destroying the old show-biz charm of the area—not to mention the theaters? The city-commissioned Kwartler/Jones report notes that many unlisted theaters are still to be found within the first 100 feet of the avenue area—the most opportune location for new development. It won't be easy to encourage large-scale development and save all those theaters, especially since air-rights transfers from [News report continued on page 48]



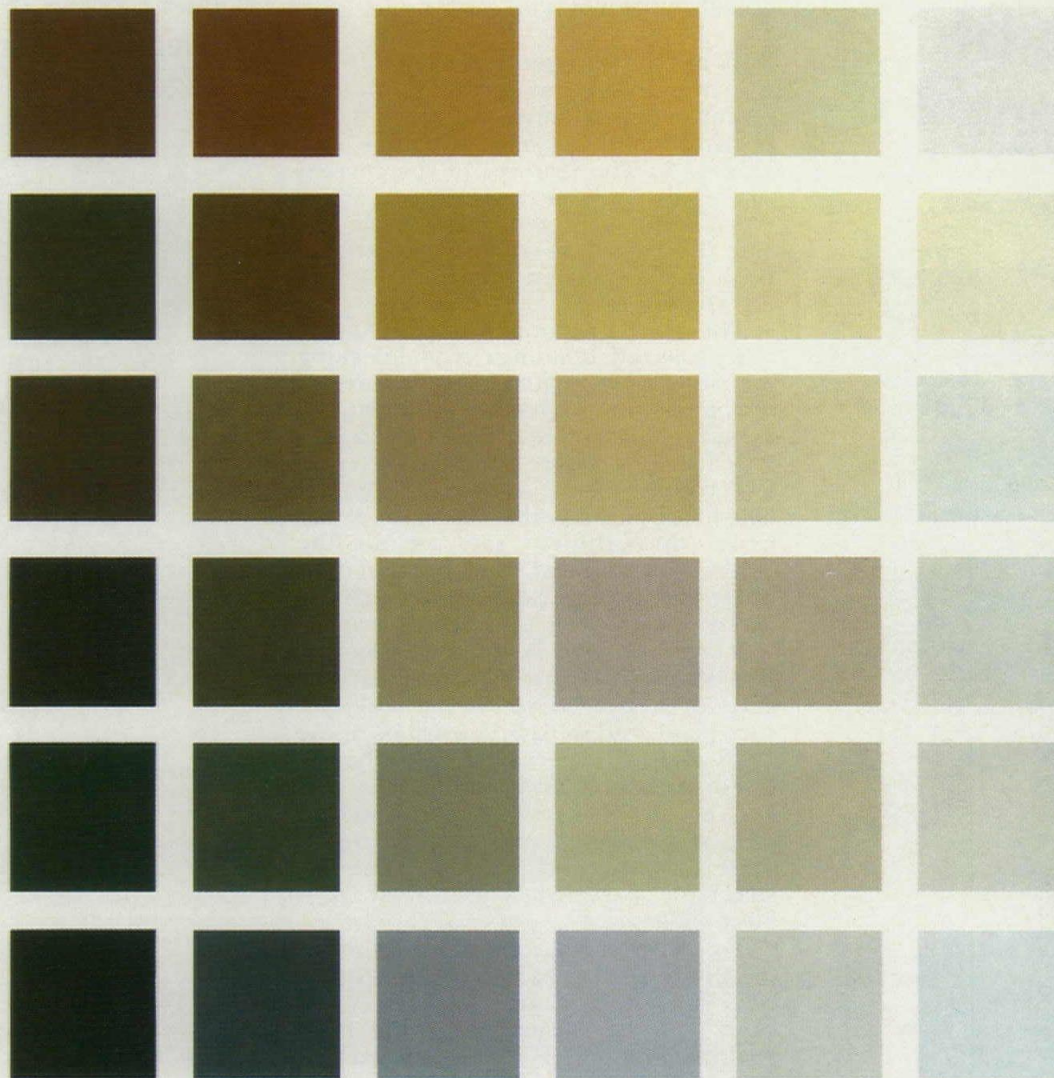
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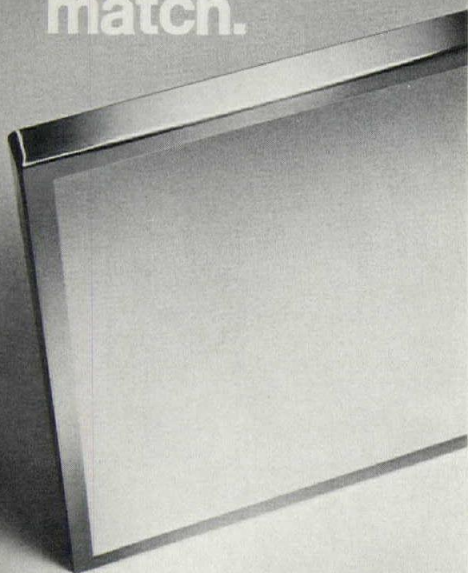
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News report continued from page 44

theaters to office buildings have to be contiguous, except in the case of landmarks. But even for the listed buildings, developers just need City Planning approval for demolition.

Bulk and how to get it in shape

The most interesting section of the new zoning proposal involves not just the restricted bonuses or the tighter East Side FAR. The features of the current zoning that are most significant affect the placement of the bulk on the site and the switch in zoning procedures from the negotiated approach back to the as-of-right.

The new bulk regulations aim at keeping projected buildings from blocking the sun and at maintaining a sense of openness on the streets of Midtown. In designing his building, the architect and his client can choose between two types (called "tiers") of as-of-right zoning. The first tier is based on specific regulations, which the city says are not the old-hat "prescriptive" type, but that definitely do set up rules and which do make explicit ways those rules may be "broken." Called "Daylight Compensation Rules," the first tier, with its "sky exposure curve," defers to the sky exposure plane and setback provisions of the 1916 zoning. This curve begins above a given maximum street wall height, and like that of 1916 setback, is adjusted to the street width. For example, it would slope upward and inward from the street line, starting at a 90-ft height on a 60-ft-wide street.

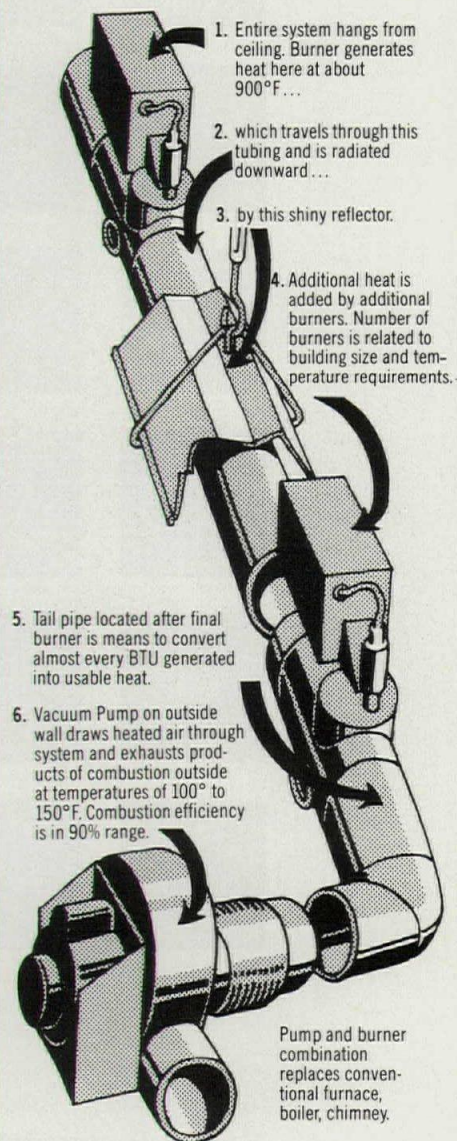
To give some flexibility to architects for the tower forms, city planners Patrick Ping-tze Too and Michael Parley came up with various ways the rules could be modified. They defined another sky exposure curve, called the "1/2 d curve," that sets up a second envelope limit to which the building bulk may reach beyond the regular sky exposure curve, if it compensates for the encroachment by setting back or receding from the curve at another point on the lot.

The second tier allows towers to score "daylight points" rather than having to conform to sky exposure curves. This tier, based on the proposal submitted in 1980 by consultants to the City Planning Department, David Brody Associates and Kwartler/Jones, allows bulk to be judged on a "performance basis." Thus this tier is tied to a Daylight Evaluation Chart where building bulk is plotted according to the "Waldrum Diagram" to determine how much sky is blocked by proposed development if one stands in the center of the street or looks at the building profile down the block. The building must attain a certain score, based on the 70-degree average that the buildings are set back according to 1916 zoning, and the 75-percent sky "dome" around most buildings. In this a building's reflectivity is given importance, since the qualities of certain materials affect the perception of bulk. Even in

[News report continued on page 52]

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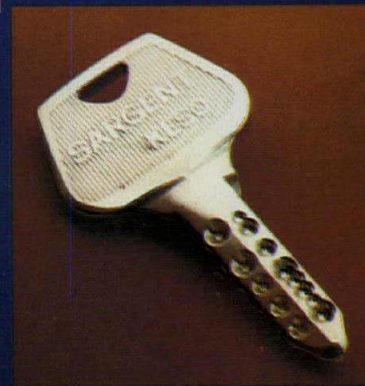
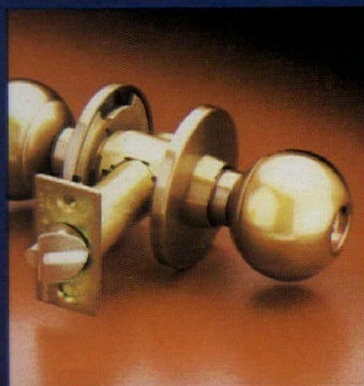
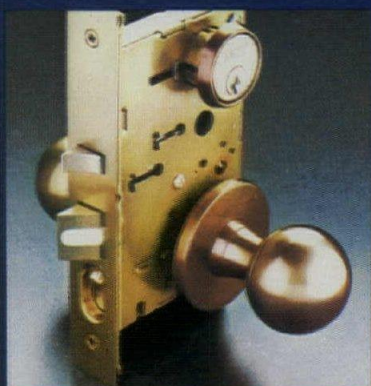
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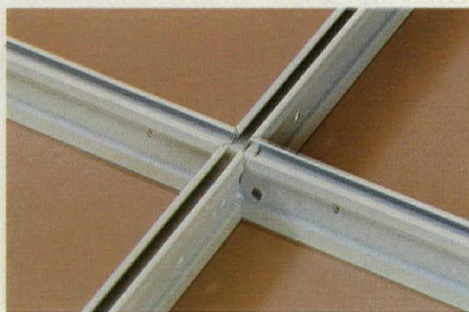
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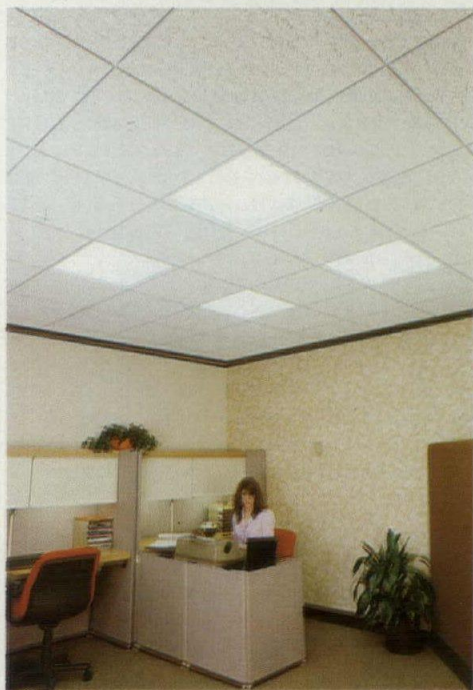


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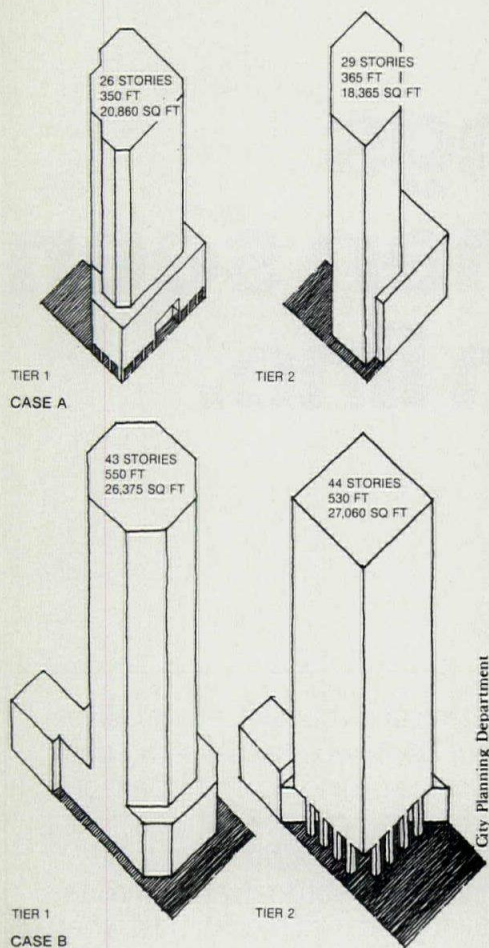
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Two hypothetical lots, with building envelopes resulting from Tiers 1 & 2.

the second tier, the Waldrum Diagram plots only the amount of sky the new development will block, not the amount of sky left over from developments on either side.

While this performance-oriented tier allows more flexibility to the architect, it will be only a backup system. Therefore, the developer who wants to make his life easy will probably follow the tower shapes suggested by the first tier. Certain towers will no doubt become stereotypes. Just as the 1916 zoning resulted in "wedding cakes" and the 1961 zoning encouraged "shoe boxes" stood on end in a plaza, this zoning could well prompt towers with ski-slope curves arising from squat rectangular bases defining the street wall. Furthermore, each building is evaluated against an assumed existing context where there are street walls of certain heights and setbacks at a 70-degree angle. But much of the existing development has occurred according to substantially different zoning policies. There will be a number of places where the new bulk configurations will appear "out of context."

A more contextual approach might have been afforded Midtown had the City Planning Department adopted Kwartler/Jones's "street district" concept, aimed at making street wall heights adjust to existing development. Now if a building on an avenue is allowed to go to a certain height, that height wall can wrap around the building for a length

of 100 ft into the side street, where it doesn't belong.

Much of the Midtown zoning report makes a lot of sense, although (naturally) it should have been proposed years ago. The cautionary approach to incentive bonuses (which, nevertheless, should not be tossed out completely) and the reapportionment of bulk on the sites all show a strong, well-thought-out redirection. Most important, by applying a performance way of thinking to city planning, along with criteria for daylight and openness, the city is acknowledging the importance of the *pedestrian perception* in the appreciation of the built environment.

However, many specifics of the zoning proposal will have to be scrutinized closely. The FAR "limits" sound as if they limit more than they do: they will still allow high construction to go up in the East Side of Midtown, as long as they block less of the sky. Low-rise buildings over most of Midtown are doomed to disappear, except in a few instances where they are declared landmarks or occupy specially designated mid-blocks. In the end there will still be many badly designed, boring-looking towers, just with some slightly new shapes.

The most dubious parts of the City Planning report concern the areas the proposal only touches upon. For example, there is specific mention of revising Clinton zoning (now a protected low-density residential area) and "looking into the feasibility of a new kind of high-density residential district for the housing market that is essentially Midtown-oriented." Sounds like luxury highrises for Clinton.

As disturbing is mention in the report of the establishment of a New York City Economic Development Corporation to provide assistance in site assemblage through its powers of condemnation "if necessary." Does the ease with which developers may level parts of Midtown—obviously older and potentially more historic fragments—have to be aided by the city? The condemnation clause will help preempt "holdouts," the developers' curse. But it robs those who own their own homes or businesses of a little stability in this sea of change.

The Midtown zoning report's intentions and concrete proposals are sound. But unless vulnerabilities and ambiguities are addressed in the coming months, it won't do much good. There will still be "overbuilding"—it will just be in different places. [Suzanne Stephens]

Times Square: developers respond

When the City and State of New York asked, last June, for proposals from developers for construction and rehabilitation in Times Square, there was doubt in certain quarters that a sufficient num-

ber of developers would come forward. But the doubt was unwarranted. By the post-Labor Day deadline, 26 proposals from developers in five states and Canada had been filed, at least one proposal for each of the ten sites in the redevelopment plan.

The city's comprehensive plan for the area includes the preservation of nine theaters on 42nd Street, and the construction of office space, a merchandise mart opposite the Port Authority bus terminal, and a possible hotel.

There was disappointment in the spring of 1980 when Mayor Koch rejected a plan for renovation in the area because of insufficient developer competition. The present situation indicates the private sector's faith in the financial strength of the redeveloped area, encouraged undoubtedly by the city's commitment to major capital improvements.

Alfred Barr: 1902-1981

"Without Alfred H. Barr Jr.," wrote art critic John Russell in *The New York Times*, "there quite possibly would never have been a Museum of Modern Art on West 53rd Street in New York . . . a walk-through encyclopedia of art, architecture, design, photography, and film. . ."

Alfred Barr, director of the MoMA from its establishment in 1929 until 1943, died in August in Connecticut. Barr had studied at Princeton and Harvard, where he was inspired in his interdisciplinary approach to art by teachers Frank Jewett Mather and Paul Sachs. In 1927-28 he traveled to Germany, to observe the development of modern art at the Bauhaus, and to Russia, returning with an understanding of International Style architecture and avant-garde art which he was to invest in—and, with Philip Johnson, indelibly stamp upon—the young museum.

Barr was criticized for neglecting American art developments in favor of European ones. After 1943 he was no longer director of the museum, and pursued his studies of Picasso and Matisse. His Russian diary was published in "October" magazine in 1978. Barr's death followed a very lengthy illness.

Robert Moses: 1888-1981

Robert Moses, whose array of public works projects affected the face of New York City and State, died in a Long Island, NY, hospital in July.

He was never an elected official (he only once ran in an election, and lost disastrously), but held several powerful appointed offices—some simultaneously—including that of New York Parks Commissioner, head of the State Parks Council and the State Power Commission, and chairman of the Triborough Bridge and Tunnel Au-

[News report continued on page 56]

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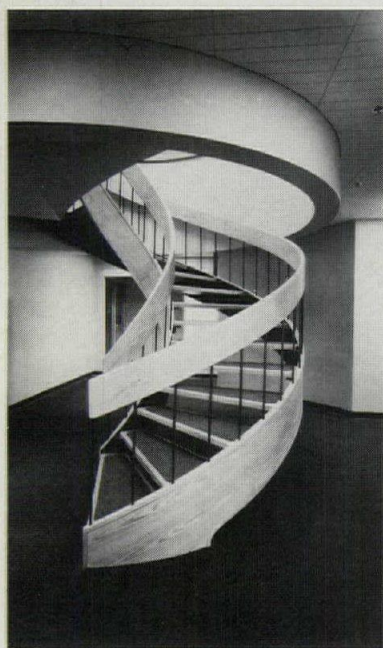
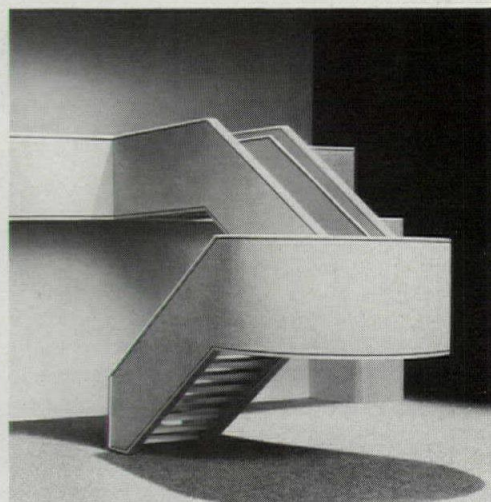
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thority. He built 658 playgrounds in New York City, 416 miles of parkways, and 13 bridges. His projects included the Triborough Bridge, Jones Beach State Park, the Verrazano-Narrows Bridge, the Long Island parkway system, New York's West Side Highway, and the Niagara and St. Lawrence power projects.

Though it was a vision later discredited by younger planners, as *The New York Times's* Paul Goldberger points out, Moses' image of a city of highways and towers influenced for decades the planning of cities around the nation.

Peter Collins: 1920-1981

Peter Collins, architectural historian, author, and professor of architecture at McGill University, died after a brief illness in Montreal in June. Collins, who had obtained a Diploma in Architecture in 1948 from the Leeds College of Art, will especially be remembered for his books: *Concrete, the Vision of a New Architecture*, which was inspired by his work with Auguste Perret; *Changing Ideals in Modern Architecture*, his most successful publication; and *Architectural Judgements*, a comparative study in decision making in architecture and law, written while he was studying to obtain his Master of Laws degree (1971) at Yale and Queen's Universities. He was an editor of the *Journal of the Society of Architectural Historians* (1967-68), and his articles, numbering about a hundred, appeared in most architectural periodicals in North America and England, including *P/A*.

During his career as a respected teacher of architectural history, he accepted visiting professorships at the University of California, Berkeley, and at Smith College, and lectured at Yale and Cambridge Universities.

His honors included the Hitchcock Medallion from the Society of Architectural Historians in Great Britain (1969) and the Architecture Critic's Citation of the American Institute of Architects (1972).

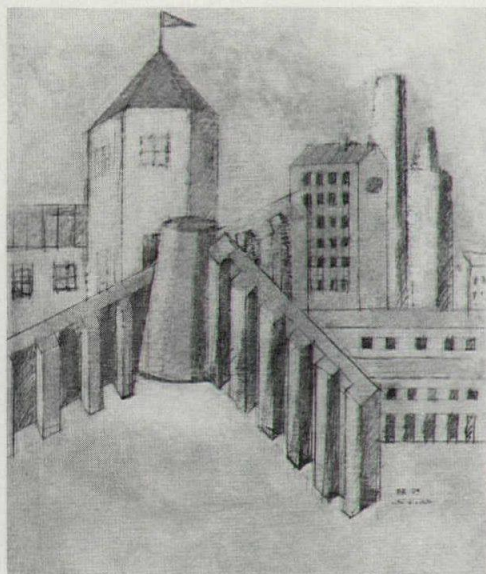
Albert Speer: 1905-1981

Albert Speer, Hitler's Minister of Armaments and War Production from 1942 and his official architect, died in London in early September.

Speer, an active member of the National Socialist Party from 1931, was appointed official in charge of government construction in 1934. His early projects included a stadium in Nuremberg, party headquarters in Munich, and the chancellery in Berlin. Plans for the reconstruction of Berlin, which was to be a Nazi showplace, were begun by Speer in 1938, but abandoned because

of the war. Many of his unbuilt projects were grandiose—a triumphal arch 49 times the size of the Arc de Triomphe in Paris, a dome nearly 900 ft high, and a 300,000-seat stadium.

Speer admitted his guilt at the Nuremberg war crimes trials in 1945-46 (the only Nazi leader to do so), and after being released from Spandau prison in 1966, devoted himself to writing his memoirs, which he published in three books between 1970 and this July.



Rossi's *Citta d'Estate*, '79.

Rossi, evolution

The quickly mounted but poised and effective exhibit of Aldo Rossi's *Projects: Monuments of Venice*, showing into early October at the Max Protetch Gallery in New York, proves that Rossi's work evolves like a city should, slowly, along continuous lines (but with surprises), with a youthful step, and with texture. To the primitive pedimented hut, now topping a trio of grain-elevator forms, is added his floating theater of the Venice Biennale, a centered form of a higher stage of evolution. His media are varied—pencil, marker, pastel, crayon—and his palette daring—pastel colors and primaries, and places in between. He combines perspective and elevation in a picture within a picture, integrating both with a single, devilishly clever line. Only his coke cans and flock paper are, or should be, beneath him.

The works in the show are not numerous; most are small; but their presence and variety are remarkable. [SD]

Real profit

Former President Richard Nixon has sold his four-story townhouse on the exclusive Upper East Side of New York to the Syrian Government. Nixon paid \$34 million for it in October 1979; he is selling it for a reported \$2.6 million.

Honors and appointments

David D. De Long, an architect, author, consultant on historic preservation, and associate professor of architecture at Columbia University, has been appointed director of the Historic Preservation Program of Columbia University's Graduate School of Architecture and Planning. He replaces William Murtagh, who has become vice president of the National Trust for Historic Preservation in Washington, DC.

Harvard Graduate School of Design has awarded the 1981-82 Loeb Fellowships to nine professionals concerned with the built environment, giving them the opportunity to pursue a year of independent study at Harvard: architect Stephen J. Carter; landscape architect Michael Curran; economist Michael L. Horst; architect and urban designer Kenneth E. Kruckmeyer; preservationist Mary C. Means; architect and architectural delineator Paul Stevenson Oles; landscape architect Robert W. Ross, Jr.; architect David S. Slovic; and architect N. Scott Smith.

NIBS recommendations for regulatory relief

Ending the second stage in efforts launched with the inauguration of the Reagan administration last winter, the National Institute of Building Sciences recently delivered seven recommendations to the president and Congress on ways to reduce federal regulatory burdens on the building industry. The NIBS report touches on several of the regulations that the U.S. Chamber of Commerce listed among "The Terrible Twenty" last spring. Reading like a housing developer's wish list, it purports to recommend actions that would benefit all segments of the generally beleaguered building industry, and is viewed as part of NIBS's overall aim to "evolve a more rational and harmonious regulatory environment."

The report suggests that federal regulations be reduced by first considering the recommended solutions (preferably involving voluntary actions) of broadly constituted advisory groups. It generally encourages increased federal use of voluntary standards and asks that the OMB issue a policy requiring federal agencies to show cause why a voluntary standard would not be suitable for solution of a perceived problem. NIBS also calls for a system of state-based clearinghouses to provide "one-stop" information on all federal regulations pertaining to building and land development.

Citing difficulties encountered by contractors in meeting the Labor Department's minority hiring require-

[News report continued on page 60]

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ments, the NIBS report seeks increased federal incentives for training of women and minority group members to enter skilled building trades. This recommendation was revised from an earlier version advanced in the NIBS committee, which called for complete elimination of current minority hiring quotas.

Other recommendations discourage the embargo of federal funds in one area to achieve goals in another (a form of federal sanction that has tied up government-backed construction projects in some places), and call on HUD and the Department of Energy to adopt voluntary industry standards for mobile home construction and for the energy efficiency of appliances.

No estimate was made of the possible dollar savings from these steps, but NIBS president Gene Brewer sees the recommendations as important for making buildings less costly. "Greater voluntary action," he said, "proposes a dramatic change in the relationship between industry and government." Brewer expects prompt and favorable action on the recommendations at various levels of the federal government.

NIBS now takes up the third phase in its efforts, moving to consider a host of other issues including sewer extension, noise and air quality regulations, and increased use of design competitions for securing professional design services on federal projects. Phase three recommendations are due in mid-December 1981. [Thomas Vonier]



More stamps for architecture

A block of four 18-cent commemorative stamps featuring significant examples of American architecture was issued in Washington at the end of August. The stamps depict the New York University Library, designed by Stanford White; the Biltmore House in Asheville, NC, designed by Richard Morris Hunt; the Palace of Fine Arts in San Francisco, by

Bernard Maybeck; and the bank in Owatonna, Mn, by Louis Sullivan.

The stamps are the third issue in the American Architecture Series that began in 1979.

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We would like to hear about former P/A award-winners. Send information and photos by Nov. 15 for possible publication.

Calendar

Competitions

Oct. 31. Mailing date for entries, Laminator's Safety Glass Association "Design of the Year" Award. Contact LSGA Design Scholarship Award, 700 Van Ness Ave., Fresno, Ca 93721.

Nov. 15. Deadline for applications to Rome Prize Fellowships in Landscape Architecture and fellowships in arts and humanities including several architectural fellowships. Contact American Academy in Rome, 41 E. 65 St., New York, NY 10021.

Nov. 15. Application deadline for study fellowships from the American Council of Learned Societies. Other deadlines:

Dec. 1 (Chinese and East European Research); **Dec. 15** (Grants-in-Aid). Contact the Office of Fellowships and Grants, ACLS, 800 Third Ave., New York, NY 10022.

Nov. 30. Submission deadline for Walker/Group Student Competition. Contact Competition Director, Walker/Group, Inc., 304 E. 45th St., NY 10017.

Dec. 1. Entry deadline, Plywood Design Awards. Contact American Plywood Association, P.O. Box 11700, Tacoma, Wa 98411.

Jan. 26, 1982. Deadline for mailing entries, The Second Annual International Conceptual Furniture Competition. Contact International Conceptual Furniture Competition, Progressive Architecture, 600 Summer St., P.O. Box 1361, Stamford, Ct 06904.

Feb. 1, 1982. Submission deadline, Fourth Arango International Design Competition. Theme: Multi-Purpose Furniture. Contact Intercon Arts, Inc., The Metropolitan Museum and Art Center, 1212 Anastasia Ave., Coral Gables, Fl 33134.

Exhibits

Through Oct. 16. Spectacular Vernacular: Traditional Desert Architecture from West Africa and Southwest Asia. Columbia University, Avery Hall, 116th St. and Broadway, New York, NY.

Through Oct. 18. Buildings Reborn: New Uses, Old Places. IBM Corp., Endicott, NY.

Through Oct. 22. The Artist Views the City. Gallery at the Old Post Office, Dayton, Oh.

Through Oct. 23. Watercolor drawings for the rebuilding and redecorating of the Teatro Valle in Rome, 1791, by Francesco and Giandomenico Navone. Lucien Goldschmidt, New York.

Through Oct. 25. Transformed Houses. Parson's School of Design, 2 W. 13th St., New York. Subsequent dates: **Nov. 14-Dec. 13** The Peale Museum, Baltimore.

Through Oct. 25. Alfred Bendiner, FAIA: A Retrospective. The Octagon, Washington, DC.

Through Nov. 1. America's Architectural Heritage. AIA, Washington, DC, and Southwestern College, Chula Vista, Ca.

Through Nov. 1. The Golden Age of Naples: Art and Civilization Under the Bourbons, 1734-1805. Detroit Institute of Arts.

Through Nov. 1. The Drawings of Andrea Palladio. Ackland Memorial Art Center, University of North Carolina at Chapel Hill. Subsequent dates: **Nov. 15-Dec. 31**, San Antonio Museum of Art.

Through Nov. 1. Art of the Olmsted Landscape. Metropolitan Museum of Art, New York.

Through Nov. 1. Eleanor Raymond: Selected Architectural Projects. Institute of Contemporary Art, 955 Boylston St., Boston, Ma.

Through Dec. 6. P.B. Wright: Architect, Contractor, and Critic, 1838-1925. The National Academy of Design, 1083 Fifth Ave., New York, NY.

Through Dec. 12. "New Chicago Architecture." Gran Guardia Vecchia, Verona, Italy.

Through Dec. 28. Retrospective exhibition of the work of Jack Lenor Larsen. Musée des Arts Décoratifs, Pavillon de Marsan, Palais du Louvre, Paris.

Oct. 13-Nov. 22. Marcel Breuer: Furniture and Interiors. Baltimore Museum of Art.

Oct. 14-Nov. 29. Innovative Furniture in America. The Lowe Art Museum, Coral Gables, Fl.

Nov. 10-Jan. 24. "Suburbs" from early suburban prototypes to speculative plans for suburbs of the future. Guest curator: Robert A.M. Stern. Cooper-Hewitt Museum, 2 E. 91 St., New York, NY.

Nov. 20-Jan. 17, 1982. The Domestic Scene (1897-1927): George M. Niedeken, Interior Architect. Milwaukee Art Museum.

Nov. 24-Dec. 17. The Work of Mario Botta. Gallery at the Old Post Office, Dayton, Oh.

Conferences, seminars, workshops

Oct. 22-24. 1981 SW Regional ACSA Meeting, Eureka Springs, Ar. Contact Dick Kellogg or Patricia O'Leary (501) 575-4705.

Oct. 22-25. Fantasy/Reality—Los Angeles 200/California 2000, 36th Annual Convention, California Council of the American Institute of Architects, Biltmore Hotel, Los Angeles.

[News report continued on page 62]

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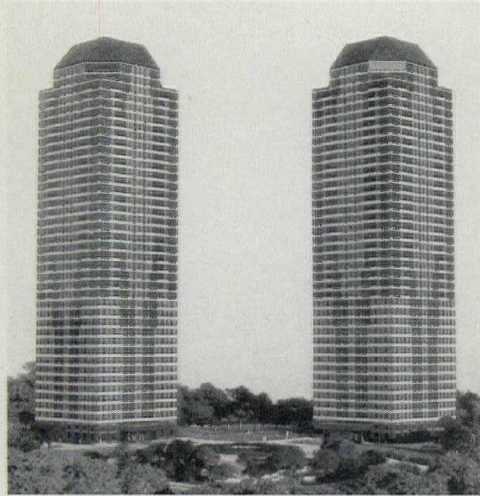
To get more finished plumbing out of your budget, find out more about Bradpack Wash Centers from Bradley. Look for our catalog in Sweet's File Sections 10.16/Br. and 15.7/Br. Or contact either your Bradley representative or Bradley Corporation, 9101 Fountain Blvd., Menomonee Falls, WI 53051, (414) 251-6000. TELEX 26-751.

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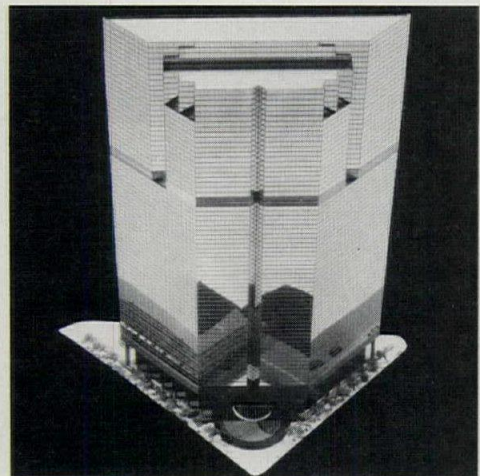


BRADLEY TIME SAVES SPACE, AND MONEY.

In progress



Battery Park City Commercial Development, New York. Architects: Cesar Pelli & Associates, New Haven, Ct. Four towers of granite and reflective glass, ranging from 33 to 50 stories in height and providing six million sq ft of office space, frame a public waterfront plaza of 3.5 acres on a 14-acre site across from the World Trade Center in lower Manhattan. A winter garden opens out to the plaza, while the three-story base structure will contain 100,000 sq ft of retail space. Part of Battery Park City, a residential and commercial development on 92 acres of landfill in the Hudson River, the development follows guidelines established in the 1979 Master Plan by Cooper, Eckstut Associates (P/A, Feb. 1981, p. 32). Battery Park City has had an eventful financial and planning history (P/A, Oct. 1973, p. 38), beginning with a 1972 general revenue bond issue of \$200 million by the Battery Park City authority, which could not continue to be sold because of adverse City financial conditions in 1974. The \$1 billion Commercial Development will be financed by private investment, with Olympia and York Properties the conditional developers.

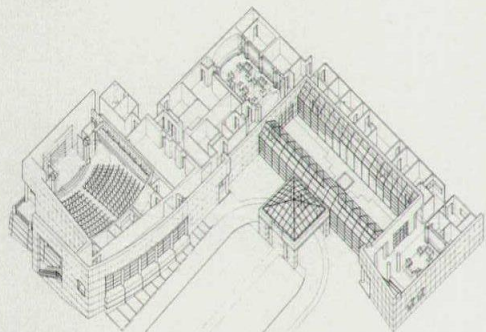


333 Wacker Drive Building, Chicago, Ill. Architects: Kohn Pederson Fox, New York; Perkins & Will, Chicago. The triangular site generated the form of this Downtown Chicago commercial building with its green-tinted reflective glass curtainwall. The curved

north façade echoes the bend in the Chicago River and takes advantage of the open riverfront views, while the south side responds to the urban character of the Loop, with a sculptural geometry accented by vertical niches and setbacks. The three-story base, sheathed in gray and black granite, green marble, and brushed stainless steel and entered through monumental portals sheltered by deep overhangs, contains a terraced space surrounded by retail facilities. A two-level, 92-car garage lies below grade. 1982 is target date for completion of the 36-story, one million-sq-ft, \$63 million building.



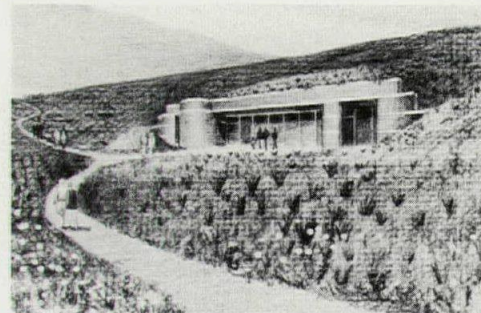
Bayshore Townhouses, Tampa, Fl. Architect: Harry A. MacEwen, Tampa, Fl. Ten traditionally styled three-story townhouses are being built on Tampa Bay and will incorporate many luxury elements: brick driveways, tongue-and-groove hardwood floors, nine-foot ceilings on the main floor, crown moldings and chair rails, individual elevators, and security systems. The townhouses, averaging 3000 sq ft, will be located on a site studded with oak trees and entered via a gateway. Completion date is spring 1982.



Bloomington Hospital, Bloomington, In. Architects: Schmidt, Garden & Erickson, Chicago, Ill. Two buildings totaling 75,600 sq ft are being renovated, an addition of 105,000 sq ft is being constructed, and future expansion is anticipated for this community hospital sited on a hill overlooking Indiana University. For economic reasons, say the architects, a single-loaded corridor will improve the efficiency of the surgical areas. For simplicity of identification, the outpatient waiting area, admitting center, and auditorium are located near the main entrance. To relate the aesthetic expression of the new buildings to the town, limestone is being used, while square punched windows repeat the fenestration of older hospital structures. The new entry was designed to convey a sense of place and arrival. Construction is planned in three phases to be completed in June 1983.

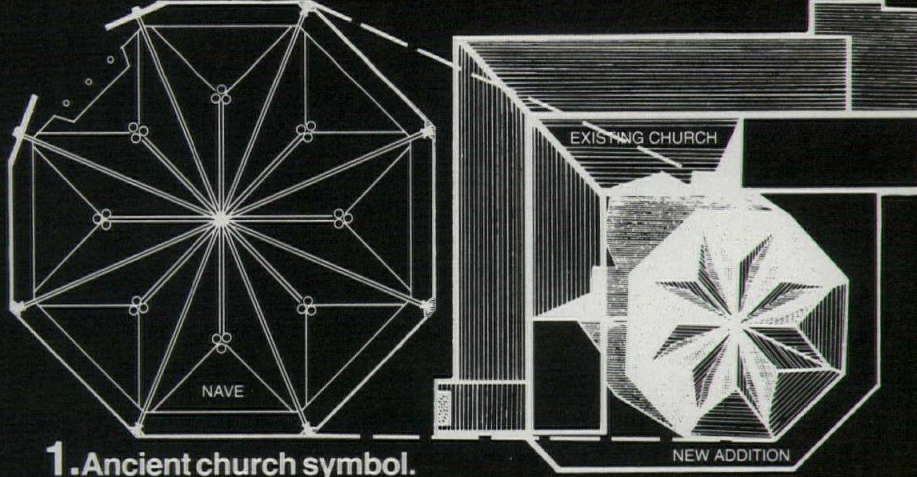


The Richard Salter Storrs Library, Longmeadow, Ma. Architects: Perry, Dean, Stahl & Rogers, Boston, Ma. This 13,000-sq-ft addition to a 6800-sq-ft public library, now housed in a three-story Georgian revival building in a historic district, will provide children's service areas in the basement and on the main floor. Historic district regulations preclude additions to the front and sides of the building, and the scheme, therefore, extends the original formal plan to the rear, adapting the original central gable form to the new central linear element. The sides of the addition are shaped by the rhythm and scale of the original building, by orientation to sunlight, and by the scale of spaces appropriate for children. A modified Trombe wall, lit by south-facing glass along the central addition, will provide up to two-thirds of the heat required. The pitched glass roof will have external louvers to shield the summer sun and to insulate at night. Materials include white painted brick, slate paving, white wood trim, insulating glass, and black asphalt shingles.



Visitor Center, Antelope Valley Poppy Reserve, California. Architects: The Colyer/Freeman Group, San Francisco, Ca. This Visitor/Interpretive Center for a new 1600-acre State Park Wildflower Reserve high in the western Mojave Desert will house permanent and temporary exhibits of wildflowers and desert ecology, and serve as a demonstration of energy-wise technology. Inspired by indigenous desert construction, the earth-sheltered insulating structure will blend into the rolling buttes. The walls, of split-face concrete blocks pierced by bands of smooth, desert-colored blocks, will suggest layers of sedimentary rock, and will step and curve where building meets earth. A 30-ft north clerestory will provide daylighting in the display area. Heat will come entirely from direct gain-mass storage in the exhibit, office, and vestibule areas and from a trombe wall at the restrooms. Summer cooling will be achieved by nighttime precooling of the mass, using a 150-ft underground duct. Electricity will be provided by an 8kW wind electric generating system. The building is structured to display the internal workings of its natural energy systems.

Two ancient ideas for a new church addition.



1. Ancient church symbol.

2. Red cedar handsplit shakes.



Sunnyland Christian Church, Peoria, Illinois
Architects: Phillips/Anderson/Associates

Problem: How to design a 300-seat sanctuary addition and create a totally new look for the Sunnyland Christian Church.

"Our solution was the reviving of an ancient church shape and nesting it into the existing L-shaped building.

"We brought it to life with a radial folded-plate plywood form clad with cedar handsplit shakes.

"The shakes, combined with the rough-sawn plywood, produced the naturally handsome and contemporary statement we were seeking."

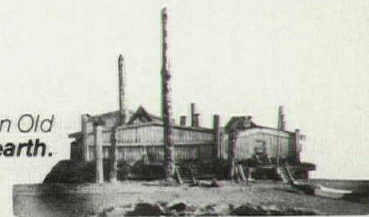
—Forest A. Phillips

For our new color brochure "27 New Commercial Ideas in Cedar (and a few old ones)," write Suite 275, 515-116th Avenue N.E., Bellevue, WA. 98004. (In Canada: Suite 1500, 1055 West Hastings Street, Vancouver, B.C. V6E 2H1.



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bath but its extra width broadens bathing pleasures infinitely.

It's a luxurious, 20 inch deep, body-contoured whirlpool, with a control panel that eliminates spouts, making sharing comfortable

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Progressive Architecture announces the second annual competition recognizing outstanding furniture and lighting design proposals, not yet being marketed by any manufacturer as of entry deadline, January 26, 1982. The competition is intended to give the design professions a forum to express ideas about the next generation of furniture design. Designers are encouraged to consider the aesthetic and ideological implications for furniture design implied by the current concerns within architecture and other design disciplines. Physical feasibility must be considered, but the design need not be constrained by existing production or marketing practices.

Winning projects will be published in the May 1982 P/A in an article by Nory Miller, P/A Interior Design Editor, who developed the competition, and they will be displayed at NEOCON 14, the National Exposition of Contract Interior Furnishings, at Chicago's Merchandise Mart, June 1982. Awards will be presented to winners in an evening program attended by press, designers, and NEOCON manufacturers. A traveling exhibit of winning projects to major cities is also planned.

In addition to the exposure afforded the submissions, the competition will encourage further discourse between the entrants and respected furniture producers. Any ongoing discussions will, of course, be up to the individual designers and manufacturers, but benefit to both is anticipated.

Submissions are invited in all categories including chairs, seating systems, sofas, tables, desks, work stations, storage systems, lighting, and miscellaneous furniture pieces. Designations of **award** and **citation** may be made by the invited jury, based on overall excellence and advances in the art.

The jury for this competition:

Emilio Ambasz, architect, graphic and industrial designer, former curator of design at The Museum of Modern Art, New York.

Kenneth Frampton, Professor of Architecture, Columbia University, Fellow of the Institute for Architectural and Urban Studies, an editor of *Oppositions*, and author of *Modern Architecture: A Critical History*.

David Gebhard, architectural historian, Professor of Architectural History and Curator of architectural drawing collection, University of California at Santa Barbara, currently president of the National Society of Architectural Historians.

Hans Hollein, architect in practice in Vienna, author, and Professor at Academy of Art, Dusseldorf.

Coy Howard, designer, principal of Coy Howard and Company, Venice, Ca.

Judging will take place in New York City during the month of February. Winners will be notified—confidentially—before March 15. Public announcement of the winners will be made at the presentation ceremony at NEOCON 14 and in the May 1982 issue of P/A. P/A will arrange for cov-

The Second Annual

International Conceptual Furniture Competition

sponsored by

Progressive Architecture

with winning projects to be
displayed at

NEOCON 14

June 1982

The Merchandise Mart
Chicago

erage of winning entries in national and local press.

Eligibility

1 Architects, interior designers, industrial designers, and design students from all countries may enter one or more submissions.

2 Design must be original. If found to be substantially identical to any existing product design, entry will receive no recognition.

3 Designer may be under contract to or in negotiation with a manufacturer for this design, but design must not be available in the marketplace as of entry deadline.

Entry form: International Conceptual Furniture Competition

Please fill out all parts and submit, intact, with each entry (see paragraph 11 of instructions). Use typewriter, please. Copies of this form may be used.

Entrant:
Address:

Entrant phone number:
Category:

Entrant:
Address:

Designer(s) responsible for this submission (identify individual roles if appropriate):

I confirm that the attached entry meets eligibility requirements (paragraph 1-3) and that stipulations of publication agreement (paragraphs 4-6) will be met. I verify that the submission is entirely the work of those listed on this form (or an attached list as necessary).

Signature _____

Name (typed) _____

Furniture Competition Progressive Architecture

600 Summer Street, Stamford, CT 06904

(Receipt)

Your submission has been received and assigned number:

Entrant:
Address:

Entrant:
Address:

Publication agreement

4 If the submission should win, the entrant agrees to make available further information, original drawings or model photographs as necessary, for publication in the May 1982 P/A and exhibition at NEOCON in Chicago and other major cities.

5 P/A retains the rights to first publication of winning designs and exhibition of all entries. Designer retains rights to actual design.

6 P/A assumes no obligation for designer's rights. Concerned designers are advised to document their work (date and authorship) and seek counsel on pertinent copyright and patent protections.

Submission requirements

7 Submissions become the property of P/A and *will not be returned*.

8 Drawing(s) and/or model photo(s) of the design should be mounted *on one side only* of one 20" x 30" foamcore board presented horizontally.

9 There are no limits to the number of illustrations mounted on the board, but all must be visible at once (no overlays to fold back). No actual models will be accepted.

10 Each submission *must include* a 5" x 7" index card mounted on the front side of the board with the following information typed on it: intended dimensions of the piece of furniture, color(s), materials, components, brief description of important features, design assumptions and intentions. This information is to be presented in English.

11 Each submission must be accompanied by an entry form, to be found on this page. Reproductions of this form are acceptable. All sections must be filled out (by typewriter, please). Insert entire form into *unsealed* envelope taped to *back of submission board*. P/A will seal stub of entry form in envelope before judging.

12 For purposes of jury procedure only, projects are to be assigned *by the entrant* to a category on the entry form. Please identify each entry as one of the following: Chair, Seating System, Sofa, Table, Desk, Work Station, Storage System, Lighting. If necessary, the category "Miscellaneous" may be designated.

13 Entry fee of \$15 must accompany each submission, inserted into *unsealed* envelope containing entry form (see 11 above). Make check or money order (no cash, please) payable to *Progressive Architecture*.

14 To maintain anonymity, no identification of the entrant may appear on any part of the submission, except on entry form. Designer should attach list of collaborators to be credited as necessary.

15 **Deadline for mailing** is January 26, 1982. Other methods of delivery are acceptable. Entries must show postmark or other evidence of being en route by deadline. Hand-delivered entries must be received at the address shown here by January 26.

Address entries to:
International Conceptual Furniture
Competition
Progressive Architecture
600 Summer Street
Stamford, CT 06904



Send us your best house design. If it wins, we'll build it.

If you're an architect, engineer, designer, builder or student, you're eligible to enter our design contest.

Object: to recognize innovations in housing.

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We're looking for single-family home designs that are appealing, economical to build, and incorporate passive solar systems. They must also demonstrate noteworthy aesthetic and structural uses of softwood plywood or structural panels.

You can get rules and entry forms three ways. Send in the coupon. Call

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But do it soon. Because all entries must be postmarked by March 15, 1982.



INNOVATIONS IN HOUSING

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Innovations in Housing
Dept. PA-101, P.O. Box 11700
Tacoma, WA 98411

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Name _____

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— from the superb
1981 solid color collection
for professionals.



The new Classicism

Classicism means, and has meant, many things to many people. To the Greeks, the major originators of Classicism, it was the embodiment of universal order. In the Renaissance, it represented humanity, culture, and the glories of civilization. To Laugier and 18th-Century Neoclassicists, it represented the essence of architecture: the primitive hut and, by extension, Nature itself. To Jefferson it embodied democracy; to Hitler, in pared-down form, it expressed power through monumentality; for Stalin, it was a means of reassuring the disembodied masses and the disbelieving world that his regime stood upon firm foundations and eternal truths. Modernists, while eschewing overt Classical references, implied Classical order in plans, in rhythmic repetitions, and in the simplified attitude of architecture as sculpture in space.

Today, Classicism seems called upon to represent any of the above at will. Charles Jencks, observer and popular interpreter of current architectural trends, sees Classicism as the major stylistic convention towards which "postmodernism" is converging. The question is, how many angels can sit on the head of a convergence point?

It is probably most direct—and popularly accessible—to turn to Henry Hope Reed's definition (in the catalog to the Smith College 1981 exhibition "Speaking a New Classicism: American Architecture Now") that the Classical "is identified not by proportions, nor by plan, nor by materials, however important, but by ornament." Following the implications of this statement (and arriving at conclusions with which Reed would not concur) by noting that ornamental allusions may be slight or they may be exaggerated, and setting aside "stripped classicism" (while recognizing the relationship between Rationalism and Classicism), *Progressive Architecture* presents a twofold classification of the current Classical movement: the historically consistent, traditionalist approach that never quite died but went underground during the decades of raging Modernism, and which we call the "Classical Underground"; and the approach

in which Classical elements are invoked and applied in a free, often deliberately nontraditional way—"Classical Transformed."

Each section opens with a discussion and display of historical "linchpins," Schinkel on the one hand, Lutyens on the other, with whose associations with imperialism we have now come to terms, and whose work provides rich sources of inspiration; recent representative work follows; and each section ends with a portfolio of current projects.

[Susan Doubilet]



In John Blatteau's Venice Biennale introductory panel, "Self-Portrait" (above), a window with details of the Farnese Palace frames "the history and future of Architecture." Classical architecture is focused in a scene that includes many styles.

Architecture as alchemy

Hélène Lipstadt and Barry Bergdoll

Interest in the work of Karl Friedrich Schinkel is spreading throughout the world today, 140 years after the Prussian master's death. Schinkel's strongest trait was the precision with which he interpreted history, as is seen in the drawings shown here, taken from a new reprint of his *Sammlung Architektonischer Entwürfe* by Exedra Books (p. 76).

Hélène Lipstadt, who holds a doctorate from the Ecole Pratique des Hautes Etudes en Sciences Sociales in Paris, is trained as a social historian and anthropologist. She has written on the history of the architectural press and other issues in 19th-Century and contemporary architecture.

Barry Bergdoll, a Ph.D. candidate in architectural history at Columbia and a graduate of Cambridge University, is the author of biographies of German and French architects, including those of Schinkel and Gilly in the forthcoming Macmillan *Encyclopedia of Architects*.

Karl Friedrich Schinkel, the creator of the Neue Wache and the Altes Museum in Berlin, the designer of the Charlottenhof in Potsdam, was lionized in his own lifetime and deified by his immediate followers. The Berlin architectural magazine, *Zeitschrift für Baukunst*, flew his silhouette from its masthead; since his death in 1841, his birthday has been commemorated by an annual speech. Historians are systematically publishing the great mass of documents concerning his buildings, drawings, furniture, paintings, porcelain, and theater designs, the relics formerly conserved in the Schinkel Museum. For almost one and a half centuries, German architects have devotedly analyzed this lodestar of originality, respecting Schinkel as the measure of their worth. In this year, the 200th anniversary of his birth, his silhouette again lends authority to an abundance of architectural publications, and his work is celebrated by no less than three major exhibitions. In both East and West Berlin, the creator of the iron icon—the Prussian Iron Cross—has himself become an icon.

The modernity of Schinkel's designs does not reside in their evolution from a nationalistic "Gothic" to a freely interpreted "Neo-Classical" to an ahistorical "Functionalism." Indeed, these traditional stylistic labels adhere with difficulty to his work, and like the standard interpretation of his alternative Gothic and Classic designs for the Friedrich Werdesche Church as evidence of "eclecticism," they succeed only in concealing Schinkel's strongest trait: the precision with which he interpreted history.

World War II destructions have obscured the layers of history from which Schinkel constructed his buildings. They survive, however, in the lithographic plates of the *Sammlung Architektonischer Entwürfe* (1819–40, with later editions, reprinted with English text, 1981). The *Sammlung Architektonischer Entwürfe*, formed of plates issued annually of new designs or recently completed projects, coalesced slowly. Yet, despite changes in fashions in illustration and the substitution of different engravers, for two decades Schinkel maintained a coherent graphic discourse.

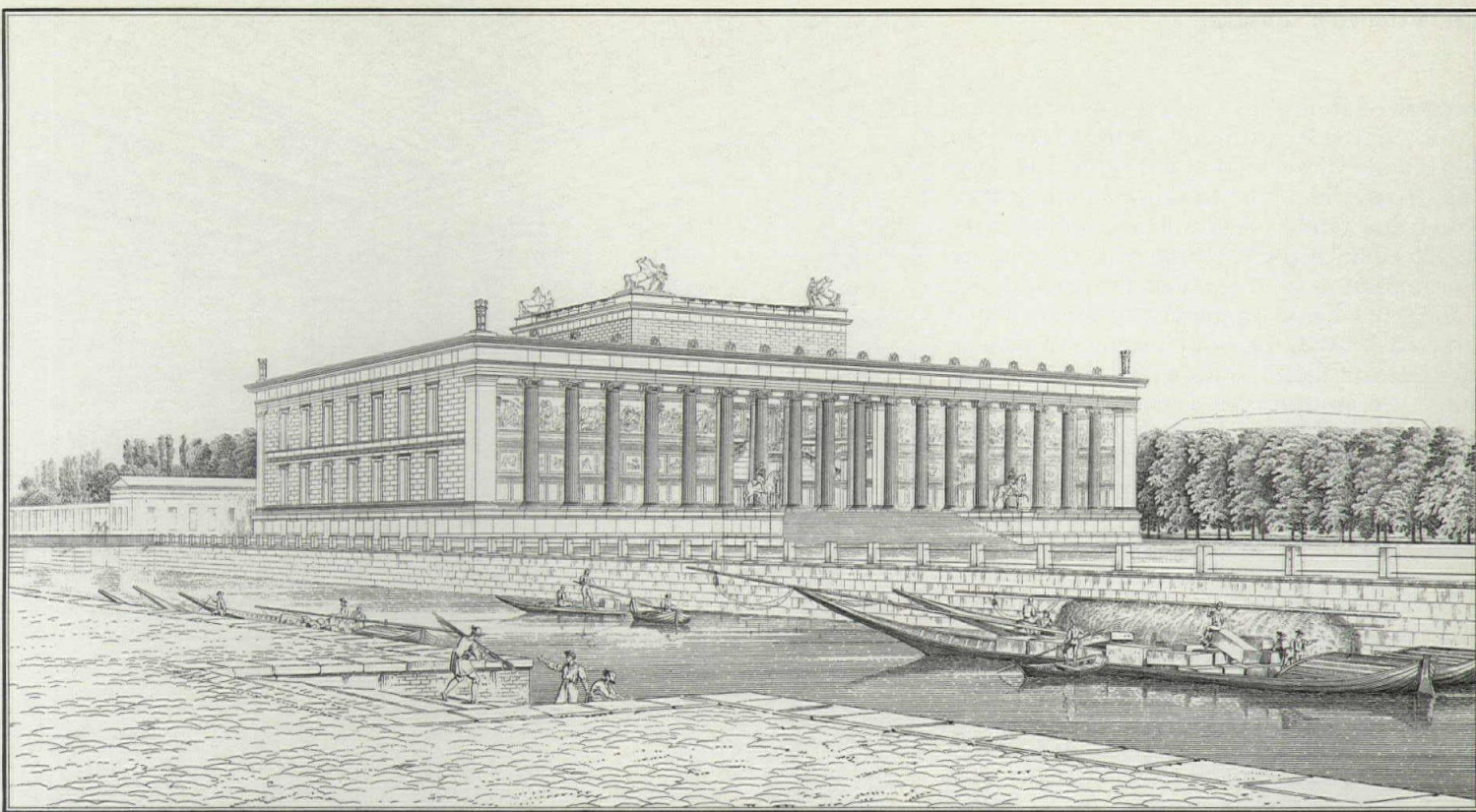
The nonfrontal perspective views of the major works are peopled with pairs of minute men in romantic waistcoats whose persistent reappearance does more than establish the scale. Indeed, these gesticulating figures comment on the building, and even more than the accompanying texts communicate

the signification of Schinkel's work. As in many German Romantic plays, these actors may well be self-consciously commenting on their own place within the scene.

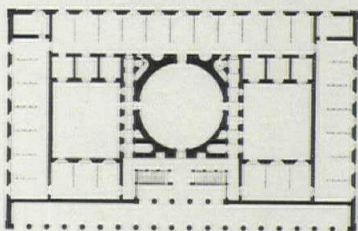
The ability to see oneself from without is paralleled by the vision of the external world wrapped around the circular wall of the panoramas Schinkel painted for the Gropius family's diorama business during the lean years of the French occupation of Prussia. The 20-year-long engagement of the same troupe of gesticulating actors invites a similar interpretation. The visitor to the Altes Museum, the playgoer at the State Theatre, the prince in his *maison de plaisance*, and the collector of the *Sammlung's* plates were led to a similar awareness of their place in the present by Schinkel's vision of history.

From the moment in 1797 when Schinkel saw the dramatic drawing of Friedrich Gilly's project for a monument to the genius of Frederick the Great and vowed to become an architect, his conception of architecture was unlike that of contemporary architects. They only later came to ponder how architecture should functionally express an epoch and its social needs. From 1815, however, Schinkel assigned as the mission of the architect the definition of the present as distinctive from the past and all other presents. In 1793, Berlin—the "Athens on the Spree"—had hoisted its own reinterpretation of the ancient Quadriga to the top of its Classical symbol, the Brandenburg Gate. The Antique had fostered the growth of Berlin from a garrison town and the growing independence of Prussian culture from its original French Enlightenment models. After the humiliation of the French occupation (1806–1807), the subsequent liberation struggle and the inebriatingly victorious Congress of Vienna, Prussia seemed promised an even greater destiny. A single historic style, even the Antique, could not suffice to express this higher purpose.

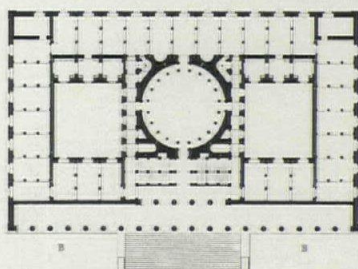
Schinkel's self-assumed prophetic task drew upon two heroic sources, one architectural, the other philosophical. The death of 28-year-old Friedrich Gilly, hailed as a genius by Tieck and other German Romantic writers, endowed Schinkel with the practice of his mentor and provided him with a specific mission to fulfill. Gilly's Frederick the Great project assured Schinkel that the artistic interpretation of genius could be materialized, achieving a higher synthesis in the symbolic transformation of spirit into form. Events ratified his dedication to idealism; in-



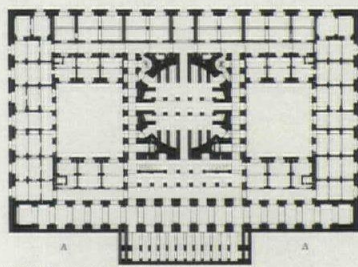
ALTES MUSEUM, BERLIN, PERSPECTIVE



THIRD FLOOR PLAN



SECOND FLOOR PLAN



FIRST FLOOR PLAN

deed, all of Prussia was charged with a spiritual mission by King Frederick William III, Schinkel's future patron, who declared that Prussia's lost military power must be replaced by intellectual and cultural strength. Schinkel drew especially on the theories of individual action, moral vocation, and the need for a program of national education and awakening expounded by the young Johann Gottlieb Fichte. Fichte's impassioned "Reden an die Deutsche Nation" (1807–08) not only fired Prussian nationalism, but inspired that noble group of Prussian liberal reformers: Stein, Hardenburg, and Schinkel's friend and patron, Wilhelm von Humboldt.

With a volume of Fichte's writings as his only literary traveling companion, Schinkel in 1803 confronted the Classical heritage of Italy, so long Gilly's ideal. Determined, however, to draw buildings "that no one else had drawn," Schinkel experimented with what Kurt Forster has recently termed his "panoramic vision."* Before each Italian city, the architect would turn his back on the renowned monuments, and climbing the closest promontory, would survey the miniaturized city as part of a more extensive landscape. In the land of Antiquity and the Renaissance, this deliberate detachment from individual buildings imparted a power over time and space and subsequently over the art of the past. As Lombardic, Byzantine, and rural vernacular structures filled his sketch books, the panoramic vision enabled him to reduce the otherwise insurmountable architectural tradition to elemental fragments of a continuous history.

Upon his return to Berlin, Schinkel found an immediate use for his method. The fashion for viewing historical dioramas in circular buildings had reached the Continent from England, and the talented draftsman was soon employed to design these long scenes,

first translating his travel sketches into dioramas and then imagining other places and events—the great battles of the Napoleonic Wars, the burning of Moscow, the Defeat at Leipzig—bringing contemporary events into harrowing but comprehensible proximity. Employment as a panorama designer earned him the attention of the Prussian Queen Luise and thus a foothold on that mountain of Prussian bureaucracy which he scaled with such agility, emerging finally as Director of the *Oberbaudeputation*.

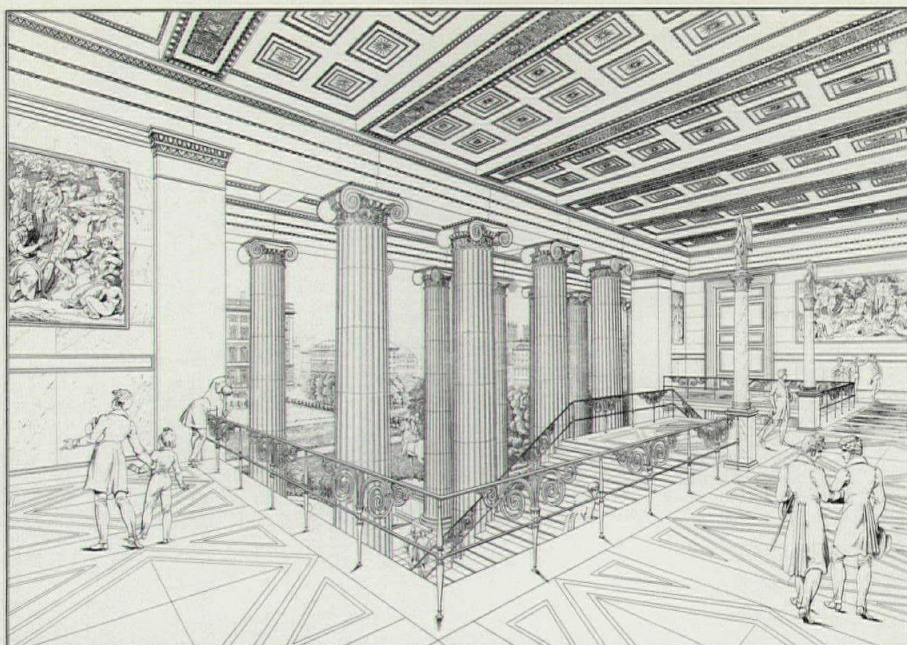
In the design of the Queen's bedroom at the Charlottenburg palace (1810), the illusionistic panoramic vision was subdued and domesticated into an effect of dawn produced simply by reflection and drapery. That vision would envelop all of Schinkel's work. The lessons of the panorama, of the reversal of external space to internal illusion by the interposition of a privileged vantage point, would also, when applied to historical time, advance the Fichtian mission that Schinkel formulated as "the ennoblement of all human relationships." His heritage and his philosophy, Gilly and Fichte, were tested by events—the liberation struggle to which Schinkel had given artistic form in the celebrated paintings of and project for an ideal Gothic cathedral—and refined by the experience of the control of time and space afforded by the panorama. Styles of the past, understood as structured systems and not as outward forms, became elements in an alchemical transformation. Just as the design of the Iron Cross had translated the inspirational slogan "gold for iron" into a Prussian archetype, so his buildings later transmuted Prussian iron into spiritual gold.

Schinkel's stated goal of casting buildings as objects "complete in and of themselves" and his ability to set them as focal points in a matrix of controlled views and suggestive archi-

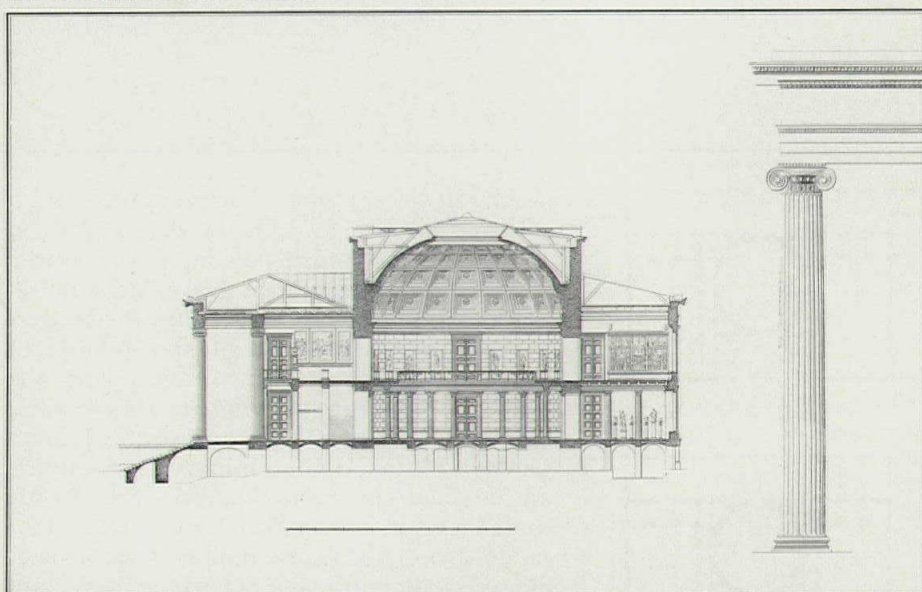
* In the Council of Europe lectures at Princeton University, Spring 1981, soon to be published by Academy Editions, London.

tectural relationships created a fundamental tension in the structure of all his designs. On the island where medieval Berlin was born and from which the representational allee Unter den Linden begins its triumphal path, he placed his Altes Museum, a linchpin in the reorganization of the whole Lustgarten. Set among the banks of replanted trees, which served as "a wall for exhibiting monuments," the museum façade is displayed in relation to the other institutional icons of the state—cathedral and palace—while obscuring the warehousing and shipping activities behind, whose rational reorganization had been occasioned by the construction of the museum. Despite its monumental strength, the façade, a flat, almost monotonous Ionic stoa, is but a grandiose screen, for it is given nothing more to support than the burden of its gilt inscription and the dynastic symbol of its royal benefactor, the Hohenzollern eagle. At once continuing and dominating the public space, the portico represents the stoas of democratic Greece and the cultured public life they fostered. The real wall of the Museum cuts short the flow of space and replaces the antique colonnade with a screen: a double row of murals representing both in superimposed composition and theme the two-story gallery spaces behind. Depicting the progress of the arts in didactic sequence, they prepare the visitor and replicate the innovative chronological ordering of the collection within. The axis of entry is established by an interruption in the real wall, which parts to display the stepped pyramidal mass of the staircase, at once a highly sophisticated spatial composition and an essay in the primitive origin of vaulted form. The entrance to the galleries thus leads the museum visitor through evolutionary architectural time, from the pure trabeation of the stoa to the rotunda unexpectedly hidden at the building's core via the piled cantilevered blocks of the staircase, a representation of a vault coming into being. The route not only engages the history of architecture, but encompasses the experiential levels of man's relationship to history and place required for a heightened consciousness. As seen in the continuous narrative of the *Sammlung* view of the staircase, the visitors, having penetrated the screens of columns and mural and traversed the tomblike hollow of the stairs, begin their ascent under cover, and reemerge on the exposed upper landing—itsself a panoramic viewing platform—newly ennobled by the lessons of architecture. Peering back obliquely at the royal palace and the panorama of Schinkel's other Berlin monuments, they are momentarily confronted with their own position in a political and urban whole.

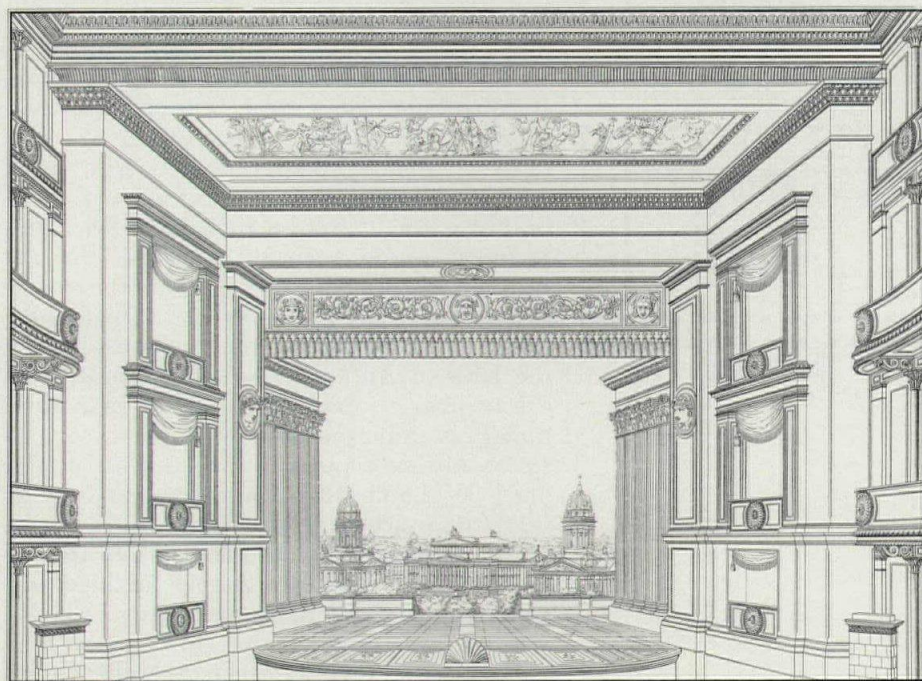
The murals reintroduce the screens of historical association and experience, and the Berliner, grateful citizen and subject, resumes his initiatory journey. In the final space, he would be, Schinkel argued, "made more receptive for the enjoyment and understanding of what the building itself housed."



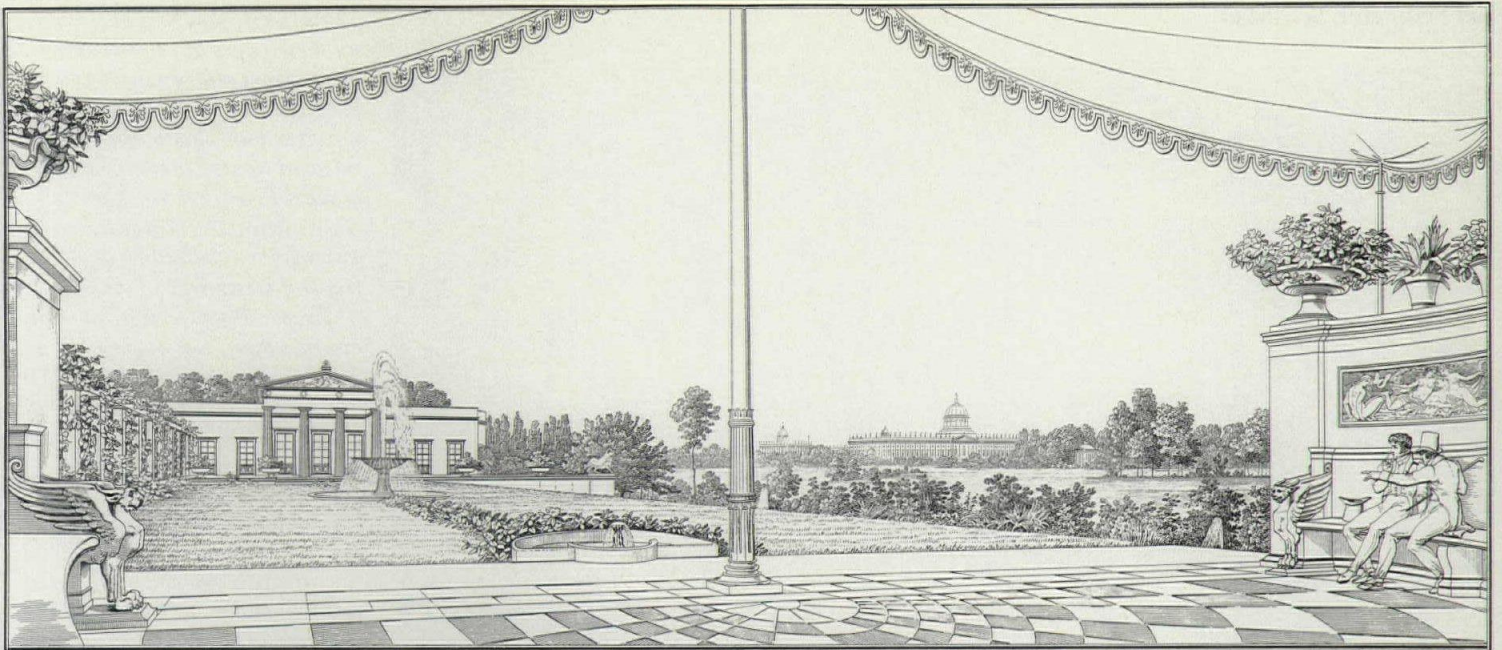
ALTES MUSEUM, BERLIN, STAIR GALLERY



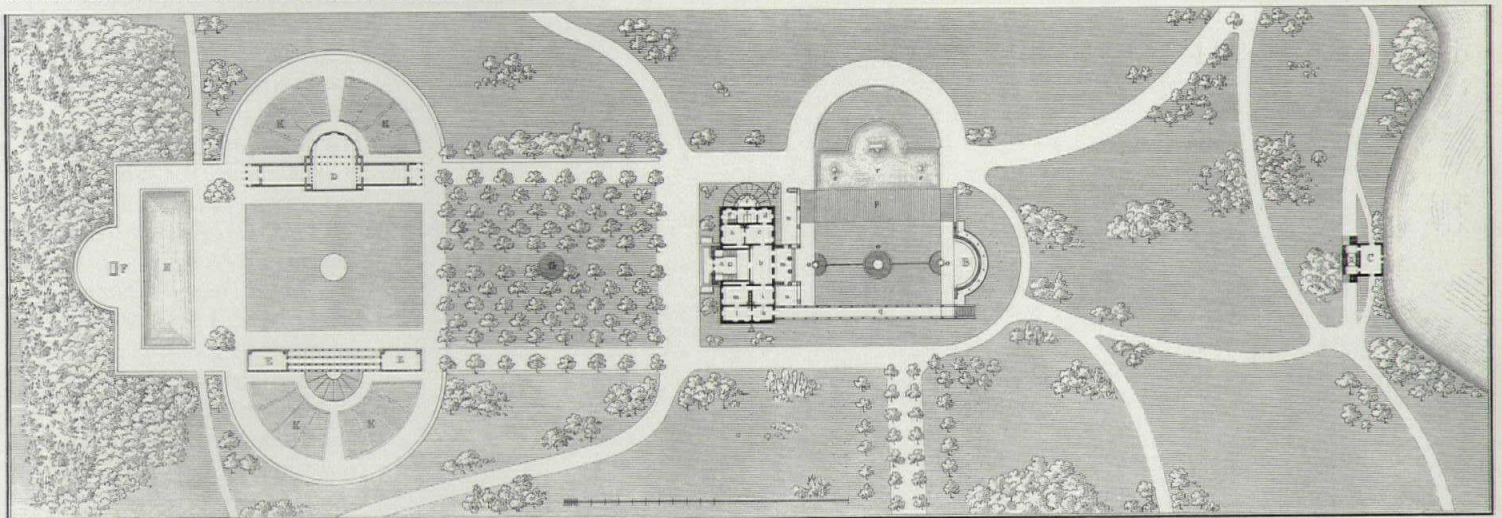
ALTES MUSEUM, BERLIN, SECTION



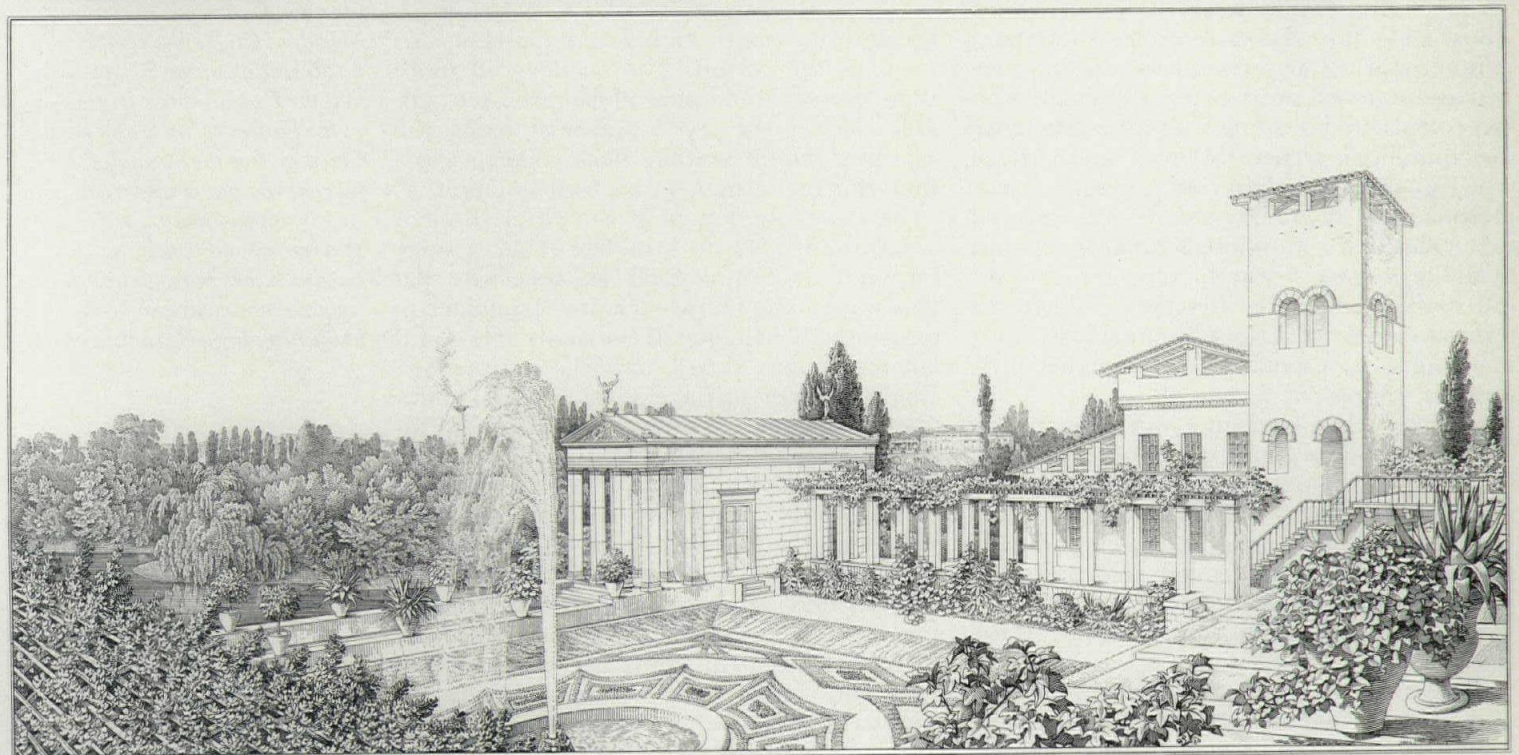
SCHAUSPIELHAUS, BERLIN, STAGE BACKDROP



CHARLOTTENHOF, POTSDAM, VIEW OF GARDEN AND HOUSE FROM EXEDRA

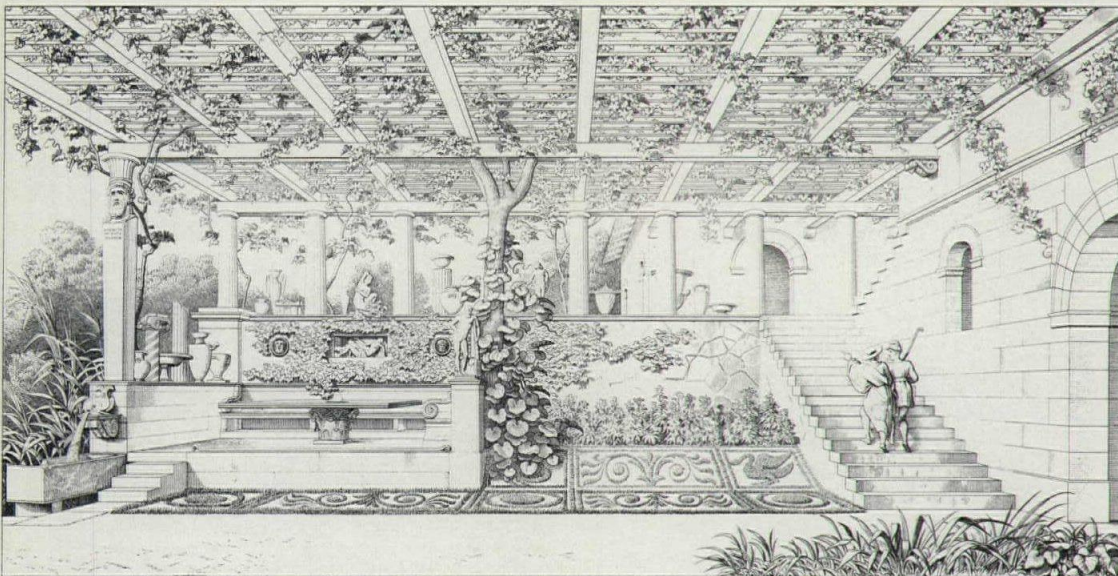


CHARLOTTENHOF, POTSDAM, SITE PLAN

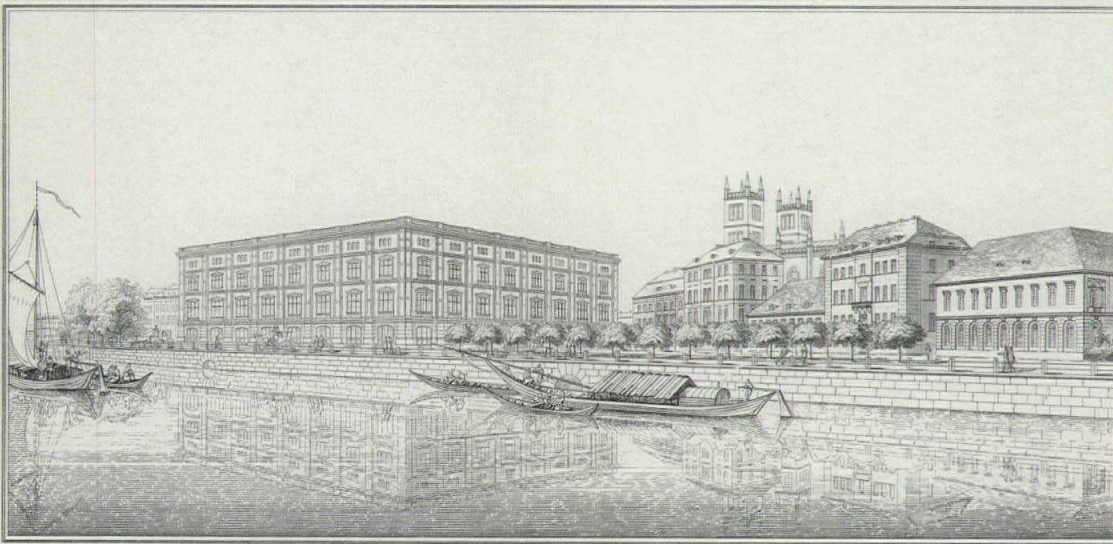


CHARLOTTENHOF, POTSDAM, COURT GARDENER'S HOUSE, PERSPECTIVE (C IN SITE PLAN ABOVE)

Karl Friedrich Schinkel



CHARLOTTENHOF, POTSDAM, COURT GARDENER'S HOUSE, PERSPECTIVE



BAUAKADEMIE, BERLIN, PERSPECTIVE

Thus, entry into the vault of the rotunda, a pantheon of the arts, completes this passage. Just as the stoed portico, the only element in fact constructed of stone, merely represented the building's structural and associational type, so the rotunda's void containing numerous casts of antique statues was devoted to the idea of the museum. Schinkel here, and in all his designs, rejected a representation of the building's mere function, which he termed *trivialer Zweck*, self-consciously constructing a representation of the higher purpose, or *höherer Zweck*.

Schinkel telescoped time and space in the Altes Museum, organizing them deliberately into screens of typological allusion and material representation, constantly directing the visitor to the higher purpose and elevating his consciousness. He proceeded accordingly in both private and public commissions.

In the Schauspielhaus (State Theatre), for example, built on existing foundations, the celebrated proto-modern articulated window grid recedes behind the requisite temple front. The privileged playgoer who attended the dedicatory performance witnessed a stage backdrop depicting the theater as seen from afar. Thus the building was once again put on display to be contemplated as a creative work and as a symbol of the ennobling capacity of

theater, the most highly self-conscious art form of the period. The curtain did more than parody traditional illusionistic settings. Here again the ironic reversal leads the playgoer (and *Sammlung* plate collector) to a higher consciousness of his own situation.

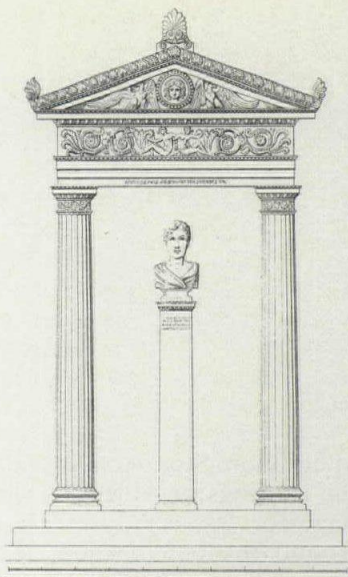
At Charlottenhof, it is the royal summer palace that is set on a private stage, a stage imposed by Schinkel on an otherwise flat landscape. The house's terrace terminates in an apsidal bench, one of the many semicircular projections thrust into the picturesque English garden by the extension of the building's orthogonal axes into the landscape. Protected from the summer sun by a cloth canopy, this Pompeian bench (a favorite Schinkel motif) affords both the direct axial view onto the Crown Prince's *maison de plaisance* and oblique glimpses of the Baroque Neues Palais. Likewise, from the semicircular projection of his simple bedroom the Prince, in retreat from the court life of Fredrician Potsdam, was afforded a panoramic view encompassing the Neues Palais and Schinkel's *fabrique*, the Court Gardener's House. These two antipodes of domestic architecture—royal palace and rustic villa—doubtless represented the Crown Prince's conscious desire to live a bourgeois life within the context of his royal position.

The drawings by Schinkel shown on these pages have been reproduced from plates generously provided by Exedra Books Incorporated, publisher of the recently released limited facsimile edition of Karl Friedrich Schinkel's *Sammlung Architektonischer Entwürfe* (Collection of Architectural Designs).

Exedra Books, a not-for-profit organization, was organized in 1978 and incorporated in 1979 by Chicago architects Kenneth S. Hazlett, Stephen O'Malley, and Christopher Rudolph for the purpose of preserving valuable but not heretofore available architectural volumes. The *Sammlung* was chosen as Exedra's first endeavor because of the unique character of the original volume and the broad range of issues—Classicism, Romanticism, industrialization, ornamentation—addressed by Schinkel's oeuvre.

The facsimile edition, limited to 1000 copies, is a full-scale reproduction of all 174 original 18" x 24" plates, and includes the first complete English translation of Schinkel's own descriptive commentary. A preface by Philip Johnson and scholarly essays by Dr. Hermann G. Pundt, author of Schinkel's Berlin, and Professor Rand Carter provide contemporary criticism.

The new volume has been painstakingly printed by the Meriden Gravure Company of Meriden, Ct, from a complete 1866 edition of the *Sammlung* that the Exedra directors found in the library of the University of Chicago. For the facsimile, 100 percent rag paper was used, closely approximating the color and texture of the original. Exedra Books plans to lavish similar loving care on book-publishing projects in the future.



CHARLOTTENHOF, POTSDAM, COURT GARDENER'S HOUSE, BALDACHINO

The Gardener's House—a tea house and bath—seems no more than a rural vernacular building chanced upon in the royal park. This contrived representation illustrates with didactic clarity Schinkel's oft-cited dictum, "Architecture is the continuity of nature in her constructive activity." The argument made public in the staircase of the Altes Museum is here restated with even greater effect, for the progression is materialized as well as symbolized. The cage of the vine-covered trellis that forms the entrance to the house and its terraces illustrates the evolution of Greek trabeation from its natural origins in wooden form, from the spanning of a small space between two stout branches, to the first baseless Doric column and its simple entablature. The trellis fuses the building with the specific landscape, binding it to the natural world whose transformations were so intently studied by Schinkel's friends and contemporaries, Goethe and Humboldt.

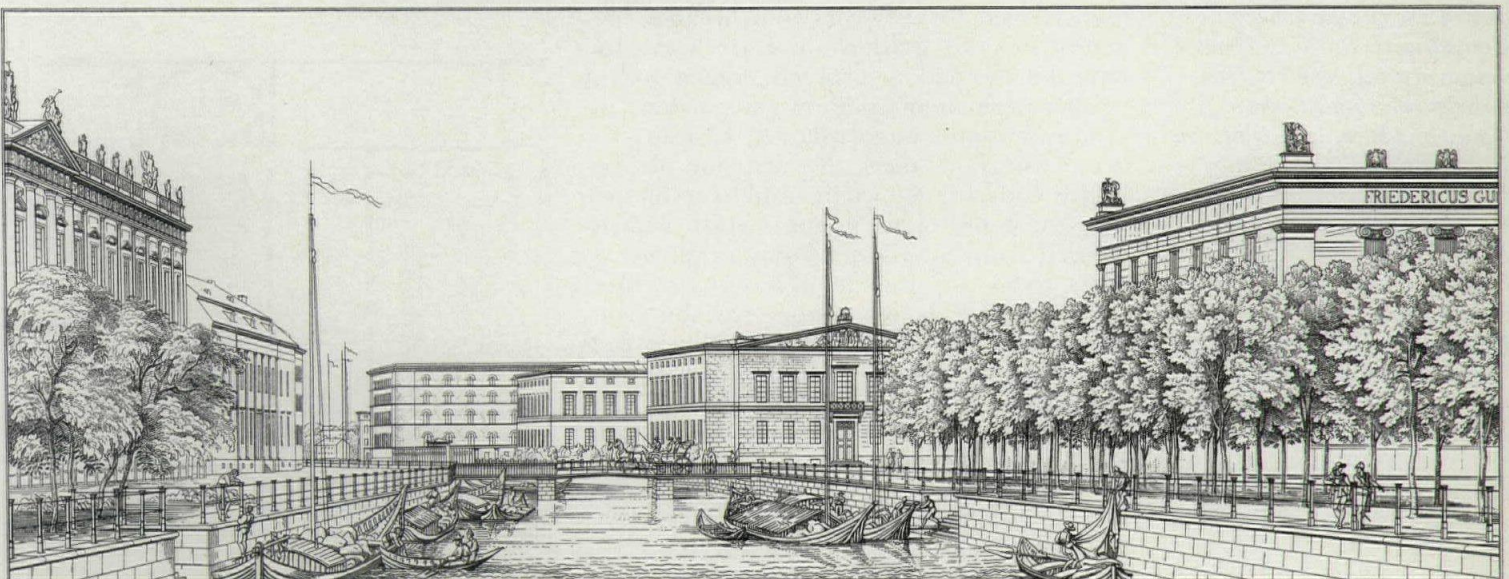
The notion of the building as the product of its own natural history reached a climax and final expression in the Bauakademie (1831–5), the last of the great cubic masses Schinkel added to the landscape along the Spree. In a building dedicated to the teaching of architecture, and as the headquarters of the Prussian *Oberbaudeputation*, to its propagation throughout the far-flung provinces, the building had become lesson itself. Schinkel devoted himself to fostering an architecture in which the nature and constructive capacity of brick—whose history was summarized in the buildings of his Packhof (1828–9) at the other end of a reciprocal vista—are given immediate expression. Whereas his earlier monuments had thrown up layers of associations which successively ennobled both institution and participant, here these screens are conflated in the curtain wall of the skeletal structure. It is the process of architecture and its creator that are ennobled.

Schinkel was client and architect, patron and artist of the Bauakademie, commissioning from himself the spaces to hold studios, amphitheaters, offices, and in the top story, his own apartment. These functions do not, however, reveal themselves on the four undifferentiated façades. The wall, a screen

stretched across a truly skeletal frame, is indeed a natural product of the fully arcuated brick construction. The façade organization represents only the grid of brick vaults and supports within and the open plan it allowed. The building as process and structure eschews any representational program outside its own history, as is reiterated by the iconographic program of its terra-cotta ornament portraying the "Developmental History of Architecture."

Schinkel enjoyed the view from his apartment window of the Berlin he had beautified, while below, his example and ideals were reproduced by his students and his designs by his bureaucratic underlings, who replicated his buildings in the distant provinces. Indeed, he predicted that the Bauakademie would serve as a linchpin for the further development of the Frederick Werder quarter of Berlin, on the model of the Altes Museum in its royal quarter. While previously king and institution were center and vanishing point of vistas, gently inserted by panoramic reversal into the spiritual process of which they were the condition of possibility, here it is the architect and his mission that are center and horizon, source of urban growth.

The Bauakademie followed no specific style, but contained the history of its coming into being. Brick, the Prussian national material, was liberated from the enveloping stucco/plaster of Classicism. The experiments in constructive expression, begun in the Schauspielhaus's reticular grid, stand here without benefit of historical reference. Centralized administration and education join in the Bauakademie, which Schinkel had attended as the elder Gilly's first pupil and surrogate son. The Fichtian ideal of self-conscious improvement through individual action culminates in a building that sums up the theories, achievements, and lessons of a career. Freed from style and apparently free from royal patronage, the Bauakademie implied a future movement of architectural practice to total independence. Here Schinkel struck the coin of Modernism: the devotion of the romantic artist to his own self-consciousness and to the present, "complete and of itself."



PACKHOF (CUSTOMS HOUSE) BUILDINGS, BERLIN, PERSPECTIVE

Grand Trianon, New York

The recent addition to the Frick Collection in New York was inspired by Classical architecture of the French Renaissance.

Data

Project: addition to Frick Collection, New York.

Architects: Harry van Dyke, architect; John Barrington Bayley, designer; G. Frederick Poehler, consultant.

Program: a 16,468-sq-ft addition including 1000-sq-ft waiting room, 5000-sq-ft garden, office, seminar, study, storage, sales, and exhibition space.

Site: a 100' x 100' plot east of the museum that was formerly the site of three townhouses.

Structural system: bearing walls, poured slab floors including first, which is cantilevered over foundation of previous townhouse; structural steel roof framing.

Major materials: Indiana limestone; wood and marble flooring; plaster ceilings and cornices; wood paneling; limestone and plaster wall surfacing.

Mechanical system: temperature-humidity controls on ducted air; city steam heat.

Consultants: Purdy & Henderson, structural; Syska & Hennessy, mechanical; Richard J. Nolan and Richard J. Olds, construction consultants; P.A. Fiebigler, Inc., iron work.

General contractor: H.M. Hughes Co., Inc.

Costs: \$2,850,000; \$128 per sq ft for new and converted space.

Photos: courtesy of The Frick Collection; color: Richard diLiberto; black and white: Henry Hope Reed.

The recent addition to the Frick Collection in New York marks the second time the museum has been added to since its construction in 1913-14. The first was in the early 1930s, when John Russell Pope made extensive additions to the Fifth Avenue mansion while converting it from a family residence into a museum. At that time, Pope followed the basic style of the original building, which had been designed by Thomas Hastings of Carrère & Hastings in the manner of the 18th Century Louis XVI domestic architecture. In the last addition, Harry van Dyke, John Barrington Bayley, and G. Frederick Poehler looked to the earlier style of the Classical period of the French Renaissance, and particularly to Jules-Hardouin Mansart's 17th-Century Grand Trianon at Versailles.

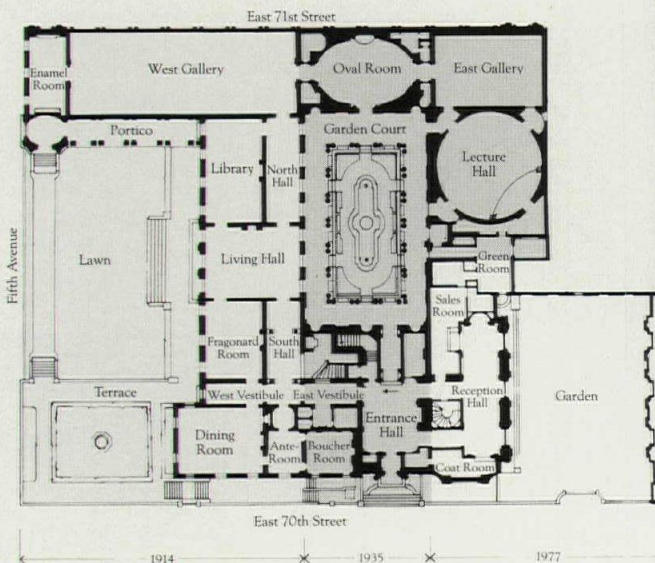
The story of the present addition, though, goes back to 1940 when the museum acquired a townhouse three doors to the east. That building was razed, and an underground bombproof shelter was built to house the collection during World War II. At the same time, the trustees began negotiations to buy the houses between that site and the museum, but it was not until 1946 that the next one, two doors to the east, could be acquired. Studies were made to see if the two properties could somehow be adjoined to the museum to meet its need for more space, but it was ultimately decided to delay expansion until the house immediately to the east could be acquired. That house was finally purchased in 1972, and in the following year, plans were drawn up for a temporary garden on the three lots, with construction of a large addition delayed for 10 years. But because estimates for the garden were so high, the museum decided to proceed instead with a smaller permanent addition and garden.

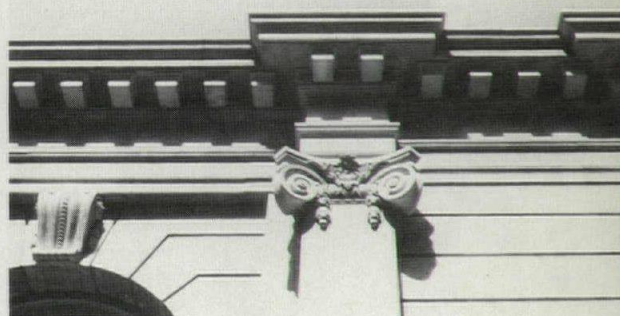
The museum was expanded basically for two reasons: to meet the demand for enlarged educational facilities and to accommodate the growing attendance, which had increased from 50 visitors a day originally to 1500 today. In the 16,468-sq-ft structure, which appears as a one-story pavilion from the outside, the main floor is given over to a large waiting-reception room, with expanded coatroom, sales, and information facilities. On two lower levels are a seminar and a study room, additional display and storage space. An additional office and storage space have been installed on a mezzanine.

The new pavilion is constructed of the same Indiana limestone as the original build-

ing and its second addition. Stone reliefs and iron gates from the Hastings structure, which had been in storage for 50 years, are reinstalled in and around the new garden designed by Russell Page. To avoid alteration of the older structure, the pavilion is entered through arches that were formerly closed and formed the east wall of the building.

The pavilion is handsome; its large French doors overlooking the garden and pond bring a most welcome relief to New York's rows of attached townhouses. But there are two common complaints, and one concerns the garden. For many people, the rectangular pond in the rectangular space with walks and hedges at right angles is static and does not make the most dynamic or pleasing solution. Another problem is with the decorative detailing of the pavilion, which is generally found to be somewhat overwrought and heavy-handed. On this score, though, both Banister Fletcher and John Barrington Bayley have something to say. In discussing the Classical period of the French Renaissance, Fletcher says (in his *History of Architecture*), "Ornament, though somewhat coarse, is vigorous and reasonably restrained." Bayley recently said of the pavilion, "The walls had been detailed in a broad and coarse way to take the aggregate limestone paint" which he had originally intended. If the vigorously detailed new pavilion is not everyone's idea of Classical perfection, it is nevertheless a most welcome companion to the more timid and restrained example of a later century to which it is attached. [David Morton]





The new addition to the Frick Collection appears as a one-story pavilion from the street, but its four levels include two basements, a mezzanine, and primarily, a large new waiting room (left).

Good, Ordinary, Classical, Modern

David Cast

A modest civic building uses Classical design, without irony, to communicate the clarity and dignity of the legal process.

Under a reorganization law passed in 1976-7, the State of Connecticut was required to increase the number of courtrooms and offices for those courts dealing with offenses disposable at the local level. The courthouse in Manchester, designed by Allan Greenberg with Peter Kosinski Associates, is a product of this legislation. It is a quiet building that fits what is around it very comfortably; it is cheap; and, in a traditional sense, it is very easy to look at. And yet, for all this, it is a building that embodies a polemic about architectural style now, style as pure style and style as the way to express and define certain social relationships—here the legal society.

These are grandiose claims, perhaps, to make about so apparently modest a building. But modesty in our age comes only with deliberate effort, and it was only because Greenberg knew what he was doing here and why that he was able to make a building that is so quiet and yet so striking. I will begin by describing the courthouse itself and then what might be called its effects or implications.

The whole building is set on the foundations of an older structure, a supermarket (photo above right). This saved money for Connecticut (with a very cheap building, even for a renovation, some \$42 per sq ft), but it placed limits on some of what Greenberg could do. And he was not helped by the contours of the site, which slopes down from a road junction in a way that is gradual, yet completely deadening. (This is not visible in photographs.) Yet Greenberg was able to counterbalance these obstacles and, by the building he designed has in fact reinvigorated the whole area, making it once again, as neighbors testify, pleasant and interesting.

The plan of the courthouse (overleaf) is simple. The basic arrangement of the interior was fixed by the placement of the three courtrooms across almost the width of the plan. These courts vary in size and importance, that on the left being the largest and most secure, leading directly to cells and to the salyport beyond. The entrance to the courthouse is, naturally enough, in the center; from it leads a gradually widening anteroom that opens out into a broad lobby that runs right across the whole building. All the inside is immediately comprehensible; on one side the three courtrooms, on the other the offices for prosecutors, clerks, and other officials.

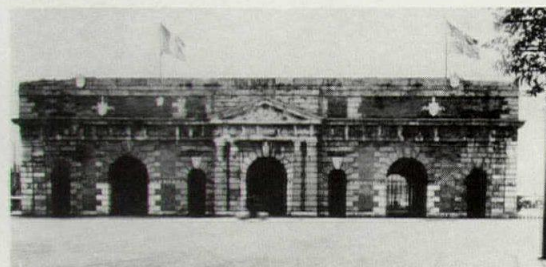
Yet more than clarity is intended here. The



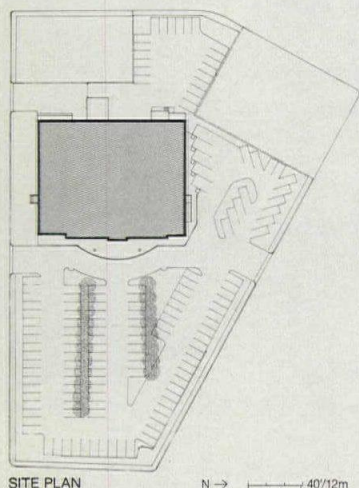
lobby is the most public part of the courthouse, it is where everyone first goes; beyond it and in front are more confidential and sequestered spaces. And if here we can think of metaphors, it is possible that the lobby and the entrance can stand for one aspect of law, its accessibility, while the courts and the offices around them suggest that the disposing of law is more private, more considered.

Perhaps necessity was the mother of invention here. But in giving form to this building, Greenberg used a language that invites such speculations, the Classical style, with all the details and implications of that language: outside, the firmly centralized front (note that the façade, following the lines of the earlier building, is not set in the true center of the front); the articulation of the façade, the rustication at the door, the portico, the flagpoles, the six well-spaced and Wren-like windows to left and right; inside, the lobby with its barrel vault, the terrazzo floor made up of alternating squares of light and dark, the doors to each courtroom with their Tuscan columns and pilasters that seem in their solidity to recall Christopher Wren or Inigo Jones.

The façade is strong and imposing, a design that reminds us—an allusion Greenberg accepts—of something like the Porta Nuova, Verona, by Michele Sanmichele (photo below). City gates have two fronts. Greenberg



Porta Nuova, Verona.



On the angular plot, between two main streets, the existing parking has been reorganized more formally; public spaces are to east, personnel to north; bus stop is at south end of building.

David Cast, recently a visiting fellow at Cornell, is now associate professor of art history at Bryn Mawr.



The shell of a 1962 supermarket was remodeled into a courthouse (before and after photos, opposite) within the existing foundation lines and retaining most walls, including the white brick "wings" that flank the new Classical front (above). In the main lobby (right), columns are original structural ones, encased in Tuscan. Quotations on frieze, selected by Greenberg:

The end of the law is not to abolish or to restrain, but to preserve and enlarge freedom: for in all the states of created beings capable of law, where there is no law there is no freedom—John Locke.

Laws are made for men of ordinary understanding and should therefore be construed by the ordinary rules of common sense. Their meaning is not to be sought for in metaphysical subtleties—Thomas Jefferson.



here looks at the interior side, the more generous side, with its human scale and the legend across the frieze that says clearly what the building is. The program of this building is consistent. The citizen in his civic role as prisoner or witness or juror or officer or judge is given a building, set in a comprehensible scale. Yet the forms of the courthouse remind him, however well or badly he recognizes them, of the tradition and the imperatives of all that takes place inside.

The idea of building now in a Classical style is something Greenberg has supported on a number of occasions; an earlier, much noted example of his work in this mode was the portico in the exhibition "Buildings for Best," shown at the Museum of Modern Art in 1980 (P/A, Feb. 1980, p. 24). Could he be truly serious, the critic Michael Sorkin asked of

Courthouse, Manchester, Ct



Baltimore County Courts Building, Towson, Md.

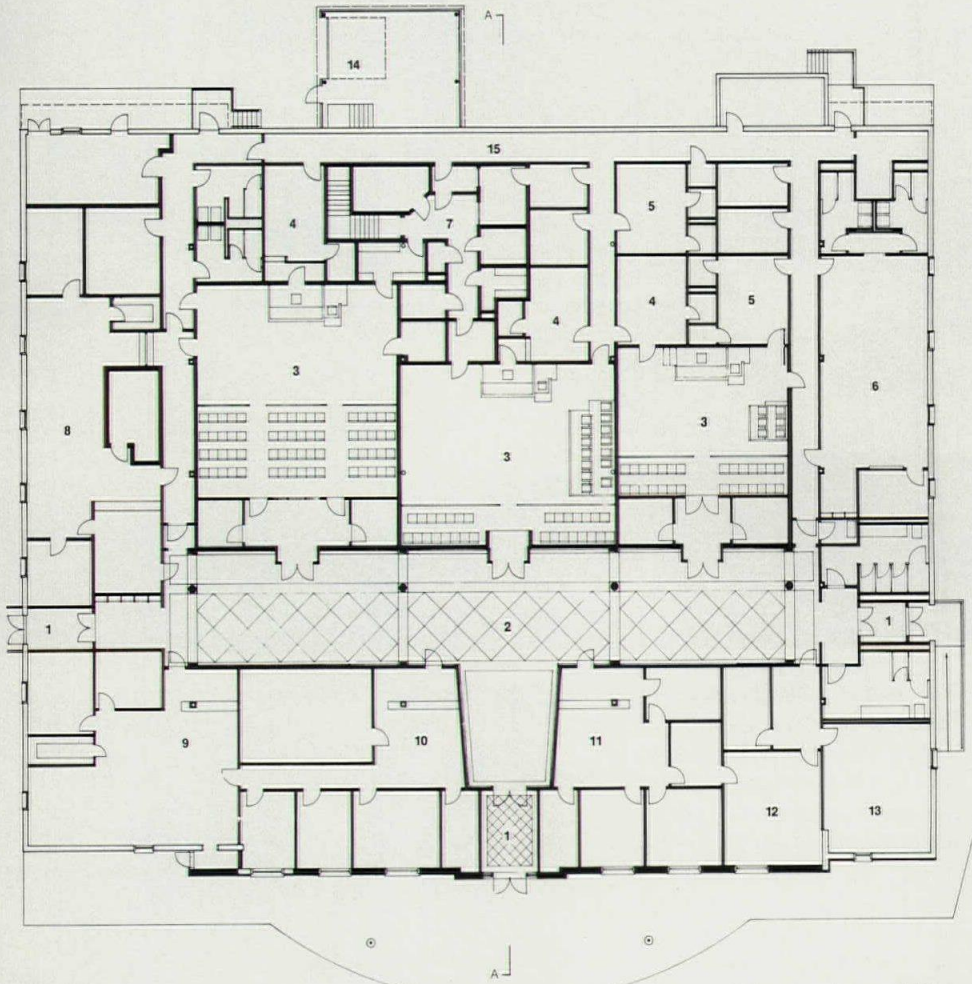
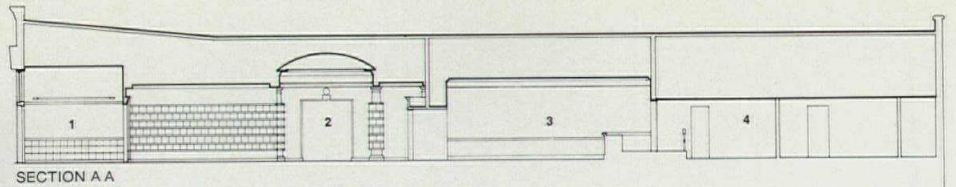


Tangipahoa Parish Courthouse, Amite, La.

that? The answer to this question must come from what we determine to be the effects of this manner of design. If we approve of these effects, then seriousness is not an issue. If we do not, seriousness is no justification. I would like to sketch on a series of qualities that might be seen in the Manchester courthouse, some familiar, some less so for architecture, some a part of the usual language of design, some a part of a general discourse about architecture of what was once called—if we think of Perrault's phrase "le bon sens"—common opinion.

Age: All architecture, wrote Wren in a phrase that seems very distant now, aims at Eternity. Much of Modern architecture seems somewhat uncomfortable with what we might call sensible time. Consider the simple question here of materials: brick, stone, wood. Are not, by contrast, the vast travertine expanses of the Albany Mall (P/A, May 1979, p. 106) too intimidating, too much out of time? Or the delicate steel and glass elements of the Johnson Glass House too abstract, too fragile for an idea of changing time, of a time lived in and defined by people? One visitor to Manchester remarked with delight that the building seemed to have been there quite some time already; by implication, we might add that it would stay there for a reasonable time. Is not the Law a part of human time and yet, in all senses, beyond any one person's knowledge of time?

Genre: There exists a rich history of courts and courthouses, one almost as old in America as the practice of law itself. Manchester takes note of this while, for practical reasons perhaps, acceding to other references from city forms, from Italian, that is Roman, traditions. In much of Modern architecture the idea of genre has been sadly weakened, the formal language used being the same for all types of buildings, whether large or small, whether public or private. Consider two recent courts, one from Tangipahoa Parish, Louisiana (1969) by J.J. Desmond and W.C. Burkes (photo above), the other the Baltimore County Courts Building, Towson, Maryland (1973) by W.L. and T.C. Gaudreau (photo above). Whatever their merits, we can ask where in the Louisiana building is there any



FLOOR PLAN

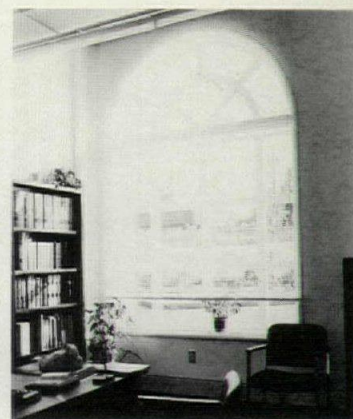
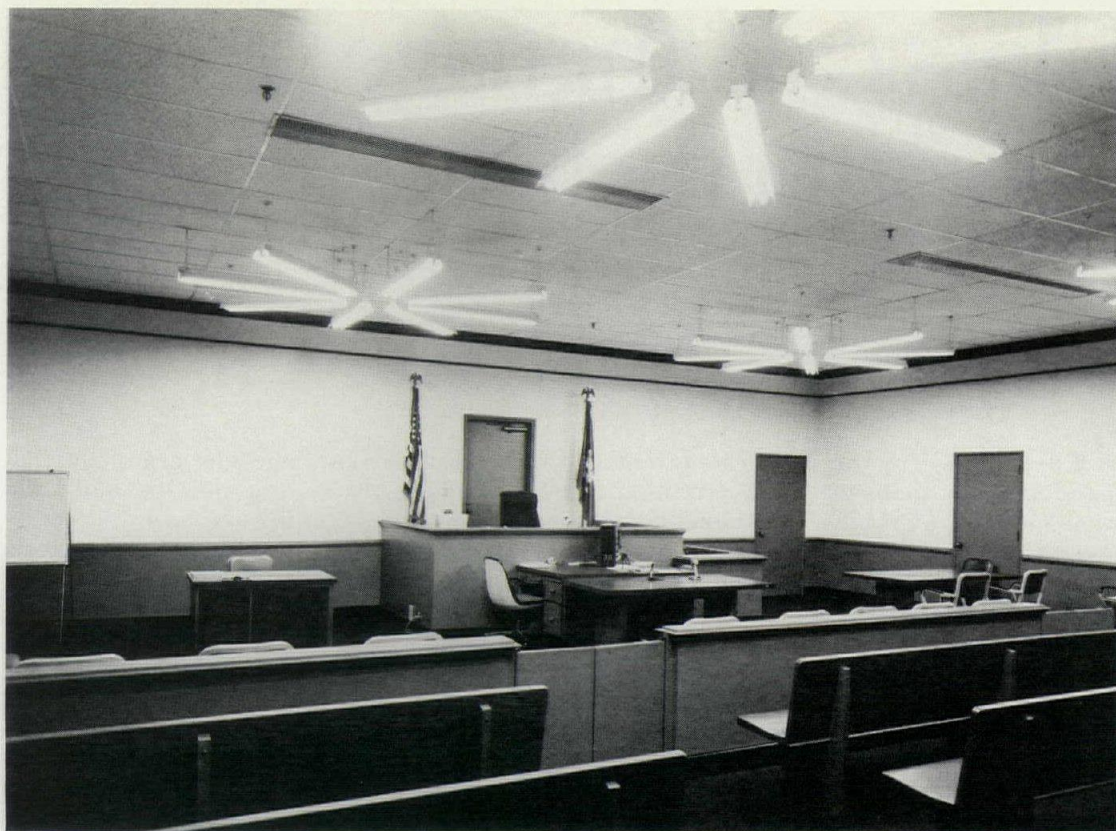
N → 20'/6m

formal device that marks this structure off from all the great wordly buildings around it, where in the Towson building is the entrance, where then the possibility of metaphor, of allusion? Manchester answers problems such as these.

Hierarchy: If it is fitting that the form of the courthouse be distinct from that of what is around it, it is equally appropriate that the various parts of its interior be distinguished. At Manchester, the courts are the most evidently decorated spaces, wood panels on the walls, warm colors at the ceiling and fluorescent lights that are arranged in a pattern of stars. The judges' chambers and the rooms of the officers are rendered in simple, white plaster. The lobby, with its columns and pilasters, has a band of pellata marble on the walls and a sequence of richly decorated doorways that lead to the courts (the simple public exits at either end are left unornamented). The distinctions here between the significance of the spaces is done within a common scale, by accumulating detail rather than enlarging the parts. This saves money since, once the Classical elements are included, standard modern fixtures can be used, as in the doors to the courts and the tubes used in the starlike courtroom lights.

Legend

- 1 Vestibule
- 2 Lobby
- 3 Courtrooms
- 4 Judge's chambers
- 5 Jury deliberation
- 6 Jury assembly
- 7 Cells
- 8 Clerk
- 9 Prosecutor
- 10 Family division
- 11 Public defender
- 12 Hearing room
- 13 Expansion
- 14 Sallyport
- 15 Staff corridor



Stripped-down Classicism of courtrooms (left) shows budget restraint, is capped by suspended ceilings and star-shaped fluorescent fixtures that owe more to sculptor Don Flavin, whose work interests Greenberg, than to Vitruvius. Arched windows light private offices at front of building (above).

Decorum: This is at once a moral and a psychological quality. Greenberg chose to work here with Classical forms, since he believes this language grants the building an appropriate character. The forms of Classical architecture represent, perhaps, one among many sets of languages, and as such it can be used in part, or at whim; this surely is how Robert Venturi uses the Ionic column in his extension to the Oberlin Art Gallery (P/A, Oct. 1977, p. 50) or Michael Graves includes Classical elements in his recent scheme for the Public Service Building in Portland, Or (p. 108). Perhaps there is a place for this whimsy. But, in the terms of the Manchester building, such citations must always seem somewhat private, arbitrary, and idiosyncratic. At Manchester, the choice of the architectural language seems accountable and fitting; it is, in this sense, decorous.

Conviction: This quality is close to decorum. All languages can be degraded, though perhaps Classicism survives such abasement better than most. Greenberg knows his history of Classicism well and he is able to work with it strongly and, as we would now say, authentically. There is much dullness in modern Classical design, and there is also, more recently, a hint of false drama. Dullness, for example, in the work of someone like Sir Herbert Baker or, in an instance closer to home, in the articulation of the forms of the New York University Law School (1951) by Eggers & Higgins. Drama in the Mathews Street House (1978) by Thomas Gordon Smith (p. 98) and in the unfinished AT&T Building in New York by Philip Johnson. The architectural forms Greenberg uses here seem simple and forthright, certainly more full-blooded than Baker or Eggers & Higgins. It seems a matter of true belief; and it is from this that Greenberg is able to give the forms dignity and conviction.

Delight: This is an old category, but one that has slipped from our grasp in recent years. The pleasure expressed by the craftsmen working on this building was obvious: the mason laying the marble in the lobby, the carpenters matching, cutting and lapping the details of the plinths and string-courses and wooden pilasters, the bricklayers outside aligning courses in the bricks and stones of the façade. Why mention this? Because it suggests, perhaps, an analogy to the response such a manner of design elicits from everyone, a way of seeing the details, of matching them to the actions of their own particular lives, delight here in such details leading us to appropriate the building to our own experience, to make us responsible. A more transcendental mode of design—and much of Modern architecture is transcendental in its idea—demands a different response, one that transports us beyond all these minute but crucial human positions.

Utility: Again an old category, another one that has slipped from us. This is a small, modest building, cheap to run because it uses no new technology. It is useful because it is able to provide us with a number of simple, yet cherished elements; windows at fitting points, doors that lead directly to the points we might wish to get to. But this is also a useful building in another sense, that it is a manner of design that runs along the line of least resistance, that it is the simplest and least determined answer to what a courthouse is. Nothing here is arbitrarily new, nothing here is idiosyncratically or identifiably new; nothing here—to use a German phrase of great meaning—imposes itself too much. That is true utility; it is perhaps a quality, like the others here, that is forgotten often in the practice and discourse about the practice of Modern architecture. □

Data

Project: Judicial District of Hartford Courthouse at Manchester, Ct.

Architects: Allan Greenberg; associated architect, Peter Kosinski Associates.

Client: Judicial Dept. of the State of Connecticut.

Site: land occupied by existing supermarket, including parking, service dock, etc.

Program: remodeling 23,000 sq ft of largely undivided supermarket structure into courts and offices (see plan).

Structural system: existing steel columns, open-web steel joists, and steel deck.

Major materials: brick, limestone, and plaster façade; pellata marble, terrazzo floor, plaster vault in white pine moldings in lobby; gypsum board, suspended acoustical ceilings, synthetic tile floor, wood trim elsewhere.

Consultants: Besier, Gible, & Quirin (structural); Walter McIlveen & Associates (mechanical).

Cost: about \$42 per sq ft, including landscaping and built-in furnishings, not including fees.

Photography: Allan Greenberg.

Classical language or mongrel rhetoric?

David Dunster

The architecture of Quinlan Terry, who has long espoused the language of the ancients, has caused considerable comment after a recent London exhibition.

In England, where the Modern movement masters hardly built—with the exception of two buildings by Gropius, an exhibition stand by Le Corbusier, and an abortive project for an office building by Mies—some derivative form of Modern architecture has still been dominant. The post-World War II Welfare State needed buildings. At the same time, however, there has been a small group of architects who designed as if Modern architecture was but a passing fancy. Raymond Erith was perhaps the doyen of this group, though Clough Williams-Ellis was more famous because of Portmeirion, and others such as Donald McMorran remain to be canonized.

Erith's heir is Quinlan Terry, whose exhibited work opened at the new Architectural Design Gallery in Leinster Gardens in London earlier this year. In the catalog to that show, Terry explains why Classicism is the *only* true style, following Ruskin in choosing seven ways in which this style has been misunderstood.

First he counters the argument that Classical architecture can only be a pastiche by saying that Palladio's drawings of moldings give ratios, not measurements, and therefore the architect must use his own experience and work within particular constraints. Second, he rebuts the proposition that Classical architecture is unfunctional and inappropriate to today's democratic usages by pointing out that in the grammar there exists a hierarchy of forms and moldings. They display relative functions by underlining the importance, for example, of one doorway over another. In addition, certain type-plans were formulated that can be "infinitely varied" without sacrificing principles.

Terry's third point addresses the criticism that Classical architecture is not appropriate for the problems of the moment—garages, airports, etc. Terry argues that such problems have not come his way, but that he would hope to solve them as Bramante did when faced with the challenge of designing St. Peter's—through juxtaposition and extrapolation.

The fourth misunderstanding that Terry wishes to clarify is the belief in the efficacy of modern materials. Terry questions the long-term durability of the new materials with their high coefficients of thermal expansion and their problems and costs of maintenance. The general false economy of using cheap modern materials when traditional materials and construction last longer constitutes the

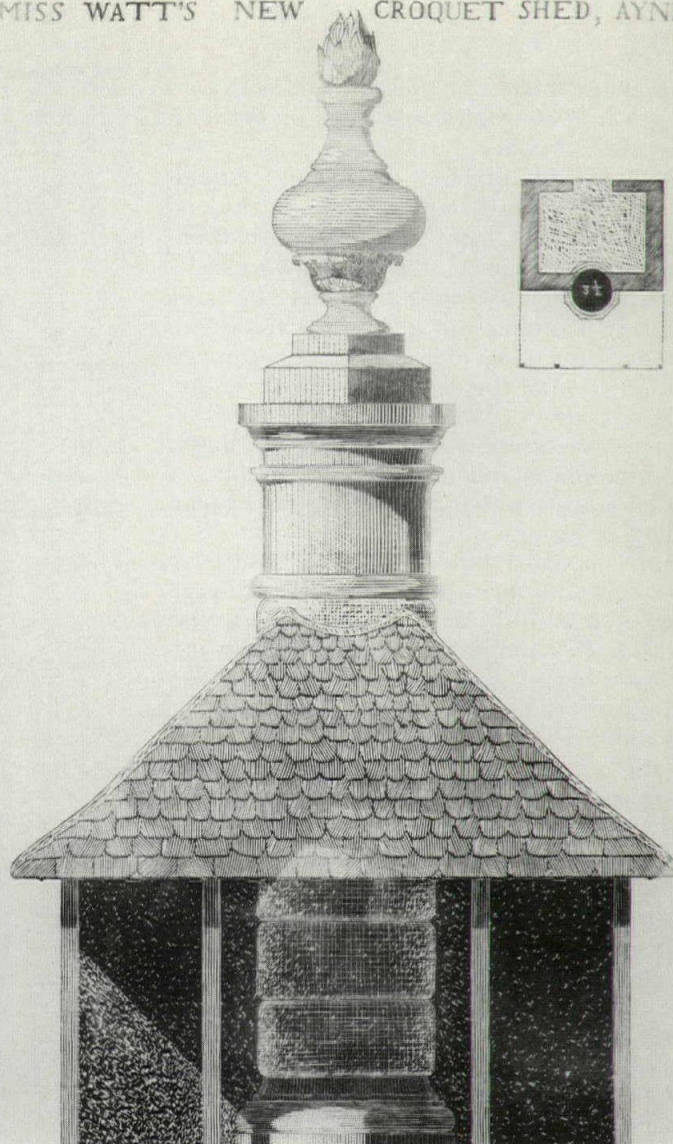
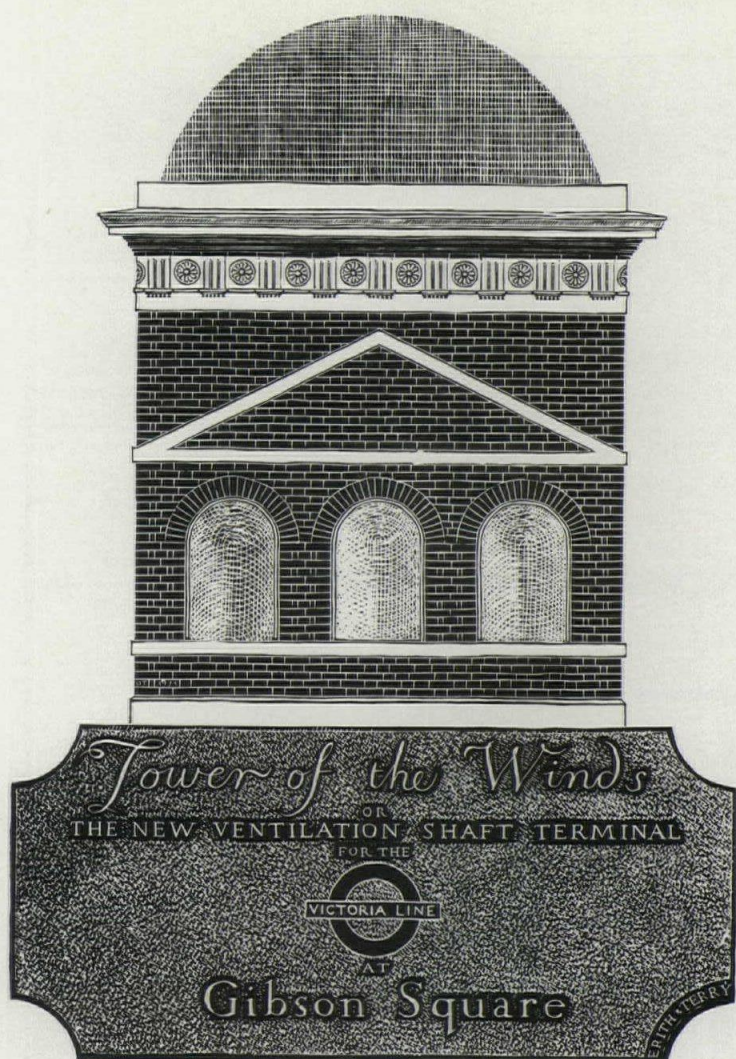
fifth misunderstanding. The argument that Classical designs cannot now be built (the sixth misunderstanding) is contradicted by Terry's experience, he tells us. Furthermore, he finds workmen gain a greater sense of pride because of the skills called into play with traditional building techniques.

Finally (number seven), Terry defies the charge that Classicism recalls politically unacceptable regimes by pointing out that it functioned as a style for a wide and varied coloration of governments. He asserts that Classical architecture is value free. "Although the spiritual, political, material, and temporal influences are crystallized in wood and stone and expressed in Classical forms, the Classical grammar remains neutral, like the paint on the artist's palette.

Terry's reasonings are not watertight, and it is fair to ask whose ever were in such situations. Irrespective of this point, two questions of a more general kind seem to be raised. First, to what extent does Classicism offer a valid alternative to Modern architecture, as that term is generally understood? Second, does Terry's architecture support a positive answer to that question: is it good of its kind?

Terry "speaks" in a language of types and type-plans, exactly what Le Corbusier sought and Mies achieved. But their work was the product of *invention*, though considerable traces of Beaux Arts planning techniques can be found. The new ways of life with which these two masters, and lately Stirling too, had sought to come to terms are erased from the set of possibilities in Terry's work. There the sole examples of the ingenuity with which he credits Bramante seem to be two "squibs"—the croquet hut at Aynho and the ventilator for the underground in Gibson Square.

But if you believe, as he appears to, that the Classical language is not exhausted, and that in any case it offers a more human alternative to current styles, we must return to the question, are his works good of their kind? The house plans are so strait-laced that they look as if they came right from pattern books. Nothing distorts to accommodate to the way people live, and the "personal touches" are restricted to details—moldings, fireplaces—in brief, decoration. When Terry speaks of a Classical grammar, I suspect that what he means is a Classical grammar of building *ele-*



Croquet shed at Aynho in Oxfordshire, 1966, implies a mid-Georgian gate pier with a Doric capital and finial (right). "Tower" in Gibson Square (top left) is a brick and Portland stone ventilation shaft (1969). Waver-ton House (above, 1979) seen from the South Garden.

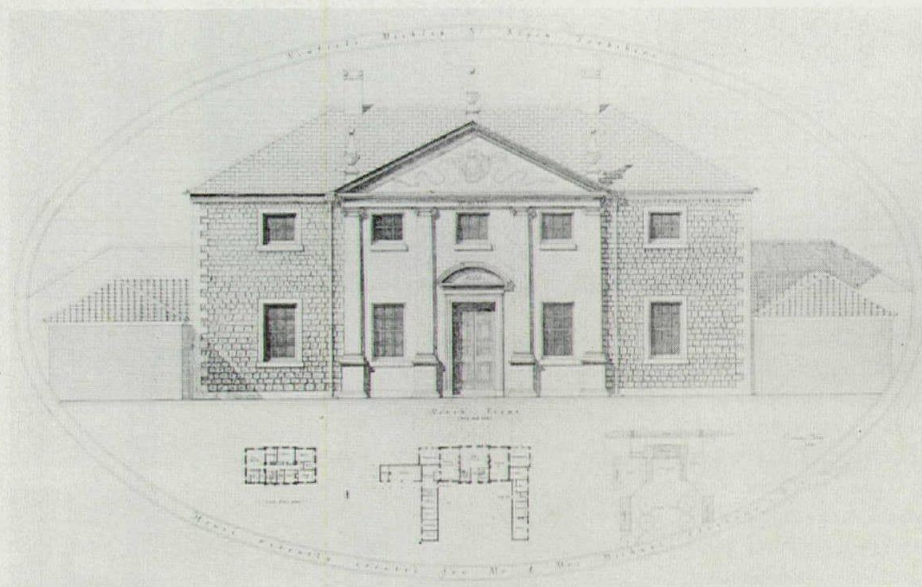
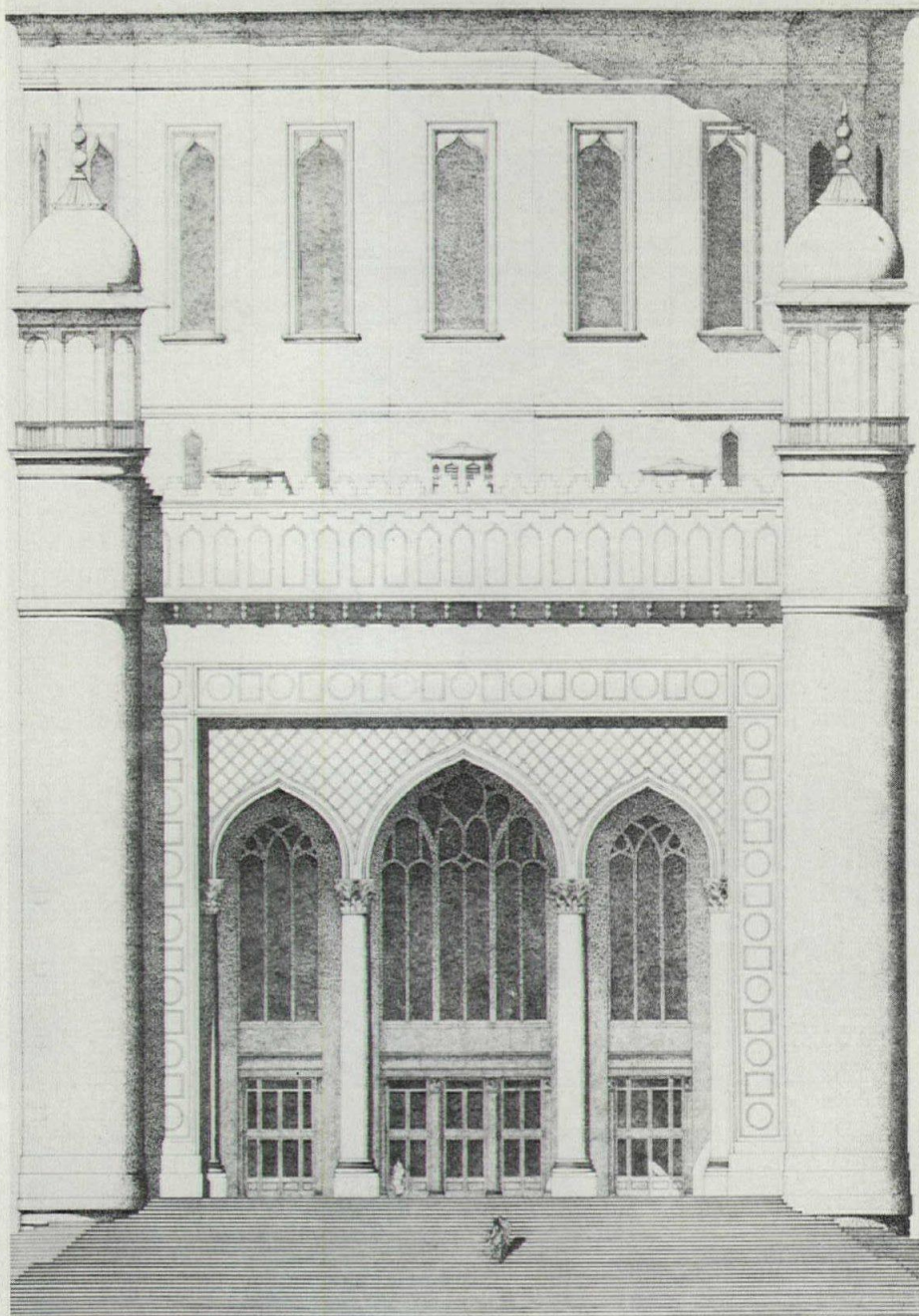
ments characterized by their functions in covering a junction between planes or between different materials.

But is this not precisely the misunderstanding of the bowdlerizers of the Modern movement? Brutalism, by the time it had become a stereotype, busied itself with exactly the same kinds of problems. Once the basic tenets of planning and procedure are set up by others, the game of architecture becomes a manipulation of the details, not the invention in techniques of planning. In this sense, Terry's work seems quite compatible with that of his contemporaries; it is simply that he has chosen a different master—Palladio instead of Le Corbusier.

But Terry adds little to Palladio. His Classicism certainly breathes some life, though whether it is a life that many people would like to lead is another question. Certainly it is not cross-bred with any Modernist sensibility and therefore is not transformed into a style that could be achieved only today. In this, unlike the detested Brutalists, he is a thoroughgoing traditionalist and produces work that could have been built at any time in the past 200 years. Of its kind it is okay. Builders without architects and clients acting on their own as architects are just as capable as he, one suspects. The plans of Newfield, for example, seem to shovel the rooms into the form of the building in an almost childlike way. The hall, apparently symmetrical, has a staircase bleeding off in one corner; the kitchen-dining room looks like the all-too-familiar plan of an unsatisfactory London row house conversion. For a house of nearly 4000 square feet, you begin to wonder where all that footage was put. Terry dismisses other architectural approaches, even though what he dismisses draws attention to his work. If given a large site in a city, on the evidence of his building and projects for Gray's Inn, he could well propose something that might have existed on the site before it became vacant. Some delightful little conceit may be offered to present the building to the clients, though it remains somewhat of a mystery as to how this fabulation might become known to the casual passerby. His architecture, therefore, offers little in the way of hope.

At the same time, in order to follow the path of tradition, it implies that there was once a golden age to which architecture and society should, for ethical reasons, return as speedily as possible. This implication is the horror of the new Neo-Classicism of which Terry is only a part, to me, and perhaps even unwillingly. While Philip Johnson, Michael Graves, Robert Stern, and Kevin Roche play with the forms of the past, they try to reinterpret them to breathe more life into them. They have never abandoned the hopes and fears of this century, nor have they turned their backs on the techniques of planning that are the greatest contributions this century has made to the history of architecture.

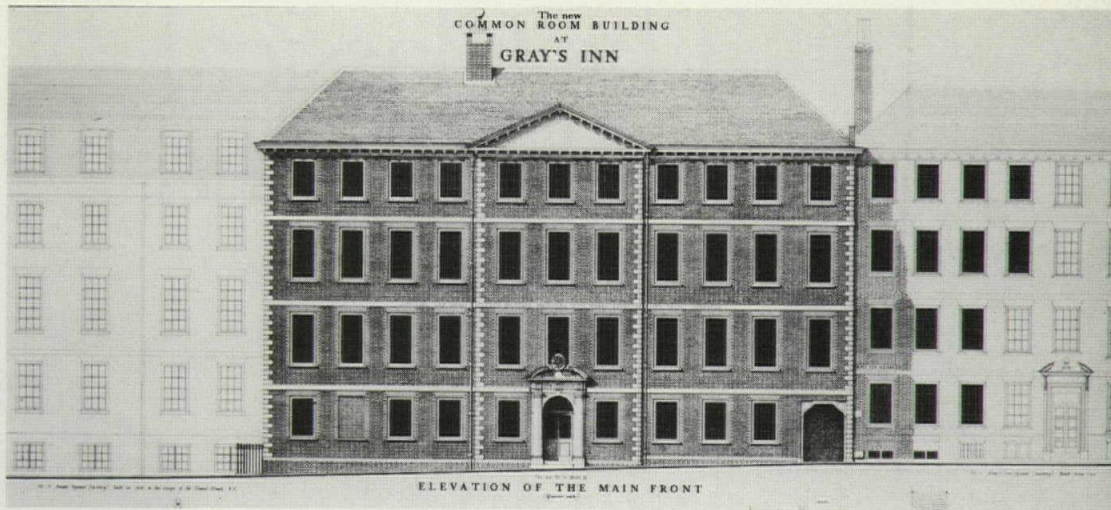
The charm of Terry's architecture is precisely a matter of individual taste, and his



In Terry's second design for a new Bahai Temple, 1973-76 (opposite, top), a mixture of styles and influences can be observed. Corinthian columns support ogee arches, colonnaded circular porches with minarets are at the corners. Newfield (opposite, bottom) in Ripon, Yorkshire, was designed for Michael Abrahams in 1980. It is placed at the head of an avenue lined with double rows of trees, and has symmetrical single-story wings east and west surrounding a forecourt.

A new common room building at Gray's Inn, London (right, top and center), 1971, employs stucco for quoins and string courses. The Ionic cornice is timber with a pediment in the middle and hidden gutters on each side. Classical treatment around the door is an English Baroque variation of the Doric order.

Kingswalden Bury in Hertfordshire, 1970 (below), is designed along Palladian lines, altered considerably to take into account the need to function with a minimum amount of domestic help. The design began in the early Inigo Jones Classical direction, becoming more and more Baroque as it evolved and was detailed. The module throughout is in Venetian feet; one Venetian foot equals 1'-2" in English. This gives more generous and more Italian scale to the building.



clients come to him knowing fairly clearly what they will have. For me, his control of mass and proportion is lax, but this is unimportant except as a personal reaction. The issues Terry's work raises, and specifically the problem of what kinds of architecture can be pursued under pluralism's gray mantle, must be answered. Terry is really no better and no worse than many third- or fourth-generation Modernists. And his view of life seems so caught up in an antiurban romanticism that only the rich can partake of it. (I dispute that his approach can be extended to those problems—garages, airports, etc.—which he claims they can.)

His dream of a natural architecture offering some panacea to the doubts and contradictions he so obviously understands is a dream few could deny. Does it have to mean such blind nostalgia? Or is the attention paid him merely symptomatic of the insecurity of the whole profession and indeed the whole range of architectural patronage? □

The Classical underground

The traditional Classical approach can be literal, or it can be adaptive and interpretive. Always, it imparts a sense of continuity.

Allan Greenberg's "Connecticut Farmhouse" (right and opposite page), now under construction, is strongly reminiscent of George Washington's Mount Vernon. However it does not strictly copy the original, but attempts to reconstruct the model Washington was following—the house he might have built had he not been constrained by preexisting construction and by the exigencies of Colonial existence. (Compare Venturi's Mount Vernon-based house, p. 106). The asymmetrical, irregular fenestration of the Mount Vernon entrance front is recalled in the syncopated but ultimately symmetrical organization of Greenberg's entrance front (opposite page, top), which uses wood to represent rusticated stone. A grand door frame is part of a larger central motif (right) that includes an arched window on the stair landing just above.

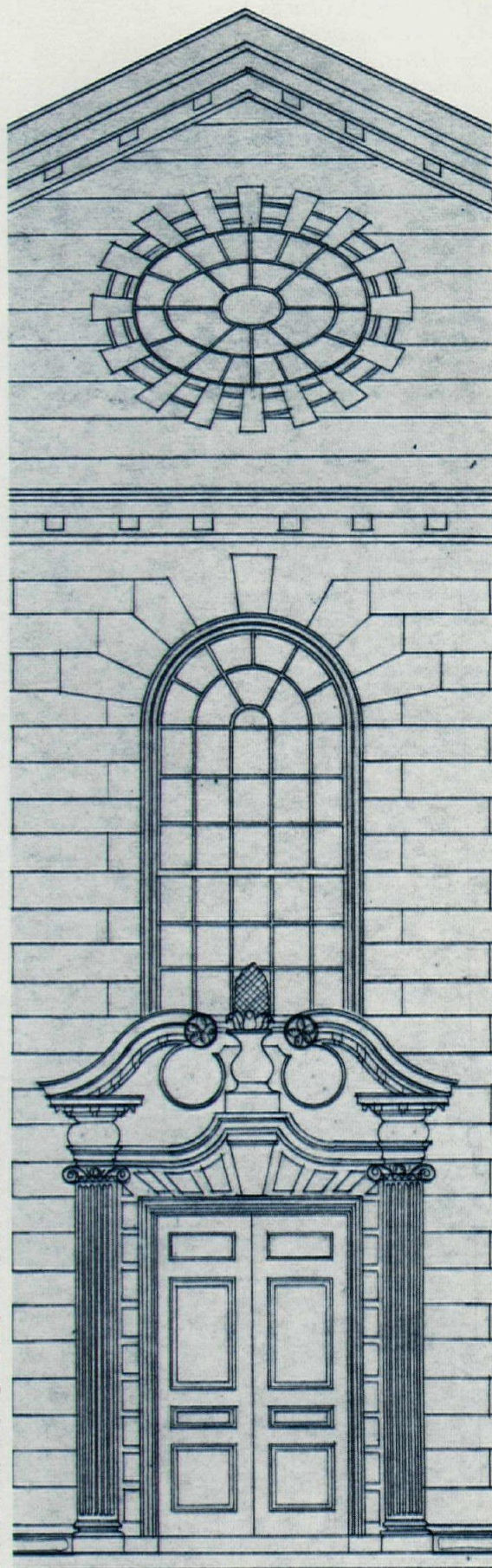
The garden front (not shown) has a two-story colonnade, as did Washington's, but here, pairs of Doric columns give the composition more stable dignity than did the skinny piers at Mount Vernon. The house, with over 20,000 sq ft of floor area, is larger than Mount Vernon. One of the flanking structures houses service spaces, and the other holds an indoor pool.

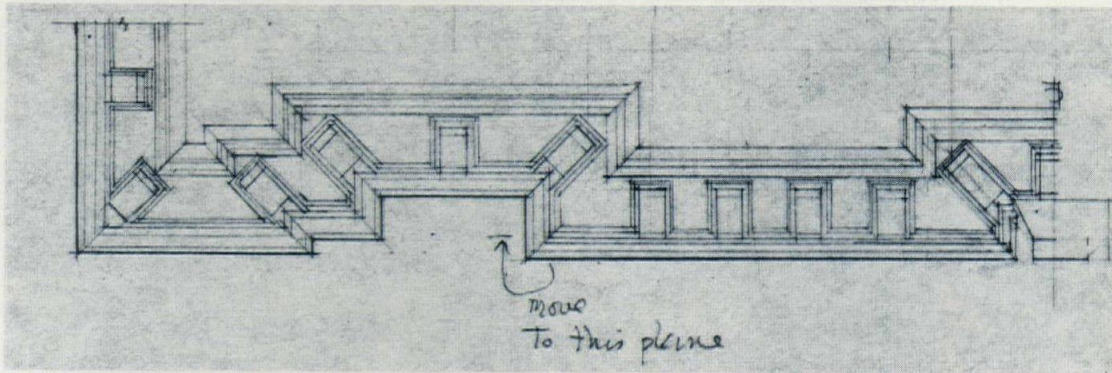
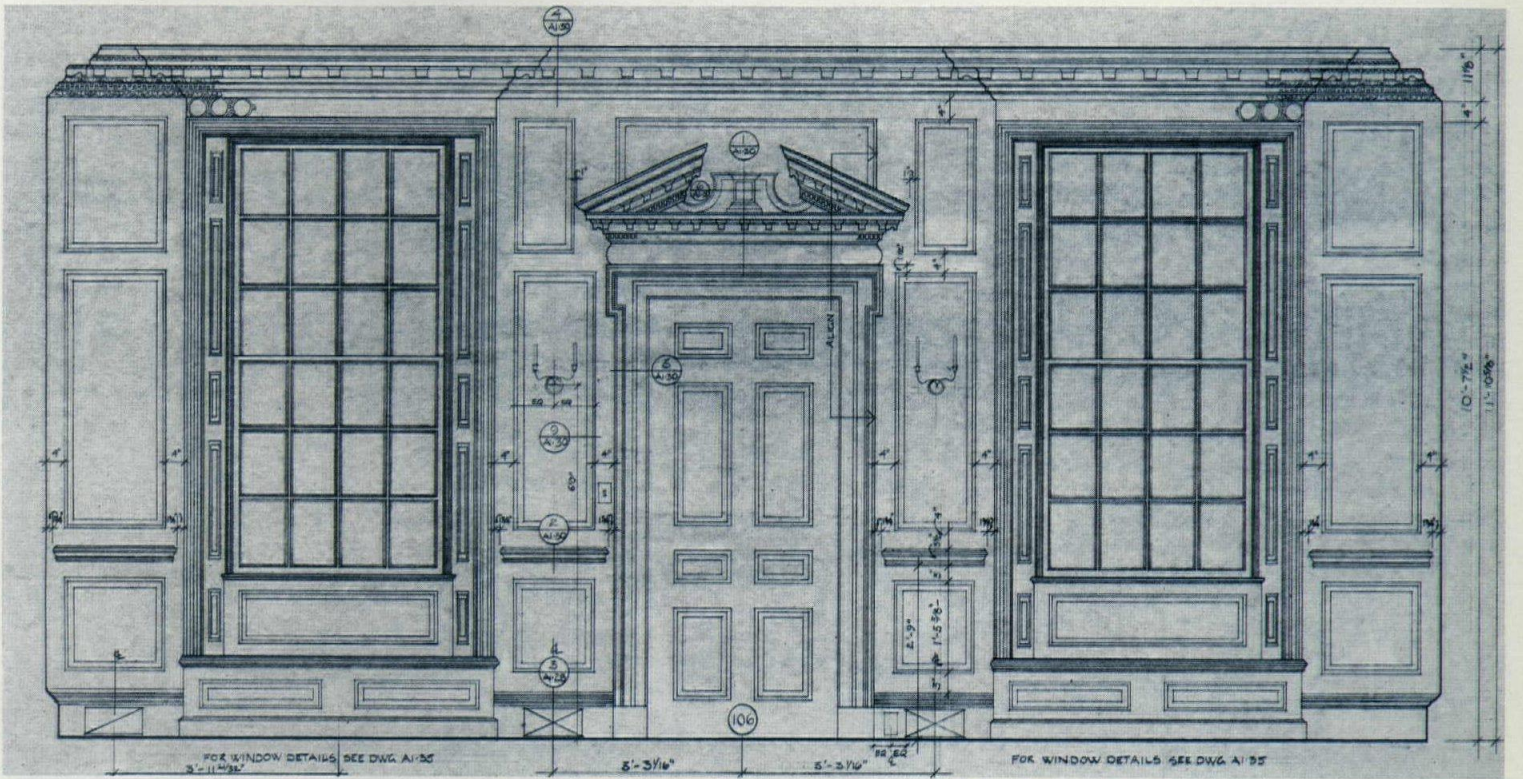
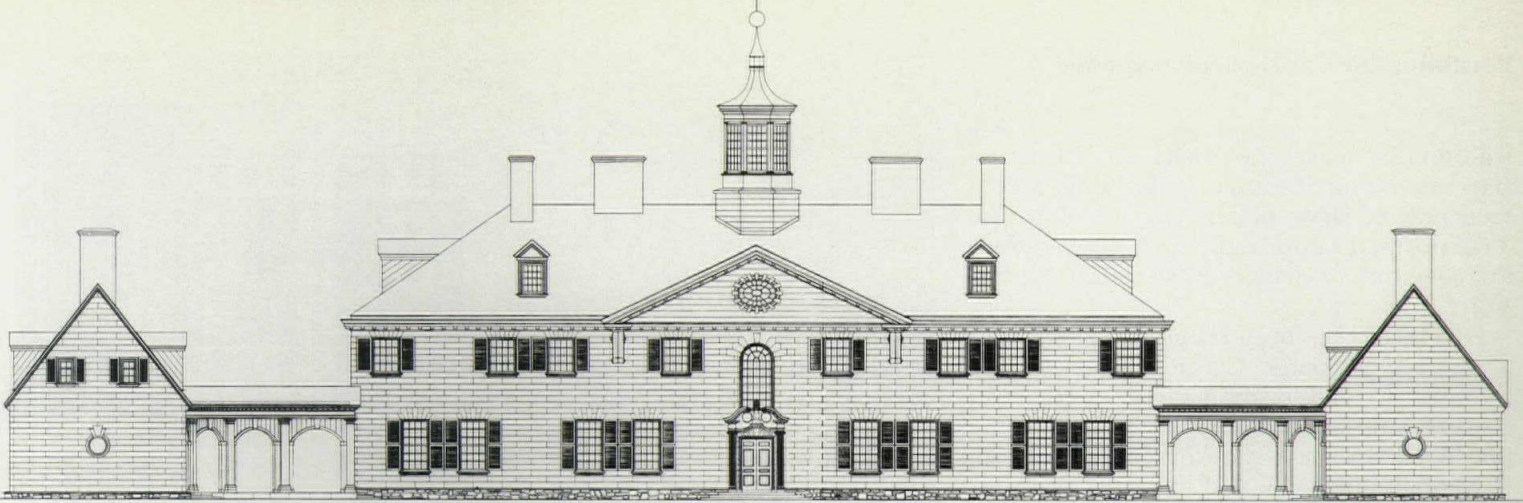
The historically consistent Classical approach to design can certainly accommodate personal and contemporary interpretation. While incorporating harmonies from earlier ages, it can expand the vision of the current age, as beautifully explained in the discourse on Schinkel by Hélène Lipstadt and Barry Bergdoll (p. 72).

In the work of Allan Greenberg, serenity is an ultimate goal in the use of Classical proportions, reassurance and exaltation the result of association and continuity. In his house based on Mount Vernon, Greenberg is not content merely to replicate; he enters into the spirit of the original and carries it further by "correcting" its artisan dissonances (while Venturi, p. 106, "exaggerates" the same dissonances, as Helen Searing points out in her introduction to the catalog of the Smith College 1981 exhibition, *Speaking a New Classicism: American Architecture Now*). With Greenberg's approach, there is the sense that he feels he is taking his place in the steady, inevitable, and proper unfolding of history. Greenberg bases his work on the Classicism of the Federal period, communicating the significance of society's institutions in the most highly developed language of form available to him, as he puts it.

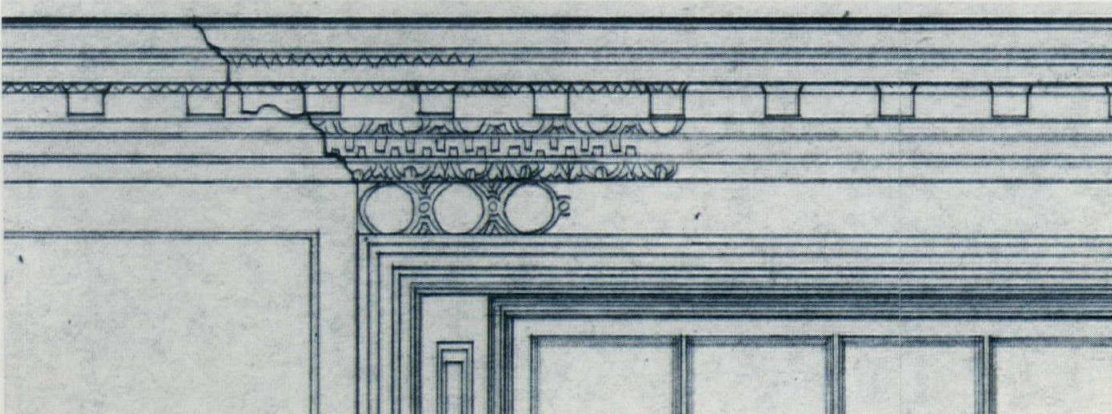
John Blatteau, of the Philadelphia firm Ewing Cole Cherry Parsky, feels that an indigenous American architecture exists, finding its strength and unity in the use of the Classical language of architecture and in its faithfulness to Classical models. His work derives from late 18th- and 19th-Century French Classical architecture, and from the Beaux-Arts tradition widely followed in America in the late 19th and early 20th Century. The civic meanings, as well as the program complexities inherent in the institutional buildings that Blatteau designs, find satisfactory expression in the Classical language of architecture.

A prerequisite—and by-product—of the increased interest in non-abstract architecture is the reinforcement of the craft of fine, detailed representative drawings. A second prerequisite, the revival of centuries-old building techniques, is more difficult to achieve. Some crafts, such as stone-carving, have virtually disappeared. Programs to train craftsmen in traditional methods provide one way to redress the situation. (The New York Municipal Art Society's *Restore* program is an example.) Another possibility is the adaptation of contemporary materials to represent





On the interior of Greenberg's "Connecticut Farmhouse," most of the major rooms have fine paneling in the American Georgian manner, often focusing on actual period fireplace mantels. Woodwork, even in the lesser rooms, scrupulously follows period models. The elevation drawing above depicts the west wall of the library. At left are cornice details from the library and main hall.



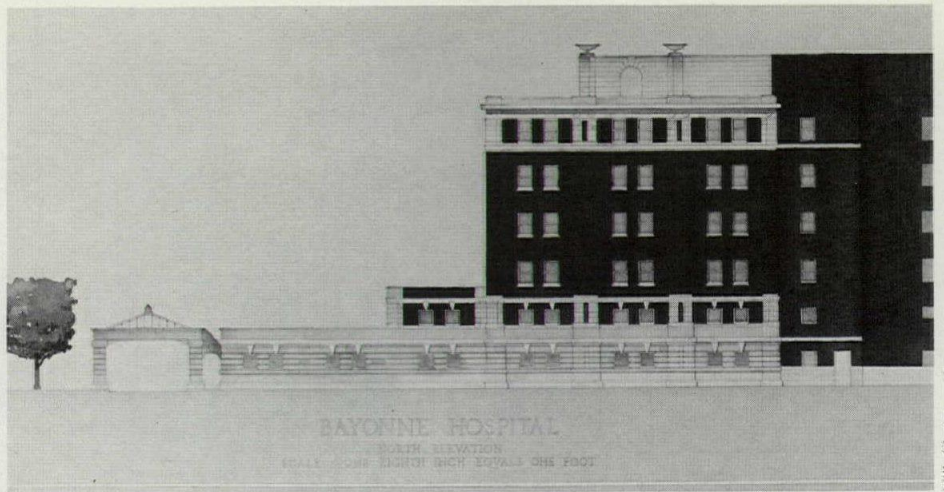
Portfolio: The Classical underground

traditional ones: the walls in Blatteau's Bayonne Hospital seem to be brick but are, in fact, cast in large pieces. (In the "Classical Transformed" approach, such substitutions are sometimes celebrated by explicit expression.)

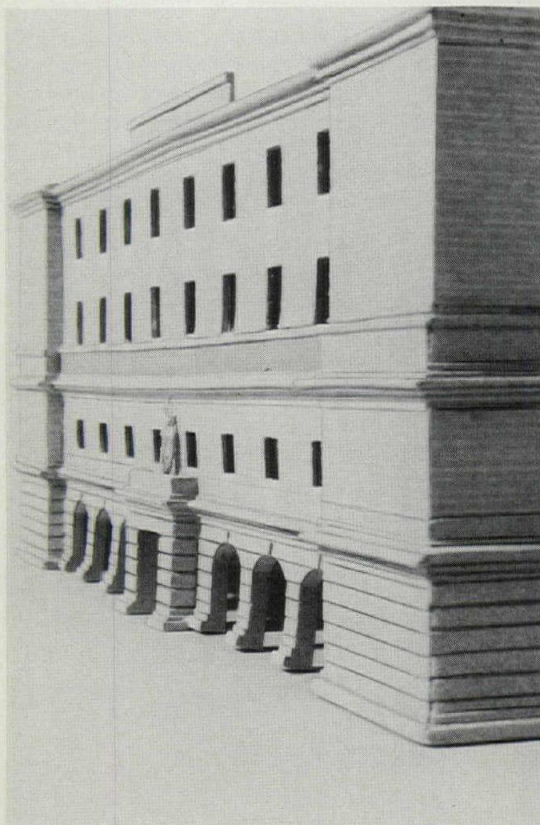
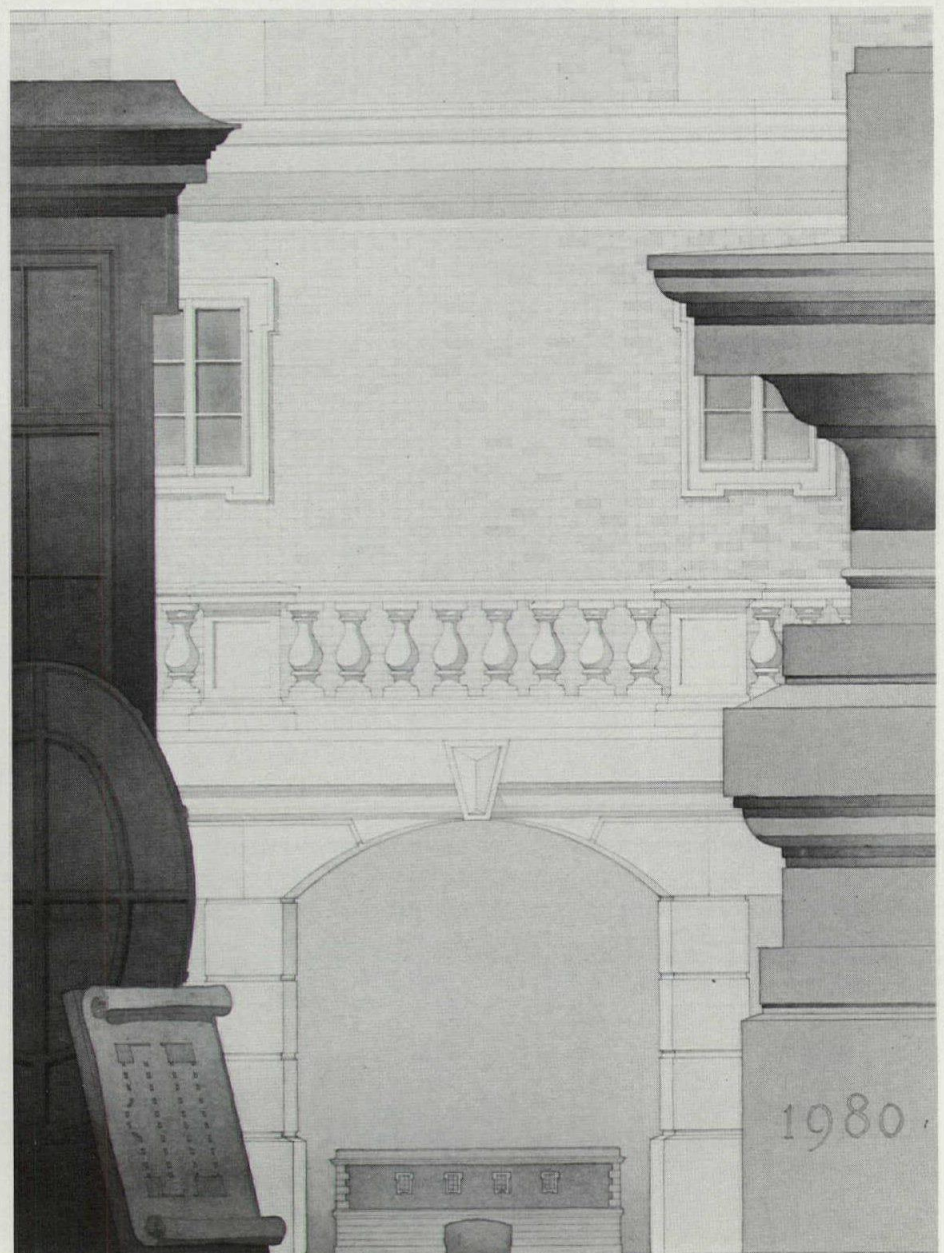
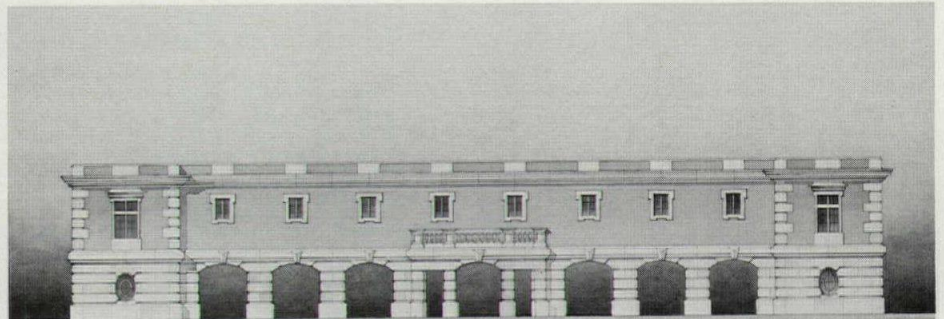
One society has been keeping the faith over a number of years. Classical America was founded in 1968 to foster the Classical tradition in American art, and claims to be the only organization in the world with that aim. It has 600 members, and its board of directors includes John Barrington Bayley, John Blatteau, and Allan Greenberg, whose work is shown in this issue; Henry Hope Reed, whose definition of Classicism is quoted in the introduction; and several other architects and artists. The society offers instruction in the drafting and freehand drawing of Classical objects and ornament, publishes and reprints books on the Classical tradition in art and architecture (*The Classical Figure in Painting* is one of its new publications), and sponsors lectures, exhibitions, and conferences. (This month, on October 2, Classical America is holding a one-day conference and exhibition at the University of Texas, Austin.)

The historically faithful Classical movement, always alive but for decades erased from the accepted history of much of the 20th Century, has been reinstated as part of the mainstream of architecture by the catholic tastes of these times. It should be noted, however, that few regard this trend as a major creative force, in the vanguard of interpretive, inspirational design. Rather, it is quiet, thoughtful, and its products imbue the environment with a sense of tradition and continuity. Therein lies its significance.

[Susan Doubilet]



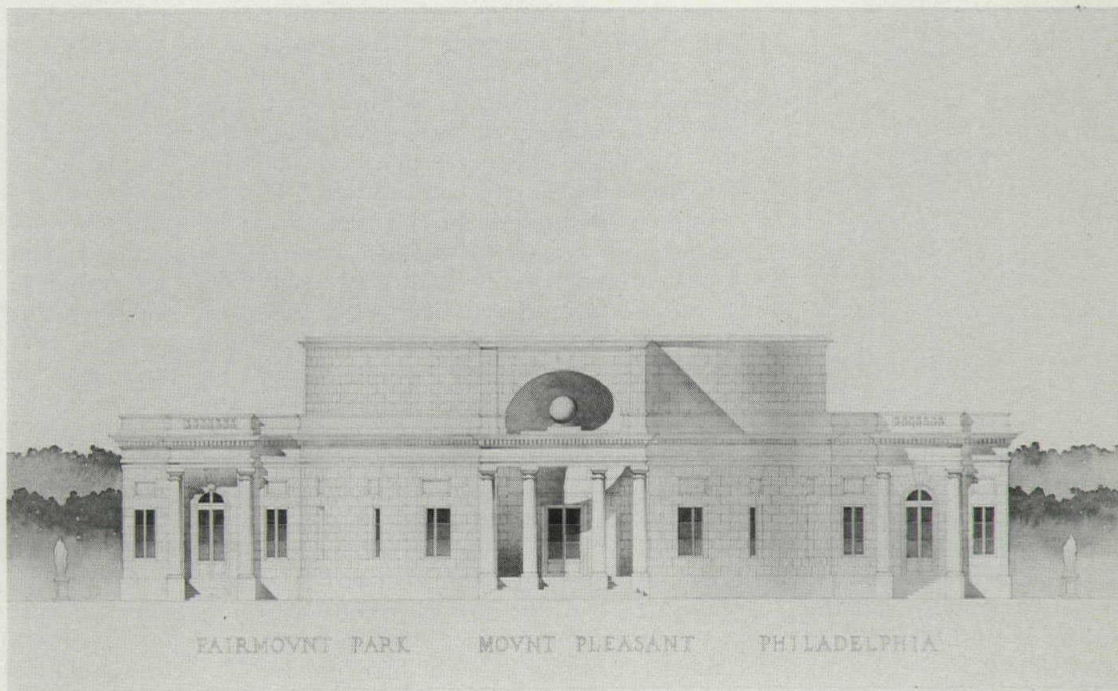
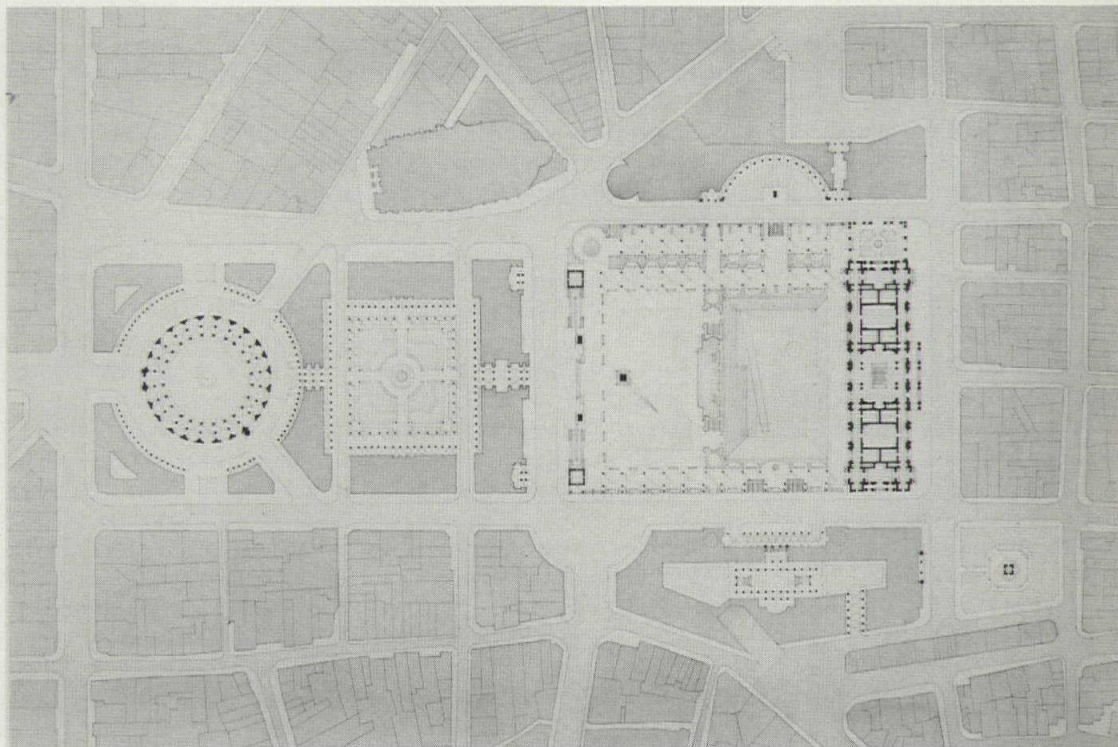
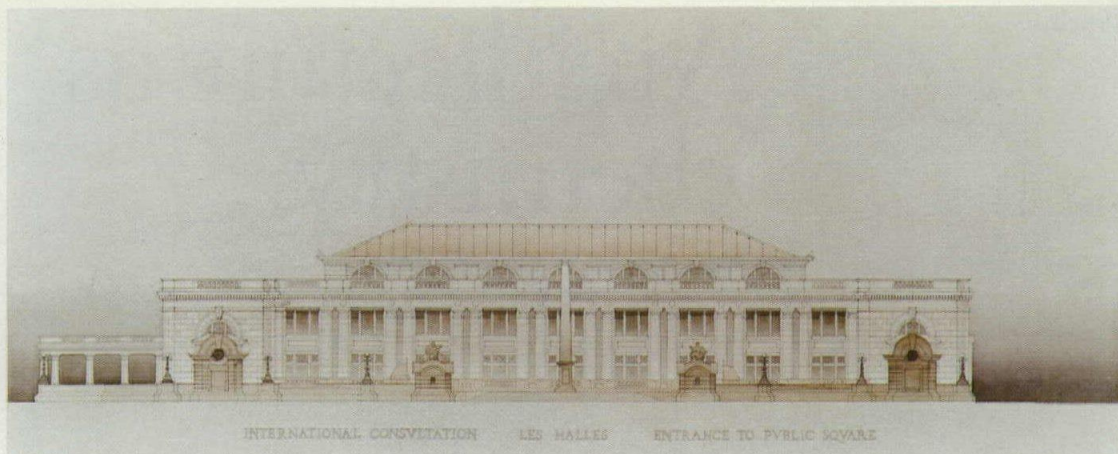
Mills Photographers



John Blatteau, of the Philadelphia firm Ewing Cole Cherry Parsky, proves by his designs that a traditional approach is a reasonable architectural alternative today.

Opposite page: In the additions and alterations to Bayonne Hospital (top), a 1980 P/A citation recipient, the Classical style reaffirms the civic aspect of the hospital in the community, while establishing a sense of human scale. The use of rustication, dentils, and keystones at the base enhances the pedestrian's experience. Against the sky, the attic story cornice and rusticated mechanical penthouse complete the composition. An addition to a suburban Philadelphia hospital (middle and bottom) is located in front of the original building, thereby displacing the main entrance and imparting a new image to the hospital, expressed in the "analytique" (bottom right). The rusticated stone ground floor will first function as a covered drive; in a future phase, with arched openings glazed, it will serve as administrative area. The upper floor is of brick and stone. Two floors will be added later (model, bottom left).

This page: 17th- and 18th-Century Parisian open spaces, the Place de Vosges, the Place Royale, and the Place Vendome are the models for the design by Blatteau (with Stephen Bonitabus and Ronnie Rosenblatt) for Les Halles, 1979 (top and middle). Mount Pleasant (bottom), designed by Blatteau in 1976, is to be a permanent addition to Fairmount Park, Philadelphia. The open garden façade and the relatively solid entrance façade express the house's private and public uses. Designed in the French Neoclassical style appropriate to a public residence in a park, the elements of Mount Pleasant have undergone no process of creative interpretation or transformation.



Architecture as chemistry

Universal Classical principles govern Lutyens's romantic imagination and comprehend exotic Indian ornament, the horizontality of Wright, and the sculptural solidity of High Victorian architecture, in the Viceregal palace in New Delhi.

The excerpts here are taken from *Indian Summer: Lutyens, Baker, and Imperial Delhi by Robert Grant Irving. This excerption will be followed by a larger treatment of Lutyens's work in New Delhi, taken from the same source, to be published in a forthcoming issue of P/A.**

Radiant with the romance of what fellow architect Herbert Baker called the Great Quest, Edwin Lutyens set out for Delhi in 1912. A dozen years afterward he could be seen striding determinedly among the rising walls of his fairytale city, puffing at perpetually unlit pipes and grunting out explanations of his great plan. By then he was laden with wordly honors.

In Lutyens's early picturesque houses, details appear that betoken his eventual embrace of the classical tradition. Increasingly, classical discipline governed his imagination, although he always remained at heart a romantic in his love of pictorial effect. After the turn of the century, Lutyens realized that as British architecture assumed a new imperial stance, his future lay in the classical idiom.

Despite his adoption of Palladian classicism, Lutyens felt strongly that archaeology should not be the architect's lodestar. In India he discerned two ways to build: either to parade a building "in fancy dress" as at a costume ball, mixing dates and styles, or alternatively to "build as an Englishman dressed for the climate," conscious only that the tailor was Indian and not English. The latter method was clearly his preference. Universal classical principles were quite capable of comprehending within their framework the exoticism of Indian ornament. But Lutyens made no secret of his disdain for "Mogulese & Hindoo contraptions," and he resolutely defended the properties of the round arch against official insistence on the four-centered, tip-tilted Mughal arch. Like Wren he considered simple geometrical shapes the best, and the classical arch, based on the true circle, was fundamental to his conception of architecture in the Indian capital.

Lutyens's august, supremely ordered Viceregal palace at New Delhi not only expressed "the ideal and fact of British rule in India," but achieved that fusion of traditions which both politics and climate dictated. Majestic, imposing, even daunting, Viceroy's House was planned and realized on a scale reminiscent of Hadrian's Tivoli or Shah Jahan's Taj rather than Lutyens's familiar cottages and country houses in the Home Counties. Six hundred thirty feet wide and 530 feet from east to west, the Viceregal edifice when completed comprised over 200,000 square feet, including internal courts—larger than the Palace of Versailles. For generations, aspiring

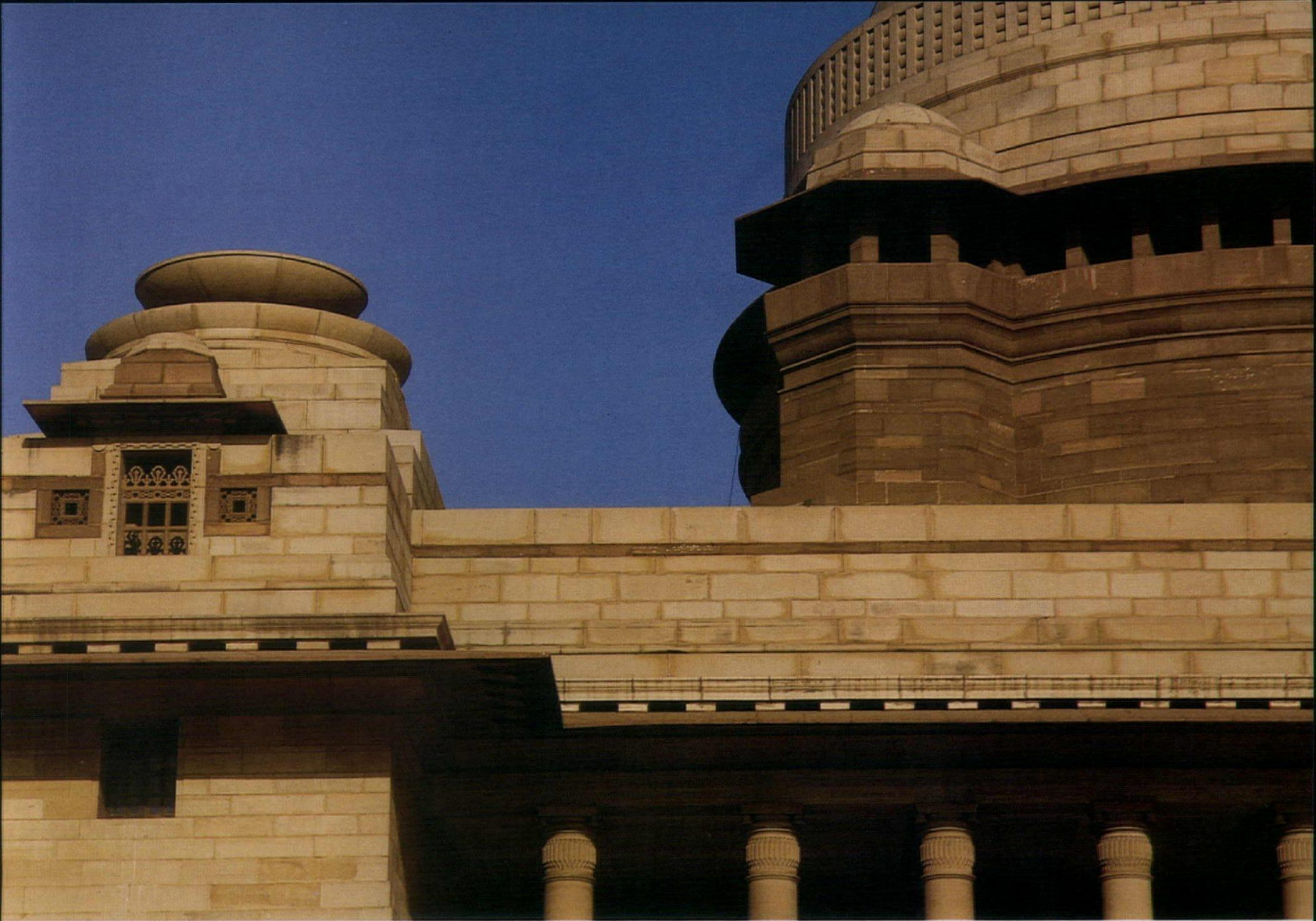
students at the Ecole des Beaux Arts had prepared for such a monumental opportunity; by a supreme irony, the chance came to a largely self-taught genius from an English village.

Straddling a rocky saddle between the summit of Raisina Hill and the lowering slopes of the Delhi Ridge, Viceroy's House exhibits a scale to defy man and nature. Majestically sited astride a granite outcrop, the palace boasts two basement stories, the lower at street level and the upper continuous with the Viceregal forecourt and elaborate gardens. Above this imposing plinth, colonnades and dark voids punctuate clifflike walls, and a titanic dome crowns the whole. From every direction the palace is as insistently horizontal as almost any house by Frank Lloyd Wright, a striking contrast to the verticality characteristic of High Victorian edifices and British-built Indo-Saracenic architecture. Yet, aside from its horizontal emphasis, Viceroy's House has the hard, clipped edges, flat, broad walls, recessed ornament, and sculptural solidity which suggest High Victorian affinities.

Buff and rhubarb-red sandstones not only echo the hues of nearby Shahjahanabad but, laid only in horizontal bands, stress the lateral dimension as well. Still another characteristic Indian architectural element acts as a crucial unifying feature of Lutyens's palace: the *chujja*, a beetling, downswept stone cornice common in Mughal buildings and found in Indo-Aryan temples as early as the eleventh century. The brightly sunlit upper surface of this immense blade as well as its deep shadow lengthen and link the palace fronts, an expression of Lutyens's dictum that light is an architect's "most important instrument" for composition.

Viceroy's House is by no means static or dull, but full of invention. Vertical surfaces are battered and profiles progressively set back so that masses taper to pyramidal forms. At the same time, the dome generates interpenetrating lines of force, a circular motion which pervades and unites vaulted corridors and rooms, classical arches and tiny chattris or cupolas. The colonnades conceal the complexity of internal arrangements, everywhere maintaining the big external public scale even when private-scale patterns prevail within the

*Copyright © 1981 by Yale University, excerpted, with permission, from *Indian Summer: Lutyens, Baker, and Imperial Delhi* by Robert Grant Irving, to be published in the Spring of 1982 by Yale University Press.



Photos: David Kutz

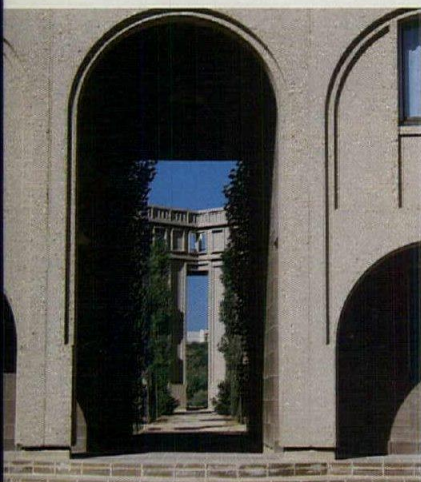
In his earliest sketches during the summer of 1912, Lutyens reinforced the dominant horizontal-ity of Viceroy's House with a repetitive march of colonnades that recalls Neoclassical projects by J.N.L. Durand or even E.L. Boullée. Such lateral emphasis gives the building a visual stability appropriate to the supreme monument of the Raj, and indeed, as it stretches across Raisina Hill, its giant pavilions firmly grasping the brow, the palace does seem to embody all the self-assurance of the Britannic Lion itself.

wings. Skillfully manipulated, the palace façades achieve that paradoxical duality found in Lutyens's best work. Voids become positive elements in the design. Massive load-bearing walls are contrasted with dark loggias; thickly layered for enclosure, the walls are punctured for ample ventilation.

The building has the openness of a summer house, despite its construction as a fortress against the Indian climate. Though it is a behemoth of some 340 rooms, the palace is still kin to the humble bungalow. □

Wage-earners' Versailles

A housing development by the Taller de Arquitectura brings the imagery of palaces and boulevards to a new town near Paris.



Passages and walkways cut diagonally through the grid of the housing blocks in Les Arcades du Lac.

Among the agglomerations of projects that make up the new towns around Paris, only a few individual developments rise above the level of Space Odyssey Modernism or bucolic nostalgia (P/A, Sept. 1980, p. 58). The most stunning departure—if not necessarily the finest—occurs in the two adjoining complexes at Saint-Quentin-en-Yvelines designed by the Taller de Arquitectura/Ricardo Bofill of Barcelona.

In bold contrast to the surrounding formlessness, Bofill and his partners have composed a dense mass of buildings, laid out along rigid axes, with sternly ordered façades and uniform parapet lines, set among formal gardens and crossing an artificial lake. The imposition of Classical order to extensive street façades and its extension out into the landscape recall both the boulevards of Paris and the Palace of Versailles. In distant views, one gets the impression of temple-like structures in an Arcadian landscape (see Cover); from closer up one feels the undertone of mass conformity present in so many turn-of-the-century streetscapes.

The designs of these paired developments were worked out in the late 1970s, while the architects were proceeding with their ill-fated scheme for the Halles site in Paris (P/A, Sept. 1975, p. 82). Their reasons for adopting Classical form are made clear in a statement by Taller partner Peter Hodgkinson, entitled "A Defense for the Reintroduction of Classicism in Europe," some key excerpts from which are presented here:

This Classicism is not a stylistic caprice or ornamental provocation. It does not follow the North American school of eclectic collage or the Italian-French school of historical revivalism, and in no way can it be associated with the ponderous latter-day exercises of Edwin Lutyens or Albert Speer.

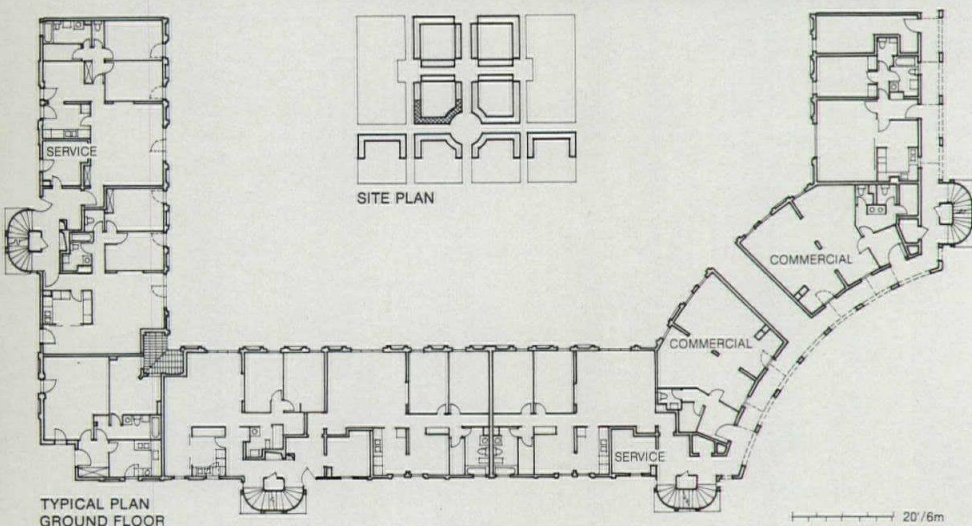
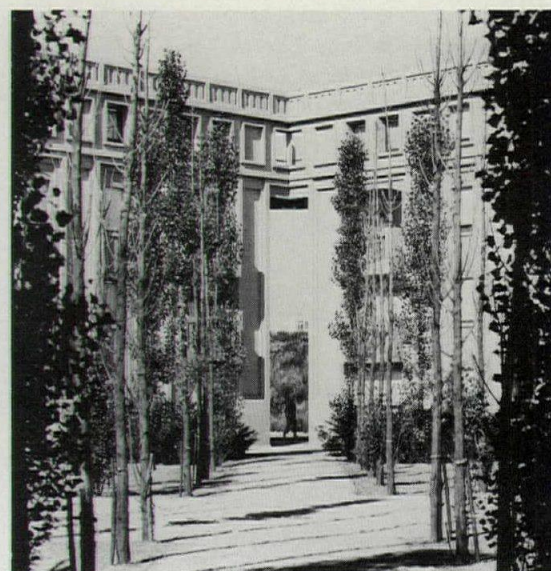
It is Classicism per se, the Classicism of yesterday's great masters reduced to the essences of today—introducing three fundamental changes: first, a change of ideological identity in terms of association and program; second, a change of technological conditions and criteria; third, a change of architectural language responding to these conditions.

Precedents for the Arcades du Lac project, for which I coined the name "Versailles for the People," can be found in radical visionary Charles Fourier's proposals (Nouveau Monde Industrielle, 1829) for large structures with strong and identifiable images of housing and équipement based on formal interpretation of the Versailles palace, to replace the



Traversing an artificial lake adjoining Les Arcades du Lac, the single linear building of Le Viaduc presents a temple-like elevation (right) at the end of the main Arcades axis. Seen broadside (below) Le Viaduc's arches are reflected in the partially filled lake.





"Circus" at center of Les Arcades (top) is not yet finished. Partial plan of typical ground floor shows generous unit plans, curved arcade at circus, and passage for diagonal, through-block walk (top right).

squalor of the petit bourgeois dream house [even then] filling out the banlieus. It was through similar motivations that the plan of the Arcades is aimed to meet the threat of decomposition in the spreading cancer of French new towns with a counterproposal of mass image and identity, plainly urban and associated with local history and heritage. The Arcades is not only speaking the formal language of Versailles, its close neighbor, but also using the sources of local design for its uniform inspiration adapted to a new industrialized technology. . . . It speaks; it's an architecture parlante; the people go and look at it on Sundays; they understand it; they enjoy it and they live in it.

Hodgkinson's statement speaks with particular pride about the adaptation of Classical vocabulary to the industrialized system—using the factory-produced precast elements prevalent in French construction. He writes of the architects' technologically current "answers to" the cornice, frieze, capital, column, plinth, and pediment—"industrializing them, changing their color and texture, changing their connotations, solving the compositive problem of panel joints, understanding molds,

cranes, vibrators, and building ordinances." Here and at an architecturally related project under construction at Marne-la-Vallée—another French new town—the architects expect to complete about 2000 apartments using these industrialized Classical devices. As a visitor to the site during construction, I can report as well that the axial layout and repetitive façades seem ideally suited for the cranes of French construction sites (even low-rise ones), the axes allowing for their tracks and the circus at the crossing accommodating the rotating boom—the Classical ground plan becoming a permanent trace of the erection process.

Hodgkinson notes not only the apparent popularity of their new Classicism with the French public, which may be recoiling from the damage that Modernism has inflicted on their urban environment. He also reports that the apartments sell well in a "competitive market," leading reputable developers and large producers of industrialized components to approach the Taller.

A critical assessment of their accomplishment here will have to await a visit to the projects when they are fully completed and occupied. But on the basis of an earlier visit, plus drawings and photos, the questions to be addressed can be outlined:

Can the needs of today's French suburbanites be met in uniform blocks that recall turn-of-the-century speculative housing—in New York as well as Paris? Can Classicism justify the constriction of windows and balconies for the sake of exterior composition? Will allées of poplars suit today's outdoor activities? Turning to the treatment of Classicism by the architects, one must acknowledge that it is ingeniously fitted around the program and meticulously executed. But do apartment windows punched through friezes or pilasters show adequate respect for their formal integrity? Has the architects'legerdemain in manipulating modern envelopes produced convincing Classical architecture? [John Morris Dixon]

Data

Project: Les Arcades du Lac, new town of Saint-Quentin-en-Yvelines, France.

Architects: Taller de Arquitectura/Ricardo Bofill, Barcelona (Peter Hodgkinson, preliminary design; Ramon Collado, Bernard Torchinsky, project design; Xavier Llistosella, façades; Serena Vergano, colors; Manuel Nunez Yanowski, gardens; Bernard Torchinsky, Jose-Maria Rocias, execution).

Client: Foyer du Fonctionnaire et de la Famille, Paris.

Site: level fields with adjoining drainage reservoir that was adapted to design.

Program: 400 subsidized apartments for sale; underground parking.

Structural system: load-bearing concrete (tunnel system).

Major materials: treated concrete, tile, wood.

Consultants: Yves Serra, OTCE, Cobitec (technical), Jean-Pierre Aury, sculptor (concrete aesthetics).

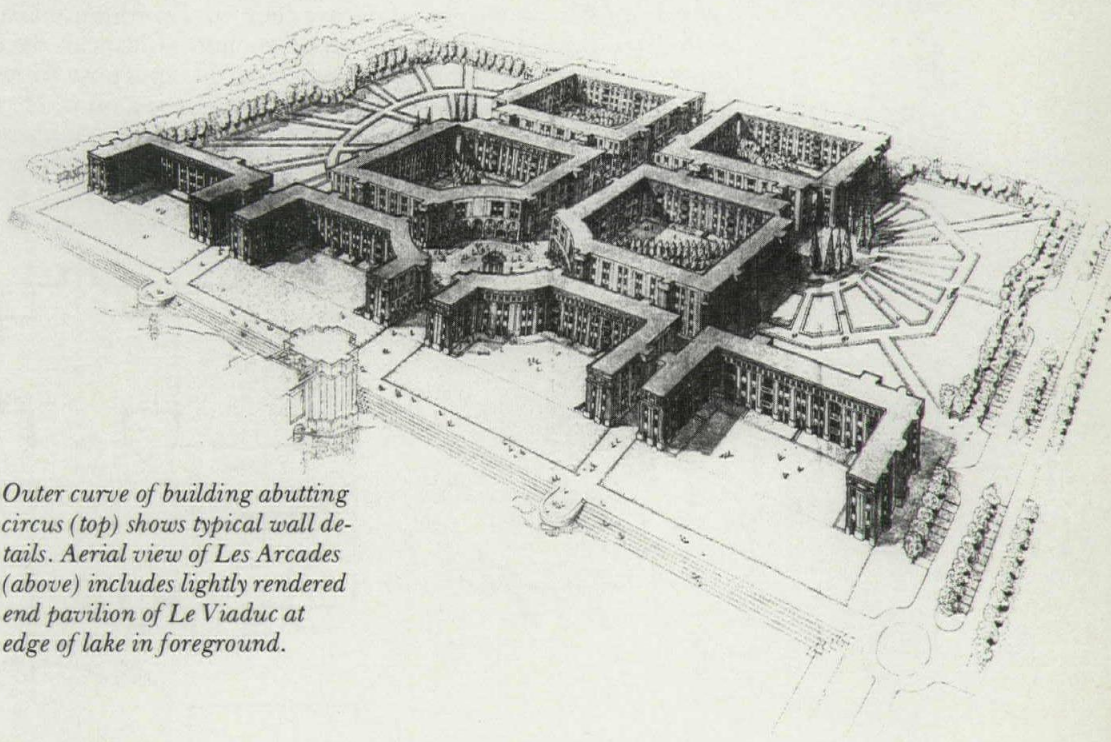
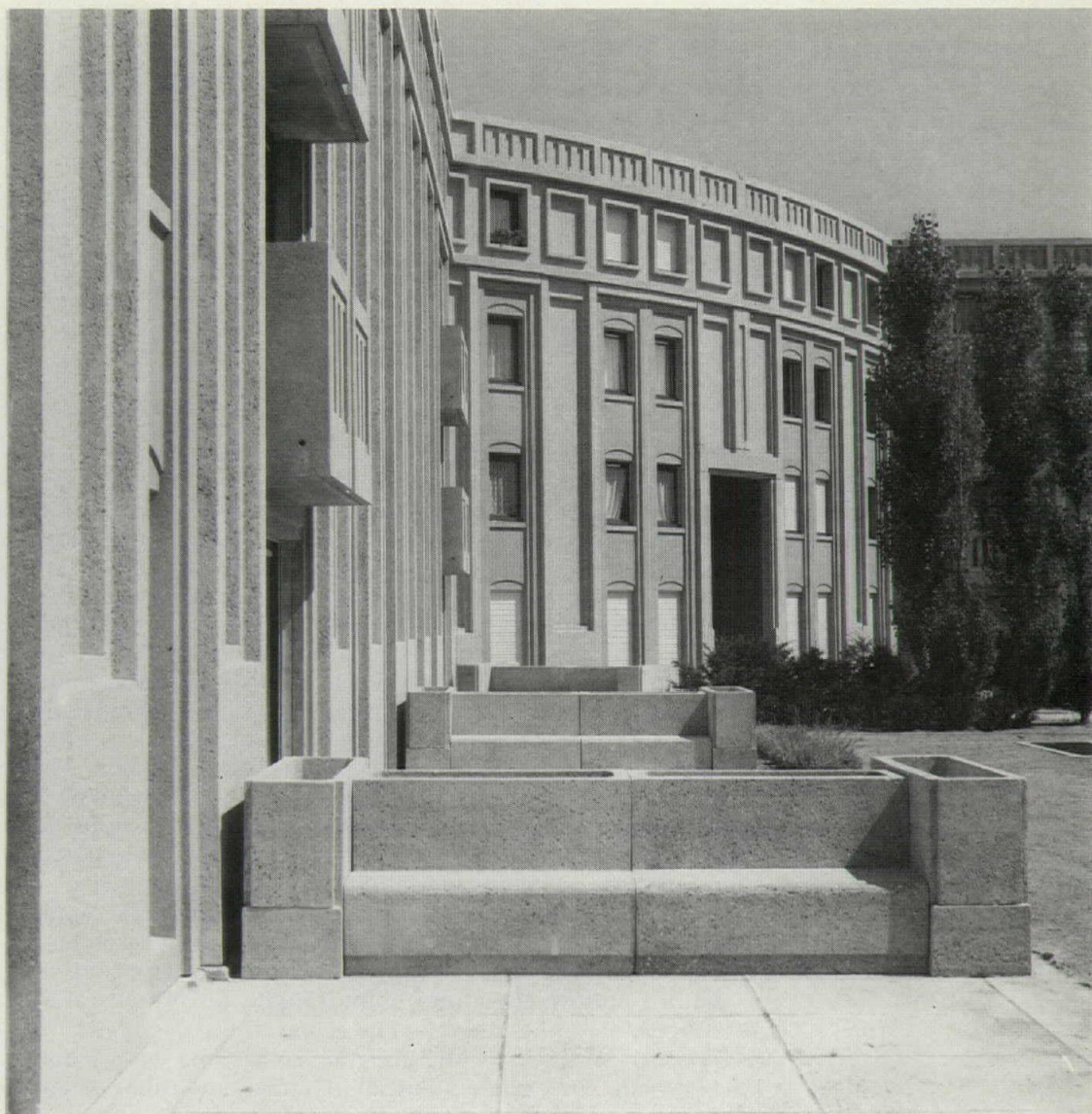
General contractor: Entreprise Hironnelle.

Costs: 2400 F per sq m (about \$38 per sq ft).

Photography: Deidi Von Schaewen.

Project: Le Viaduc, adjoining Les Arcades du Lac, designed by the same architectural firm for different developers includes 60 dwelling units, similar in structure and materials to Les Arcades. P/A plans to publish more details on this project in the future.

Photography: Deidi Von Schaewen.



Outer curve of building abutting circus (top) shows typical wall details. Aerial view of Les Arcades (above) includes lightly rendered end pavilion of Le Viaduc at edge of lake in foreground.

Eclectic revivals

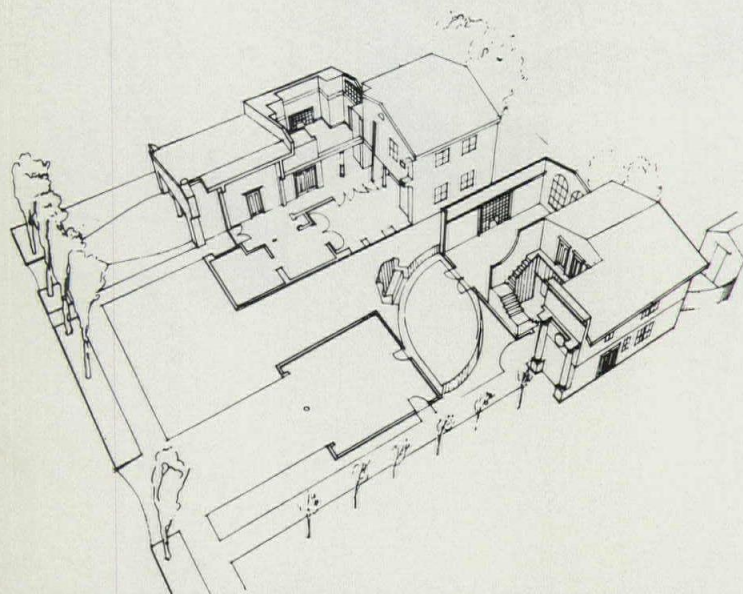
Two houses by Thomas Gordon Smith look basically to Classical traditions, but to some others as well.

By his own admission, Thomas Gordon Smith has no interest in the past. He does say, though, that "I am passionate . . . about the elements of architecture which have been available to architects throughout history, and I am excited by the opportunity to design buildings with this wide vocabulary which solve today's problems and convey spiritual content. From my point of view, our current challenge is to extend the meaning of the elements of architecture and iconography for appropriate expression today."¹ In his highly eclectic approach to architecture, Smith does not quote directly from the past, but uses elements in an iconographic or metamorphical manner to express certain ideas.

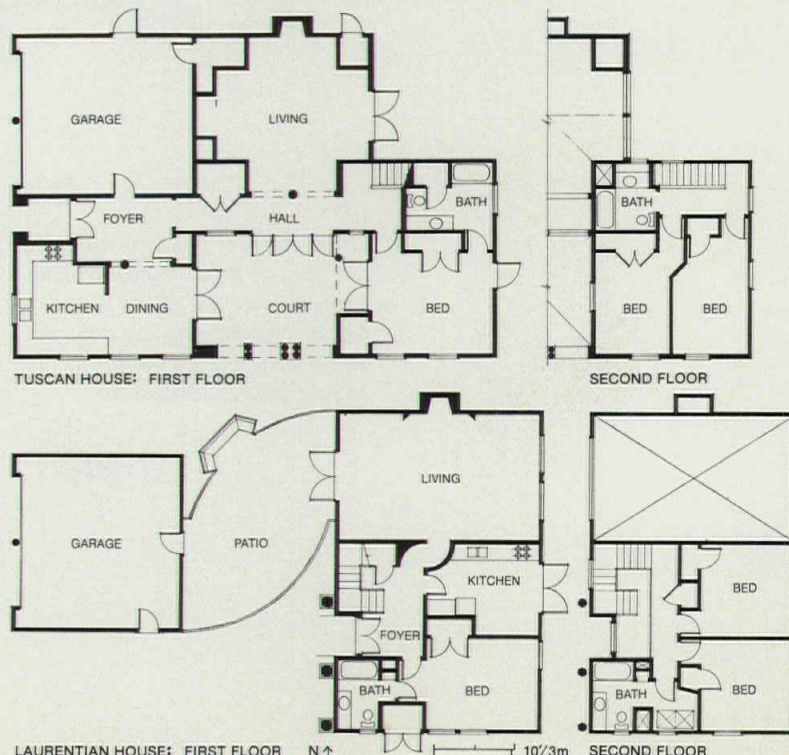
The idea of the two adjacent houses in Livermore, Ca, is that of the Roman villa, a type that has certainly been seen in California before, and which Smith still finds highly appropriate to the region. The wood frame houses, stuccoed with integral color on plywood, are called Tuscan House and Laurentian House. Named after two villas described in Pliny's letters, they are not intended to duplicate those descriptions, but rather to reflect the ambiance suggested by them. Smith, however, did not confine his references only to the 1st Century, but looked also to the late antique houses of Ostia, which in basic organization seemed especially appropriate to the site in California.

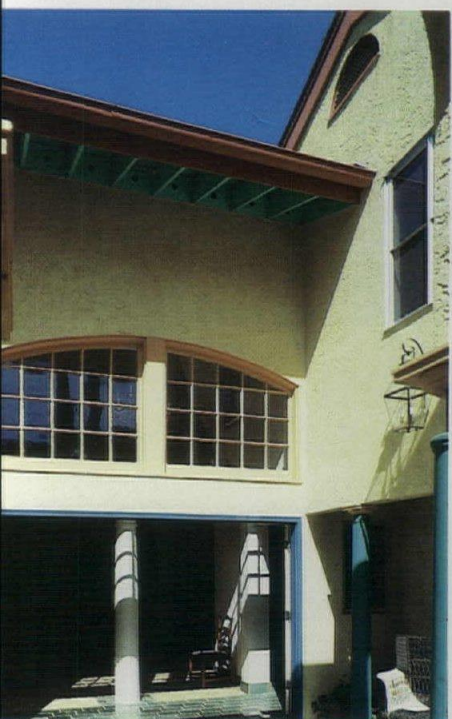
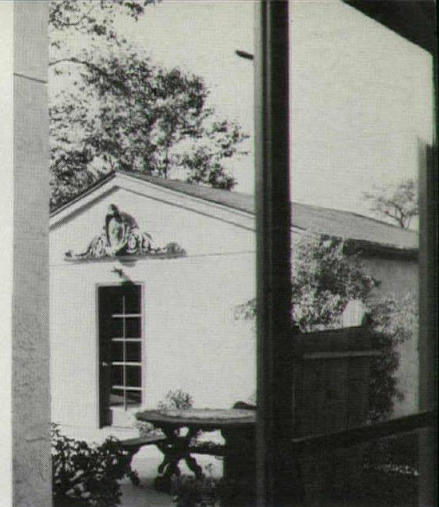
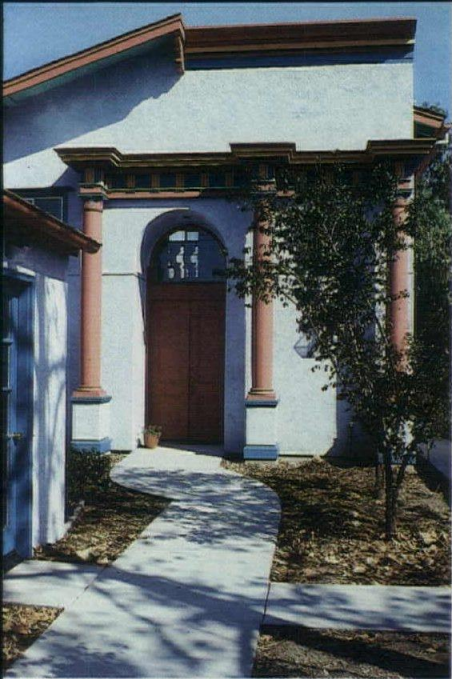
In Ostia, although the houses occupy confined sites, they are built with an open, fluid communication between indoors and outdoors to suggest grand vistas in the manner of Hadrian's Villa. On the two 50' x 100' lots in Livermore, Smith broke the two houses into three basic units centering around outdoor courtyards. While the 1900-sq-ft Tuscan House and garage are treated as one unit, the garage of the 1700-sq-ft Laurentian house has been separated from the main body of the house. This leaves an open space between the two that is adjacent to the courtyard of the Tuscan house, and which allows sunlight to penetrate that house. Although local zoning required 40 percent open space for each lot, this could have caused somewhat cramped conditions for the houses. But a sense of spaciousness is achieved through the asymmetrical distribution of masses, and through a plan for each house that places major rooms in proximity to the open, inner courtyards that extend the sense of space.

Throughout both houses, Smith has used antique massing and spatial distribution and Classical decorative elements, not for the purpose of replicating the past or commenting on it. He wants "to contribute to that vast and contradictory tradition" by using elements of the past that he finds viable for today for a practical purpose—that of endowing the houses with a sense of place.



CUTAWAY AERIAL VIEW, TUSCAN HOUSE (TOP), LAURENTIAN HOUSE (BOTTOM)





The Laurentian house (top) and Tuscan house (above) are organized so each has a semiprivate courtyard off the street. Although the open space is shared, the two courtyards are defined by the colonnade of the Tuscan house and the high redwood banquette between the Laurentian house's garage and entry (right).



Houses, Livermore, Ca.

His references, though, are not limited to Roman Italy. Although the Roman half-round window is seen in the living room of the Laurentian house, the living room plan of the Tuscan house is cross-shaped in resemblance to that of the central drawing room of Palladio's Villa Malcontenta. It is also not coincidental that in the form of these structures one can detect the influence of Maybeck, and particularly of his Italianate vernacular designs of flat, expansive walls pierced by large openings sheltered by deep overhangs. Smith grew up in and around these buildings in the Bay Region; he has studied them and knows them thoroughly. A further reference to Maybeck, and to the concrete houses in Berkeley in particular, is seen in the polychroming. Walls are pastel blue, rose, or yellow, with sculptural and architectural decoration in saturated colors of viridian, Venetian red, Windsor emerald, cerulean blue, and chrome yellow.

Inside, the houses are basically off-white, but here, too, Smith's penchant for the eclectic is also seen. He has no more qualms about putting a Vienna secession-inspired fireplace in the Laurentian house than he does a Swiss chalet staircase. The green tile floor found throughout both houses would seem more appropriate to Los Angeles Moderne than to any of the other references in the houses, but it is attractive and it works. In the same vein, Smith could furnish the Tuscan house in Chippendale and Empire, and the Laurentian house in Mission oak.

Thomas Gordon Smith is not a Post-Modernist, and certainly not in the sense of using historical references in what are otherwise Modern buildings. There is little that is Modern about these houses in form, massing, or plan. On the other hand, he is too eclectic to be considered a strict traditionalist. The work lies somewhere between the two, but is part of neither. He has said, "I have become increasingly aware of the importance of subject in my buildings, and I have begun to use the elements of Classical architecture to develop the subject. I am currently working to determine which aspects of this tradition remain representational today, and which associations must be altered to have current validity." By this admission the houses can be seen as an investigation, or an experiment, by a young architect. They are not completely resolved, yet on the other hand there seems little doubt that the undeniable vitality they show will be one of Smith's strongest assets for the future. [David Morton]

Data

Project: Tuscan and Laurentian houses, Livermore, Ca.

Architect: Thomas Gordon Smith.

Program: two adjacent houses, the Tuscan of 1900 sq ft, the Laurentian of 1700 sq ft; each meets local zoning requirement for 40 percent open space, with major rooms opening to gardens and courtyards.

Site: residential lots each 50' x 100' on flat terrain in late 19th-Century neighborhood.

Structural system: slab on grade with footings; wood frame construction sheathed with 5/8-in. plywood.

Major materials: stucco with integral color, asphalt shingle roof, aluminum casement windows, redwood entablature, and



reused wooden windows, terra cotta decorative elements, and columns; inside, gypsum board walls, ceramic tile floor, carpet, French 8-paned doors, and reused mahogany moldings and redwood paneled doors.

Mechanical system: gas-fired forced air with intermittent ignition system.

General contractor: George Jensen.

Costs: Tuscan house, \$100,000; Laurentian house, \$90,000; \$53 per sq ft; garages at 1/2 full value.



The Tuscan house (top, middle, and facing page top) is furnished in Chippendale and Empire styles, the Laurentian house in Mission oak.

1. *Architecture 1980: The Presence of the Past*, Venice Biennale, N.Y., Rizzoli, 1980.



Pavilions in the sun

Changing pace, a Vermont maple sugar farmer and his family begin cultivating island citrus crops from a new 'plantation house.'

Comprising four cut stone two-story structures defining a central pavilion, the Talbot House is settling in comfortably on Nevis, West Indies. Designed by Taft Architects of Houston, the amiable house for a Vermont

family of three nestles halfway up Nevis Peak on the small volcanic island, overlooking the Caribbean. It is located on 10 acres on the previous site of the Main House at Jessups Plantation, a copra plantation originating in the mid-1700s. The Talbots plan to cultivate citrus fruit on the island.

Nevis is in the Lesser Antilles, about one-third of the way southward along their arc between Puerto Rico and Trinidad/Tobago. The house has no mechanical temperature conditioning, relying entirely on natural ventilation. In fact, it has no electricity; instead, kerosene is used for lighting, food preparation, and refrigeration. Solar insolation heats water for domestic use. As is the case on many islands, rain is depended upon for water supplies, and the Talbot House includes a 35,000-gallon cistern below the main living pavilion.

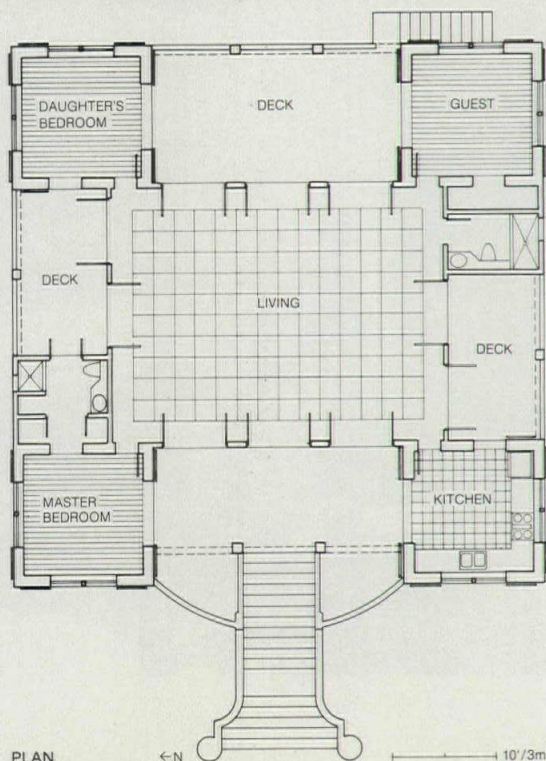
It is thought neighborly on the island to have either red or green roofs, and red-orange was chosen here. The indigenous buildings are built of cut native stone and wood, and they are painted in complementary colors. Stone from the site was used for the corner elements. Taft selected blue-green and a cream color for shutters, panels, and trim, and the color values vary, lighter on the stone structures and darker on the pavilion. The result is an ingenuous air, a playfulness despite, or maybe even because of, the classic symmetry and order of the design.

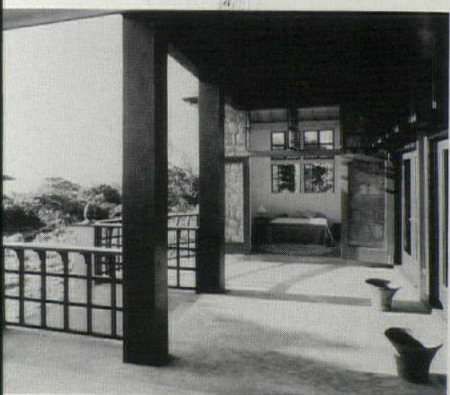
Inside, each room is painted in a different pair of complementary colors. In the tradition for which Taft is becoming known, bands of floral patterns encircling each room were hand-stenciled by the architects. They also designed and built the chandelier in the living pavilion. Cross-ventilation is provided through oversized casement windows. Floors, like the interior walls, are concrete, although the floors are scored and polished, walls are plastered, and the ceiling joists and decking are exposed and painted.

Ground-floor spaces are used as garages and workrooms, while on the main floor, three of the stone structures are bedrooms and the fourth, the kitchen. The only asymmetry about the east-west axis in plan is in



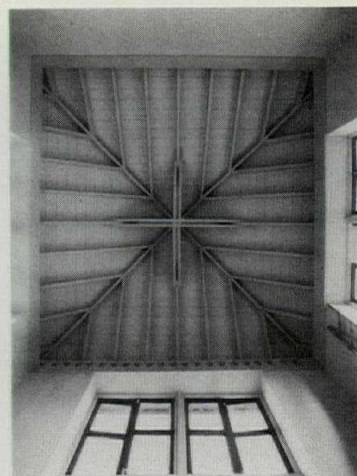
Opening to the west, the house presents a grand stair into the porch and living pavilion. Nearly symmetrical in plan, the house combines bedroom and kitchen corner structures with open decks and living space between.





From halfway up Nevis Peak, the porch (above and right) looks toward the Caribbean (top).





Interiors are bright and cheerful, with different pairs of complementary colors in each room. The architects were fully responsible for the stencil work around all rooms and for the light fixture in the living pavilion (top left). Sunlight is softened (bottom) by wood slats over the porches.

Data

Project: Talbot house, Jessups, Nevis, West Indies.

Architects: Taft Architects, Houston, Tx; partners, John J. Casbarian, Danny Samuels, Robert H. Timme; project team, Marc Boucher, Robert L.K. Lynch.

Clients: Tom and Deborah Talbot.

Site: 10 acres halfway up a volcanic peak.

Program: 3 bedrooms, 2 baths, kitchen, and living area; water storage and work areas complete the total gross area of 3116 sq ft.

Structural system: load-bearing stone exterior walls with backup walls, floor slabs, and foundation of reinforced concrete.

Mechanical system: none.

Major materials: granite and concrete walls, plastered interior walls, wood and polished concrete floors, mahogany cabinets, wood joists and decking, paint.

General contractor: Noral Lescott Construction Co.

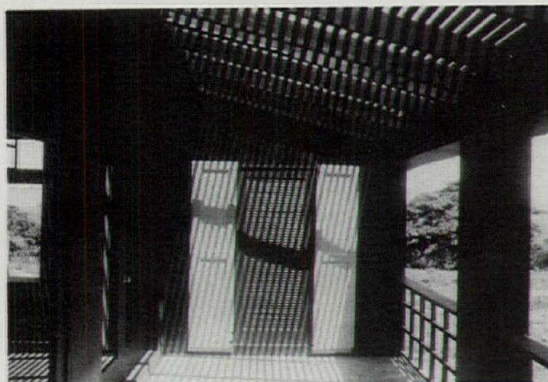
Costs: \$32 per sq ft.

Photography: Taft Architects.



the placement of baths at opposite ends of the north and south decks. Except for these volumes, decks surround almost the full perimeter of the living pavilion.

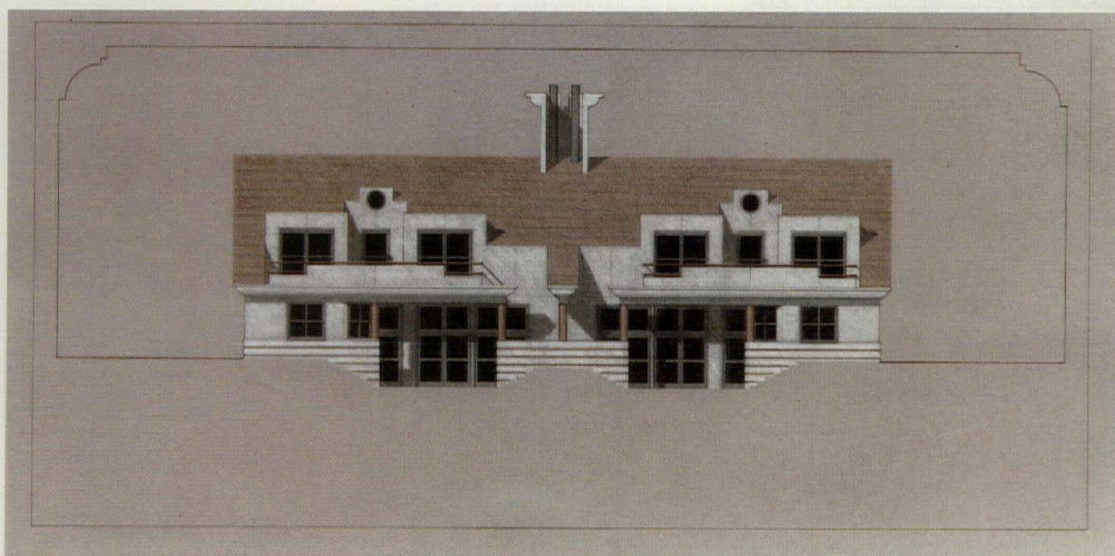
Taft has succeeded in capturing the flavor of island architecture influenced as it certainly was by the British colonization of Nevis. The house achieves Classical order and a simultaneous charm that is imbued with a sense of make-believe. It looks like a delightful place to live. [Jim Murphy]



The Classical transformed

With the free approach to the Classical language of architecture, familiar ingredients are used with a twist ... various twists.

Classical, as in "classy":
For Delafield Estate, Riverside, NY, designed in 1980 (an elevation, above, and site plan, below, are shown), James Stewart Polshek & Partners and Peter L. Gluck & Associates used the American Romantic Suburb, as embodied in the surrounding Fieldston area, as the historical source for the 30 new houses to be built on 10.4 acres of wooded, steeply sloping land. The 3500-sq-ft houses, some semiattached, will be constructed of stucco and horizontal wood siding on wood frame, with concrete roof tiles. An existing house will hold three dwelling units when renovated.



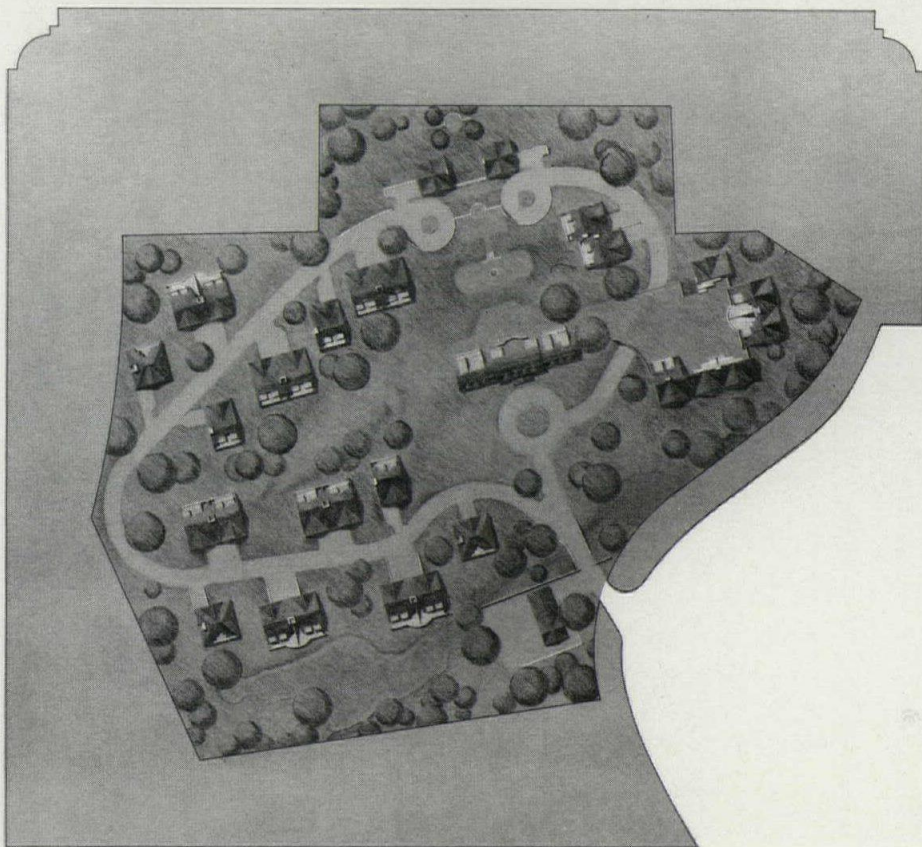
When the Classical language of architecture is used traditionally, the combinations are potentially infinite in number, but the rules and relationships are familiar. When the Classical language is transformed, the language itself provides material for forage, but the recipe is the cook's concoction. Elements are borrowed and used in very personal ways; or total com-

positions are taken as the starting point from which to diverge.

At one end of the "Classical transformed" scale stands Michael Graves, whose integration and transformation of the elements is personal and extreme. Details are recognizable but altered in their scale relationship to the composition. But the most interesting "Classical" quality of Graves's designs lies in the total image: the anthropomorphic nature, not only of the parts (compare the Classical Orders) but of the quirky, endearing whole (a quality that is lost in, for example, the Portland Public Services Building).

Another approach to Classical transformation is seen in a country house design by Venturi, Rauch & Scott Brown: deliberate alterations are made upon a specific, symbolically charged precedent, Mount Vernon. The precedent was chosen to suit the client's lifestyle and furniture; and the modifications—shortening the main wing, enlarging the side wings, and generalizing the details, for example—are made to accommodate modern program requirements, to reflect that the house is conceived all at once rather than over time, and to exaggerate its symbolic content. Venturi feels that "one can't be very accurate—our houses contain many bathrooms and no slaves, for instance—and one shouldn't be: Bramante wasn't."

James Stewart Polshek takes a moderating approach to the "classicizing" of architecture. He subordinates the idea of "borrowing" Classical motifs to the broader ideals of Classicism, favoring the definition of Classical as "elegant, tasteful, polished, refined, re-



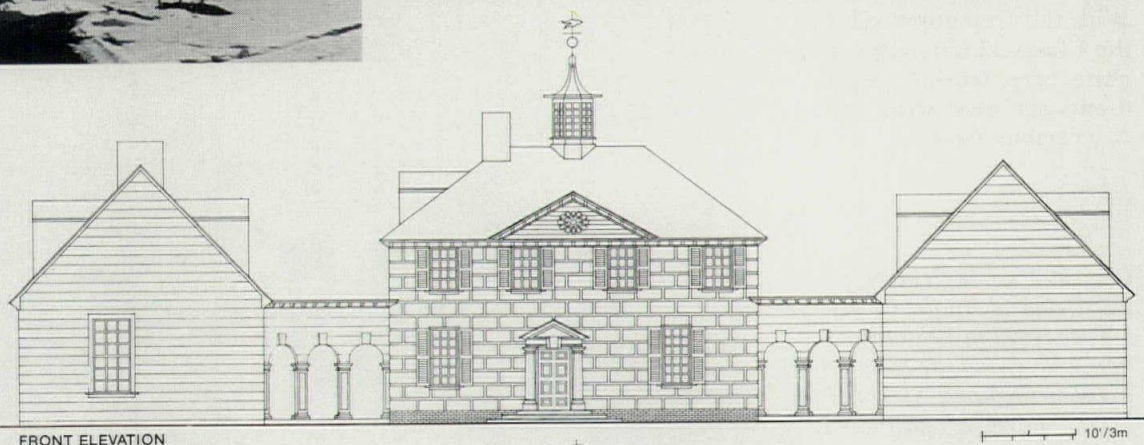


The reductive process:

Moore Grover Harper took Palladio's Villa Poiana as the historical source—reduced, simplified—for Sammis Hall (above, left and right), a guest house constructed in 1980 for the Banbury Conference Center in Cold Spring Harbor, NY. The symmetrical design responds to the axial approach to the building, on a walking path between two rows of gnarled apple trees. A central two-story miniature "Great Hall" is skylit, and sets of abstract arches frame the main stair and float below the skylights. Material is stucco, over a wood frame.

Deliberate modifications:

Venturi, Rauch & Scott Brown base their 1979 country house design (right) on Mount Vernon, and deliberately modify their model: taking something familiar and making it slightly off, says Venturi, can make its familiarity eloquent. The length of the main block is shorter than the original, the side wings are relatively big, and detailing is simplified, flattened, and therefore generalized. The artisan dissonances of the original are exaggerated (compare Greenberg's treatment, p. 89).

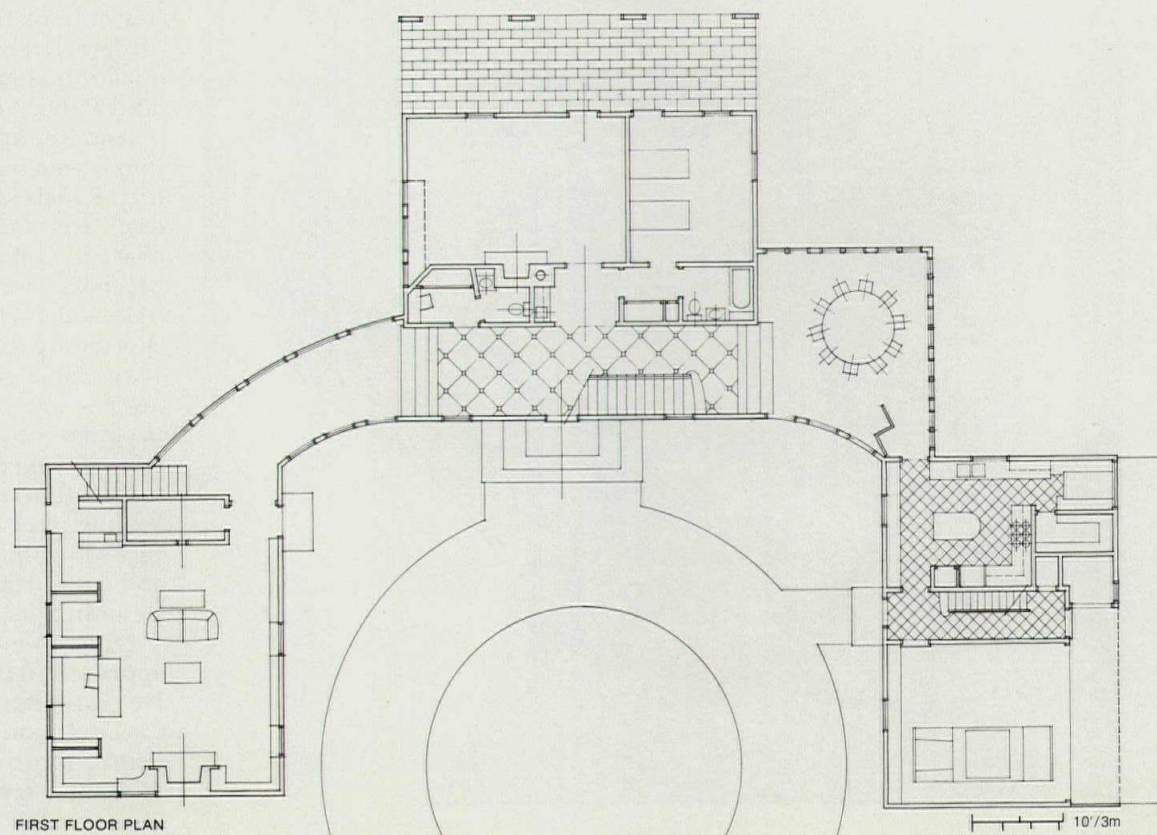
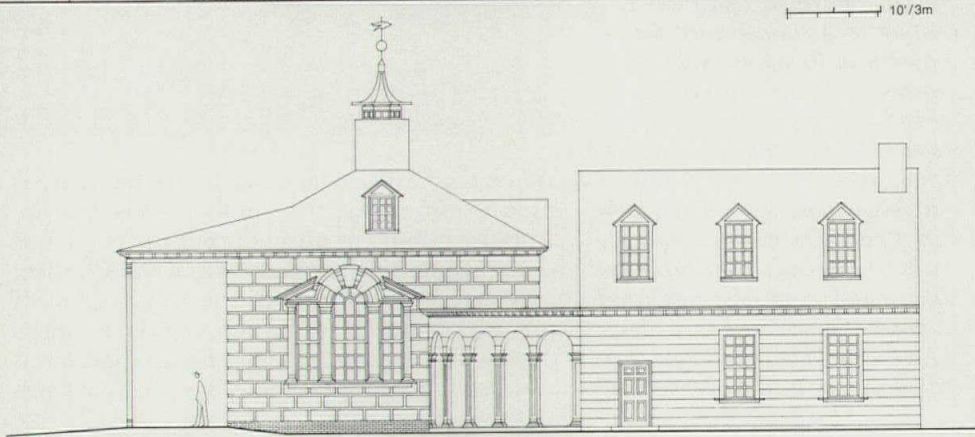


FRONT ELEVATION

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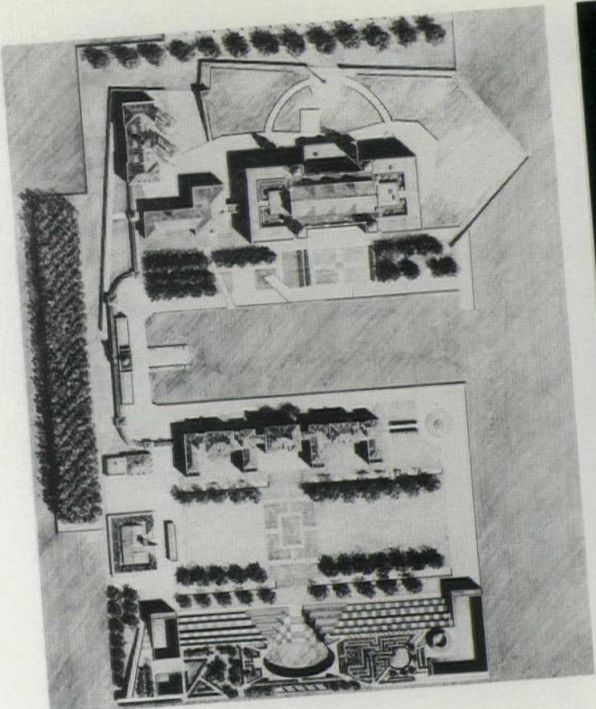
FRONT ELEVATION

SIDE ELEVATION



FIRST FLOOR PLAN

10'/3m



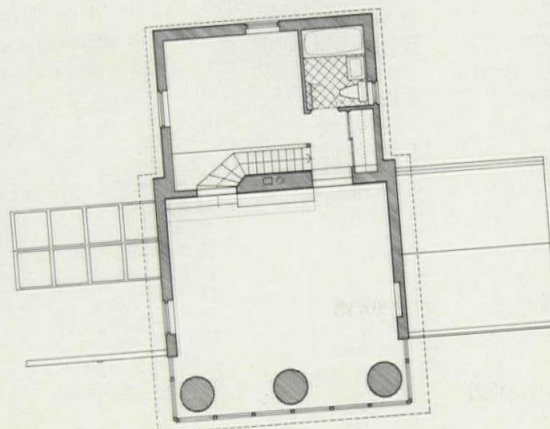
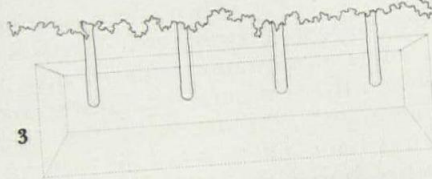
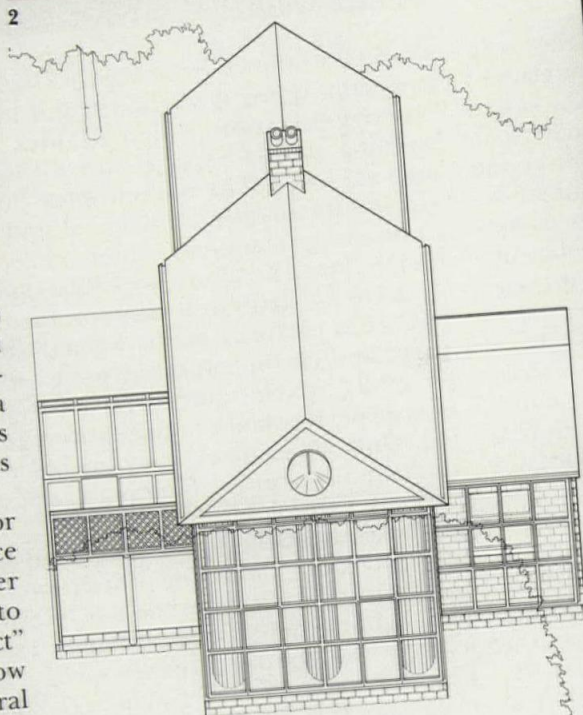
1 strained" (from *Roget's Thesaurus*). He especially rejects the belief that simplistic historic allusions impute greater "meaning" to a given architectural work.

Pragmatism and historical comment are combined in Edward Levin and Ellen K. Morris's Solar Greek-Revival House, a project for a wooded site in Virgil, NY. The typical T-plan of the area's Greek-Revival houses, with a four-column, pedimented façade, two volumetrically identical side-wings, and an auxiliary rear volume, is adjusted to accommodate three water-filled columns inside a glazed façade to the south, a central-mass wall, and a small greenhouse/porch serving as an airlock entry to the house.

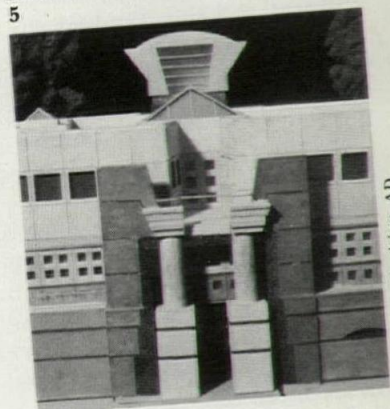
In Sammis Hall, a 16-bedroom building for scientists attending seminars at a conference center on Long Island, NY, Moore Grover Harper applies the reductive approach to Classicism: simplification of details ("abstract" arches frame the main stair and float below the skylights) and miniaturization (the central "little Great Hall"). This lightweight, generalizing attitude is intended as a response to Palladio's inspiration and to the implied formality of an axial approach.

While Robert A.M. Stern has hyped Classicism for its two uses—syntactical, as an aid to composition, and rhetorical, as an aid to expression—his work especially embodies the contemporary world's pluralistic nature, a phenomenon upon which he also expounds. In a pool house addition to a house in New Jersey, the formal references are deliberately complex, automatically triggering (it is hoped) the appropriate responses.

In general, the tendency to forage the Classical language more for its rhetoric than for its syntax, and for its parts rather than for its intent, can provide intellectual excuses for physical awkwardness and emotional sham. But it can also furnish inspiration and leeway for outstanding individual creativity.
[Susan Doubilet]



David Stansbury



Post-Modern Classicism, AD

Classical urban design:
Susana Torre's proposal for an urban park and museum on New York's Ellis Island (1).

Classical pragmatism:
Edward Levin and Ellen K. Morris's Solar Greek-Revival House (2, 3, 4), Virgil, NY, designed 1980-81.

Eclectic triggers:
Robert A.M. Stern's Pool House (5) Llewellyn Park, NJ, designed 1980.

Personal anthropomorphisms:
Entrance to Michael Graves's Plocek House, "Keystone House" (P/A Award, Jan. 1980) (6), Warren Township, NJ, designed 1977-79.

Energy analysis

Portland Public Office Building

This analysis was prepared in the Center for Planning and Development Research, College of Environmental Design, University of California, Berkeley; Vladimir Bazjanac, Ph.D., Project Director. The work is funded by the Buildings Division of the U.S. Department of Energy.

Michael Graves's design for the Portland Public Office Building is a result of an invitation to participate in a closed competition in late 1979 and early 1980. The intent of the design is to fit into the city's block grid and its character defined by the Classical and Beaux-Arts buildings, and to symbolize the traditional governmental function through the building's Classical form.

The building reflects Graves's belief that the Classical division (base, middle, and top) helps to understand the building better. These three parts of the building are clearly defined in the Portland design. The base, with its giant colonnade and portal, identifies the most public use: the city office and the commercial space. The middle houses city services. The top has a form of a pavilion on the roof of the building, which serves as a lookout toward distant Mount Hood. The original design also included a number of decorative details and several other pavilions on the sides and the top of the building.

Graves's design won the competition (the other invited competitors were Arthur Erickson and Mitchell/Giurgola) partly because it provided more space at less cost. The building's gross area is 406,000 sq ft and its expected cost is \$22.4 million. It is a 15-story cast-in-place concrete frame structure. The concrete is exposed from the 4th to the 15th floor and painted. The center of the three-story base of the building along Fourth and Fifth Avenues is covered in ceramic tile. A typical office floor is 23,500 sq ft. The mechanical system has no boiler plant: it recovers waste heat from the computer center, and it exchanges heat with the city water main. The completion is scheduled for October 1982.

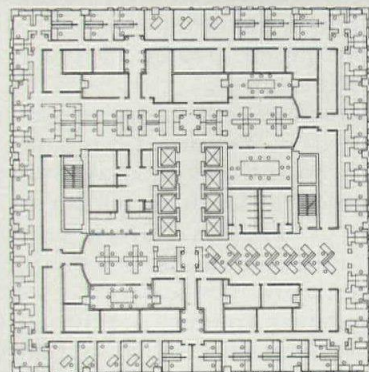
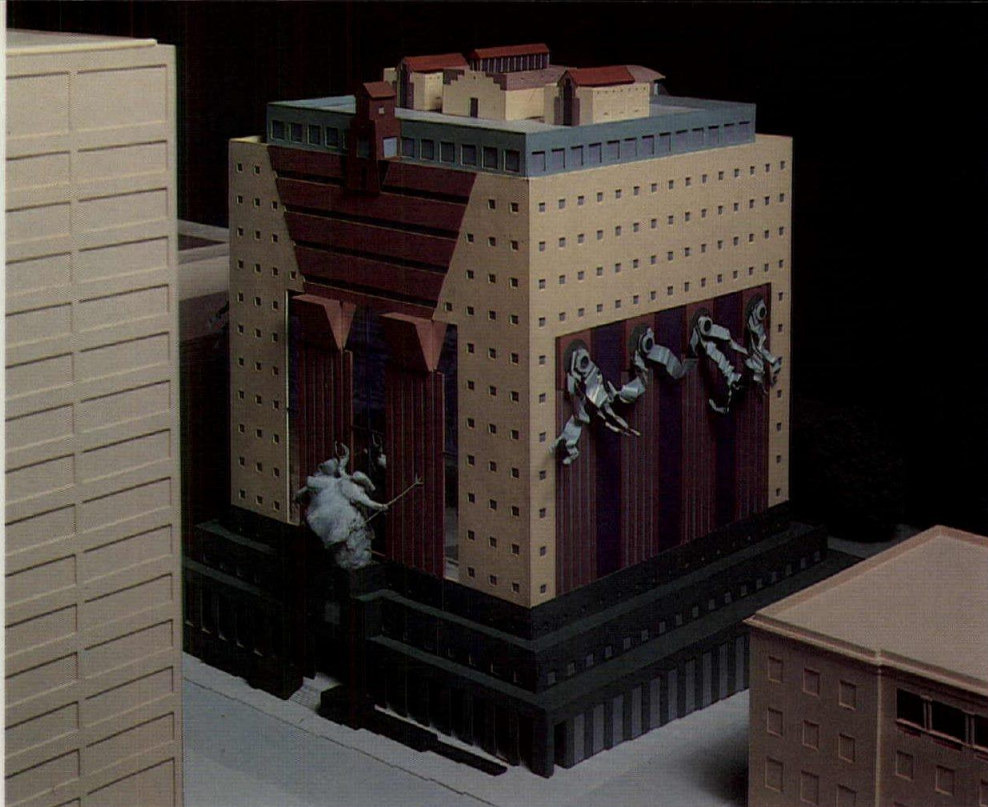
The building features an exterior skin with heavy thermal mass, small un-

shaded windows (which provide little opportunity for daylighting) and internal organization which divides the building into two parts with different internal loads. The bottom three floors are predominantly commercial and include a large computer center, while the fourth floor and above are office floors. This energy analysis focuses on the difference in performance between the two parts, and on the impact of some architecturally viable alternatives on the energy performance of the entire building. Only alternatives which would not dramatically alter the building's appearance are considered.

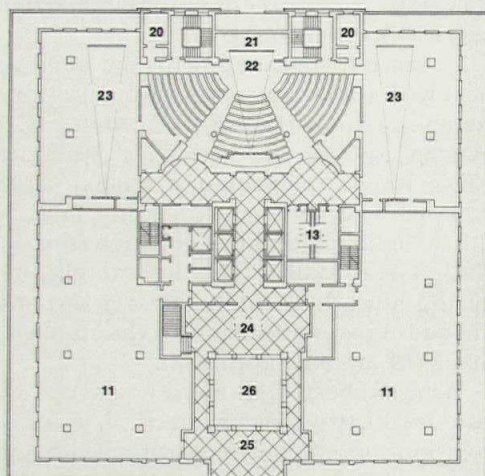
The entire building is dominated by internal loads. The major proportion of those loads results from the use of artificial lighting and office equipment. The loads in the bottom three floors of the building are much larger than in the office tower because of an enormous electrical load in the computer center (30 W per sq ft), a large lobby, and more glazing than in the office tower. The excessive electrical load also increases the cooling load significantly in that area. When the computer equipment load is eliminated, the loads in the bottom three floors fall to below the loads in the office tower, and the heating load exceeds the cooling load in that part of the building.

Legend

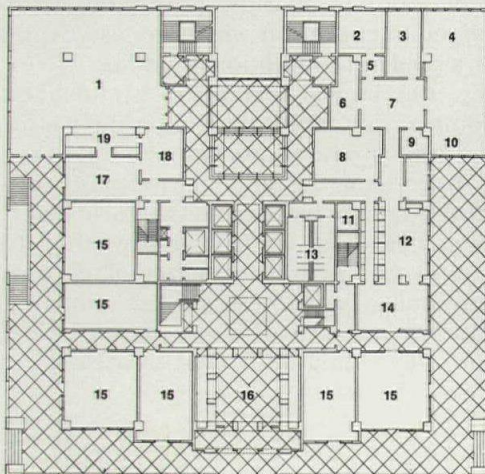
- | | |
|----------------------------|------------------------|
| 1 Coffee shop | 15 Shop |
| 2 Manager | 16 Lobby |
| 3 Distribution | 17 Kitchen |
| 4 Technical staff | 18 Pantry |
| 5 Secretary | 19 Serving |
| 6 Forms | 20 Dressing room |
| 7 Clerks | 21 Auditorium storage |
| 8 Files | 22 Hearing room |
| 9 Storage | 23 Meeting room |
| 10 EDP terminal | 24 Visual arts gallery |
| 11 Mechanical | 25 Gallery |
| 12 Permit bureau reception | 26 Open to below |
| 13 Lavatories | |
| 14 Waiting | |



HYPOTHETICAL TYPICAL FLOOR PLAN

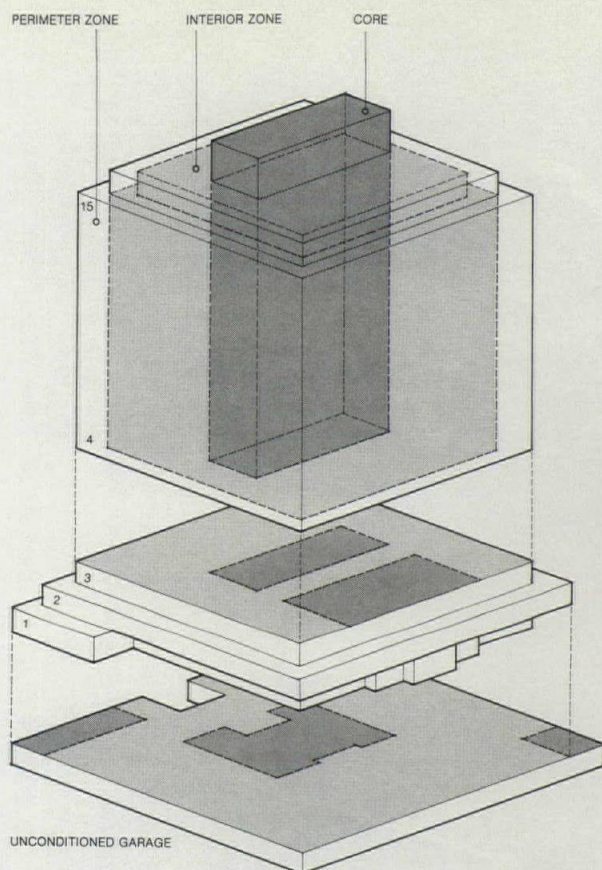


SECOND FLOOR PLAN



FIRST FLOOR PLAN

40' / 12m



- DESIGN ALTERNATIVES:
- 1 AS DESIGNED
 - 2 DOUBLE IN PLACE OF SINGLE GLAZING
 - 3 NO INSULATION
 - 4 INSULATION ON THE OUTSIDE
 - 5 ALL GLAZING CLEAR
 - 6 LIMITED DAYLIGHTING, SOLAR GAIN AS IN "AS DESIGNED"
 - 7 GLASS TYPES AS DESIGNED, LARGER WINDOWS
 - 8 LIGHTWEIGHT SKIN, NO DAYLIGHTING
 - 9 LIGHTWEIGHT SKIN, WITH LIMITED DAYLIGHTING
 - 10 LIMITED DAYLIGHTING, LIGHTWEIGHT SKIN, NO INSULATION
 - 11 NO COMPUTER CENTER
 - 12 OFFICE TOWER: LIMITED DAYLIGHTING, LIGHTWEIGHT SKIN, BOTTOM THREE FLOORS: DOUBLE GLAZING, LIGHTWEIGHT SKIN, NO INSULATION

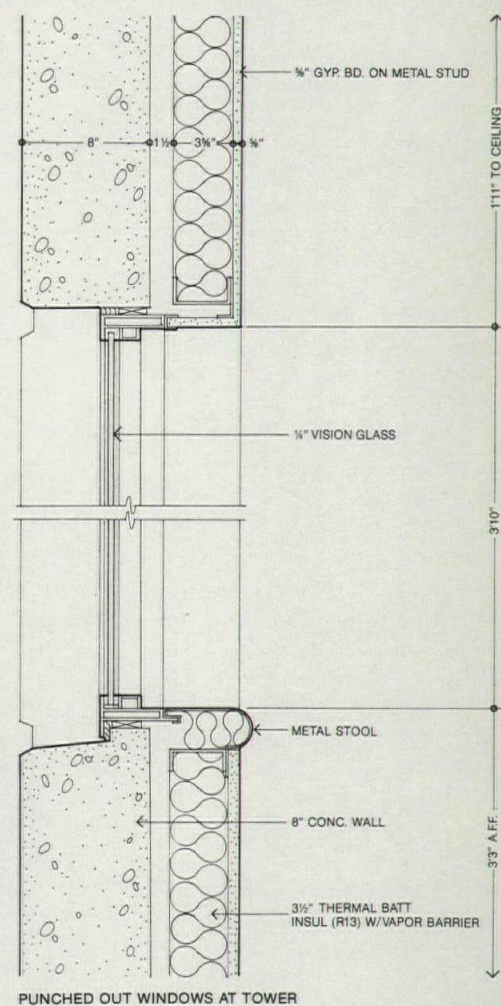
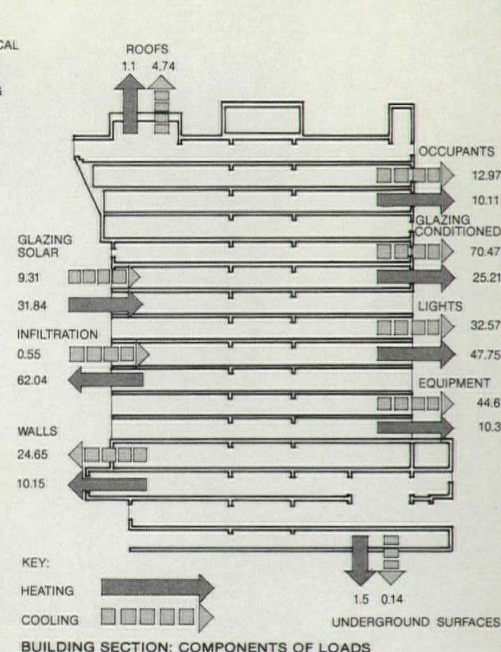
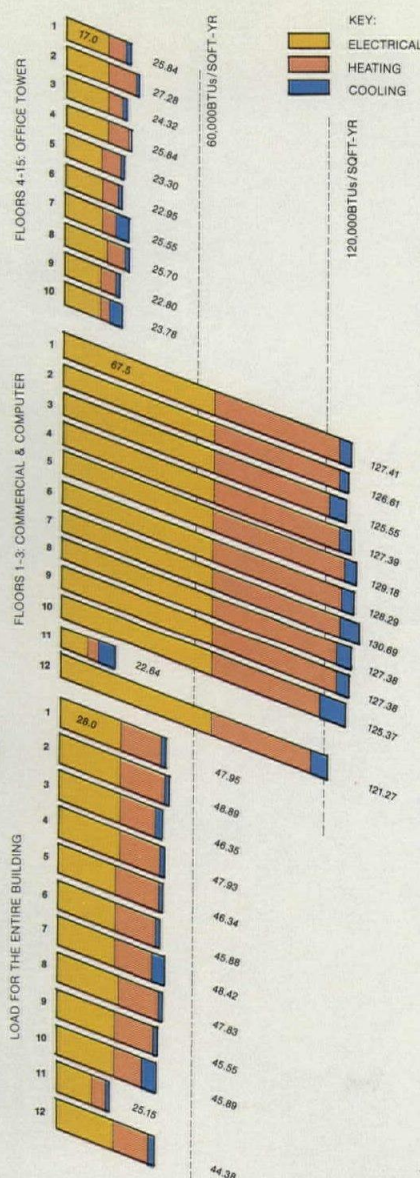
COMPARISON OF ANNUAL PERFORMANCE

Since the building is dominated by internal loads, an insulated skin with heavy thermal mass prevents the proper "breathing." This fact, coupled with the lack of effective exterior shading of windows, causes a cooling load in the office tower which is much higher than the heating load. Double glazing, additional insulation, and similar solutions which further reduce the "breathing" through the skin increase the cooling load more than they reduce the heating load. Therefore the architects' decision to use single glazing in the office tower (with the exception of the 15th floor) is beneficial to the performance of the building. Conversely, double glazing of the large glass areas in the bottom three floors would work better than the designed single glazing.

The introduction of clear glass in place of reflective (on the east and west facing elevations) and tinted glass (on the north and south elevations) provides an opportunity for some daylighting. This reduces the electrical load in the

office by 20 percent but also increases the cooling load (because of an increase in direct solar gain) by 11 percent. Overall, such partial daylighting reduces the total demand for energy for the entire building by less than 4 percent. If the glazing type is changed to glazing that allows the penetration of more light but still maintains the same solar gain (alternative 6 with limited daylighting), the total demand for energy in the building is reduced by less than 5 percent. The introduction of larger windows (with the same glazing as designed) to create more daylighting actually increases the demand for energy, because it worsens the performance of the bottom three floors of the building more than it improves the performance in the office tower.

The best energy performance in the office tower is achieved by the use of a lightweight skin (with stucco on the exterior) and limited daylighting. In the bottom three floors the best performance is achieved with lightweight skin and double glazing without daylighting. The combination of these two alternatives results in the best overall energy performance and a reduction in the demand for energy of 7.5 percent for the entire building.



The analysis of the energy performance of this building does not include the performance of the mechanical systems in the building. It is based on annual simulations with DOE-2.1, using standard weighting factors, and the TRY weather tape for Portland, Or. Its accuracy is limited to the accuracy of DOE-2.1 in representing the building's thermal behavior and does not necessarily conform to all of the details of the actual performance of the existing building (P/A, April, 1980, p. 100).



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Floor: Primitive Encore Tile, 8" x 8", 804 Bark

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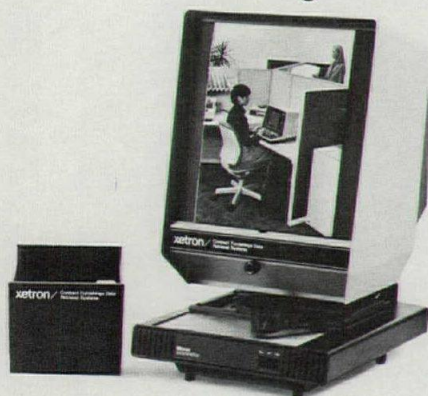
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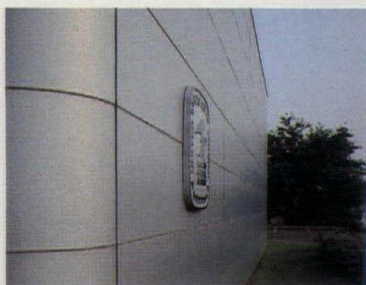
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THINK HORIZONTALLY



General Mail Handling Facility, U.S. Postal Service, Huntsville, Alabama Architect: Northington, Smith, Kranert, Tomblin Assoc. General Contractor: Bryson Construction Co., Inc.

Design in a new direction with the horizontal look from Robertson



There's a new option for design flexibility from Robertson: Formawall® flat metal wall panels have been redesigned for horizontal use - in addition to traditional vertical installation.

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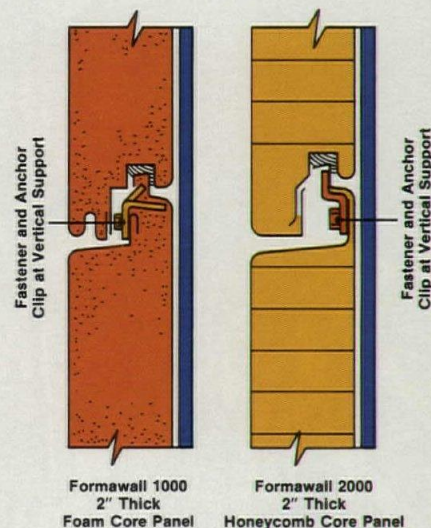
In either case, you'll take advantage of this latest Robertson innovation: we've eliminated the customary weather-exposed sealants at all horizontal joints, so we can now provide a bolder, deeper shadow line.

The horizontal look: another new concept in walls from Robertson, designed to make your building come to life.

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Horizontal Formawall Typical Joint Details



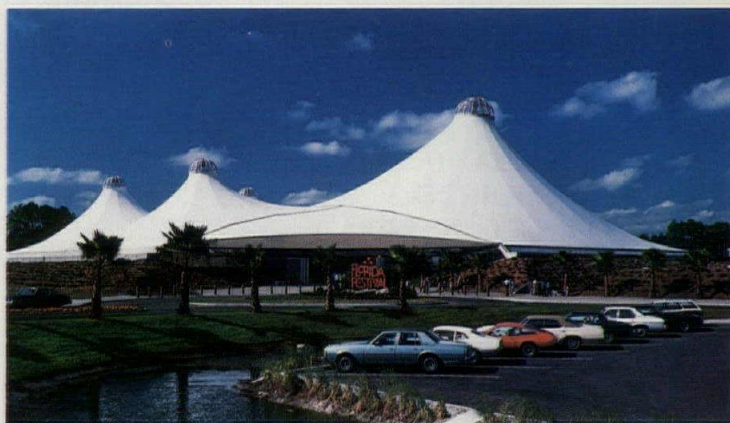
Robertson

60,000 sq. ft.



of daylight.

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"Florida Festival" in Orlando, Fla., has the highest light transmission (18%) yet developed for a roofing fabric. The permanent structure is a free-form tension canopy made of Fiberglas® fabric coated with DuPont TEFLON fluorocarbon resin. The 60,000 sq. ft. complex is designed to provide recreation, entertainment and a bustling marketplace attraction for the millions who visit Sea World Park each year.

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Visitors to "Florida Festival" are treated to a unique indoor ambiance. They experience the light of the sun, the movement of the clouds, the sound of rainfall.

Strong and Durable The coating of TEFLON provides outstanding long-term resistance to UV deterioration, moisture and temperature extremes. Thus TEFLON protects the glass fabric, enabling it to retain its inherent strength over time. And the non-stick properties of TEFLON help the fabric's brilliant white appearance stay that way as each rainfall washes it clean.

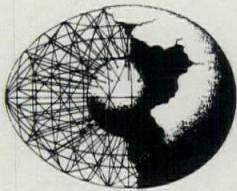
Economical and Energy-Efficient In addition to design flexibility, fabric structures offer today's building planner substantial economic advantages. They often require less time to construct than conventional buildings. And the lower roof loads permit smaller foundations and the use of less structural steel. Operating costs can be reduced, too, through lower energy consumption needed for artificial lighting. The high solar reflectivity of these fabrics minimizes heat gain, reducing air-conditioning requirements.

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THE 7TH INTERNATIONAL MISAWA HOMES PREFABRICATED HOUSING DESIGN COMPETITION '82

"HOUSE FOR LONGER LIFE" Intermediate Report

Sponsored by: Misawa Homes Institute of Research & Development
With the cooperation of The Building Centre of Japan

Entries for our competition number 530 from 23 countries as of July 1, 1981.

U.S.A. 236, JAPAN 176, FRANCE 28, WEST GERMANY 23, CANADA 14, ITALY 11,
AUSTRALIA 10, INDONESIA 7, BELGIUM 4, TURKEY 4, ISRAEL 3, AUSTRIA 2,
NETHERLANDS 2, ENGLAND 1, SWEDEN 1, SWITZERLAND 1, PORTUGAL 1, GREECE 1,
MOROCCO 1, INDIA 1, BANGLADESH 1, PERU 1,

"To live sound and long," has not only been a hope that people have sought unceasingly, but it is also a common goal in our everyday life styles and behavior. How should we grasp this idea and realize this goal toward which our ancestors have also devoted themselves since many years ago?

Ways and means of improving health and realizing a longer life have been vigorously developed through the scientific innovations of medical and engineering technologies, as well as through increased social awareness concerning mental health and activities related to leisure time and household work. All generations have benefited by such advancement, however, the environments in and around our residential space are not sufficiently reflecting the results of technological development. There still remains a lot of room concerning our daily life for further improvement and the development of technical devices.

In search of housing and living patterns necessary to realize "a sound and longer life," suggestions related to (1) household components, equipment, tools, machinery, furniture, and other elements to be included in the housing environment for the purpose of improving the value of the living space or house; (2) how these elements are combined and used in the dwelling space in order to obtain the utmost results; and (3) how the above housing plans (or parts thereof) and housing environments may be devised in order to improve the capacities and functions of the houses, are now being solicited worldwide according to the following requirements.

I. REQUIREMENTS

Settings for suggested plans may concern indoors or outdoors or both, while resident(s) may be an individual or a group (including families). However, the purpose, method, and anticipated effects from the use of any settings and residents must be clarified within the suggested plan. The applicant must explain and clarify his/her suggested settings and elements. In addition, the applicant is required to clarify the interactive relationship between man and his dwelling space by creating narratives or diagrammatical descriptions which will explain how these settings and elements influence human life, behavior, and health.

II. SUBMITTED TO:

Misawa Homes Institute of Research & Development, "Design Competition for Prefabricated Houses '82", 2-4-5, Takaido Higashi, Suginami-ku, Tokyo 168 Tel.: (03) 332-5111

III. ENTRY DEADLINE

January 10, 1982.

IV. ANNOUNCEMENT

February 1982.

AWARDS

First Prize	¥1.5 million	1 person
Second Prize	¥700 thousand	2 persons
Third Prize	¥300 thousand	2 persons
Honorable Mentions	¥150 thousand	4 persons
Best Idea Award	A total of ¥400 thousand will be divided among a number of persons according to the results.	

JURY OF COMPETITION

Chief Judge:

Kiyoshi Seike (Professor of Tokyo National University of Fine Arts and Music, The Japanese Representative of Japan Center for Environmental Planning)

Judges: (in alphabetical order)

Gregory Clark (Professor of Sophia University, International Commentator, M.A. Oxford)
Kazuo Hayakawa (Professor of Kobe University, Guest Professor at University of London)
Akira Koizumi (Professor of University of Tokyo)
Yoshiyuki Mizukoshi (Director of the Building Centre of Japan, Professional Member of International Conference of Building Officials)
Eizaburo Nishibori (Director of Misawa Homes Institute of Research and Development, Member of The Professors World Peace Academy)
Tsunemasa Terazaki (Professor of Nihon University and the University of Hawaii)
Sumio Yoshida (Professor of Osaka Medical College, Executive Director of Japan WHO Association)

In cooperation with the Building Centre of Japan.

The detailed announcement of competition will be sent to applicants upon request provided you send us a printed or type-written piece of paper or seal with your name and address on it to paste on the return envelope.



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Stark tile is as attractive as it is durable. In fact, in applications like the Akron-Canton Airport shown above, textured tile's deep-relief, random pattern and earthtone colors encourage innovation in design and atmosphere.

Combines noise control and low maintenance

For those areas where sound control is necessary, specify Stark acoustical tile, available with a glazed or textured face. Both



are virtually impervious to heavy traffic and vandalism, never need painting, and provide a sound absorption coefficient of .73.

Sound Absorption Coefficients

Tile Size	500 CPS	Noise Level
6T	.79	.60
8W	.73	.55

For new literature, write: Stark Ceramics, Inc., P.O. Box 8880, Canton, OH 44711. Or call toll free: 1-800-321-0662. In Ohio, call collect: 216-488-1211.



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Soft Shell Structures

Stage coverings are a frequently employed application of tensioned membrane structures. Their soaring shapes and free-span space heightens the spirit of performance and open up new horizons of design freedom.

This stage shelter at the University of Miami, Florida is both beautiful and practical. Besides sheltering the performers, it becomes a dramatic visual accent at night as well as during the day. The structure is fabricated of vinyl-coated polyester material held in tension on a steel framework resulting in a lightweight, rigid structure engineered to withstand heavy winds and rain.

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HELIOS TENSION PRODUCTS, INC.

Soft Shell Structures Division

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*Stage shelter at the University of Miami, Florida
Architect: Todd Jonas, AIA
Photo: © Steven Brooke*

The light heavyweights

Light-transmitting plastic glazings are either clear or translucent. Excellent impact resistance, light transmission, and insulating properties combine with light weight and strength to compete with any other alternative. Here is an overview of why and how they are used.

More than any other building material, plastics are a creation of the human mind. The vital link with the human thought process has accounted for the great variety of plastics available as well as the hundreds of products and applications plastics have in buildings. The human input and the base ingredients used do not make them cheap. It does seem a devilish fate that many of the same brainchildren that are so dependent upon petroleum provide some of the best insulating materials and most versatile energy-saving glazings. Further typifying the influence of human nature and man's incapacity to fully predict the ramifications of his inventions, the greatest weaknesses that plastics have are related to the health and safety problems for building occupants, which can occur when such materials are incautiously used. The link with the human psyche has also produced a material of uncommon capacity for artistic expression, even romance.

Because of their usual place on the frontiers of environmental problem solving, plastics have been amply represented in the pages of P/A over the last two decades. The entire June issue of P/A in 1960 was devoted to an overview of plastics and emphasized the perceived potential for structural plastics and foams.

The October 1970 issue, equally devoted to plastics, concentrated again on the overview, but gave new importance to plastic houses and furnishings with a state-of-the-art review of plastics and building codes. Fire and code issues were emerging as a serious industry problem in those years.

More recently, P/A has concentrated on specific segments of the plastics industry as it has grown: plastic laminates, skylights, insulation, sealants, panel systems and fabric structures. (Only fabric structures have really fulfilled the pre-



The mysterious bulging curves flowing out of the tropical plants above are part of the Colonnades Garden Centre in London. A plastic form and a plastic material were generated by the Terry Farrell Partnership architects. See p. 133 for more photographs.

dictions of structural applications from the early issues.) Discussions of the problems of fire and health as related to plastics are found in P/A as recently as October 1980 and April 1981. Following, as it does, the September 1981 technics article on insulating glass and daylighting, the discussion this month is directed to the light-transmitting plastics used as glazing materials, the light heavyweights.

As a replacement for glass

Plastics manufacturers lament that if plastic had been born before glass, it would have had a much easier time fending off glass replacements for plastic products than in the reverse situation offered by history. As a vertical transparent alternative to flat glass, sheet plastic is most frequently used where glass breakage might represent an unusual

hazard. Protection from breakage is needed in both windows and glazed doors where there is danger of accidental pedestrian impact. School windows represent a very large market for clear plastic glazing where vandalism is a recurrent problem and repair a significant expense. Windows in the hurricane prone areas of the country also represent a viable opportunity for a clear glazing material that will withstand impact from high-speed debris. Gun toting criminals can be held in check with plastic glazing that will stop a high caliber bullet. In addition to banks, prisons represent a significant volume of this type of use.

It is very rare, however, to encounter a multistory building which has been totally glazed with transparent flat sheet plastic. The higher material cost does not usually permit its use in upper floors where glass windows are out of danger or do not themselves represent a hazard. The result quite frequently, therefore, is a combination of glass and plastic, either as doubling glazing or in a window frame or a mullion system that must accommodate both plastic and glass.

In a combination glass/plastic clear insulated unit, there are several design obstacles. The most obvious problem is the fact that glass and plastic thermally expand and contract at different rates. Plate glass expands and contracts .0006 in. per inch of width or length over a 120 F temperature range. The same value for acrylic is .0049, and for polycarbonate .0045. Most installations therefore employ a dry form of sealant, which can allow the plastic to expand and slide in place. Also, because the clear glazing plastics are porous to moisture, no desiccant can be effectively used in an insulated unit. The presence of moisture or heat on one side can actually cause the more flexible plastic sheet to "bow" slightly in place. A related problem is the lack of ample room between the two glazing faces, thereby endangering the glass surface with possible impact from the plastic under wind load. Custom double-glazed units are available with both lites in plastic. Water

Jo Reid & John Peck

Technics: Light-transmitting plastics

Acrylic and polycarbonate must be used with an appreciation for the fact that they are combustible materials. In general, the same fire precautions that are observed in connection with the handling and use of any ordinary combustible material should be observed when handling, storing, or using these materials.

Building codes and Underwriters Laboratories standards define good practice in their use for light transmission and control on a design and engineering basis that takes into account the combustibility and fire characteristics of the material.

The fire hazard can be kept at an acceptable level by complying with building codes and UL standards, and observing established principles of fire safety. Listed at the right are the general fire response characteristics in one column and the design, engineering, and fire protection implications.

migration does occur, but producers explain that the units are "self-purging." Even insulating units with "welded" edges are a coming reality.

In a single-glazed situation where a uniform window frame or mullion is used throughout the building, the differential between glass and plastic in thermal expansion often means that the rabbet for the normal glass application must be made deeper to accommodate greater edge engagement for the plastic. The larger the panel, the more expansion and contraction.

The various clear plastics available for vertical glazing, although identical in initial appearance, have varying responses to weathering and abrasion. Uncoated polycarbonate, although very highly impact resistant, will yellow from exposure to ultraviolet light and moisture over a short period of years. Uncoated acrylics will not yellow appreciably, but will scratch easily. Other aging characteristics to worry about in some of the plastic replacements of glass are a loss of surface gloss, loss of optical clarity, and partial loss of impact resistance.

Clear plastic glazings can also be attacked by fire. Where glass is more likely to break from excessive heat, most plastics can contribute fuel to the fire. In actual fire experience, plastics industry experts explain that plastic glazings rarely do catch fire. Polycarbonates have a higher ignition temperature than acrylics. They are given a burning rate in the codes of Class I while acrylics are rated Class II. Acrylics, however, burn very rapidly and in contrast to polycarbonates do not smoke. In a related matter, the impact resistance of plastics can be a hazard in a situation where a fire-

Fire Response Characteristics of acrylic and polycarbonate

General

When installed as a wall or ceiling finish or when laminated to a substrate, they provide a surface over which flame may spread rapidly and release heat and gases contributing to flashover.

Large area installations such as transparent enclosures are not provided for in building code regulations because they do not conform to area limitations and therefore require special permits based on analysis of all relevant fire-safety considerations.

Polycarbonate

The ignition temperature is higher than that of most woods, but it will ignite. When involved in fire, these products will burn and generate heat and smoke rapidly.

Polycarbonate products soften when heated above 275° F, which is below their self-ignition temperature of 1090° F. When burning, products will drip.

Burning produces smoke. The concentration of carbon monoxide and/or carbon dioxide released by burning is a factor of the quantity of the product involved and the conditions of burning.

Acrylic

The ignition temperature of acrylic is higher than that of most woods but it will ignite readily; and when involved in fire, will burn vigorously and generate heat rapidly.

It softens when heated above 260° F which is approximately 300° below its ignition temperature. If held in position when burning, it will drip burning droplets.

Burning acrylic does not produce either excessive quantities of smoke or gases more toxic than those produced by burning wood or paper. The concentration of carbon monoxide and/or carbon dioxide released by burning is a factor of the quantity involved and the conditions of burning.

Recommended Practices for acrylic and polycarbonate

General

Install away from sources of intense heat or flame. Enclose edges of components made with these materials. Observe building code stipulations and restrictions. Do not use a greater quantity than required to perform the functions required of them. Employ fire protection systems—such as sprinklers, fire detectors, and automatic vents—as fire hazard analysis indicates.

Do not use such materials as supporting elements or in any location where resistance to fire penetration is required. In overhead lighting, mount them in free channel mountings to assure fallout prior to ignition. Extinguish burning products with water or fire extinguishers.

Do not install as applied wall or ceiling finish or as a substrate surfacing material for large interior surface areas in building applications unless the areas are protected by an automatic sprinkler system.

Relevant considerations are use of the structure (occupancy); location (exposure); height and area; nature of interior arrangements (decorations, finishes and furnishing); availability and construction of fire exits; need for special fire protection systems such as sprinklers, automatic heat and smoke vents, early warning devices and deluge systems or water curtains.

Polycarbonate

Use may be restricted or prohibited in some locations because of high smoke generation. The use is not restricted because of the toxicity of its products of decomposition.

Impact resistance may create entry and venting problems. When possible, install in operable windows. Fire departments and building occupants should be informed of the location of fixed glazing in order to provide for alternative evacuation and venting facilities. Consult local fire officials for their requirements.

Acrylic

Use is not restricted because of the character of its products of decomposition but because of its combustibility and burning characteristics.

man is trying to gain access into a building through a plastic panel that is still intact. Fire is also the Achilles heel of plastics as a security glazing; a torch can silently penetrate the surface.

Such plastics can be subjected to chemical attack. Unlike uncoated glass, they can have a reaction with certain sealants as well as chemical products used in window maintenance. Paint thinner, for example, will dissolve polycarbonates.

A final consideration when comparing flat sheet clear plastic and glass is site workability. Acrylic has 15 to 30 times the impact strength of normal glass. To obtain the impact resistance of acrylic, glass must be tempered. This is done at the factory, and once the glass is tempered, it cannot be further cut. The plastic glazing materials can be site trimmed to the proper opening size. Their light weight is an attractive property for shippers and installers. It is also of great value in reglazing or overglazing for retrofits.

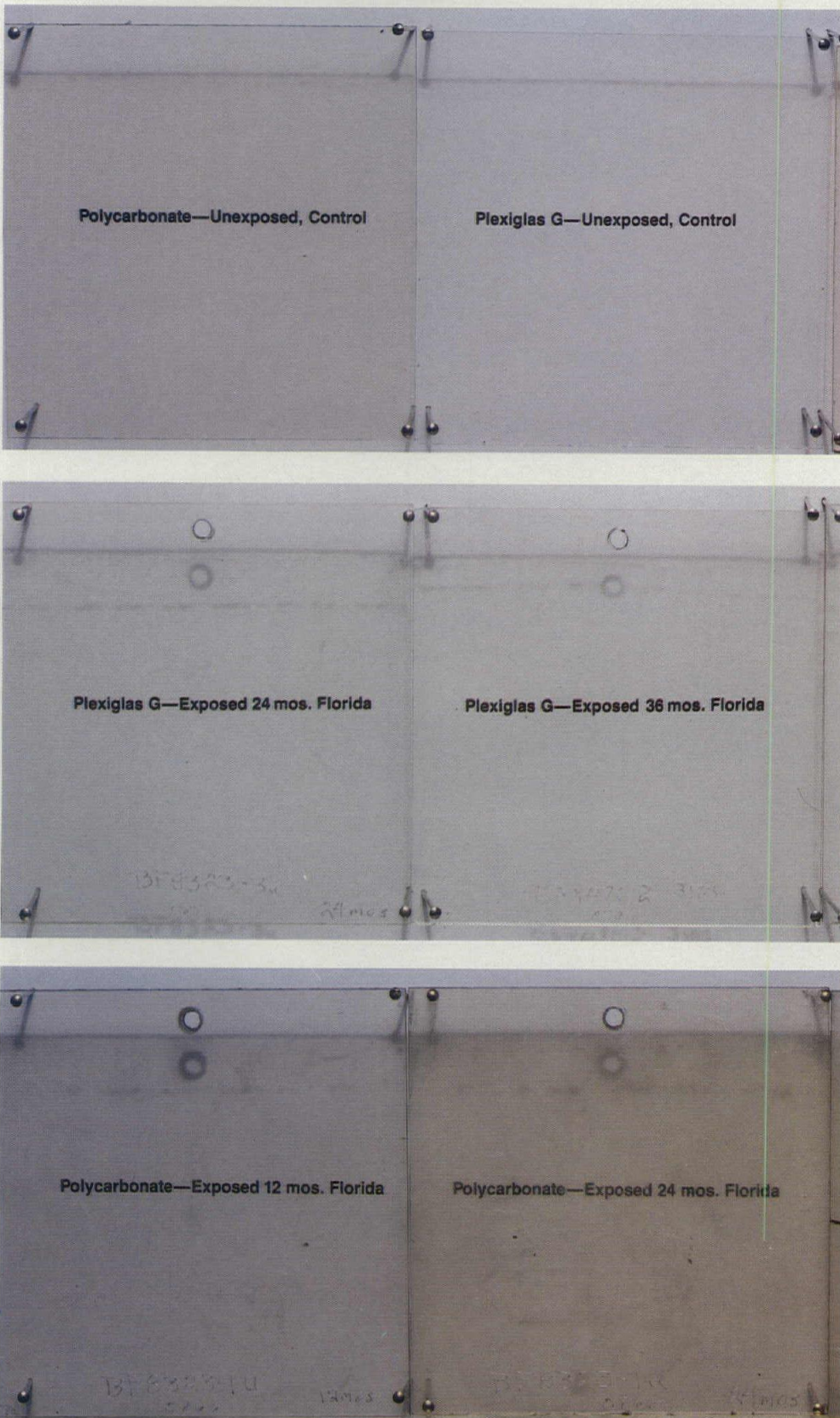
The revolution in coatings

Because window replacement has been a very large percentage of the market for plastic glazing, there have been significant efforts in the last decade to improve upon the faults of clear plastic. One answer has been an era of new coating technology.

Since the late 1940s, manufacturers have been working on the problem of coatings to control weathering and abrasion resistance. As explained, uncoated plastics also scratch easily. Coating is something of a misnomer. A fine layer of transparent hardcoat is applied during manufacture (not over a finished material like paint). It is impossible to distinguish (with the naked eye) a coated clear product from an uncoated version. By applying an acrylic coating to a polycarbonate base, the appearance can be maintained, and surface dulling, yellowing, and hazing can be delayed for

	Light Transmission (1/4" Thickness)	Available Colors	Available Sizes	UV Stability	Weight	Impact Strength (IZOD-ASTM D256)	Modulus of Elasticity	Burning rate class (ASTM D635)	Forming Potential	Preferred Sealant	Retail Cost PSF
Dupont Lucite SAR (Acrylic Base)	93 Per cent	Clear Green Gray Bronze	1/8"-1 1/2" 4'x6' to 6'x10'	Excellent	1.5 PSF	.3 ft lb/in of notch	4.5 x 10 ⁶ psi	C-2 or CC-2	Limited: Parameters for Design by Request	Silicones Acrylic Ter- polymers Urethanes	\$5.50-\$6.00
Rohm & Haas Tuffak CM-2 (Polycarbonate base)	85 Per cent	Clear Solar Gray Solar Bronze Light Green Custom	1/8"-1/2" Maximum sheet size 72"x110"	Very Good	1.5 PSF	15-16 ft lb/in of notch	3.5 x 10 ⁶ psi	C-1 or CC-1	Cold forming to a minimum radius of 180 x thickness	Self Priming Silicone	\$6.50-\$7.00
Swedlow Acrivue (Acrylic Base)	93-94 Per cent	Clear Green Gray Bronze	1/8"-1 1/2" Max sheet size 6'x10'	Excellent	1.5 PSF	.3 ft lb/in of notch	4.5 x 10 ⁶ psi	C-2 or CC-2	Very Limited	Silicones	\$5.50-\$6.00
G.E. Margard (Polycarbonate Base)	82 Per cent	Clear Solar Gray Solar Bronze Light Green Custom	1/8"-1/2" 6'x8' Max sheet size	Very Good	1.5 PSF	15-16 ft lb/in of notch	3.5 x 10 ⁶ psi	C-1 or CC-1	Flat Only	Silicones	\$6.50-\$7.00

COMPARISON OF MATERIAL PROPERTIES: THE FOUR COMMERCIALY AVAILABLE COATED PLASTIC GLAZING PRODUCTS



The above chart compares the relative merits of the four coated glazing products that are available for architectural use in the U.S. Many of the properties of the materials closely parallel the uncoated versions of the same base materials. At left is an attempt to show why the manufacturers have gone to so much trouble to try to control the UV yellowing problem certain plastics have when exposed to sunlight. It should be emphasized, however, that such problems present the greatest difficulty to the building owner or occupant when they are in his immediate environment and sight line.

years. A silicone-based coating on the same plastic material renders it abrasion resistant. A polysilicate coating on acrylic can make it abrasion resistant as well as improve chemical resistance.

Coating a plastic sheet can triple its cost over an uncoated version. It may also limit the formability of the product. The coating may be a thermoset material while the substrate is thermoplastic. (Both thermoset and thermoplastic coatings are used.) The products are abrasion resistant but not scratchproof. The plastic surface is smoother when coated and usually has increased optical transmission (especially for materials manufactured by an extruding process). The coatings can also add to the product's sensitivity to certain sealants (see table above).

The largest market for such products has been in mass transit where the combination of impact strength and abrasion resistance is critical. The passenger is usually seated only inches from the window surface. In very large spaces, where the glazing is remote, weathering and abrasion are relatively unimportant.

Translucent glazing

Once released from the necessity of imitating the crystal clarity of glass, plastic glazing begins to recoup for its apparent weaknesses. In fact its great strength, light weight, formability, and light transmission ability give it formidable material properties if all of them

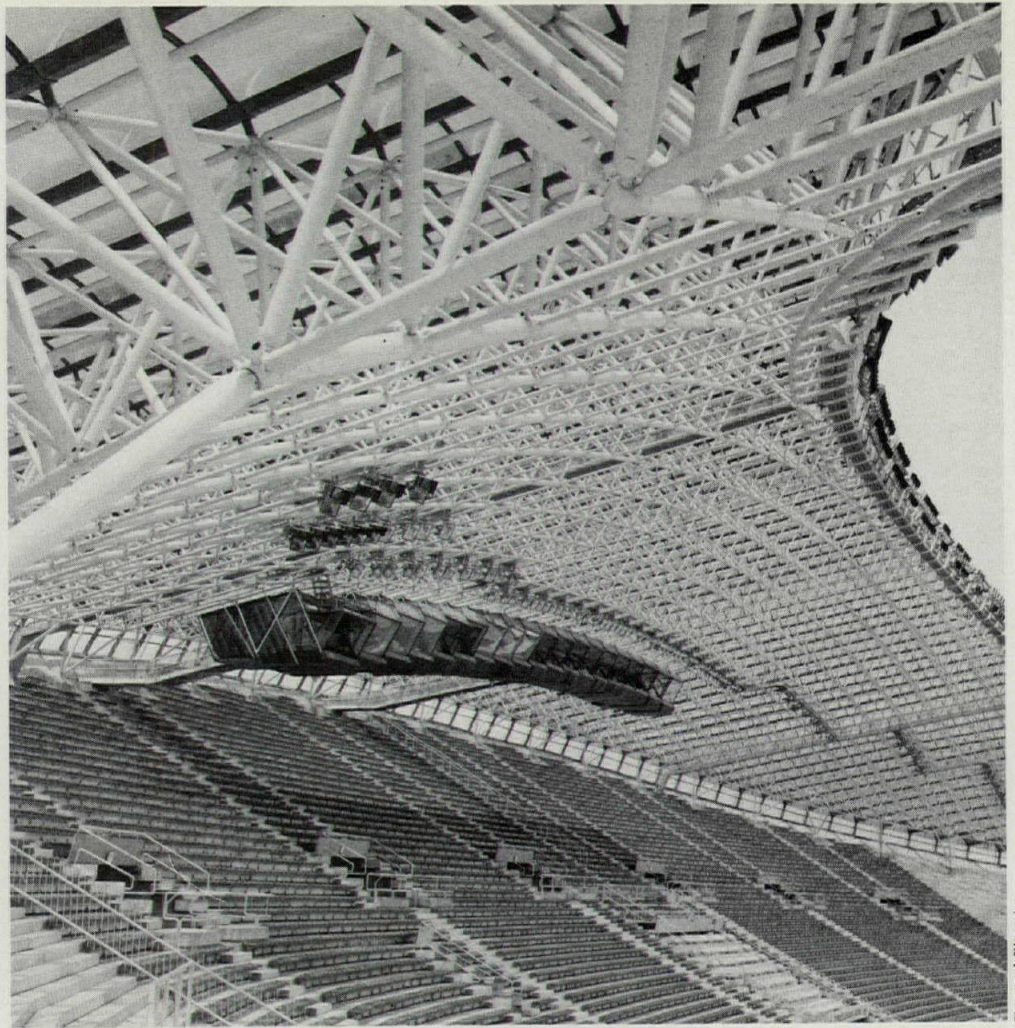
Technics: Light-transmitting plastics

can be appropriately and economically employed. It is possible chemically to vary the light transmission of the material independent of its thickness. Coloring or tinting is much simpler in plastic than glass. When color is added, both the UV yellowing and the scratches are less noticeable. By eliminating color but using a translucent material, the daylighting and thermodynamic properties of all plastics begin to vie with impact resistance in selection criteria. In general, plastics conduct less heat than glass does and have superior thermal resistance. In addition, plastics that can be extruded can be made into hollow double-wall sections, plastic sheets can be reinforced and made into stressed skin panels, or honeycombed cores can themselves be made from plastic and used for lightweight translucent structural panels.

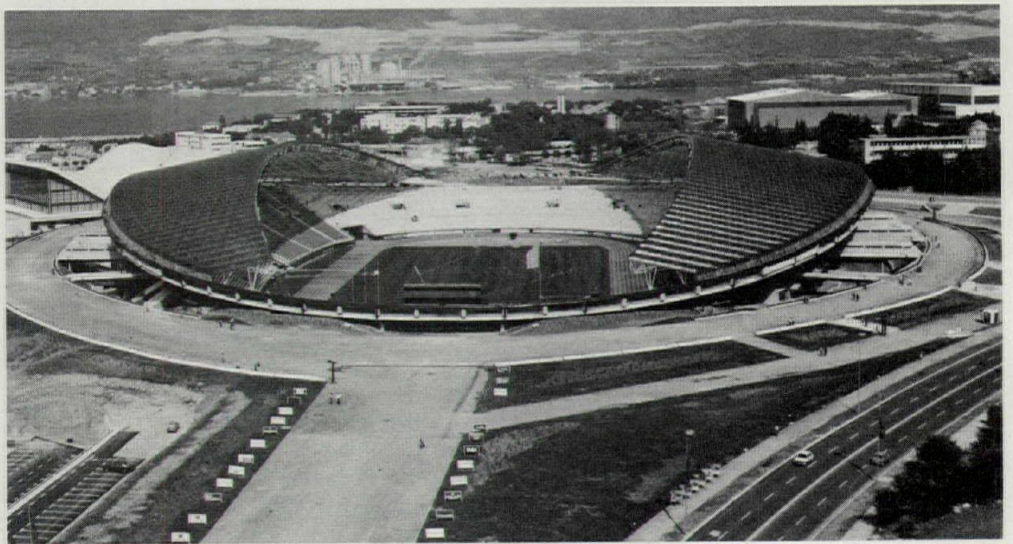
Cored sections: Using the same plastic compositions available in solid sheets, acrylic or polycarbonates can be extruded into thin-walled hollow-cored sheet materials. Because the products are extruded, all of the interior ribs of the core are equally spaced, unidirectional, and equidistant, entrapping parallel tubes of air. The result is a lightweight, translucent (colors are available), stiff panel of potentially unlimited lengths. Such products were first used in Europe for greenhouses.

In equal thicknesses, normal plastic sheets are about half the weight of glass. When the extruded sections are used, it is possible, through very thin walls in the panel, to reduce its weight greatly while obtaining an R-value about the same as insulated glass and a shading coefficient superior to that of insulated glass (that is, they offer greater light transmission). In addition, all plastics are superior to normal glass for containing long-wave radiant heat. The panels add the relative ease of thermal forming to their further advantage over glass.

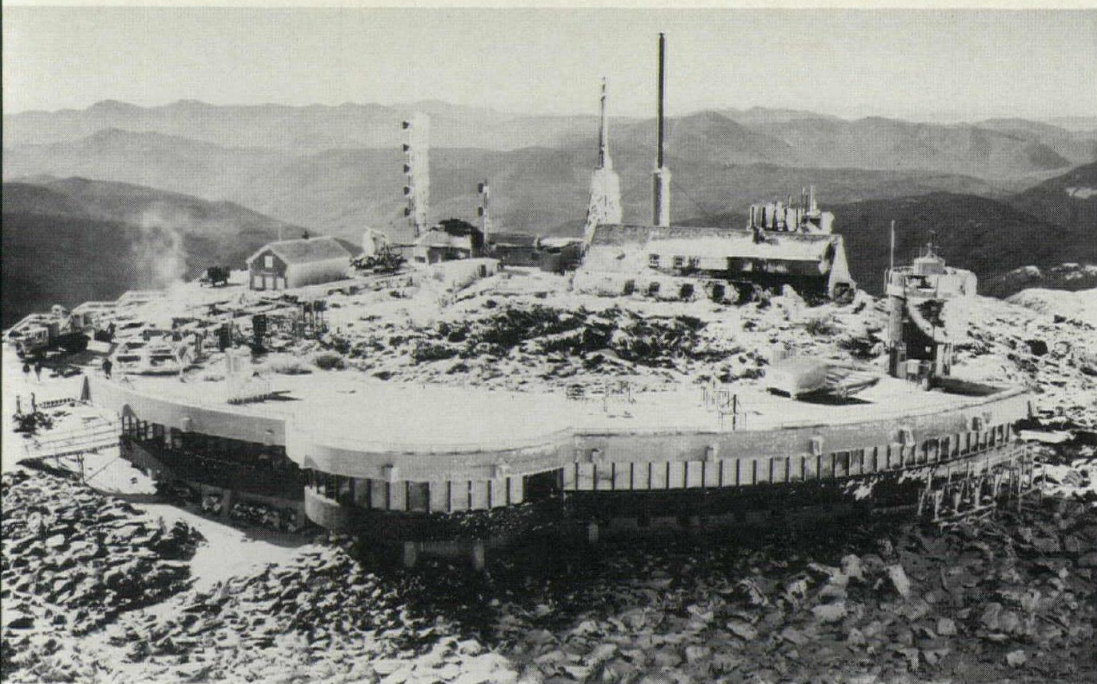
What does this mean to the designer? Especially for residential use (and direct solar gain), if vision glass is not required or desired, it is possible to allow more light and heat into the building and keep more in, while maintaining about the same R-value as insulating double glass. The added impact resistance is available, if desired, and the scratches on the surfaces are made less visible by the ribs which show through the plastic surface. Such products also prove to be excellent for trombe wall construction, greenhouse use, and skylight insulation.



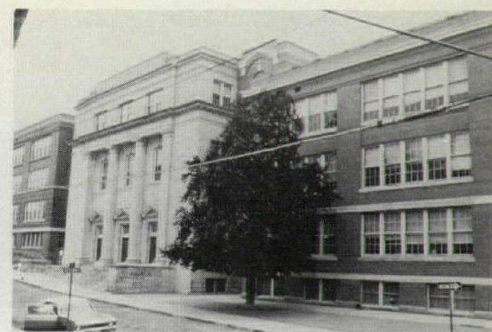
General Electric



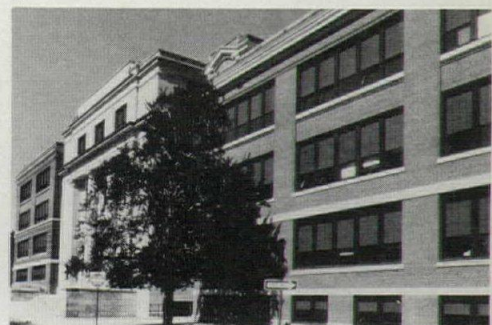
Pictured above is the Gradski Stadium in Split, Yugoslavia. By using curved polycarbonate panels (top), architect Boris Magas was able to shield spectators from weather while maintaining a 50 percent light transmission with the tinted panels. The tough plastic sheets were cold formed and drilled on site. Although they are light in weight, they are resilient to high winds. The stadium was the site for the 1979 Mediterranean Games.



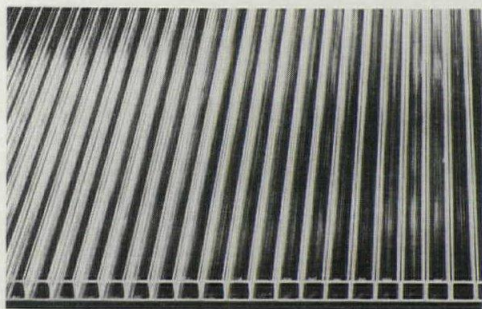
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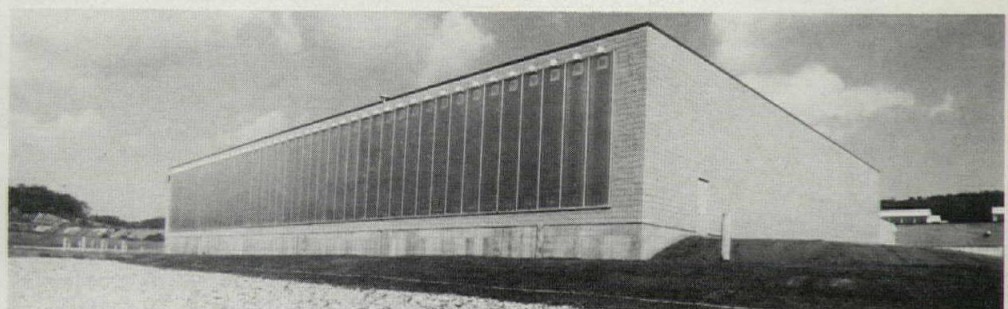
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5

The negative aspects of the material are the same as for the plastics from which they are made, the primary ones being fire properties and cost. Another issue, which has to be carefully detailed, is the possibility of condensation within the core channels. When they are vertical and properly plugged on the top, the condensation can be channeled out at the foot of the panel.

The only product commercially available in this country, which is used in large commercial window building application, is Exolite manufactured by CYRO Industries. The $\frac{3}{8}$ -in.-thick material comes in 4-ft widths in either acrylic or polycarbonate. For smaller scale applications, Rohm and Haas manufactures Twinwall in $\frac{1}{4}$ -in.-thick cored polycarbonate sheets. It is used primarily as an inexpensive insulation for retrofit, replacement, and overglazing of windows.

Reinforced plastic panels: Once the necessity for clear vision is gone, it is possible to use very thin sheets of glass-reinforced polyester and a structural frame of another stronger material such as aluminum. The thin sheets allow for maximum light transmission; the core frame minimizes obstruction to light, allows for longer spans, and encapsulates

air for insulating purposes. When light is less important than R-value, insulation can also be added in the air space. Thermal breaks can be incorporated to avoid conductive heat loss.

By using the polyester resin, increased control of material properties is possible, including the potential of a different resin formula on the exterior and interior sheets of the panel. The color, texture, shading coefficient, reflectivity, weathering characteristics, and impact capacity of each surface can be varied. In addition, the same panel system can be used with differing properties elsewhere in the building. The structural core makes it possible to use larger panels with fewer joints, less infiltration, and reduced potential for leakage. Most important, the fire and flame-spread characteristics of the polyester make it possible to obtain a Class A fire rating (as a skylight).

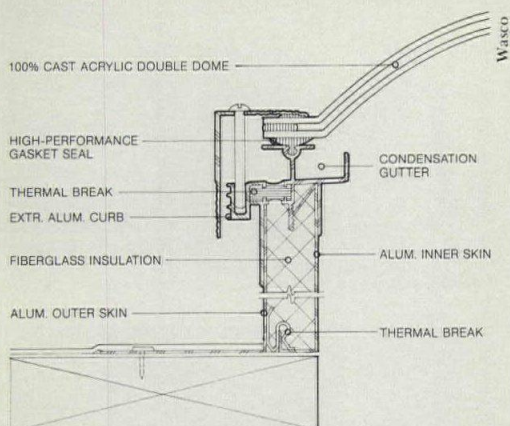
What's wrong with it? The panels are thicker than insulating glass and therefore the incorporation of vision glass into the glazing system gives preference to the modular mullion system developed for the panels. Adding to this rigor of use is the visual discipline of viewing the grid core behind the translucent plastic sheets.

The original panel system using thin glass-fiber-reinforced polyester sheets and an aluminum frame for a core was Kalwall (see P/A, Nov. 1980, p. 126). As

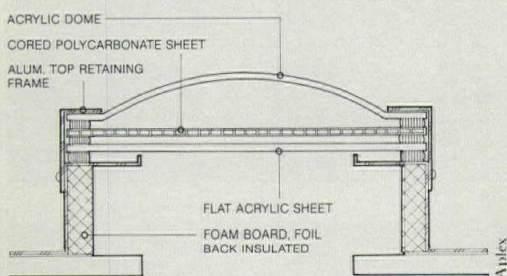
1 Mt. Washington State Park Summit Building has triple glazing with the outermost lite of $\frac{3}{8}$ -in.-thick polycarbonate sheet. Architects Dudley, Walsh & Moyer of Concord, NH, chose the plastic to protect the inner two panes of glass from wind-driven ice. 2 & 3 Woonsocket Jr. High School, Woonsocket, RI, is shown before and after renovation. The Robinson, Green, Baretta Corp. architects used glass-fiber-reinforced polyester to cut down vandalism and maintenance costs while improving insulation and energy consumption. 4 & 5 Famolare, Inc., Brattleboro, Vt, has a new warehouse which has among its solar strategies a trombe wall faced with a cored acrylic sheet. The material was chosen by architects Banwell, White, & Arnold of Hanover, NH, for its high light and heat transmission, good insulation value, and ability to retain the heat from the mass wall behind it.

CYRO

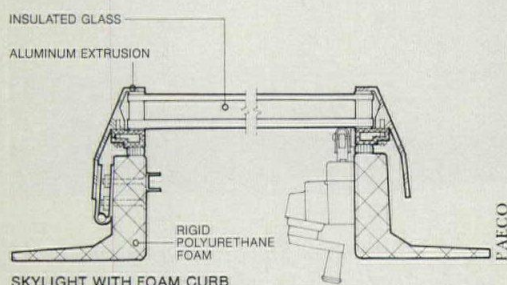
Technics: Light-transmitting plastics



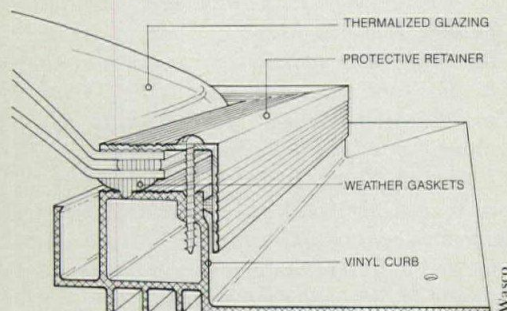
ALUMINUM SKYLIGHT CURB WITH THERMAL BREAKS



TRIPLE GLAZED SKYLIGHT



SKYLIGHT WITH FOAM CURB



SKYLIGHT WITH PVC CURB

The skylight sections shown above portray the types of innovation which have occurred recently to make skylights more energy efficient. The top detail shows a thermal break, which has been incorporated into the conventional curb design. The second skylight system uses a cored plastic sheet as part of its triple glazing. The curb on the third detail is made of unreinforced high-density urethane foam which has been injection molded. It is operable to help vent the summer heat. Directly above is a hollow PVC skylight curb. The plastic itself provides good protection from thermal bridging in cold climates.

creator of the concept, Kalwall maintains its leadership in the field.

Honeycomb core: A third possibility for a translucent panel with good insulating and daylighting properties is plastic honeycomb-core material. By heating a thermoplastic sheet to a molten state and pulling the parallel faces apart, it is possible to create a plastic core material composed of interlocked "ribs." The adhesion of the heated plastic to the pulling surfaces causes it to stick to them until they cool. The product that results is itself very stiff indeed. When other thin sheet materials are adhered to the faces of the core, a panel of surprising strength results. When a 1/8-in.-thick sheet of polycarbonate was pulled apart into a 1-in. honeycomb core, the same material was measured to be nearly 50 times stronger. Core thicknesses from 1/4 in. to 4 in. are possible (with different thicknesses of base sheet). Because it is a manufacturing process and not a specific product yet, the thermal and lighting properties vary with each material used.

There is only one manufacturer of such products in the world: Norfield, in Danbury, Ct. The product was invented and patented at Union Carbide and exclusive manufacturing rights obtained by Norfield. The concept is now nearly 15 years old, but products are just being born which take full advantage of the material properties. Norcore has been available on a production basis only since 1980.

Double bubbles

All of the plastic glazings mentioned so far can be used as skylights. In the case of the structural panels, they can be designed to span from purlin to purlin. For thin sheets to be used in a near horizontal situation, however, they usually must be shaped. A one-way curve can be achieved either by cold forming or thermal forming. A complex pyramid or bubble involves heating the plastic and either stretching it over a form, blowing it into a bubble shape, or using a vacuum.

Skylights used to be primarily for industrial purposes. The use has grown and changed very rapidly in the last decade. While most skylights used are bubbles, the preference formerly was single, milk-white plastic glazing. Bubble skylights today are predominantly double glazed (triple is available), clear, and usually acrylic for commercial use unless there is a very high hazard of impact. The residential market has blossomed largely because of the retrofit needs of a family trying to make do with existing space until mortgage rates diminish. (The market has increased at about 100 percent per year.) In these uses, tinted polycarbonates are common and permit nailing directly through the plastic sheet. The tint hides UV yellow-

ing. Condensation becomes a difficult issue when a single-thickness bubble is nailed into place.

Thermodynamics have strongly influenced skylight design. The growing sensitivity to the thermal break in window mullion design has spilled over into skylight curb design. Interrupting highly conductive metal with structural plastic or rubber separates the exterior metal temperature from that on the interior of the building.

A significant new approach to skylight design has been the use of plastic for the skylight curb. Wasco Industries is using a hollow extruded PVC curb as an alternative to metal. High-density urethane foam is also used unreinforced as the curb material. Although not so good an insulator as low-density foam, the urethane curb has superior thermal insulating properties. The only manufacturer in America at this time is PAECO, Inc., in Toms River, NJ. The actual skylight used is insulating glass.

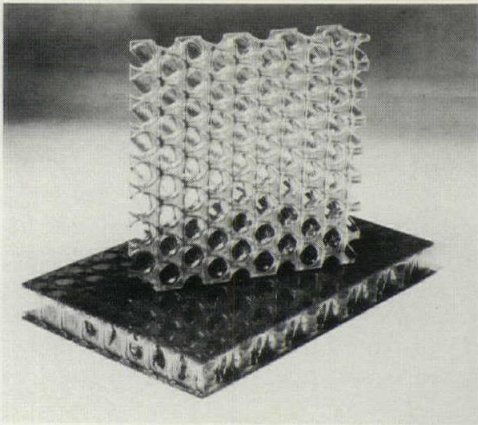
There is also a growing interest in operable venting skylights to help remove unwanted summer heat. Even triple-glazed units are growing in popularity in the northern states.

Daylighting from above

The most significant design issue in commercial building skylight application has been daylighting. Like the vertical window, the skylight has been rediscovered as a possible tool for both thermal exchange and daylighting. From an analytical point of view, the skylight industry is two or three years in advance of the window industry. AAMA has provided a computer-based design methodology for skylight design for three years. Like the vertical glass decision-making process, the tradeoffs are difficult to fully evaluate economically (see P/A, Sept. 1981). What is the dollar value of natural light as opposed to artificial light?

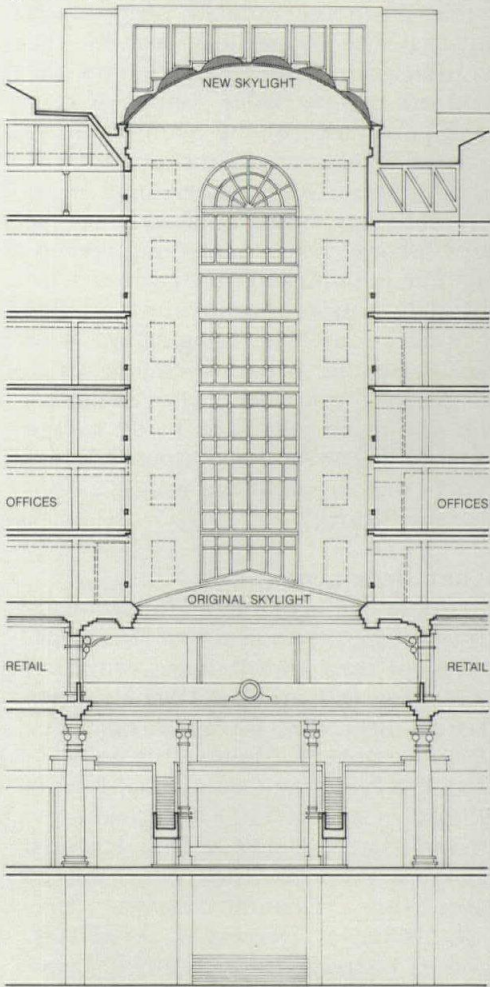
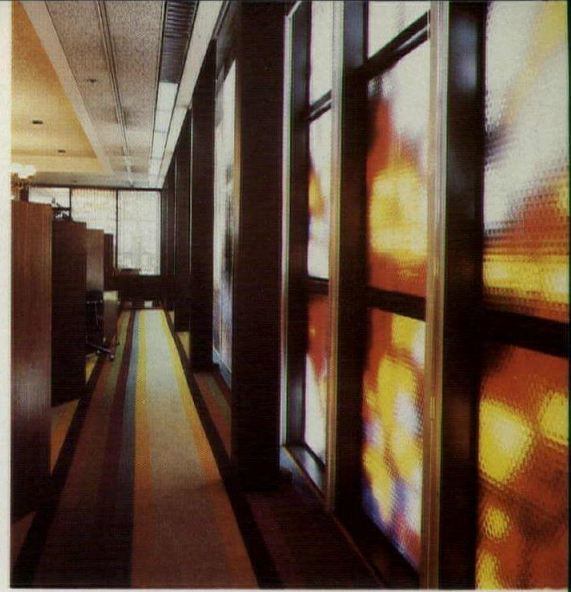
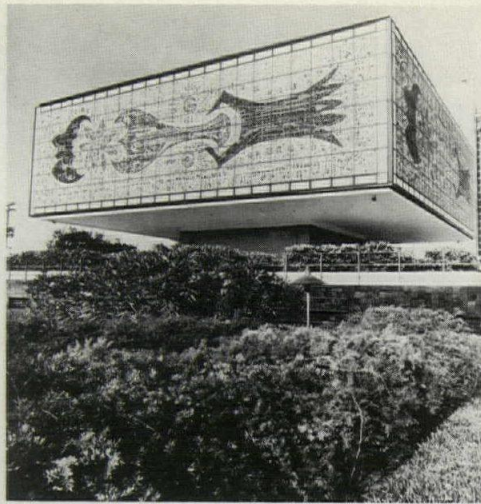
The life-cycle benefits of daylighting and daytime solar gain in winter have to trade off with the heat loss through skylights in the winter night or the unwanted heat gain in the summer day. When shading devices are added to protect the skylight from summer sun or reflectors are used to reflect the winter sun, the equation becomes even more complex. Nevertheless, the fact that a skylight is usually on a plane that sees the sun throughout the day simplifies the equation from those for walls of different orientation.

If it is possible to optimize the size of the skylight for daylight and thermal advantages, the first cost must then be examined. The issue is especially sensitive for a large expanse of skylight over



Norfield

The Bacardi Imports building in Miami, Fl (at right), resorted to the use of a translucent plastic honeycomb material to cut down heat gain but preserve the color from exterior glass murals. The architect is Ignacio Carrera-Justiz of Coral Gables.

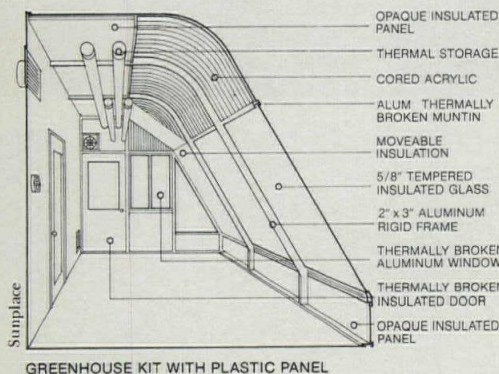
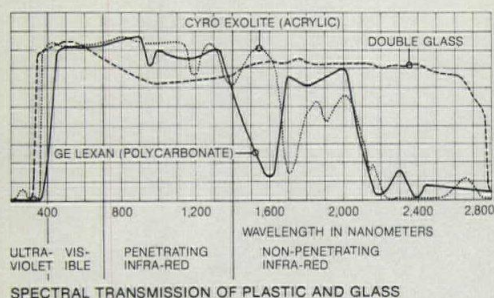


SECTION: THE PHILADELPHIA BOURSE BUILDING 10' / 3m

The Philadelphia Bourse Building shown here has a new skylight, five stories above the former one. The vaulted array of acrylic domes was chosen by Philadelphia architects H2L2 to preserve the natural light but also permit visual contact between upper level of offices and the retail levels below. The added advantage is that the interior atrium surfaces need no weatherproofing.



Technics: Light-transmitting plastics



The ability of plastic glazing materials to contain long-wave radiation is demonstrated in the graph above. The principle proves valuable in greenhouse design. The use of cold-formed acrylic for enclosed walkways (directly above) is demonstrated at Princeton University by architects Sert, Jackson & Associates.

an atrium. It should be noted that, by code, area of skylights made of Class C-1 materials cannot exceed 33 percent of the floor area covered (with C-2, 25 percent is permitted). When skylight manufacturers begin to examine a potential atrium job, they are very conscious of the component sections and skylight shape.

A simple vault, for example, can be created by cold forming, eliminating the expense of heating the plastic and the labor involved. The support structure must be curved. Limits of curvature for each glazing must be observed. If the skylight is shaped thermally, the more units ordered the better. Extruded plastics are somewhat more sensitive to the heat forming process. If a bubble is used, it is made from a flat sheet and

uses less material than cold forming. The height of a bubble that is blown cannot be greater than half the narrow opening dimension. Vacuum forming permits a slightly higher bubble. The bigger the modular skylight units, the less joints and the less potential for leakage. The first cost and installation of skylights therefore involve a complex calculation even after the energy evaluation has been made.

An advantage that plastic has over glass in cost analysis is that prices of plastic sheet are relatively constant throughout the industry. Availability and speed of delivery are more likely to affect choice of the source of supply than material costs.

Greenhouses, canopies, and walkways

Along with skylights, the greenhouse has been increasingly employed by the homeowner as an opportunity to add space to an existing home while simultaneously providing a heat source, recreational plant growth, and a possible food source. In many cases, some of the expense can be used as a tax write-off. Translucent and transparent plastics have been used for greenhouses of all types for some time with varying regard to permanence.

Bill Yanda's book, *The Food and Heat Producing Solar Greenhouse*, was the first on the subject to reach the marketplace. Yanda has investigated numerous glazing possibilities over the ten years he has spent building custom greenhouses. After a stint with the government traveling and explaining their use, Yanda has now settled in Burlington, Vt, where he teamed with architect Robert Holdridge and technical expert Doug Taff to design a greenhouse kit and form their company, Sunplace.

The combination of field experience and design talent has yielded a greenhouse that is more a small prefabricated building than most kits commercially available. A 4-ft module is used to coordinate with 4-ft widths of translucent cored acrylic used for the roof. The material is heated and draped over a form to achieve the curve. With the mullions farther apart and snow load or drifting a consideration, beefy aluminum extrusions are used. They are designed with thermal breaks and accommodate both the plastic roof material and the tempered double glass used for vertical glazing. Tubes filled with organic phase-change material are used for heat storage.

The increased use of slanted skylights and large-scale greenhouses has provided a market somewhere between the domain of the skylight industry and the curtainwall manufacturer. The curved plastic used as a transition for the greenhouse is, of course, a formal advantage of plastic over glass. The same property has been widely used in creat-

ing entrance canopies and enclosing transparent walkways.

The enclosed walkway has become increasingly common in downtown commercial districts endangered by competition from the suburban shopping mall. By providing enclosed space between buildings, a commercial hazard can be turned into a bonus. Hotel owners have also made good use of plastic for the roofs of canopies. The impact resistance can provide greater safety from objects tossed from upper-story hotel rooms.

Conclusion

An article about light-transmitting plastic glazing would be incomplete without two further observations about the character of the material. They come from visits to manufacturing facilities as well as talking with designers. The first is that given the number of products and material properties involved, the manufacture of the material and the products is remarkably simple. A very small percentage of the manufacturing space is devoted to production, and the processes are readily understood.

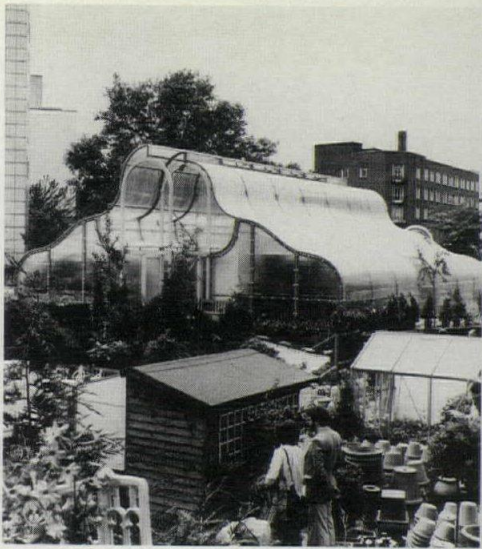
A corollary observation is that the word "plastic" is key to the design potential. The buildings illustrated in this article demonstrate a tremendous variety of applications. The imagination is in many cases the prime discipline which the design must observe. For designers who like to be told what to do by the material, it can be frustrating. For designers with vision, it has wings.

[Richard Rush]

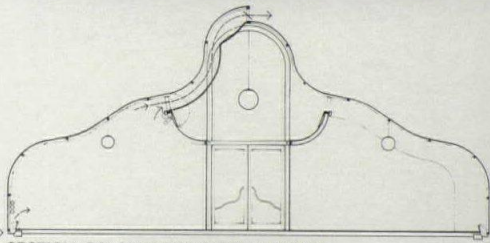
Acknowledgments

We would like to thank the following architects, organizations, and manufacturers for their contributions to the research for this article: AAMA; Apex Plastics; Beckman, Blydenburgh & Associates; Bohem Manufacturing Co.; Bristolite Products; Commercial Plastics & Supply Corp.; CYRO Industries; E.I. du Pont de Nemours & Co.; Eastman Chemical Products, Inc.; Terry Farrell Partnership; General Electric Co.; H2L2; Charles Herbert & Associates; Ignacio Carrera-Justiz; Kalwall; Naturalite, Inc.; Norfield; PAECO Inc.; Parallax; Rohm and Haas; The Society of the Plastics Industry; Sunplace; Swedlow, Inc.; Walsh & Moyer; Wasco Products.

For product information and literature related to this article, see p. 158.



Jo Reid & John Peck



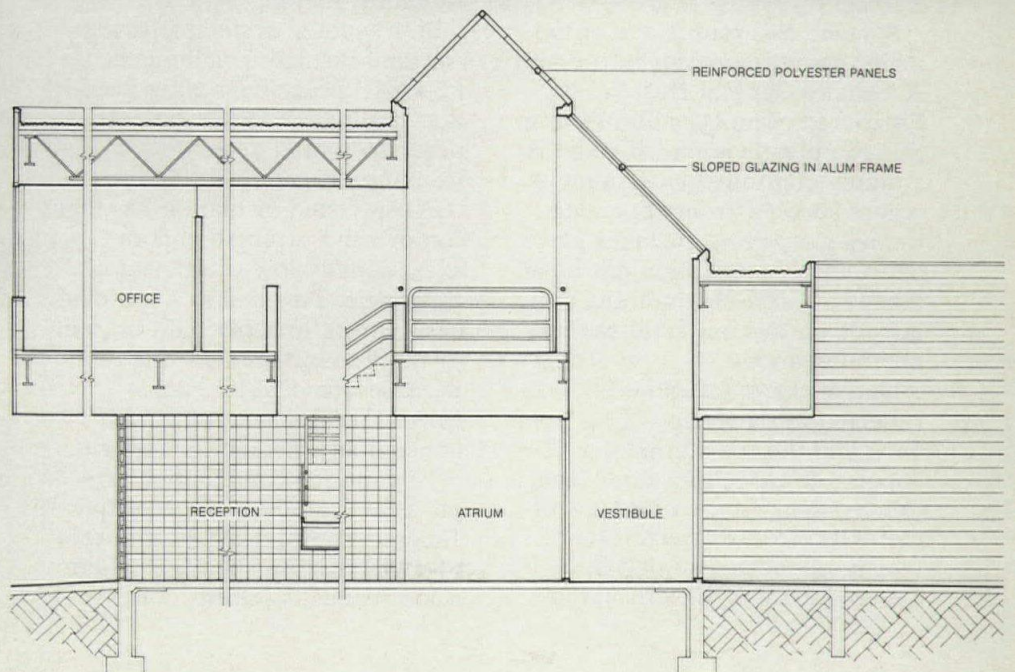
SECTION: COLONNADES GARDEN CENTRE

The greenhouse above (see frontispiece) is an exquisite statement of the potential for plastic glazing material. The cored extrusions of polycarbonate sheet are perfect for the greenhouse application as well as the curvilinear forms.

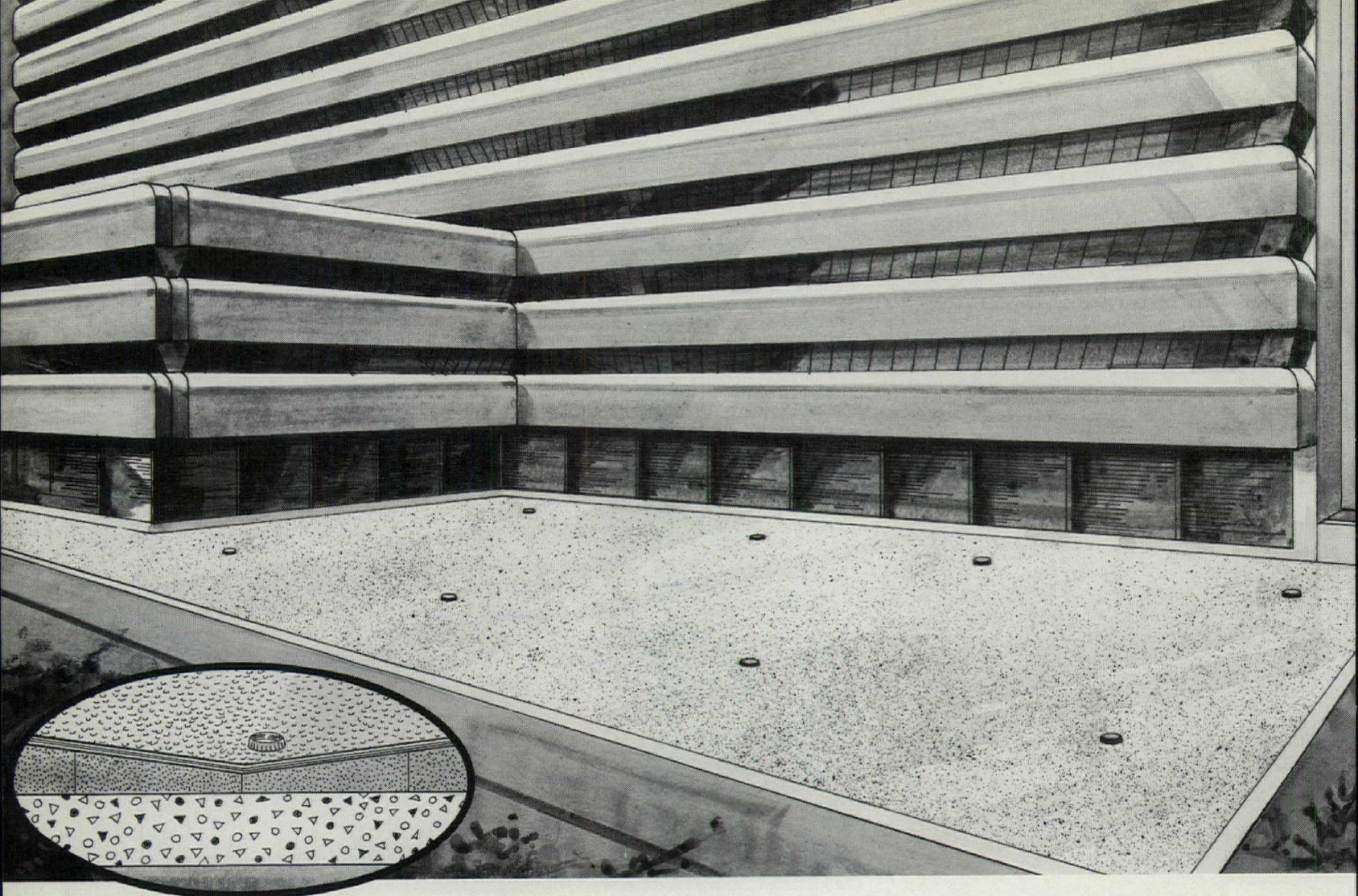


Kalwall

Architect Charles Herbert & Associates of Des Moines, Ia, has chosen to make the plastic-covered atrium a dominant element in the international headquarters building for Pioneer Seed Corn in Johnston, Ia. The reinforced polyester panels, which roof and face the atrium, enclose a two-and-one-half-story space 220 ft long, 8 ft-8 in. wide.



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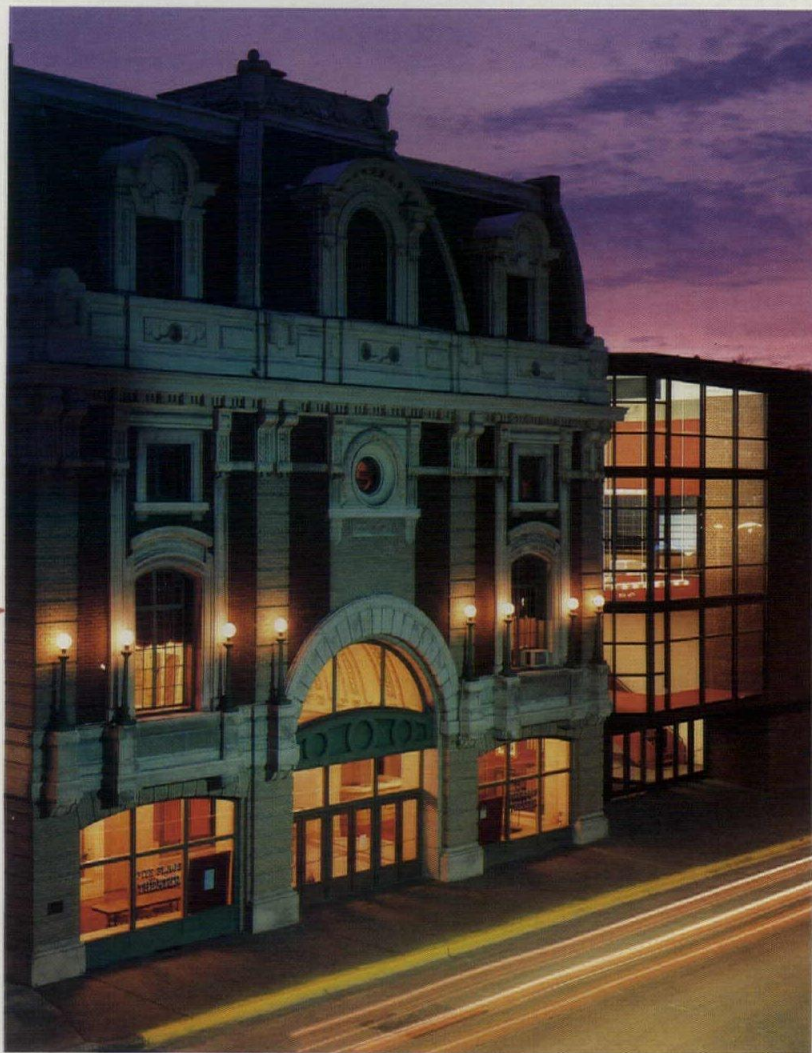


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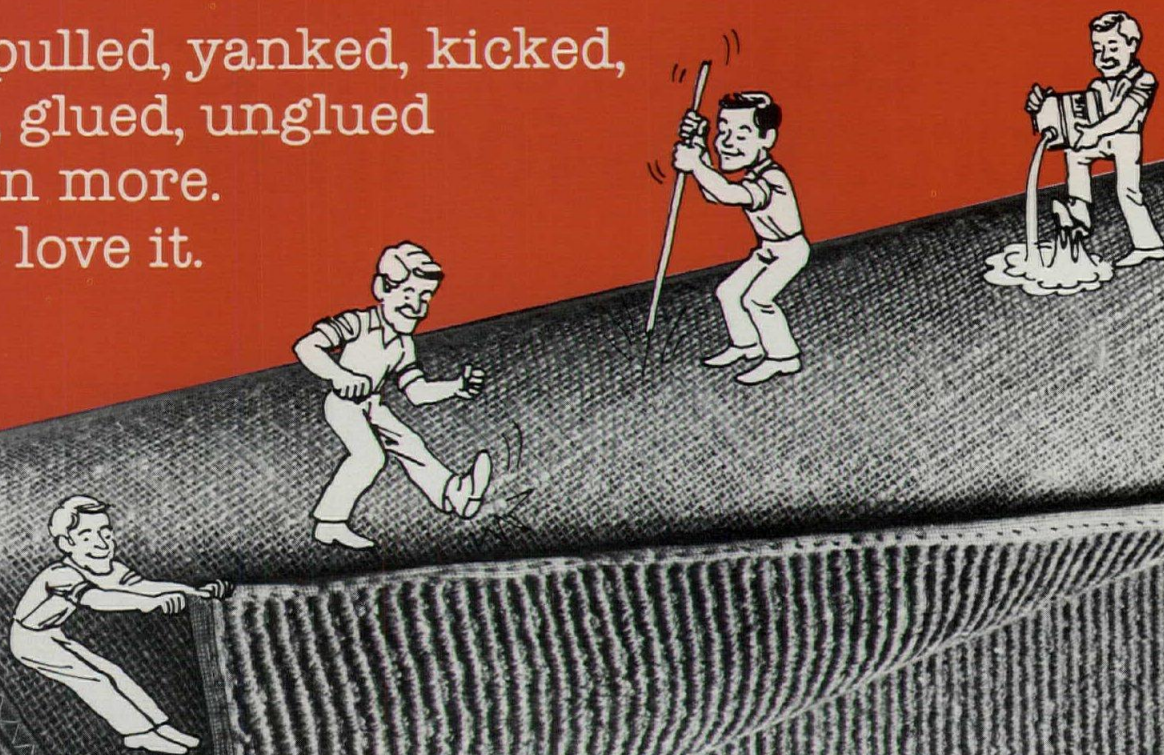
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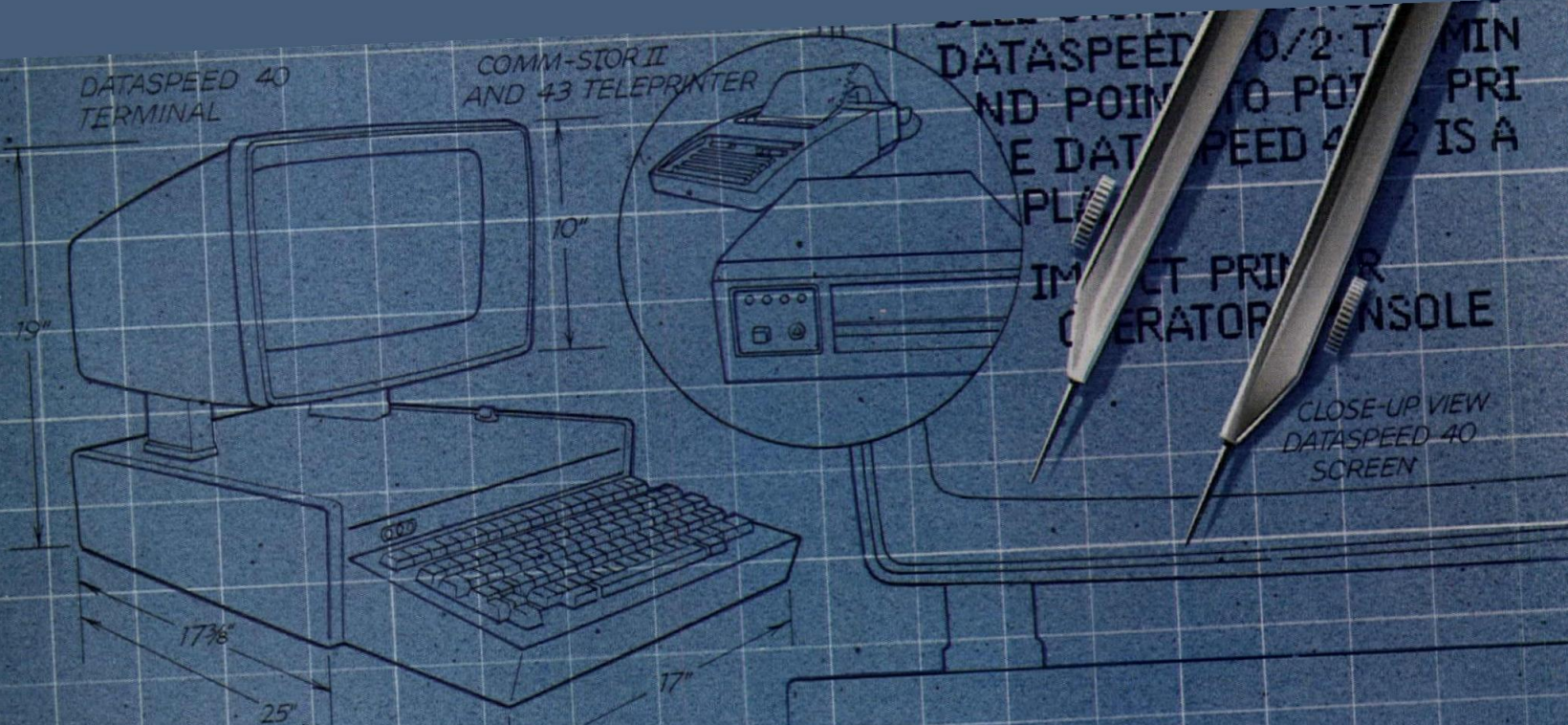
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Defining 'family' for zoning purposes

Zoning regulations that limit property to single-family use bring up the question of what constitutes a single family.

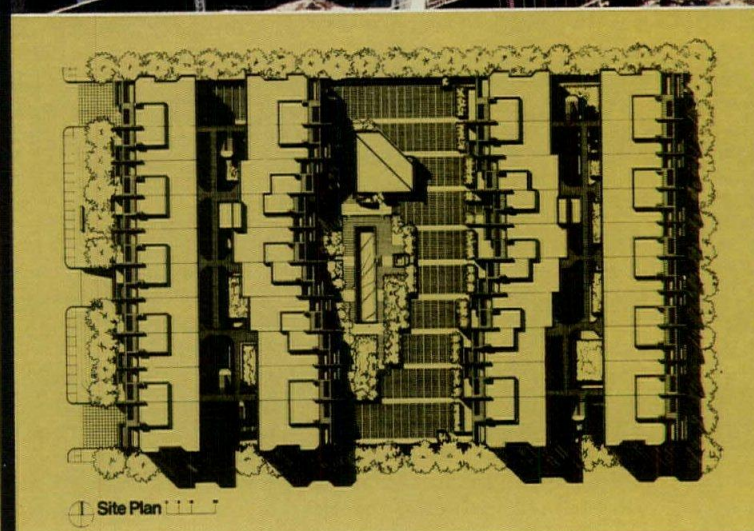
Zoning regulation that restricts the use of property to single-family residential is a valid exercise of the police power of the municipality. The United States Supreme Court in this context has said that "the police power is not confined to the elimination of filth, stench and unhealthy places; it is ample to lay out zones where family values, youth values and blessings of quiet seclusion and clean air make the area a sanctuary for people."

Zoning regulations for single-family residential use may be challenged, however, if the definition of what constitutes a family is too restrictive (It's the law, Feb. 1980, p. 116). Generally speaking, zoning regulations that define a family solely in terms of blood or legal relationships have not been looked upon with favor by the courts. In New Jersey, for example, in voiding such a statute, the highest court of that state said that "the fatal flaw in attempting to maintain a stable residential neighborhood through the use of criteria based upon biological or legal relationships is that such classifications operate to prohibit a plethora of uses which show no threat to the accomplishment of the end sought to be achieved." In California, where the zoning statute expressed its intent by stating that the regulations for one-family zones were intended to sustain a suitable environment for family life, the Court rejected the assumption that a group of unrelated persons "hazard an immoral environment for families with children." In New York, the highest court of that state stated that zoning is intended to control types of housing and living and not the genetic or intimate internal relationships of human beings and "so long as the group home bears the generic character of a family unit as a relatively permanent household and is not a framework for transient living, it conforms to the purposes of the ordinance."

Many municipalities have struggled with the definition of family to establish a zoning ordinance that limits the number of associations of unrelated persons that could be included in the definition of a family unit, but is broad enough to pass constitutional muster. For example, one municipality in New York defined a family under its zoning ordinance as "(a) any number of persons related by blood, marriage or legal adoption living and cooking on the premises together as a single nonprofit housing unit; or (b) any two persons not related by blood, marriage or legal adoption, living and cooking on the premises together as a single, nonprofit housekeeping unit, both of whom are 62 years of age or over." This ordinance was challenged as unconstitutional on the ground that it excluded unrelated persons under 62 years of age from living as a family unit and that those under 62 had not been afforded equal protection of the law. In a recent decision (*McMinn v. Town of Oyster Bay*, Vol. 85, NYLJ No. 111) this ordinance was found to constitute an unreasonable exercise of a town's police power and therefore unconstitutional.

In the *McMinn* case, the owner of a one-family home located in a one-family residential area leased that dwelling to four young unrelated men. These men were all college graduates with good positions who had been living with their families in the same town but preferred to live independently. The town challenged the use of the residence as violative of its zoning ordinance, and the owner sought a court declaration that the ordinance could not be constitutionally enforced. In support of his position, the owner established through expert testimony that 93 percent of the residences within the town could be utilized only for one-family use, that the number of persons living alone and the number of unrelated persons sharing housing has dramatically increased in recent years, and that many of the young people between the ages of 20 to 35 and who made up 27 percent of the town's population were compelled to seek housing elsewhere. It was the opinion of these experts that an ordinance limiting one-family use to persons related by blood or marriage or to unrelated persons over the age of 62 years was exclusionary in nature. On the other hand, experts testifying for the town contended that the movement of young people from the town to urban areas was not because of the lack of housing accommodations, but rather that the lifestyle and community facilities of the town did not meet the needs of the people in that age group. They further contended that a zoning ordinance defining family in a manner that will permit the enhancement of family values, and which is oriented to the basic characteristic of a family as a child-rearing function, is a reasonable definition, which satisfies the standards of a majority of the residents of the town.

The Court concluded that the statute was not constitutionally valid because it failed to provide equal protection of the law, stating: "... The Ordinance by permitting occupancy of one family homes, in one instance based upon the relationship of the occupants, and another based upon their attainment of a certain age, exhibits a lack of rational purpose. It is true that the equal protection clause will take into account the societal importance of the interests that may be affected by it. However, in this case it is difficult to arrive at any rational explanation for the distinction. This is not to say that age considerations may not bear a rational relationship to a proper governmental objective. The Ordinance, however, simply establishes a special exception. The effect of this statute is to discriminate in the occupancy of one family housing solely on the basis of age. ... The condition precedent, namely, that they both be over the age of sixty-two years is an unreasonable exercise of the Town's police power and therefore is unconstitutional." □



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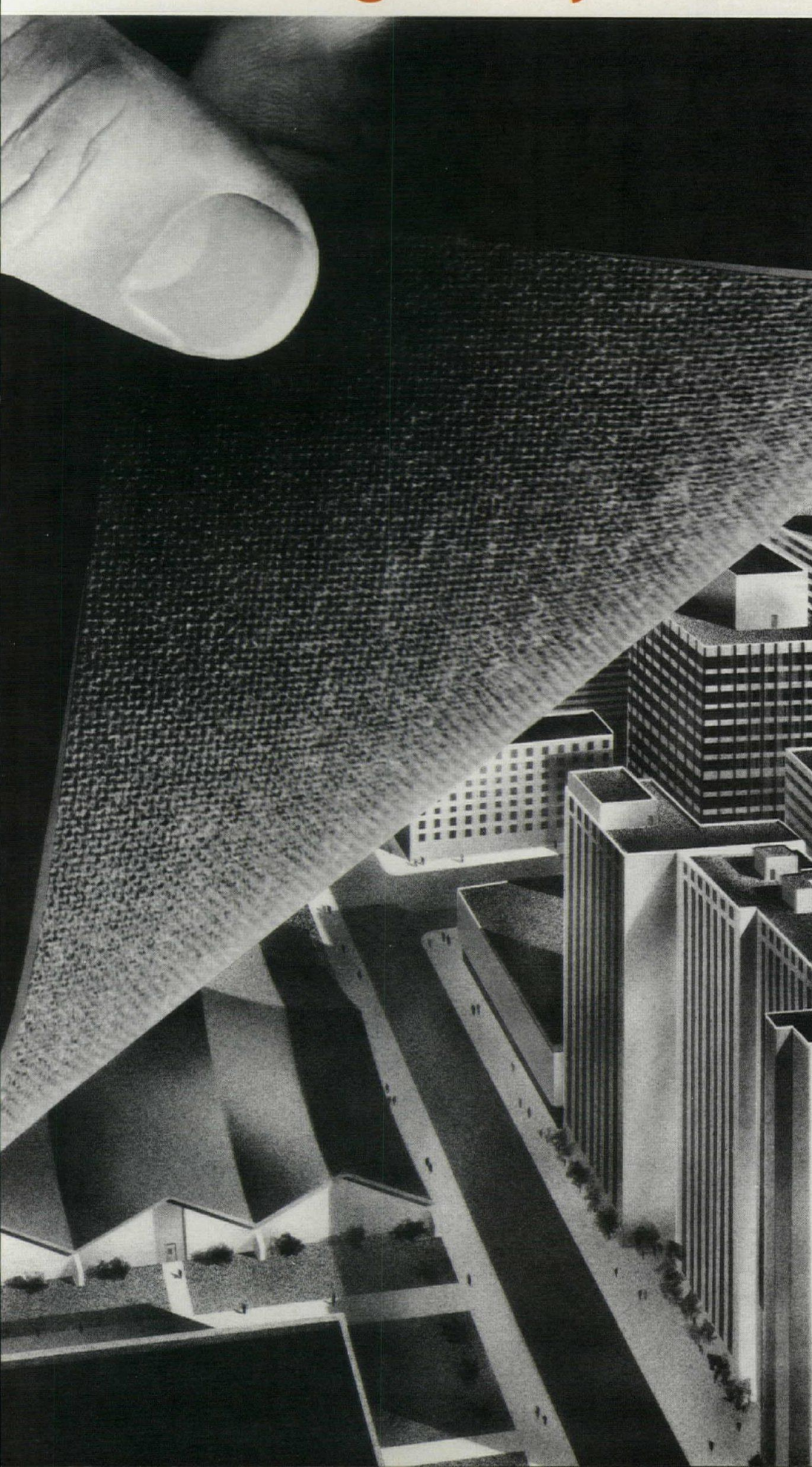
Project: Augusta Court Condominiums, Houston, Texas
Owner: A joint venture of David Mitchell Companies and Mac-Carey Properties, Inc., Houston
Developer: David Mitchell Companies, Houston
Architects: Sandy/Babcock & Associates, San Francisco; project architect, Steven House AIA
Structural Engineer: M. Hourani & Associates, Houston
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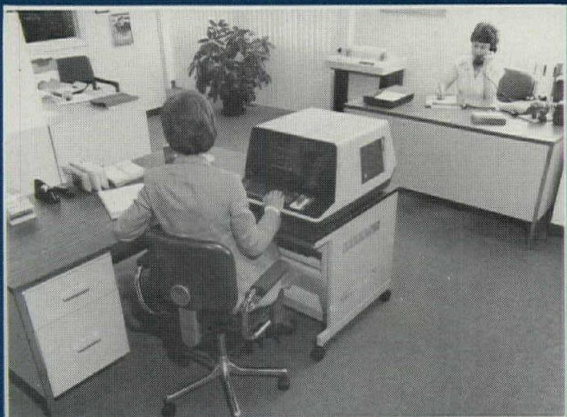
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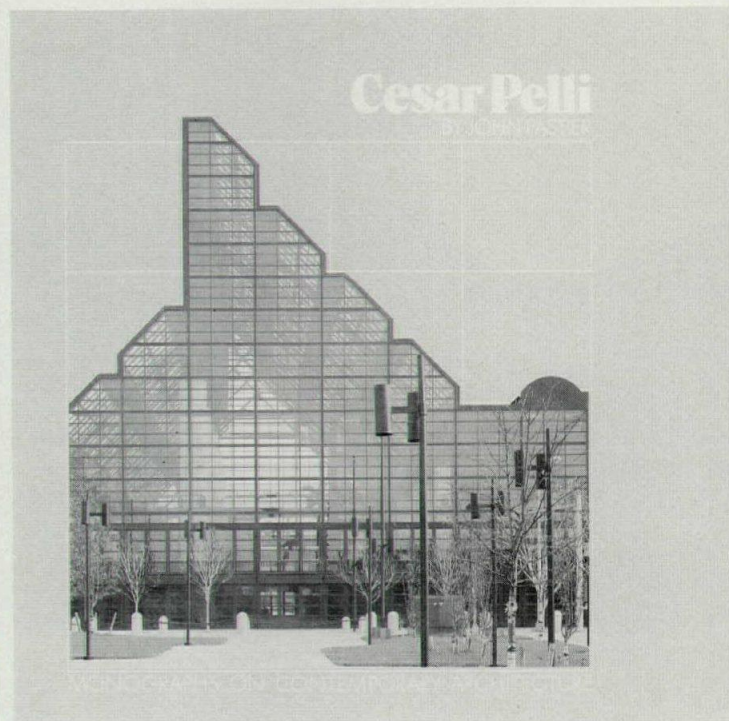
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Books



CESAR PELLI by John Pastier. *Monographs on Contemporary Architecture*, Whitney Library of Design, 1980. 120 pp., 158 illus., \$18.95.

CHARLES MOORE by Gerald Allen. *Monographs on Contemporary Architecture*, Whitney Library of Design, 1980. 128 pp., 164 illus., \$18.95.

At best, a series of monographs on architects is a travel kit in which much is packed into a small space. A series of the 1950s published by Il Balcone, Milan, was edited by Belgiojoso, Peressutti, and Rogers and dedicated to Gianluigi Banfi, a partner who died in a concentration camp. The 150 pages, in a format less than 5" x 7", contained 5000-word monographs by Rogers, Pevsner, Veronesi, Argan, and others on 30 early Moderns; cheaply produced, the design has not dated.

The Braziller Master Series of the 1960s had 10,000-word texts, chronology, bibliography, index, and around 150 illustrations ganged in the center of the book. Few chances were taken on the subjects, as most were past middle age. The design of the books did them little credit.

The present Whitney series gets underway with Pelli and Moore, with Hardy Holzman Pfeiffer, Venturi, and Gehry to follow, all at mid-career. Their work branches out from the Modern movement, which the architects in the two previous series helped to found. Besides a 5000-word introduction, there are long captions for each of the 20 buildings selected to feature. The square format, typical of architectural books today, is handsome—but the grid lines are so insistent that they sometimes jam into a plan.

Pelli's biographer is John Pastier, as disciplined as a Pelli program. His prose has the tautness of one of Pelli's glass skins, and his sharp wit is as low key as the profile of a Pelli mullion. He sees Pelli's work as "a succession of encounters [Books continued on page 144]

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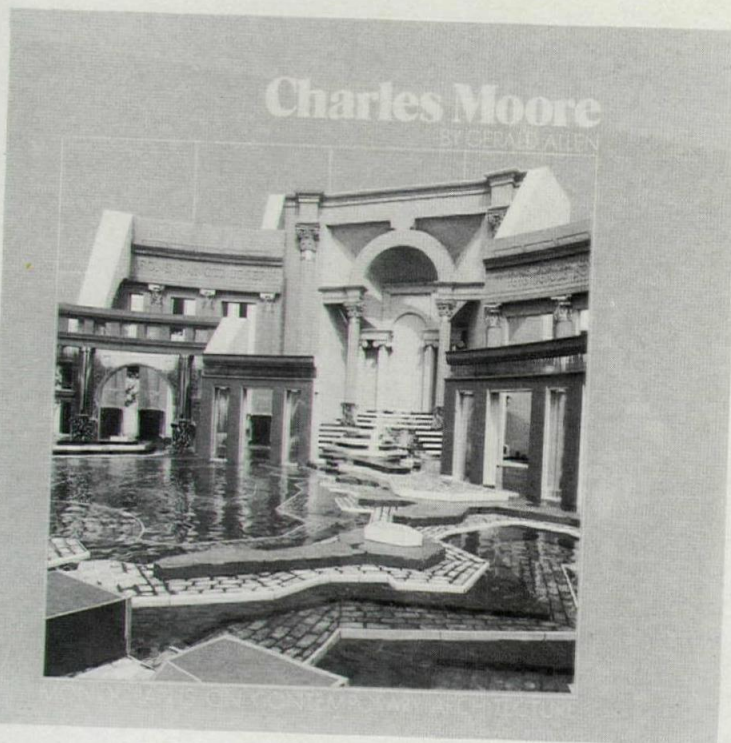
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Books continued from page 142



between the realist and the romantic, or the logician and the poet." He divides the work into that done during the 12 years in Los Angeles and the four years in his own office in New Haven, little of which is completed but which promises a new direction. Pelli's ten years in the Saarinen office is barely mentioned, although it is instructive to compare the expressionistic TWA Terminal in New York, on which Pelli worked, with the almost monoplanar Worldway Postal Center, or the Morse and Stiles colleges with the Teledyne Laboratories.

Pelli came to Los Angeles in 1964, after Saarinen's death, to head the design department at Daniel, Mann, Johnson & Mendenhall. He was 38; he was ready to make design decisions, and to do this he sacrificed the leisurely pace of a prestigious office for the severe time and budget limitations of a commercial office where there was a great volume of work of many types. He chose so well the things on which to concentrate that four years later, when he became a design partner at Gruen Associates, he had given DMJM a new image. When Anthony Lumsden took over at DMJM, Los Angeles had established two points in the east-west axis. (Los Angeles was at a disadvantage until the height limit was lifted, for the quality of small-scale work is obscured until a good tower unblocks the view.)

Pastier says of the Los Angeles years, "His work was characteristically freestanding, independent of history, anticipatory of change, machinelike, and enamored of surfaces—in short, it was like Los Angeles itself."

Pelli's buildings are often called high-tech, a term he believes can be applied only to NASA. The years of work under time-budget pressures convinced him that technology amounts to little more than finding the best way to put a building together. He said of the UN City competition for Vienna, which he and his team won, that he did not hesitate over the choice between a plan easily built and an imagemaker. As a juror on the Thousand Oaks Civic Center competition, his vote went to a scheme that would build itself—not to the Venturi & Rauch entry, which emphasized the sense of place.

Pelli had his own ideas of sense of place: the Pacific Design Center is a tribute to the sprawling, horizontal movie studios; it also has something of what Ignazio Gardella called a memory of what had been there before—in this case, a carbarn for street cars was once at the edge of the site.

Pelli's interest in the glass box tower had been short-lived before he started carving out the sides and shaping the top. Noting the similarity of the PDC in profile to the Crystal Palace, Pastier compares Pelli to the great Victorian engineers [Books continued on page 146]



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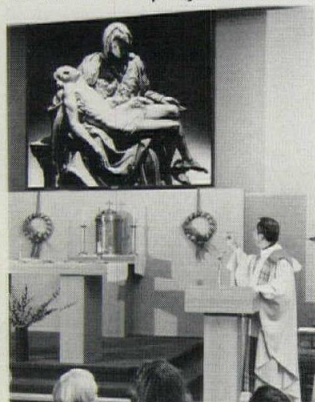
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Books continued from page 144

in his instinct for trusswork and fondness for great spaces flooded with light.

PDC and the Winter Garden-Mall at Niagara Falls are transitions between the Los Angeles work and the towers coming from his New Haven office. The change of climate and "operating in a historically and physically richer milieu" were responsible, Pastier thinks, for the greater freedom, which has taken Pelli back to the stepped towers of the Depression style, sometimes a spire, a shaped top, even a Beaux-Arts symmetry, in his late buildings under construction.

Gerald Allen's sympathetic monograph on Charles Moore is written with grace and literary overtones, very different from Moore's own writing, which gets into beautiful tangles of little Anglo-Saxon words of movement and action that speed his prose but not his theory. Moore, however, has always been a reluctant intellectual. Allen sees his work as "pastoral," by which he does not mean vernacular, but refined and sophisticated like the pastoral poets who "deal with the imaginary and sometimes actual retreat of worldly people to the country and its simplicities." Or perhaps Moore's work shows just a sophisticated attitude toward stored-up images (lattice porches, cellar doors, random fenestration), which he weaves in and out of historical images, casting it all in a floor plan curiously formal for today.

Some of the historical images are as recent as Kahn's Trenton Bathhouses, which serve as a starting point for the 1962 Orinda house for himself; there's also a fair rendering of an early Mayan temple, but Moore's roof comb is a square clerestory on top of a pyramidal roof. That was the beginning of many schemes for top lighting, often combined with ingenious ways of opening walls: counterbalanced walls in a vacation house that open to porches in the summer, sliding walls on barn door tracks. Many were compromises between lighting and privacy. In the Burns house (1974), the plan corkscrews up to the light like a plant seeking the sun; a remodeling of a New Haven house for himself squeezed in three two-story light traps, light distributed through cutouts on the sides, the spaces within used for drafting boards.

Sea Ranch started a style, which is standard now for Southern California condominiums, and Moore moved on to new forms. Among the few constants in his style are explicit or implied platforms—the Burns organ loft, the speakers' platform at Kresge College, UC Santa Cruz, with William Turnbull. It was the only college at Santa Cruz that ever came in on budget, and to meet it, all amenities were stripped from the plans; the speakers' platform, with bunting painted on, implies what was removed.

The implications are rich in the Faculty Club at UC Santa Barbara. It is a little history of California, the road through the building suggesting the freeways, the false fronts and cinematic juxtapositions referring to the movies, the Hearst fortune appearing in columns and fireplaces, unused loot in Hearst Castle's back storage lot, Santa Barbara's City Hall providing the big scale and white plastered walls.

A late work so burdened with implications that it is sensual overload is Piazza d'Italia in New Orleans, Moore's message from the Baroque churches of Sicily to America—with love. Moore is the great message writer of his generation.

[Esther McCoy]

The California Bungalow by Robert Winter. Hennessey & Ingalls, Los Angeles, 1980. 96 pp., 116 plates, \$14.95.

The bungalow has waited almost three-quarters of a century for a scholarly overview, but the wait is worth the witty and far ranging analysis of the building type by an architectural and social historian. An earlier treatise on the bungalow was Clay Lancaster's "The American Bungalow," Art Bulletin 40, 1958 (only slightly shorter than Winter's small book), but the numerous illustrations in both lead to no precise definition of the bungalow. The difficulty in pinning it down may be why it fulfilled a multitude of diverse dreams of "home."

Winter welcomed in Spanish Colonial, pueblo, and Victorian Gothic revivals, the California ranch house, and Irving [Books continued on page 148]



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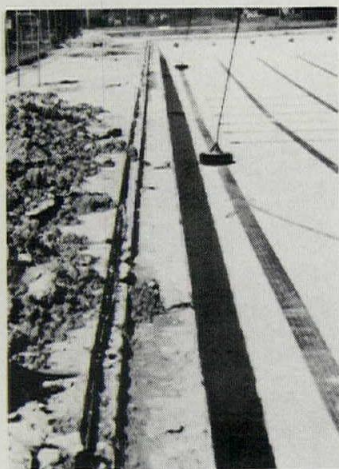
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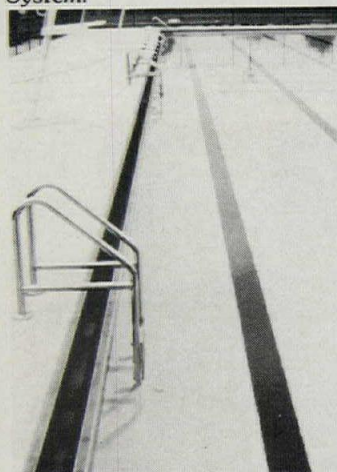
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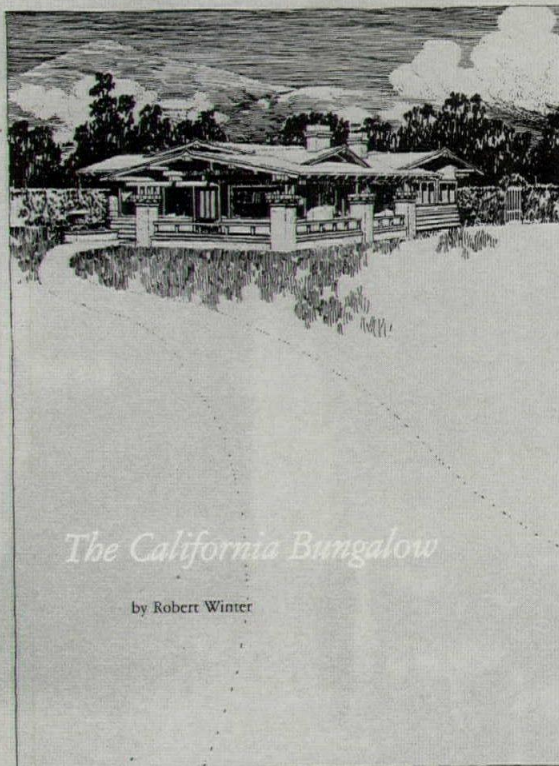
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The California Bungalow

by Robert Winter

Gill's Lewis Courts as examples, while Lancaster spilled over into such official architecture as Louis Sullivan's Ocean Springs shingled cottage, and Purcell and Elmslie's Woods Hole house. The inclusiveness brings to mind John Ashbery's line, "The mind / is so hospitable, taking in everything / like boarders."

But from the moment the *bungla* reached England in the 17th Century (by way of Bengal and India), the word has warmed the tongue and been hospitable to varied interpretations. The English thought the early types in India "as handsome as a stack of hay," but in California by the 20th Century, the praises were in song and verse. Winter quotes a poem ending "in fitness and fineness lie beauty and charm, not in show / As his latest achievement bears witness, the beautiful Bungalow."

The idea spread over the U.S. by pattern books, *The Craftsman*, *Ladies' Home Journal*—and plans at \$5 a set. The Ready Cut bungalow came in The Pomona, The Pasadena, and The Sunshine. Most bungalows were horizontal, gabled with extended beams and broad eaves, were stained a dark color, and had wide porches; there was crawl space below to bring in water and gas, standard window sizes were organized into banks; the plan was open, the living room divided from the dining room by low bookcases; bookcases flanked the fireplace, and above the extended mantel were square case-ments; the built-in buffet filled a dining room wall. Winter saw here the beginning of Wright's Prairie House—minus servants' rooms and with entry directly into the living room.

Jean Murray Bangs credited the popularity of the bungalow to Greene & Greene, whose designs could be easily reduced and built with standard materials from standard details. Winter says the bungalow was well rooted before the arrival of the Greenes. He hesitates to call Greene & Greene's Gamble house a bungalow because of the second story and the cost (\$85,000 in 1908). To him the bungalow was the first democratic house type in America. The low cost and ease of erection on a small site at the edge of a city or town turned hundreds of new settlers into homeowners, accounting in time for the sprawl.

The California Bungalow is the first of a Hennessey & Ingalls series edited by David Gebhard. To follow are John Chase's *Hollywood Stageset Architecture*, John Beach's *Ernest Coxhead*, and Sally Woodbridge's *John Galen Howard*. [Esther McCoy]

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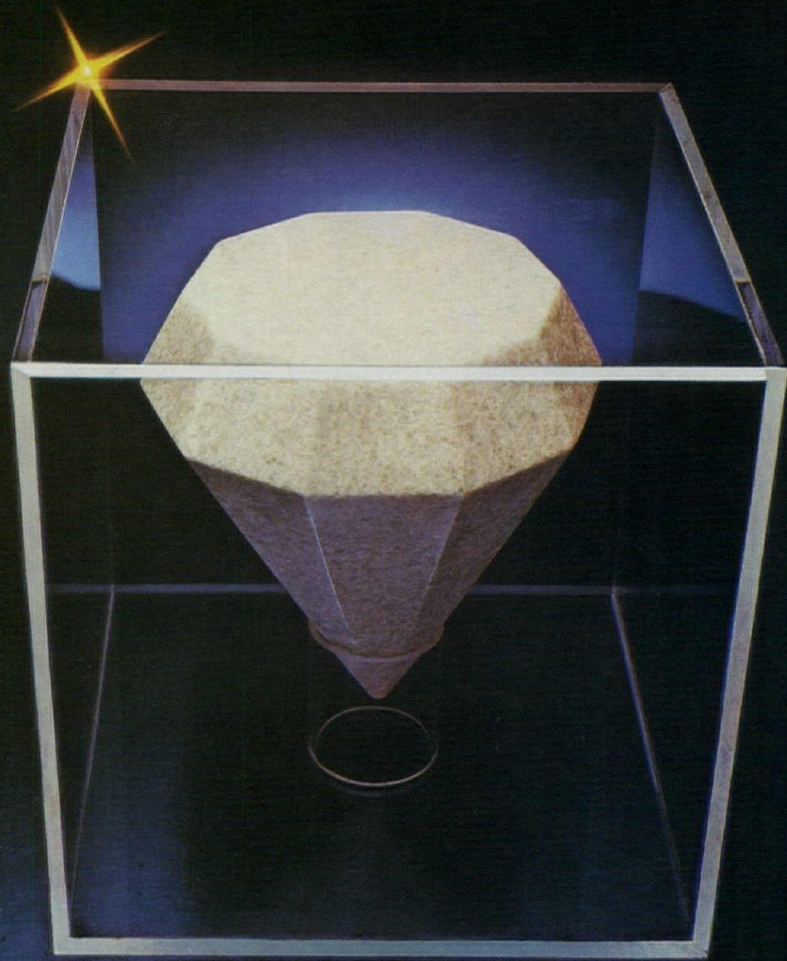
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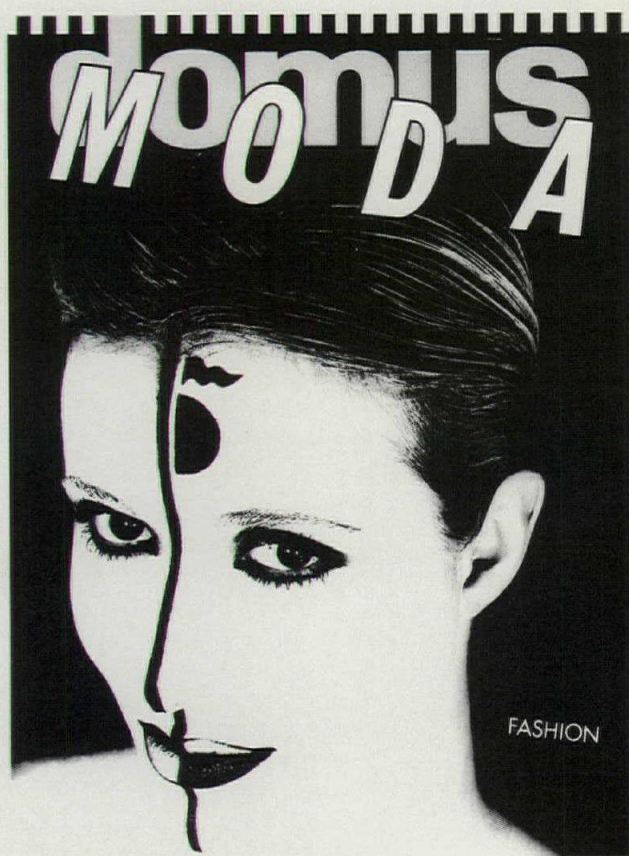
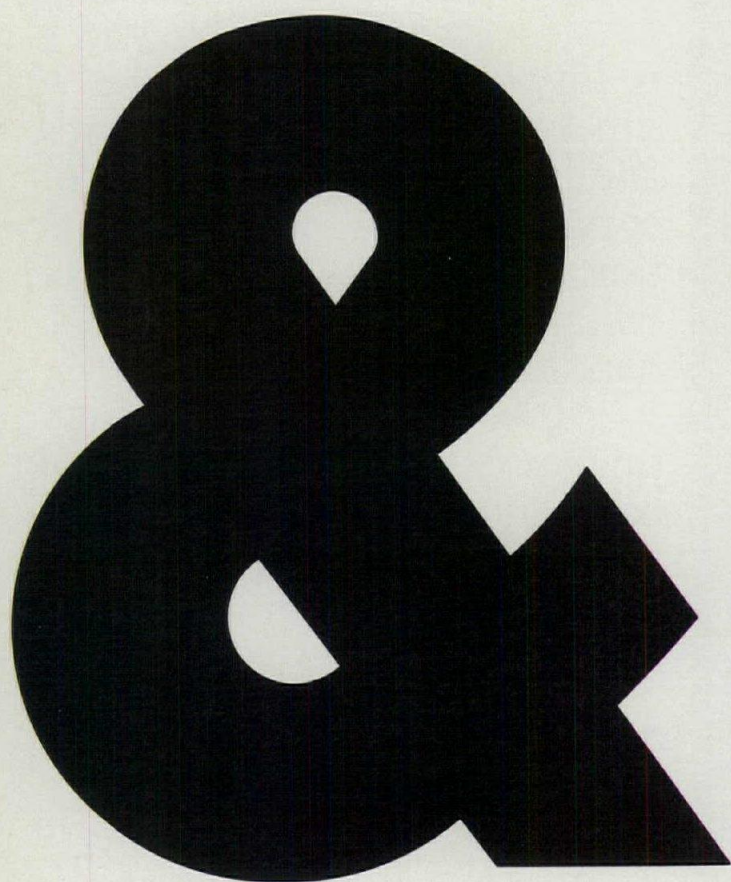
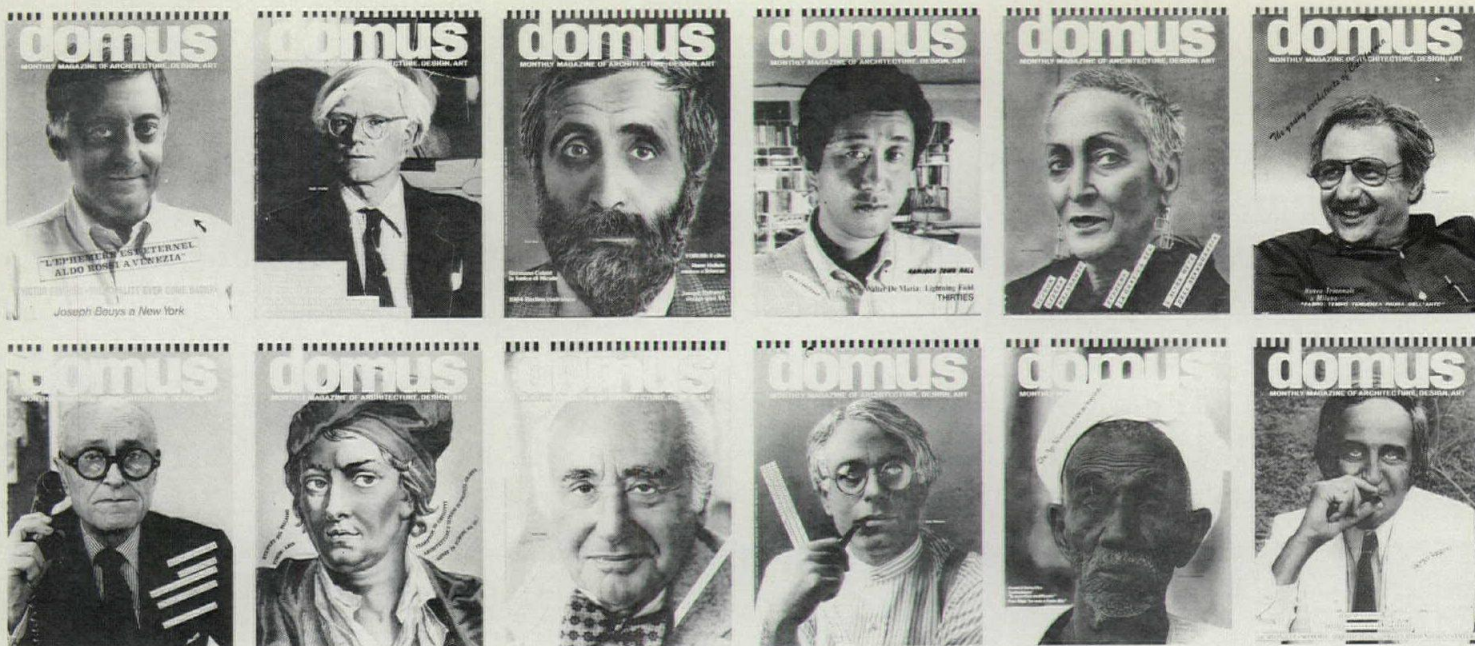
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Atrium and west face of Jeppesen Sanderson headquarters, Denver, Colorado, Johnson + Hopson & Partners Architects.



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AMERICAN ARCHITECTURE: AFTER MODERNISM

Article ● Robert A. M. Stern Michael Sorkin Suzanne Stephens

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There can be no doubt. American architecture today is in a state of transformation. The changes that are taking place go deeper than the construction of the AT & T Building in New York or the jungle-like house in Santa Monica. The transformation is quietly, but steadily and definitely occurring in the deepest levels of the architects' own awareness. Right now, American architecture is being forced to face challenges arising from crises within contemporary society.

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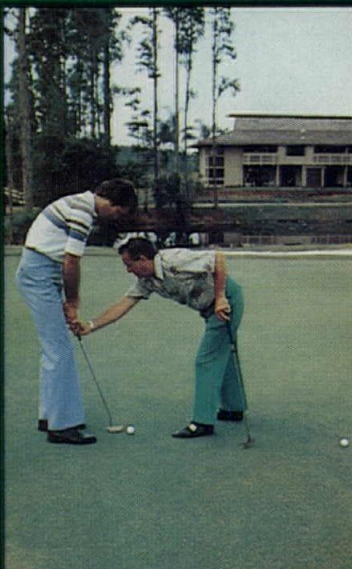
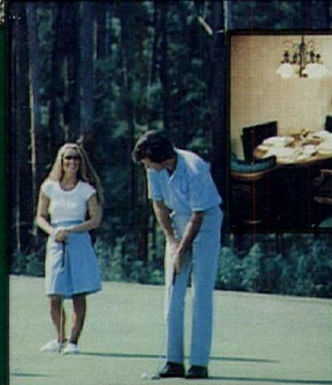
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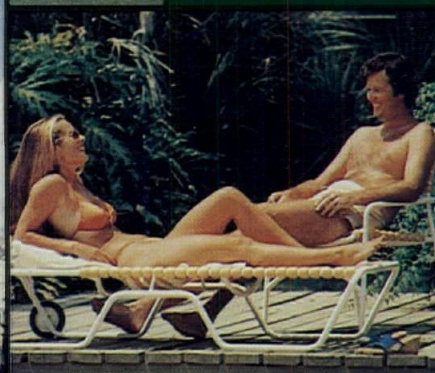
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Susan Doubilet

Landmarks renovated, restored, and reused will be the topic of an expanded special feature section of the November P/A. To demonstrate the possibilities and pitfalls of restoration, P/A has documented recent efforts involving landmarks from a variety of places and periods—from Schinkel's Altes Museum in Berlin to Wright's Arizona Biltmore Hotel in Phoenix, from the mission church at Rancho de Taos, NM, to Corbu's Salvation Army building in Paris. A *Technics* feature on the restoration of concrete will focus on a problem that is becoming timely as we restore our 20th-Century heritage.

P/A in December will feature a rich collection of new work completed during the year, among them a house and a horse farm—and an architecture school.

P/A in January will bring you, of course, the results of the annual P/A-Awards program. This extra large edition will include reports on other competitions and major projects—plus an update on the execution of previous P/A winning designs (see p. 60).

P/A in November: Landmarks renewed

Progressive Architecture 10:81

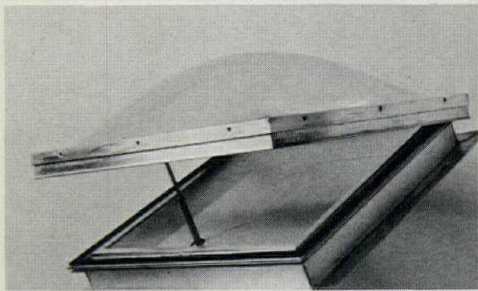
Products and literature

The following items are related to the technics article about glazing with plastics. They are grouped here for the reader's convenience.

Plastics products

SkyCraft insulating dome skylights consist of two white acrylic plastic domes forming a dead air space that is filled with translucent glass fiber insulation. U-value (to prevent heat loss) is 0.19, and R-value (to prevent heat gain) is 5.40, according to the manufacturer. The skylight is available in eight sizes ranging from 16" x 32" to 48" x 48". API Manufacturing Co.

Circle 100 on reader service card



Thermalized skylights of acrylic and aluminum, with a polyurethane thermal break, are said to offer significant energy savings. Special sealants and the design features result in twice the resistance to heat loss of conventional units, according to the manufacturer. There are no weep holes to allow cold air to enter, and accumulation of condensation is prevented, eliminating damage to gypsum board. Naturalite, Inc.

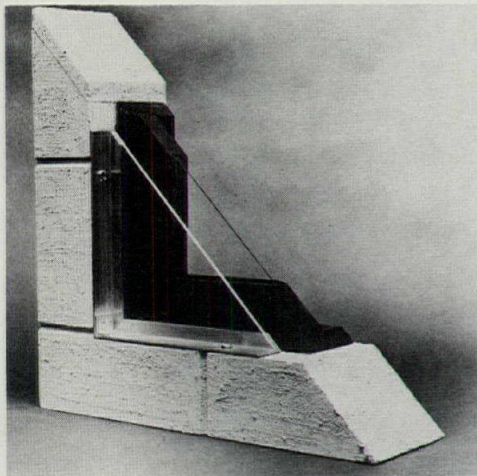
Circle 101 on reader service card

Tuffak® CM-2 polycarbonate is coated to increase its resistance to UV rays, abrasion, and weathering, while retaining optical qualities. Suitable applications for the practically unbreakable material include windows in schools, public housing, commercial and industrial buildings, as well as bus shelters. Rohm and Haas.

Circle 102 on reader service card

Margard® polycarbonate sheet has abrasion resistance nearly that of glass, along with resistance to weathering, and is virtually unbreakable. Typical applications are in areas requiring resistance to vandalism, high impact, and marring. Margard also provides sound and thermal insulation. General Electric Co.

Circle 103 on reader service card



Overglaze of polycarbonate sheet for stained glass windows provides protection against breaking and energy savings as well. Installation is on the outside of existing sash, in extruded aluminum frames, without altering the existing window structure, creating a sealed, double-walled thermal window. Units are fabricated on site. Shenandoah Studios of Stained Glass, Inc.

Circle 104 on reader service card

Plastics literature

Skylights and roof hatches are described in a 16-page brochure. Flat, pyramid-shaped and domed skylights in several sizes and shapes are shown, along with sizes and specifications for each. Detail drawings show methods of installation. Acrylic domes have Therm-o-weld construction, with each dome fused to its fiberglass skirt. There are thermalized skylights in the group and some models also serve as vents and smoke hatches. Bristol Fiberlite Industries.

Circle 200 on reader service card

Acrivue® A acrylic sheet offers clarity, resistance to chemical deterioration, and good weathering properties. An abrasion-resistant coating provides the

material with surface hardness approaching that of glass. An eight-page brochure describes the product and its applications and shows in tabular form its performance characteristics and physical properties. Swedlow, Inc.

Circle 201 on reader service card

Plexiglas® skylight brochure describes the benefits of using Plexiglas acrylic instead of glass for skylights. Lighter weight, lower cost, and better energy conservation are among the advantages cited. The material comes in solar control tints. Illustrations show installations in the U.S. and Canada. Rohm and Haas.

Circle 202 on reader service card

'Energy Waster,' a six-page brochure, describes the use of Exolite double-skinned sheet as retrofit glazing for single-pane windows in factories and other business facilities. The 5/8-in.-thick sheets are said to provide insulation comparable to 5/8-in.-thick insulating glass at lower cost. The brochure provides calculations for determining heat loss and potential energy savings. CYRO Industries.

Circle 203 on reader service card

Natural energy systems catalog describes and illustrates plastic skylights, including single-dome, double-dome, custom designs, and special types, such as continuous vaulted, cluster systems, and one with high thermal insulation providing a U-factor of .31. The eight-page catalog contains general information about skylights and energy evaluations. Apex Plastics.

Circle 204 on reader service card

Lucite® acrylic in two sheet types is described in a 12-page technical brochure. Lucite L (cast acrylic sheet) is used where safety, light weight, optical clarity, and long-term retention of properties are important. Lucite SAR (super abrasion resistant sheet) has a surface that is almost as abrasion resistant as glass. It comes in a number of tints, special UV filtering or transmitting formulations, or in a matte finish to provide privacy and security. Tables provide recommended design considerations for both grades. Drawings show installation details. E.I. du Pont de Nemours & Co.

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[Literature continued on page 160]



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Thermal, security, and acoustical plastic glazing is explained in an eight-page brochure. Insulgard® thermal and security glazing is compared with other types of glazing for nominal U-factor and weight when used in this type of sash. Information about performance, installation, and maintenance is provided for Isocoustic® acoustical plastic glazing having a sound transmission class rating of 40. Commercial Plastics & Supply.
Circle 206 on reader service card

UVEX® plastic sheet, which is used for skylights, is described in an eight-page technical bulletin. Tables provide properties and characteristics of the material's impact strength in various sheet thicknesses; light transmission of various colors; and combustibility characteristics. Eastman Chemical Products.
Circle 207 on reader service card

Exolite rigid, double-skinned acrylic sheet has integral ribs between the exterior sheets for high rigidity, light weight, and good impact resistance. It offers excellent light transmission, weatherability, and insulating properties, and it will resist damage by hail, wind, vandals, and snowload. It can be used on greenhouses, atriums, Trombe walls and water walls, skylights, clerestories, and similar applications. It is said to provide insulating properties equal to a 5/8-in.-thick insulating glass unit at lower cost. CYRO Industries.
Circle 208 on reader service card

Curtainwall system brochure provides information about the Kalwall system that consists of translucent fiberglass sheets, permanently bonded to a grid core of interlocked structural aluminum I-beams. For added insulation, the units can have translucent fiberglass insulation inserts. Illustrations of actual installations and detail drawings are included. Kalwall Corp.
Circle 209 on reader service card

Glazing systems for Exolite™ sheet include: Aluminum Glazing System for vertical or sloped applications; PVC/Aluminum for less demanding installations, such as greenhouses and patio covers; and Universal Glazing System, suitable for Acrolite® monolithic sheets or Exolite® double-skinned sheets. Drawings in this 48-page manual show details of vertical glazing, sloped glazing, vertical/sloped combinations, double and single slope skylights. CYRO Industries, Inc.
Circle 210 on reader service card

Acrylic Skydomes®, skylights, and heat and smoke vents are described and shown in a 16-page brochure. Graphs illustrate heat loss and air loss compared with conventional skylights. Detail drawings, specifications, and size charts are provided for the various models. Wasco Products.
Circle 211 on reader service card

Plexiglas® GM bullet-resistant acrylic sheet offers 92 percent light transmittance and weighs half as much as the equivalent thickness of glass. A 24-page brochure provides design and installation considerations, fabrication and installation techniques. Diagrams show details of various installations. Rohm and Haas.
Circle 212 on reader service card

Skylights in square, rectangular, pyramid, and circular forms are discussed in an eight-page brochure. There are single-glazed and double-glazed models with domes or flat glazing of acrylic. They are described and illustrated and have tables of sizes. Also included in the brochure are fire and smoke hatches. Bohem Manufacturing Co., Inc.
Circle 213 on reader service card

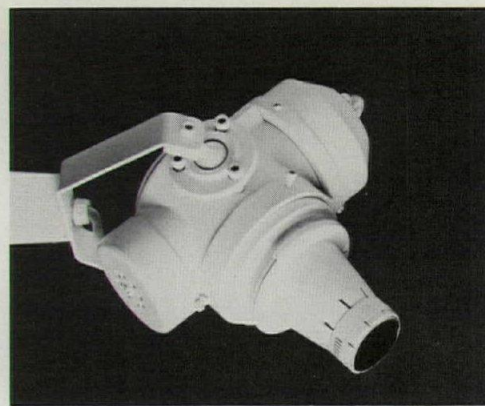
Design for Energy Conservation with Skylights is a guide to designing energy-efficient application of manufactured dome skylights. The four sections are: The Role of Skylights in Building Energy Conservation; Building Energy Use Considerations; Energy Efficient Skylight Design Considerations; and Daylighting Design Considerations. Copies of the 20-page brochure, at \$5 each (include payment with order), are available from the Architectural Aluminum Manufacturers Association, 35 E. Wacker Dr., Chicago, IL 60601.

Exposure Comparison of Plastic Sheet Materials illustrates the effect of exposure for varying periods of time on polycarbonate, butyrate, and Plexiglas® acrylic. Photographs show exposure comparison by transmitted light and by reflected light. Graph shows impact resistance as a function of exposure. Rohm and Haas.
Circle 214 on reader service card

Other products

Outdoor ramps for foot traffic or wheelchair use provide accessibility to most buildings. GA series ramps come in 6-ft to 32-ft lengths and can be used for heights up to 5 ft. They have safety wheel guides and nonskid treadways. Handi-Ramp, Inc.
Circle 105 on reader service card

ANSI-PAK shower seat/grab bar package meets requirements of ANSI A 117.1-1980 for wheelchair shower space. The package consists of shower seat, grab bar, decal, and mounting hardware for secure, watertight installation. Shower seat has stainless steel frame and a choice of Naugahyde or teakwood seating, left- or right-hand models. Tubular Specialties Mfg., Inc.
Circle 106 on reader service card



Optical projectors to spotlight art objects or architectural features are available as track lighting. Model 1180 is designed for small paintings, sculptures, and antiques; Model 2350 is applicable to commercial uses such as conference tables, desks, bars, and lobby areas. Both use a "Y" yoke design, yoke adapter, and track. According to the manufacturer, they can illuminate one or more objects to the exact contour of the item. Wendelighting.
Circle 107 on reader service card

Rim-mounted exit devices, one for wood or hollow metal, the other for aluminum/glass doors, are available in four standard lengths for door openings 30, 36, 42, and 48 in. wide. The bar travels only 1 in. and projects 2 1/2 in. from the door surface. Exterior access can be provided by any standard rim cylinder. Finishes are satin clear aluminum, "bronze," and black. The unique rotating starwheel design bolt is said to provide greater security than conventional bolts. Both styles are listed by Underwriters Laboratories. Adams Rite Manufacturing Co.
Circle 108 on reader service card

Astro wall panels have a wood subsurface finished in lacquer-like acrylic. They are installed in a grid that is brass, stainless steel, or acrylic-finished in colors. Standard panels are 27" x 90" with 3-in. top and bottom moldings to create an 8-ft wall, with custom sizes available for other height walls. Options include square or bevel-edged shelving and spotlights to fit in the underside of any shelf. Panels and shelves are offered in seven colors. Cy Mann Designs, Ltd.
Circle 109 on reader service card

Fabrics in the Compendium collection have 100 percent wool face and 100 percent cotton back. There are three styles available in 31 colorways. Arc-Com Fabrics, Inc.
Circle 110 on reader service card

Tambour wallcovering in Phoenix series is made from selected wood veneers, cork, brushed and polished metals, and custom-fabricated versions. It is designed to be fire-rated Class A according to ASTM E-84. National Products.
Circle 111 on reader service card
[Products continued on page 162]

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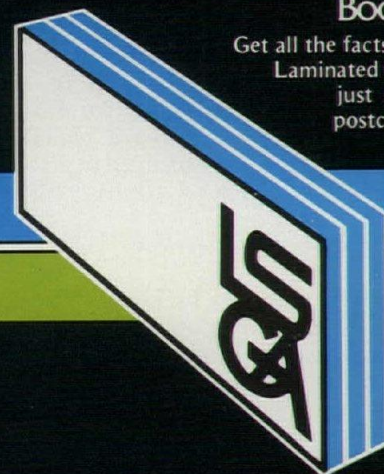
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Symbol Signs Repro Art is a portfolio containing 50 passenger-pedestrian symbols developed for the Department of Transportation by a committee of designers under the direction of Thomas Geismar. Each copyright-free symbol is printed on 9" x 11" Kromekote stock suitable for reproduction. A 24-page booklet included in the portfolio offers guidelines for the use of the symbols. Standardized red and green paint chips are provided as a guide for sign manufacturers. Cost to AIGA members is \$40; to nonmembers, \$50; plus \$1.25 book rate postage. Order from The American Institute of Graphic Arts, 1059 Third Ave., New York, NY 10021.

Versa-Trak™ flat conductor cable now includes telephone and data transmission wiring. Recently expanded capabilities make it suitable for offices with closed fixed walls, portable walls, and modules, as well as open plan offices. It is installed directly on the floor and covered with modular carpet. The cable is easily tapped and can be folded to change direction. Modifications of equipment and lighting layout can be changed without structural modifications. The system is UL listed and meets the requirements of the National Electrical Code, Article 328. Thomas & Betts.

Circle 112 on reader service card

Traditional collection area rugs of 100 percent acrylic are hand tufted, hand sheared, and hand carved. There are three Chinese-inspired and two European-inspired designs; two are available in two colorways. All are offered in 4' x 6', 6' x 9', and 9' x 12' sizes. Cado/Royal System, Inc.

Circle 113 on reader service card

Cycle-Safe® storage lockers provide secure bicycle and moped storage at transit stations, park-and-ride lots, colleges and universities, apartments, and similar areas. Each modular unit holds two bicycles secured by means of a T-handle lock. The lockers are con-

structed of high-compression-molded fiberglass-reinforced polyester with a baked urethane finish. Cycle-Safe Division, Philip Johnson Corp.

Circle 114 on reader service card

Lighting fixtures for walkways, patios, and other low-level sites are made from laminated Western Red Cedar, which has natural preservative oils. Each fixture is built to custom specifications to meet site conditions and can incorporate graphics where appropriate. Ryther-Purdy Lumber Co.

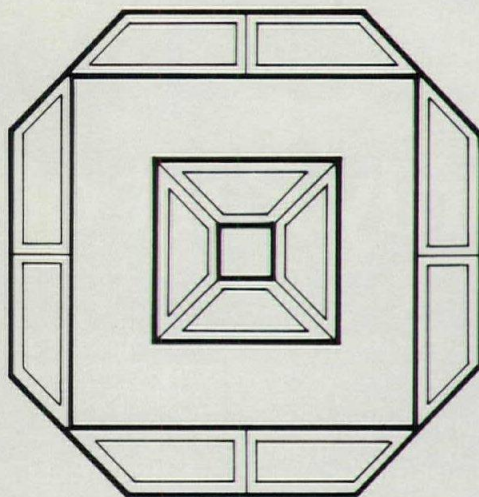
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Coffers of mirror gold metal in three styles have lamps inside that create reflection patterns. The 24-volt lighting system draws only one watt per lamp. The lamps, which have a 20-year life expectancy, require virtually no maintenance or replacement. Neo-Ray Products, Inc.

Circle 116 on reader service card

Simplicity Series medallions are offered in 20 Classical designs in four sizes: 12", 18", 24", and 31". Medallions are made of Contour-all™, a completely flexible material that can be installed without special tools. The designs, such as shell and bellflower, laurel leaf, and egg and dart, coordinate with moldings and other products the company produces. Focal Point, Inc.

Circle 117 on reader service card



Mirrora® interchangeable mirror modules come in a variety of geometric shapes and standard sizes. They can be combined to create any number of custom arrangements for use as borders or frames, to conceal joints or seams, or as design appliques. Mirrora Div., Floral Glass & Mirror, Inc.

Circle 118 on reader service card

Fabrics of 100 percent wool, for commercial seating, are engineered to meet major fire code requirements, according to the manufacturer. There are six weaves, including tweeds, a small checkered pattern, and a nubby texture, each in several color choices. Homestead Fabrics.

Circle 119 on reader service card

Interface® carpet tile, especially suitable for areas using flat cable wiring, is available in a new pattern—Tattersall. The 18" x 18" carpet tiles, fusion-bonded to the backing, are dimensionally stable. Tattersall consists of over 5000 miniature squares in each tile and is available in ten color combinations. Interface Flooring Systems, Carpets International Georgia, Inc.

Circle 120 on reader service card

Mira Contract 86 carpet is a selection of 86 colors in carpet made of Allied Chemical's two-ply ANSO IV yarns. The velvet carpet can be used on platforms and walls, as well as on floors. Colors are keyed to the company's upholstery fabrics, wall coverings, and drapery fabrics. MIRA-X International Furnishings.

Circle 121 on reader service card

The Cado desk system comprises executive desks, returns, typing table, suspended pedestals, and organizers. Woods are teak, walnut, or oak, with all hardware hidden. Lengths are 56, 66, or 72 in., each 28½ in. high, 31½ in. deep. The typing table is also suitable for dictating machines, TV, or computers. Organizer can be hung exposed on either side or suspended underneath. Cado/Royal System Inc.

Circle 122 on reader service card

The Wallcovering Gallery™ contract collection consists of lightweight and heavy-duty, 54-in., fabric-backed vinyls. Designs include suedes, stipples, grasscloth, ropes, burlaps, linens, and crush. Wallcoverings have coordinated paint colors from the Color Key Program.™ The 30 patterns meet Federal Specification CCC-W-408A and Class A Fire Classification in accordance with ASTM E-84. Grow Group, Inc.

Circle 123 on reader service card

The COM Collection of classic fabrics comes in a color selection that includes neutrals, pastels, and "jewel" tones. The group, coordinated by John Flynn Associates, includes cottons, woolens, worsteds, mohairs, nylons, and some blends. The tightly woven upholstery fabrics offer durability suitable for executive, transportation, and public seating, and paneling. Flame-retardant processing is available. Lee Jofa.

Circle 124 on reader service card

Other literature

Diamond Series grilles, illustrated in a 12-page color brochure, are available in a choice of woods or clear acrylic. Woods can be provided unfinished or in any of several stains and finishes. Panels also can be supplied with frames. Custom designs, sizes, frames, materials and finishes will be produced to order. Customwood.

Circle 215 on reader service card

[Literature continued on page 164]

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Peter Protzman



All-Steel Inc., Aurora, Illinois 60507 Phone: 312/859-2600



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Mall lighting with an Art Deco look is one of many styles shown in a 64-page custom lighting catalog. Detailed engineering drawings of individual lighting ideas are provided, along with price quotations based on finish, lamping configurations, luminaire designs, pole styles and wiring. Architectural Area Lighting Co.

Circle 216 on reader service card

Flat undercarpet cabling can be surface mounted on floors rather than being placed inside ducts or channels. It can be extended virtually anywhere on the floor and connected to conventional round cable feeders. The system is described in an eight-page color brochure that illustrates components of the system and its installation, and includes specifications. AMP Special Industries.

Circle 217 on reader service card

Designing for accessibility. Two recent publications, produced for the U.S. Department of Education, Higher Education and the Handicapped Project, are designed to assist those involved in either modifying existing structures for accessibility or designing new ones. Construction Guidelines and Specifications (89 pages, soft bound), written and researched by architect Stephen R. Cotler, approaches a facility as a user would, beginning with the site, moving to entrance, doors, and through the interior. The publication offers solutions to the problems of accessibility to restrooms, drinking fountains, and special spaces. A companion publication, Accessibility Products Catalog (58 pages, spiral bound), offers specific products that can be used to achieve design recommendations. Request free copies from HEATH/Closer Look Resource Center, P.O. Box 1492, Washington, DC 20013.

'Washrooms for the Handicapped' provides detail drawings and installation drawings of equipment to provide accessibility for the handicapped. Wheelchair turning radius, space required for crutches and walkers, hand-rail height and clearance, washroom and toilet installations, and shower facilities information is included in this 12-page guide. American Dispenser Co.

Circle 218 on reader service card

Wood site furnishings catalog illustrates planters, benches, receptacles, tables, and decking. California Redwood is standard for all products, with Philippine mahogany, cedar, and oak available as options. Custom sizes and finishes are available in addition to standard sizes listed in the 12-page catalog. Sitecraft.

Circle 219 on reader service card

The Hatlig combination toilet-bidet, produced in West Germany, replaces the standard toilet seat to offer the advantages of a bidet without installation of a separate unit. Suggested where space is limited or as a retrofit, the unit is easily attached to existing plumbing. A ten-page brochure describes and illustrates the bidet and its components and shows various plumbing connections. International Hygienics.

Circle 220 on reader service card

Barrier-free products catalog has complete specifications for water coolers, drinking fountains, kitchen sinks, lavatories, shower valves, and faucets. The products comply with requirements of ANSI A 117.1-1980. Elkay Manufacturing Co.

Circle 221 on reader service card

Natural stone panels brochure contains information about how the panels are made, used, and installed. Color photos illustrate the various aggregate sizes and colors offered. Drawings show typical joint details, such as exposed sealant, batten, and ship lap. Sanspray Corp.

Circle 222 on reader service card

Custom-printed carpet for commercial installations, such as hotels, motels, and restaurants, in over 200 patterns, is illustrated in a 24-page, full color catalog. Made from Monsanto's Ultron® nylon, the carpet patterns come in 61 colors. There are coordinating solids, and custom-coloring services are offered. Prints include classical, traditional, and geometric patterns. Durkan Enterprises, Inc.

Circle 223 on reader service card

Eurosit office chairs, illustrated in a 12-page, full-color catalog, include secretarial styles with manual or gas cylinder height adjustment. They have five-prong bases with casters and are available with or without arms. Drafting stools and high- or low-back executive models are included in this group manufactured in France. Scan, Inc.

Circle 224 on reader service card

Insta-Lok standing seam metal roof requires no crimping, zipping, or maul-

ing. Each anchor clip is fastened by means of a power screw gun. The roof is described and illustrated with photographs and detail drawings in a six-page color brochure. Suggested specifications are included. The Binkley Co., Building Products Div.

Circle 225 on reader service card

Red cedar shingles and shakes. Eight-page brochure provides information about the application and finishing of red cedar shingles and shakes on roofs and sidewalls. Detail drawings show how they are applied to hips, ridges, and valleys. There are tables of data about the various grades available and suggested specifications. Red Cedar Shingle & Handsplit Shake Bureau.

Circle 226 on reader service card

The Clivus Multrum® system composts toilet, kitchen, and other organic wastes without chemicals, heat, or water. Materials decompose in a composting chamber and are reduced in volume by about 90 percent. Water vapor and carbon dioxide byproducts are exhausted to the outside by means of a fan-equipped ventilation stack. A six-page, full-color brochure describes the system and illustrates installations in one- and two-story houses. Clivus Multrum USA.

Circle 227 on reader service card

Washroom equipment catalog for 1981 offers coordinated items, from toilet compartments and vanity tops to soap dispensers and warm air dryers. Equipment for the physically handicapped is included, along with guidelines for mounting at convenient height. The 56-page color catalog also has hospital consoles, railings, and grab bars. A list of models that meet federal specifications is provided. Bobrick Washroom Equipment, Inc.

Circle 228 on reader service card

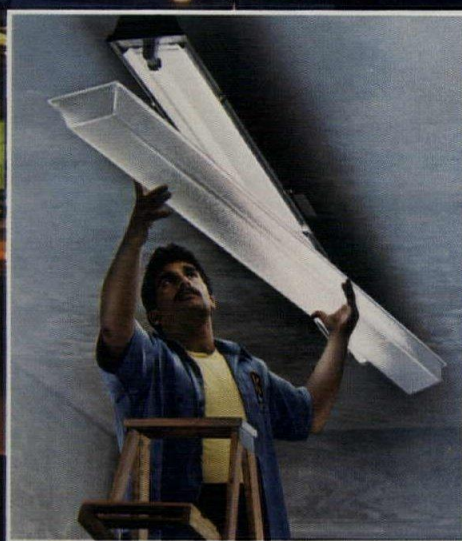
'Fiber Glass Building Insulations Catalog' for residential and commercial insulations has color photographs, charts, illustrations, and comprehensive information about company's full line of fiber glass insulation. Included are unfaced, kraft-faced, foil-faced, and flame-resistant products. There also are thermal-acoustical, specialty products, and ThermaTite® Plus sheathing. Johns-Manville.

Circle 229 on reader service card

Architectural sealants, both tape and gunnable types, are covered in an eight-page brochure. A table of seven products lists uses, applicable specifications, design and application considerations, and property information. Each product is also described in greater detail in the text, with detail drawings illustrating their application. Protective Treatments, Inc.

Circle 230 on reader service card

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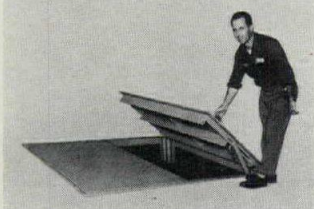
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[continued on page 168]



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Job Mart continued from page 166

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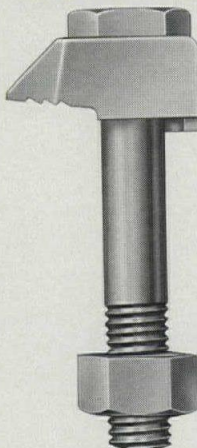
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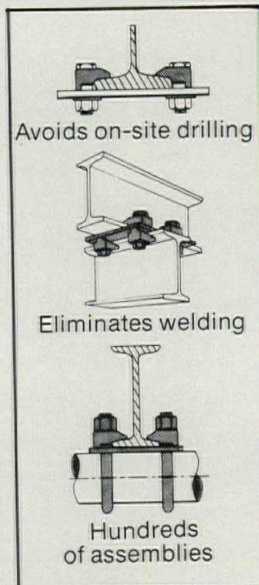
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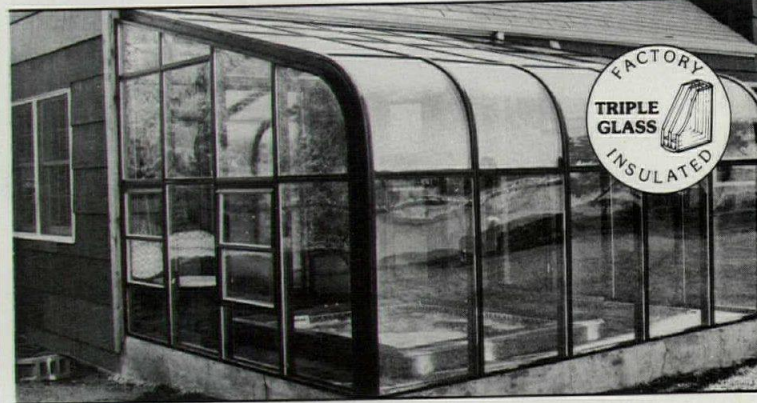


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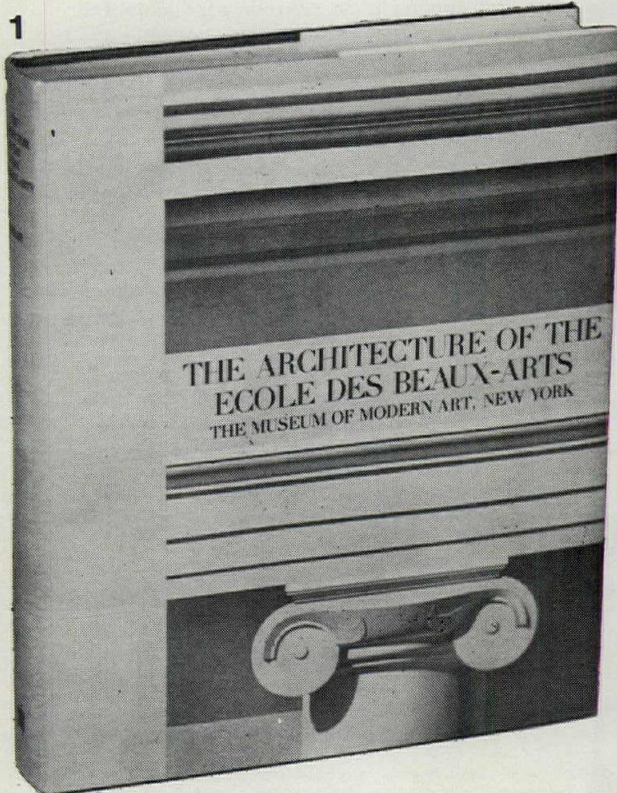
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By Barbaralee Diamonstein, Editor 176 pp., illus. . . . \$32.50

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