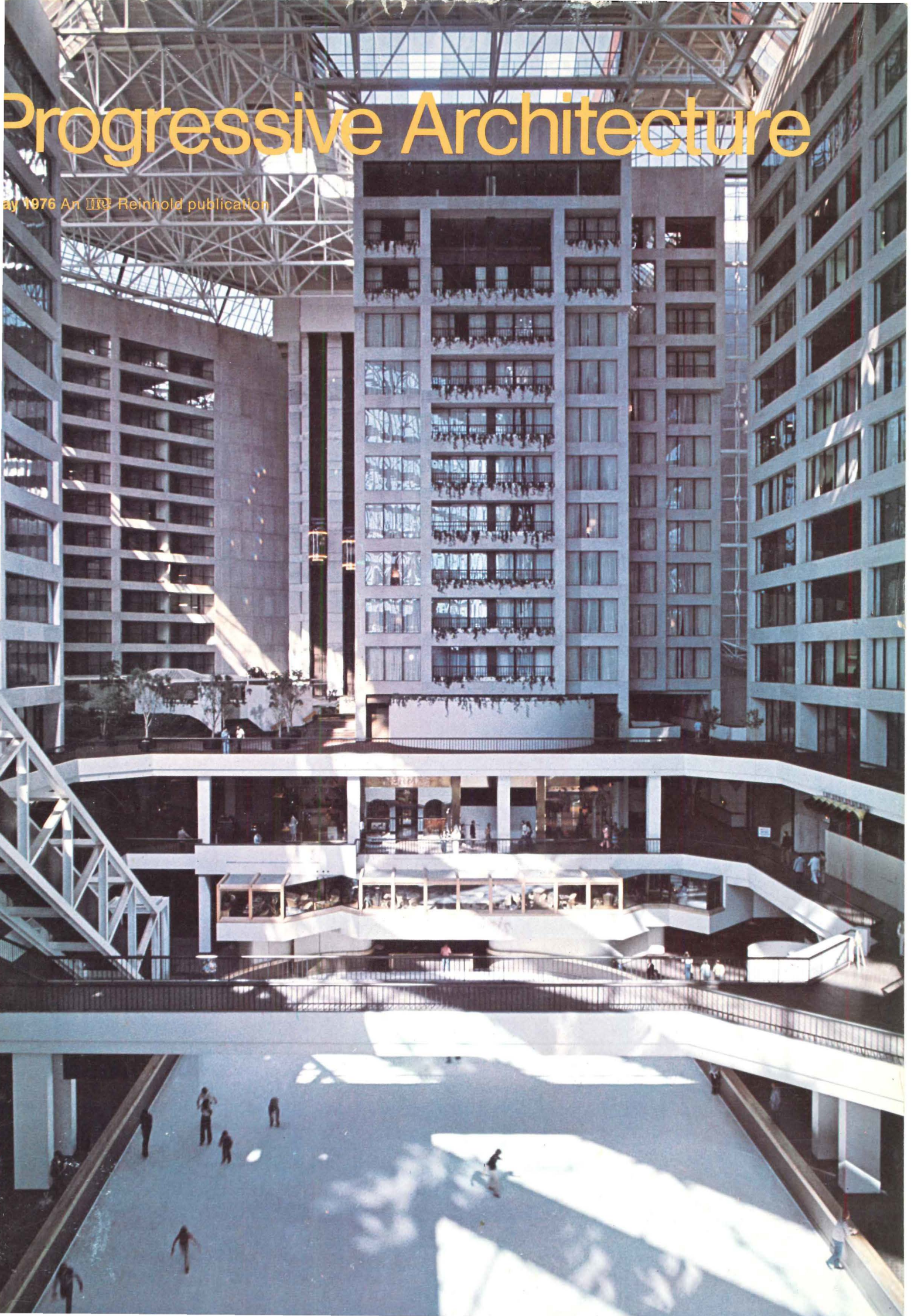


Progressive Architecture

May 1976 An  Reinhold publication



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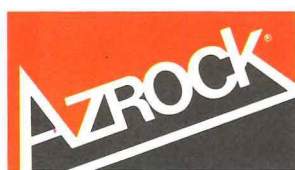
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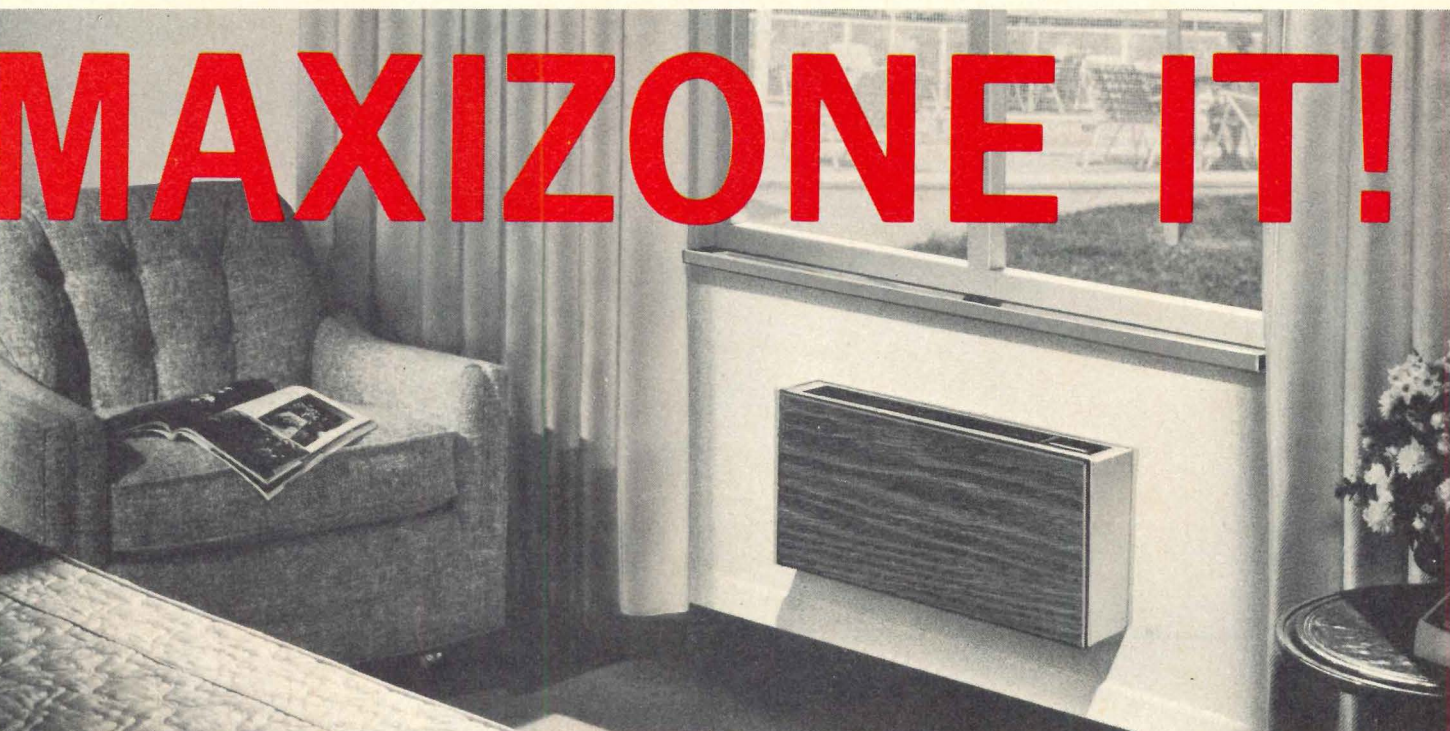
Azrock Floor Products, Dept. 537A, P. O. Box 531, San Antonio, Texas 78292.

Floor and wall patterns shown: 1. Custom Cortina and Pebbled-Onyx. 2. Cortina Series and Custom Travertine. 3. Maison Parquet.

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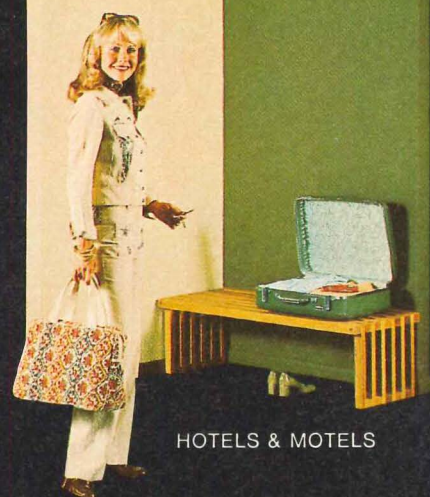
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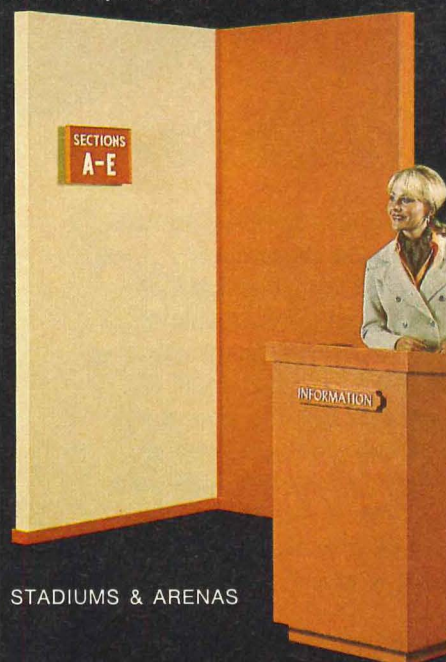
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May 1976

Progressive Architecture

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- 64 **Urbanity comes to Kalamazoo**
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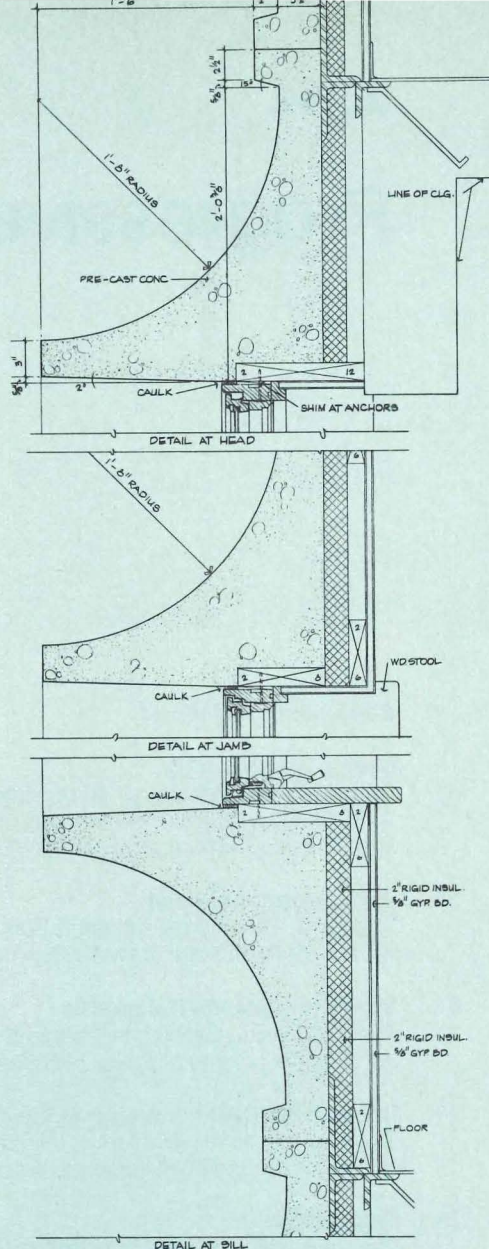
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Cover: Omni International, Atlanta. Eleven million cu ft of space accommodates a multitude of activities (p. 58). Photo: Clyde May.

ABP



CMC



Columbia Court—Housing for the Elderly
Muskegon Heights, Michigan
Architect: Haughey, Black & Associates;
Battle Creek
Installation: Perma-Shield Casements
in precast panels

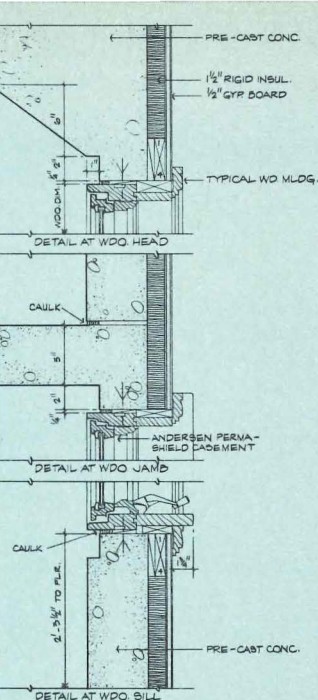


Concrete eviden

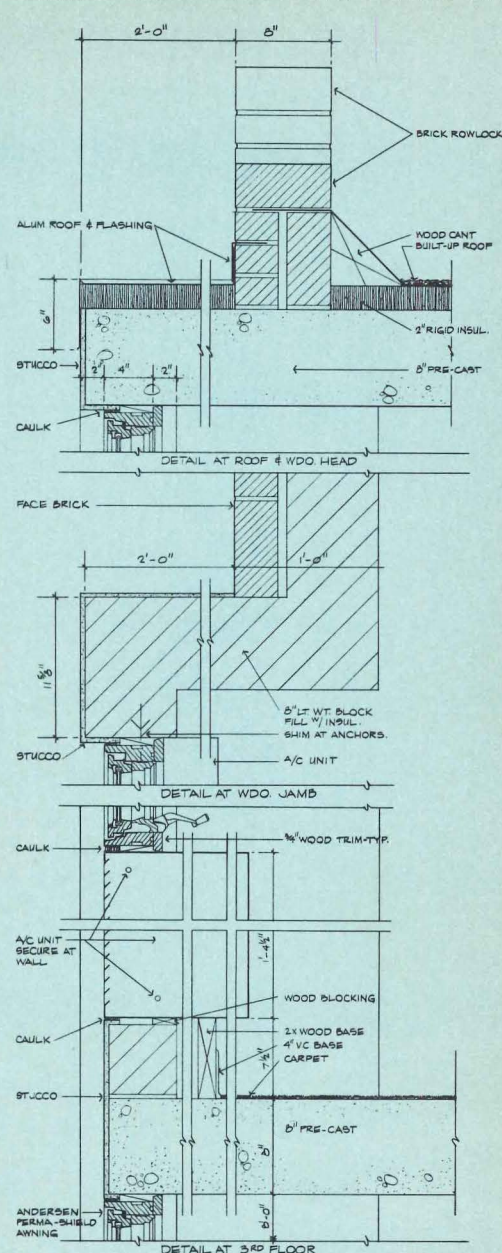
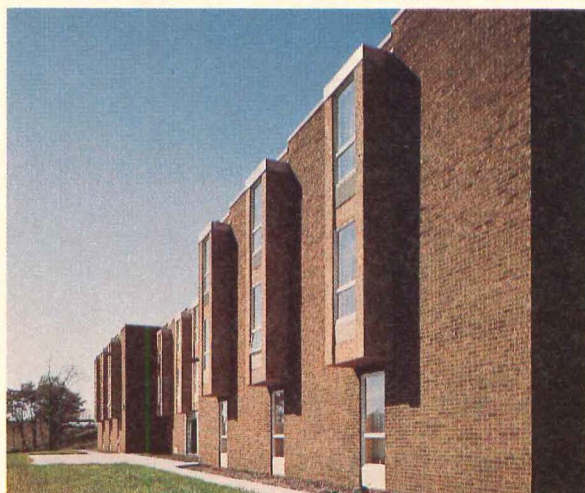
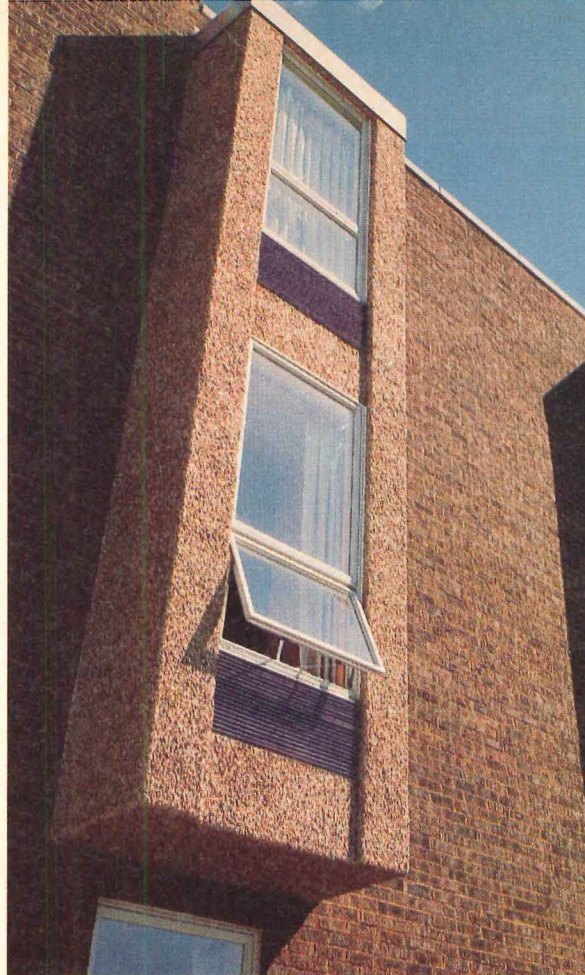
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Architect: Keith Williams & Associates;
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Form follows

May 1976

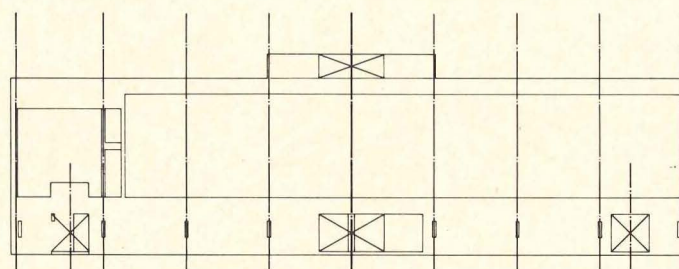
We're accustomed to dividing architecture, for purposes of discussion, into its several aspects—social, visual, practical, even political. For a comprehensive set of architectural qualities, nobody has yet displaced Vitruvius's 2000-year-old combination of *commodity*, *firmness*, and *delight*. These quaint-sounding Renaissance translations can be updated as the *functional*, *technical*, and *aesthetic* aspects of architecture; Norberg-Schulze, for instance, interprets the three this way (*Intentions in Architecture*, MIT Press, 1965) just before propounding a new, more ample set of concepts.

Here at P/A, we customarily divide our feature subjects into two distinct categories of "Design and planning" (functional + aesthetic) and "Technics" (a word also adopted by Norberg-Schulze). We are quite willing to separate technical problem-solving from design: this wall texture or that alarm system may be well worth discussing even if applied in a building of little design interest.

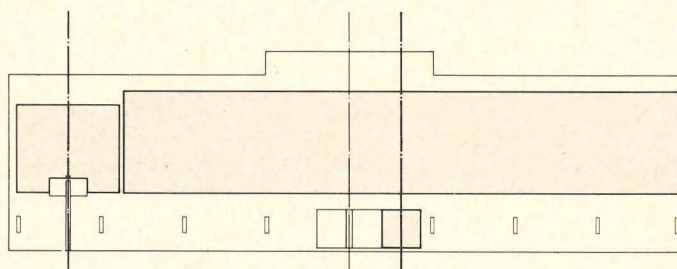
But it is harder for most of us to acknowledge a cleavage between the functional and the aesthetic. Our academic traditions—whether Beaux-Arts or Bauhaus—hold these two aspects (if not the technical as well) to be inseparable in any *valid* architecture. Louis Sullivan said they had to be, yet Sullivan could manipulate pure form—and plenty of decoration—apparently without guilt.

Recently, that old form-function bond has been coming unglued. Design instruction in many schools has been separating into areas of problem-solving vs. formal investigations. P/A juries, after a period of rejecting houses as inadequate challenges, functionally, now accept them as valid subjects for formal exploration, just as Wright, Corbu, and Mies did. We are now in a period of doubt and search, as we were in the early years of this century, when we may have pursued these aspects separately in order to make progress. Back in the confident 1950s and 1960s, that would have seemed heresy.

All of this comes to mind because the "design" contents of this issue are so clearly split between a set of buildings (mixed-use "centers") which are discussed—and to a large extent conceived—as solutions to tough functional problems (accepting *symbolism* as a function). The other build-



STRUCTURE & PRIMARY SYMMETRIES



LOCAL SYMMETRIES

Analytical elevation drawings by Werner Seligmann (see p. 78).

ing, by contrast, has a simplistic program and an unencumbered location—the "tidy realities" referred to in the title—yielding an opportunity for rare formal refinement.

We did not plan to expose this dichotomy in this issue—not quite consciously—though we did see these features as striking the "editorial balance" we generally strive for. These buildings extend two different frontiers—the mixed-use centers pressing toward new opportunities for urban development and professional practice, the small office building toward aesthetic satisfaction. We can't afford to overlook efforts on either of these fronts, and neither can the architectural profession.

John Morris Difer

Views

Housing highs and lows

Congratulations for an evenhanded, thorough presentation of the high-rise-low-rise controversy in your March 1976 issue.

After the expiatory "mea culpa's" of critics as well as some architects for every having considered high-rises as a valid housing option, it is refreshing to read articles with a pluralistic viewpoint as those by Suzanne Stephens. I especially agree with her statements "that varied kinds of housing are desirable, depending on the different occupants and the situation" and "the kind of housing suited for varying neighborhoods cannot be determined on the basis of sheer assumption."

John Macsai, AIA

*John Macsai & Associates Inc.
Chicago, Ill.*

Your editorial "Housing Choices" in your March issue was without question the best ventilation this subject has received in years. The topic of high density is urgent and the editorial is long overdue.

Our social promises to ourselves require cities. Their scale requires high density. The maladjustments of our economic system, our living mechanisms, our distribution systems all favor the high-density urban patterns which have caused us so much trouble.

It is the architect's task to make our required living patterns habitable and beautiful. The architect also remains the only trained professional who is equipped to give our social promises a spatial form.

Your editorial says all these things and I congratulate you for it. The articles in the body of the issue by Ryder, Morton, Stephens were important.

*Bertrand Goldberg, FAIA
Bertrand Goldberg Associates
Chicago, Ill.*

After reviewing pp. 54 and 55 of the March 1976 edition of P/A, I would recommend reinstallation of Robert C. Wood [former Secretary, U.S. Department Housing and Urban Development] and Marie McGuire [former Commissioner, U.S. Public Housing Administration] to assure more interesting and varied design in housing by local Housing Authorities. Since their departure from the federal agencies at Washington, D.C., it ap-

pears housing has suffered, as evidenced by New York's West Village Housing Project. It doesn't help our profession to publish standard design.

*George Stephen Lewis, AIA, CSI
George Stephen Lewis & Associates
Boston, Mass.*

I would like to see more articles by Sharon Lee Ryder in your magazine. "Upstairs, downstairs" (P/A, Mar. 1976, p. 40) shows a rare example of clear thinking which transcends the usual cloud of professional lingo and faces the issue.

David Fulton

M. Arch. candidate

University of Pennsylvania, Philadelphia

Your choice of "fortress" to describe Louis Sauer Associates' Penn's Landing Square is more properly descriptive than may be immediately apparent. Medieval towns were built for defensive purposes, as were the Philadelphia homes, but it is the resulting quality within that continues to make those towns attractive. The elimination of the unknown from the interior of Penn's Landing makes it a welcome refuge in today's urban situation.

Still, sufficient public space exists within to ensure that residents come to meet and enjoy each other. However, the configuration means the development is necessarily devoid of nebulous "semi-public" green spaces, which offer no real opportunities for social contact, while adding much to the cost of housing and the consumption of land and resources. Nevertheless each residence is provided with a reasonable amount of private outdoor space. It is indeed a testament to Louis Sauer Associate's experience and to today's needs in urban housing.

*Thomas Martone, Architect
Ann Arbor, Mich.*

An interesting article on the Rutland Road Houses in your March issue, but a major omission: the contractor's name. Regardless of who it was (obviously, it was Turner, thus this letter), the contractor played an important role in a project such as this and might have offered some insights for the piece.

*James Wilson
Director of Communications
Turner Construction Company
New York, N.Y.*

CM viewpoints

Last evening I had an opportunity to read the February issue of P/A. I want to congratulate you for your outstanding article on Construction Management. This was the most clear and most concise article I have ever read on this subject.

*Philip J. Meathe, FAIA
President
Smith, Hinchman & Grylls Associates Inc.
Detroit, Mich.*

Roger Yee's series in Feb. 1976 P/A demonstrates a substantial understanding of the construction management process from the viewpoints of architect and general contractor, both of whom have been drawn into the whirlpool and are now trying to navigate opportunistically in turbulent waters. However, education over a period of years of professional activity by direct exposures to the evolution of phased construction, negotiated contracts, pre-purchasing, CPM,

etc., and package projects when "package" some years ago was a dirty term in the AIA, leads me to believe important parts of the CM history may have evaded Mr. Yee's perception.

Mr. Yee gives light emphasis to the Owner's involvement in creating CM procedures. As an Owner's "captive" architect in recent years, I suggest that the analogy of identifying the father of construction management overlooks the mother completely (which women architects would identify as a male chauvinist attitude). The need for a new process came from the egg of the Owner, thence fertilized by architect and/or GC who, forced by the marketplace to modify his conventional role became a father reluctantly. The need generated by sophisticated corporate Owners such as IBM, who created the concept because traditional methods had limited effectiveness, then was exploited because the concept also applied to a larger market of institutional as well as private Owners.

The 12 basic steps to architecture which Mr. Yee cites from the tradition of architectural practice apply very well to many building processes but tend to fall apart in adversary situations growing from CM involvement. I've lived through the controversy of whether architect or CM is better qualified to manage bidding, contracts, subcontracts, construction and payments, all processes mostly extraneous to what Mr. Yee sees as a sequence beginning and ending "with the architect for obvious reasons." The reasons are not altogether obvious. Who has responsibility for doing what in the Owner's interest should be determined by the capabilities of the composite animal managing the total process. The GC turned CM frequently does the job better than architect as we have known him.

You might do an interesting story on Owner involvement in the CM process, inasmuch as the Owner foots the bill for what in some respects is a higher risk involvement, one which may compress time sequences for economic gain in an inflationary market, but puts unforeseen pressures on the architect-owner decision-making process.

*Henry J. Wald
Director, Program and Facilities Planning
Yale-New Haven Medical Center, Inc.
New Haven, Conn.*

Comfort correction

May we call your attention to an error in your otherwise excellent article, "Water Tower Place (Dec. 1975 issue)? Under the heading "mechanical systems" you list "fan coil units in residences of units."

The heating system used in Water Tower Place Condominiums and the Ritz Carlton Hotel is Radiant Electric Ceiling Cable. We believe that the mention of the Ceiling Cable System is significant in an architectural magazine.

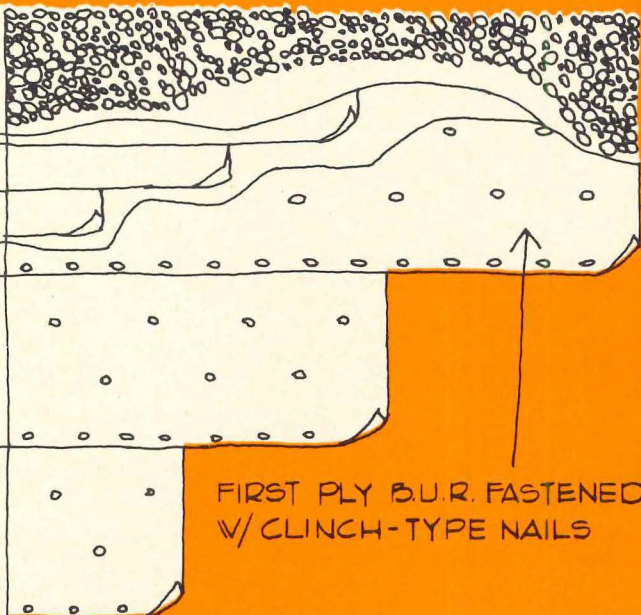
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The one fact that should be of most interest [continued on page 14]

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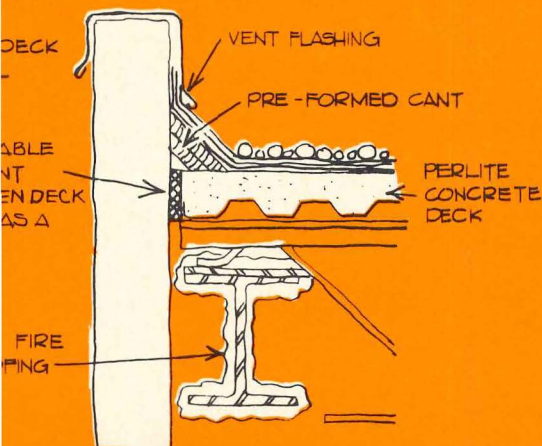
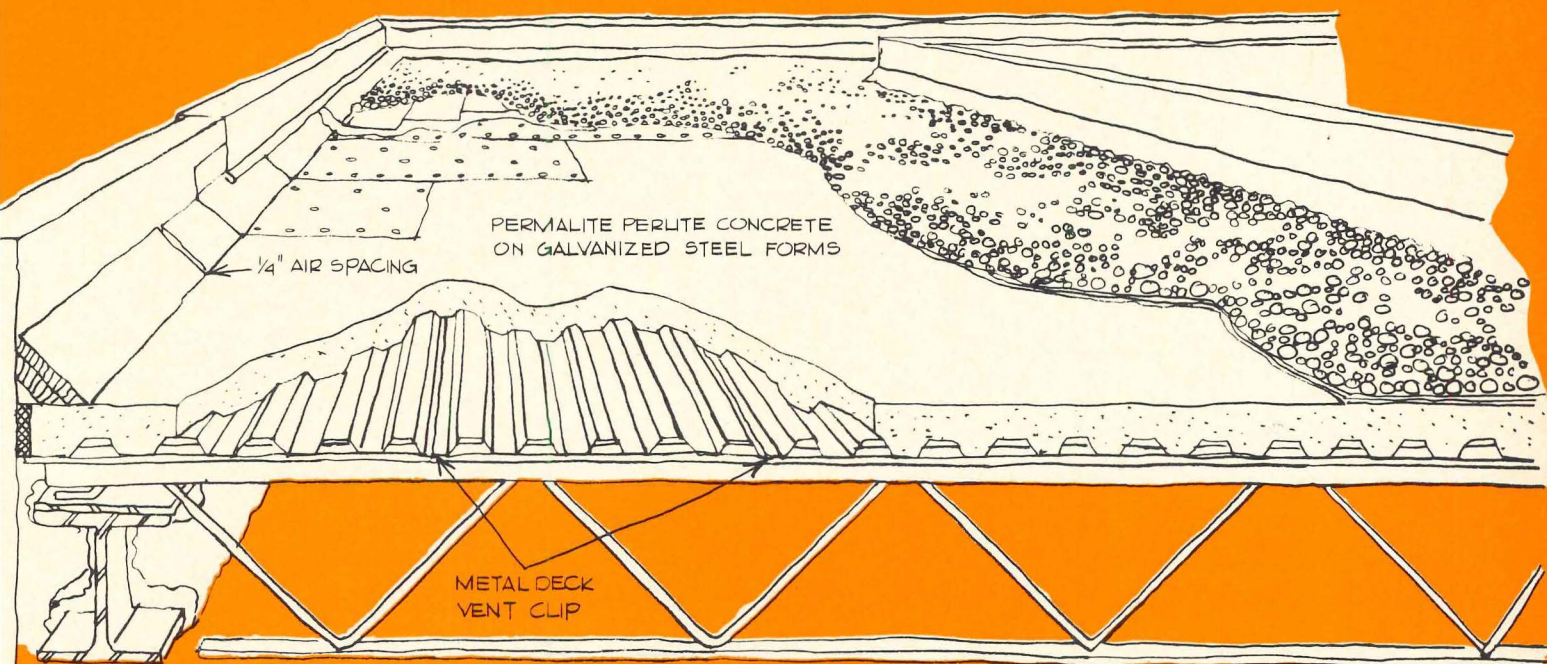
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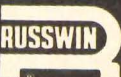


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Appointments

Walter A. Meisen has joined the Washington, D.C. office of Daniel, Mann, Johnson & Mendenhall as vice president, Eastern Region operations manager.

Keith A. French has been elected officer in charge of EDAW, Inc.'s Newport Beach, Calif. office.

James McCune, PE has joined Cannon Design Inc., Grand Island, N.Y., as vice president and director of structural engineering.

D.A. Patrick has been appointed executive vice president of Pacific Architects and Engineers Inc., Los Angeles.

Harold A. Montague has been elected vice president and manager of the architectural department of Robert Company Associates, Atlanta, Ga.

Peter C. Darin, PE has been named to the board of directors of Smith, Minchman & Grylls Associates, Detroit.

Jim W. Machlan, AIA has joined Page Southerland Page, Corpus Christi, Tex., as executive architect.

Charles E. Thomsen, AIA, has been appointed principal administrator of the Environment Directorate, Urban Environmental and Land Use Division, Organization for European Cooperation and Development, Paris, France.

Henry T. Winkelman, AIA and **David M. Burdick, AIA** have joined The Klein Partnership Inc., Houston, Tex., as associates in the Health Facilities Group.

Haines Lundberg Waehler (HLW), New York City, has added the following partners: **Gregory E. Brooks**, **Arnold D. Hackel**, **Lee R. Kirk**, **Bronislaus F. Winckowski**, **William E. Altz**, **Robert A. Djerejian**, **John S. Mountain**, **Charles Hyun**, **Jack C. Smith**, and **Anthony J. Flaherty**.

Stephen A. Becker has been named an associate of Schoenwald-Thomas-Harris-Norwood-House-Obama, Fresno, Calif.

John I. Pearce has joined The Hillier Group, Princeton, N.J.

Joe M. Powell has been appointed associate partner of Pierce, Goodwin & Lanagan, Architects, Engineers, Plan-

ners, Houston, Tex. **Bob Stowe**, **George Mahoney**, **Bob Thomas**, and **Christi Oliver** have been named associates.

Robert E. Isaacs, AIA was named vice president of Connell/Metcalf & Eddy, Inc., Architects, Engineers, Planners, Coral Gables, Fla.

Naramore Bain Brady & Johanson, Seattle, Wash., has named the following principals: **Robert G. Burke**, **James W. Evans**, **David P. Haworth**, **Thomas R. Hickman**, **Richard J. Koopmans**, **Robert Messer**, **L. Dixon Steinbright**, and **Michael H. Trower**.

Frederick S. Cowan and **Richard E. Brown, Jr.** have been appointed associates of Lynn Taylor Associates, Architects, Spring House, Pa.

John L. Atkins, III, AIA has been named a partner in O'Brien/Atkins Associates, formerly the firm of William L. O'Brien, Jr., AIA, Architect, Chapel Hill, N.C.

Sherwood Alan Smith, AIA has joined O'Dell/Hewlett & Luckenbach, Inc., Birmingham, Mich.

Darryl W. Scherba, AIA has joined Richard Fleischman Architects Inc., Cleveland, Ohio, as an associate.

Caudill Rowlett Scott, Inc. of Houston, New York, and Los Angeles has named the following vice presidents: **William A. Feathers**, **Dan R. Stewart**, **Perry King**, and **Robert T. Daniel, Jr.**

Rina Rothblum has been appointed project engineer for the Spirits Group of Heublein, Inc., Hartford, Conn.

Blass Riddick Chilcote of Little Rock, Ark. has made the following appointments: **Gulley Carter, PE**, **Richard L. Lanford, PE**, **Jerry C. Wilcox, AIA**, partners; **Rita Hopkins, ASID** and **W.L. McCulloch, Jr., PE**, associates.

James M. Waite has been elected an associate of Wilson, Crain, Anderson & Reynolds, Houston, Tex.

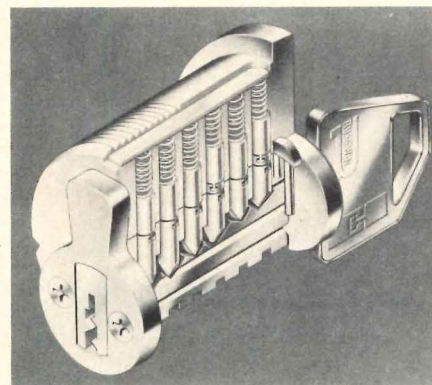
Stephen J. Short has been promoted to planning associate for Medical Planning Associates, the architectural planning group of American Health Facilities, Winnetka, Ill.

Robert R. McKenzie has been named manager of Management Engineering/Planning of Ellerbe, Bloomington, Minn. **Robert M. Edwards** has been appointed manager of health care planning for the division.

Thomas P. Weldon, Jr. has been appointed executive vice president of Burke Nicolais Archuleta, Los Angeles. [continued on page 122]

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General Contractor: F.P. Lathrop Construction Co.,
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Nature set the scene for the creation of what has been called the world's most acoustically perfect amphitheater—the new 4.5 million dollar Concord Pavilion, located in Contra Costa County, 28 miles northeast of San Francisco.

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Three hundred fifty tons of structural steel went into the Concord Pavilion. Seventy per cent

of the steel is U.S. Steel's USS EX-TEN (A572) high-strength low alloy steel; the remainder is A36. Fabrication and erection were completed in only 15 weeks.

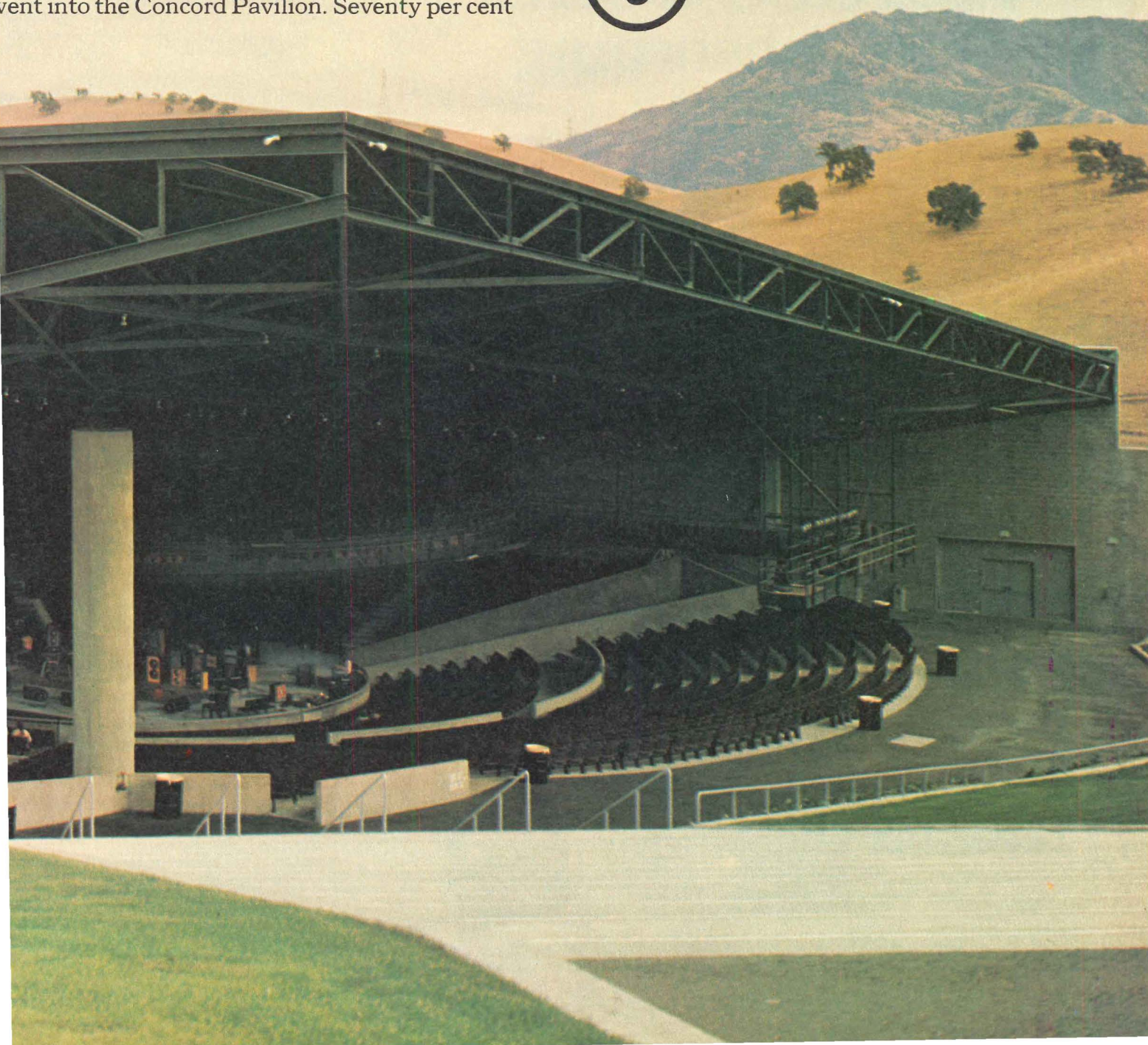
Spectacular by day or night, the new Concord Pavilion represents an expression of contemporary architecture that blends to perfection with the environment. It is one more beautiful example of the imaginative use of exposed steel.

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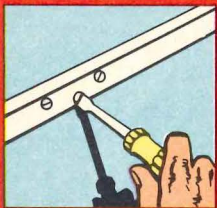


United States Steel

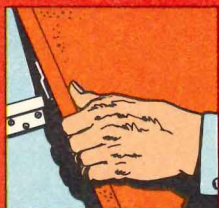


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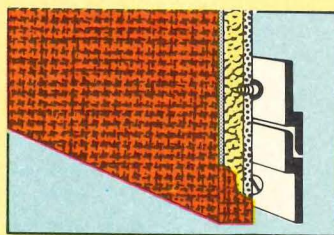
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Views continued from page 6

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Frank R. McShane
Heat Products, Inc.
Oak Park, Ill.

Pembroke's pop patio

I would like to express my view on Pembroke dorms in Brown University, Providence, Rhode Island (P/A, Feb. 1976).

My first impression of the building—without suspecting that it is a building designed by a famous architect—was of a builder doing his own design, in other words, architecture without architects.

But when I read the excellent articles written by you and Mr. William H. Jordy, I went to visit again the building and realized that Lyndon's façades are the most ordinary in the whole city. What a contrast with Pembroke College Chapel at Cambridge, designed by Christopher Wren.

It seems to me that for an architect to copy from the people's architecture is reactionary and against all principles of Architecture. What beautiful words: "Unalloyed ordinariness . . ." Que picuo . . . (Que picuo: A Spanish expression that suggests, in a vulgar way, poor taste.)

Hannibal F. Flores-Jenkins, AIA, Architect
West Hartford, Conn.

Architecture spurned

In a time when the functionings of the architectural profession are being questioned and many duties of the architect are being assumed by various managerial disciplines, it is very inopportune for a professional journal, such as *Progressive Architecture*, to single out for publication a completed building of which the user refuses to take possession. I am referring of course, to the Ward's Island Fireman's Training Center, by Hardy Holzman Pfeiffer (Feb. P/A).

The fact that the client was not the user but the developer, does not release the architect from his responsibility to produce a building which will satisfy the needs of both parties. Messrs. Hardy Holzman Pfeiffer are to be excused even less because they are New York architects, and should know the New York Fire Department's conservative, traditional values.

I repeat, a professional journal such as P/A should not be advocating architecture which is the product of the ego of the architect in opposition to and disregarding the needs of the user. Lawrence Marek, Architect
New York, N.Y.

(It is apparent from local press reports that the fire department has no immediate need for a training center, now that hiring has virtually stopped, and is not ready to take on the expense of maintaining it. The department's reported dislike of the design has no bearing on the occupancy problem. It surely does not disqualify the project for publication, as long as that situation is made clear. This month we are publishing another building, sponsored by a New York State agency, which remains unoccupied for budgetary reasons.—Editors)



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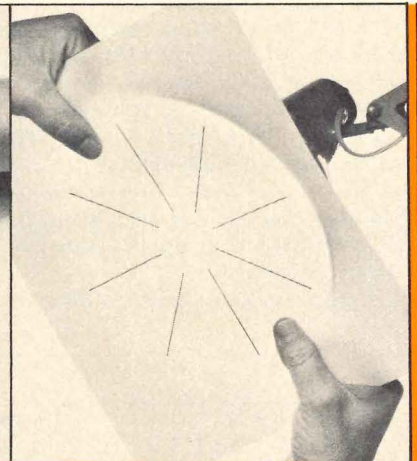
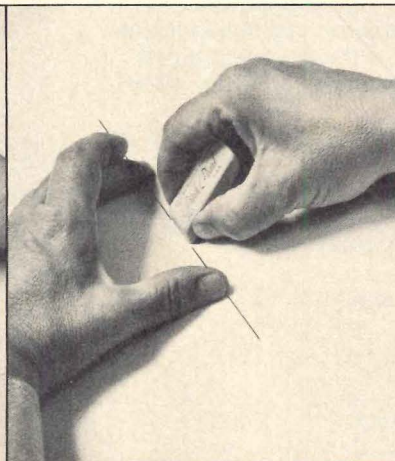
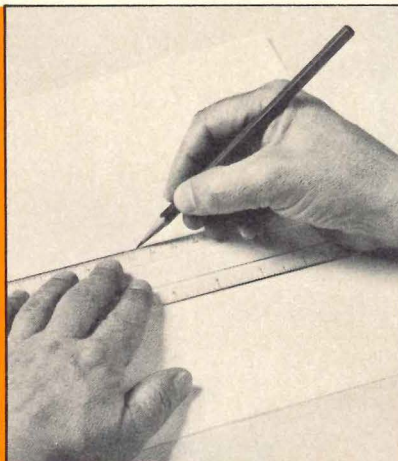
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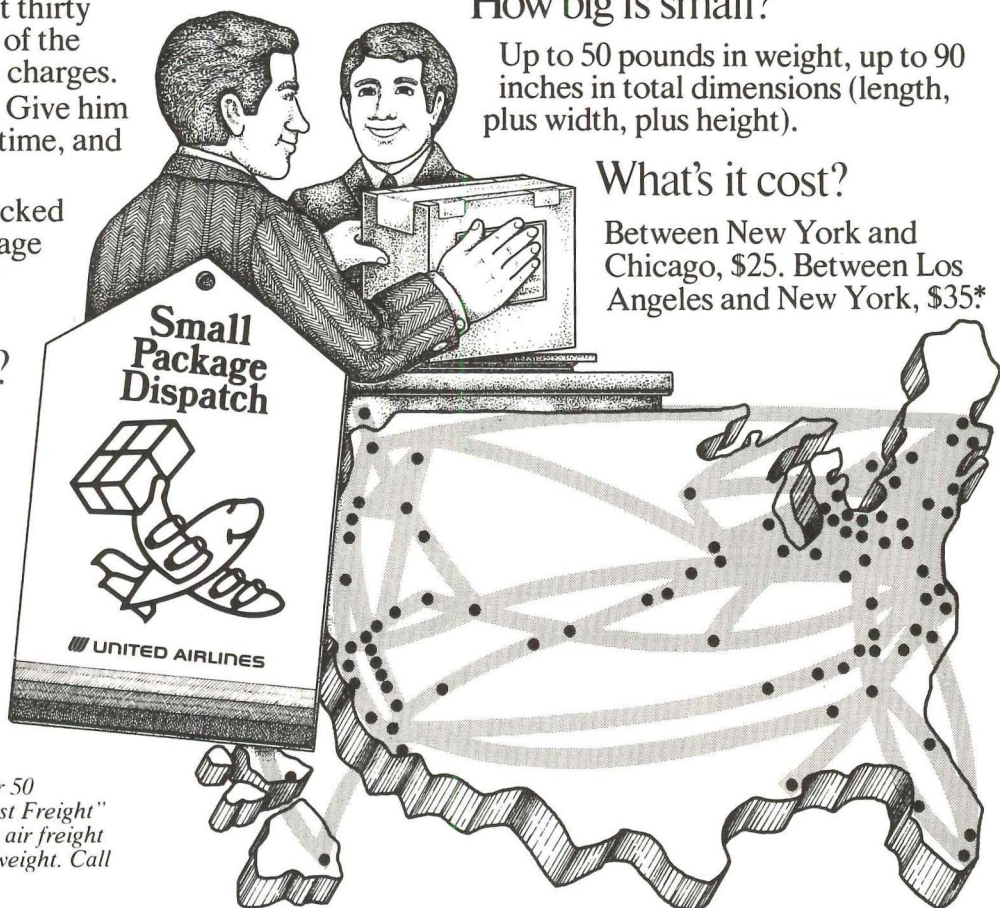
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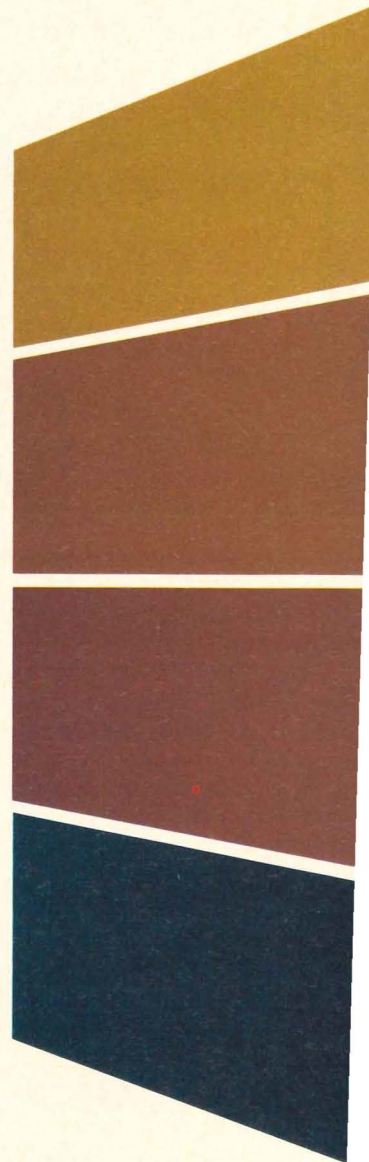
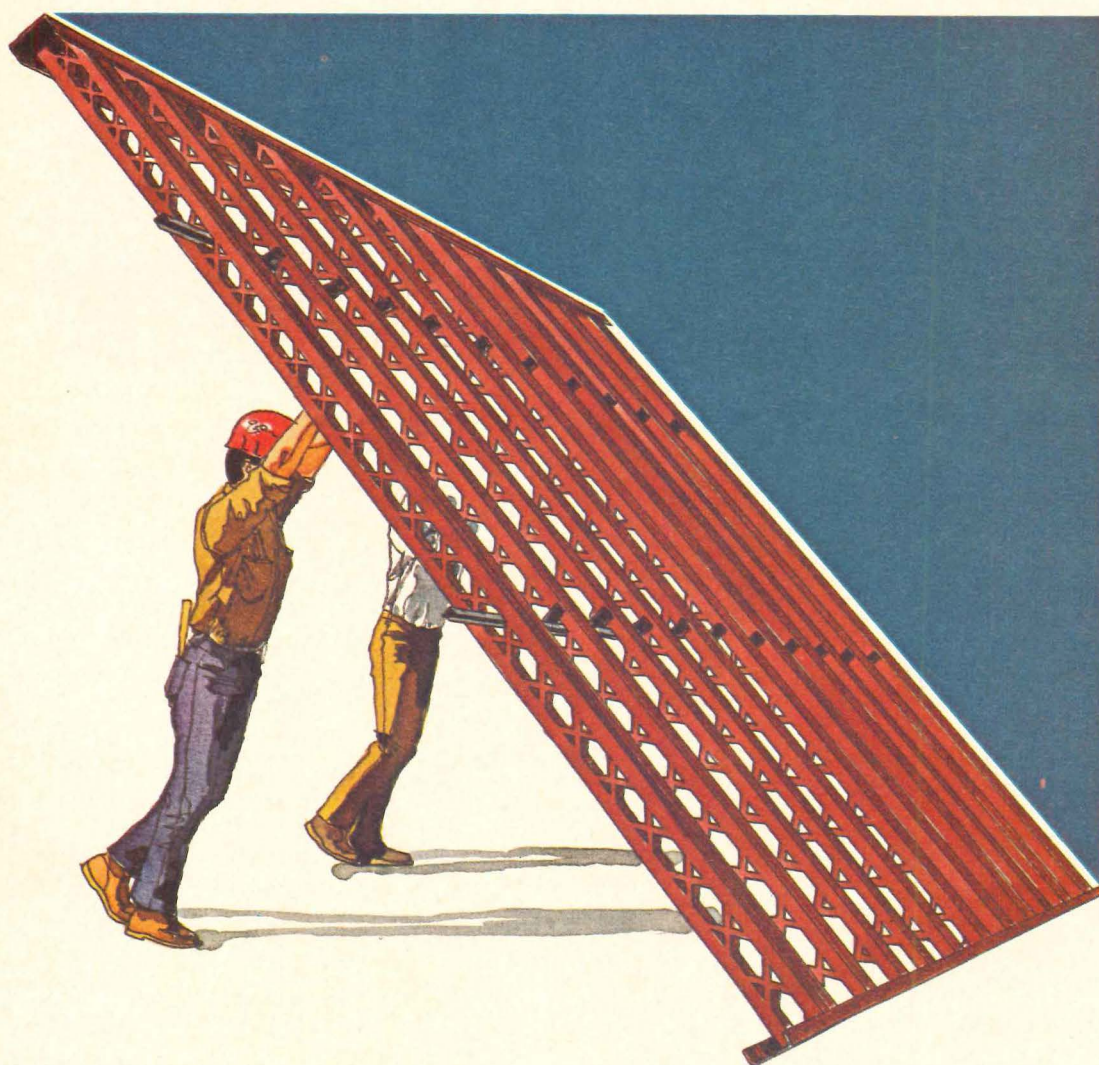
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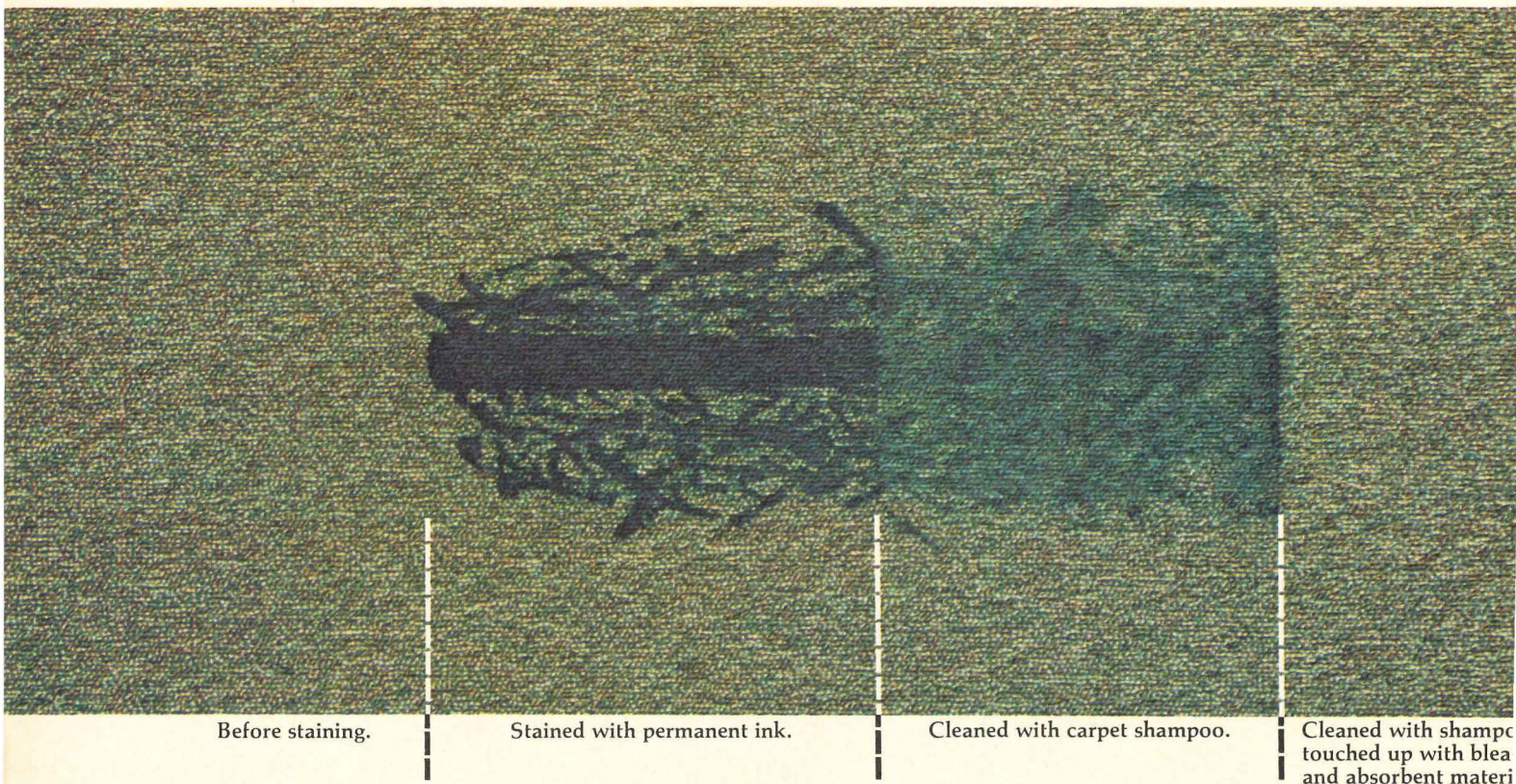
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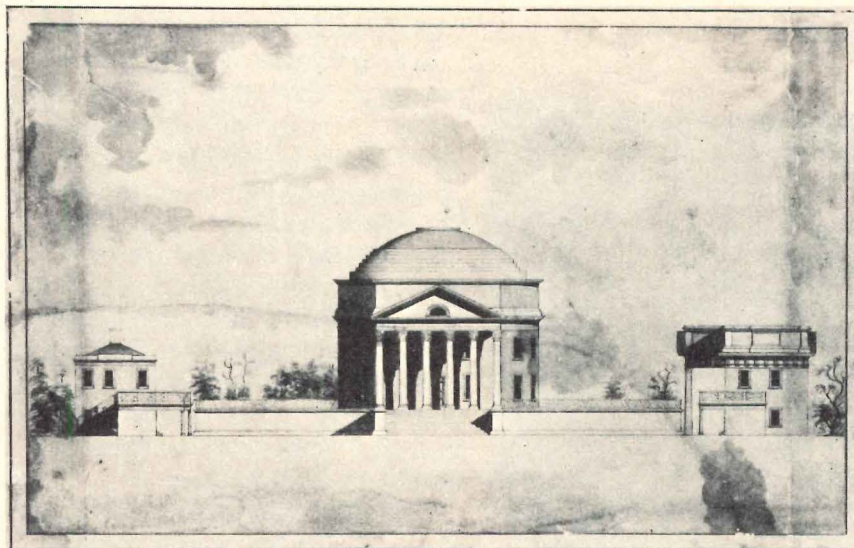
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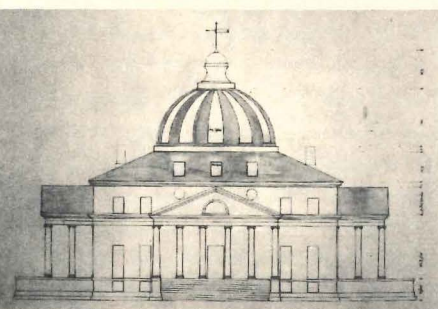
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News report



U.Va. buildings: drawing credited to Jefferson's granddaughter, Cornelia Jefferson Randolph.

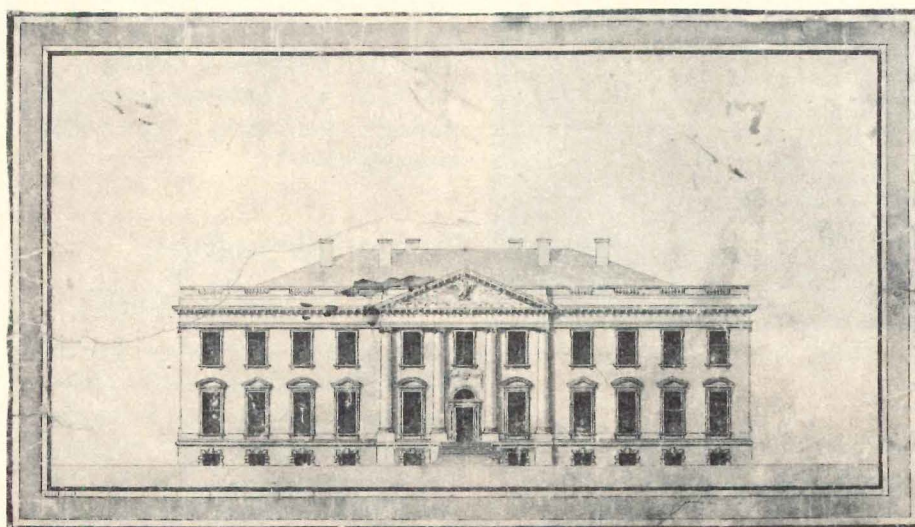


Jefferson's entry, President's House competition.

Eye of Thomas Jefferson' exhibit

A major Bicentennial exhibition, "The Eye of Thomas Jefferson," will be on view at the National Gallery, Washington, D.C., June 5 through Sept. 6. The exhibition will portray the wide range of Jefferson's interests in the arts—particularly his accomplishments as architect—as well as musician, designer, and collector. Of the Founding Fathers, Jefferson alone devoted a lifetime to the arts and undertook to set an artistic standard of excellence for the young Republic.

As Secretary of State, he suggested a competition in 1792 for the design of the President's House, which he subsequently inhabited, and of the Capitol. He anonymously entered a design to the President's House competition, won by the Irish-born James Hoban. Jefferson's submission was based on Palladio's Villa Rotonda near Vicenza and was signed A.Z. Compared to the other entries, his was more refined and carefully drawn, but it was so elementary there is speculation whether the entry was a last minute notion. The contents of the Jefferson ex-



Winning entry in the President's House competition, 1792, by James Hoban (1762-1831).

hibit, which was two years in planning, will number 550 items drawn from collections in Europe and North America. Items will include art, books, furnishings, and other design which reflect Jefferson's times—the Enlightenment—as well as his own work.

Large models of major buildings by Jefferson or buildings which influenced him will be displayed, including the Virginia manor, Rosewell (1726), Poplar Forest, and Monticello, his own home. There will be a full-scale reconstruction of the central hall of Barboursville, a house Jefferson designed in 1817.

In conjunction with the exhibit, a series of concerts will be given starting June 6 in the gallery's East Garden Court. The Andrew W. Mellon Lectures in the Fine Arts, which concluded last month, given by Classical scholar Peter von Blanckenhagen, served as background for the exhibit.

An illustrated catalog with an introduction by W. Howard Adams, the editor, and eight separately published essays will be available.

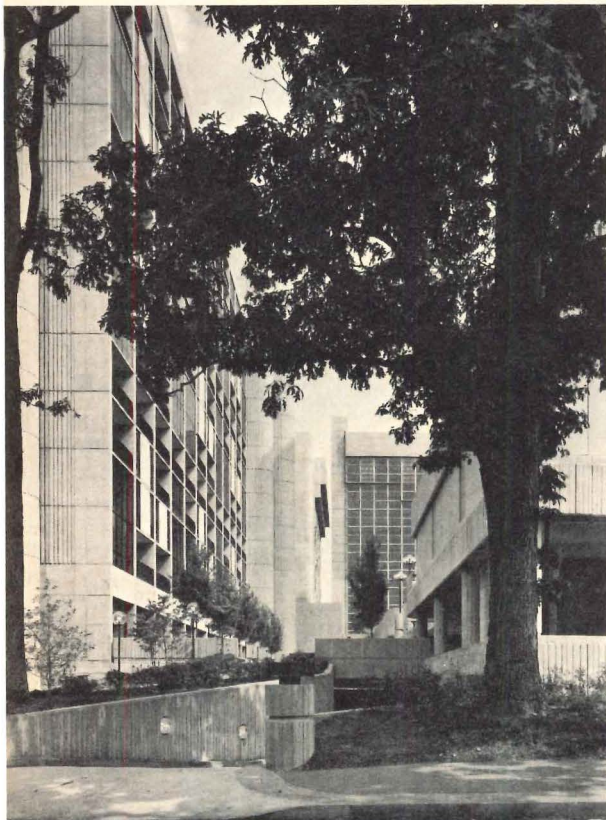
Multi-use pioneer files Chapter 12

The Cushman Corp. of Atlanta, developer of the \$100 million Colony Square, a multi-use megastructure begun in 1969 and completed in 1974, has filed Chapter 12 in federal bankruptcy court and is awaiting the court's acceptance of a reorganization plan for debt repayments. The Colony Square debt is \$86.3 million.

Remarkably sympathetic architect, referring to the bankruptcy, "It's unfortunate that the only Atlanta developer gutsy enough to tackle housing should meet such a fate."

Apparently the main problem with

Alan McGee



Colony Square, by Jova/Daniels/Busby, Atlanta

the complex has not been the general economic slowdown as much as internal difficulties within the management's operations. As for the building itself—by Atlanta architects Jova/Daniels/Busby—it received a 1975 honor award for design excellence from the Georgia Association of the American Institute of Architects.

It is believed that much of the Colony Square struggle has been between the Chase Manhattan Bank, New York, which furnished the \$51 million construction loan (\$20 million still outstanding) and holds a secondary lien on most of the complex, and the management practices of developer James E. Cushman, from whom Chase apparently wants control of the property.

According to the leasing agent, condominiums in one wing (the other is vacant) have been selling well, the rental apartments are 90 percent occupied, and office space is 90 percent rented, but retail space has been in trouble, with only 40 percent leased. Contributing to the problem has been lack of visibility of the stores to passersby along Peachtree St. and the lack of free parking in the 2000-space ga-

rage. A number of shops have closed.

In filing Chapter 12 rather than the heretofore more widely used Chapters 10 or 11, Colony Square developers automatically stalled any foreclosure proceedings by their creditors. In retaining control of the property they may work out a reorganization plan which, if accepted by the court, will be binding to the creditors even though the plan may lengthen the terms of the mortgage or even reduce the interest rate. However, creditors may submit their own reorganization proposal for the court's consideration.

Kevin McCullagh, a Chase vice president, commenting on this pro-debtor twist the recently revised bankruptcy laws have afforded, said he didn't think the laws, particularly Chapter 12, would be a deterrent to investors. "Hopefully we'll be smarter in avoiding some of the problems . . . and a little more cautious."

Ferriss drawings: an architect's vision

In the hands of Hugh Ferriss, from the 1920s until his death in 1962, charcoal, pencil, and kneaded eraser became instruments to evoke visionary images of the City of Tomorrow. The Ferriss metropolis was an awesome spectacle of towers that stood somber and massive in shafts of light or glowing with their own inner radiance against a sky of midnight blackness. His contours could be tremulously romantic or as hard-edged as a Cubist collage. The occasionally seen human figures were diminished to afterthoughts by the immensities of his scale.

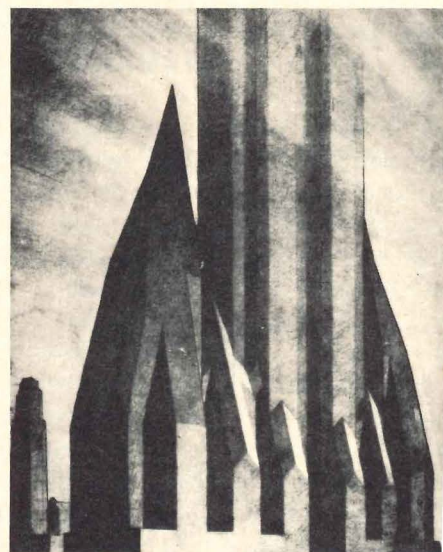
An exhibition of 73 Ferriss drawings shown earlier this year at Washington University in St. Louis, introduced his remarkable urbanism to the new generation that inhabits his native city. Curatorial assistant Arline Leven of the university's Steinberg Hall Gallery assembled the show and wrote the catalogue introduction.

Ferriss, born in 1889, was graduated from the Washington University School of Architecture in 1911—in that school's first year of independence from the School of Engineering. He soon moved to New York, where he remained. He worked in the office of Cass Gilbert during late stages of the Woolworth Building project, and then

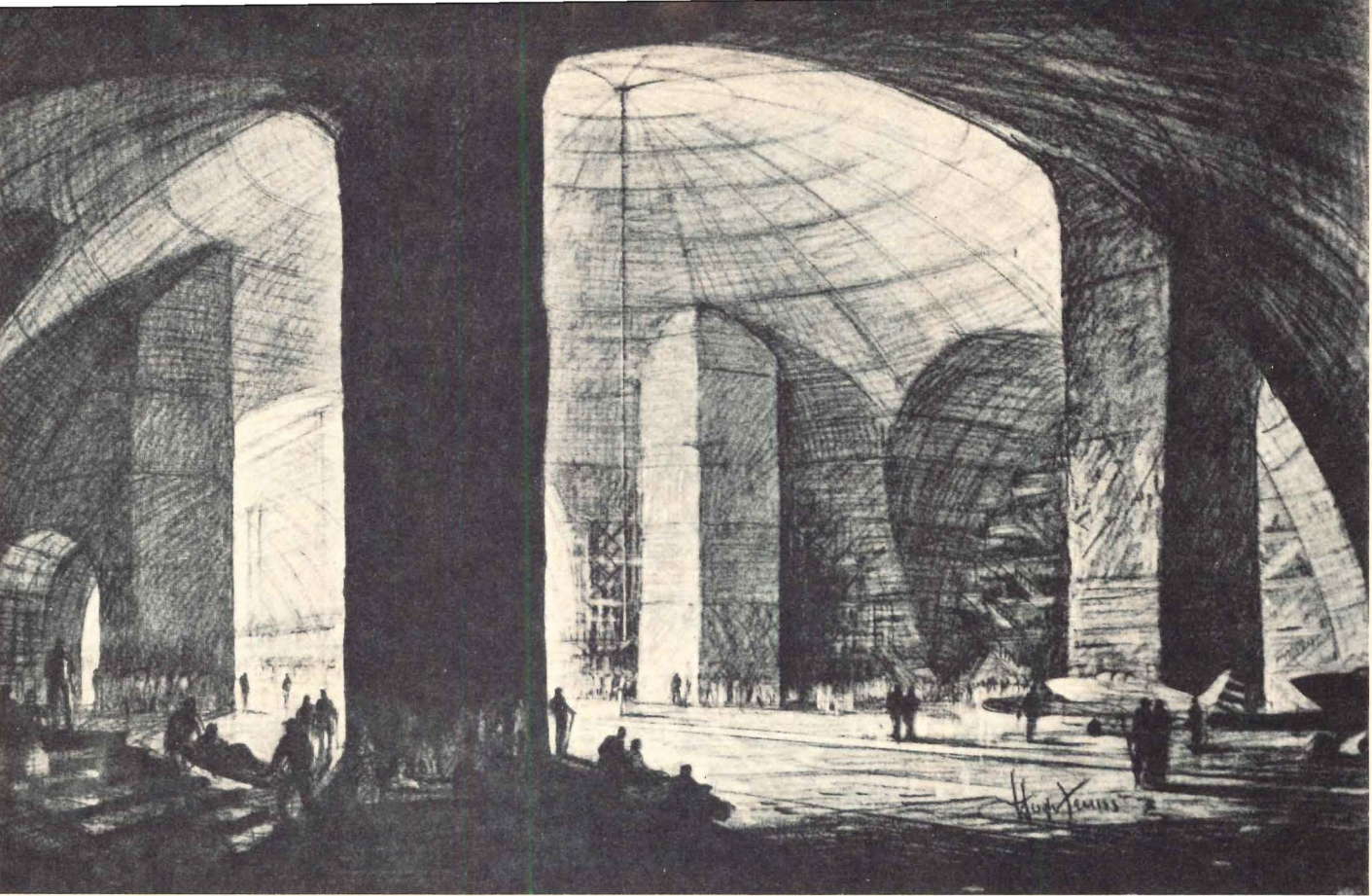
opened his own studio as an architectural illustrator.

Ferriss did presentation drawings, interpretive delineations, and conceptual illustrations, and he created visions. His visions appealed strongly to newspaper editors, who found the charcoal luminosities and the imposing volumes of the Hugh Ferriss nocturnes ideally suited to copper-plate reproduction in the old brown-ink Sunday rotogravures, and equally effective in black on news pages. It would be hard to say how many projects were eased over the hump of public or client acceptance by the Ferriss talent for making the projects he illustrated seem to belong so confidently and inevitably where they were proposed to be put, but his influence was considerable.

It seems that no subject was denied the full authority of his craftsmanship. Even in a sequence of abstract forms that explored the permissible building mass within New York's 1916 zoning envelope, Ferriss did not confine himself to outline diagrams. His forms grew within the specified conditions—the allowable sheer rise from the street the setback profiles within the given angle from the street center line, then the unlimited rise above 25 percent or so of the lot area—to a cathedral monumentality, each stage modeled, shaded, and backlit with the kind of excited solicitude given a major project for a waiting builder. These were published in the *New York Times* in 1922, and from then he moved to conceptualizations of skyscraper cities with hanging gardens, apartments on bridges, and pedestrian crossings over the abysses.



Ferriss' evolution of the setback, 2nd stage.



St. Louis Art Museum

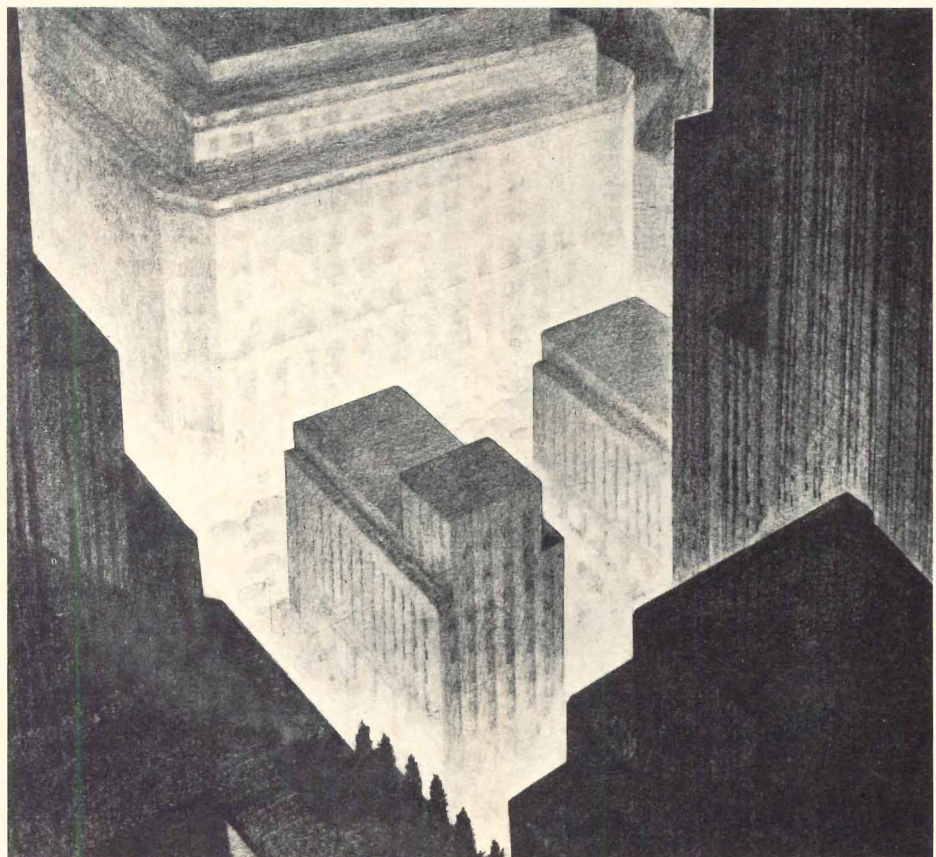
Bombproof shelter by Hugh Ferriss (above); Rockefeller Center (below) from an exhibit earlier this year in St. Louis.

Ferriss appears to have been in his natural element with behemothian scale and huge monolithic masses. His architectural visions seem carved from living rock.

Ferriss traveled the United States in 1940, making drawings of buildings since 1929 that he considered significant in the spirit of American design. His selections were not focused on poignance, but all express grandeur of conception—especially in his drawings of them. The human being is solitary or in low density in his scenes, and at magnifying-glass scale. But those were not times of advocacy planning.

In drawings done for the Board of Design of the 1939 New York World's Fair he delineates buildings under construction as well as completed pavilions with minimal notice of the fair as an intensely human activity. His underground bomb shelters, done as studies for a construction firm, are high-domed interiors with columns as thick and tall as 10-story buildings, like a joint venture of Piranesi with Cecil B. DeMille.

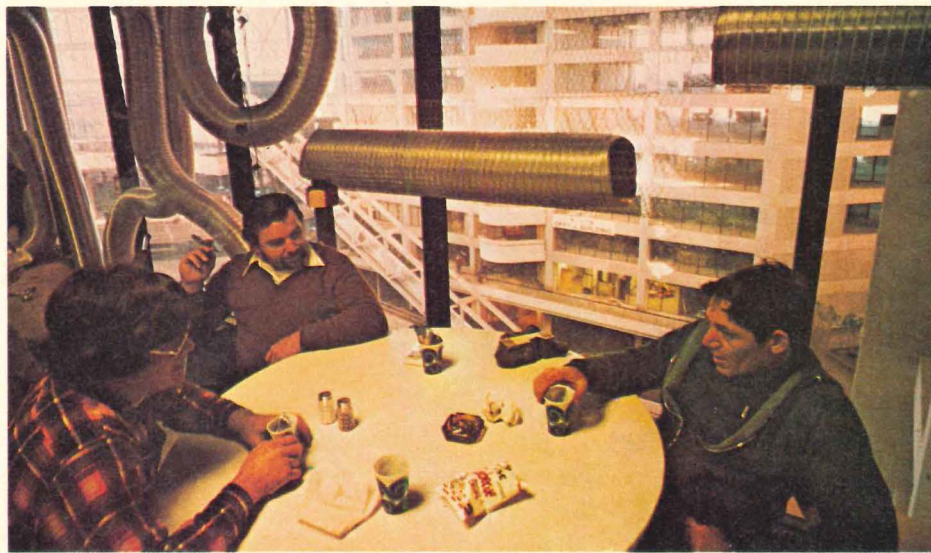
Ferriss retained his dark atmospheric effects throughout most of his work. It needs to be remembered that in many cities of his earlier years these effects were a physical fact. In his native St. Louis innumerable house chimneys and the stacks of industries and switch engines piled the air with layers of smoke from soft coal combustion. In



Jean Ferriss Leigh

a city prone to inversions, the Ferriss drawings were literally descriptive of the available light, for the winter skies were quite often as stygian at 10 a.m. as at 1 a.m. A St. Louis civic center composition for which he did bond-issue promotion drawings in 1926 has the proposed buildings gleaming in the

sooty air like symbols of new hope for the future. Ferriss stayed with his images of whitened edifices dramatically staged in a morose environment, and now that the smoke has been reduced to smog it may be that the civic center buildings the bonds paid for are somewhat too visible. [George McCue]



Timeout overlooking the interior space of Omni International.



This is nobody's pipe dream.



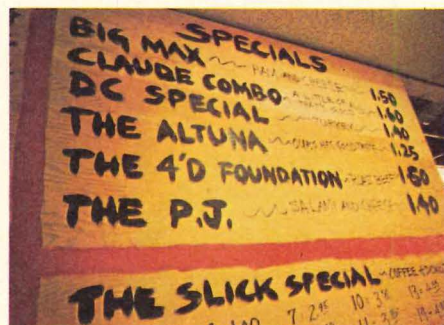
Snack line with milk carton mobile.



Relaxing on painted pillows.



White collars like it, too.



Blueprint for a sculpture.



The Hardhat: chic place to eat

"*Nostalgie de la boue*" (literally, hankering for the mud) is the French idiom for the kind of romanticism that leads aristocracy to seek a kinky communion with the working class. The Hardhat restaurant in Atlanta was perfectly designed for such "slumming." Opened last summer in the unleased office space of the Omni International (Thompson, Ventulett & Stainback, Atlanta) for the construction workers, The Hardhat soon attracted white collars as well. In fact, the functionaries have come to rival builders for a place to sit down. Conceived originally as an interim eatery, The Hardhat already has postponed one scheduled dismantling and will continue serving the Big Max at least through May. Credit restaurateur P.J. van Beneden and some art students with the interiors. [Antonin Aeck]

Hancock's glass is popping again

One face-lift later, and the popping windows of the John Hancock Tower in Boston still continue to be a problem. The latest break in the ongoing saga of I.M. Pei & Partners' mirror-glass building happened in April when one of the newly installed panes fell out. Shortly thereafter another pane was shattered when a man shot at the 62-story building with a rifle. The Building Department has ordered a stop-occupancy on the building, which is just [continued on page 29]

Park Ridge Hospital prevents epidemic of slapped-up signs with integrated signage system.



The interior of Park Ridge Hospital—a warm, harmonious blend of wall colors, textures and carpeting—is therapy in itself.

Located in Greece, New York, and serving the Greater Rochester area, the hospital was dedicated in September 1975. A two-building complex, it covers approximately 300,000 sq. ft. The medical building contains 194 patients' rooms—all private—in addition to offices, conference rooms, labs, therapy departments, etc. It is connected to the adjoining Supply, Processing and Distribution building via a glass-enclosed walkway.

Signage as a subsystem

A hodge-podge of signs, slapped up as an afterthought to construction,

would have seriously marred the hospital's handsome interior. But the architects and hospital administrators, aware of the need for an efficient traffic moving system, wrote a complete signage program into their initial plans.

Matthews was called in a year before the building completion date to design and fabricate a total, integrated signage system for both interior and exterior traffic control.

Over 300 individual signs—interior and exterior—were installed. Most were fabricated of damage-resistant NOMAR fiber reinforced polyester. All of the signage is tastefully understated but highly functional, with complete continuity of color and letter style.

Matthews. Total responsibility for total signage systems. Write for further details to Jas. H. Matthews & Co., 1315 West Liberty Ave., Pittsburgh, PA 15226.

Architect: Stevens, Bertin & O'Connell, Rochester, NY

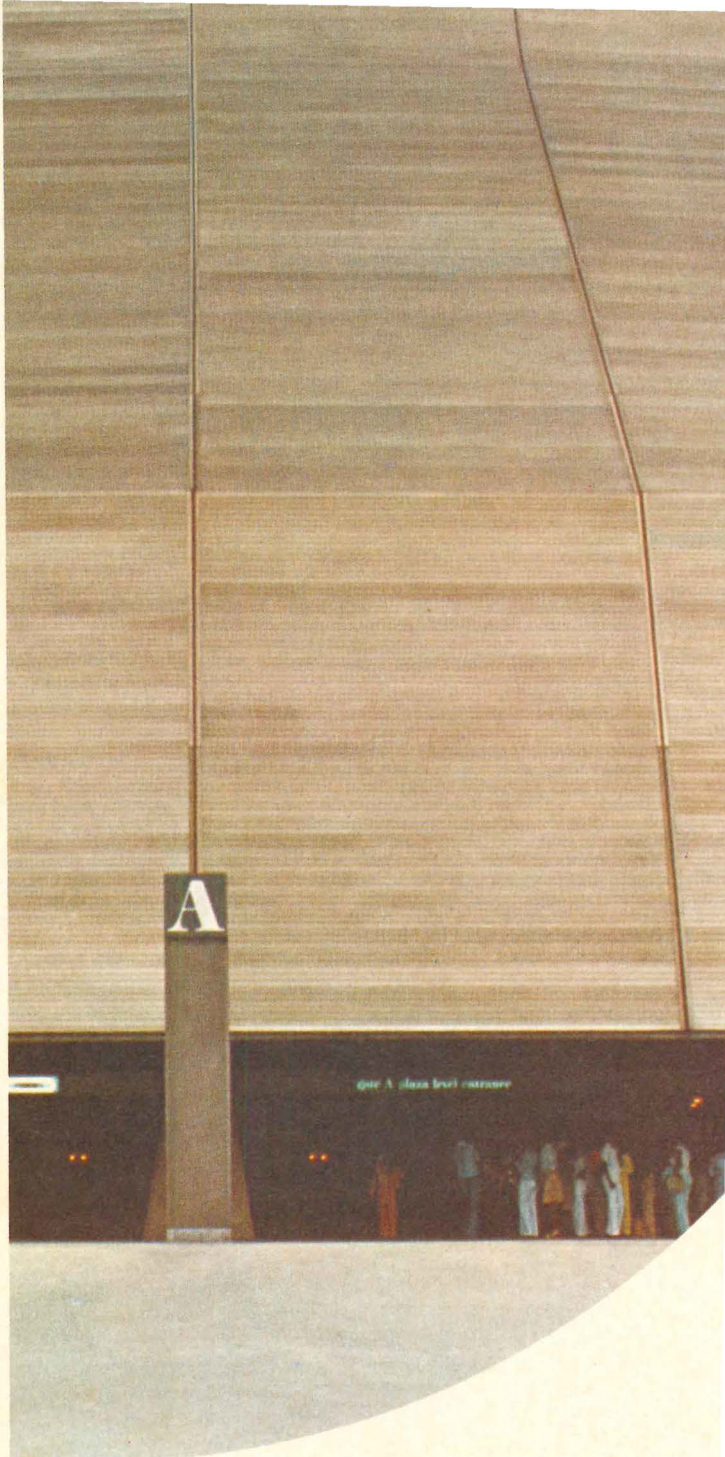
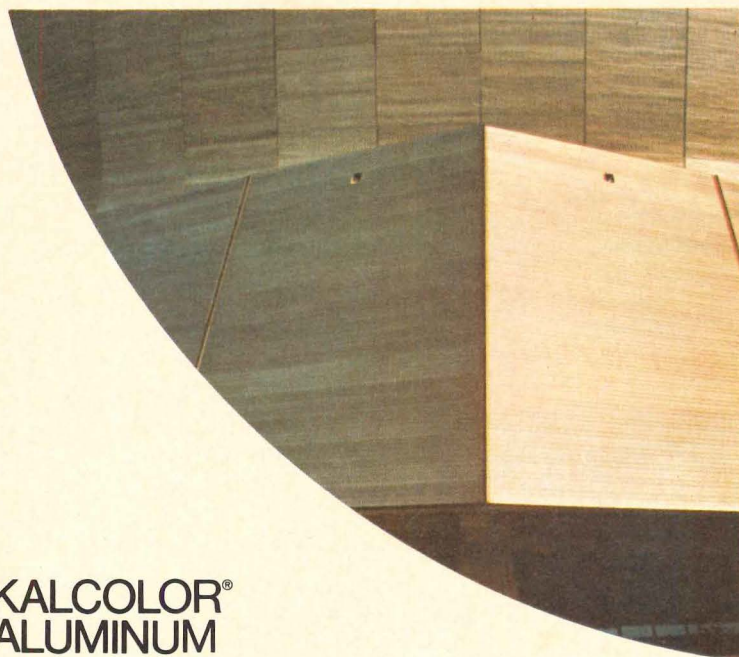
Construction Mgmt. Firm: John W. Cowper Buffalo, NY

Signage Contractor: Empire Sign Co., Inc. Rochester, NY

JHM MATTHEWS Architectural Division

1., 2., 3., 4., 5. and 9. NOMAR with screened graphics embedded. 6. Cutout aluminum logo. 7. NOMAR post and panel assemblies with surface applied reflective pressure-sensitive legends. 8. Reverse screen process on acrylic identifies patients' rooms. Slide-in cards and strips for adaptability.





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News report continued from page 26

now receiving its first tenants after a lengthy delay following a large-scale breakage of windows in 1972 and the subsequent reglazing.

Swimming pool design a time for imagination

Designers should abandon the "La Guardia" effect of swimming pool installations—placing pools in acres of concrete—and instead learn from examples in Mexican and European resorts, where pools are imaginatively executed. That was the message from swimming club operator Joe Hunsaker, who manages 50 facilities in the St. Louis area. Hunsaker was among speakers at the second Swimming Pool Seminar for Architects and Designers sponsored by KDI Paragon, manufacturers of swimming pool equipment. He discussed examples such as one facility that had a man-made "stream" for children, who could build dams to stop the flow of water as it coursed along various levels. Water noise and texture, he said, are just as important as other factors. Landscaping should be lavish; the swimming area should have a feeling of security as well as leisure. Plenty of decks for sunbathing and sitting should be provided, along with a variety of activities—golf, tennis, restaurants, water polo pools—since people quickly tire of just swimming.

Gordon Berger of Montreal, Canada, spoke of his fast-growing business of developing standardized, indoor pool complexes costing \$60 per sq ft. He's just completing his fourth and has four more on the boards. These pools—all comparatively large, 65 to 77 meters—are enclosed by an A-frame wood and steel building that varies little in appearance from one site to the next. He, too, stressed the necessity of having a variety of activities, and his pools are used for community meetings, day care, and competitive meets as well as swim classes for all age groups including senior citizens. Berger also is co-developer of a bubbling system that aerates water so that in the diving area headaches, commonly associated with learning high dives, are eliminated.

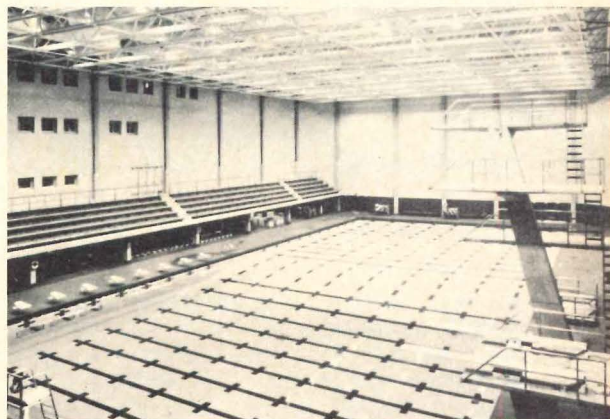
[continued on page 32]



Canadian standardized aquarena with two movable bulkheads.



Kinderbad, a play stream, minus water, at Innsbruck, Austria.



Natatorium, 10 m tower, Cleveland State.



Wave pool in Michigan by Architects Swanson Associates Inc.



Inside, there's the warmth and beauty of our traditional wood window.

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(a)

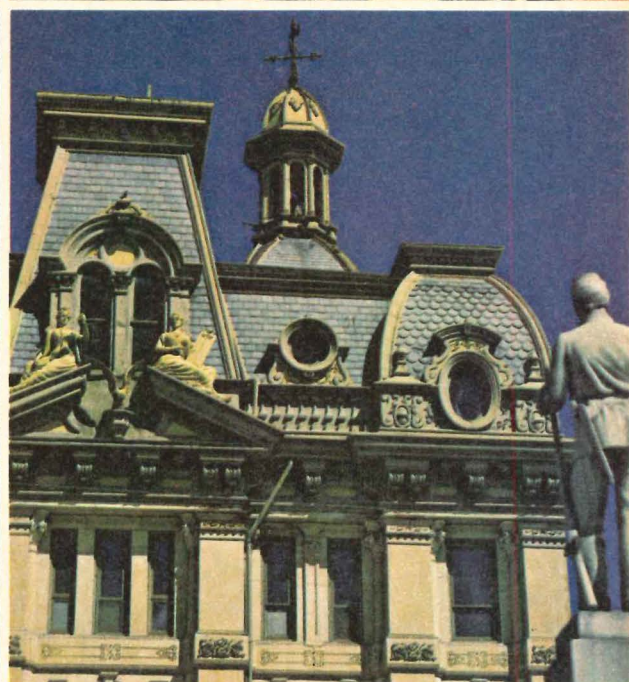
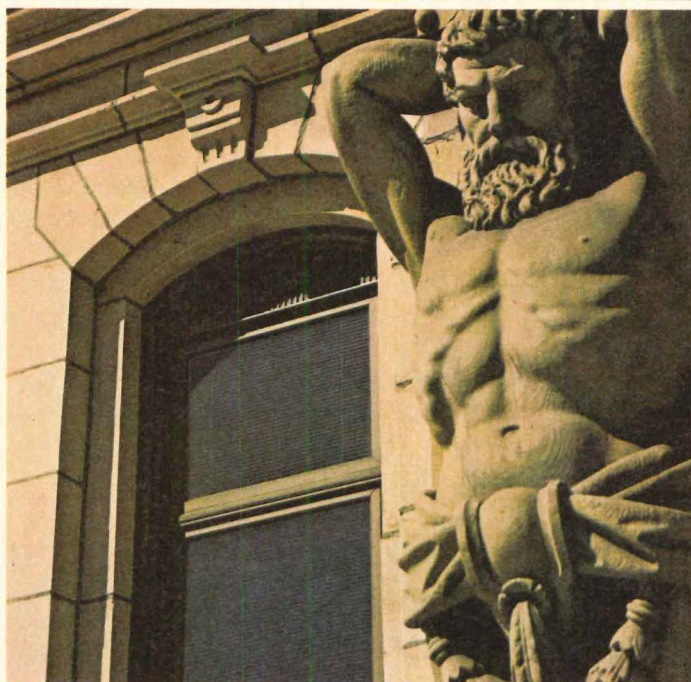
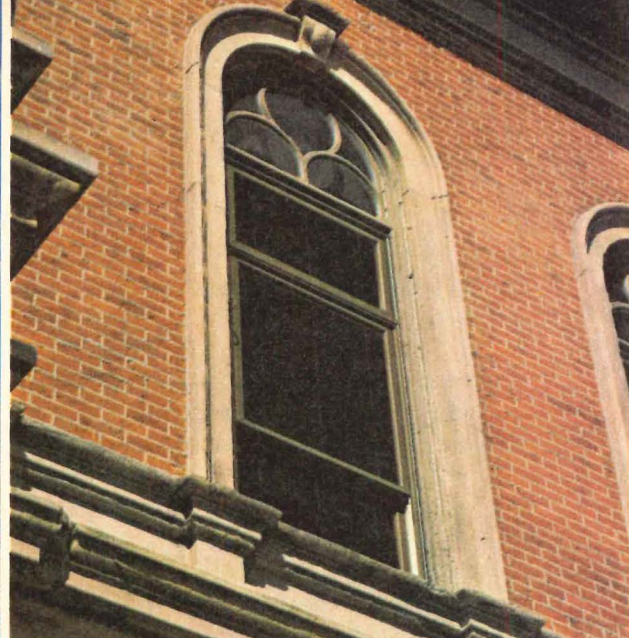
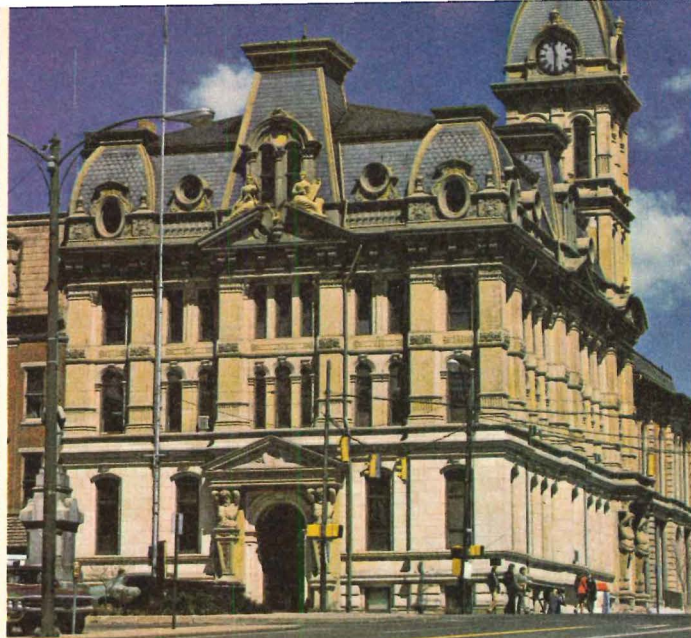
In between, a number of unique options for controlling the environment and associated costs.

The removable inside storm panel in our optional Double Glazing System gives you a number of other valuable options. Like using our Slimshade® (b) to control sunlight, privacy and solar heat gain and loss. Housed between the panes, this flexible adjustable blind remains virtually dust-free. The Double Glazing System also accommodates our snap-on muntins and privacy panels. But mere flexibility is not its only saving grace. The 13/16" air space between the panes does a better job of insulating than ordinary welded insulating glass. And at a lower cost per window.



(b)

This Pella Clad window system combines modern convenience with traditional values, in the recently restored Wayne County Courthouse.



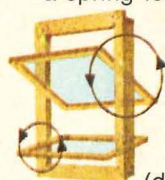
side, an acrylic coated aluminum finish that reduces maintenance without reducing your choice of colors.

The Pella Clad window system, all exterior wood surfaces are sealed off from the weather and other atmospheric pollutants by an acrylic coated aluminum skin. An outside finish that has earned its reputation for durability. And one that is available on our Contemporary and Traditional Double-Hung, Casement, Awning, Fixed and Trapezoidal Windows, Pella Clad Frames, and Pella Sliding Glass Doors. In Dark Bronze, Dark Brown, White (c) and eight special colors. With sizes in each to accommodate a wide variety of design and building requirements.

(c)

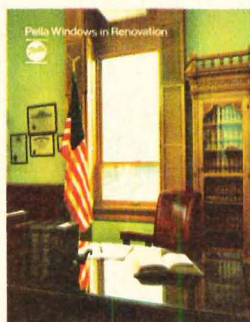
Afterward, the ease and economy of washing the outside of a ventilating window from the inside.

Window cleaning is another maintenance factor which deserves consideration. And Pella Windows have something to offer in this area also. All of our ventilating units can be cleaned, easily, from the inside. The Pella Double-Hung Window has a spring-loaded, vinyl jamb liner which allows the sash to pivot fully. And because each sash pivots at its center point (d), the weight of the sash is counterbalanced. Which makes the job just that much easier. Reglazing can also be accomplished from the inside, along with sash removal. And the same thing is true of our casement and awning windows.



(d)

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Among other recent developments in the pool field are movable bulkheads which change the swimming length of the pool and movable floors which may be raised or lowered to create any depth of water. Improved technology includes creating "fast" pools so that competitive swimmers have the least resistance from wave action, lifeguard chairs that meet Occupational Safety and Health Administration (OSHA) standards, and electronic devices for competitions that range from individual sonic reports of the starter pistol at each swimmer's platform to computerized scoreboards and instant replay screens above the pools.

Vecta trademark protected by court

Vecta Contract's "Tubo" trademark for furniture designed by John Mascheroni has been upheld by order of the Federal Court in Chicago. Vecta Con-

tract had brought suit against Brayton International, Inc. to prevent Brayton's use of the word "Tubo." According to information received from Vecta Contract, Brayton was told to discontinue its Tubo line, issue replacement catalog pages, and inform previous purchasers of these developments.

Josef Albers 1888-1976

Josef Albers, whose "Homage to the Square," a series of color studies, seemed uniquely compatible with contemporary architecture, died March 25 in New Haven. He had lived in the New Haven area since 1950 when he became chairman of the art department at Yale University. Prior to that he taught at Black Mountain College in North Carolina for 16 years.

Albers was born in Germany March 19, 1888, studied at the Royal Art School, Berlin, 1913-15, and the Art Academy, Munich, 1919-20, when he left for the Bauhaus in Weimar. There he remained three years as a student,

and another ten as teacher, dividing that time between the Bauhaus at Weimar, Dessau, and Berlin. He immigrated to the United States in 1933 and became a naturalized citizen in 1939.

Albers retired as chairman at Yale in 1958. He was author of *Poems and Drawings*, 1958, 1961; *Interaction of Color*, 1963, and *Search Versus Re-Search*, 1969. He was a member of the National Institute of Arts & Letters.

Women's School plans second year

The Women's School of Planning and Architecture will hold its second session Aug. 8-21 at Santa Cruz, Calif. Admission is open to women of any age and of any background; enrollment will be limited to 75. The cost is \$415, including room, board, and tuition. Further information is available by sending a self-addressed stamped (24¢) envelope to WSPA, Spring Lane, Farmington, Conn. 06032.

The first session held last year in [continued on page 34]

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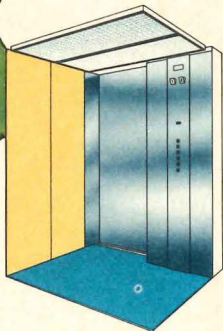
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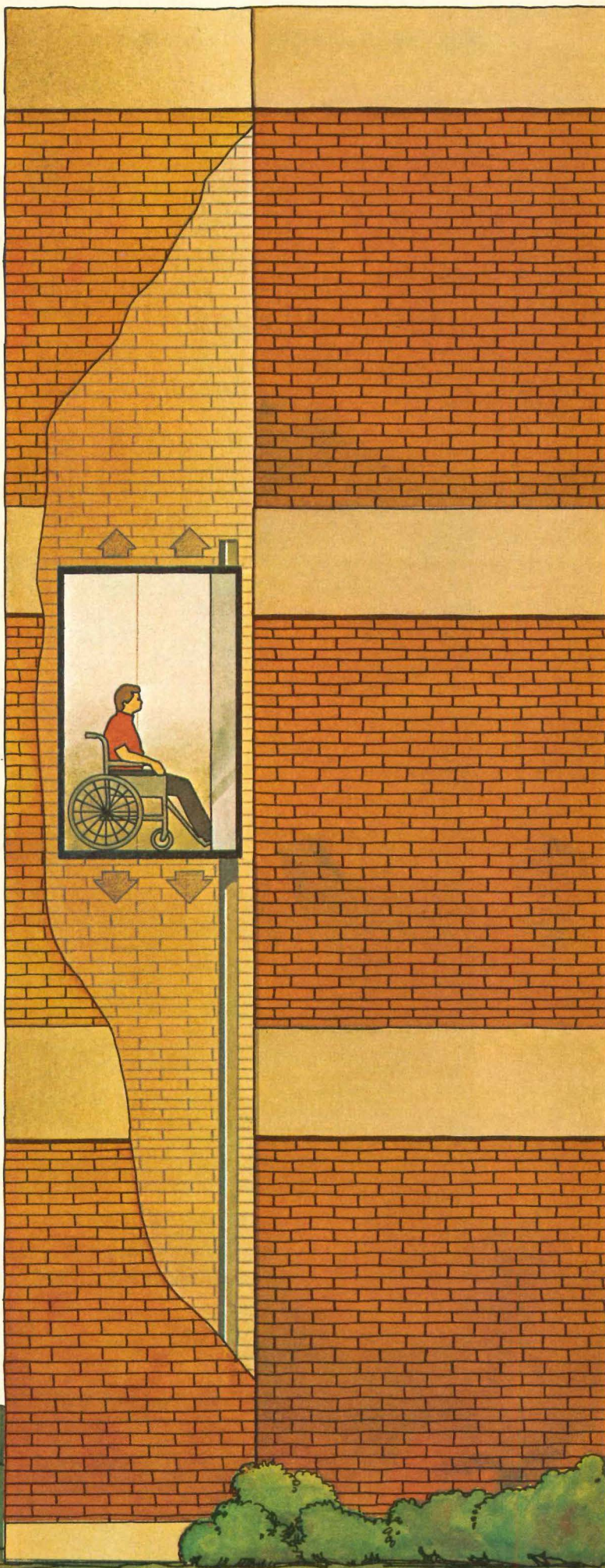
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News report continued from page 32

Biddeford, Maine, drew 52 women from 21 states and Canada. Courses this year include Politics and Ideology of the Planning Process and the Role of Women in Local Planning Issues.

Illinois Center's ongoing art program

Sculpture—especially monumental works by internationally famous art-

ists—has been the most popular form for integrating art with architecture in these recent years of enlightenment. At Illinois Center, a \$1 billion multi-use complex growing by stages in downtown Chicago, ongoing exhibitions of works by Chicago and area artists have been held in the lobbies of twin office buildings developed by Metropolitan Structures and Illinois Center.

Currently on view is "Fantasy and Whimsy," works by five Chicago painters, Eleanor Dixon, Eleanor Spiess Ferris, Michael Ferris, Wanda Odessa Lackey, and Alan Stecker. For the last



Illinois Center: "The Runner" by Eleanor Dixon.



"The Lady & the Dolphin" by Alan Stecker.

decade or longer, Chicago has been threading its own route through the trends of modernism, painting pictorially when others chose non-objective subjects; running hot when others were cool, and including, when elsewhere, artists were excluding. The present show draws upon these traditions evoking playfulness, and humor.

Knight joins P/A as Washington writer

Carleton Knight III, associate editor of *Preservation News*, publication for the National Trust for Historic Preservation, has joined *Progressive Architecture* as a contributing editor. He received his Bachelor's degree in art history from Marietta College, Marietta, Ohio, in 1966. From 1973-1974 he was a correspondent for *Architectural Forum*. He also has contributed articles to *House & Home*, the *AIA Journal*, *America Illustrated*, and the *Chris* [continued on page 37]

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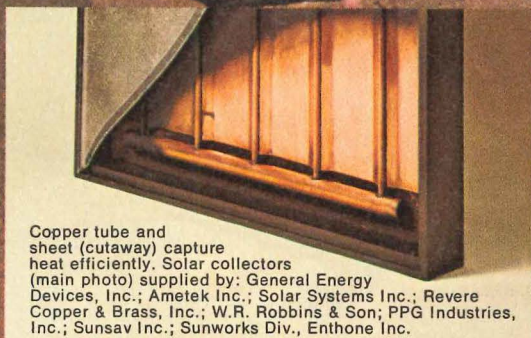
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News report continued from page 34

tian Science Monitor. He joined the National Trust in 1970.

Last year, Knight received an award of merit from the Society of Publication Designers, and the two previous years he received awards from the Educational Press Association.

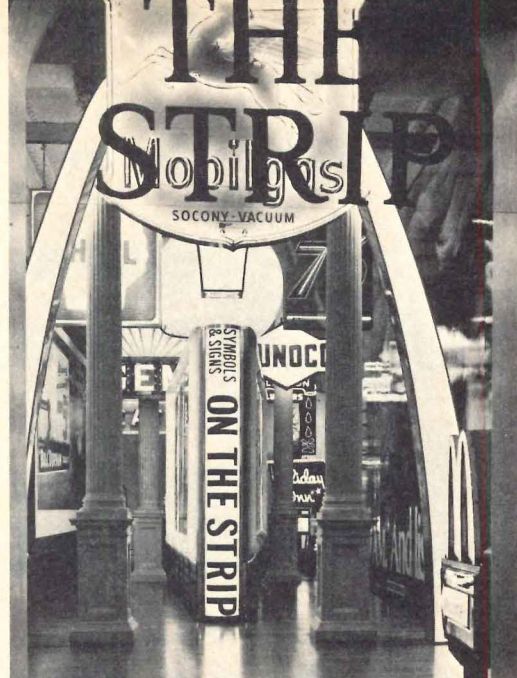
Signs and symbols as show stoppers

Venturi & Rauch's current show at the Renwick Gallery, Washington, D.C., stunningly aggregates the visual aspects of typical, man-built America. Called "Signs of Life: Symbols in the American City," this three-part exhibition takes on the home, the 20th-Century commercial strip, and the 19th-Century city.

Some of the material will be familiar to Venturi & Rauch followers—such as

the investigation into signs and landmarks of the commercial strip. The surprise comes with the "house," where the tracings of its various forms and iconography is devastatingly and wittily assembled. Three period rooms representing different aspects of American lower-middle to upper-middle class tastes provide a highlight of the exhibit. One is a "family room" of a suburban tract house executed in Archie Bunker colonial; another, from a row-house, displays Mediterranean kitsch and Renaissance-style borrowings, while a third features traditional suburban WASP accoutrements. Cardboard signs in the shape of comic strip balloons point out the different styles in a spoof on art historical didacticism. Even the modern idiom makes an appearance with a floor lamp labeled "Bauhaus Survival."

The exhibit's message is compelling: that people long for a symbolic environment laden with associations, connotations, and content to express their



National Collection of Fine Arts

Where the strip and Renwick's architecture meet.

self-images, fantasies, and life styles. And they don't give a damn about the degree of sham they go to to get it.

Venturi & Rauch's message is that we should learn something from this overlay and provide it in architectural design. Exactly how to do so is another

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National Collection of Fine Arts



A period room at Renwick show (above).
Venturi & Rauch's installation the Whitney.

Geoffrey Clements



matter: for it raises questions of the degree of fakery a consumer-oriented society is willing to accept to add content to its everyday life. The architects are quite right in demonstrating that high-design architecture has until recently offered little content. And neither has everyday life to many people.

Exhibit designer Steve Izenour of Venturi & Rauch used the 3M computer-scanning and point spray process for creating large "architectural paintings" made from photographs. This bicentennial exhibition not only makes use of these murals but also includes 7000 photographic images to convey the way Americans conceive and receive their symbolic milieu.

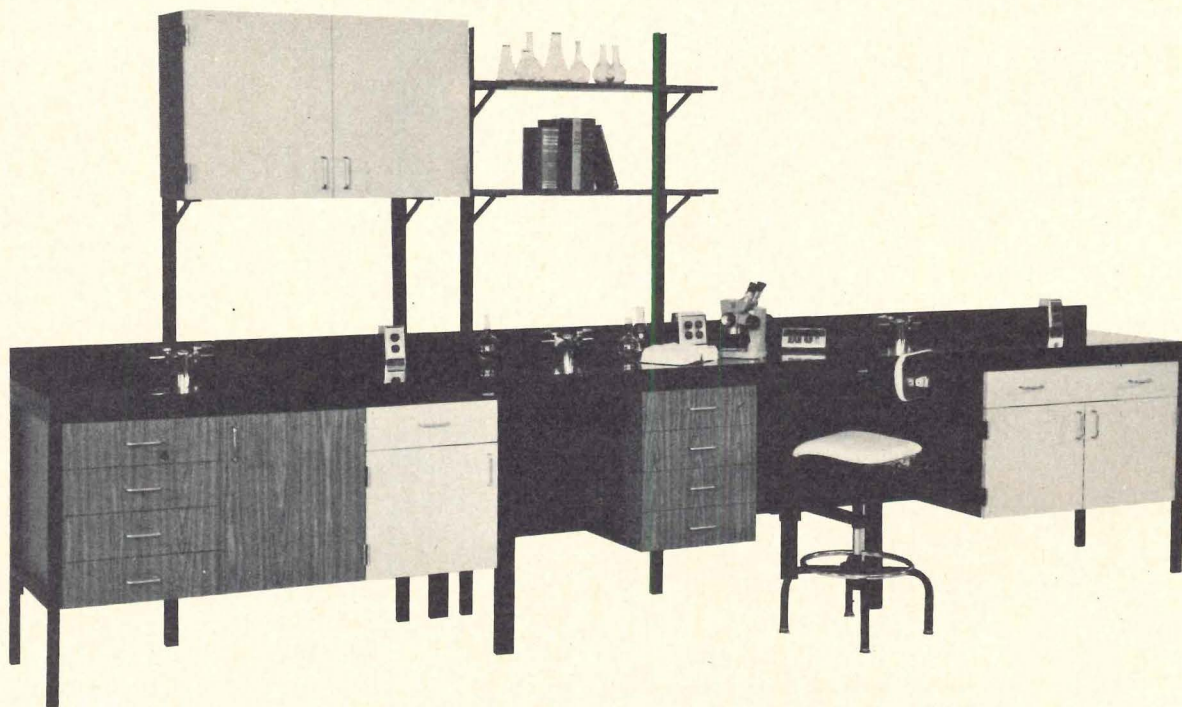
Venturi & Rauch also used the 3M process for photographic backdrops in their design of the bicentennial sculpture show at New York's Whitney Museum. Their installation of "200 Years of American Sculpture" has been greeted almost unanimously by the art press as a travesty of artistic intention. Which brings up the whole argument of art's being dominated too easily by

architecture in its display.

From the architectural viewpoint (where art is not meant to be seen as isolated objects but as part of a dynamic whole) the show is ingenious. Sculpture is placed in dramatic juxtapositions and in spatial clusterings that generate a three-dimensional animation viewed from almost any angle.

The "white box" type of installation is tossed out. As Robert Venturi explains, the firm sought to create an *impression* of the setting that the artist might have anticipated. Thus 19th-Century neo-classical works are presented against two-tone mauve walls with faintly outlined arches. Early 20th-Century modern sculptures are arranged against green walls—as if in a garden—separated by green tinted acrylic planes. Art lovers may hate this treatment, but those who like seeing art in an ensemble and who respond to the two-dimensional frontality of the planes receding in layers past three-dimensionally grouped sculptures may react differently. Whatever the case, the installation should be seen. [SS]

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San Diego AIA holds chair competition

CHAIR, the 1977 International Chair Design Competition/San Diego, has been announced by its sponsor, the San Diego Chapter of the American Institute of Architects. Information may be obtained by writing Walter Collins, chairman, Chair Design Competition, 654 India St., San Diego, Calif. 92101.

Each of the 10 finalists will receive \$1000 to develop a fullsize prototype. From these, three chairs will be selected for display and to receive \$15,000 first, \$10,000, second, and \$5000, third prize. After a major exhibition in June 1977, at the AIA national convention in San Diego, the chairs will be exhibited at several museums.

Jurors will be Warren Platner, Cini Boeri, and George Nelson, architects and furniture designers, and Sherman Emery and Mildred Friedman, editors of design magazines.

Personalities

P. Richard Rittelmann of Burt, Hill & Associates of Pittsburgh and Butler, Pa. and Fort Myers, Fla. has been appointed consultant to the Solar Energy Program Team of the National Bureau of Standards.

Jerry Pollak, AIA has been appointed chairman of a Land use Task Force sponsored by California Council of the American Institute of Architects.

Calendar

Through May 30. "Chicago Architects," Time-Life Building, Chicago.

May 1-June 10. "One Hundred Years of Chicago Architecture," Museum of Contemporary Art, Chicago.

Through June 13. "A Tribute to Alvar Aalto" exhibit, The Fort Worth Art Museum, Fort Worth, Tex.

Through June 13. "Designing a Nation's Capitol" exhibit of extant original drawings entered in the 1792 first federal architectural competition, at the Octagon, Washington, D.C.

Through June 27. "Art Nouveau Belgium/France" exhibit, Rice Museum, Houston, Tex.

Through Sept. 26. "Signs of Life: Symbols in the American City" exhibit, Renwick Gallery of the National Collection of Fine Arts, Smithsonian Institution, Washington, D.C.

May 19-24. Annual meeting of the Society of Architectural Historians, Philadelphia.

May 24-28. International Symposium on Lower-Cost Housing Problems, Hyatt Regency Hotel, Atlanta, Ga.

May 25-28. Seventh annual conference of the Environmental Design Research Association, University of British Columbia, Vancouver.

May 31-June 3. Architects' workshop sponsored by the Church Architecture Department of the Southern Baptist Sunday School Board, Glorieta Conference Center, Glorieta, New Mexico.

May 31-June 11. "Habitat," the United Nations conference on human settlements, Vancouver, B.C.

[continued on page 43]

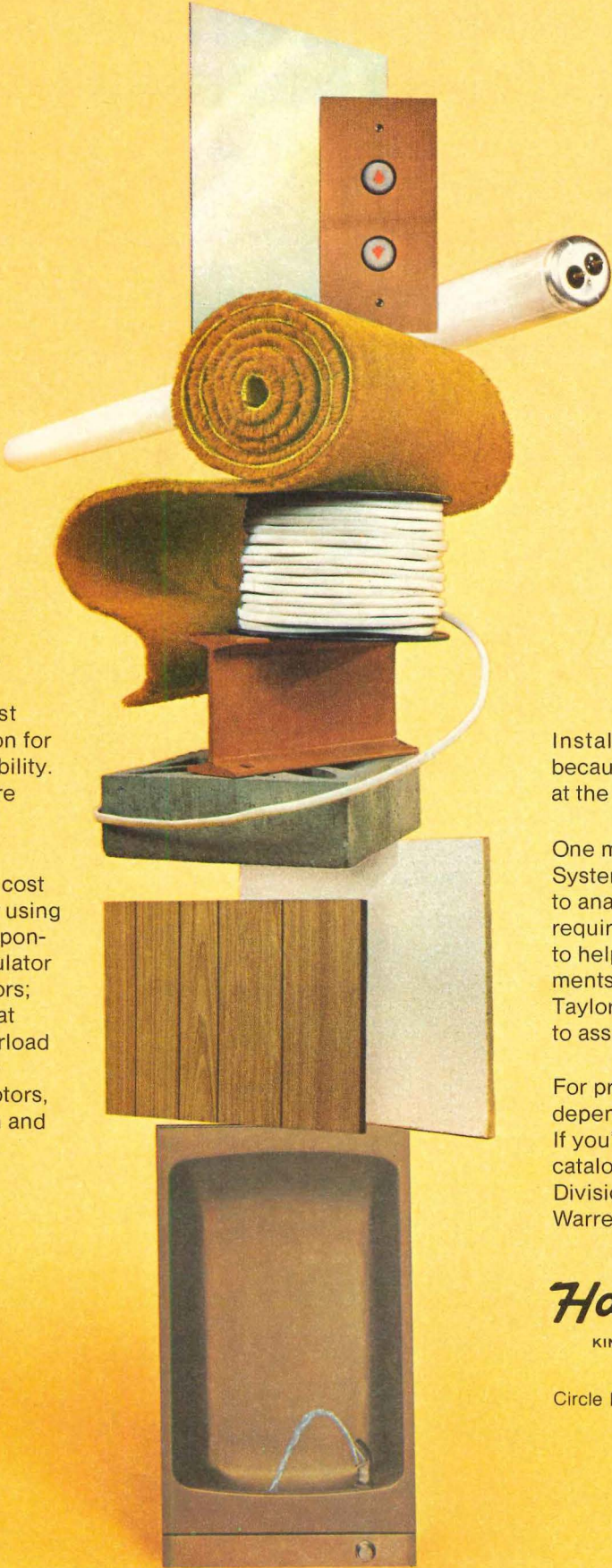
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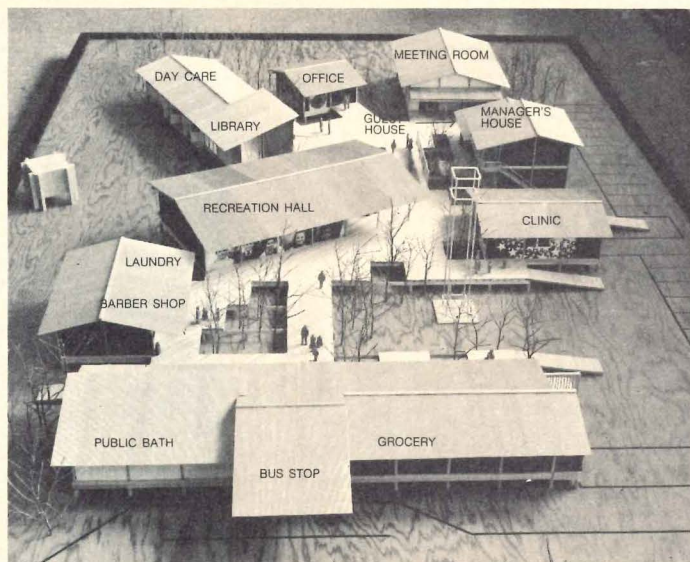
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In perspective



Bordersville Community Services Center in Texas cost \$255,000 to build.

Ranchero style multi-use center

When the 180 families of rural Bordersville were annexed to Houston and asked to pay taxes, they demanded to know "what for?" Fewer than 40 percent of them even had running water, and so the city, led by Mayor Louie Welch, took on the problem as a pilot case of community resource coordination. The mayor asked University of Houston assistant professor of architecture John Zemanek to serve on a panel looking into the Bordersville case, and subsequently Zemanek became the architect, along with his students and two other faculty members, for the planned development.

They met with community leaders to determine what was needed. At the time, in 1969, only five churches existed, in addition to the shacks used for dwellings. A community center providing services as basic as public baths was selected as the most needed improvement. A site of five acres was bought from the local public school, and the students set to work on campus, building the prefabricated components of each structure in the complex. These were erected at the site on 4-ft-high wooden platforms supported by concrete piers. The natural terrain was to be undisturbed, as a concrete slab base would have smothered the ground. After the roofs of wood panels covered with galvanized iron were erected on wooden posts, insulated sandwich-type plywood walls were put in place. Standard doors and windows were installed.

The Bordersville Community Services Center was completed in 1975 and took less than a year to build.



The bell tower is a prominent feature; two open areas accommodate the traditional barbeque.

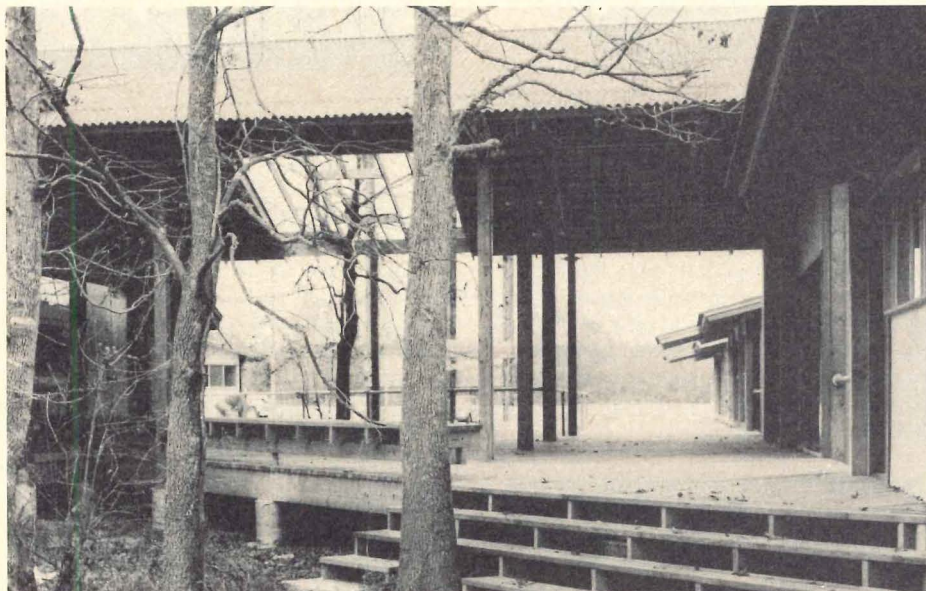


Prefabricated components built off site.



Center funded by private and federal sources.

Centrally located wooded site on main traffic artery picked by residents.



In progress



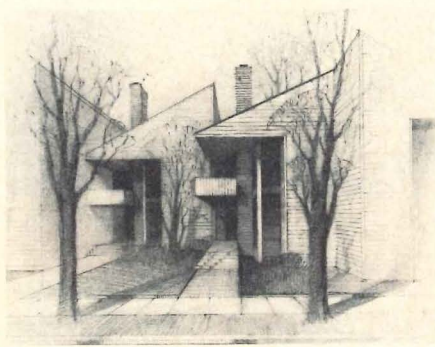
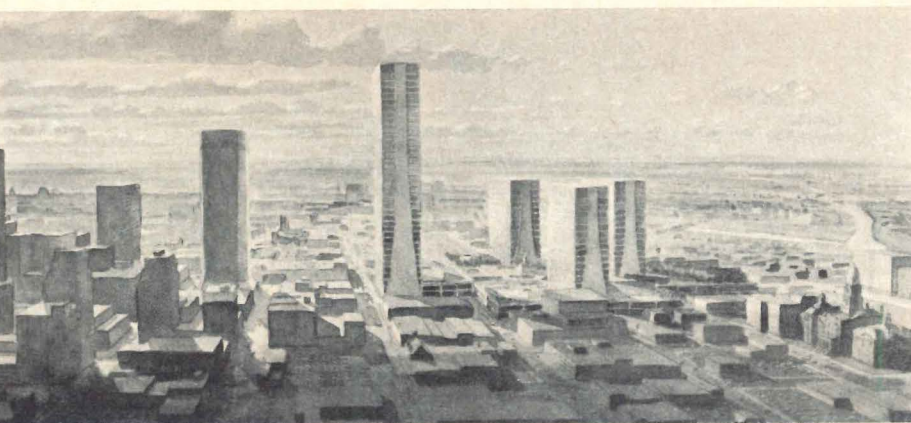
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1



3



1 Lexington Center—Ellerbe of Minneapolis, Minn., is architect for the \$46 million Lexington Center to open later this year in Kentucky, serving not only Lexington, but also a tri-state population in the surrounding 60 counties. The center is located downtown on an 11-acre site and will offer quality shops along a three-level enclosed mall, a 17-story, 350-room hotel, a convention center, and a 23,000-seat arena, called the world's largest. Developers are the Lexington Center Corp., Hunt Development Co., and Landmark Development Corp.

2 Tandy Center—Construction has begun on downtown Fort Worth's Tandy Center, a combination retail-office-hotel structure developed by Tandy Corp. The initial phase will include an 18-story office tower of exposed concrete frame

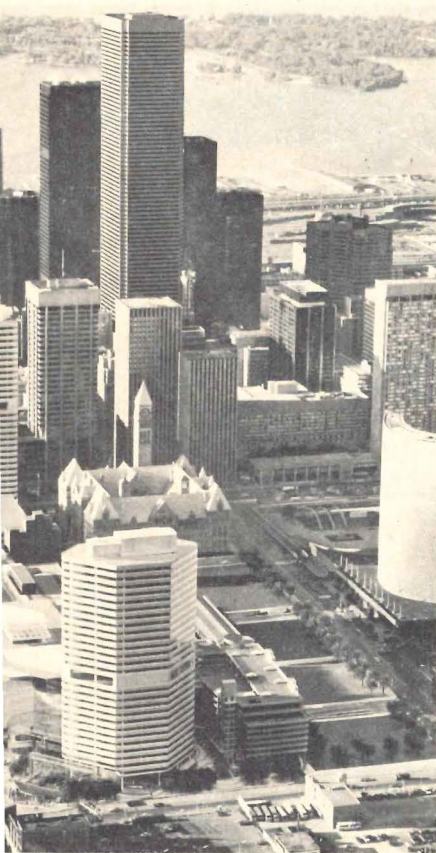
and reflective glass and a three-level shopping center overlooking an indoor ice skating rink topped by a 50' x 120' skylight. Architects are Growald/Schutts Architects of Fort Worth. The site is eight contiguous blocks of cleared land, and the complex will connect with an existing department store. As the project grows, it will form superblocks closing a number of downtown streets. An existing lot along the Trinity River will be expanded to provide 500,000 sq ft of parking with a subway link to the center. Planned for the next phase are a 500-room hotel and two more office towers.

3 Ghent Square—The Norfolk (Va.) Redevelopment and Housing Authority has entered a program of building an in-town residential community, Ghent Square, of moderate and upper

income homes. Harry Weese & Associates, Chicago, did the master plan. In 1969, slum homes were razed from 65 acres of land next to the turn-of-the-century neighborhood of Ghent—compared by Weese to Washington's Georgetown—and 500 lots were created. Six townhouses are nearing completion with nine more and a detached house planned—all by Norfolk architects Oliver, Smith & Cooke Ltd. Finished is the landscaped spinal mall, Botetourt Gardens, which will provide a site for the Norfolk Ferry Terminal, 1887, dismantled and held in storage since 1964. Landscaping in Ghent Square is by Sasaki, Dawson, DeMay of Watertown, Mass. and street lighting by William Lam Associates Inc. of Cambridge, Mass. The Authority also is administering low-interest improvement loans in the older Ghent area.

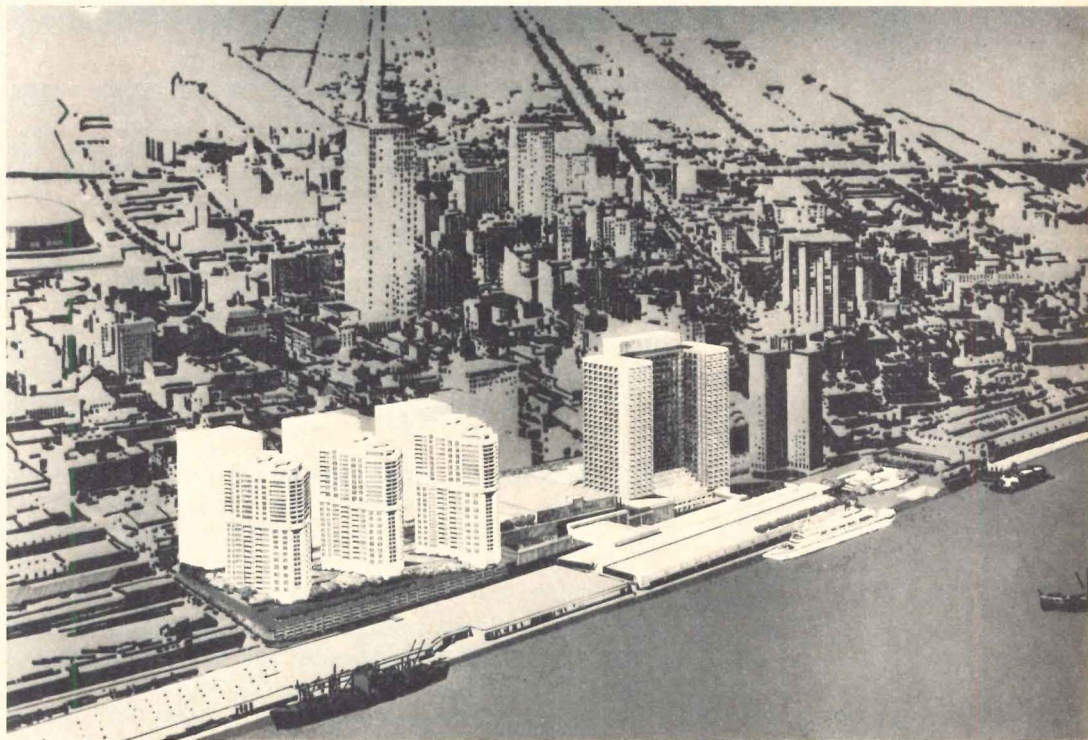
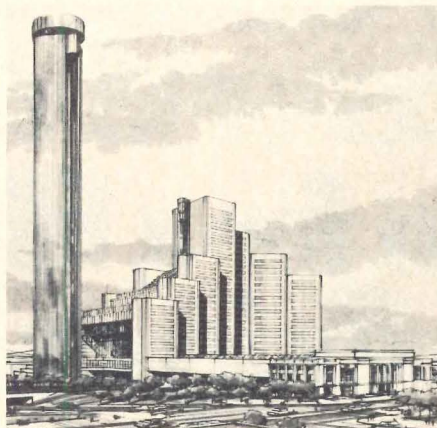


4



4 Eaton Centre, Toronto—Under construction in downtown Toronto is a three-level, 7-million-sq-ft shopping mall by Bregman & Hamann and Zeidler Partnership/Architects, both of Toronto. The mall is being created by moving Eaton's Department Store north of its existing location opposite Simpsons, another successful department store, to create an infill of small shops between the two. In addition, further development will include structures 6 to 8 stories high which will serve as a base for high-rise towers at either end. Developer of the project is Cadillac Fairview Corp. Ltd., in joint venture with T. Eaton Co. and Toronto-Dominion Bank.

5 Reunion in Dallas—A combined city/private mixed-use development is moving towards first phase completion in early 1978 at the southwest



edge of downtown Dallas. Reunion incorporates the existing Union Terminal into a shopping and 1000-room Hyatt Regency Hotel complex with parking for 2000 cars, a 50-story observation tower, and 10 acres of parks and walks. The city owns 32 of the site's 50 acres; two private companies own the remainder. Co-developers are the city and the Woodbine Development Corp., a subsidiary of Hunt Investment Corp., one of the land owners. Vincent Ponte of Montreal is land planner, Welton Becket & Associates, Los Angeles, architect. The old railroad terminal will be a hub of city transportation. It also will house a bank and other retail activity. Future office and residential structures are planned.

6 International Rivercenter—Situated on former railroad yards along the Mississippi River next to



5

6

New Orleans' convention center and international trade mart is a \$250 million complex due for first phase completion in late 1977. The project will include a 1200-room Hilton Hotel 30 stories high, a shopping mall, and a \$1 million passenger terminal for cruise ships. Eight indoor tennis courts and parking for 2500 cars also are planned for phase 1. The next phase of construction will be for the first of several condominium towers. Joint venture architects are Neuhaus & Taylor, Architects, and Hellmuth, Obata & Kassabaum. The hotel will have an atrium lobby overlooking the river and a penthouse night club. Developers are a joint venture of five partners: land development divisions of Southern Pacific and L&N railroads, the Hilton Hotel Corp., and two private citizens, James Coleman Jr. and Lester Kabacoff.

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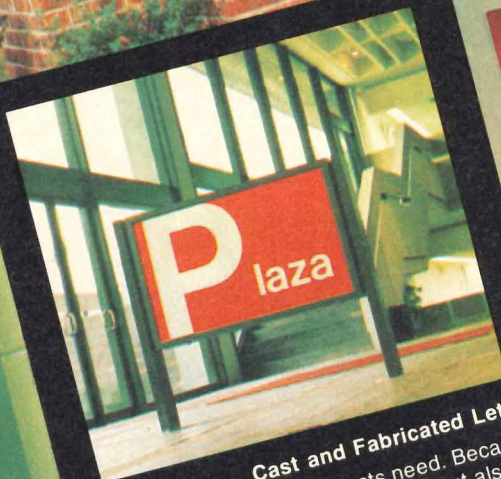
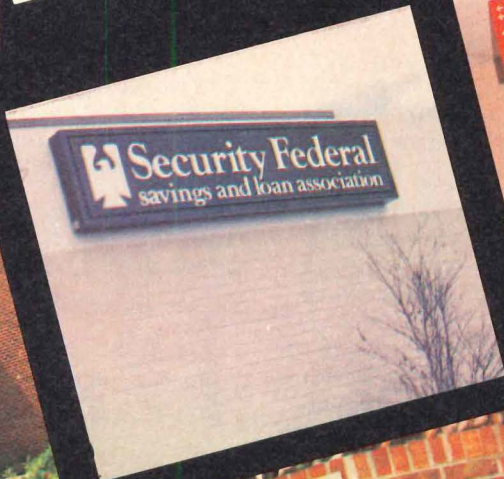
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Preliminary frame analysis determines simple steel frame with braced core most efficient.

Eastern Properties Office Building, Lexington, Ky., is a 33,300-sq-ft structure designed to accommodate a radio station, a corporate headquarters for a large financial organization, a computer operation, and a complete printing shop.

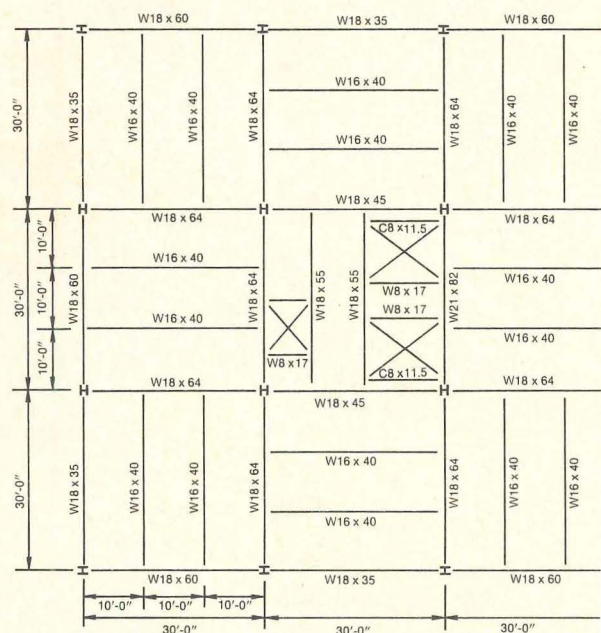
The owners, along with the project's structural engineers, White, Walker & McReynolds, requested a preliminary analysis based on a building having six supported levels. Several framing schemes were investigated, but the most efficient proved to be a simple connected frame with a braced core. Because of various other factors involved, the owner decided on a 4-level structure with a 5th-level mechanical penthouse. The framing scheme, however, remained essentially the same as that recommended by the framing study. "We selected structural steel for the framing material because of its ease and speed in erection, lower cost, and its structural ability to support the clear spans required by the owner," reports Bank Management Associates, construction managers for the project. "Based on Bethlehem's preliminary framing analysis, we selected the scheme that would be the most economical and use the smallest amount of steel necessary."

Erected in 30 days

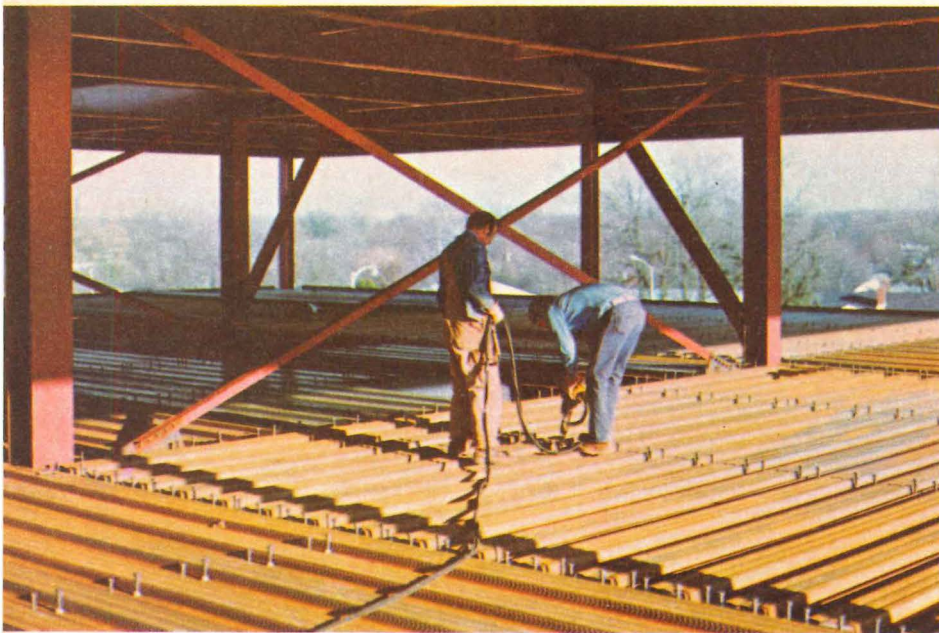
The office, situated on an elevated site, rises 66 ft 6 in. from its on-grade, 93-ft-sq base. ASTM A572 Grade 50 high-strength steel is used in the base tier portion of all columns. The balance of the steel is A36. The entire structural frame was erected within one month and is expected to be ready for occupancy within eight months.

Wind loads are accommodated in the central core by X-bracing in one direction and K-bracing in the other. The core houses all vertical transportation, fire protection equipment, restrooms, mechanical and electrical shafts.

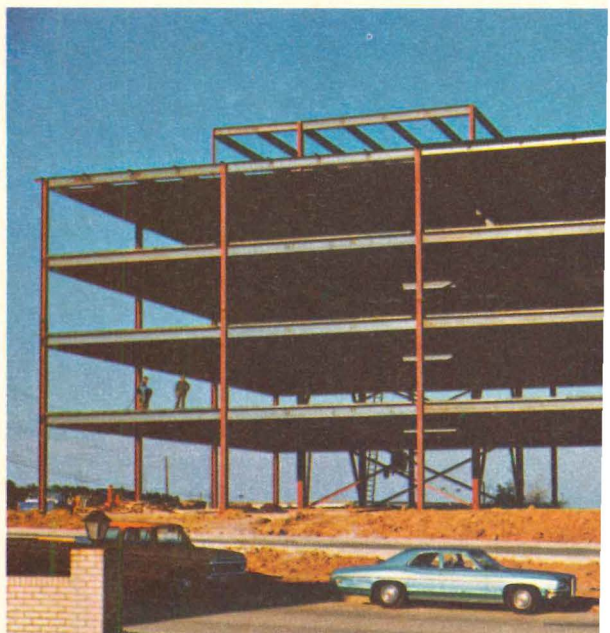
Spray-on fire protection is applied in accordance with the BOCA building code specifications. Columns are rated for 2 hours; beams for 1 hour.



Typical floor framing plan illustrates the structure's gene column-free bays. The frame is designed for a live load of psf plus 25 psf for partitions.



The floor system consists of a 3¼-in. lightweight composite concrete topping over 2-in. non-cellular composite steel deck. Floor-to-floor height is 12 ft. Bethlehem furnished all of the structural steel requirements for the building.



Owner: Eastern Properties, Inc., Lexington, Ky.; *Architects:* J son/Romanowitz, and W. D. Hatcher III, consulting arch Lexington, Ky.; *Structural Engineer:* White, Walker & McReyn Lexington, Ky.; *Fabricator/Erector:* Englert Engineering (pany, Nashville, Tenn.; *Contractor:* White & Congleton Co., Lexington, Ky.

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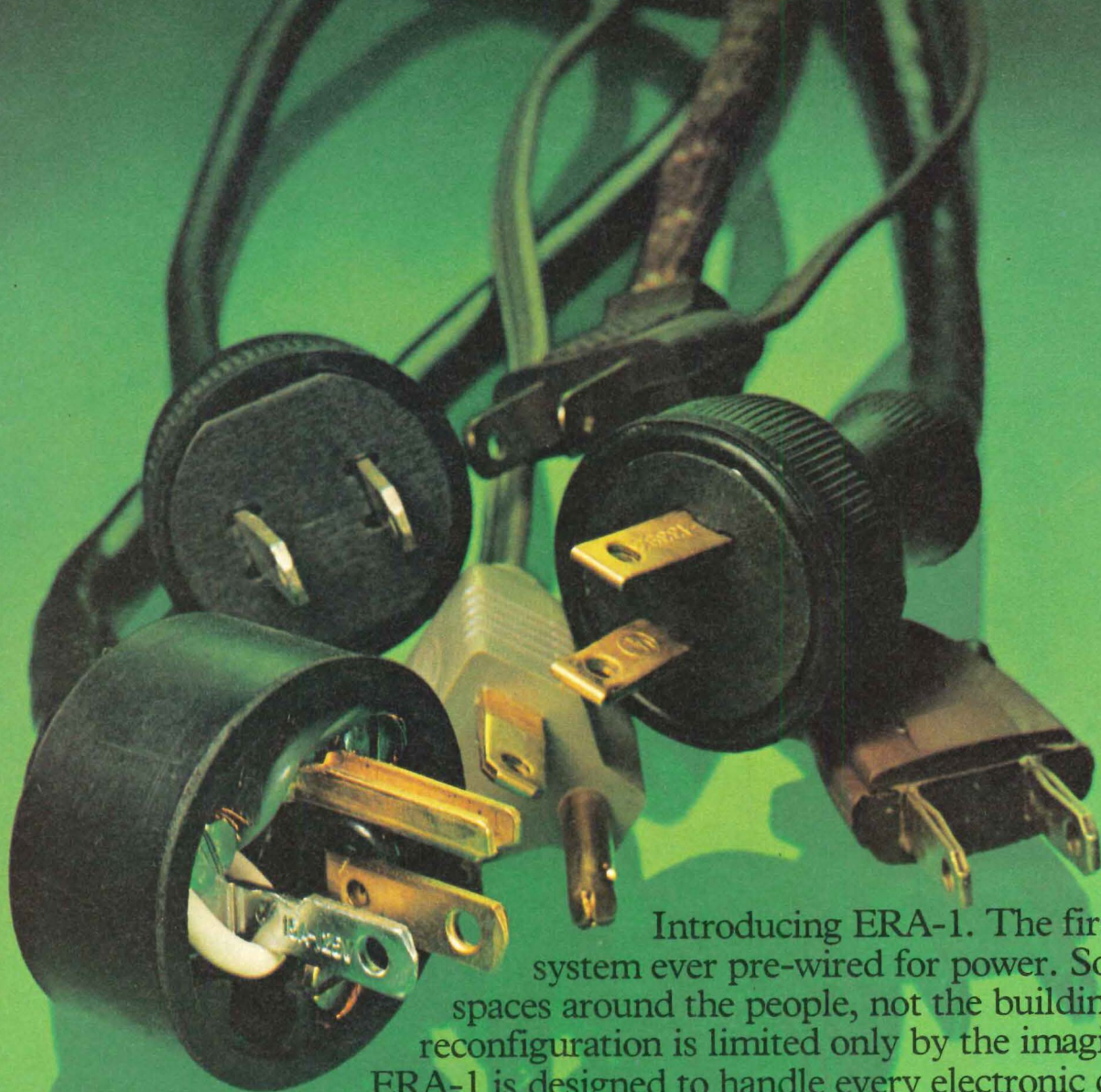
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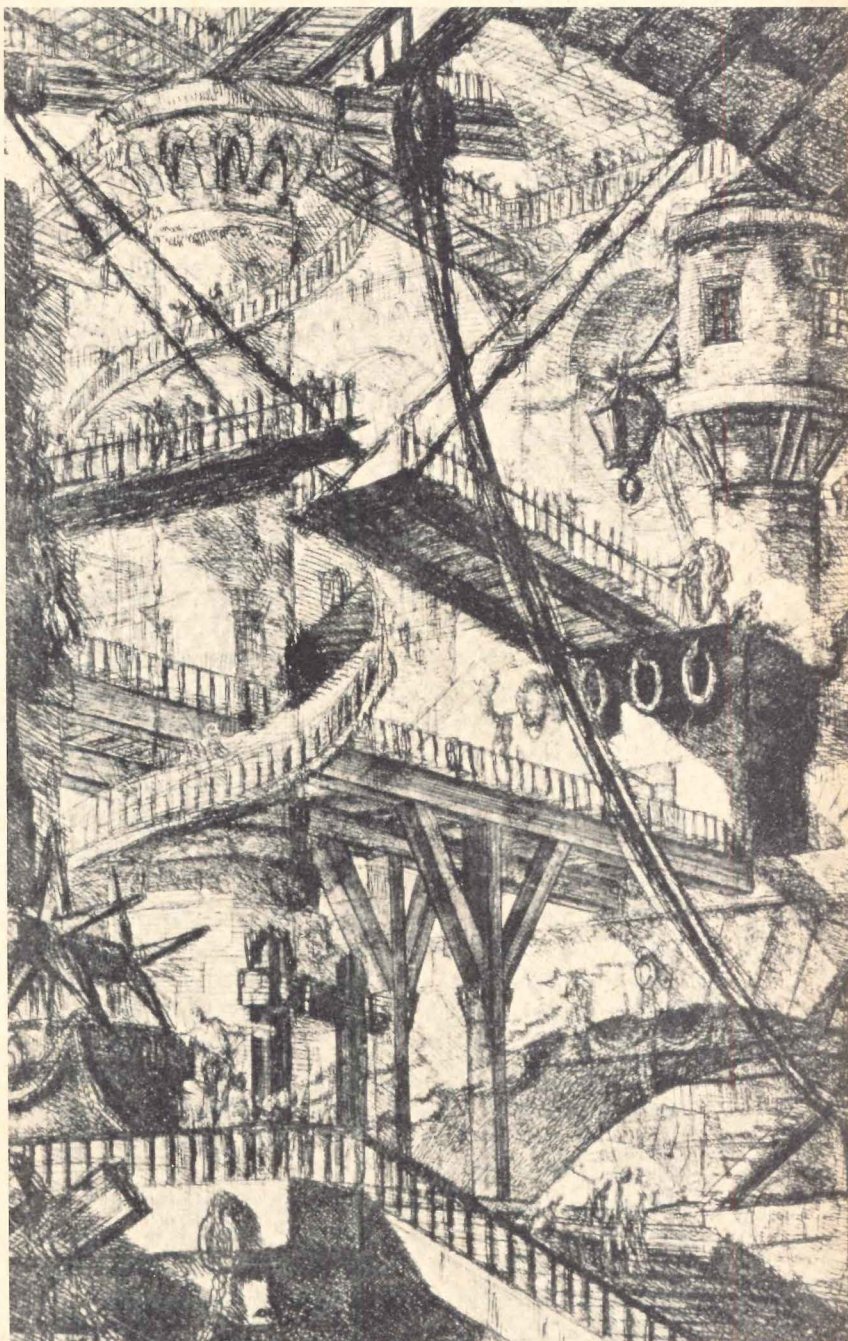
Anatomy of mixed-use

Donn Logan

Urban center concepts have undergone marked change since their popularization in the early 1950s. A brief history explains why so many complexes have evolved to assume those forms that today represent mixed-use.

In 1954, Back Bay Center, a mixed-use complex proposed for Boston, was designed by Pietro Belluschi, Walter Bogner, Carl Koch, Hugh Stubbins, and The Architects Collaborative. The scheme, which won a P/A First Design Award (P/A, Jan. 1954, p. 73) was exemplary: encompassing hotel, motel, housing, office, convention, shopping, and parking uses; its form comprises spatially related towers and slabs around a variety of malls and plazas on a multi-layered platform (illus. 1 next page). In the past 20 years, as mixed-use complexes have proliferated, the influence of this design concept and its imagery has been pervasive.

Historically, cities were always composed of mixed-use buildings. Then the automobile, suburban expansion, and the advent of land-use zoning radically altered this urban pattern, with single-purposeness carried to the extreme. The fad of collecting similar uses into "centers," produced the shopping "center," the industrial "park," the financial "plaza," and the cultural "center," all antithetical to city life. Yet successive generations of mixed-use complexes since World War II have clearly attempted to counter the idea of separateness, evolving from simple plazas defined by buildings to multi-level concourses animated with activity. In the process, the large open spaces have shrunk in plan and grown in section to become dramatic gallerias and covered courtyards. These projects have been universally designed as pedestrian islands separated from vehicular traffic, although many contain transportation elements as uses: subways, trains, buses, and parking. The current crop of projects is perhaps more successful than ever before. Unlike their early post-war antecedents, they are more truly mixed-use *buildings* rather than collections of discrete single-use structures. They are oftentimes smaller in scale and appear to offer an incremental building component for



Spatial diversity of mixed uses à la Piranesi

Author: Donn Logan, ELS Design Group partner, prof. of architecture, the University of California, Berkeley.

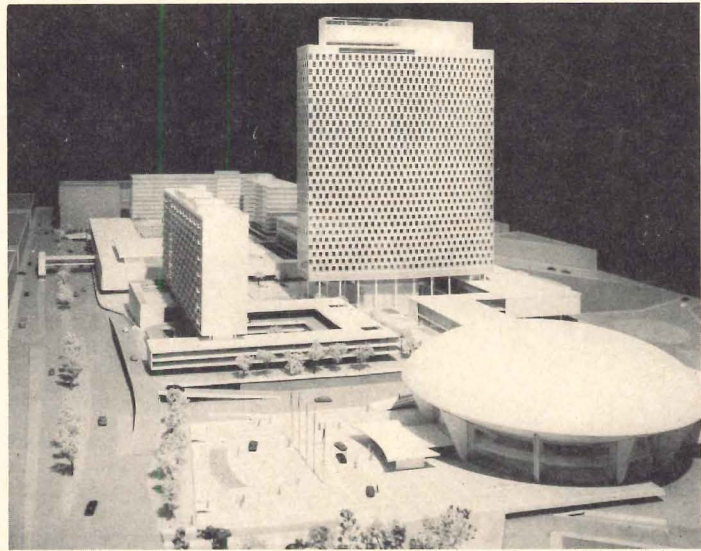
modern cities, a synergistic archetype combining many activities that once again can bring about the diversity and liveliness synonymous with urban life. In this fashion such buildings recall the multi-level city idea put forth by Leonardo da Vinci (illus. 2) as opposed to the more commonly applied urban models derived from Le Corbusier.

Early developments

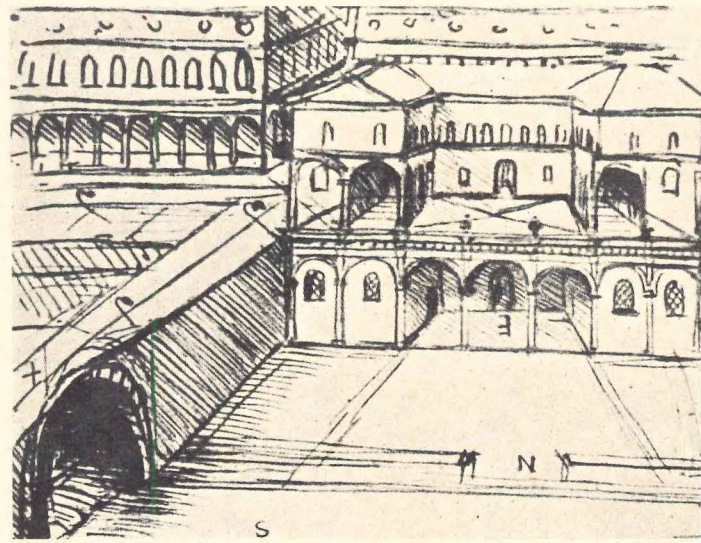
The Back Bay Center was not alone in pointing the way toward mixed-use prototypes. Edmund Bacon of the Philadelphia Planning Commission was one of the first to make creative use of the urban renewal process in the development of mixed-use, as P/A recently noted (P/A Apr. 1976, p. 46). The Bacon-sponsored Penn Center plan (illus. 3) done by Vincent Kling used the presence of underground railroad and subway lines to create an elaborate subgrade shopping concourse that extends beyond the boundaries of the site to connect adjacent hotels and office buildings. The composition is simple but effective; a grade-level plaza supporting a series of free-standing office buildings covers the pedestrian concourse, its shops, and train stations. The plaza is punctured with sunken gardens that bring natural light into the pedestrian areas. The scheme is an elementary but significant advance over the typical practice of composing isolated buildings on a plaza; the introduction of the shopping concourse produced a mixed-use complex that knitted together several blocks of downtown Philadelphia.

The Penn Center design was initiated in 1952 and completed in the early 1960s, the same time period that saw Place Ville Marie (illus. 4) designed and built. Similar to Penn Center in concept, this building by I.M. Pei & Associates is well known as the keystone of Montreal's famous enclosed network of pedestrian concourses. It features a 48-story cruciform tower and lower buildings on a plaza, below which shopping concourses extend to adjoining blocks under the streets.

Back Bay Center, Penn Center, and Place Ville Marie contain many of the ingredients found in later mixed-use designs. They were all conceived in the mid-1950s and can be considered the best of the first generation of post-war prototypes. The Back Bay Center concept has been the most influential, however, because of its broader range of



1 Back Bay Center model 1954.



2 Leonardo da Vinci's multi-level city.

3 Penn Center according to 1952 plan by Vincent Kling.



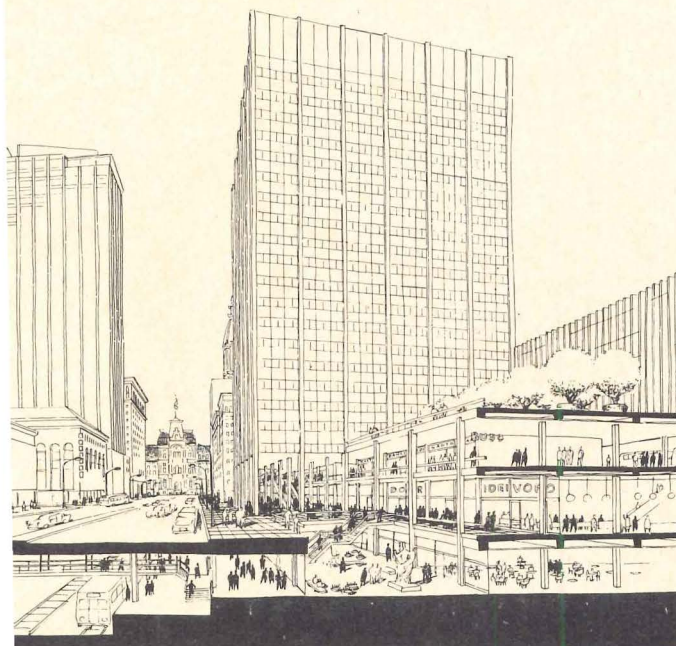


4 Place Ville Marie, 1966, by I.M. Pei.



5 Constitution Plaza, 1964, planned by Charles du Bose.

3 Willo von Moltke's 1958 plan for Market Street East.



Joseph Mollitor

Joseph Mollitor

uses in a more complex multi-level form. It featured not only a three-level covered shopping mall in suburban style, but also an urban arrangement of an open shopping street with offices above. The activity, however, takes place above the adjacent streets and an encircling ring road makes it difficult for pedestrians in the vicinity to use the center. While Penn Center and Place Ville Marie are simpler in composition and contain only shopping, office, and transportation uses, they offer an enduring contribution to modern urban design: the sunken pedestrian concourse that links several blocks of an urban core.

Less successful are the raised platform schemes like Constitution Plaza (illus. 5) in Hartford and the Golden Gateway complex in San Francisco. These more rudimentary concepts with parking tucked under their pedestrian podiums suffer like the Back Bay Center in being disconnected from their surrounding context. And they lack Back Bay's internal richness.

The concourse expanded

In the second generation of mixed-use prototypes (mid-1960s), shopping concourses became dominant as the form-giving armatures of the designs and the "platform look" receded. Not coincidentally, the same period ushered in the double-story enclosed-mall suburban shopping centers. Market Street East in Philadelphia, another product of Edmund Bacon's vision, serves as a good example. In its earliest form, as designed by Willo Von Moltke in 1958, Market Street East featured three shopping levels set back from the street to bring natural light into a lower level plaza (illus. 6). The composition of open spaces, office towers, and shopping buildings was uncomplicated and similar in character to Penn Center and other mid-1950s developments. The scheme did not strongly express the shopping activity in its architectural form and retained some of the vestigial notions of the platform-type solution.

The next scheme for Market Street East, designed by Rinaldo Giurgola of Mitchell/Giurgola in 1964, stamped a unified architectural concept over the long, narrow site (illus. 7). His linear office building with its triangulated structure and skylit mall was a powerful idea that underscored the shopping concourse as an organizing element. Unfortunately, it also produced a monotonous space and a development that could not easily be phased. In a third scheme by Skidmore, Owings, & Merrill (illus. 8), Giurgola's wide and high (90 ft) mall was replaced by a series of covered squares in the center of each block, connected under the cross streets. Thus the lower level concourse was retained but made more varied and less grandiose. This scheme had the beginnings of an incremental approach so important to successful developments of this scale. The latest updating of Market Street East by Bower & Fradley (illus. 9) increases the dynamic complexity of the mall spaces by further activating the upper shopping levels. In this version, one part of which is under construction, the shopping concourse has clearly become the generator of the design (illus. 10).

Other projects of the period display characteristics similar to Market Street East. The John Portman design for San Francisco's Embarcadero Center, for instance, has a three-level retail concourse topped with office buildings (illus. 11). Since there is no subway, the concourse begins at

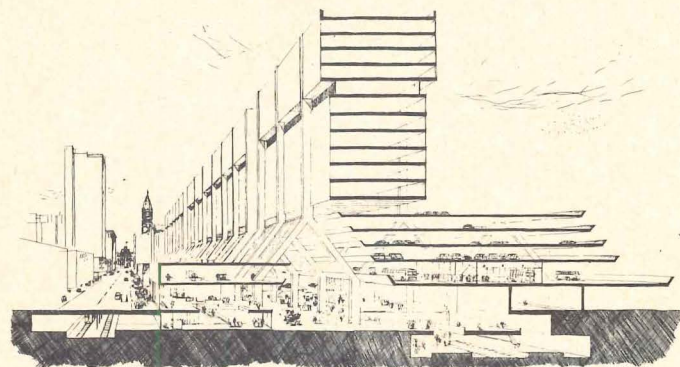
grade level rather than below. The second and third levels are connected by pedestrian bridges between the four blocks. With activity on the street as well as above, this project is a major improvement over its immediate neighbor, the Golden Gateway.

Cité Concordia in Montreal (illus. 12) is another concourse concept that owes a debt to the pioneering Place Ville Marie and Penn Center. Like these schemes it features a subgrade shopping level passing under streets (illus. 13). However, the concourse changes levels—sometimes forming two layers—and opens to a sunken outdoor plaza. The buildings vary in form and relationship, resulting in more strongly articulated spaces. Furthermore, the project, designed by Dimitri Dimakopoulos, has a residential component, a feature not seen in many urban mixed-use developments. The housing complements a program of offices, retail shops, a hotel, restaurants, and recreational facilities.

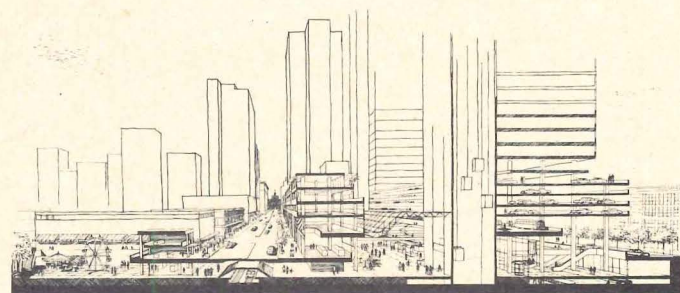
All three examples, Market Street East, Embarcadero Center, and Cité Concordia, typify the lessons learned from the earlier schemes. They advanced the state of the art through multi-level retail elements, highly integrated spatially and physically with other activities. Because of their potential to connect primary levels to other parts of the city, they form true urban fragments suggesting an integrated solution for building in the downtown core.

Grand spaces and compact forms

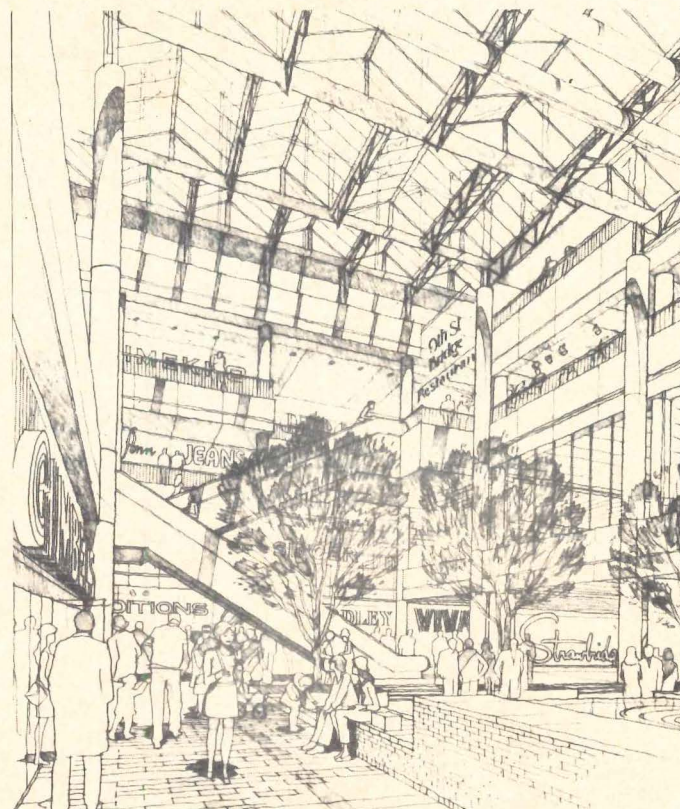
The latest trend in mixed-use building is the central space type, in which multiple activities are arranged on several levels surrounding a covered courtyard. The idea can be traced back to spaces like Milan's Galleria and the great halls of transportation terminals like Grand Central Station. The historical prototype most clearly analogous is the grand department store with the open well passing through several floors and roofed with glass, such as Samaritaine and Maison du Bon Marché in Paris. John Portman has now popularized the concept in his atrium hotels. Recently, the form can be seen in the new super regional enclosed mall shopping centers. Added ingredients are the multiple uses and the multiple levels that focus in on the atriums. Place Bonaventure could be considered an antecedent, though it lacks a central space. But it does have the single city block compactness and close layering of activities



7 Mitchell/Giurgola's 1963 plan for Market Street.

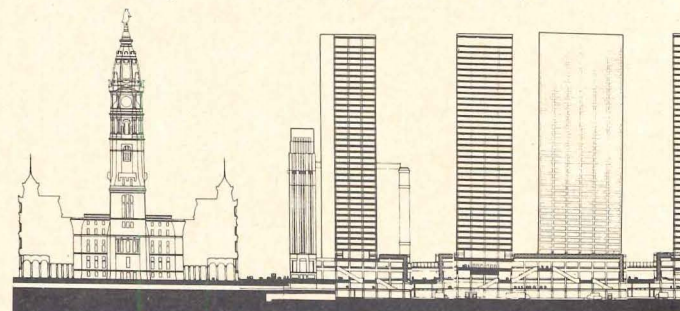


8 SOM—San Francisco's 1966 plan for Market Street East.



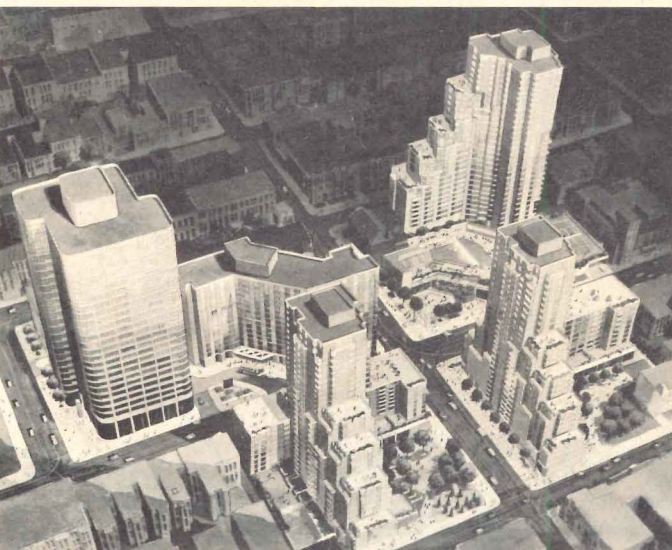
9 Bower & Fradley's current proposal for Market Street East mall.

10 Section through Bower & Fradley's Market St. East plan.





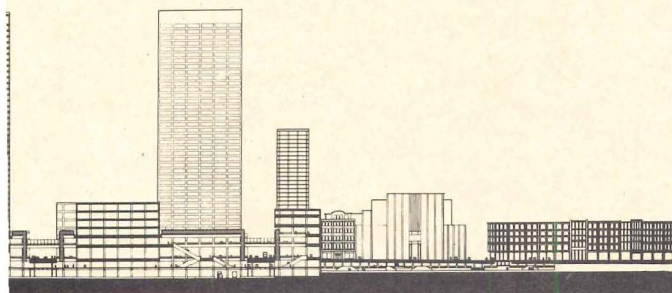
11 Embarcadero Center by John Portman, 1974.



12 Dimitri Dimakopoulos' proposal for Cité Concordia.



13 Shopping levels in Cité Concordia.



common to the type.

The recently built examples vary in their approach to the central space notion. In Broadway Plaza, in Los Angeles, (illus. 14), the top-lit space, simple in form, occurs only on two levels. However, it succeeds in integrating the hotel lobby and shopping areas. Generically, the design is similar to a single block of SOM's Market Street East proposal. The elegant IDS Center in Minneapolis, designed by Philip Johnson and John Burgee (illus. 15), is just beginning to tap the vitality inherent in mixing different uses. The beautiful Crystal Court welds various activities which, in reality, occupy four discrete buildings. Without the glass roof, the development would be a compositional arrangement of buildings around a square. The relationships between the activities and the general ambience of the place are transformed by the translucent all-encompassing roof form.

The new Omni International in Atlanta offers a more definite single-building image, with hotel and offices surrounding a huge central skylit space (p. 58). It is a literal translation of the department store prototype on an immense scale.

The Centrum, a complex slated for Los Angeles, is similar in scale and form to Omni, but also bears a close resemblance to Place Bonaventure. (Its designer, Ray Affleck, of Arcop Associates, worked on the Montreal project.) As at Bonaventure, the Centrum has a massive bulk that fills the site to the sidewalks. Also like Bonaventure, the hotel sits on top of the building around a landscaped roof garden. But here the similarity ends. With the Centrum scheme, the roof garden contains a large skylight that covers a 165-ft-high central space surrounded by four levels of retail shops, plus offices and parking. Although the scale is similar to Omni International, the sketch view (illus. 16) indicates the space may be more lively and varied.

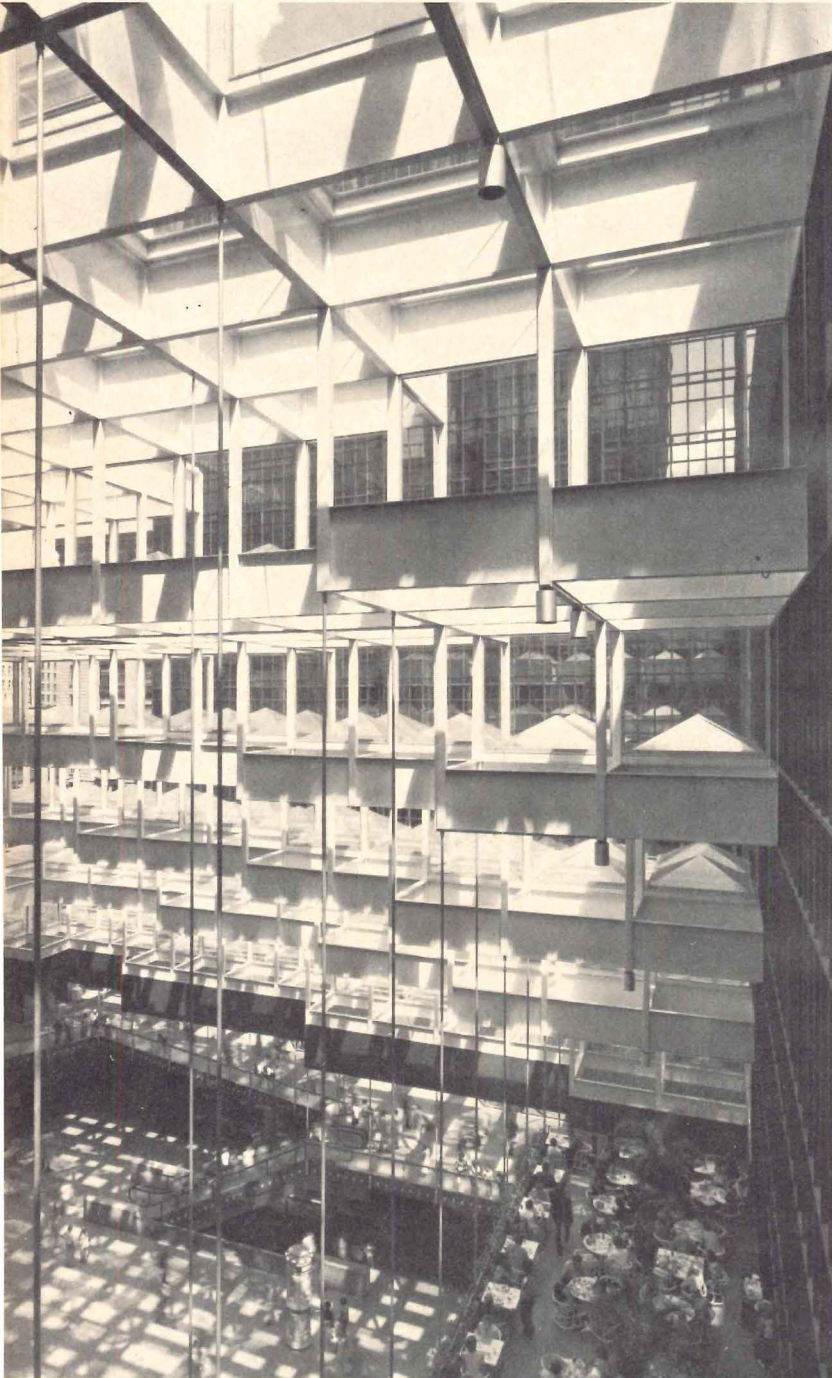
Kalamazoo Center in Michigan uses many of the same activities as Omni and the Centrum to achieve a more modest version of a mixed-use building. This building, designed by the ELS Design Group, is tightly organized around a small central court where various functions are aggregated to form a "city room" or gathering place (p. 64).

Mixed-use as catalyst

Because of the scale and location of most mixed-use complexes, they can seldom occur without some sort of public participation. They are simply too interdependent with city services and transportation elements, and require too many special considerations. The extent of the public involvement varies from joint ownership, as in the Kalamazoo Center, to public sponsorship during planning stages, as in Market Street East, to simple cooperation with the private sponsor. Some private firms undertake large projects on their own, as Place Ville Marie illustrates, where a developer (William Zeckendorf) worked directly with a large landowner, the Canadian National Railroad. Where public initiative is inappropriate or lacking, the private redevelopment group made up of local businesses or industries, such as Baltimore's Charles Center Corporation, has increasingly become a common sponsoring agent.

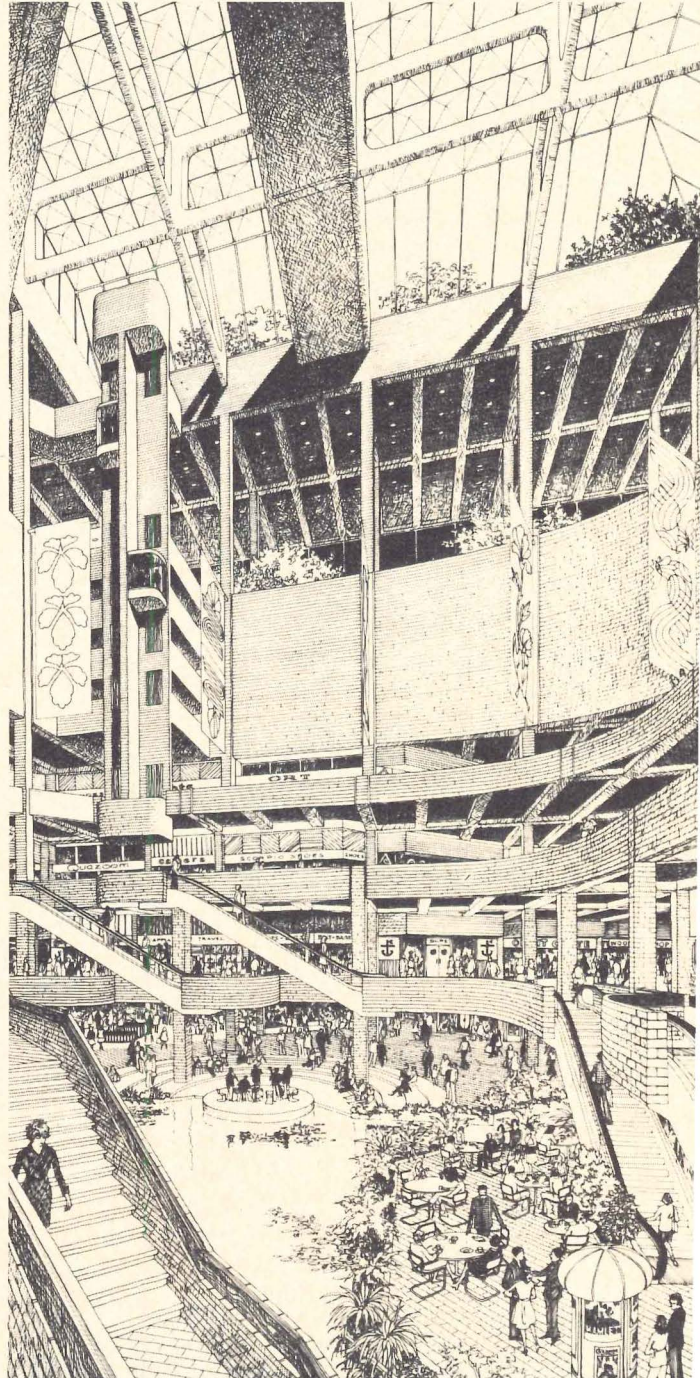
Whatever the sponsorship, the motives for building mixed-use complexes are the same: to improve downtown business. Even Milan's Galleria was a prescription for saving business in the city. Along these lines, mixed-use build-

15 Crystal Court, IDS Center 1974, Philip Johnson and John Burgee.



14 Broadway Plaza, 1973, Charles Luckman.

16 Projected mall for Centrum by Arcop Assoc. and Gruen Assoc.

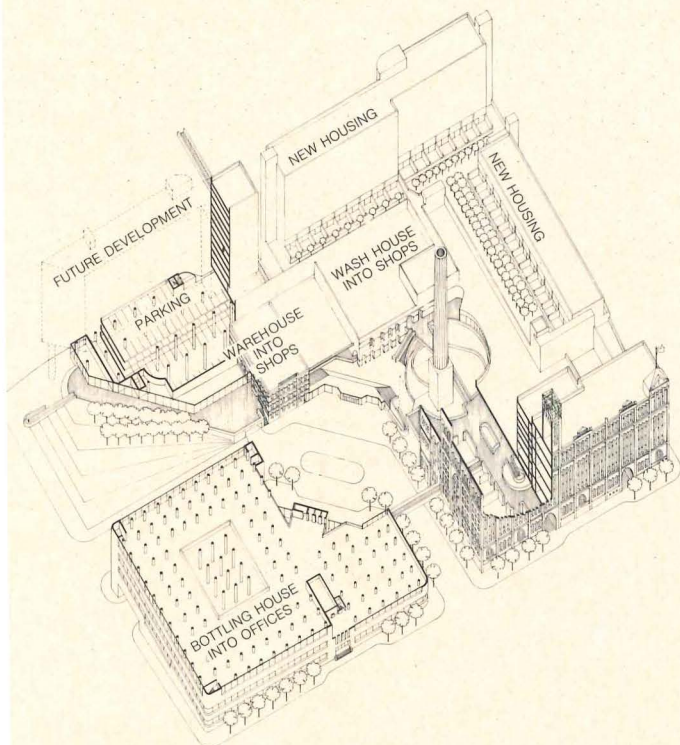


Hedrich-Blessing



John Fulkner

7 Diamond & Myer's Student Union housing, 1973, U. of Alberta.



8 The ELS Design Group's proposal for a Milwaukee brewery.

ings have several advantages. The mixture of activities usually extends the use of the facility, perhaps even around the clock, thereby prorating fixed operating costs and stimulating other downtown economic activity. From the public point of view this stimulation is critical. Because of their drawing power, the complexes catalyze spin-off activities ranging from minor beautification to major new investment. The advantages of mixed-use buildings may be greatest for small cities that do not have sufficient market demand for major new single-purpose facilities. Most towns have sufficient natural growth to justify a new downtown development where a small hotel, a few meetings rooms, shops, social services, or recreational facilities may be aggregated. These activities usually exist in scattered form throughout the area. The task for the architect may thus be one of identifying the various pieces that could be brought together in a mixed-use center and finding the means for doing so working with the city or developer.

Towards a vernacular

The projects discussed here are steps in the development of a modern mixed-use building type for cities. As paradigms, they have much to offer. But they also have limitations. One of the most serious problems is their coarse grain which tends to destroy the scale of surrounding neighborhoods as seen by Back Bay Center. Another issue is the loss of street life due to the internally focused galleries and courtyards. A whole city composed of these developments would have minimal pedestrian activity along the streets. A third issue is the lack of housing in most mixed-use complexes. If we are to make our cities work again, we need a mixed-use prototype that includes residential space. Student housing, normally less hampered by convention, may offer the best clues for incorporating housing into mixed-use buildings. A potentially influential idea is shown in Diamond & Myers' design (illus. 17) for student housing along a covered shopping street at the University of Alberta (P/A, Feb. 1974, pp. 46-51). New York's Galleria and Olympic Tower (P/A, Dec. 1975, pp. 37-51) are mixed-use urban components, with residential units that illustrate the impact that a zoning code can have on promoting mixed-uses.

In one project for Milwaukee, executed by the ELS Design Group, major existing brick buildings are being retained and renovated to ease the fit into the context (illus. 18). In addition to other uses, a large resident population will provide continuous activity for the complex. Institutional and social service uses can provide an added dimension to the usual list of activities, and should be given more consideration in the development of mixed-use programs.

It may at last be clear that urban mixed-use buildings are necessary. They offer urban lifestyle qualities that have been disappearing from American cities—qualities that were described eloquently 15 years ago by Jane Jacobs. Jacobs and other writers on urbanism influenced a whole generation of architects and planners to the extent that perhaps we have learned to deal with diversity as a design problem. Now the economic and political situation is working in favor of this diversity. Enlightened citizens, environmental legislation, special zoning districts, rising construction costs, and the energy crisis promote mixed-use. We have an opportunity to develop an urban vernacular that is good business as well as good urbanism. □

Acres of entertainment

Eight years after Hyatt Regency, Thompson, Ventulett & Stainback of Atlanta successfully has challenged John Portman on his own turf—and with his own kind of building.

Omni International is a bold move toward creating a business and convention center and family vacation resort in the heart of Atlanta—a city with a pressing concern over the exodus to its suburbs. The complex is an in-town response to the growth of regional shopping centers and office parks which have made downtown visits unnecessary for suburbanites. More emphasis has been given to its architecture than to its programmed attractions, which makes the Omni a rare specimen among the growing numbers of multi-use centers. The developers were adventurous—per-

haps audacious—because they began the Omni five years ago, without an overall plan, in a rundown western part of the inner city, against the prevailing trend of building to the north.

The 34-acre air rights development over railroad tracks literally emerged year by year, with fast track construction. The five separate components, in order of completion, are The Decks, a parking structure, The Omni, a sports coliseum, The Omni International, a multi-use megastructure covering 5½ acres, and the World Congress Center, a state convention and trade fair facility. Atlanta's Omni is the fore-runner of two others planned by the developer: a \$75 million hotel-retail complex in Miami, Fla., and a 17-acre, \$60 million megastructure in Norfolk, Va.

As a whole, the Atlanta Omni has embraced different combinations of devel-

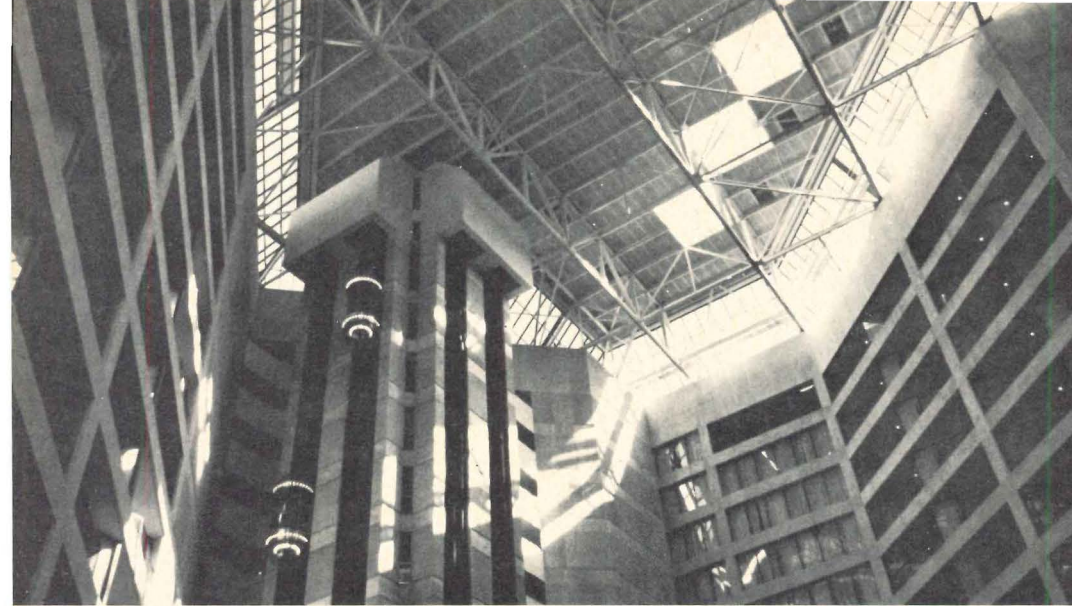
opers and financiers, and is built over a site owned by numerous property-holders. Amazingly, a constant factor has been the architect, Thompson, Ventulett & Stainback of Atlanta. The work of the firm is as diverse as the variables which surround it. To chief design partner Tom Ventulett, space, and its ability to withstand all that it must accommodate, receive high priority. Operationally, TVS is willing to relinquish some of its responsibility to the developer and his in-house professionals: it believes in the democracy of the team to the exclusion of any overt megalomania, and it eschews tradition to the extent it can save the client time, money, or ennui. The firm's power seems not to have suffered, as clients come back for more. Nor does TVS aspire to be architect-developers.

Clients are valued, and if a design "isn't worth what the client is paying for it, we

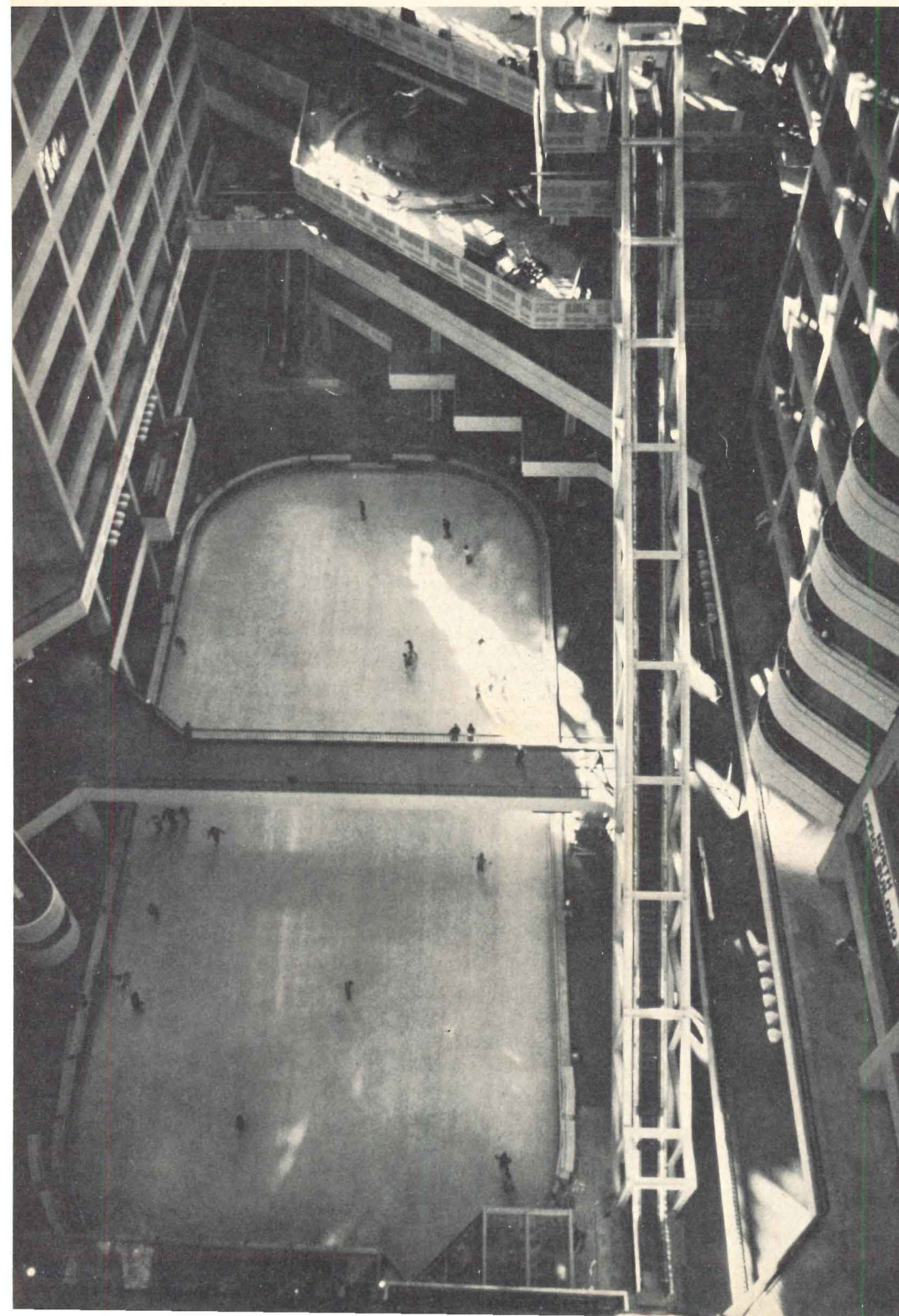
Entrance through office building (below) and view of hotel (opposite) at east end of 11 million cu ft space; two-level Presidential suite, top of tower.







Hotel elevators (above); to left, balcony niches for individual guest rooms. Krofft World space (below), ice rink, and 8-story escalator; at either side are office suites.



want it changed," declares Ventulett. Despite the attraction of large government projects, TVS is convinced that better, less costly public facilities should be produced through private developers.

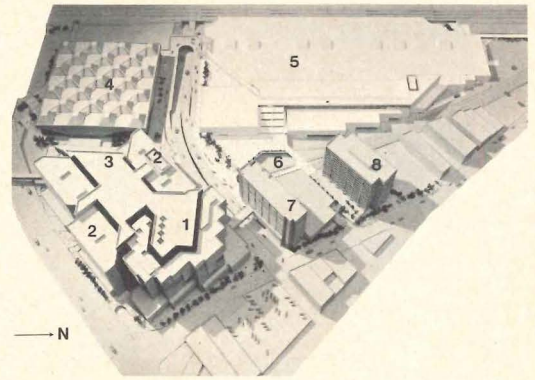
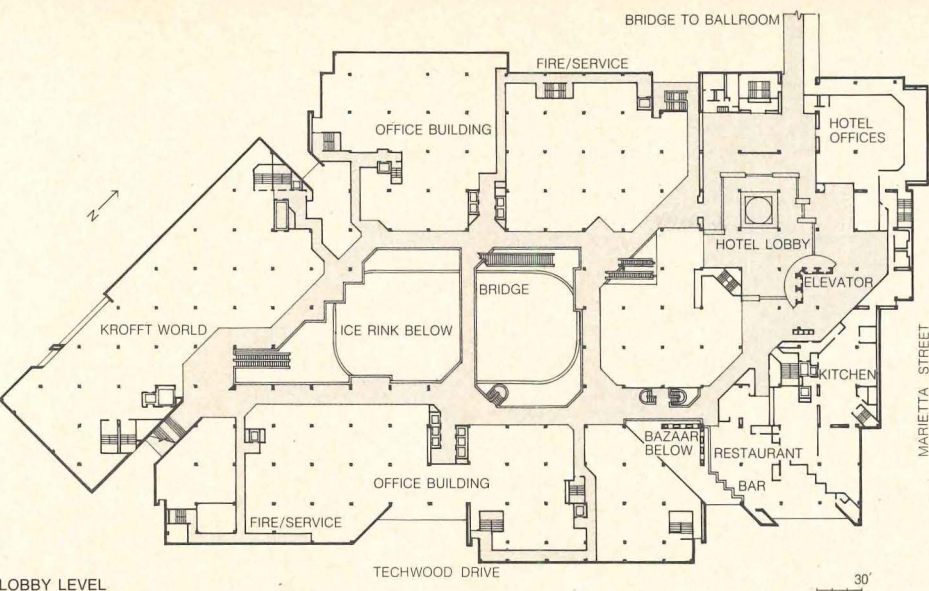
TVS was only a year and a half old in 1969 when it received the \$17 million Omni coliseum commission from Atlanta developer Tom Cousins. The Decks facility for 2000 cars was actually the first structure in the complex to be built on the site, once the railroad hub of the southeast. The subsequent development, except for the World Congress Center, is 23 ft above the tracks, which still are used for hauling freight. The Omni arena, seating 17,000, was the first building on the site. Initially, its hulking shape dressed in weathering steel offended Atlantans, who were used to pristine buildings clad in white Georgia marble or to Portman's slender towers.

The subsequent acceptance and success of the Omni coliseum—attracting two million visitors annually—is attributed to its liveliness of design (glass corners, and situation of the arena on the diagonal to allow maximum prime seats) and to its frank accommodation of user needs. Encouraged, Cousins teamed with Jacksonville, Fla., developer Maurice Alpert, forming International City Corp., headed by Alpert, to begin the \$90 million Omni International megastucture which contains two 14-story office buildings, a 500-room hotel, an Olympic-size ice rink, and a year-round indoor amusement park. Originally, the amusement park was to be a trade pavilion, but plans changed when the opportunity appeared for a \$35 million, state-owned World Congress Center on adjacent property, donated by Cousins. The Congress Center will open in September.

The amusement center of the Omni has been a joint development of International City Corp. and Sid and Marty Krofft, European-tradition puppeteers, and the appeal of the attraction will be to all ages. To ensure the success of the Omni as a family entertainment center—drawing residents as well as out-of-town visitors—Omni International includes six mini-cinemas, 230,000 sq ft of retail stores; and 10 restaurants, among them a West Coast-style singles hangout with driftwood furniture and a menu of health and gourmet fare.

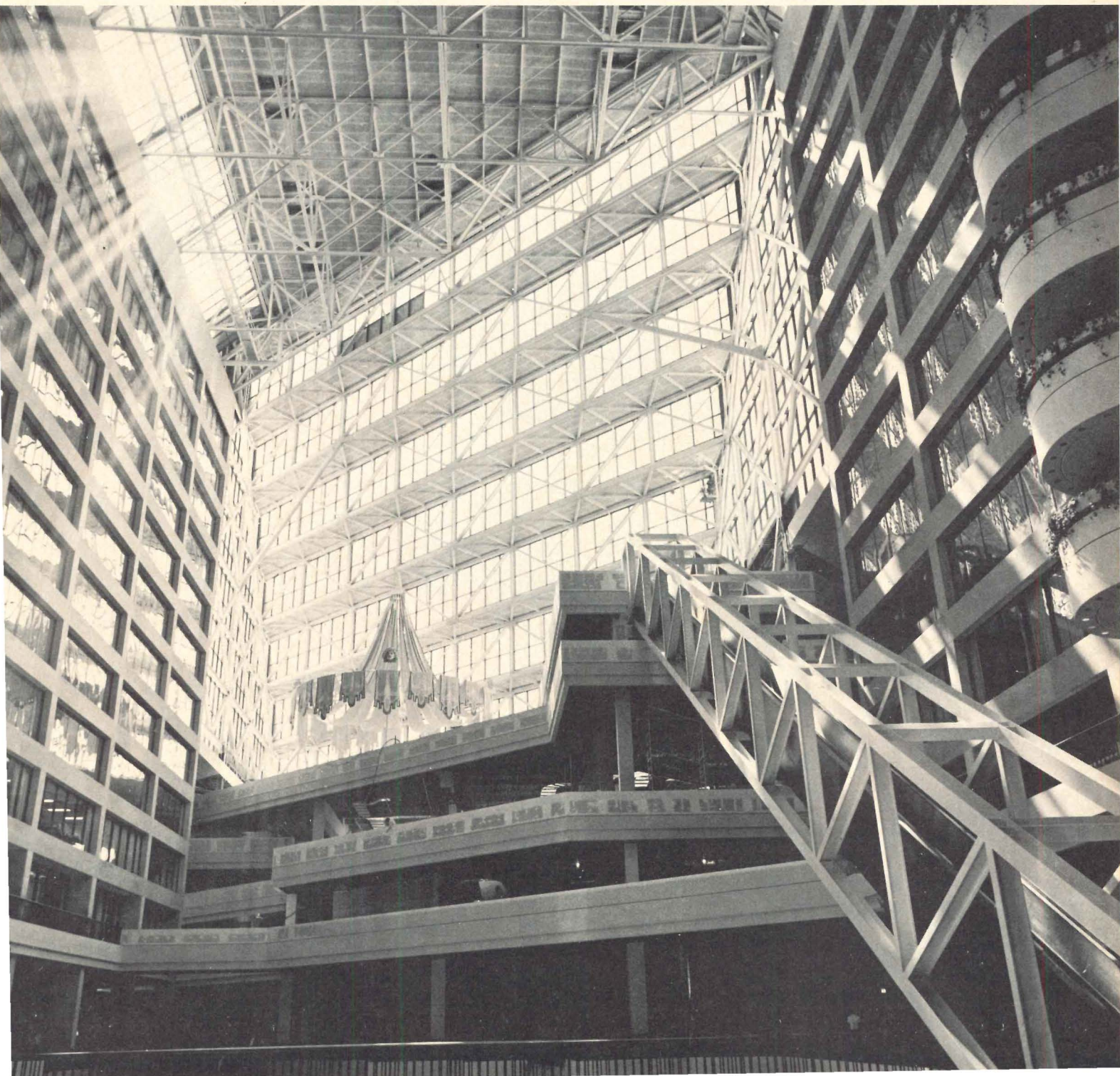
The luxury hotel, which opened in December, has had capacity days. The office towers, with 500,000 sq ft of rentable space, are one-third full, an acceptable rate in a soft office market, and last year the development secured two of the four major leasing deals in the city—despite having the most expensive office space.

The Omni is five blocks from John Portman's Peachtree Center; four blocks from Five Points, the financial district; two blocks from Rich's, largest department store in the Southeast; and 10 blocks from the state Capitol. While its railroad gulch location has been a neglected district, the Omni offers its tenants the best views in town: they see the Atlanta skyline—including the impressive Peachtree Center (and



Omni International with hotel **1**, offices **2**, and Krofft World **3**; The Omni arena **4**; Georgia World Congress Center **5**; ballroom and meeting rooms **6**, proposed hotel **7**, and office **8** expansion.

Indoor fantasy attraction, The World of Sid & Marty Krofft, being installed in 8-story space beneath braced frame glass roof. Entry reached by 205-ft. escalator.



Omni International



TVS-George Blevins



Beyond curtains (above, left) is bedroom balcony and the Great Space (center); hotel lobby (right). Plaza connects Omni International (below) with the



Plaza)—not to mention the 11 million-cu-ft atrium of the Omni.

As if the enclosed Great Space (including an eight-story-high escalator to The World of Sid & Marty Krofft) were not enough, Washington, D.C. sculptor Rockne Krebs has been commissioned to create day and night light happenings. "Atlantis," his daytime piece, consists of 700 prisms placed strategically on the Omni's skylights so that shafts of light are split into the color spectrum and splashed against the buff limestone walls of the Great Space. By night, "Canis Major," a laser directed from the area of Krofft World, will beam towards the hotel's elevator core where it will explode into smaller bands of light.

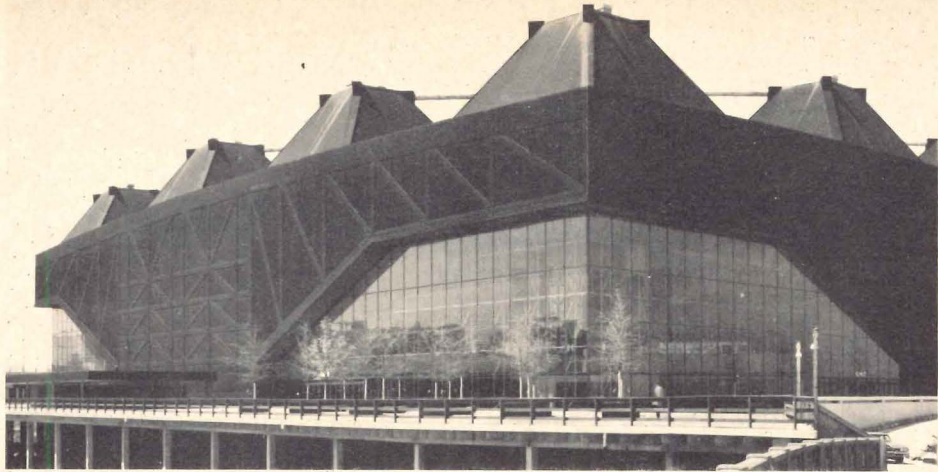
The most appealing aspect of the hotel is that half its rooms have carpeted balconies overlooking the Great Space. It seems the perfect balance between being drawn as spectator to intensely public areas and the desire to be alone. Bathrooms, equipped with telephones, are spacious beyond the norm. Guest rooms are placed along the double-loaded corridor at 45 degree angles so that a variety of suite configurations is achieved. Entrances are set in niches marked by overhead recessed lights so that the view along the otherwise plainly finished hall is a pattern of light and shadow.

The color scheme of the hotel is an unrelenting brown, and more brown, in every shade and tint. Grand spaces—the lobby and ballroom—are somewhat underplayed by the ubiquitous hue even though they compare more than favorably with similar rooms in other hotels.

Public spaces of the office towers are considerably less dramatic, even though developer Alpert has provided a Meditation Garden in a small alcove off the elevator lobby of the south tower. One disturbing element—from a programming point of view—is lack of check-in space for coats, packages, or whatever an individual may want to park while staying indoors for a day of shopping, dining, and entertainment.

The \$14 million Krofft World, which anticipates a million visitors the first year, will create a fantasy environment in which visitors are expected to stay as long as four hours. Carried by a 205-ft escalator on a two-minute ride to the top of the terraced pavilion, visitors will wend their way down eight levels catching such rides as the air-supported Crystal Carousel and giant Pinball Machine, and walking the incredible streets of Lidsville to the 1000-seat puppet theater. Along the way, they will look across the Great Space toward the hotel at the far end, to office towers on either side; or down to the ice rink below. To the rear is the waffle-roofed Omni arena, seen through a self-supporting glass wall nine stories high.

At one point the usually optimistic Maurice Alpert (whose concept of the Omni complex is summarized in his frequent use of the word "synergy"), once admitted that "It's tough to sell something that can't even be visualized." Now Omni Inter-



Bill Barnes

The Omni rises next to rail yards; arena is placed on a diagonal for maximum prime seating.



Clyde May

national is in sharp focus and even trades on the fact that the mélange of activities is not hidden but exposed by the very structure that contains so many attractions. [Ann Carter and Antonin Aeck]

Data

Project: Omni International, Atlanta, Ga.
Architects: Thompson, Ventulett & Stainback, Inc., Architects, Atlanta, Ga.; Marvin Housworth, AIA, associate in charge; George Blevins, Jere Williams, AIA, Bryce Weigand, Roger Neunschwander, John Wyle, AIA, Wayne Swanson, project architects.
Program: to create a major mixed-use development in the city center.
Site: leased air rights above railroad tracks in deteriorated area downtown; location for a future rapid transit station.
Structural system: different types include ice rink level: steel plate girder platform spanning railroad tracks and supporting all other buildings; hotel and office buildings: steel frames; Great Space west wall: independent, self-supporting braced frame structure, an extension of the roof, supporting nine stepping roof trusses that span 168 ft. Hotel and office building interior walls support 15-ft-deep, white-painted Warren trusses spanning up to 180 ft, chosen for ability to retain uniform appearance at varying lengths.
Mechanical system: four air handling units distribute heated and cooled air to "blanket" the Great Space while four other units supply air

downward around the periphery; vents in roof draw smoke in the event of fire. Total heating and cooling of the building not penalized by the Great Space, which buffers hotel and office building interior façades from outside extremes.
Major materials: framing of structural steel and cladding of Alabama limestone, smooth finished, sand blasted, or rilled; weathering steel for stepping roof and other elements; bronze and mirrored insulating glass, exterior; metal paraline ceiling in retail areas; quarry tile and carpet in public spaces; dark bronze anodized aluminum handrails and window frames. (Building materials, p. 122.)
Consultants: Jimmy H. Klutz & Associates, landscape; Genevieve Arnold Alpert of Arnold Galleries, Robert A.W. Jones of Omni International Hotels, Inc., and Frank Nicholson of Jutras Nicholson, hotel interiors; Nichols, Bray, Carter & Seay, Architects, Inc., ice rink concession and bazaar interiors; Lazenby & Associates, Inc., mechanical engineers; Prybylowski & Gravino, Inc., structural engineers; Rosser White Hobbs Davison McClellan Kelly, Inc., electrical engineers; Boner Associates, acoustics; Schirmer Engineering Corp., fire protection; Rinaldi & Associates, Ltd., graphic designers; One + One, design consultants.
Contractor: Ira H. Hardin Co., Atlanta, Ga.
Client: International City Corporation, Atlanta.
Costs: \$43 million budgeted; \$50 million, actual construction. Building types too varied to give per sq-ft cost.
Photography: Alexandre Georges, New York, N.Y., except as noted.

Urbanity comes to Kalamazoo

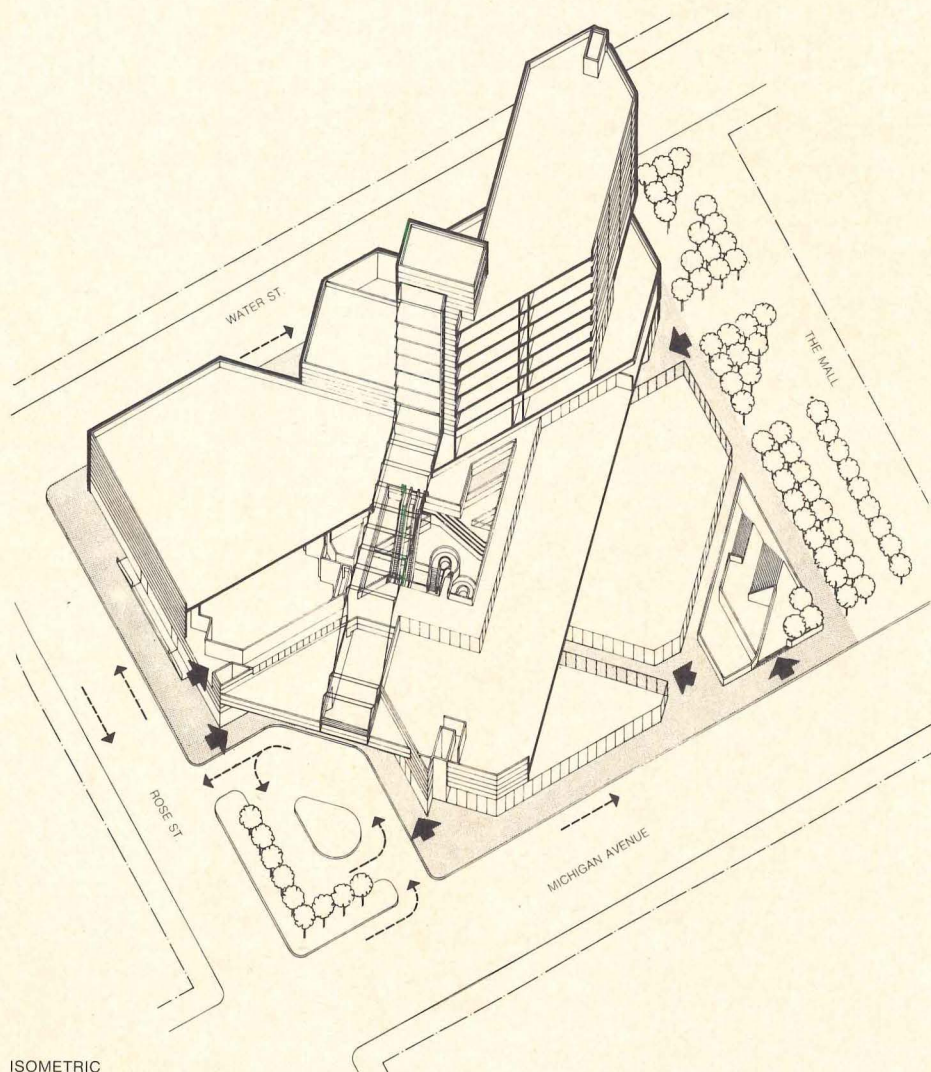
A city doesn't have to be Chicago, New York, or Atlanta to attract the convention business. Nor does it have to be big to try mixed-use centers. But it had better be daring, imaginative, and smart.

One of the serious considerations to be confronted in the design and construction of multi-use centers concerns size and scale: The centers have to be big enough to foster a mixture of uses, but their design also has to be geared to the size and texture of the surrounding community. In other words, make them big, but not *too* big. The ELS Design Group has carefully fit Kalamazoo Center to the scale of Kalamazoo, a midwestern city of 93,000 people. Already, the convention facilities in the 362,000-sq-ft center are completely booked for the rest of the year. Hotel and restaurants are busy, discotheques hopping (at night), stores doing a very brisk business.

Accommodating the center to the realities of the medium-sized city required a keen economic, as well as architectural, sense. Mixed-use centers are still rare in this particular context. Because this project represents the unique and extensive participation of private developers, government, and interested citizens, its success was all the more significant. Its physical design responds to the needs and desires of these various interest groups behind it, as well as to the public who will be attracted to it. In this regard, siting and design were as critical to the solution as size and scale.

Placement

Placed diagonally on its two-acre site, Kalamazoo Center's entrance is oriented to the main street and to the town's older central square to the southwest. Because of the diagonal alignment, the center also inflects at the opposite end toward the Kalamazoo Shopping Mall, a four-block pedestrian promenade of shops and department stores that dates back to 1958. Its entrances and organization draw people through the building past shops



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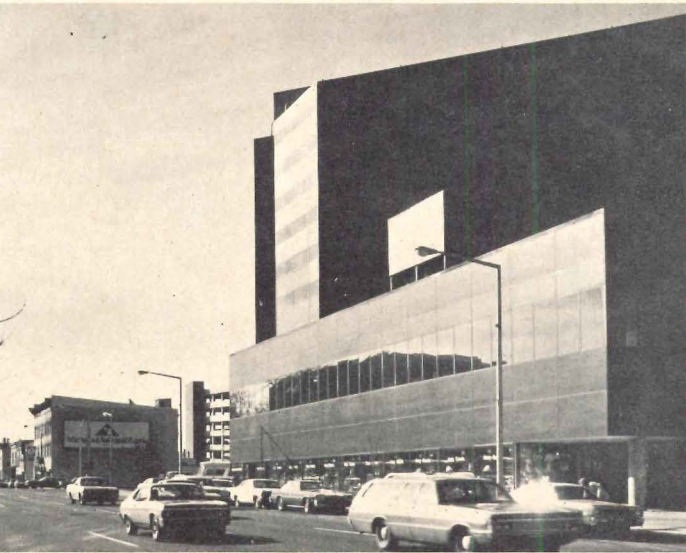
and cafes to the main three-level skylit atrium. From the main entrance they can enter onto the second (street) level; from the mall they descend a terraced plaza to the lower level of shops; and from the adjoining garage they enter the atrium's third level via a skyway over the street.

Since the Kalamazoo Mall had already established the idea of a pedestrian environment downtown, the center's location could take advantage of the flow of people and reinforce that activity. With its massing—a three-level base building containing atrium shops, restaurants, recreational

and conference facilities, and the seven-story office and hotel tower above—it is neither too forbidding at the street level, nor too tall.

Perception

While configuration, placement, and massing relate the building to the surrounding context and tie it into the existing urban matrix of activities and movement patterns, the choice of exterior cladding could be debated. ELS had thought about glossy finish porcelain-enamelled panels, but a dull matte finish seemed more advisable.



Kalamazoo Center's entrance (below); view down the main street (left); and elevation fronting the Mall (right).



Kalamazoo Center

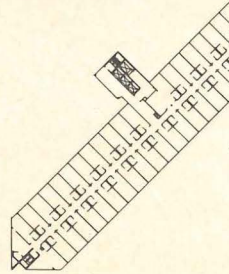
Given the limited construction time, architects feared that defects would be constantly plaguing them. (They were given 26 months from the start of design to the end of construction.) But reports indicate the public does perceive the building's opacity as forbidding. The high-tech image the center conveys seems out of place next to 50- and 100-year-old not-too-slick brick structures. On the other hand, the building doesn't *intrude* or overpower the landscape: Although being definitely noticeable, it does not scream for attention. This blending of two values—nonassertion and visibility—is important and does work, albeit somewhat ambiguously.

While a greater transparency would better convey the mix of uses in the center,

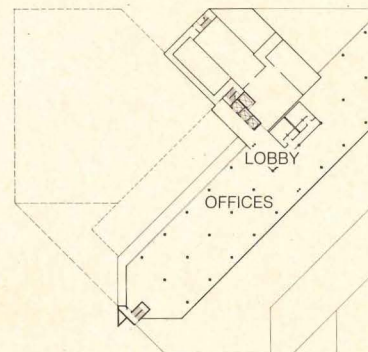
the dark, quiet exterior enhances the surprise of the interior. The three-story-high central space is filled with a maze of movement as stairs and escalators convey visitors through various levels. With its recall of Fritz Lang's film "Metropolis," where bridges fly across the streets linking buildings, it is no wonder ELS refers to the interior space as a "city room." People can meet, greet, look at each other, and look at shops. (The architects studied sight lines extensively to guarantee that stairs and escalators would not obstruct views of stores.)

However, one misses the dramatization of the core of space that John Portman or Roche, Dinkeloo give to their atriums. Rather than placing the skylight over the actual three-story-high well of space framed by escalators and stairs, ELS ran the skylight over the stretch of escalators extending from the entrance up to the sec-

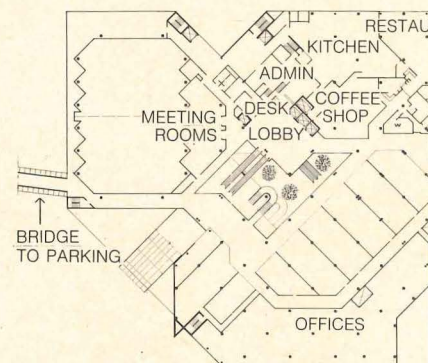
A three-story-high space inside is framed by stairs, escalators, elevators that feed onto various levels.



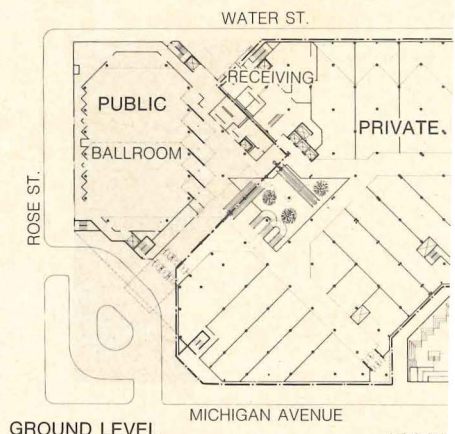
TYPICAL HOTEL FLOOR



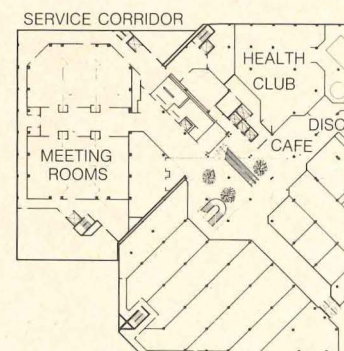
THIRD FLOOR



SECOND LEVEL



GROUND LEVEL



PLAZA LEVEL

ond-level hotel lobby. The progression upward is dramatic, counterpointed by the different levels channeling movement in varying directions. But the terminal point of all this procession is a rather unassuming hotel lobby, a not-so-dramatic climax to the active skylit ascent.

The columns down the middle of the escalators cut down the clarity of the space as well. Yet there is a good reason for those columns and the general parti—a reason having to do with the complex form of ownership of the center. The multi-use center is structurally two buildings, encased in one skin and separated by an expansion joint. The city owns and operates the part of the building to one side (see plan) of the escalators (including one row of columns and one escalator); Inland Steel Development Corporation owns the other. In this experimental venture undertaken jointly by private and public interests, legal consideration finally prompted the solution in which the two entities were created, physically united by the atrium.

Past plans

The design solution reflects not only the intriguing history behind the center but also the steadfastness of the developer-city-citizen interaction—and the architects' own ingenuity.

In the late 1940s the city of Kalamazoo began talking about a civic center. By the 1950s they also began to recognize the danger suburban shopping centers were posing to the vitality of downtown. Victor Gruen was commissioned to devise a downtown plan in 1958. Gruen's scheme, based on the notion that an enjoyable shopping experience was intrinsic to attracting people back downtown, nevertheless implied a major operation usually achieved with urban renewal. Kalamazoo citizens, however, were not particularly eager for federal help and eschewed the urban renewal approach. Instead, they proposed that the city close three blocks of a major street and transform it to the first downtown shopping mall in the country. (In 1971 the mall was refurbished and updated in its appointments and now one additional block has been added.)

The idea for a civic center was never forgotten as a means of truly stabilizing the whole downtown area. Yet the citizens' group realized it would have to relate the civic center to the land uses in downtown (hotel, retail) to make it work. Fortunately, the president of Inland Steel Development Corporation (ISDC), David Carly, was looking for just such a multi-use undertaking for Inland Steel's new development operations. He had gone to Kalamazoo College, where he studied with political science professor Elton Ham, a long-time promoter of the civic center idea. Ham and Carly began developing a concept and talking to manager James Caplinger and director of City Planning Bruce Brown (now City Manager).

Several sticky wickets had to be passed through however. While Inland Steel liked the idea of a multi-use center, it was not

overly eager to take inordinate risks and pay heavy taxes. On the other hand, the city could not afford to build its own civic center and needed ISDC to enter the picture. Citizens also felt that a developer would best know how to create the mix.

At first, a solution was considered in which Inland would construct a multi-purpose commercial building on air rights leased to it by the city. However, the city planned to use general municipal obligation bonds to finance the center. Just at that time, a court case in Detroit denied the use of bonds to finance a partially private project. Air rights transfers from public to private parties were also being questioned. ISDC and the city grew wary of these two methods for getting the center off the ground.

After studying the project in more detail



A long skylight dramatizes entrance (above) and ascent by escalators (below).



Kalamazoo Center



The atrium view looking up toward the skylight (top); from the second level near the bridge (above); and from the cafe on the plaza level (bottom).

and talking to the architects Inland Steel had brought in, the two decided they would buy and own the land on the block separately and build two distinct though connecting structures. Fortunately, they agreed on one architectural firm—ELS.

ISDC arranged to buy about two-thirds of the land, pay full taxes, and sought no zoning variances. The city contracted to buy the rest, relying on private donations to finance land, building, and equipment costs to avoid the delays implicit in a bond issue decided by public vote. The Kalamazoo civic groups in the long run provided \$3 million of the almost \$4 million the city had to cough up for its share. Revenue bonds were used for indirect costs associated with the project, such as expanding the adjacent 357-car parking garage to accommodate 1050 cars, and linking the garage to the center via the skywalk.

Still, the elderly who lived in the existing hotel and apartments on the block had to be relocated. The city undertook a sensitive relocation procedure in which people would be helped to find new residences with a follow-up social service program including medical attention. Also, the Kalamazoo Development Corporation, formed to acquire land options for city and developer, hadn't been able to acquire a critical parcel before the center went into construction. When the owners finally agreed to sell, ELS had to change the design—in midstream, so to speak.

Other such minor changes made during construction months included adding an extra floor of hotel rooms. The speed of erection enabled the developers to buy materials months before they began escalating in price. Inland Steel products were not used, simply because the contracts went to the lowest bidder. Economies had to be made in the interior finishes and in certain "extras" such as closet doors in the hotel rooms. The aim was to keep the building costs low enough so that hotel rates could be competitive in the area (approximately \$21 per night).

Post-design appraisal

Naturally there are always things architects and clients would do differently after everything is said and done. ELS feels that adding two more floors of housing on top of the hotel could have re-introduced a residential element into downtown. The city, for its part, would like to have had a large exhibition space to supplement meeting rooms and the grand ballroom meeting hall. Larry Pearce, formerly supervising the project for ISDC (now President of U.S. Real Estate Equity Co.), suggests that the average store size is too large for the kind of boutique operation the Center hopes to attract. He also thinks that the hotel lobby might have had more visibility from the street and wonders if the public mall space is too great in comparison with the leased public space. (Obviously the concerns of each party are peculiar to their own values and interests.)

The details regarding the operation and maintenance of this siamese center re-

quired exhaustive definition by the two parties. Cleaning, management, and security have all been subject to intensive debate. Unexpected, too, was the public's appropriation of the mostly privately owned atrium space. Most of the visitors regard it as public turf—much like a street. The public mix works well, except in cases where conflicting uses crop up—a rock-and-roll party in a room rented from the city, for example, check-by-jowl with a very staid wedding party in ISDC's hotel. Balance is crucial.

Nevertheless, the city is doing fantastically well with its convention center—already receiving bookings for 1981. Similarly, the hotel benefits. Only 20 percent of the shops have been leased so far, however, and the office rentals are lagging. One of the reasons the shop rentals are slow is ISDC's desire for "quality" stores—the kind of specialty shops found in nearby Chicago and Detroit, but not so often in Kalamazoo. A design committee, including the architects, oversees the design of the stores to ensure that the tone of the center is retained. In fact, ELS has designed the Knapper Lee shop and The Book Store.

All in all, Kalamazoo Center is a very important prototype on several different levels: It shows that it is possible for city governments and private developers to come together in an enterprise that will benefit both. It demonstrates that a smallish multi-use center can successfully spur and/or reinforce the rejuvenation of the downtown core of a medium-size city. And it illustrates that architects who are interested enough to learn the developer's language can create the opportunity to apply their architectural and urban design expertise. No one needs to point out the necessity of these abilities in this economic climate.

Kalamazoo Center may not be a perfect prototypical solution, but then prototypes rarely are. As such, it can be refined and polished for future application. It presents a learning model, one which ELS has already been using as it undertakes new multi-use projects in Flint, Mich., Elkhart, Ind., and Milwaukee, Wis. Unlike other multi-use centers, Kalamazoo Center doesn't strive to create a playland atmosphere to seduce consumers into its recesses. Nor does it simply settle on the shopping center concept with its heavy reliance on compulsive consumerism to generate its vitality. Rather, Kalamazoo Center brings together two strongly traditional urban forms: the town square and the market place in their 20th-Century manifestations (shopping center and convention center) to create urbanity. This attempt to bring urbanity to a middle-class suburban America, until now totally alienated from such a concept, is important. It may be difficult to define what constitutes "urbanity," but this much can be said: It begins with a mix of people, activities, and spaces that engenders a sense of coming together, of energy, excitement. Without an appreciation for this quality by the larger public, the cities of America have little hope for their future. [Suzanne Stephens]



The bridge to garage inside and outside.



Data

Project: Kalamazoo Center, Kalamazoo, Mich.

Architects: The ELS Design Group, Berkeley, Calif. and New York, N.Y., Michael Severin, project architect; and George Duncan, project coordinator; Robert Grether, William Adams, design team.

Client: city of Kalamazoo, James Caplinger and Bruce Brown, city managers; Inland Steel Development Corporation, a subsidiary of Inland Steel Urban Development, a subsidiary of Inland Steel, Lawrence Pearce, vice president.

Program: a 362,000-sq-ft mixed-use center for a small Midwestern city (pop. 93,000), to contain a convention center (60,000 sq ft), retail facilities (72,000 sq ft on three levels with swimming pool, health club, and discotheque in some of the space); a 288-room hotel; 26,000 sq ft of office space. Garage next door provides 1050 spaces.

Site: two acre block adjoining mall downtown.

Structural system: poured-in-place reinforced concrete frame and footings; precast concrete floor (ballroom level) elsewhere concrete flat slab or steel decking.

Mechanical system: forced air, steam boilers, through-the-wall heating and a/c units, baseboard radiation units. Separate systems for shops, hotel, conference rooms.

Major materials: reinforced concrete, porcelain-enamelled insulated wall panels, ceramic tile and quarry tile flooring, storefront windows, tempered glass in aluminum frame windows for skylight. (Building materials, p. 122.)

Consultants: Kingscott Associates, structural and mechanical engineers (city), Arnold & O'Sheridan, structural engineers (private); R.I. Anderson mechanical engineers (private). Marilyn Hovda, interior designers (city), ISD/Chicago, interior designer (private). Design, Etc., Architectural Graphics, graphics and signage. Miller-Davis Co. general contractor.

Costs: \$16 million total (\$12.5 million paid by ISDC; \$3.4 million by Kalamazoo) \$30 sq ft.

Photographs: Balthazar Korab.

A sign of the times

Big or small, garish or subtle, signs tell us where we are or where we want to go, while at the same time conveying something about the character of the place.

Whatever else the art of architectural graphics may be, its primary purpose is informational, either as a system or as a single element, giving identity to a place or directing a person to where he wants to go. But being informational does not mean that it must be dull, pedantic, boring, unimaginative, or even Helvetica Medium. Nor does it mean being assaulted with the visual chaos which ensues from the competitive commercial marketplace along the highway.

Inherent in the nature of signs, however, is one basic conflict: in their role as identification they must draw attention to themselves without allowing the attention-getting device to interfere with the clarity of the information being conveyed. Establishing a basic clarity and, at the same time, transcending the purely informational aspects to create something that becomes more, requires a delicate balance that separates graphics which add to the quality of our experience of a building or place from the cardboard and tape patch-up or other remedial afterthoughts. Ultimately, if architectural graphics are to succeed, their conception must be part of the overall design process. Fortunately, the rather limited vernacular of modern architecture does not carry over into the realm of graphics—except insofar as Helvetica as a type face, elegant in its proportions and geometrics, has become the beginning and end-all counterpart to the glass and aluminum curtain wall.

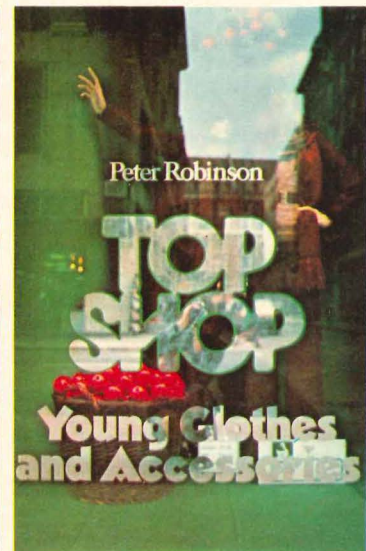
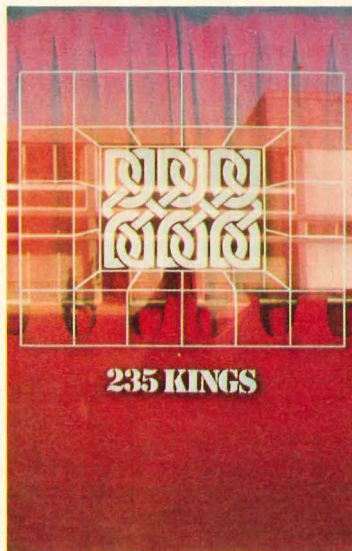
Since all signs deal with information and, consequently, words or symbols, most signs embody typography as a prime design element. The number of type faces now available and the diversity of styles offer an incredible range of choices. Some faces appear so similar that only to the trained eye are the differences in proportions, weight of letterforms, or spacing of characters apparent. Fortunately, too, for the designer, most type styles do not have the same eclectic qualities usually associated with styles of architecture; the selection of a particular type face involves finding a face whose character of letterforms is appropriate to the particular word being spelled or to the image being projected. Sans serif faces (mostly Helvetica and several of

its derivatives and predecessors) have become more extensively used than the more traditional serif faces in the last decade, partly because of the cleanness of line, the clarity of letterforms, and the obvious similarity of character between the type face and the building forms on which it is used. But, with the exception of the three signage systems shown on the last two pages, most of the other signs gain their character without sacrificing clarity, using faces other than Helvetica.

As diverse as the type styles are the ways in which signs are treated in relationship to the building or place. At one extreme is the commercial strip, with each sign bigger and brighter than the next, yet spread out in such a thin layer that their cumulative effect, the very thing which makes Times Square work, is lost. At the other end of the spectrum are signage controls so strict that, in an effort to avoid visual chaos, there is no vitality or identity at all. Shopping malls, in particular, seem to suffer from this syndrome. With each storefront identical to the next, the only opportunity for individuality or character is in the sign, but it is this one element of variety against the blandness of the rest that causes the sign to become an aggressive element in this context. Yet, the efforts at sign control instituted in some malls have produced nothing more than an overall, uniform neutrality. In his design for a village center at Columbia, Md., Louis Sauer understood the scale at which variety must exist to create a place which is visually stimulating. He avoided the drawbacks of other solutions by individually designing the series of store fronts, and signs.

Along with the diversity of styles, the scale of signage ranges from a simple designation over a doorway to a system of traffic signs for use on all English motorways. And as individuals become smaller in relation to the larger institutional complexes with which they must interact, elaborate signage systems have been developed which enable the users to find their way about in less than clear surroundings. One aspect, often overlooked, according to one designer, is that signs lead people to their destinations, but often fail to tell them how to get out. What follows on the next five pages will, perhaps, make clear the diversity of approaches to the problem and the successful solutions, both in the use of materials and in the relationship of the sign to the building or place. [Sharon Lee Ryder]

Paint on glass is probably one of the oldest and, judging from its inordinately common usage, still one of the most popular techniques, perhaps because it is one of the least expensive. As glass is simultaneously reflective and transparent, the sign may well end up being something other than what the designer intended. The "J" or the Russell & Bromley sign are almost lost for their subtlety: one because of strong reflections, the other because of the chaotic background. All are from the Kings Road area of London except for Ditto's, designed by Deborah Sussman of Sussman and Co. Where the reflections are a visual pun.



All photos: Sharon Lee Ryder, except as noted

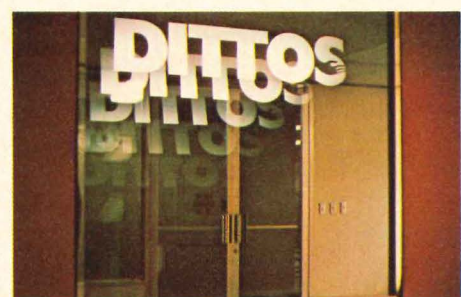
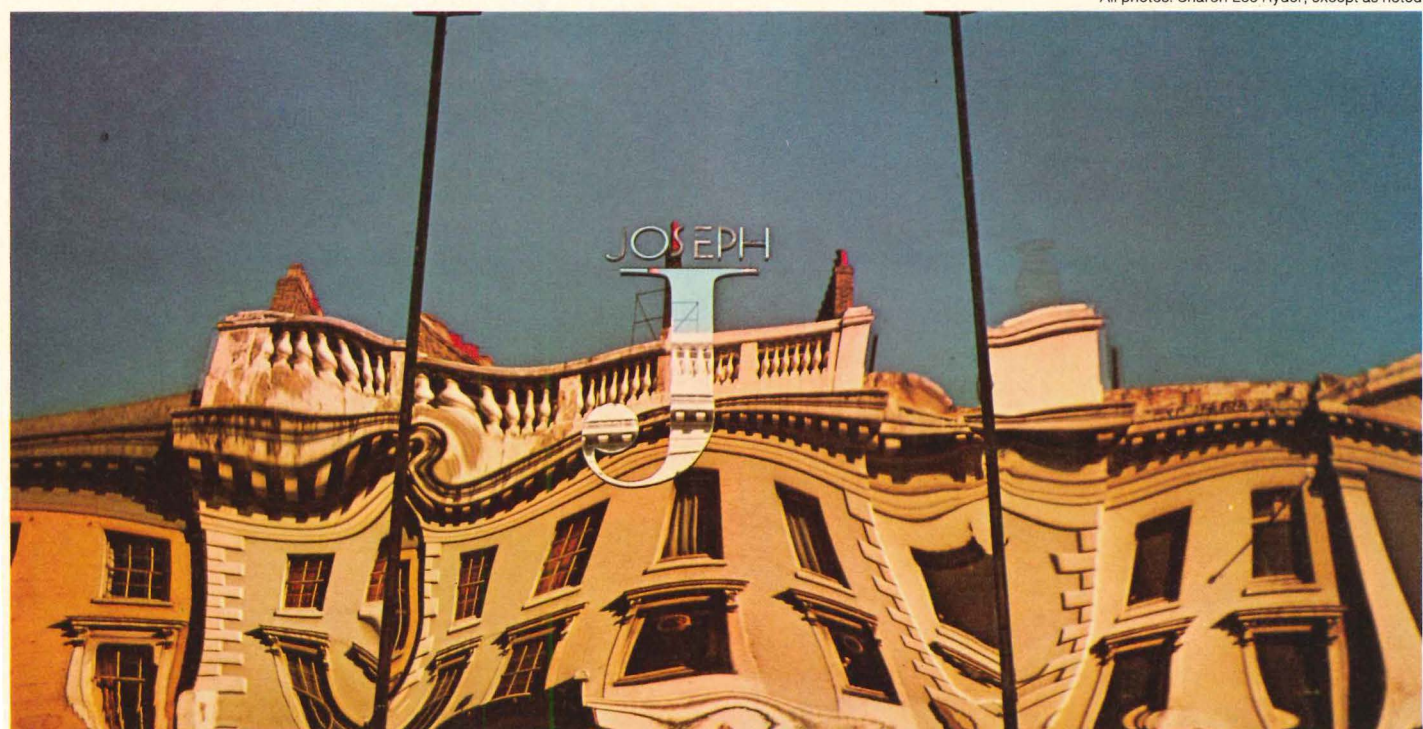


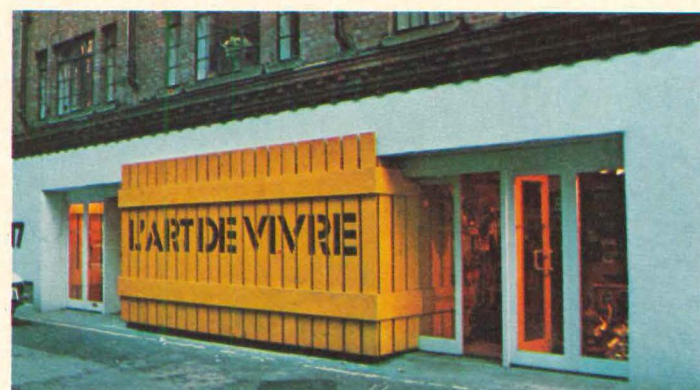
Photo: Office of Deborah Sussman



A sign of the times

Buildings in an urban context usually present only one face to the street, and when the sign covers the entire front, the distinction between architecture and graphics is rather blurred. The three painted façades, again from England, have a rather flat billboard quality. The American Flag, plastic and illuminated from behind, rests on two mock stainless steel columns, and frames the front of the County Federal Savings Bank's branch office in Stamford, Conn. Designers were Buzz Yudell and Tina Beebe of General Eclectic. The trading company sign (left) is one of the many do-it-yourself sign façades which grew out of the counter culture movement.

Photo: Marcia Due



Picking up on a readily available commercial technique, designers have begun to use neon, sometimes in other than traditional ways such as the "Eat"—a sign for the restaurant at Hartford's Wadsworth Atheneum—designed by William Grover, Martha and Jerry Wagner. Sometimes, the neon mimicks the imagery of its more traditional predecessor, as in the "button" designed by Pamela Waters for the elevator banks of an office building. Design Research's "D/R" sign for the new Cambridge store is seen through the colorful merchandise and reflections of Brattle Street on the glass façade, and the 1050 (Mass Ave, Cambridge) sign, designed by Cambridge Seven Associates, uses three primary colors in successive layers to create a three-dimensional and constantly changing effect. The signs for both the Fish Market, a Philadelphia restaurant, and Girl, a clothing store on Kings Rd, London, are instances where the background is subdued and the eye is immediately drawn to the lighted sign, although the signs are not large nor garish.



Photo: Sharon Lee Ryder



Photo: Sharon Lee Ryder

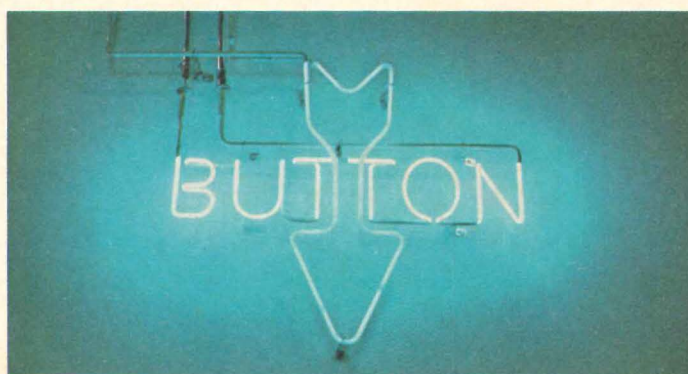


Photo: Pamela Waters



Photo: William Grover



Photo: Sharon Lee Ryder



Photo: David Morton

A sign of the times

Sign as sculpture, while visually quite interesting, can more or less succeed in providing coherent information. The "9" designation on 57 St. in New York City is fine as long as one is walking east to west. Coming from the other direction, the number is backwards, but that doesn't seem to matter, since the symbol is known and the designation is clear. The sign for the Phillip Morris factory is a tall column, clad in the wrappers of the cigarette brands manufactured by the company. While the name of the company does not appear, as long as one wants to go to Phillip Morris, the symbol is clear. The construction fence surrounding the new Playboy Club in Chicago gets one coming and going. In case the bunny symbol is not clear, the word "Playboy" is spelled out in the other direction. All were designed by Chermayeff & Geismar.

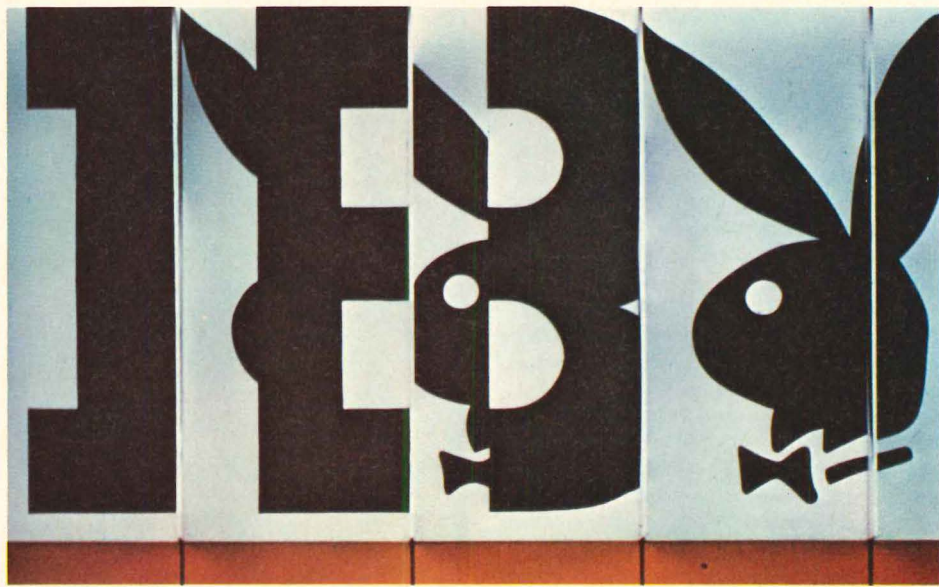
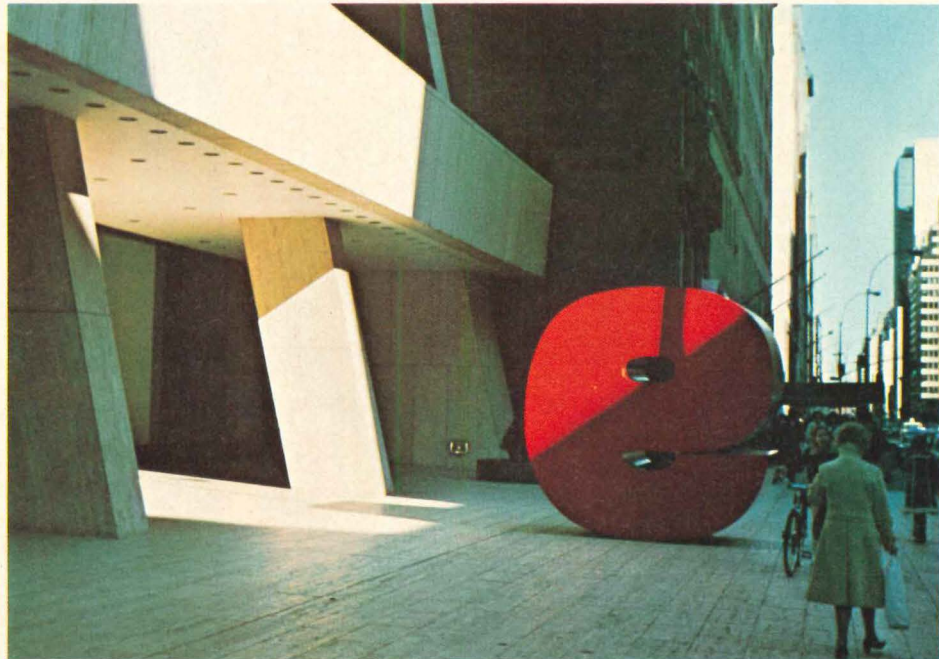


Photo: Chermayeff and Geismar



Cloth as a sign element is being used in a way much like the old awnings which carried the store's name on its fringe so that even when it was rolled up, the name was still facing front. At 127 John St. canvas awnings, on a scaffold frame designed by Rudi deHarak, denote the entrance and provide rental information. Cloth banners inside New York's new Merchandise Mart, designed by Pamela Waters, are a colorful alternative to the bland travertine lobbies typical of office buildings. The banners at the end walls show which elevator banks service which floors.



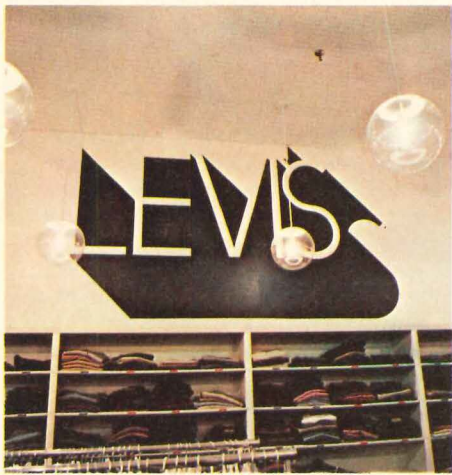
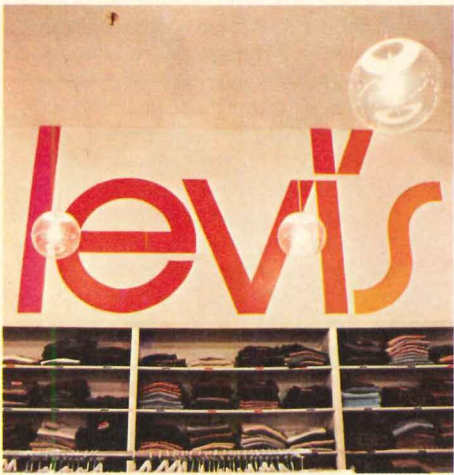
Photo: Sharon Lee Ryder



Photo: Pamela Waters



How many different ways can you say Levi's? Apparently a lot, at least at the Gap, a chain of stores selling every conceivable size, shape, and style of denim. Harry Murphy and Friends of San Francisco developed the logo for the Gap and designed all of the graphics, signage, and interiors for the stores. In using six different type faces to spell one word, it is easy to see the difference in character which the name takes on with each type face.



Photos: Office of Harry Murphy and Friends



A sign of the times

As institutional facilities have become larger and more complex, the movement of people from their point of entry to their destination has had to depend on signage systems rather than on the clarity of the architecture. The two systems shown here, as well as most others, deal with both word and symbol in an effort to communicate with an increasing number of non-English-

speaking people. Part of the hospital signage system developed by Christopher Klumb uses symbols to denote various facilities. Similarly, a system developed by the American Institute of Graphic Arts (initiated by the Department of Transportation) for airport facilities uses both symbols and words and shows prototypical applications. The difficulty with the use of symbols is that their abstraction must be great enough to be clearly read, but not so great as to make the symbol devoid of meaning. In both of these systems, some symbols are more effective than oth-

ers, partly through a cultural familiarity and particularly because some ideas lend themselves more easily to abstract representation. The third signage system, for the Market St. project in San Francisco, is another area where systems have been applied to eliminate the chaotic results of years of adding one, then another, sign on whatever pole was available. Designed by Barbara Stauffacher, this system, like earlier efforts in other cities, gives order to the various vehicular and pedestrian signs as well as street lighting and litter receptacles.

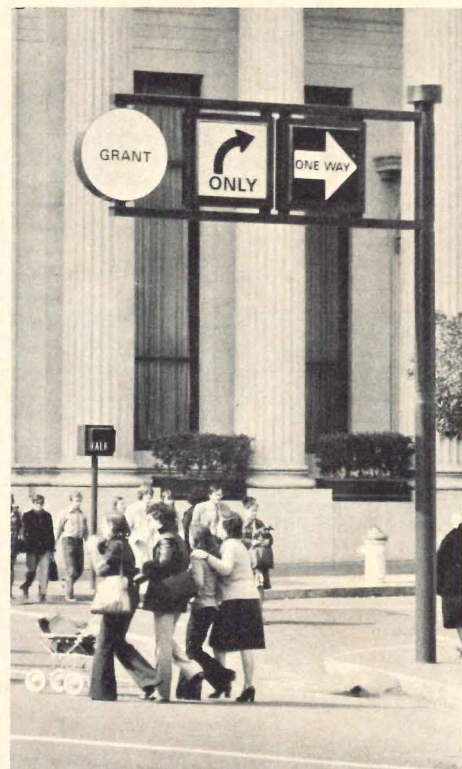
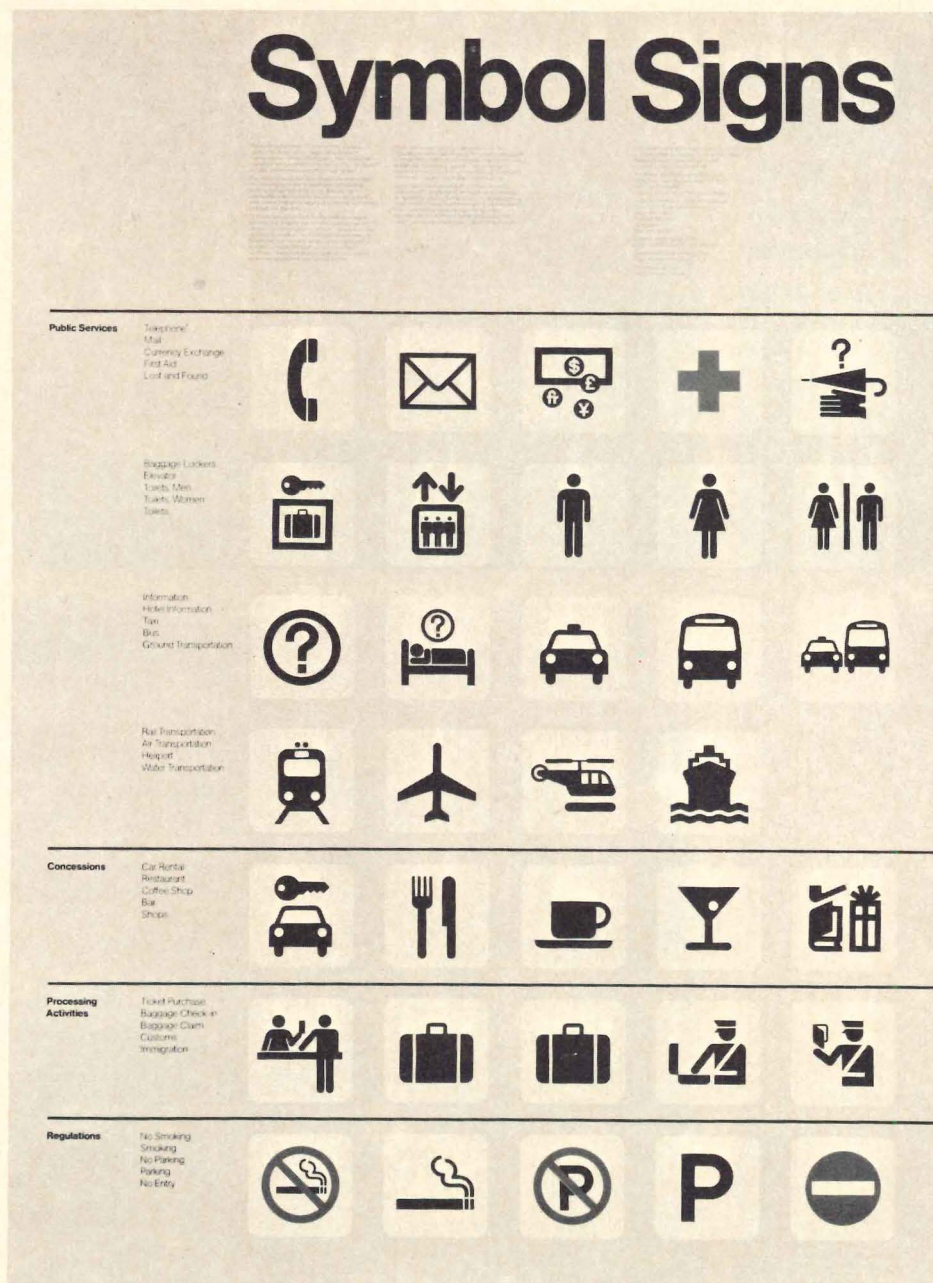
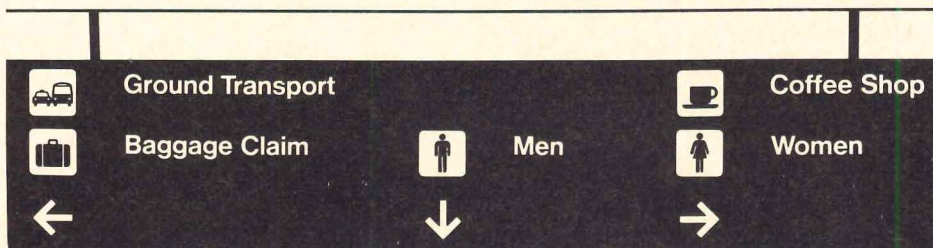
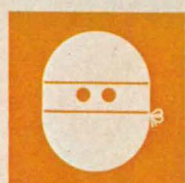
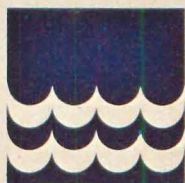


Photo: Rob Super



Photo: Rob Super



Symbol signs are something new for New York City hospitals. We hope to make a visit to a hospital easier by showing pictures of some of the hospital services for the visitor and patient. You will find these symbols useful in identifying those services which you may require.

El uso de símbolos es algo nuevo en los hospitales de la ciudad de Nueva York. A través del uso de figuras que representan varios de los servicios dados en el hospital esperamos que su visita se la haga más fácil. Estos signos le serán muy útiles para encontrar los servicios que usted requiera del hospital.

The New York City Health and Hospitals Corporation

hospital or Medical Center
room
wheelchair Access
Information
Orientation
Registration

hospital o Centro Médico
de Recreo
150 Para Sillas de Rueda
Información
Orientación
Registro

7. Pharmacy
8. Eye Care
9. Dental Care
10. Specialties

7. Farmacia
8. Ojos
9. Cuidado Dental
10. Especialidades

11. Hydrotherapy
12. Physical Therapy
13. Occupational Therapy
14. Speech & Hearing
15. Mental Health
16. Orthopedics

11. Hidroterapia
12. Terapia Física
13. Terapia Ocupacional
14. Habla y Oído
15. Salud Mental
16. Ortopedia

17. Female Care
18. Maternity
19. Child Care
20. Nursery
21. Family Care Unit

17. Consulta Femenina
18. Maternidad
19. Consulta Infantil
20. Recién Nacidos
21. Servicio de Cuidados
Atención Familiar

22. X-Ray Department
23. Ear, Nose & Throat
24. Skin Care

22. Departamento de Rayos "X"
23. Nariz, Garganta y Oído
24. Piel

25. Surgical Care
26. Medical Care
27. No Entry
28. No Smoking
29. Emergency

25. Consulta de Cirujía
26. Consulta de Medicina
27. No Hay Entrada
28. No Se Fuma
29. Emergencia

N.Y.C. HEALTH SYMBOLS

Administration Building, Willard State Hospital, N. Y.

Tidy reality

Michael Dennis



Administration Building from north (above), and south (below).

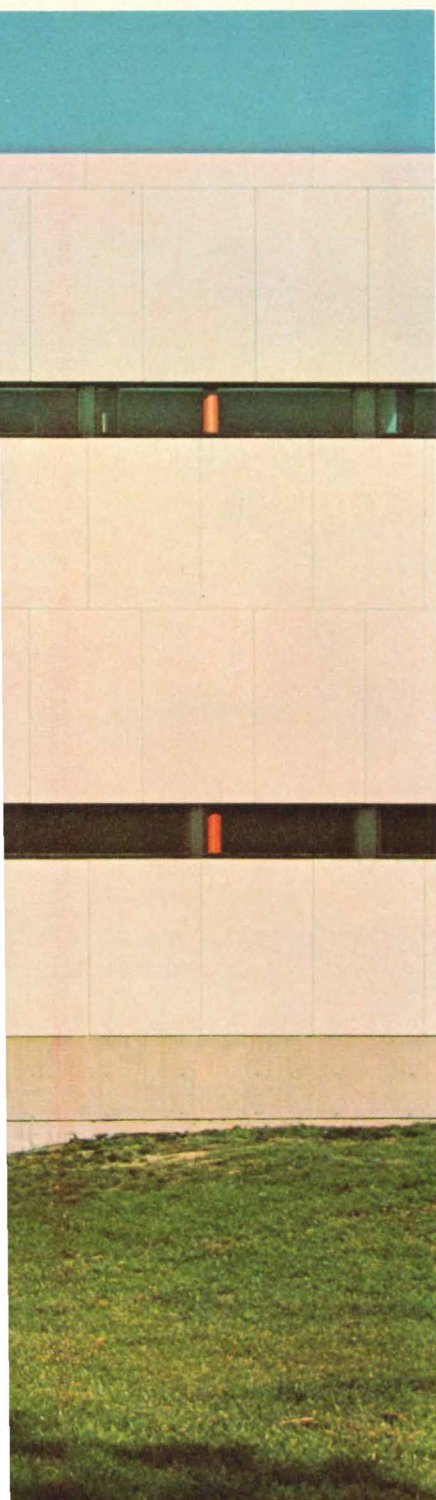


Within its apparently unified whole, a small building by Werner Seligmann & Associates is paradoxical: its self-contained form has implied extensions; its modern, catalog materials produce a historicist image; unpredictable relationships between industrialized systems can make its rational aspects seem irrational.

"Between the idea / And the reality / Between the motion / And the act / Falls the Shadow."—T.S. Eliot. Modern architecture in Europe, born out of fantasies of socialist society, has ironically been an ideal partner in its common law marriage with the American dream. Modern architecture's predilection for Platonic, or freestanding, objects and its promise of technological (read "economic") deliverance via industrialization were to prove irresistible to American corporate enterprise. Freestanding buildings, af-

ter all, are "tidy" (no party wall problems with neighboring buildings), and they offer high potential for identity (McDonald's or the High Court at Chandigarh—take your pick). They promised to be fast, flexible, easy, and above all, cheap. Who could resist? Certainly not bureaucratic agencies for whom image potential generally takes a back seat only to self-preservation. The various agencies established in New York State by Nelson Rockefeller, although "enlightened" by most standards, are not immune to these tendencies, nor are their usually talented architects.

It could be (and was) argued that the Willard State Hospital Administration Building should not exist as an independent building on a remote, exposed site, but rather should form part of a more coherent complex nearer the center of patient services. The Department of Mental Hygiene was adamant, however. They obviously wanted the tidiness of "a building," the identity of a prominent location, and a



Author: Michael Dennis is a partner, Wells/Koetter/Dennis architects, and associate professor at Cornell University.

Administration Building, Willard State Hospital

new "mental health" image to replace the old brick images of "insane asylum" days.

Further, it could be (and was) argued that the program as presented to the architect was not only unhierarchical and undistinguished (inherently not the raw material with which to fashion a new face for the old campus) but was also overly specific for an administrative building subject to use changes. Again the Department was adamant. The random room sizes based on bureaucratic pecking order could not be systematized, and flexibility was not an issue.

It is against this background that the administration building should be seen. That is to say, if the building is exceptional, that is due primarily to architectural intentions and ideas, since the program is more or less neutral and the site offers few cues to organization.

In fact, the basic ideas and vocabulary are in themselves not new, but are obviously developments of themes of the "heroic, or classical period" of modern architecture. It was, after all, Le Corbusier who made the most cogent statements of the free plan, the free façade, and contextual issues of the site. The villa at Garches, for example, is literally freestanding, but it also implies possible extension and/or replication. It presents simultaneously a rational, measurable world (grid and Platonic volume) and a relative, unmeasurable world (idiosyncrasies of the free plan). It renders shallow, layered space as well as deep, continuous space, and it presents the building fabric as a series of related but articulate independent systems free to be organized more or less according to their own individual requirements. These are also primary themes in the Willard Administration Building, but for pragmatic reasons as well as for human or ideological ones. But Garches, although conceptually prophetic, was a handcrafted building and not a product of the factory—it might be seen as a painting of the problem rather than a solution. Now, however, some 40 years later, when the various technologies are reality rather than dreams, these earlier themes tend to take on new relevance and meaning. Although the administration building is admittedly not yet an industrialized building, it is largely built of "dry" construction, and made of commercially available components; it can be seen as a conceptual and a literal "assemblage" of images and materials.

The primary image of the building—a white box in the landscape—is initially jarring in contrast to the drab brick buildings of the Willard campus. One might be inclined to consider it a sheet metal rip-off of LeCorbusier's Brasilia French Embassy project, except that a tour of the surrounding area reveals additional similarities to other forms. The parti is in fact, and consciously, similar to that of barns indigenous to the area—a two-story white box on a one-story masonry base with an earthen ramp leading to a large opening on the main level. The other peculiar aspect of the building—the strangely monumental scale for so small a building—can also be traced to the barns, to their openings that are either very small (south) or very large (north).

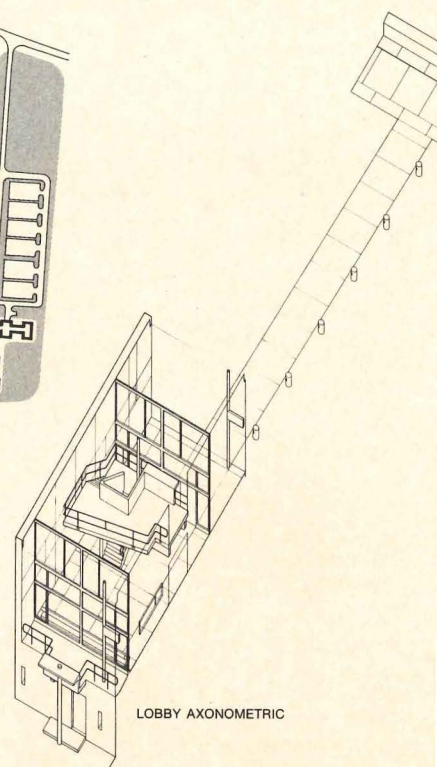
The functional distribution of the building is simple and clear. The base contains mechanical and service spaces, on the main floor are public offices, and on the top floor are the administrative office, a library, and a conference room.

The two-story lobby on the end unites the two upper floors and serves as an entrance. Each floor spine is double-loaded, with larger offices to the north and a service zone and smaller, special rooms to the south. This asymmetrical zoning of the plan was not simply a programmatic accommodation; it also puts the smaller rooms in close relationship to the small scale of the landscape and staff residences to the south, and orients the larger offices to the open landscape on the north. In addition, differentiation of the fenestration and structural systems on the south and north give a preferred direction to the double-loaded plan.

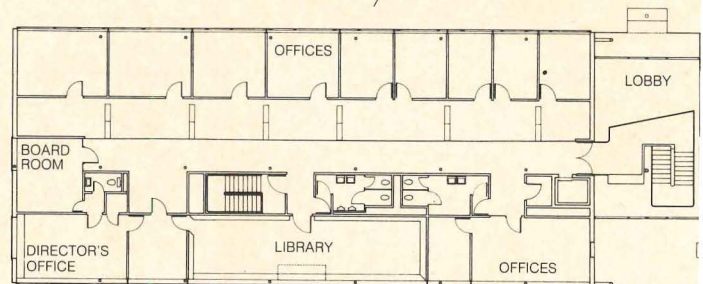
Conceptually, the building is a rational, or neutral, volume into which a specific, contrasting figure (circulation) has been inserted. Rather than being simply a corridor, the circulation becomes a street that connects the space of the lobby with the landscape to the west and provides the key (almost literally) to the building's resistance to the implica-



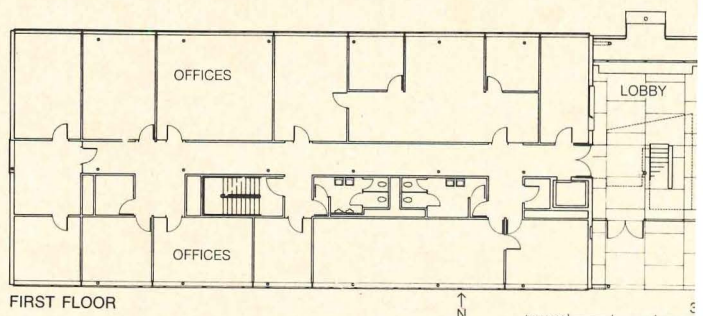
SITE PLAN



LOBBY AXONOMETRIC



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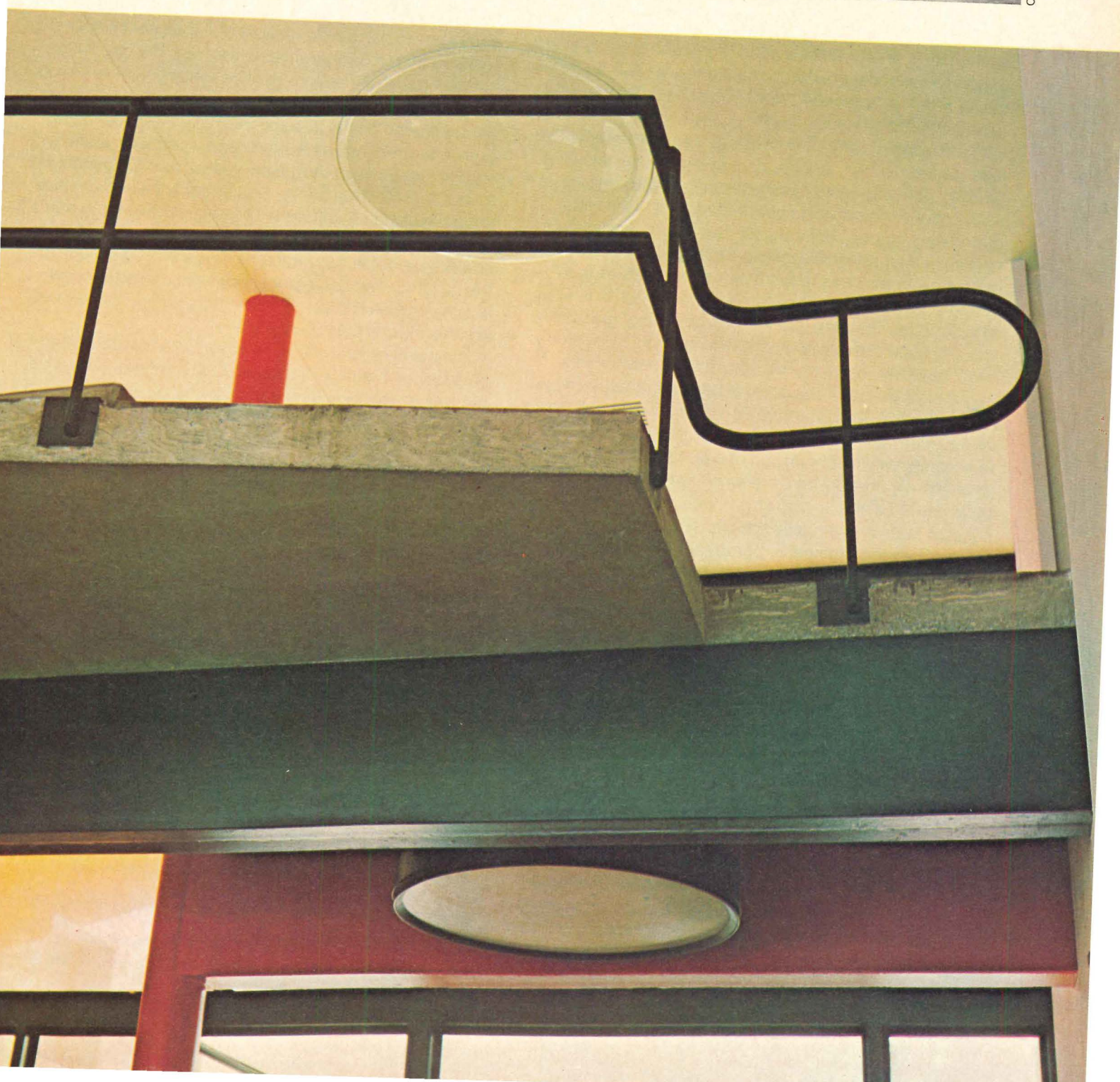
FIRST FLOOR



Lobby (north façade above; interior right and below; axonometric below left) and landscape to the west are united by circulation "street."



C. Hadley Smith



tions of closure and finiteness. At this level of generalization, the internal subdivisions of the office zones are largely irrelevant and can be seen as independent systems of thick, habitable blocks or *poché*, which are used to define and shape the axis between the man-made landscape of the lobby and natural landscape at the other end. The street, by its implied western extension, attempts to impart an almost Hellenic awareness of the environment.

If, on one level, the office subdivisions are unimportant, on another level they are extremely important in that they do not, and could not, conform to any modular system. Similarly, the other systems, such as mechanical, structural, metal skin, fenestration, etc., each have their own internal requirements and unique characteristics of module, tolerance, and compatibility with other systems. More often than not these various systems, as *found*, are at odds with each other, thereby necessitating costly and time-consuming custom fabrication, both in the factory as well as on the job, in order to "integrate" them into one unified whole. In contrast to this tendency towards unity and integration, the administration building is orchestrated as a series of articulate, but interrelated, independent systems, thus allowing for change in one system without simultaneous change in all the others. This change can, within limits, take place during the planning, construction, or post-construction phases of the project. Beyond the pragmatic convenience of separating the various systems, however, there is an added dividend. On the one hand the multiple modules of window, wall, structure, panels, etc. do tend to grid, layer, and articulate space in a rationalistic manner. On the other hand, however, because of unpredictable relationships between the systems, a condition of paradox emerges where the rational can appear irrational, or vice versa, depending on the interpretation of the observer. Structure (that "factual" antigravity machine) can appear loose and painterly, while the supposedly free, "relative" world of circulation becomes fixed and unchanging. One can then see the circulation system as a highly specific sequence of events beginning with the landscape, proceeding through a rationalistic, shifting, gridded world, and ending with a curious re-presentation of the landscape.

From the main road to the north, the building is presented frontally across a large, open field. At this distance its layered façade of multiple grids flattens out to throw the shifting symmetries into sharp profile. As one approaches, the various layers of the façade become apparent, with the flat curtain wall acting as a foil for the cyclopiian ocule of the lobby. The regularly spaced (16 ft) red-orange columns are seen in depth through the slightly projected glass wall and the white frame of the metal skin. The steel and glass wall itself is actually dead flat, but appears to undulate in depth due to the rhythmic spacing of verticals—their varying widths tending to make them recede from the picture plane, which is then re-established by the spandrel and surrounding frame. Seen from further along the access road, the north façade becomes simply a flanking plane for a distant vista west toward Lake Seneca.

From the south, access is via the long, earthen ramp. Here, where the relative proportion of window to wall is the

reverse of that of the north façade, a two-story yellow portico is set into the opaque white surface. The lobby, punctuated by special windows, is also supposedly a waiting room, but it is clearly not a space in which to sit. The built-in bench is too low and uncomfortable and chairs are, at best, token gestures. The lighting fixtures are exterior quartz lamps, the floor is waxed concrete (subsequently carpeted), and the ceiling is putty-coat plaster. The lobby can only be seen as a circulation space and viewing platform where the faint tracery of plaster joints and fenestration offer the only stability for the kaleidoscopic plastic extravagance of a concrete stair that should only be credited to the miracle of modern engineering. Here, the middle column is displaced longitudinally to the center of the room. Ascending the stair, there is a vista of the entry ramp to the south, and then from the precariously open mezzanine with its higher view of the lobby and northern approach, the main body of the building may be entered.

The office spaces themselves are white, black, and gray, and have the normally high level of fluorescent illumination required for the daily routine. In contrast, the circulation "street" has a low level of general lighting, with large round fixtures illuminating the polychromed subspaces that serve as distribution points through the deep wall of services. Thus, the street has a hard side and a soft side, and the irregular sequence of the green, yellow, and red distribution points are stabilized by the regular cadence of the red-orange freestanding columns. The sequence leads past the library with its special windows, mirrors, and skylight to the conference room and director's office at the west end of the building. The conference room has a large window which exposes the last of the corridor columns and gives another view of Lake Seneca.

It is the director's office, however, which receives the last curious comment on fantasy and reality. Across the western wall is a window flanked by mirrors on one side and a book case on top. The space of the room appears to disappear deep into the mirrors, and the image of the distant landscape hangs in a black steel frame behind the desk. □

Data

Project: Administration Building, Willard State Hospital, Willard, N.Y.

Architect: Werner Seligmann & Associates; Werner Seligmann and Michael Dennis, design; Michael Dennis, job captain.

Program: a freestanding building of approximately 12,000 sq ft to house administrative and library facilities.

Site: hospital campus in rolling, upstate N.Y. rural location.

Structural system: simple, inexpensive steel frame and bar joists.

Mechanical system: unit heaters, cabinet heaters, condensing unit, climate changer, wall fins, and enclosure.

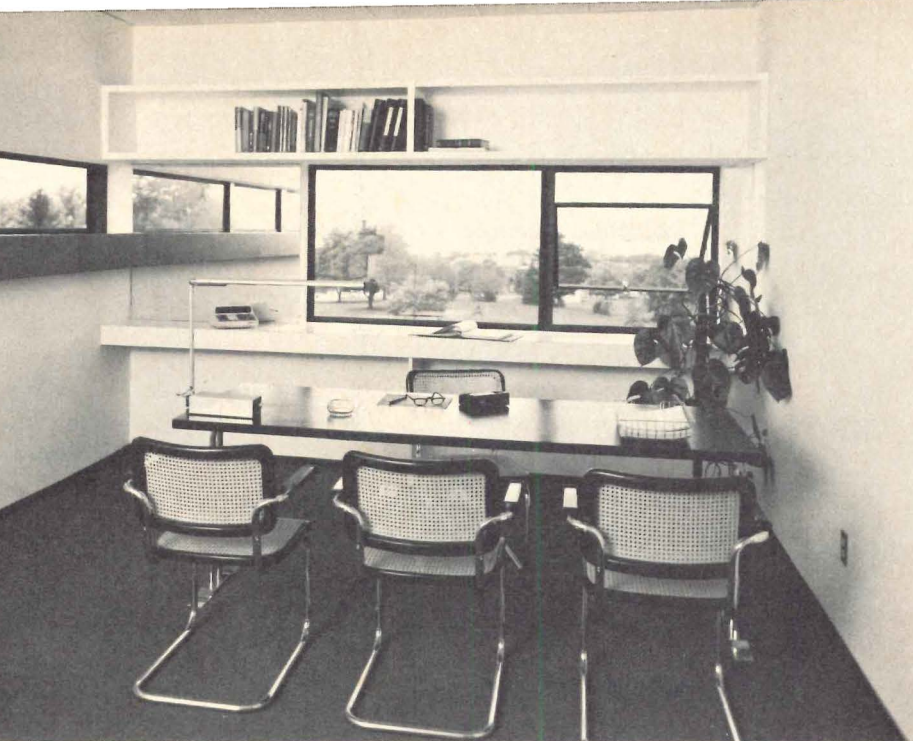
Major materials: exterior wall system above basement level is preassembled light metal framing sections and white porcelain enamel panels. Interior partitions are light gauge steel studs and gypsum board. Ceilings of suspended acoustic tile. Exterior and interior glazing is in bent (hollow) metal frames. Except for topping slabs and stain, building is dry-assembled. (Building materials, p. 122.)

Consultants: Galson & Galson, engineers; Dr. Donald P. Greenberg, structural.

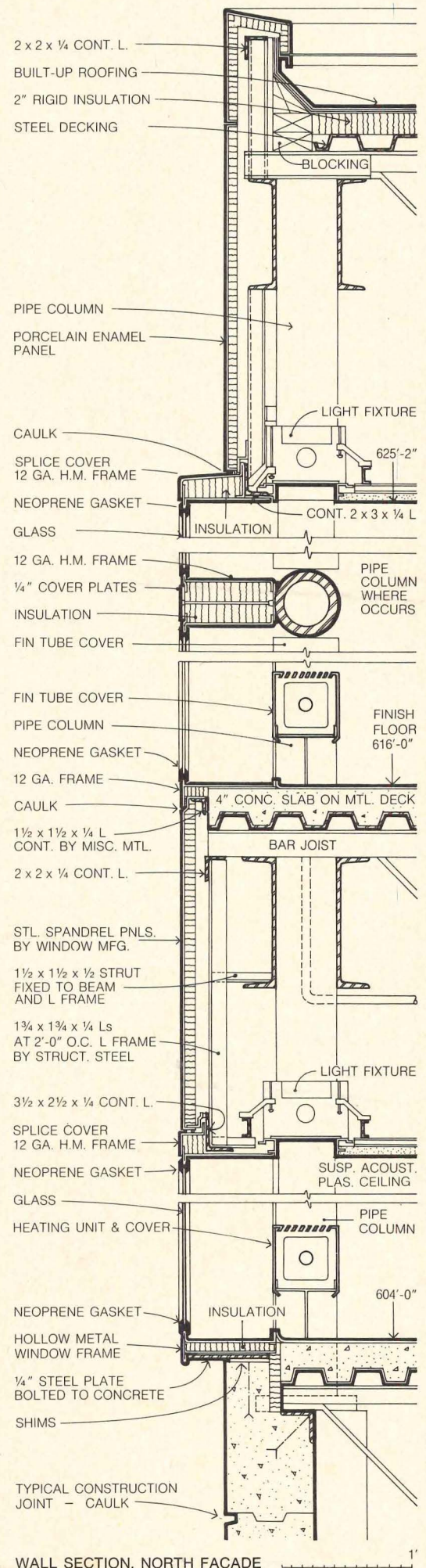
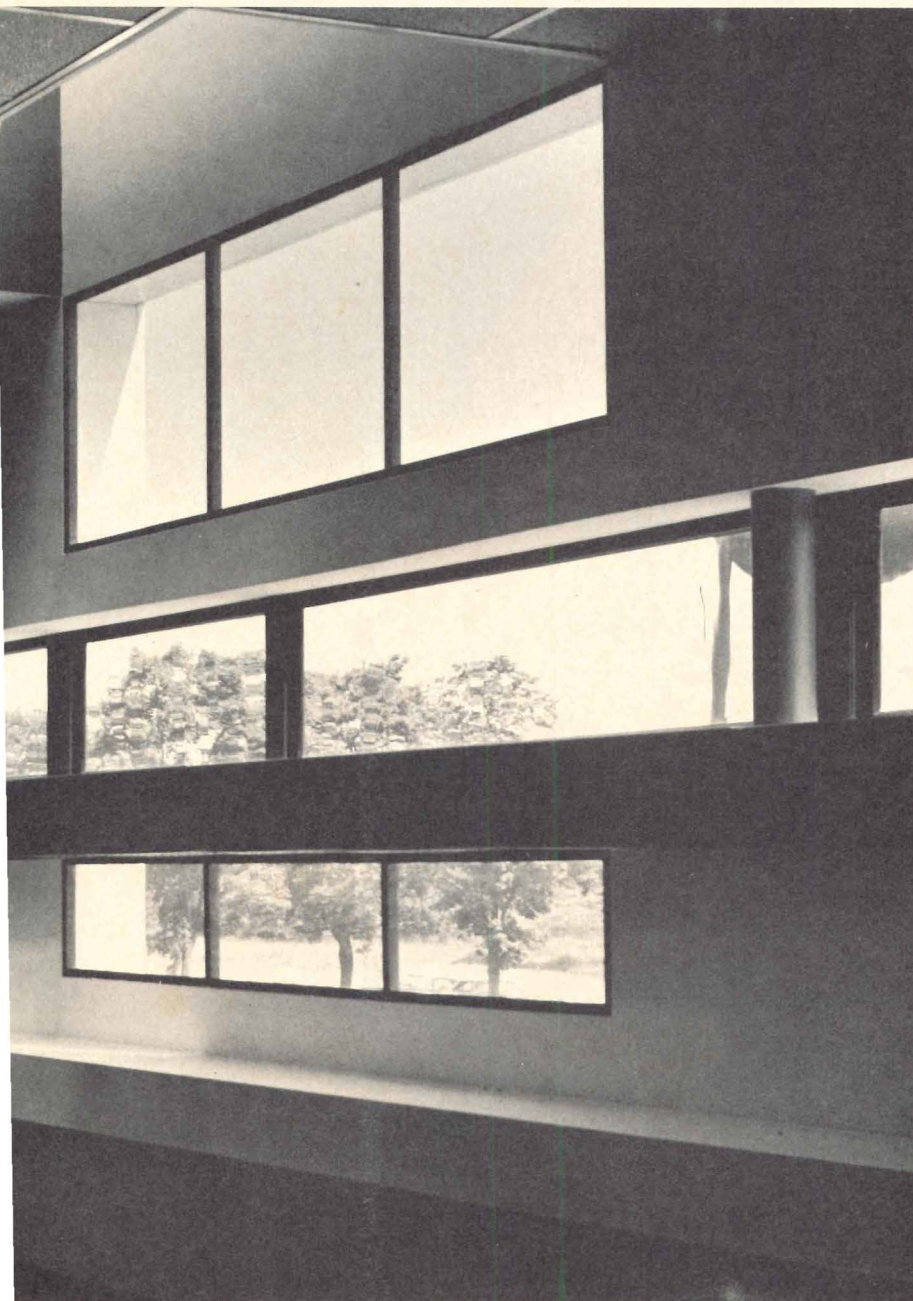
Client: N.Y. State Health and Mental Hygiene Facilities Improvement Corp.

Costs: \$600,000, about \$33 sq ft.

Photography: Werner Seligmann except p. 81 top, right, C. Hadley Smith; p. 83 top. Lyon Photo.



Mirrors in director's office (above) seem to extend room into pastoral landscape; typical orange-red columns punctuate white, gray, and black library (below).



WALL SECTION, NORTH FACADE



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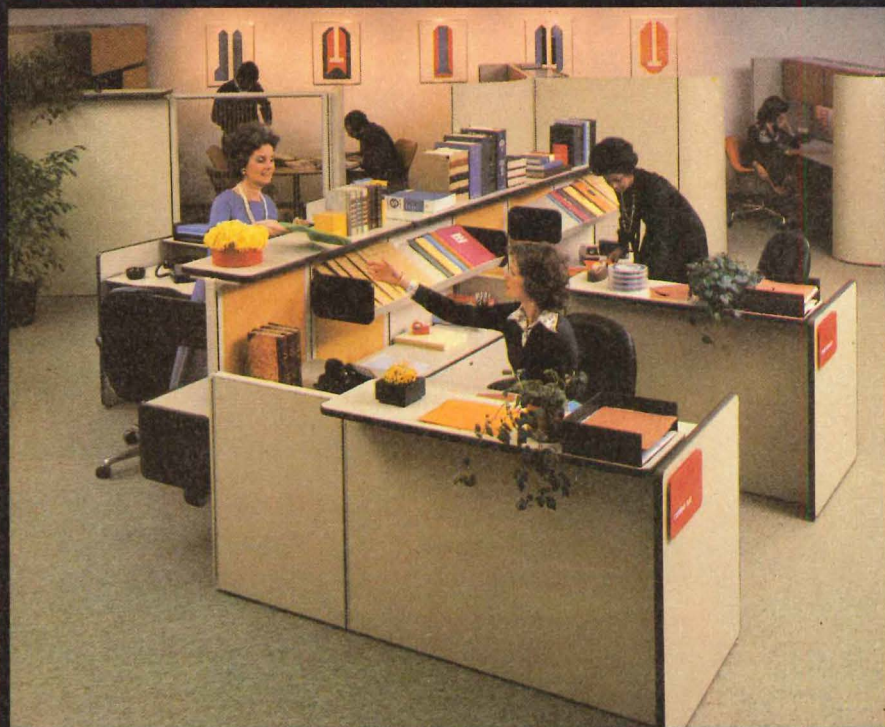
Desks don't change. Desks can't grow to provide more work surface and storage. They are ponderous pieces of static furniture which can't respond to changes in tasks and people. You can't adjust a desk to fit large or small, right- or left-handed workers. Group desks together and it's a mess. In the traditional bull pen, space

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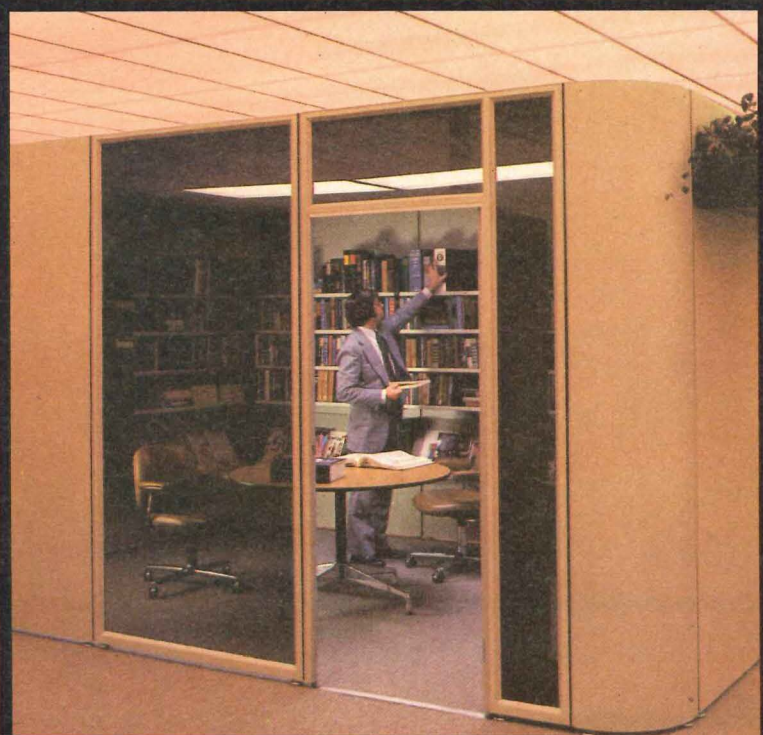
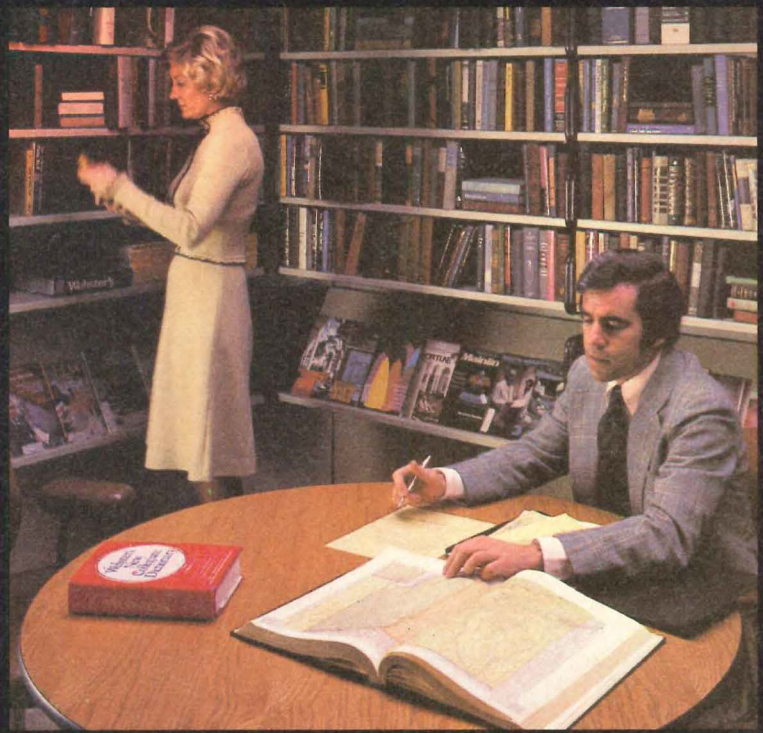
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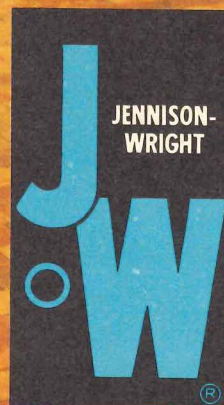
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Loss prevention: Before and after construction failure

Harold J. Rosen, PE, FCSI

To minimize financial losses due to construction failures, efforts should be directed toward critically examining all construction documents in the first instance and getting the best attorneys in the second. The author suggests valid loss preventive measures.

Construction failures seldom occur because a product or material has failed spontaneously. The proximate cause of failure is usually related to structural movement, thermal movement, chemical interaction, or any combination of these events. Defective products, usually the result of poor quality control, can generally be isolated and identified when a materials failure occurs. A construction failure involving a generally acceptable and reputable product usually results from poor design, inadequate information, or from not recognizing the forces coming to bear in a given situation involving structural movement, thermal movement, or chemical interaction.

It is rather difficult to list construction failures with a commonality that have occurred and that either have been adjudicated in the courts or settled out of court. Certainly the architect involved, in the immediate case, is not about to disclose his embarrassment. Such a compilation, if it could be made, might be a guide for avoiding similar mistakes.

However, building structures designed by architects are unique in that the configurations, orientations, geographical locations, design details, and workmanship are rarely duplicated so that an unusual construction failure under one set of circumstances may not necessarily be duplicated again. For example, if one designs a joint width and joint spacing for a plaza paving in a tropical area where the difference in year-round temperature may be only 30F, it could not be duplicated in a northern climate where the temperature difference might be 125F, since a serious joint sealant failure would then occur. Or one could use an ordinary architectural paint coating in a dry, northern environment but would have to include a mildewcide if the same paint were used successfully in a warm, humid climate.

Author: Harold J. Rosen is an independent construction specifications consultant in Merrick, New York.

Efforts toward loss prevention due to construction failures should be directed first toward a critical checking of construction documents to minimize construction failure, and second to products liability litigation after a construction failure occurs. In the first instance, the effort is designed to avoid problems associated with construction failures such as property damage, personal injury, and death. In the latter instance it involves lining up the best attorneys and expert witnesses on your side to reduce your liability after a construction failure occurs. The first procedure is a lot less costly, embarrassing, and time consuming.

Since we do not have available to us a rendition of common construction failures we can only be guided in loss prevention by establishing a set of guidelines based on previous experience and engineering judgment. Whenever the detail involves past successful use with comparable materials and interrelationships, it is most likely that the detail will work again. It should be checked for thermal movement and structural movement since these conditions can readily change as a result of size and environment and therefore influence the behavior of the detail.

For example, partitions used in low-rise construction suddenly experience cracking or deformation when used in high-rise construction due to a number of new conditions, i.e., thermal expansion and contraction of the frame, wind drift, and/or compression of the structure. New details must be designed to permit this movement without compressing the partitions. As structures increase in plan dimensions, consideration must be given to the introduction of expansion joints to allow for thermal expansion.

On the exterior of the structure, details involving dissimilar materials must be checked to assure chemical compatibility to avoid corrosion, and chemical interaction. Similarly the same details must assure balancing of differential thermal coefficients of the various materials coming together to make up the detail so that undue movement of some of the elements are compensated.

When considering a new material or product, it should be carefully reviewed with the manufacturer. If it is to be used in an untried manner, obtain the maker's approval and guarantee or don't use it. Tell the owner when a major use of a new product is contemplated if it seems to be the only or best solution and advise him of the problems and pitfalls. Obtain his concurrence in its use.

Whenever the contractor submits substitutions for approval, review the submission carefully for its effect on adjacent materials and obtain the contractor's agreement and guarantee to ensure his responsibility in the event a construction failure occurs that is attributable to the use of the substitute product. Advise the owner of the potential problems associated with substitutions or omissions so that future possible construction failures are not solely the responsibility of the architect.

An illustration of this latter situation involved a metal roof deck with concrete fill. The owner requested a credit for omission of the concrete fill and the following sequence of events occurred. The sprayed-on fireproofing of the underside of the deck began to delaminate. This was attributable to the undulations in the deck due to the workmen laying down the new roofing. Had the concrete fill been used it would have dampened the movement. It was originally proposed that a temporary roof be put down, which would



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serve as a vapor barrier. In the absence of the concrete fill this became impossible to achieve. The omission of the concrete fill now required that the insulation be mechanically fastened at the perimeter to meet Factory Mutual requirements. All in all the simple omission of the concrete fill with an apparent credit turned out to be a veritable hornet's nest leading to problem after problem and ultimately the credit turned into an extra. The moral to be drawn from this exercise is that design should take place during the design and production stage where criteria are properly checked and not during the construction phase when all of the ramifications of a change are not carefully thought out.

Another major area where attention to loss prevention techniques can reduce the architects' exposure is in the modifications to the AIA General Conditions. To begin with the architect should read his owner-architect agreement and make certain that he does not obligate himself to be responsible for certain events, for which he is not compensated, by including certain provisions in the General Conditions that are not in the owner-architect agreement. In addition there are a number of standard AIA clauses in the General Conditions that should be modified, particularly the provisions regarding the review and approval of shop drawings. Do not change your procedures in-house with respect to the review of shop drawings. However, use language in your modifications to the AIA General Conditions that indicates that *review* of shop drawings is only for the convenience of the owner in following the work and will not relieve the contractor for any deficiencies, departures, or deviations from the requirements of the contract document. Also include a provision indicating that the architect's review shall not be construed as an indication that the submittal is correct or suitable or that the work complies with the contract document except as to aesthetic matters.

Do not use the words *check* or *approve* anywhere with respect to shop drawings or samples. Change your shop drawing stamp to show the following notations with respect to shop drawing submissions:

Action A means that fabrication, manufacture, or construction may proceed providing submittal complies with contract documents.

Action B means that fabrication, manufacture, or construction may proceed provided submittal complies with the architect's notations and the contract documents. If for any reason, contractor cannot comply with the notations, contractor shall resubmit as described for submittals stamped C Action. Action C means that submittal does not comply with the contract documents and that fabrication, manufacture, or construction shall not proceed. Submittals stamped C Action are not permitted on job site.

In modifying the AIA General Conditions use language that will minimize your exposure and change the word "approval" to "review" wherever possible.

To reiterate, reduce exposure to lawsuits by checking construction documents, especially details affected by structural and thermal movement, and chemical interaction.

Once involved in a lawsuit, get the best attorneys and the best expert witnesses on your side. It makes a difference despite what may appear to be the merits of the case. □

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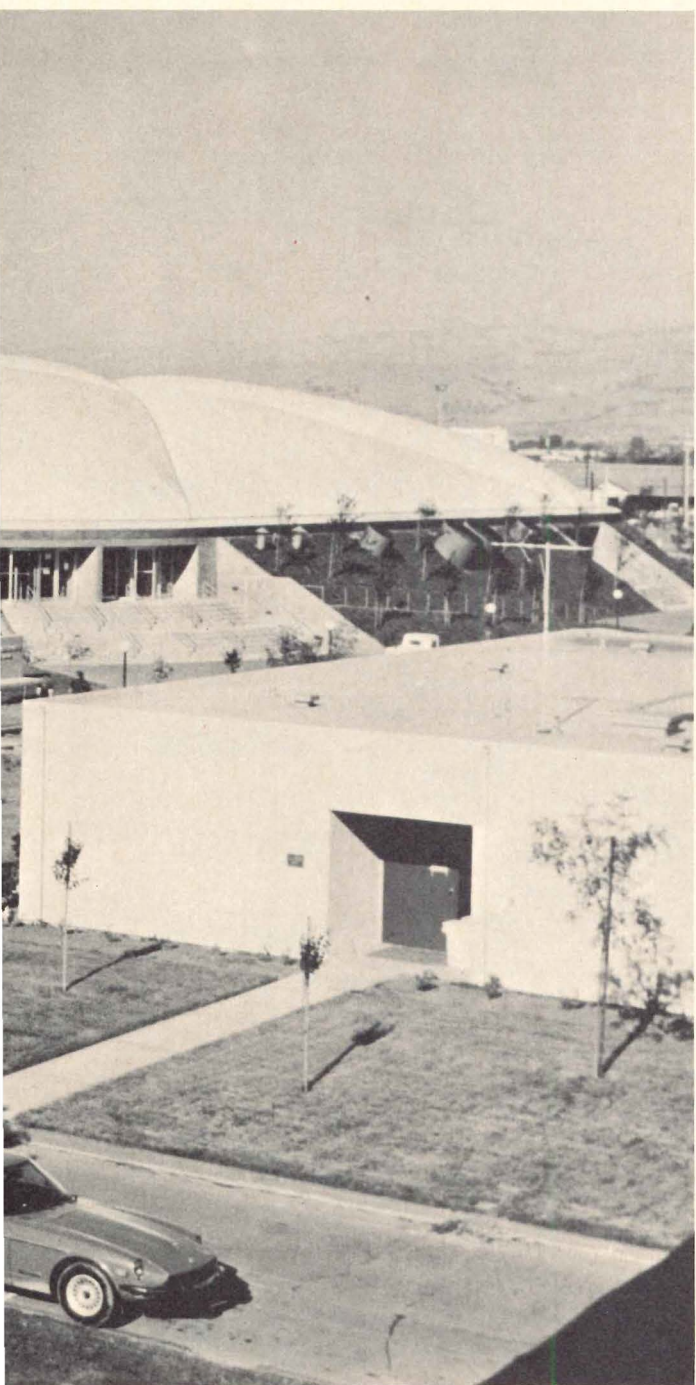
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Circle No. 318, on Reader Service Card

Technics: Air supported structure

Cream of the puffs





Julius Shulman

The world's largest permanent air supported structure, by Caudill Rowlett Scott, Los Angeles, is the Thomas A. Leavy Activities Center, University of Santa Clara, Calif.

Try to plant a "grove of academe" in this. Two acres of land adjacent to an industrial district; heavy truck traffic; soil of poor bearing capacity; a history of seismic disturbance in the region. Can you balance a bubble on a razor's edge? It can be done. Caudill Rowlett Scott, Los Angeles has designed the world's largest permanent air supported structure, the Thomas A. Leavy Activities Center, for the University of Santa Clara, Calif. on just such a site.

The east edge of the USC campus is not your usual bucolic collegiate setting. An industrial complex roars with vigor on the east side. A small stadium and field are on the northwest. A parking lot covers much of the area on the south side bordering El Camino Real, a major thoroughfare. The campus proper of the coeducational Jesuit university, with its historic Mission Church and Mission Gardens, is situated on the south and west.

The university needed a central facility for athletic, scholastic, and ceremonial activities. And so, a team from CRS under Paul Kennon (then CRS senior vice president and director of design, now CRS president) "scatted" with Rev. Thomas D. Terry, S.J. and president of USC, trustees, alumni, staff, students, and faculty to develop program and design criteria. Requirements proved to be heterogeneous but compatible: a swimming pool, 5000-place seating for athletic competitions, 6000-place seating for scholastic and ceremonial convocations, lockers, showers, offices, study space, and dining facilities.

The architectural solution is a masterful synthesis. Two air supported membranes cover concrete shells nestled in landscaped berms in a simultaneous gesture to the industrial complex, playing and parking fields, student activities, and soil conditions. Although the structure maintains a rather low profile, what emerges from the lush berms is un-

The University of Santa Clara's new air supported structure provides both needed space and a visual buffer against an adjacent industrial park, hidden in this view east to the mountains. Photo: Julius Shulman.

Technics: Air support structure

mistakably a lithe, graceful technological device.

Openings from within the berm are phrased in concrete and metal set in hard, flat or curving forms that convey the spartan aesthetic of an internal combustion engine. Entrances resemble deep machine-routed notches. Cylindrical skylights reach for light from inside by systematically puncturing the bermlike engine manifold pipes. The compression rings and roof membranes are a clean, unifying cornice line that controls the entire aesthetic.

The same pronounced boundary layering is expressed in the interior spatial organization. There are two levels which circulate athletes and spectators more or less separately. The upper level, lifted slightly above the ground, takes spectators to bleacher seating that either rises from this level to the roof or descends from it to the playing floor. (Bleachers telescope as space requirements vary.) The lower level, cut slightly below the ground, takes athletes to lockers, showers, and other related facilities as well as to the playing floor. The two air structures, while physically distinct, are joined by pedestrian passage at the contiguous upper level and a rising corridor from the shared lower level lockers and showers to the upper level pool.

That sinking feeling

Buildings cannot fly—at least in 1975. A structure erected on soil of poor bearing capacity must therefore devise more convincing means to lighten its dead load and distribute its foundation stresses. The center's air supported roof and bermed compression ring represent a particularly felicitous solution. Potential structural dead load is greatly reduced by the substitution of air pressure for hard static members. Weight concentrations are eased by spreading them over the wide bermed area.

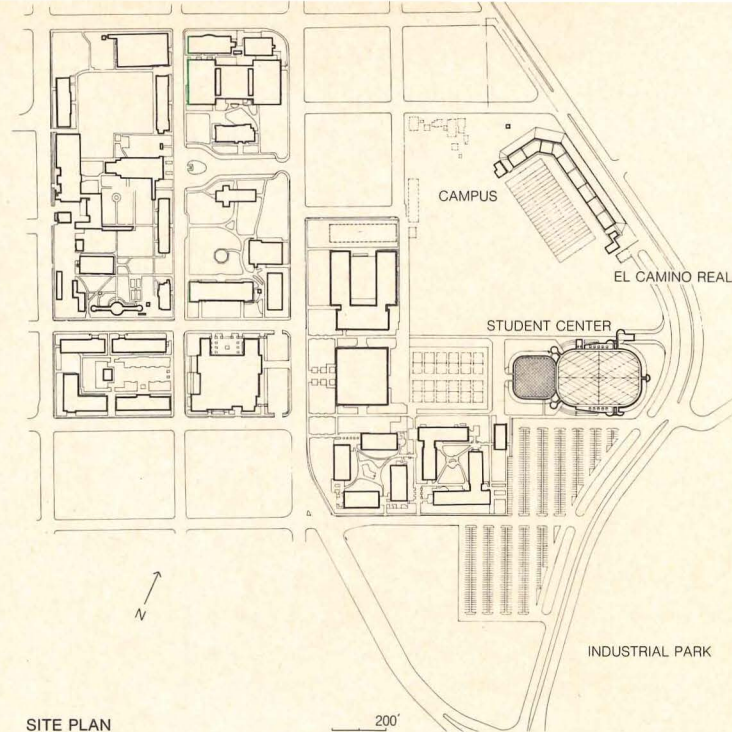
The air supported roof formed of two super ellipses is naturally the center's most striking feature. Its development typifies the exhaustive inquiry necessitated by new building technologies. As Bertold Brecht once noted, "Every new technical invention is greeted by a shout of triumph that can soon turn into a cry of fear." CRS as the design architect and Albert A. Hoover Associates, Palo Alto, as associate architect and their consultants, David Geiger and Horst Berger, air structure engineers were no less concerned about their creation.

To uphold a tetrafluoroethylene coated fiberglass fabric roof weighing 37.5 oz/sq yd over a basketball arena 310'x210' and a swimming pool arena 135'x130', air is drawn into the basketball arena by four main fans rated at 40 hp and 40,000 cfm each to generate a 5 psf uplift. This air is partially bled into the smaller space to inflate its roof. Then it is completely exhausted to the outside.

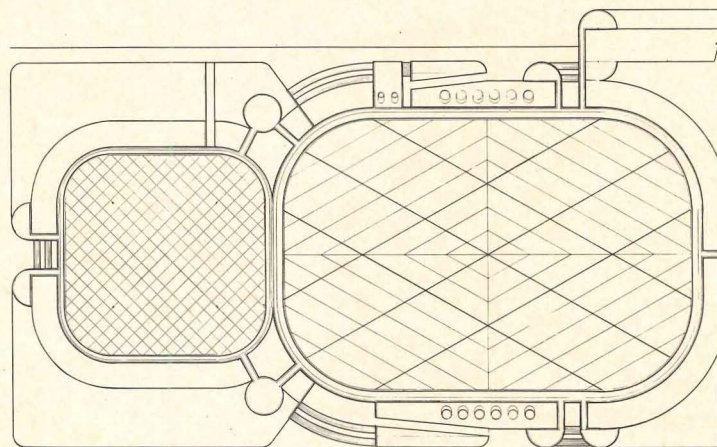
The press of air on the membrane roof due to internal supply and external wind introduces a tensile stress. This is transmitted via a network of six 2½ in. steel cables to the concrete compression ring on the periphery. Membrane and compression ring are thus kept in equilibrium.

The sting

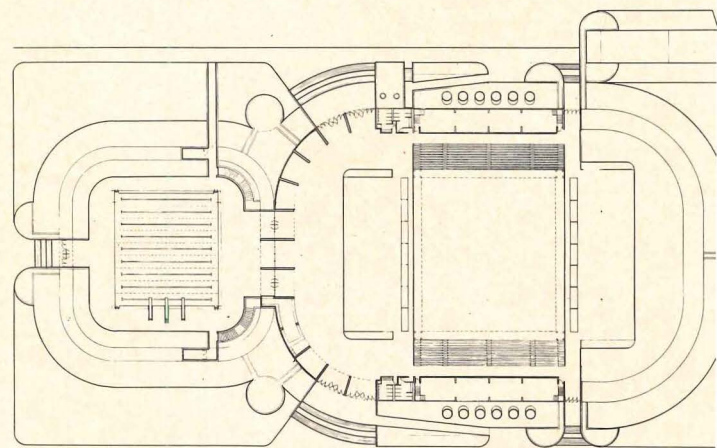
It seems inauspicious to ask how such a system could fail. No matter: the architect has played a tireless devil's advo-



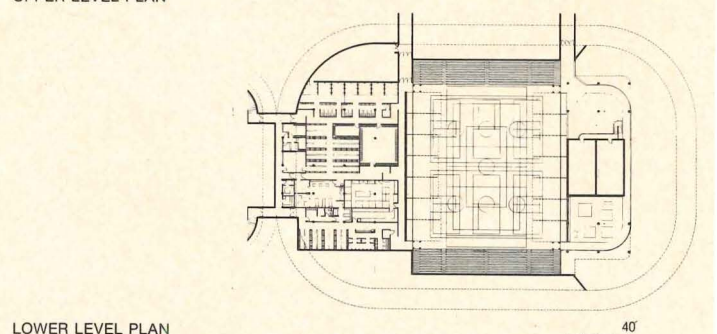
SITE PLAN



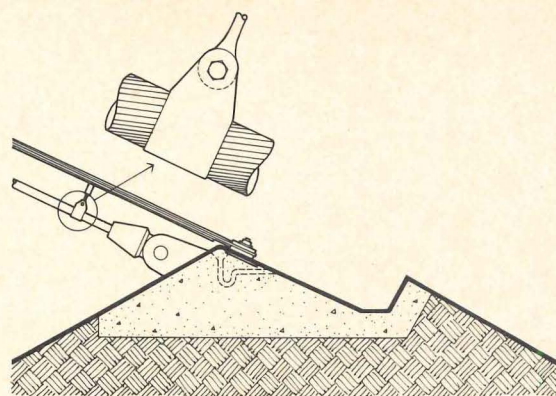
ROOF PLAN



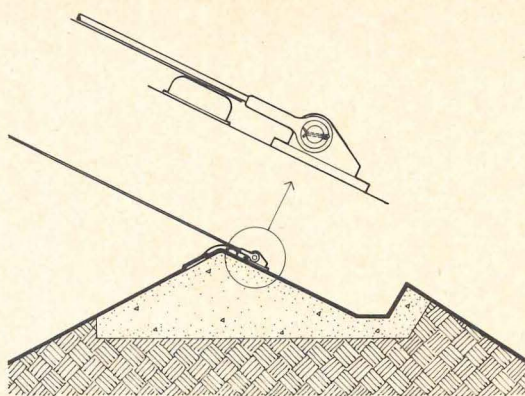
UPPER LEVEL PLAN



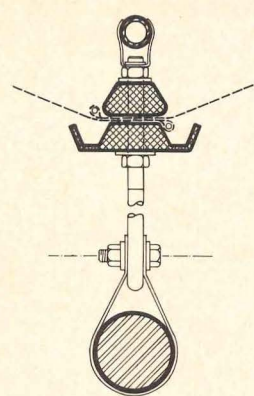
LOWER LEVEL PLAN



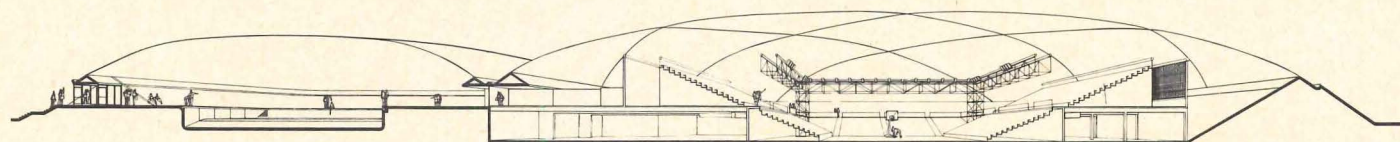
TYPICAL CABLE ANCHOR
AT BASKETBALL COURT RING



TYPICAL CABLE ANCHOR
AT SWIMMING POOL RING

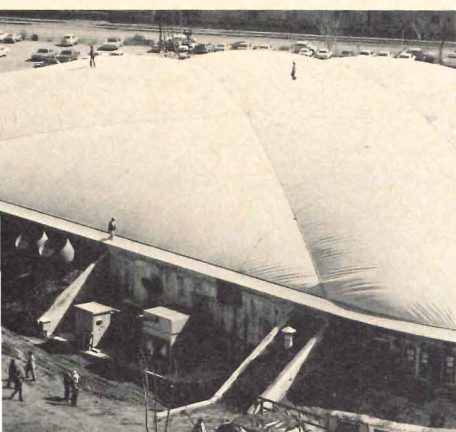


HANGER WITH FABRIC
CLAMP AND CABLE

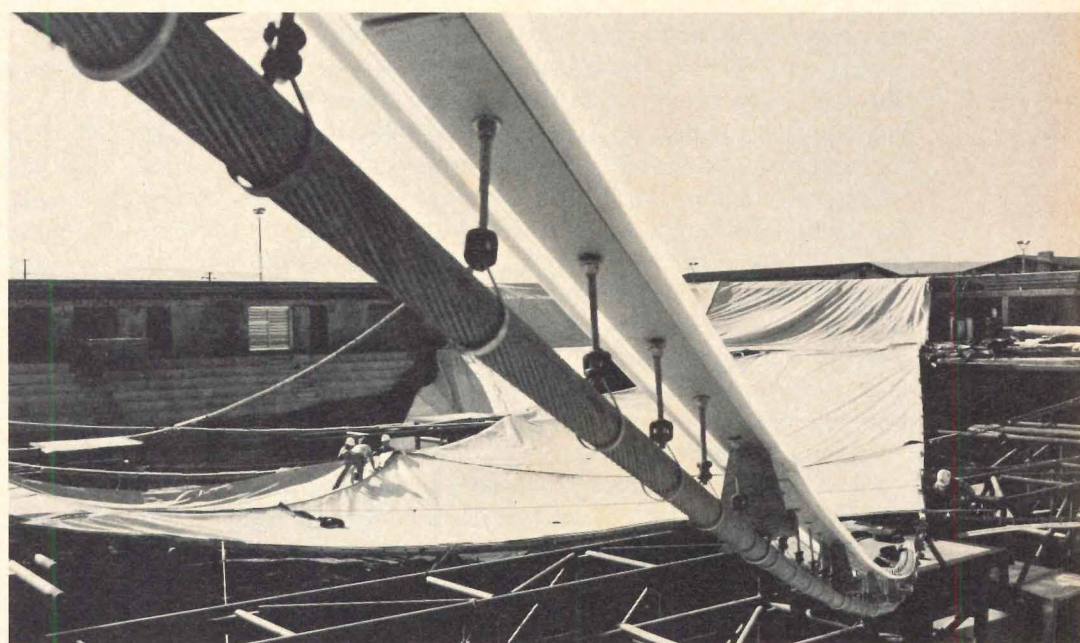


SECTION LOOKING NORTH

Below: details of construction from membrane assembly to inflation to inspection. Photo of air handling equipment bottom left: Julius Shulman.



Photos: William Eymann



William Eymann

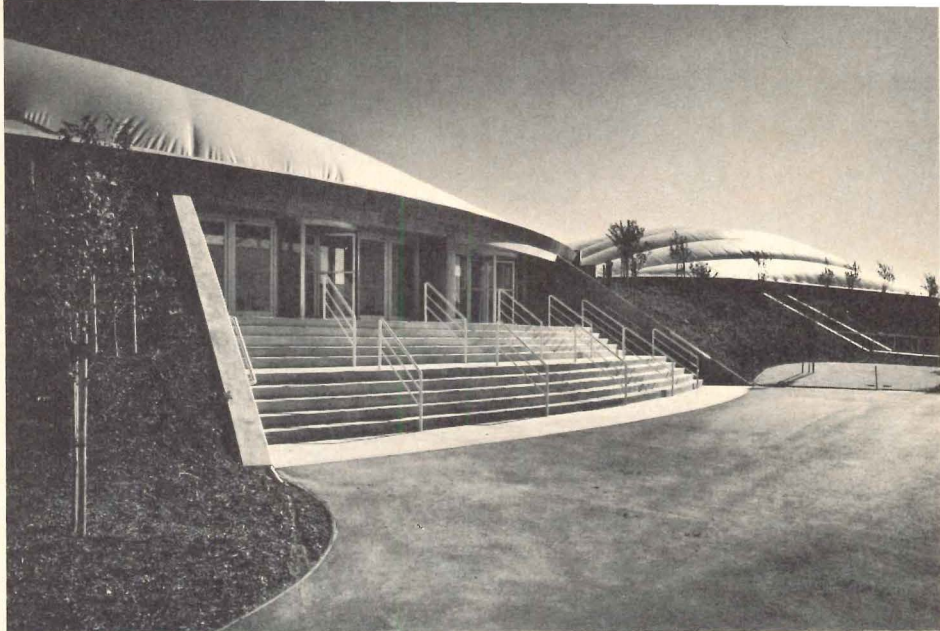


Julius Shulman



Technics: Air support structure

A clean well-lighted place. Views left to right and top to bottom: a south view of entrance to basketball court and swimming pool structure; karate class exercises behind basketball bleachers; swimming pool interior; offices on upper level of basketball court; basketball court interior with light bridge. All photos: Julius Shulman.



cate. A special determination by the city fire marshal permitted the architect to analyze the center as an exterior stadium with a permanent environmental cover. There was no shortage of latent problems even so. Fortunately, a structure held up by air has some unusual assets of its own.

Consider the most spectacular catastrophe possible in the center. Invariably it would involve the combustion or collapse of the air structure fabric. The coated fiberglass fabric has passed tests for intermittent spread of flame, and burning brand application. Although the coating might separate and the cloth might char, the material can retain sufficient integrity to hold together. Further, the air pressure may keep both flame from a burning brand and rainfall on the outside of the fabric, according to these tests.

Still, automatic fire sprinklers are not precluded from the structure. Thanks to the fire marshal's ruling, they are held only to areas where occupants would exit within a 25-ft vertical distance of the air structure span—instead of everywhere immediately under the roof. The locker/shower area and central equipment storage space are fully sprinklered in compliance with normal code requirements. (Fire safety considerations have also included such potential fire loads as the urethane based floor compounds, steel framed bleachers, carpet, acoustical material, and landscaping.)

The performance of the air structure is quite versatile. It is sufficiently translucent that artificial lighting is not required during daytime use, which permits energy savings for lighting and heat disposal. It permits ultraviolet penetration that can support plant life. Because its profile at the ring connection follows the shape of the earth berm at a roughly 1½:1 ratio, it suffers minimal distortion (maximum of 3 ft) due to vertical side loading of the roof in a high wind.

Could the soufflé ever collapse? Were the main fans to fail, four backup fans and three air conditioning fans could more than compensate their loss. A hole 10 ft sq could be sustained.

And what of a visit from vandals or perhaps a light aircraft? Complete deflation might take some two hours. As cable and fabric slump from loss of pressure, they would drape themselves across a system of vertical supports. A light bridge truss in the main arena and special railings atop the higher bleachers are among the structures designed to support the sagging roof.

Roll me over

One of the two air structures is not quite as "permanent" as the other. The swimming pool is intended to take advantage of the steady sunlight which is available for some two-thirds of the year by rolling back its roof. Its membrane of vinyl dacron has an estimated service life of 7 years (assuming continuous exposure) versus 20 to 25 years for the coated fiberglass over the basketball arena. But it rolls up easily whereas the other does not. When temporary cables are stretched from north to south pool walls and all vertical obstructions are retracted below the plane of the cables, the fabric and its enclosed cables are wound to one side and stored atop the compression ring.

Flexibility is a catchword of architecture. Paying for it is not nearly so infectious. However, in creating an air supported structure for USC, CRS has delivered a sizable facility at relatively low cost.

And the industrial neighbors of the campus have not looked better in years—concealed by the center. An east view of the beautiful San Diablo mountains has been enhanced too. Never underestimate the power of a bubble. [Roger Yee]

Data

Project: Thomas A. Leavy Activities Center, Univ. of Santa Clara, Calif.

Architect: Caudill Rowlett Scott, design architect; team headed by Paul Kennon; Albert A. Hoover & Associates, associate architect.

Program: student activities center.

Site: University of Santa Clara, Santa Clara, Calif.

Structural system: air supported roof structure over reinforced concrete bermed walls and floors.

Mechanical system: forced air heating and cooling.

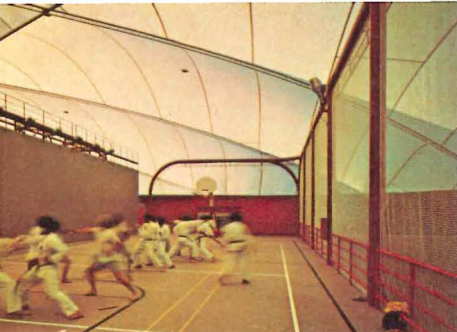
Major materials: reinforced concrete exterior walls and floors; tetrafluoroethylene coated fiberglass fabric over basketball arena; vinyl dacron fabric over swimming arena; steel tension cables; metal interior wall partitions; urethane-based floors; steel framed bleachers; steel truss for interior light bridge.

Consultants: David Geiger & Horst Berger, P.C., air structure consulting engineers; Pregnoff/Mathieu/Kellam/Beebe, structural engineers; G.B. and T.R. Simonson, mechanical and electrical engineers; Industrial Noise Services, Inc., acoustical engineers; Arutunian/Kinney Associates, landscape architects; Woodward-Lundgren & Associates, soil engineers and geologists.

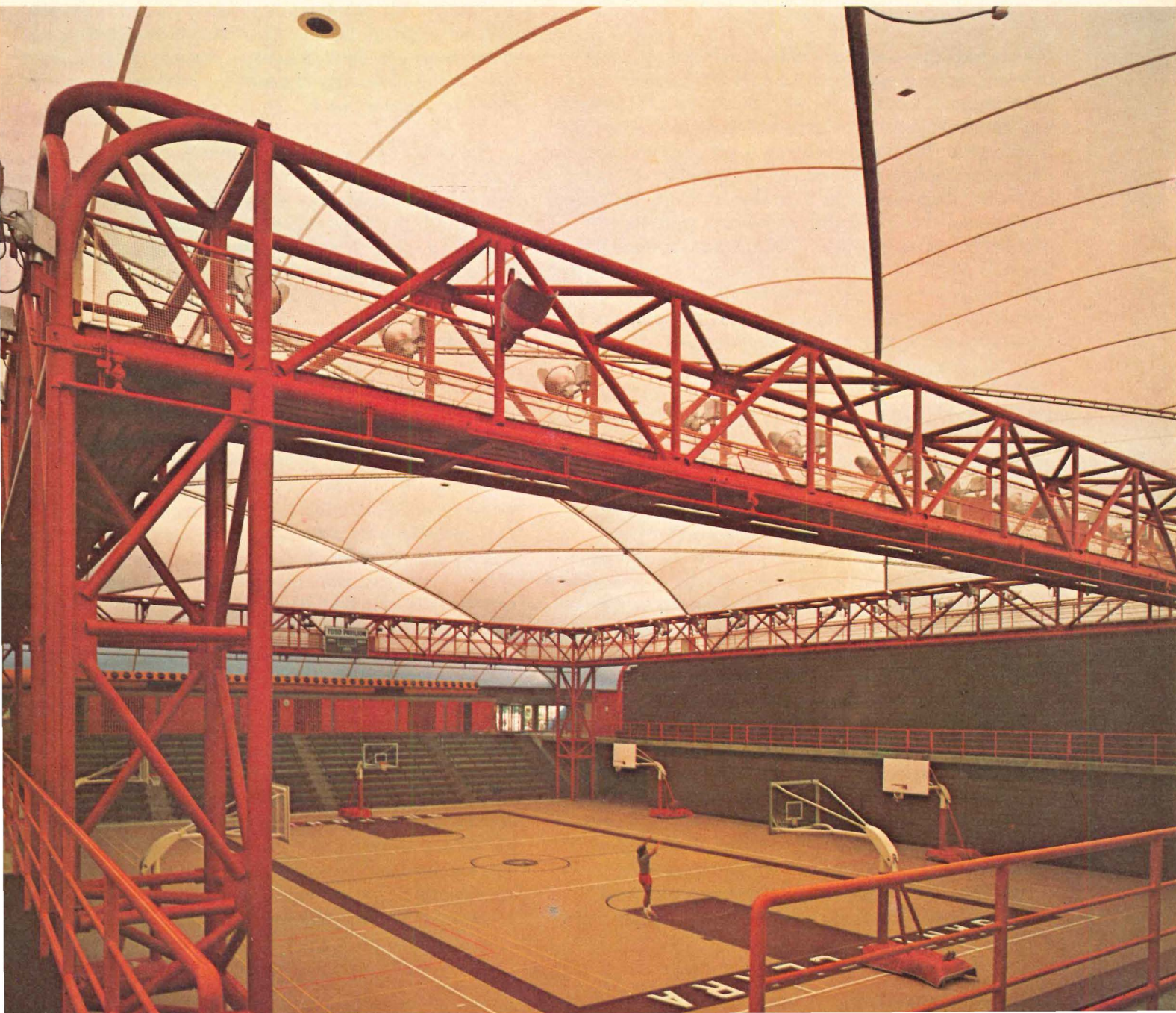
Clients: University of Santa Clara; Philip Welch, consulting architect.

Cost: \$4 million.

Contractor: Johnson and Mape Construction Co.



Photos: Julius Shulman



Tree sues bulldozer?

Bernard Tomson and Norman Coplan

Although the U.S. Supreme Court ruled to the contrary, it is entirely possible that organizations concerned with protecting our environment may soon be able to file suit on behalf of their clients—trees, lakes, and wild animals.

Concern about the environment has led to the suggestion that for juridical purposes, natural objects such as trees, lakes, streams, wild animals, etc., should have legal rights and standing to challenge actions which may threaten their preservation. The courts have not as yet adopted this rather unique suggestion. To the contrary, the United States Supreme Court, in *Sierra Club v. Morton*, 405 U.S. 727, ruled that a person, in order to challenge some action which might affect the environment, has to show some special interest, or an identifiable interest, in order to sustain the suit. Three judges on the Court, however, dissented from this opinion stating that they would "permit an imaginative expansion of traditional concepts of standing in order to enable organizations such as the Sierra Club to litigate environmental issues." One of the dissenting judges stated that the right to institute suit should be simplified "in the name of the inanimate object about to be despoiled, defaced, or invaded by roads and bulldozers and where injury is the subject of public outrage."

Although the United States Supreme Court does not appear prepared at this time to give natural objects legal rights, the legislatures in many of the states have enacted laws to enhance or preserve natural conditions or to restore the environment to an appropriate balance. Many statutes have been adopted enacting laws protecting plant life, wildlife, establishing parks and wilderness areas, and protecting the cleanliness of water. One of these is the Adirondack Park Agency Act of the State of New York whose purpose is to protect and preserve the aesthetic and scenic value of mountain areas consisting of approximately six million acres of land. More specifically, the Act was designed to "insure optimum overall conservation, protection, preservation, development, and use of the unique scenic, aesthetic, wildlife, recreational, open space, historic, ecological, and natural resources" of the Adirondack Park.

The majority of acreage in the Park areas is privately owned and the whole area is approximately the size of Ver-

mont. Guidelines for moderate intensity use areas were established by the Park Agency and one of the compatible uses was for hunting and fishing cabins and hunting and fishing and other private club structures. A secondary use includes marinas, boatyards, and boat launch sites.

A private owner of approximately 39 acres of land which border on the Oseetah Lake in the Adirondacks sought permission to develop his property. This permission was granted subject to certain terms and conditions. One of these conditions was that no boathouses would be constructed on the shore of Oseetah Lake and that any dock that would be constructed should be a type and size that was compatible with the existing rustic shoreline of that portion of the Lake. The owner of the property challenged this ruling, contending that the State could not base a restriction on land use which is solely based on aesthetic or environmental considerations (*McCormick v. Lawrence*, 372 N.Y.S. 2d 156). The Court, in rejecting the suit, stated:

"However reluctant courts have been in the past to allow aesthetic considerations alone to justify the use of police power . . . the courts now recognize aesthetics as a legitimate concept within the general police powers . . . 'It is now settled that aesthetics is a valid subject of legislative concern and that reasonable legislation designed to promote the governmental interest in preserving the appearance of the community represents a valid and permissible exercise of police power.'"

The Court, having held that aesthetic considerations were not unlawful per se and that the Adirondack Park Agency had the authority to impose reasonable requirements and conditions respecting the use of the land in granting a permit, it was necessary to determine whether that administrative act was arbitrary or capricious. In this respect, the Court said:

"It appears from the exhibits, and especially from the enlarged photographic panorama mosaics, that the shorelines of Oseetah Lake are relatively undeveloped and in a relatively pristine state in the vicinity of Petitioners' property. It can be seen that the view from the main channel, which passes close by Petitioners' property, still retains a scenic view of the trees and shoreline unspoiled by overdevelopment. Furthermore, at the time of the application Saranac River was under study for inclusion in the Wild, Scenic, and Recreational Rivers System. Assuming its designation as a recreational river, the Agency would be directed to preserve and restore the natural scenic and recreational qualities of such river, and the Agency could take this into consideration. It must be concluded that the addition of a cluster of boathouses on a project of this size and in this location would tend to destroy the natural beauty of the area, and that the Agency's decision cannot be deemed arbitrary or unreasonable."

The change in the law in many states from the traditional concept that aesthetic considerations alone could not validly support a zoning restriction, to the present-day concept that aesthetic factors may be the basis for land use restrictions, is a dramatic example of the fact that the law is not static, but continuously evolving. □



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Separate but equal

Popular Culture and High Culture by Herbert Gans.
New York, Basic Books, 1974. 179 pp., \$10.

Reviewed by Stanley Abercrombie, architect and former senior editor, *Architecture Plus*.

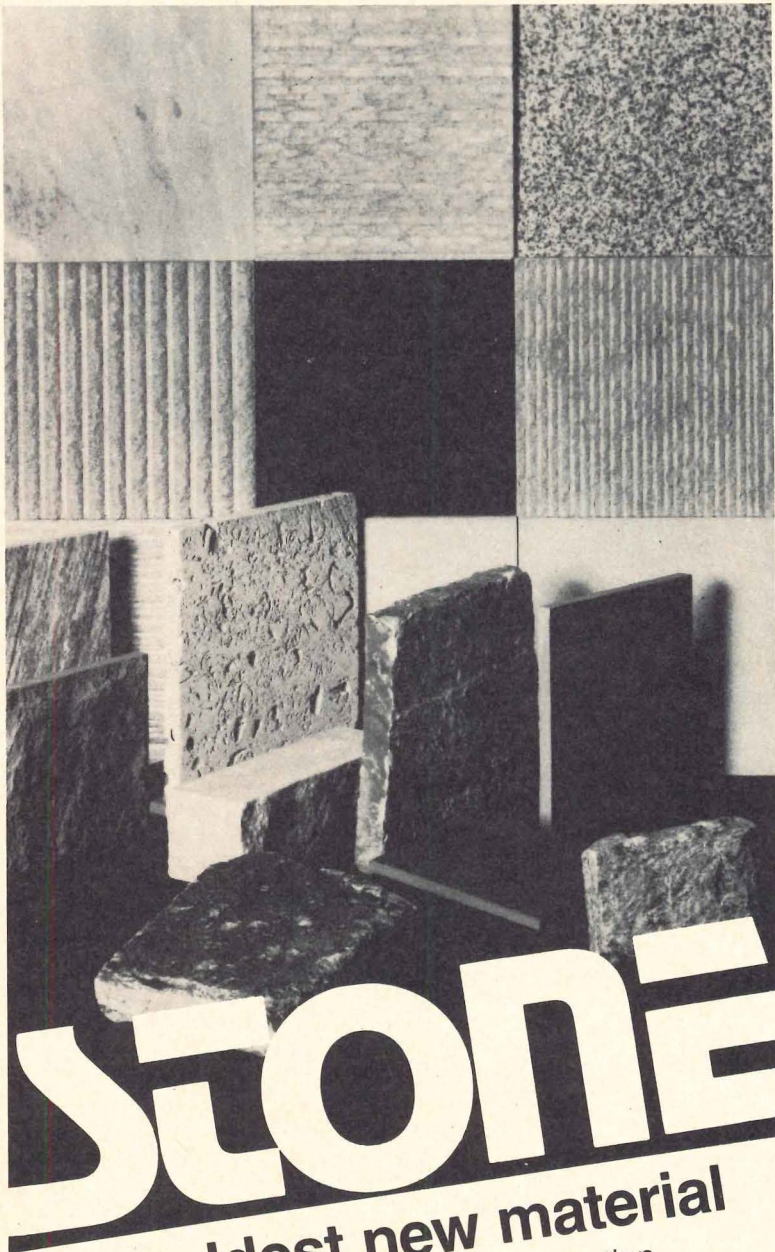
Read Herbert Gans' new book, then write your congressman to protest against it. Gans, noted author of *The Levittowners*, eminent urban sociologist, and philosophical guru for the husband-wife architect-polemicist team of Robert Venturi and Denise Scott Brown, has, in this latest book, gone too far. First, he divides culture not just into popular and high but into five "taste structures." All right. As Gans acknowledges in a footnote, Russell Lynes did something similar two decades ago with the "Highbrow, Middlebrow, Lowbrow" chapter in his book *The Taste-makers*, and similar gradations are obvious to all of us. But whereas Lynes made his distinctions with wit, Gans makes his with vengeance, and he goes further: he suggests that there is no scale of values which can measure his five classes; each is the perfect, most valuable one for its own particular audience, each is to be encouraged and supported, and each is to have its own "trained critics who judge culture by the standards of individual taste publics."

Now why further harry your already over-harried congressman with such matters? Because it is the federal government which Gans sees as the source of his five cultures' encouragement and support. "I think," he says, "everyone should get the culture they (sic) want, even if they cannot afford to pay for it." Here we are brought to the heart of the worry about government bureaucrats' meddling in the arts: will they be as inept with sculpture and architecture as with southeast Asia and the economy? If they take Gans' advice, they very well may be. Federal funds for, say, Twyla Tharp's dance group may be very welcome, but Gans seems to want an equal sum spent on subway graffiti. You surely can't call him an elitist.

Gans, we know, has been an important theoretical contributor to an important recent direction in art and architecture, the appreciation and use of the commonplace and the crude. That direction is in itself thoroughly respectable; to the extent that it absorbs new images (new to high culture, that is) and is invigoratingly abrasive to old images, it is the same old iconoclasm that must be part of any definition of "modern." In our painting, it is at least as old as Picasso's *Les Femmes d'Alger*. Older.

When Gauguin attended Paris' Universal Exhibition in 1889, Herbert Read wrote it was not Eiffel's tower that bewitched him, but the displays of exotic and primitive cultures. Almost four score and seven years later, having squeezed most of the immediately available inspiration from such exotica (although some architects do go on about the huts of the Dogon), we have turned to our own

[continued on page 104]



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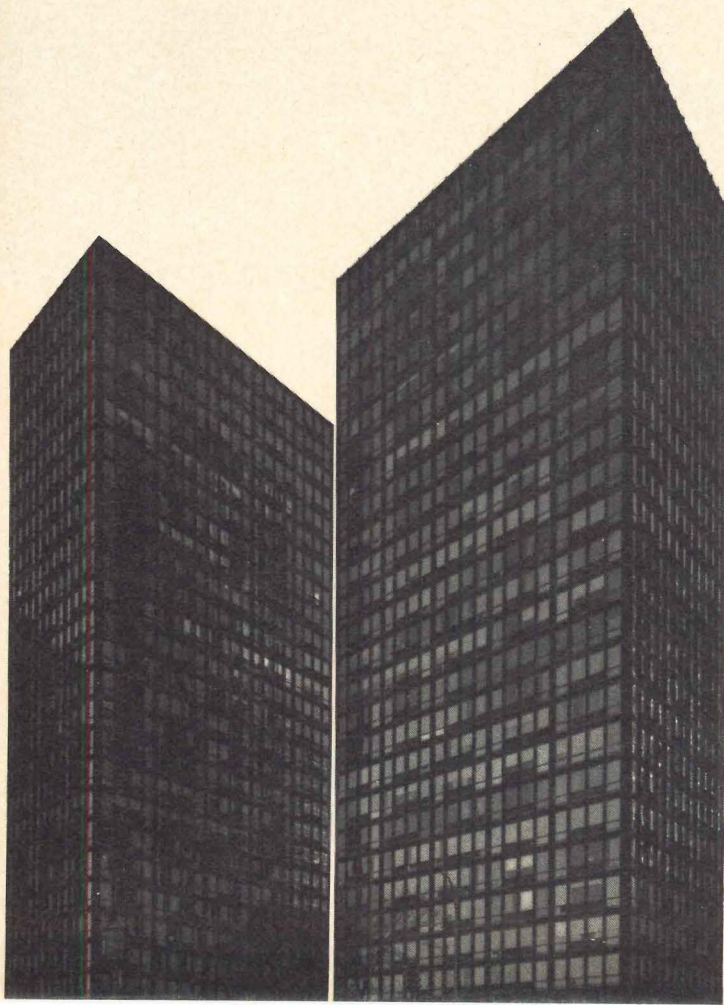
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Books continued from page 102

tribal artifacts: Jasper Johns to the flag, Warhol to the grocery shelves, John Margolies, assembling an exhibition at New York's Architectural League, to the Miami hotels of Morris Lapidus, the Venturis to Las Vegas and, with Gans, to Levittown.

One traditional point of this sort of thing is that it can stimulate minds, crack calcified attitudes, and be, well, *fun* to give bad-taste paintings or buildings to good-taste consumers (as long as you are talented enough so that *they* know that *you* know that they know better). But such wearing-furs-to-Harlem cross-cultural entertainment, however refreshing, is strictly at odds with Gans' goal of multi-cultural stratification. Gans, it appears, would have each of us stay in his own little cultural ghetto, dressed appropriately.

And that's the really disagreeable thing about his book. It sounds splendidly democratic to say that middle-class art is fine for the middle class and that it's no better or worse than the art of any other class. But the idea of dividing us into such classes and then feeding us, in the form of appropriately graded art, just the sort of pabulum that would keep us contentedly in our places, is destructive of the upward mobility which is one of democracy's great possibilities. Not a probability, perhaps, but a possibility still.

There is another, more subtle danger in Gans' proposal, a danger to art itself. Clement Greenberg has remarked on the phenomenon of a civilization that "produces simultaneously two such different things as a poem by T. S. Eliot and a Tin Pan Alley song, or a painting by Braque and a *Saturday Evening Post* cover." He finds that phenomenon disturbing because a common value system, and thus a natural means of communication, is obviously no longer in operation. The artist is "no longer able to estimate the response of his audience to the symbols and references with which he works." Greenberg saw as a result of such a situation the creation of an artistic avant-garde, detached from society. Gans' divisions, if Greenberg is right, would breed further, ever more precious, ever more finely discriminating divisions. With common experience denied, art and literature turn increasingly for their subjects to art and literature, or, as in the cases of Venturi and others, to an occasional raid of lower culture, always with tongues safely in cheek. Surely such narcissism and condescension is as unhealthy for high art as an uncritical reveling in kitsch is for popular.

Lest we misrepresent Greenberg, we should add his statement that "by no other means is it possible today to create art and literature of a high order." Let us also quote, though, his view that the "avant-garde's specialization of itself . . . has estranged a great many of those who were capable formerly of enjoying and appreciating ambitious art and literature . . ."

We accept Greenberg's implicit judgment—it surely never occurred to him that he need be explicit about it—that Braque painted better than Norman Rockwell. And we can accept that value judgment with no sense of needing to explain or apologize to Gans, who advocates their equal but separate appreciation and who therefore (if we are not to think of him as the most heinous snob, intent upon institutionalizing an aesthetic caste system) must not be able to see the difference. □

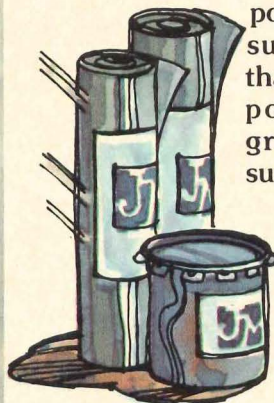
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Products and literature



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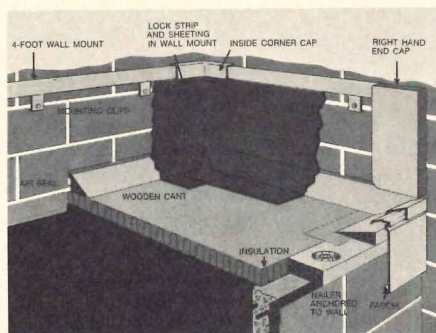
The pendant unit offers either two or three 40 w lamps, and either a lens-louver combination or a special double lens to beam light to the work surface. It also incorporates an on-off control on the fixture itself, allowing individual switching. It is reported that, using the pendant unit, 70 foot-candles can be attained using 1 w per sq ft or even less. The fixture mounts in electrified tracks which can be placed anywhere in the system, adjacent to the grid, allowing total flexibility of light fixture location for open plan offices, and increasing the ceiling area for absorptive material.

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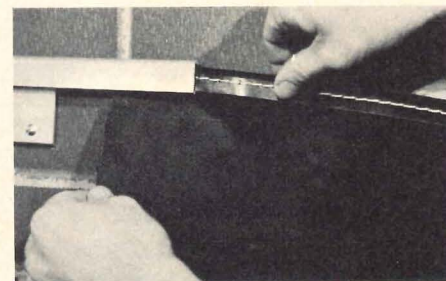


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[continued on page 108]

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floor

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Larwin Company, Encino, CA.



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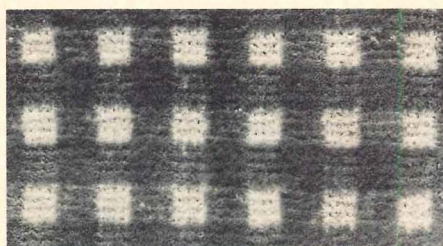
Ergon chairs. The series includes secretarial, management, executive, side and pull-up chairs; with or without arms, on casters or glides, and with tilt-swivel mechanism where required. Chairs have adjustable seating height; secretarial chairs also have back height and back angle adjustment. The chairs are offered with either an upholstered or non-upholstered outside shell and come in a wide choice of fabrics, leathers, or vinyls or COM. Bill Stumpf, the chair's designer illustrates how the chair accommodates the office worker in the basic work, conversation and relaxation positions assumed throughout the workday. Herman Miller, Inc.

Circle 109 on reader service card

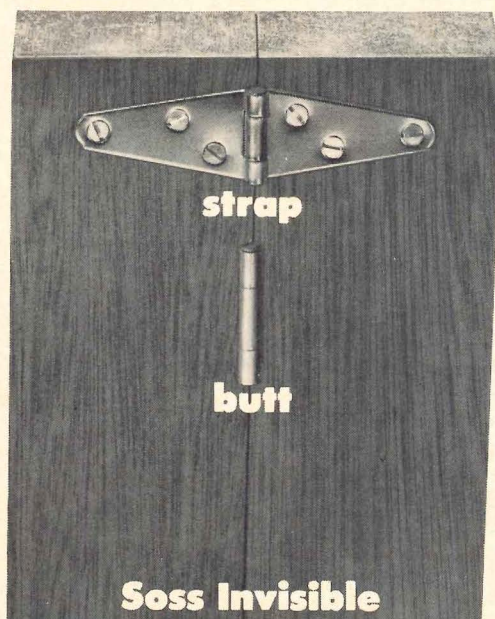
Custom carpet. A contrast of a loop and fully sheared yarn is used in this carpet group called Textural Studies. The juxtaposition of textures enables the specifier to determine the relationships of the interrelated grid systems and select the scale and texture appropriate to his design concept. The designer can add or subtract from the face weight of the carpet to appropriately solve the traffic needs of various areas within a single application. Carpet is constructed of 100 percent wool to color specifications of the designer. V'Soske.

Circle 110 on reader service card

[continued on page 110]



Pick the hinge that hides

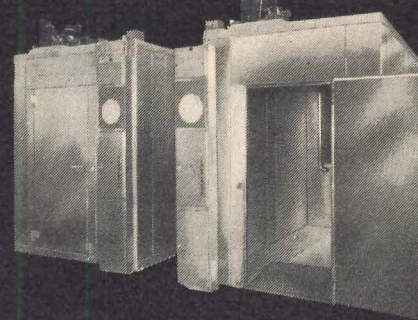


Compare the Soss look of invisibility with any strap or butt hinge and you'll choose The Soss Invisibles. These amazing hinges hide when closed to blend with any decor. With The Soss Invisibles you can create room, closet, or cabinet openings which are unbroken by hinges or gaps . . . the perfect look for doors, doorwalls, built-in bars, stereos, or T.V.'s. The Invisibles are extra strong, open a full 180 degrees, and are reversible for right or left hand openings. See listing in Sweet's or write for catalog: Soss Manufacturing Company, Division of SOS Consolidated, Inc., P.O. Box 8200, Detroit, Michigan 48213.



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Circle No. 362, on Reader Service Card

Note: Metallics are protected by a hand-finished lacquer coating (except No. 6250).

Dimensions at right are one-third scale.



Tomorrow's design innovations today

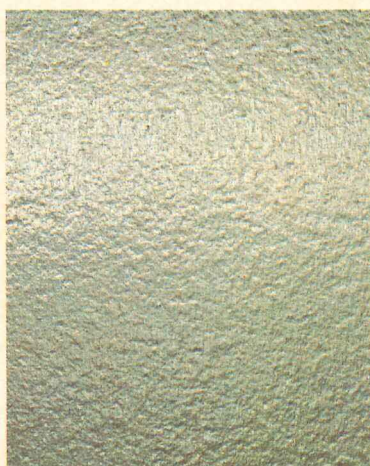
WILSON ART™

WILSON ART BRAND LAMINATED PLASTIC

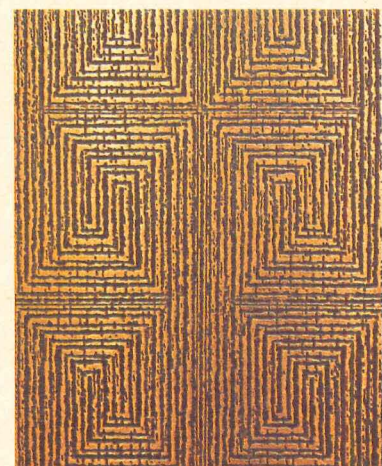
© Copyright 1976, Ralph Wilson Plastics Co., Temple, TX 76501

Wilson Art—manufacturers of Wilson Art high-pressure laminated plastics, Chem-Surf, Tuf-Surf, Dor-Surf, Metallics, Wilsonwall and Contact Adhesives.

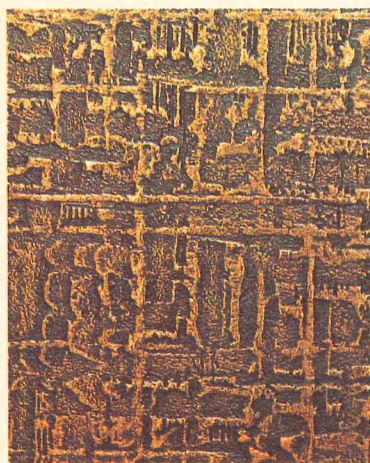
Circle No. 6214
Copper Embossed



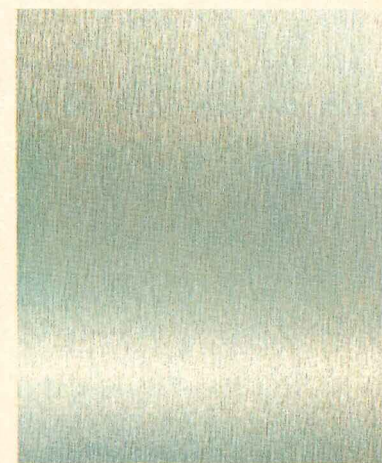
6252 aluminum Embossed shiny hammered finish, fine texture.



6230 copper Elaboration on the classic theme of Greek frets.



6240 copper Darker, heavily textured abstract with a bold appearance.



6250 aluminum Brushed finish. Surface not lacquered—this pattern is natural-color aluminum, anodized for protection.

Seating. 7600 Series includes executive models with fully upholstered arms, managerial and supervisory seating with open arms, armless clerical chairs, fixed back and posture back secretarial models, pedestal base chairs and high base chairs with footrings. A rigid foam shell structure with an internal support arrangement is basic construction of all models except the secretarial models. Metal arms and chair controls are mounted directly to the steel substructure. The shell may be completely upholstered or upholstered only on the top side and finished off with a vacuum formed back liner. The arms and five-legged base are cast aluminum. Arms have a powder-coated finish in a choice of three neutral or three deep tone colors and base is available with either powder coating or polished finish. The series is also available with a four-legged steel base. An internal rubber molding strip, concealed under the upholstery, covers the edge of the shell and serves as a bumper. Harter Corp. *Circle 111 on reader service card*

Paper handling system is composed of two card trays for 5"x8" documents; two letter size trays for documents from 5"x8" to 10"x12"; a legal size tray for large papers up to approximately 12"x15"; a wide, flat-bottomed book tray for ring binders and reference books. Paperflo trays can be mounted on company's movable walls, installed in their lateral files, or used with a



Seating

free-standing support on desk tops or credenzas. Each tray is furnished with a clear plastic holder for labeling and color coding of contents. Steelcase, Inc.

Circle 112 on reader service card

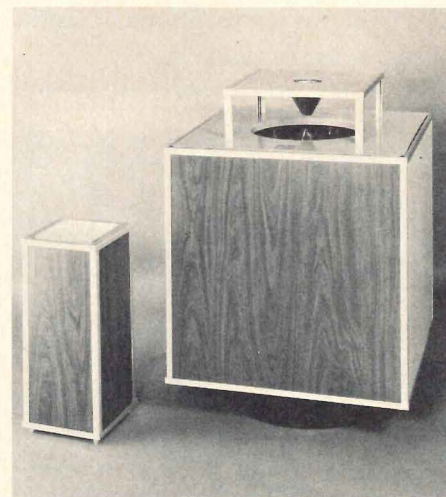
Ash urns/trays. The dimensions of the ash urn are 10½"x10½"x24½" and it may be used with or without sand. Made of anodized aluminum it is available with a choice of 18 aggregate rock panel finishes, six solid colors, or a wood grain finish. The side panels may be coordinated with the company's 55 and 30 gal. litter receptacles. The ash tray attaches to the underside of the litter receptacle bonnet top and is designed so that trash may be emptied from the container without removing the ash tray. It is on runners so that it can be easily removed for cleaning. For use in hotels, theaters, retail stores, etc. Clean City Squares, Inc.

Circle 113 on reader service card

[continued on page 112]



Paper handling system.



Ash urns/trays

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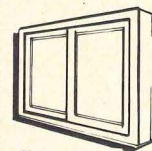
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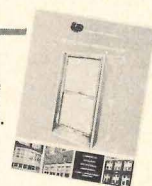


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"I call architecture frozen music," Johann von Goethe wrote in 1829.

Today you can express your own ideas of "frozen music" with the help of Amarlite's PBS-383 curtain wall, a thermal barrier stick-type wall system that allows you the flexibilities in design needed for any building composition.

PBS-383 uses snap-on glazing beads at the interior horizontals for either exterior or interior glazing, depending upon job conditions and building design.

A variety of mullion depths is available, as are snap-on covers with 5/8" depths to comply with requirements for a shallow-faced mullion used with

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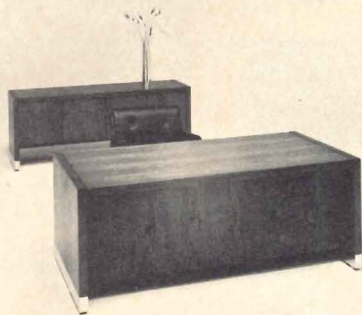
Check 8.14 AN in Sweet's or phone direct for more information about the PBS-383 curtain wall and other Amarlite architectural aluminum products.

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ANACONDA  **Aluminum Division**



Office furniture. A collection of executive and secretarial desks, credenzas, and accessory tables. Desks come in 14 sizes and configurations with five matching credenzas and six accessory tables. All pieces are available in a choice of oak or walnut veneer with a full range of oil and varnish finishes. Chrome base strips are optional. File drawers have heavy-duty suspensions, and box drawers have nylon rollers. All drawers have 9/16" solid oak sides. Two in. panel sizes are standard with 1 1/4" thickness as an option. Dore Office Furniture, Inc.
Circle 114 on reader service card

Tree feeding system, called W.A.N.E., for water, air, and nutritional exchange, is a piece of equipment that is placed at regular intervals around the tree. The PVC liner is inserted into augered holes that have been backfilled with approximately 6 in. of gravel. Then a specially designed filter element is inserted, and the unit is capped with one of two different ABS plastic lids. It is designed to use a slow release fertilizer mix, a vapor release packet, or a custom mix of nutrients. The rise above grade is 3/32" after installation. A frost anchor is provided in northern areas. W.A.N.E. Tree Systems.
Circle 115 on reader service card

Anodized colored aluminum plates. Colored images are sealed under an anodic layer protecting them from stains and corrosion. Reproduction capabilities are said to be virtually limitless. Plates are available in red, blue, green, purple, orange, and black. Metalphoto Corp.
Circle 116 on reader service card

Literature

Building stone. Hard cover, 1976-1977 catalog contains indices of quarriers and trade names, glossary of terms, and separate sections covering limestone, marble, bluestone, granite, greenstone, obsidian, quartzite, sandstone, slate, and specialty stones. Catalog may be obtained by writing on your letterhead to the Building Stone Institute, 420 Lexington Ave., New York, N.Y. 10017.

Signage. Full-color brochure illustrates some applications of directional signs and graphics, points out the importance of correct coloring, positioning, siting, lighting, etc. Dymo Industrial Marking Systems.
Circle 201 on reader service card

Coping. A four-piece system which consists of perforated cleat, molded styrene chair, heavy gauge coping in 10-ft lengths, and concealed joint covers. Adhesive bonds cleat to parapet eliminating imbedded anchor bolts. System with stands wind uplift of 60 lbs per sq ft, states maker. Styrene chair carries water from joints back to roof. No nails, screws, or other fasteners are required, coping cover snaps on to cleat. Coping is available in width increments of 1 in. from 6 1/8 in. to 16 1/8 in. Booklet contains scale drawings and gives installation and specification data. W. P. Hickman Company, Inc.
Circle 202 on reader service card

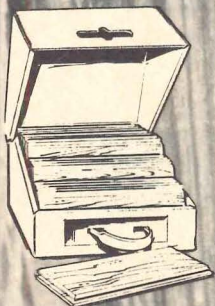
Roof decking. Four individual runs of 2x6 T&G decking, finger-jointed for structural strength, are panelized by the application of a heavy Kraft paper. Each panel face is a net 19 1/2 in. wide, weighs 3.2 pounds per sq ft and is available factory stained and/or sealed to meet customer's specifications. Face side of panel may be smooth, textured, or laminated with a heavy-duty brown or white Kraft paper. Brochure gives detailed data. American Forest Products.
Circle 203 on reader service card
 [continued on page 114]

The incomparable touch of Townsend.

You can't beat Townsend genuine hardwood plank paneling. For texture. Richness of finish. Appearance. Shaping. Grooving. Design convenience.

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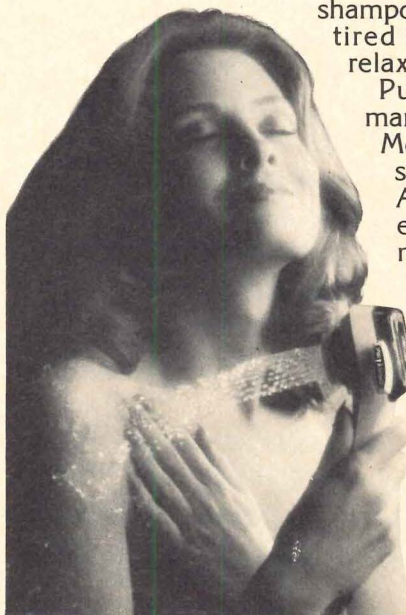
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Potlatch

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That's what your clients will say, when you specify Pulsation™, the massaging hand shower from Moen. Pulsation provides cascades of pulsating water that refresh, relax and invigorate. Great for tingling shampoos, soothing relief for tired feet, gentle all-over relaxation.

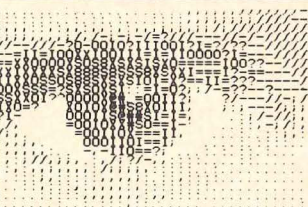


Pulsation is just one of many new products from Moen, the first name in single-handle faucets. All Moen faucets are equipped for automatic water/energy conservation. For details write Moen, a Division of Stanadyne, Elyria, Ohio 44035.

THERE'S ONLY ONE.



International Design Conference in Aspen



Exploring Change June 13-18

One of America's most renowned fashion designers, **Rudi Gernreich** was responsible for the contemporary desertion of "lady-like" fashion and the revolt against traditional Paris styles. He will provide a personal view of how the forces of technology and changing social values affect the fashion marketplace.

Brendan Gill is Broadway Drama Critic of The New Yorker. His books include *Here at the New Yorker*, *The Trouble of One House*, and *Ways of Loving*. He is also a noted architectural historian.

Landscape architect, educator at the University of California and editor of *Landscape Magazine*, **John B. Jackson** will view how our love affair with the road has been instrumental in changing the physical and social landscape.

Ian McHarg, landscape architect, regional planner, professor, and author of *Design With Nature* (one of the influential treatises in the ecology movement), will explore how changing demands on the world's natural resources affect our future.

Robert McKay is President of the Legal Aid Society of New York City and Chairman of the American Bar Association's Commission on Correctional Facilities and Services. He was Chairman of the New York State Special Committee on Attica and Director of the Aspen Institute for Humanistic Studies' program on Justice, Society and the Individual. He will present an overview of "Change and the Law."

Food critic and columnist for *Natural History Magazine*, author of *Great Recipes from the New York Times* and *The Saucier's Apprentice*, **Raymond Sokolov** invites us to witness the collision of traditional methods of food preparation with new technologies.

Media poet **Gerd Stern** is an author, producer and director of major multi-media presentations, "The Six Minute Day" and "Imagimotion." He recently produced "This is Federal Design," 200 years of stamps, emblems, money, posters, for the Federal Design Assembly. Gerd will examine the impact of microtechnology on our society in a talk called "Flip-Flop."

Brian Sutton-Smith will examine the increasingly symbolic world which children inhabit and the role to be performed by the arts in their development. Program Head in Developmental Psychology, Columbia University, he is best known for his research and prolific writings on child development through play, games and artistic media.

Gene Youngblood is an authority on the social implications and uses of electronic communications media and author of *Expanded Cinema*. He will share his personal views on communication as a revolutionary force, or how shifts in communications systems radically alter basic institutions of our society.

Other Participants Include: Raquel Ramati, Cedric Price, John Platt, Dorothea Elman, Samuel Kaplan, Gilles de Bure, Heinz Edelmann, Jan Sawka, Shigeo Fukuda, Mario Bellini, Bohumila Milena Lamarova, Marc Berthier and Eric Staller.

• A display environment designed by **Niels Diffrient** will be the showcase for designs brought to Aspen by the conferees.

• There will be a continuous slide showing of recent and past award-winning designs.

• Graffiti walls equipped with washable markers will be on hand for those of us with more immediate graphic and calligraphic needs.

• Our traditional barbecue will be followed by an authentic western rodeo and a late evening dance.

Participation

Conferees at IDCA have long demanded a greater opportunity to participate in the program of the conference. By means of a wide variety of mechanisms the conferees will have the chance to explore how participation can be a meaningful and enjoyable experience.

Films

The National Film Board of Canada will present the premiere of a major film produced by the Board, as well as nightly and afternoon screenings of traditional and experimental films.

Throughout the week there will be showings of other films and experimental video tape productions, such as the prize winning films from the First International Craft Film Festival: *Hands*, by James Beveridge; *Pedro Linares—Folk Artist*, by Judith Bronowski and Robert Grant; *The Violin Maker*, a Zagreb film produced in Yugoslavia.

Children's Program

The children's program will be orchestrated by **Rita de Lisi**, former director of Project, Inc., an experimental visual art center in Cambridge, Mass. Rita would enjoy corresponding with the children before the opening of the conference, and requests that each child send a letter and a picture to: Ms. Rita de Lisi, 319 North Clinton, Lindenhurst, New York.

Exhibits, Events, Entertainment

• A multi-media event (created by **Eric Staller** and **Jivan Tabibian**) will document the views of William Kunstler, Isaac Asimov, William Rusher, Herbert Gans, Thomas Hoving, Louis Harris, Richard Sennett, Philip Johnson and Edward Logue. The presentation will deal with questions such as, Why are we so fascinated with change? What is changing around us, and why? How are we affected by the impacts of change?

• Workshops will be held by the participants and Members of the Board. Case studies will include such topics as the natural and built environments, education and recreation, performing and visual art, food, fashion, and furnishings.

• **Don Miles**, Director of Urban Design, Office of Midtown Planning, New York City, will present time lapse film studies of how people interact in urban places.

• Laser beam images will be projected onto the mountains and clouds surrounding Aspen, creating a stunning visual effect.

• The U.S. Parachute Association has offered to demonstrate a choreographed free-fall jump. Hang gliding events are also planned.

• Inflatable tubes will provide opportunities for the development of personalized seating and play environments.

Aspen

Aspen, Colorado, scene of the annual International Design Conference since 1951, is located in a beautiful valley high in the Rocky Mountains. It has an abundance of

excellent hotels, lodges, and restaurants with a wide range of summer rates. There are many outstanding campsites. It is renowned as an outdoor sports center, and boasts such cultural resources as the Aspen Music Festival and Music School, the Physics Institute, and the Institute for Humanistic Studies.

In June, daytime temperatures in Aspen range from pleasantly cool to warm. Because Aspen is about 8000 feet above sea level, the evenings are often quite chilly and heavy sweaters and jackets are recommended. Dress is informal and casual throughout the week.

For accommodations write or phone:

Aspen Reservations, Inc.
P.O. Box 4546
Aspen, Colorado 81611
(303) 925-4000

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Program Assistant: Eva M. Doman

Registration

Reservations are by mail only. Your check will be your receipt. Deadline is May 29 or cutoff number, whichever comes first. Checks received after May 29 must include a \$15 surcharge.

Registration fees are immediately refundable, less \$15 for handling, upon written notice no later than June 30, 1976. Refunds will be issued through IDCA, P.O. Box 664, Aspen, Colorado 81611.

All conferees must be pre-registered due to limitations of conference facilities.

\$150	Registration fee
\$100	Companion
\$ 75	Student (proof requested)
\$ 50	Children's Program (per child, 6-12 years)

Fee covers access to all conference programs and literature (does not include food or drinks)

Make checks payable to IDCA and mail with coupon below to:

IDCA
c/o The Bank of Aspen
P.O. Box "O"
Aspen, Colorado 81611

Conference literature will be distributed on Sunday, June 13. The program will begin that evening.

Please fill in and return:

Name _____
Street _____
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Name _____ Age _____
Name _____ Age _____
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Circle No. 375, on Reader Service Card

Literature continued from page 112

Building material. Filled methyl methacrylate manufactured under the name of Corian is a solid material that is said to require a minimum of on-site fabrication, edge, or surface treatment, may be sawed, drilled, routed, or rabbeted with power tools, can be worked like wood, and can withstand high temperatures. The non-porous material can be washed with soap and water or abrasive household cleansers can be used. Cigarette burns or other surface abuse are usually repairable with abrasive cleanser or light rubbing with fine sandpaper. Colors available include opalescent white, two shades of marble with veining; gold with dappled-pattern all the way through. Product information bulletin is available from E. I. Du Pont De Nemours & Co. *Circle 204 on reader service card*

Laminated plastics. Brochure illustrates Design Group I marble patterns that are created from imported engravings and, according to manufacturer, have deeply veined, realistic look. Designs include Lalique marble, with mother-of-pearl opalescence; Braganzia marble, a buff with chocolate toned veining; and Torino marble, a subdued green with ochre veining. Eight other marbles from tans and white to blue and green, plus white and black slates are featured in this collection. Wilson Art. *Circle 205 on reader service card*

Water-base paints that are quick-drying for interior spray application are said to be suitable for refinishing large industrial or commercial ceilings and high walls because the dry fog overspray falls as a dust. Maker states that the products do not give off obnoxious odors and may be applied by airless or conventional spray equipment. Brochure contains technical data. PPG Industries. *Circle 206 on reader service card*

Cold storage doors. Catalog contains guidelines for door selection and suggested specifications, and illustrates various door types and styles. A selection guide lists the full line of doors and possible applications, which include food service, general cold storage, warehousing, processing, loading dock, and heavy traffic use. Standard and optional features are noted. Request General Catalog '76. Jamison Door Company. *Circle 207 on reader service card*

Stains. Color brochure provides coverage table, table of recommended uses, and chart of colors available. It also gives information on surface preparation for all surfaces. Olympic Stain. *Circle 208 on reader service card*

Wine vault is a self-contained storage unit with walls, ceiling, and door of redwood, which maintains the ideal temperature and a balanced humidity level inside, states maker. Unit comes in seven sizes, ranging in capacity from 138 to 1732 bottles. It comes with patented locking panels and is said to be assembled in under an hour and taken down just as quickly. The Wine Vault, A Viking Sauna Company. *Circle 209 on reader service card*

[continued on page 116]

Knoll

... finish, on rim and base, adds two new choices at a price that
...d make you think twice about anything less than the original Pollock chair.

... International
... Fifth Avenue, New York, New York 10022

... 374, on Reader Service Card



Signage, lighting, and seating are coordinated in a system of square and round chesspieces. Downlighting, downlighting with accent light, up-downlighting, and totally luminous lighting is available with coordinated seating for walks, parks, malls, and directional/informational signs for pedestrian and vehicular traffic. Brochure. Moldcast Lighting.

Circle 210 on reader service card

Tablets and plaques catalog illustrates examples of cast aluminum and bronze pieces, with many letter styles available. Sculpture and special designs can be produced. A second catalog of architectural letters illustrates a wide range of different type styles and sizes of letters in cast aluminum or bronze available in several finishes. Custom-fabricated letters on special order. Art in Bronze by Sheidow.

Circle 211 on reader service card

Injection molded/fabricated foam letters. Catalogs show various letterstyles available, sizes, colors, prices. Additional graphics catalog illustrates standard graphics for interior and exterior use. Scott Plastics, Co.

Circle 212 on reader service card

Architectural building systems. Brochure gives detailed information about four basic systems: the flat-roof look for commercial and institutional buildings; modular building system with a number of interrelated components; rigid



Signage, lighting and seating



frame design for functional space enclosure with many width, height, length, and structural design options; and grids, domes, barrel vaults, hyperbolic paraboloids. Product line is supplemented by roof and wall systems, lighting/ceiling/air distribution systems, and more. Butler Manufacturing Company.

Circle 213 on reader service card

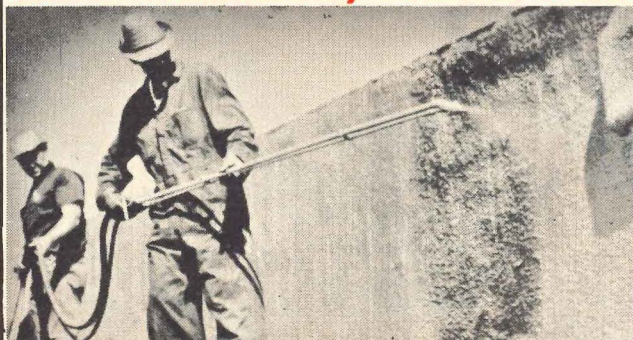
partition panels. Choice of Mirawal facings are procelain enamel fused to lightweight steel, anodized aluminum, stucco-embossed aluminum, and natural or smooth tumbled aggregates applied to a cement asbestos board core. Kaiser Mirawal.

Circle 214 on reader service card

Wood gazebo shelter, a hexagonal structure, is designed for installation in public facilities or around the home. Basic package includes the rafters, columns, roof decks, roofing felt, asphalt [continued on page 118]

NU SENSATION

... a Hy-Build Fibred acrylic coating which seals, waterproofs, beautifies masonry and concrete.



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... waterproofs, rustproofs and reflects heat ... on roofs, tanks, buildings, equipment.



The versatility of ALUMANATION 301 heavy-duty coating is proven over 28 years. Recommended for protection of asphalt, felt, gravel and metal as a waterproofer and rustproof. Application is simple -- by in-plant crews (spray equipment available at no charge) or outside contractors. The RPM maintenance approach can be tailored to fit your budget and needs. Permit us to demonstrate the flexibility of our program by circling the inquiry card number.

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Only granite wears forever, retains its beauty, requires no maintenance. Nothing can discolor it. Nothing short of violent force can mar it. It's nature's most enduring structural material and is ideally suited for use as paving and steps in malls, plazas and terraces.

At Cold Spring we now have available a wide variety of Module Pavers and Curax Blocks in standard dimensions to

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In addition, we produce complementary granite products (mosaics, ribwalls, broken joint and split face ashlar) in 20 beautiful colors. These products suggest extremely broad usage, both indoors and outdoors.

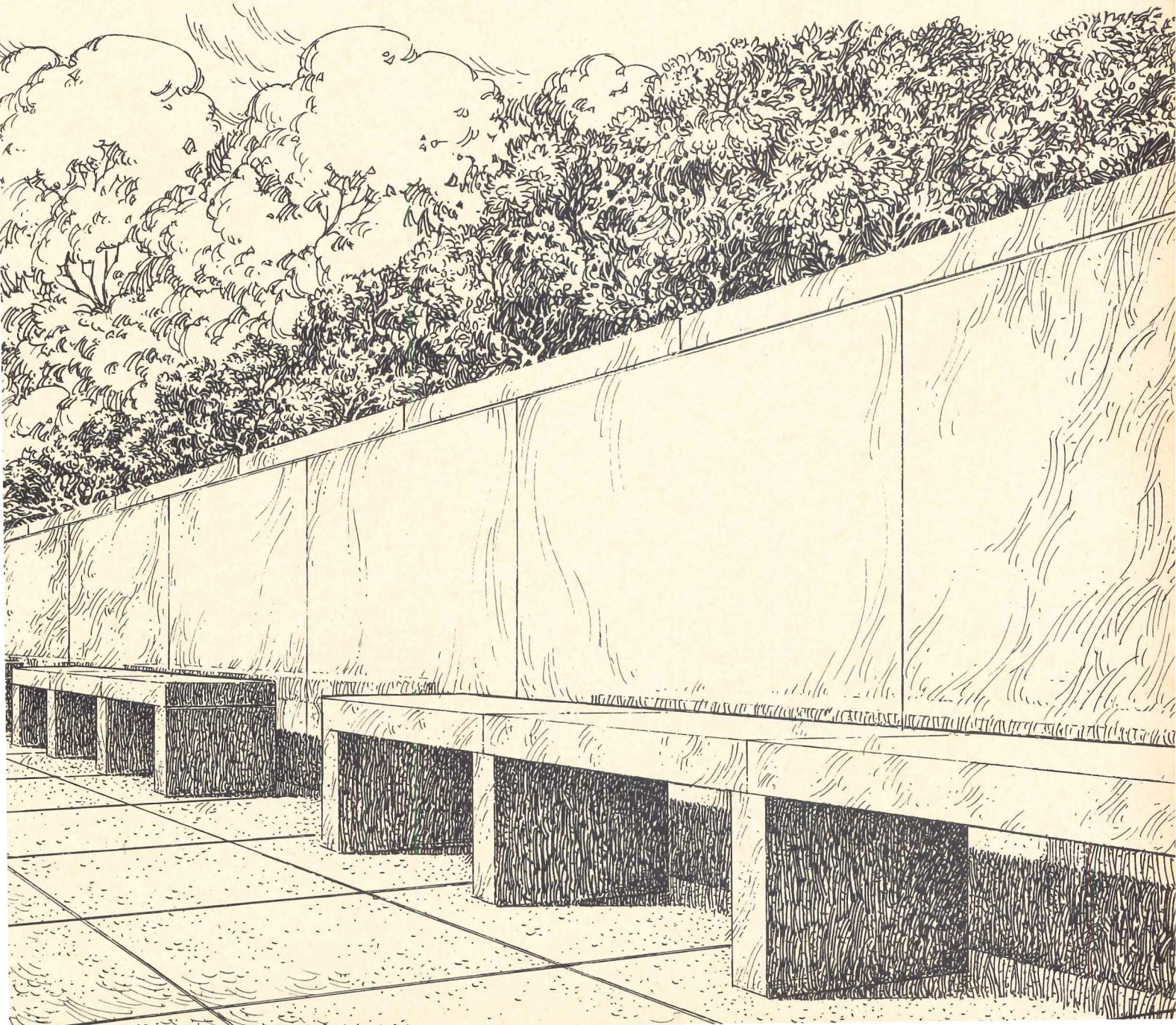
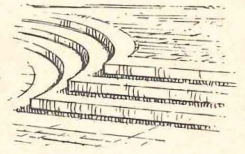
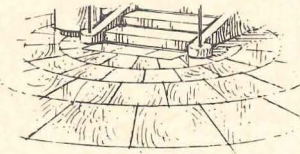
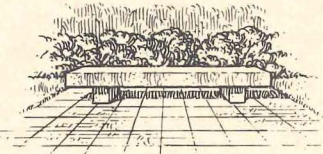
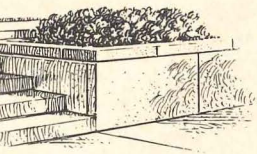
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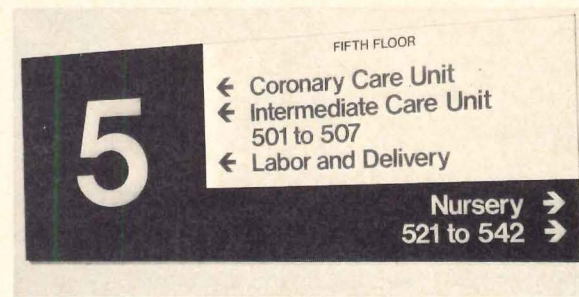
shingles, and hardware for assembly. The wood columns and fascia are pressure-treated for in-ground installation. The columns, when embedded in ground, provide a height to the shelter roof of 7½ to 8 ft. The shelter is 16 ft wide from side to side and covers about 390 sq ft. An optional floor system of pressure-treated lumber is available with the basic package. Screening or latticing for privacy may be added once the shelter has been erected. A product data sheet with details is available from Koppers Company, Inc. *Circle 215 on reader service card*

Interior architectural signage catalog illustrates all types of acrylic plaques, window signs, desk units, and directories. It also includes pressure sensitive vinyl letters and graphics. A companion catalog covers exterior illuminated and non-illuminated signs. Company also produces architectural letters and cast plaques. Catalogs contain specification data and information about letter styles, dimensions, mounting methods, framing systems. Andco Industries Corporation. *Circle 216 on reader service card*

Roofing and siding. "Zip-Rib" aluminum locks together like one piece of metal without a hole or end-lap, states maker. Literature gives technical data, and load chart. Kaiser Aluminum. *Circle 217 on reader service card*



Exterior and . . .



Interior architectural signage

Task lighting. Tabloid discusses energy savings and balanced light environment which are achieved through task lighting, gives economics of task lighting in chart form and three case studies of where energy savings are achieved. It also illustrates basic fixture. Knoll International. *Circle 218 on reader service card*

Architectural graphics and signage. Catalog describes and illustrates interior and exterior plaques and directory systems, hospital signage, desk identification, sculptured cast letters, acrylic, metal, and vinyl letter series, acrylic cube and pictorial graphics. Vomar Products. *Circle 219 on reader service card*

Insulation panels. A composite insulating board consisting of a rigid polyurethane foam closed-cell core which is integrally bonded during manufacture between two protective skins. These

may be of asphalt impregnated glass fiber mats, aluminum foil, Kraft paper and others. Panel has a "K" factor of .12. Literature gives technical information plus latest performance results and physical characteristics. PBS, Inc. *Circle 220 on reader service card*

Letter spacing and alignment can be accomplished by a spacing and alignment carrier with removable tabs which support a vinyl die-cut letter. Brochure explains procedure and gives specifications. Architectural Signage, Inc. *Circle 221 on reader service card*

Polished stainless steel ceiling panels feature a supporting grid concealed behind its 2-ft-sq panels. The panels can be lowered on torsion springs for access to spaces above. Request guide. Integrated Ceilings, Inc. *Circle 222 on reader service card*

This elegant fiberglass planter is designed for low profile applications indoors and out. It is impervious to rust, corrosion, weather, and children.

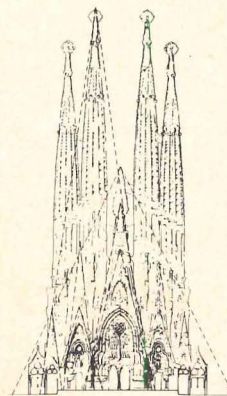
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Approaching the Ideal

Gaudí:

His Life, His Theories, His Work
by César Martinell

translated from the Spanish by Judith R.
edited by George R. Collins

This is the only book on Gaudí that is fully commensurate with the dimensions of his genius, and in its completeness and detail it supplants all previous accounts. All of Gaudí's projects are illustrated in 555 photographs of buildings, sculptures, furnishings, and plans, including 60 full-color plates—a significant since color was an integral part of Gaudí's architectural realizations.

\$50.00

The Mathematics of the Ideal Villa and
Essays

by Colin Rowe

\$15.95

Architecture and Utopia:

Design and Capitalist Development
by Manfredo Tafuri

\$9.95

Seven American Utopias:

The Architecture of Communitarian Socialism
1790-1975

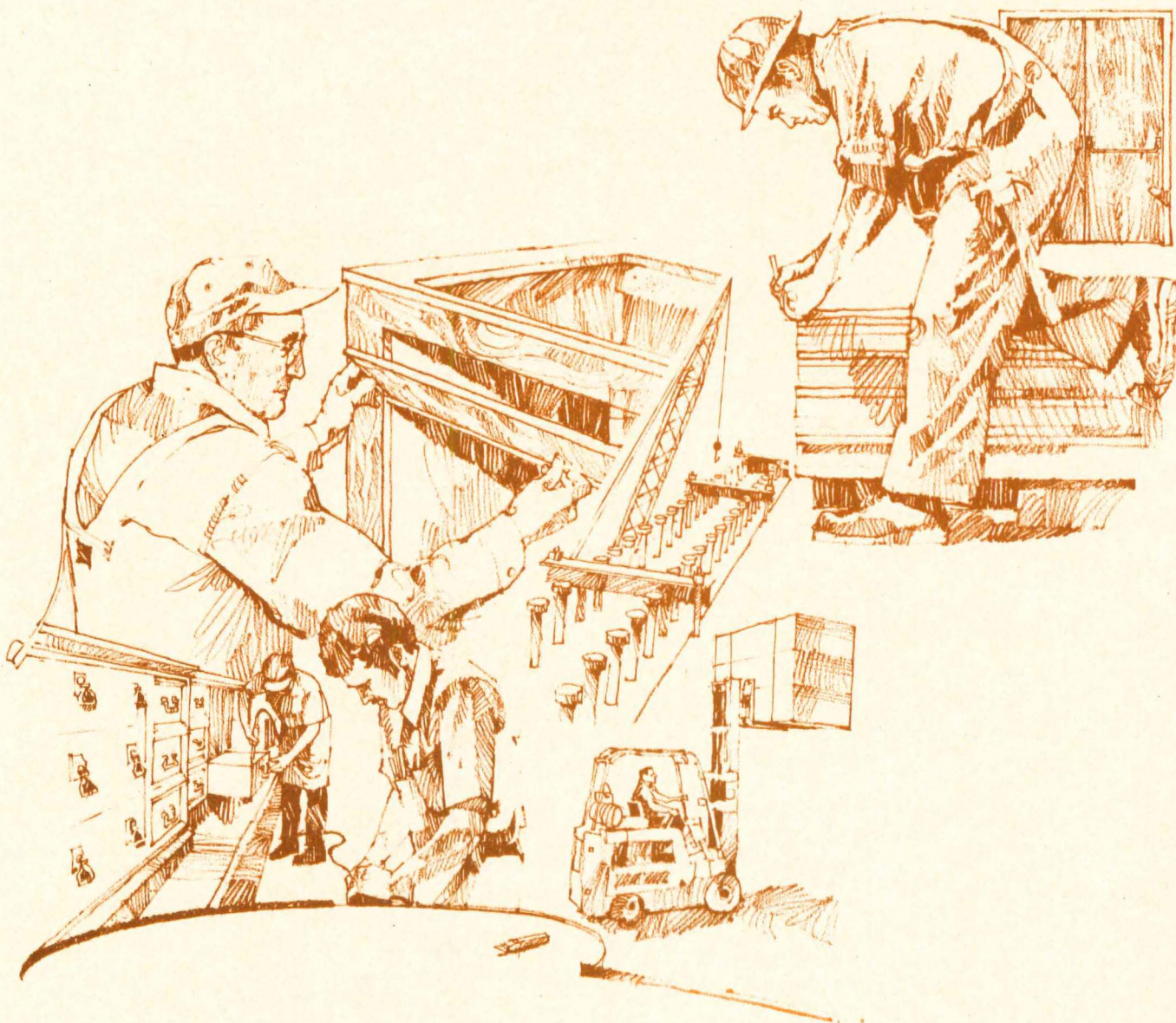
by Dolores Hayden

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The MIT Press

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February MTW/HHPA/Gentry
January P/A's 23rd Awards Program

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Colleges
November Performing Halls
October Wood in Architecture
September Taller de Arquitectural/Plastics

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1 Construction Inspection Handbook

By James J. O'Brien,
512 pp., 140 illus., . . . \$17.95

Outlines the duties, requirements and interests of the construction inspector. Describes the "whys" as well as the "how-tos" involved in observation of construction quality. Including handy checklists to work from, the book shows you exactly what should be reviewed and inspected.

Circle B601 under Books.

2 New Uses for Old Buildings

By Sherban Cantacuzino,
280 pp., illus., . . . \$29.95

'New Uses for Old Buildings' presents an architectural concept whose time has come. There are many unused or under-utilized buildings existing today whose construction and detail — which can never be recreated — should be preserved. But today's increasingly sophisticated demands for standards and services, as well as tighter codes for fire and safety, make the conversion of an old building to a new one a formidable task.

Circle B602 under Books.

3 Perspective: a new system for designers

By Jay Doblin,
68 pp., illus., . . . \$7.50

The first system developed to solve the kind of drawing problems encountered by designers. Eliminates the complex mechanical drawing that an architect normally employs in his traditional way of working with plans and elevations. The system offers a simpler method of visualizing any three dimensional object accurately and quickly.

Circle B603 under Books.

4 Marinas: A Working Guide to Their Development and Design

By Donald W. Adie,
336 pp., illus., . . . \$39.95

Boating occupies an increasingly important position in the major growth industry of leisure. Because boating involves vast expenditures, and the need to conserve and use water resources wisely, these facilities demand high ex-

pertise in planning and design, this up-to-date guide provides.

Circle B604 under Books.

5 Architectural Graphics

by Frank Ching,
128 pp., illus., . . . \$9.95

This book presents graphic techniques available for conveying architectural ideas. Included is know-how on layout and materials; drafting; architectural conventions for orthographic, parallel and perspective drawing; devices for rendering tonal values and context; graphic systems and lettering; freehand sketching; diagramming; and effective presentation of design proposals.

Circle B605 under Books.

6 Architectural Rendering The Techniques of Contemporary Presentation

By Albert O. Halse, 326 pp., illus., 2nd edition, 1972 . . . \$26

This completely up-to-date revision is the most widely used guide to architectural rendering covers all phases from pencil strokes to finished product — and shows how to achieve the desired mood, perspective and color effects, select proper medium and work in different media.

Circle B606 under Books.

7 Construction Design For Landscape Architects

By Albe E. Munson,
256 pp., illus., . . . \$14.50

This volume is a complete guide to preparation of a building site for construction or landscaping. The book is written for use as a rapid reference for the practicing landscape architect as well as a handy reference guide to short-cut methods that will be of interest to the civil engineer doing improvement plans.

Circle B607 under Books.

8 Residential Designs

Edited by David E. Link,
192 pp., . . . \$14.50

Hi-rise or low cost, condo, multi-unit custom or townhouse, here's a book that shows you the very best



class. Complete collection of with over 200 illustrations of techniques used by some of the nation's leading builders, planners and designers.

Circle B608 under Books.

Housing for the Elderly

By Green, Bernard E., Fedewa, A. Johnston, William M. and Howard L. Deardorff, illus., ... \$13.95

This book provides ready-to-use ideas for producing high quality housing for older Americans. It shows techniques of housing that meets the physical, social and perceptual needs of citizens. Emphasized are shelter, environments and security required by independent elderly as well as those who need health and social services.

Circle B609 under Books.

Anatomy for Interior Designers:

By S. Panero, illus., ... \$9.95

This is a comprehensive book of standards for designers of interior spaces. It contains all the data the designer needs for designing around the needs for people in use: the design, residential and commercial applications, lighting, material and vertical movement, space, furniture, windows, and

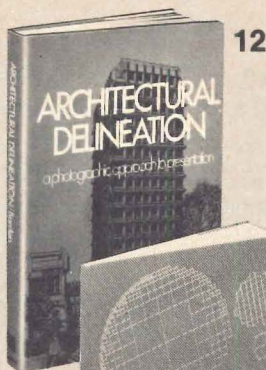
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Designer's Guide to OSHA

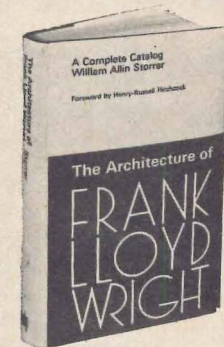
By S. Hopf, A.I.A., illus., ... \$19.50

This practical volume translates tens of thousands of words of regulatory drawings, diagrams, and graphs. With OSHA violations increasing, engineers obviously working guide to compliance with government job safety and health laws. This book fills that need. All is presented in the same series as the OSHA regulations are

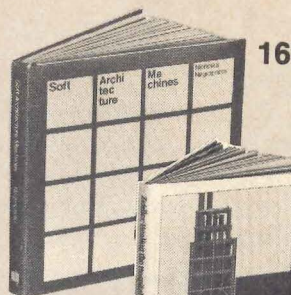
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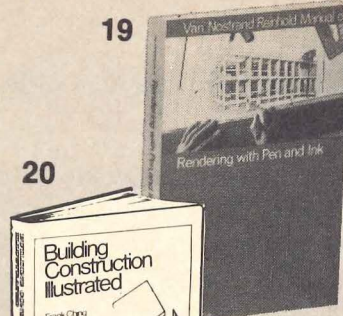
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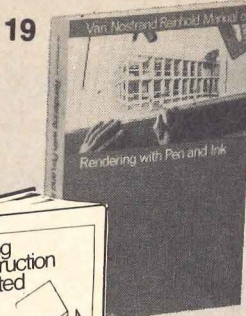
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21

12 Architectural Delineation: A Photographic Approach to Presentation

By Ernest Burden, 288 pp., illus., 1971 ... \$23.85

In this illustrated book, the author demonstrates a simple, flexible method of using photography to depict architectural projects in true perspective. Also how to create models for photography and how to put together an effective slide presentation.

Circle B612 under Books.

13 Energy and Form

By Ralph L. Knowles, 198 pp., illus., ... \$27.50

This is a scholarly, theoretical book, a major work that will be used for years to come. The projects described concentrate on reducing environmental problems in individual or groups of buildings by controlling shape and structure, scale and surface, volume ratio, location and orientation, isolation and insulation.

Publisher will bill you direct before shipping any book.

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14 The Architecture of Frank Lloyd Wright: A Complete Catalog

By William Allin Storrer, \$11.95

The first fully complete catalog of every building designed by Wright that was actually constructed — 433 in all — includes a photograph of practically every one of them, and a descriptive note on the materials used, the plan, and the circumstances of construction.

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15 Healing the Hospital

by Eberhard H. Zeidler, 165 pp., illus., ... \$15.95

The author tells the story of the McMaster Health Science Centre in Hamilton, Ontario. Called "obsolescence-proof," it is considered a major breakthrough in health facilities design. Covers the concept, the design

development and the equipment and services involved in the project.

Circle B615 under Books.

16 Soft Architecture Machines

by Nicholas Negroponte, 239 pp., ... \$14.95

A mind-boggling extension of Negroponte's previous *The Architecture Machine*. The author projects the impact of new generation computer systems on the design of living environments for man. Proposed: a new kind of architecture without architects.

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Circle B616 under Books.

17 Fabrics for Interiors

By Jack Larsen and Jeanne Weeks, 208 pp., illus., ... \$14.95

Completely geared to current trends, this book can make the difference between costly mistakes and successful, personalized interiors. It explains functions and requirements of fabrics for windows, furniture, walls and ceilings.

Circle B617 under Books.

18 Architecture and Design, 1890-1939

Edited by Timothy Benton and Charlotte Benton; with Dennis Sharp, 264 pp., illus., ... \$12.50

This concentrated study of the rise of the Modern Movement in architecture and design covers the half century during which attitudes toward these practical arts were changing dramatically. Based solely on original source material, this book contains extracts from the writings of such influential men as: Adolf Loos, Henry Van De Velde, Hermann Muthesius, Walter Gropius, Le Corbusier, Mies van der Rohe, Bruno Taut, Louis Sullivan, and Frank Lloyd Wright.

Circle B618 under Books.

19 Rendering With Pen And Ink

By Robert W. Gill, 368 pp., illus., ... \$6.95

This paper-back edition is a copiously illustrated guide to the techniques and methods of rendering, including sec-

tions on perspective, projection, shadow, reflections, and how to draw cars, ships, aircraft, trees, and human figures. The author also describes the very wide range of instruments and equipment currently in use.

Circle B619 under Books.

20 Building Construction Illustrated

By Frank Ching, 320 pp., illus., ... \$17.95

Charmingly hand-lettered by the author, this book presents step-by-step techniques in residential and light construction. Containing over 1,000 drawings, it covers materials, finishes, fastenings, posts, trusses, slabs, wood joists, light steel/aluminum, structural calculations, planning and site work, cost estimating, and construction sequencing.

Circle B620 under Books.

21 Trees

By Robert L. Zion, 168 pp., illus., ... \$12.95

An inexpensive paperback version of the book with virtually everything you want to know about using trees to complement the buildings you design. Both aesthetic and practical considerations are given, including tree characteristics, as well as cost considerations, planting, maintenance, rate of growth, and city and seashore recommendations.

Circle B621 under Books.

22 Restaurant Planning & Design

By Fred Lawson, 180 pp., ... \$24.95

Develops in detail the elements that go into successful restaurant planning. Not only provides a step-by-step guide in design procedure for the architect and designer, but presents essential technical information in convenient form which will be of value to all catering administrators.

Circle B622 under Books.

Organizational changes

Gassner Nathan Brown Architects Planners, Inc. of Memphis, Tenn. will now be known as Gassner Nathan & Partners, Architects Planners, Inc.

Chatelain, Samperton & Nolan Architects and Engineers and Carcaterra & Associates Consulting Engineers have merged to form Chatelain, Samperton & Carcaterra of Washington, D.C. and Silver Spring, Md.

The Office of E. Paul Kelly AIA Architecture/Planning is the new name for Ostwald & Kelly, Berkeley, Calif.

Welton Beckett Associates of Los Angeles has formed The Energy Group, a wholly-owned subsidiary offering consulting and planning services in energy conservation.

New addresses

Arvid Elness/Architects Inc., 623 Butler Square, 100 N. Sixth St., Minneapolis, Minn. 55403.

Saur/Obrock Design Associates, Inc., Architects/Engineers, 301 Sov-

erein Court, St. Louis County, Mo. Thomas Stephen Terpack, AIA, Architecture/Planning/Interiors, 1122 N. Sheridan Ave., Pittsburgh, Pa. Loeb Schlossman Dart & Hackl, 845 N. Michigan Ave., Chicago, Ill. Poor, Swanke, Hayden & Connell Architects, 400 Park Ave., New York City 10022.

Emerson-Fehr Architects & Planners, 2001 N. Lamar Blvd., Austin, Tex. 78767.

Charles H. Boelsen, 427 W. 20 St., Houston, Tex. 77008.

John S. Coke & Associates, 22 E. Gay St., Columbus, Ohio 43215.

Harry Maslow, Irwin Miller Architects Planners, 400 Lincoln Blvd., Middlesex, N.J. 08846.

Norman Hoberman Architect, 98 Hunting Ridge Road, Greenwich, Conn. 06830.

New firms

Richard Schwarz Associates and Roger Freeberg's Times Architects, Inc. have merged to form Richard Schwarz/Roger Freeberg, Inc., 8030 Cedar Ave. South, Bloomington, Minn. 55420. Principals of the new firm are

Roger C. Freeberg, AIA, Richard J. Schwarz, AIA, and Neil Weber.

Charles Terrence McCafferty, AIA, AIP, 555 Buhl Bldg., Detroit, Mich.

David Wulff Architect, 177 W. Big Beaver Rd., Troy, Mich. 48084.

Thomas Martone, AIA has formed Martone/Architect, 1925 Austin, Ann Arbor, Mich. 48104.

Building materials

Major materials suppliers for buildings that are featured this month, as they were furnished to P/A by the architects.

Omni International, Atlanta, Ga. (p. 58). Architects: Thompson, Ventulett & Stainback, Atlanta, Ga. Piling: Raymond International. Concrete: Gifford-Hill, Williams Brothers. Steel framing: Mississippi Valley Steel. Firestairs: Southern Ohio Fabricators. Steel decking: H.H. Robertson. Permadeck: Concrete Products. Weathering steel: U.S. Steel. Alabama limestone: Georgia Marble Co. Gypsum wall board: U.S. Gypsum. Carpet: Philadelphia Carpet. Quarry tile: Summitville Tile Co. Metal paroline ceiling: Donn Products. Concealed spline tile: Armstrong. Built-up roof: Johns-Manville. Planter linings:

[continued on page 124]

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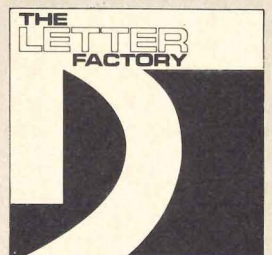


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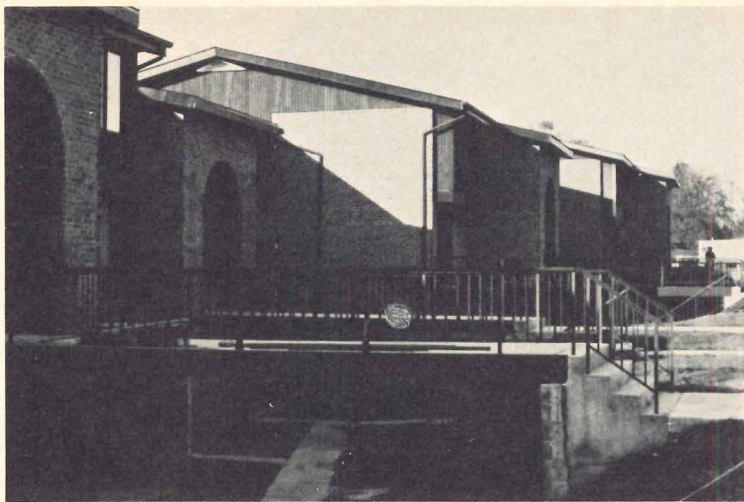


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Park Plaza, Santa Monica, Calif.
Architect: Krisel/Shapiro Associates, AIA
Developers: McCulloch Realty, Inc. in partnership
with Ticor Properties Corp.



Mermaid Run, Pike Creek Valley, Delaware
Architect/Engineer: Hillcrest & Assoc., Newark, Del.

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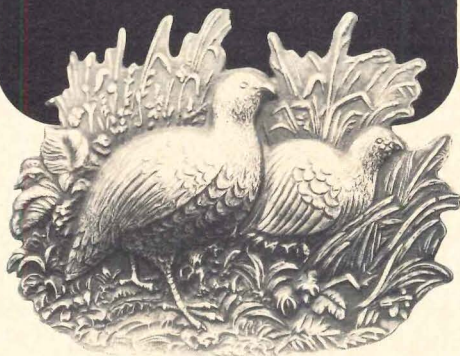
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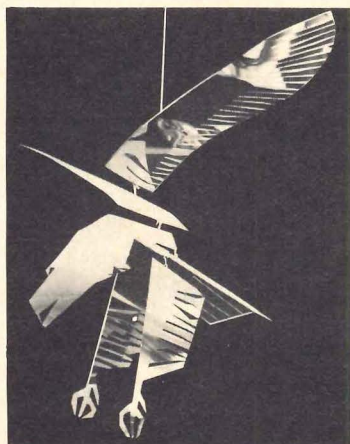
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Building materials cont'd from p.122

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Kalamazoo Center, Kalamazoo, Mich. (p. 64)

Architects: The ELS Design Group, Berkeley, Calif. and New York, N.Y. Reinforced concrete footings: Inland Ryerson. Cast-in-place concrete: Consumers Sand and Gravel. Precast concrete floor: Precast Concrete Products. Concrete flat slab or steel decking: Elkhart Bridge & Iron Co. Mirawal porcelain on insulated wall panels: Kaiser Aluminum Co. Ceramic tile flooring: American Olean. Quarry tile: Murray. Acoustic tile: Armstrong. Mastic damp-proofing: Wolverine. Gypsum drywall partitions: U.S. Gypsum. Storefront windows: Kawneer Co. Hotel windows: Litex Co. Hardware: Russwin. Overhead roll up doors: Crawford-Hall Co. Mall skylight: (tempered glass in aluminum frames): O'Keefe Co. Elevators: Otis. "Pico" prefab stairs: Haven-Busch Co. Mall handrails and miscellaneous ironwork: Kehr Iron Works. Electric distribution: Westinghouse Electric. Air cool a/c condensers and fans: Trane Co. Boilers: Cleaver Brothers. Water closets: American Standard. Tubs and lavatories: Venetian Marble.

Administration Building, Willard State Hospital, Willard, N.Y. (p. 78).

Architects: Werner Seligmann & Associates. Reinforcing bars: Bethlehem Steel. Porcelain enamel panels: Davidson-Northern, Inc. (Conyers, Georgia). Vinyl asbestos tile; suspended ceiling: Armstrong. Stair treads, landing: National Floor Products Co. Built-up roofing; insulation: Johns-Manville. Skylights: Wasco Skydomes. Windows: Hope's Windows. Doors: County Fire Door. Hardware: Baldwin, Russwin, Sargent, Stanley. Paint: Devco. Kitchenette: Dwyer. Elevators: Otis. Vault door: Mosler. Fluorescent office lighting: Miller. Plumbing fixtures: Kohler. Heating and air conditioning: Trane, Tuttle and Bailey.

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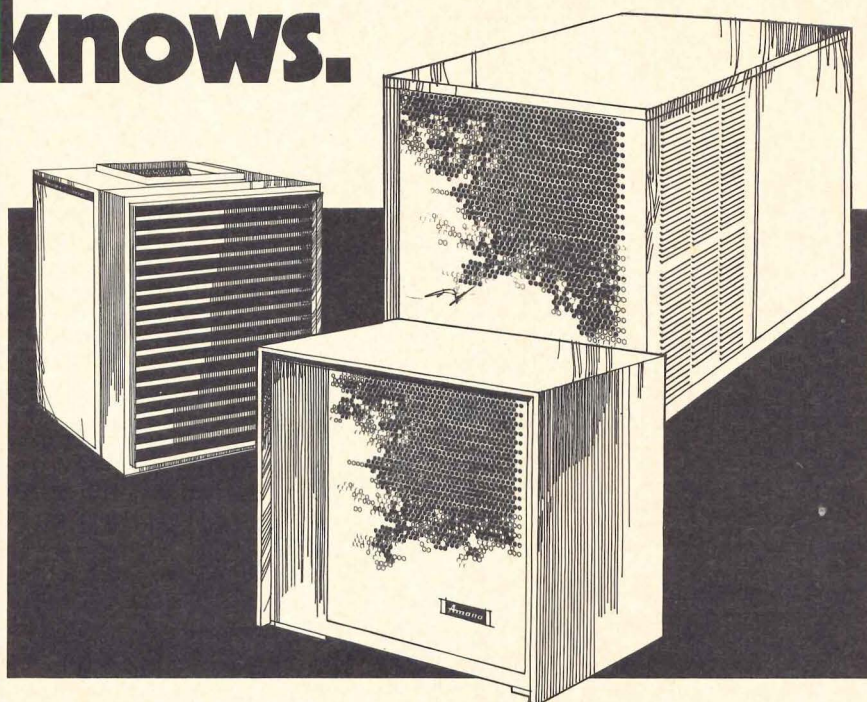
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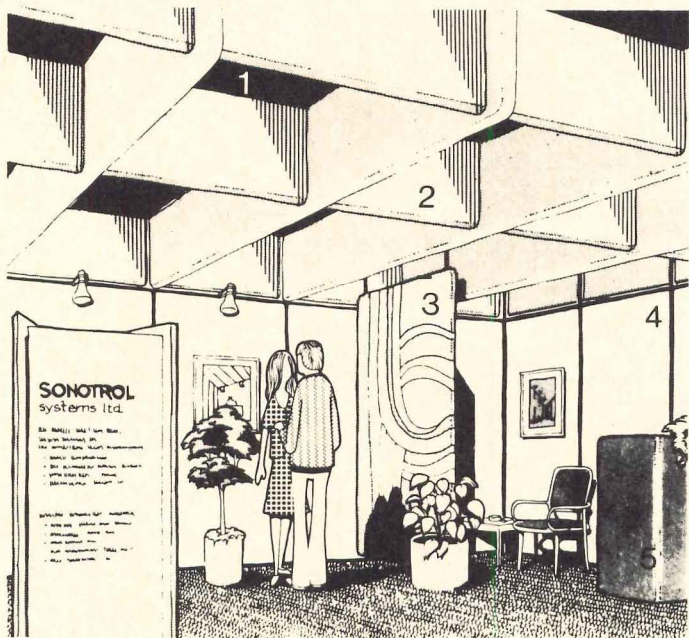
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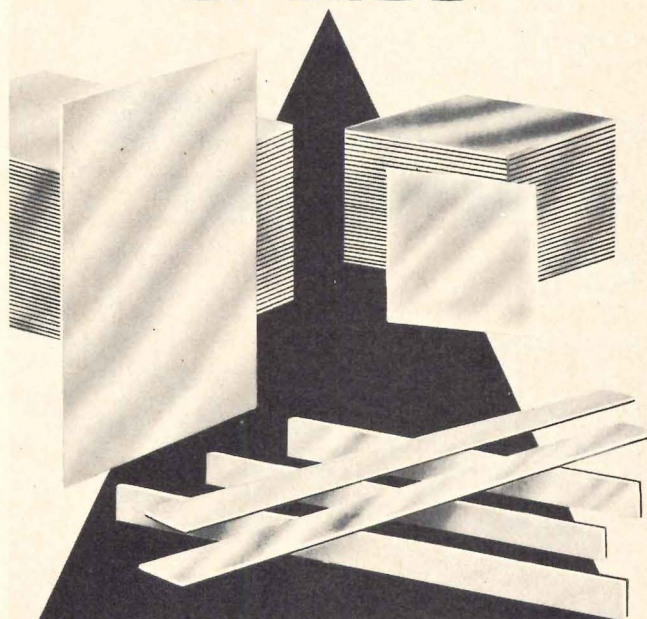
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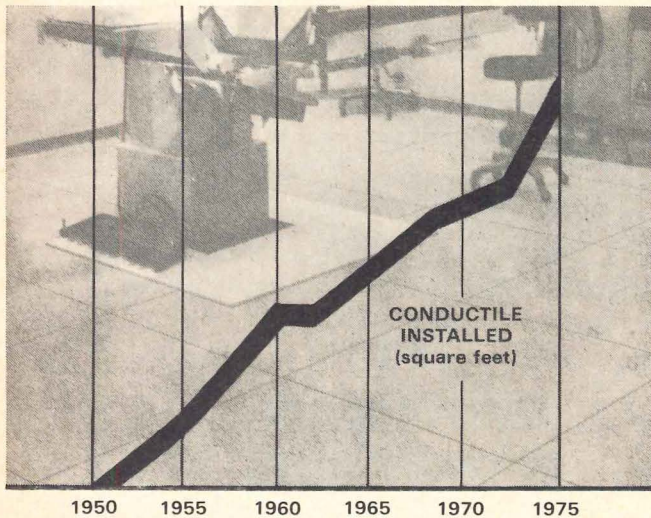
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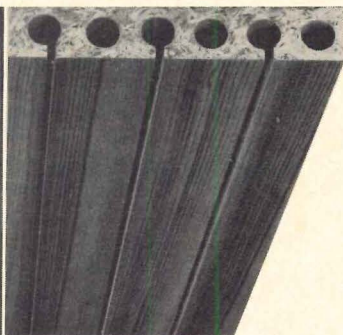
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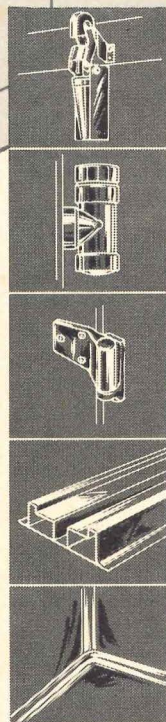
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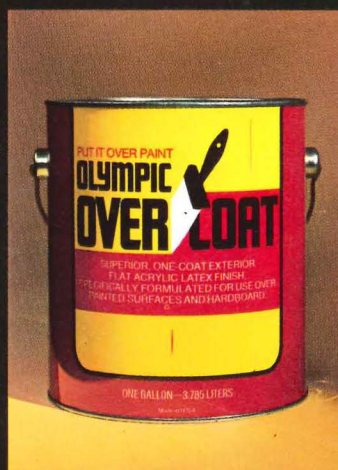
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While the demand for antebellum mansions isn't what it once was, there are plenty of opportunities for a paint product good enough to bear the name Olympic. The product is Olympic Overcoat, a beautifully durable, flat, acrylic-latex finish that's the perfect answer for hardboard, concrete, stucco or any exterior surface that must be painted. (Anyplace you don't use stain.)

Overcoat delivers spectacular coverage and maintains excellent hiding ability at the same time. The




end result is a beautiful exterior finish that really lasts.

You can specify Overcoat in most of the popular Olympic Stain Solid Colors, plus some brand new pastel shades. To learn more about Overcoat, refer to the Sweet's catalogs, call their BUYLINE, or write us.



OLYMPIC®

Olympic Stain.

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