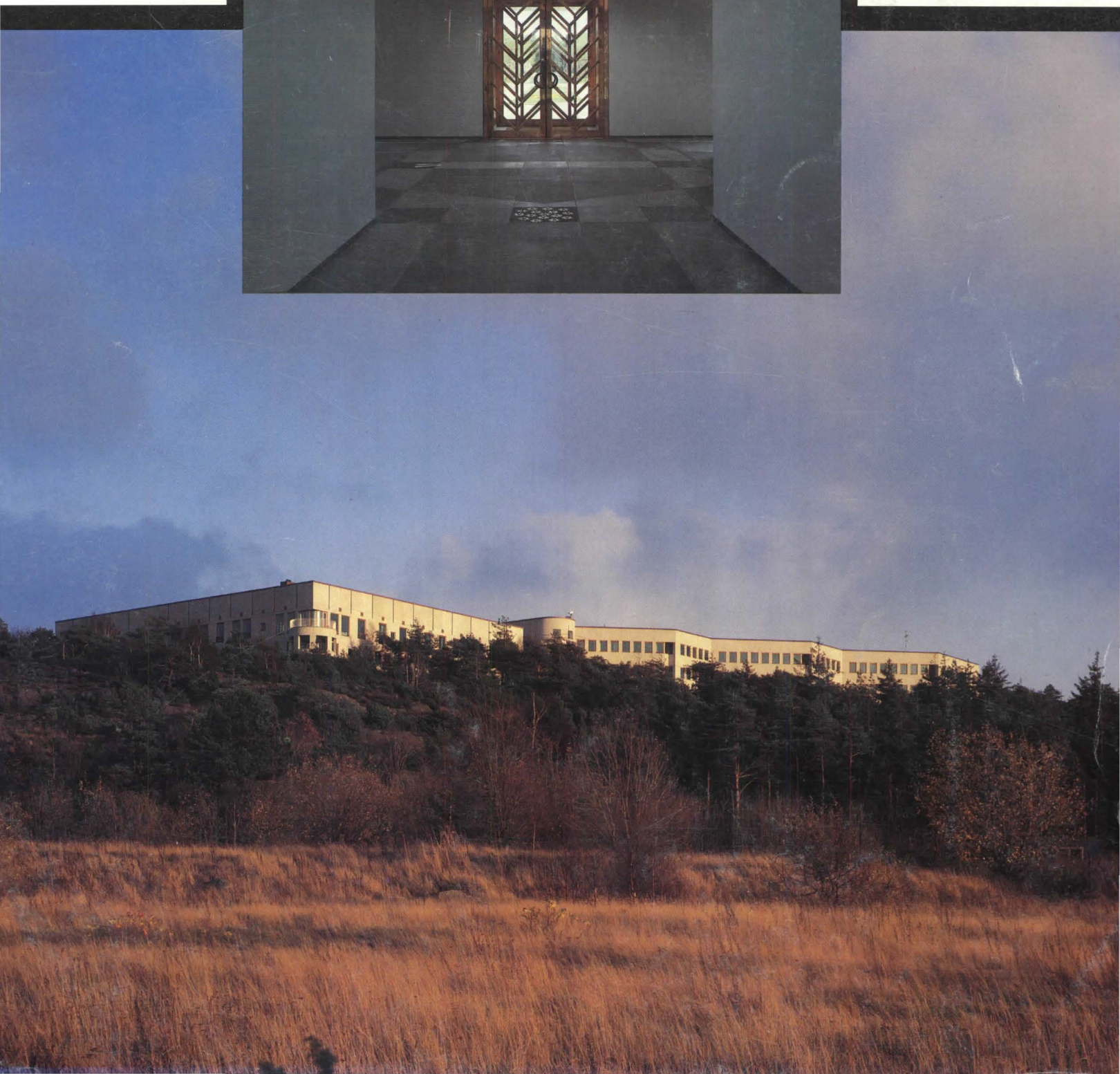


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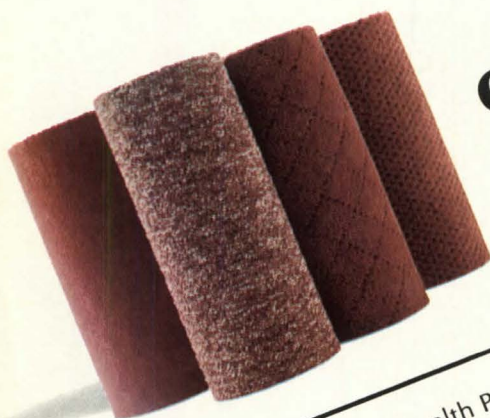


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Progressive Architecture

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ABP MPA

ARCHITECTURAL DESIGN

65 Northern lights

Volvo Corporate Headquarters in Gothenburg, Sweden, by Mitchell/Giurgola with AKOS, relates to its cultural context but with a Mediterranean accent. *David Morton*

77 Two hospitals

A hospital in Bayonne, N.J., by Ewing Cole Cherry Parsky and one in Scottsdale, Ariz., by The NBBJ Group illustrate contrasting stylistic approaches.

78 Pragmatic ornamentalism

Philadelphia architects Ewing Cole Cherry Parsky alter and add to an existing hospital complex and clothe it in a distinctive traditional skin. *Susan Doubilet*

82 Skillful contextualism

The Scottsdale Memorial Hospital in Arizona by The NBBJ Group makes a rationalist response to the poetic colors and textures of the Southwest. *Jim Murphy*

86 Vestpocket villa

Classical features of Thomas Gordon Smith's small suburban home in Richmond, Calif., call up images of Pompeii and Rome. *Sally Woodbridge*

92 Cultural exchange

The Issey Miyake boutique in New York's Bergdorf Goodman, designed by Shiro Kuramata, incorporates Coca Cola bottles in the terrazzo floors and walls. *Pilar Viladas*

TECHNICS

95 Liberty update

Revived skills and 20th-Century technology are being used to restore the Statue of Liberty. *Thomas Fisher*

100 Ascending rooms

Improved technology and opulent materials for cabs make architects and owners less likely to settle for "standard" elevators. *Thomas Vonier*



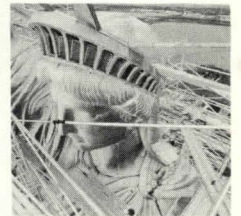
65



77



86



95

111 Lighting World III

The program, a list of exhibitors, and some of the products to be shown at the International Advanced Illumination Exposition & Conference to be held in New York in April.

DEPARTMENTS

7 Editorial

11 Views

21 News report

41 In progress

51 Calendar

55 P/A practice

105 Technics-related products

169 Books

173 New products and literature

178 Building materials

182 P/A in April

184 Job mart

188 Advertisers' index

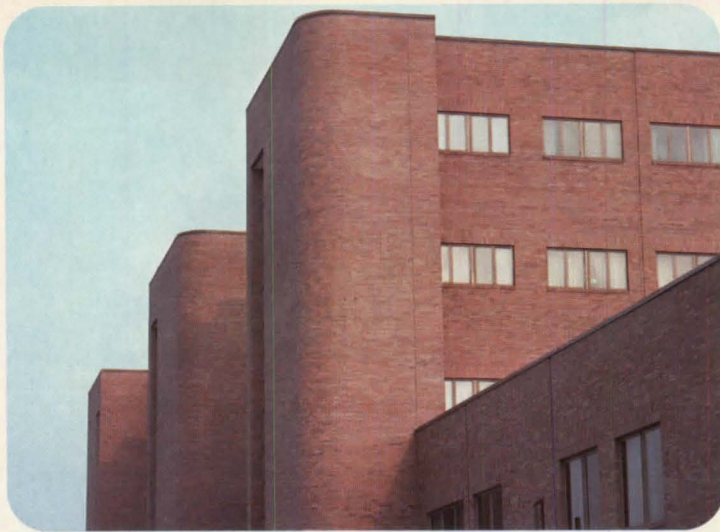
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Cover

Volvo Headquarters, Gothenburg, Sweden (p. 65), by Mitchell/Giurgola with AKOS. Design: Richelle J. Huff. Photography: Keld Helmer-Petersen.

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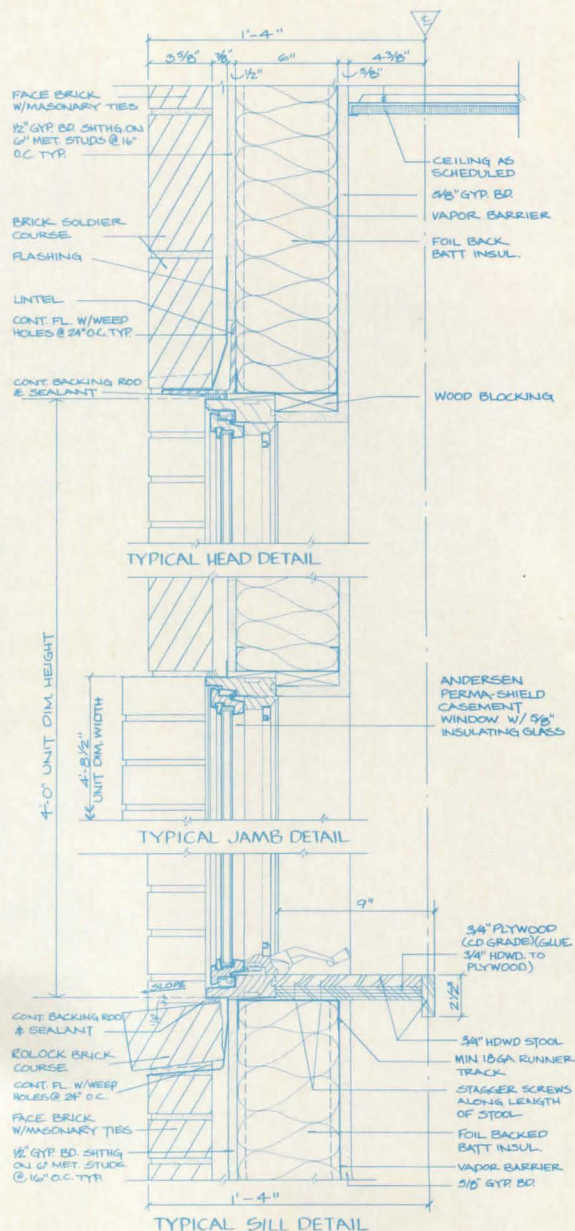
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Twenty-five years on watch

It doesn't seem like 25 years, but it has been that long since I first took a job on the P/A editorial staff in early 1960. I have remained in architectural journalism all those years (18 of them with P/A), and it has been an excellent situation from which to observe events as they develop in the special arena of architecture.

Looking back over the years since 1960, they appear to have been a period of much thrashing about and little essential change, either in architecture or in the world as a whole. Most of today's technology, institutions, political alignments, economic and social conditions were already in place by 1960, the result of the feverish productivity and cataclysmic conflicts of the previous 25 years. Much activity of this last quarter-century has essentially involved aftermaths—of the breakdown of Colonialism and the acceptance of racial equality, for instance, and of America's suburbanization and the shift of its work force from blue-collar to white-collar pursuits. Truly impressive progress has been made in some areas, such as space technology (military, too, for what it's worth), automation and data processing, and genetic research. Socially, the role of women has changed substantially in America, with long-term effects on both the family and the work force.

The architectural profession seems to have passed through a variety of primary concerns in these 25 years. Urban design was a fresh and seductive challenge in 1960, and it has remained a serious one ever since. During the 1960s a strong current of social concern emerged and gave birth to an academic thicket of "urban studies" that most architects never penetrated. The behavioral sciences also assaulted the architect's traditional preoccupation with objects vs. people, bequeathing a low-energy residue of activity. Also in the 1960s, environmental and preser-

vation movements became major influences in architecture and planning—both transmitted to the profession by more foresighted members of the public; though environmentalism seems to have had recent setbacks politically, both concerns are now quite firmly established in the public consciousness and in a network of laws. Energy conservation arose suddenly in the 1970s as a responsibility of architects, one they had largely ignored since the early 1950s; like the preceding concerns, this one has lost some of its urgency (for the moment) but has permanently affected the way architects actually work.

In the 1980s, the profession has followed much of society in turning attention largely away from altruistic concerns to narrower interests: The most urgent concerns have become liability, fees, compensation, and the delivery of "value" to the paying client. Today's profession is concerned, understandably, with maintaining its economic role and rewarding the young people who join it. A few voices, fortunately, remind us that unless architects provide some kind of aesthetic and social conscience to society, their authority over the design of its buildings will be meaningless.

Building design itself has passed through the familiar phases of Late Modernism—more visually assertive and less doctrinaire than its precedents—into an age of doubt and pluralism. Whatever the merits of historical allusion, complexity, and other anti-purist impulses that emerged around 1965, we have made certain clear-cut gains—in my view—over the situation that prevailed in 1960. We now can look upon the whole body of historical architecture as worthy of examination and interpretation; we are again cognizant of the symbolic import of what we build; we now generally acknowledge an obligation to the building's context—a consid-

eration that some architects such as Louis Kahn and Eero Saarinen never forgot.

Have we produced much work of lasting value since 1960? This has been a period in which one set of convictions has been declining and another being rather tentatively tried out. There have been solid achievements, but how would we compare them to the accomplishments of, say, 1885–1910?

What has happened in these most recent 25 years is that architects have learned prodigiously. We have left behind the body of Modernist dogma that prevailed in 1960, and the blindness and complacency that went with it. We have been chastened by the so-called "failure" of Modern architecture (which occurred, according to some of our more simplistic chroniclers, with the dynamiting of the Pruitt-Igoe housing in 1972). We have confronted the lessons of architectural history (again), of urban design, of behavioral research, of aesthetic theory (even semiology), of public participation in the design process. We have had to face the specters of environmental degradation, abandoned neighborhoods, and nuclear holocaust. Architects as a group now have a broadened, more sophisticated view of their task and the means they can bring to it. Understandably, they have the kind of doubts and disagreements that such enlightenment brings with it.

Over these 25 years, then, architects have gained all kinds of wisdom. What we must continue searching for is a body of shared convictions. ■

John Morris Diefen

In the years since I first joined the P/A staff, there has been much agitation in the world of architecture—and some substantial change.

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Views

More memories of Kahn

The breath of air that came with your recent issue focusing on Louis I. Kahn (Dec. 1984) was welcome. It clarifies the inevitability of another such issue ten years hence and then again and again. Lou spoke of architecture independent of style and his thoughtful making of spaces will continue to be a fundamental measure to those whose concerns are inspired by content and performance, not by façade and fashion.

I appreciate the use of some of my material from my forthcoming book of Lou's speeches and writings and the mention you gave them.

Richard Saul Wurman

Access Press Ltd.

Los Angeles

Having known Lou Kahn first as a juror and lecturer while I was a student at Yale in the late 1950s and then visiting with him from time to time in Dacca when I was actively working on Bangladesh's Polytechnic Institutes (1964–1974), I was reduced to reverie on seeing the "second capital" at long last (and apparently) complete (P/A, Dec. 1984, pp. 56–67). Having come to work first in East Pakistan, then in Bangladesh in the very same way as both Paul Rudolph and Lou Kahn did; i.e., recommended to its Government by its very first native Bengali architect trained in the West, Muzharul Islam, and during the course of my twenty trips to that poignant place inevitably finding the time to visit the (slowly) emerging capital, I am somehow bemused by its completion. I have never known anything interminably "in the process of becoming" as Bangladesh and seeing the finished symbol of its existence belies so much yet to be done in that place.

Much is left unsaid about Lou Kahn, but much of what he said, what he was, what he wrote and what he built was mute as well. At the very end he touched me twice. I believe myself to be the last person (architect) to see him. We met, quite by chance, at Heathrow Airport outside of London that fateful last trip of his—he was on his way back to Philadelphia (alas, via New York as we know) from Ahmedabad and I was on my way to Dacca for the very last of my twenty trips. We met, talked and we parted. (The content of our talk is in Richard Wurman's forthcoming book.) It seemed fantastic that I read of his death in the Dacca newspaper several days later. Bangladesh, his parliament project, and himself all now seem as a dream.

Stanley Tigerman, FAIA

Tigerman Fugman McCurry

Chicago

Damn the wrathful Gods who have deprived the earth of the beauty, grace and empathy with man; the creations of Louis Kahn. The heavens gain our loss.

E. "Manny" Abraben, AIA, RIBA

Architects Design Consortium, Inc.

Ft. Lauderdale, Fla.

The Venturi firm: words and pictures

I would like to thank Mr. Pilar Viladas for his article on Venturi, Rauch & Scott Brown (P/A, Oct. 1984, pp. 88–93). Obviously, space for the article was limited, hence, his concise statement "... the firm's idiosyncratic, thoughtful brand of contextualism." It was this very phrase that helped me solve a mystery that has plagued me for over 25 years: can it be that Robert Venturi the writer is the same person as Robert Venturi the building designer?

Whenever I read Venturi (and his followers, including P/A) on Venturi the architect I am convinced that the photos accompanying the essay are the wrong ones. In order to find examples of the well-planned, innovative, and exciting design breakthroughs, as described in said prose, I would have to search through the illustrations for the other articles in the publication.

With the help of a dictionary and an English teaching friend, I was able to interpret Mr. Viladas' phrase to mean, loosely, that it is the firm's *intent* to structure the peculiarities of their work in this style. I didn't know that!

In fact, at one time I thought that there was an *international* conspiracy afoot to test the intelligence of country architects such as myself, until I read *Modern Architecture*, by Manfredo Tafuri and Francesco Dal Co (translated from the Italian by Robert Erich Wolf; Harry N. Abrams, Inc., Publishers, New York). They stated, "What Venturi takes from the world ... is never more than its superficial mask: like ... kitsch ..."

Oh yes, my compliments to the draftsmen who executed the illustrations for the article.

John James Connolly, Architect

Point Reyes Station, Calif.

[We have never maintained that the work of this firm is a perfect embodiment of their ideas; whose is? But P/A has long considered both the work and ideas informative—for about 20 years, in fact. And the best of the firm's buildings—Franklin Court in Philadelphia, for instance, and Wu Hall at Princeton—are truly contextual, idiosyncratic, and superb. Honor Awards bestowed on these works by juries of other architects tend to validate this view. Pilar Viladas, please note, is a woman.—Editor]

Specifiers: rules of the game

In your December 1984 issue there was an article entitled "Specifications: Games Specifiers Play" (pp. 46–47), written by Walter Rosenfeld, AIA, CSI. I have learned a great deal from his articles and I know I will learn even more in the future. On the whole I agree with this article, but I do take exception to his implication that specifiers choose for the contractor how he is to divide the work among his subcontractors. Specifically his statement which I quote "... specifiers generally determine how it will be assigned and bid" is very misleading.

Specifications, better known as the project manual, contain qualitative requirement for products, materials, and workmanship. The project manual complements the contract drawings, and it must precisely define the qualities of the products to assure use of correct materials and methods of assembly. The organization of the project manual into divisions, sections and articles, and the arrangement of the drawings shall not control the contractor in dividing the work among subcontractors, or in establishing the extent of the work to be performed by any trade. These are the rules of the game as specified by the A.I.A. "General Conditions of the Contract for Construction."

Denis L. Lemieux, CSI

Vice President

HBL Corporation

Auburn, Maine

Walter Rosenfeld replies:

Mr. Lemieux may be right that "determine" is too strong a word to describe the Specifier's influential role in assigning work within the Project Manual. But no one is going to specify plumbing fixtures in the Roofing Sections or electrical panels under Concrete. And it's still very possible to generate costly conflicts among subs by carelessly locating items. *Where* a material is specified really does have a powerful influence on how the work will be bid, even though A201 for legal reasons indicates that it shouldn't.

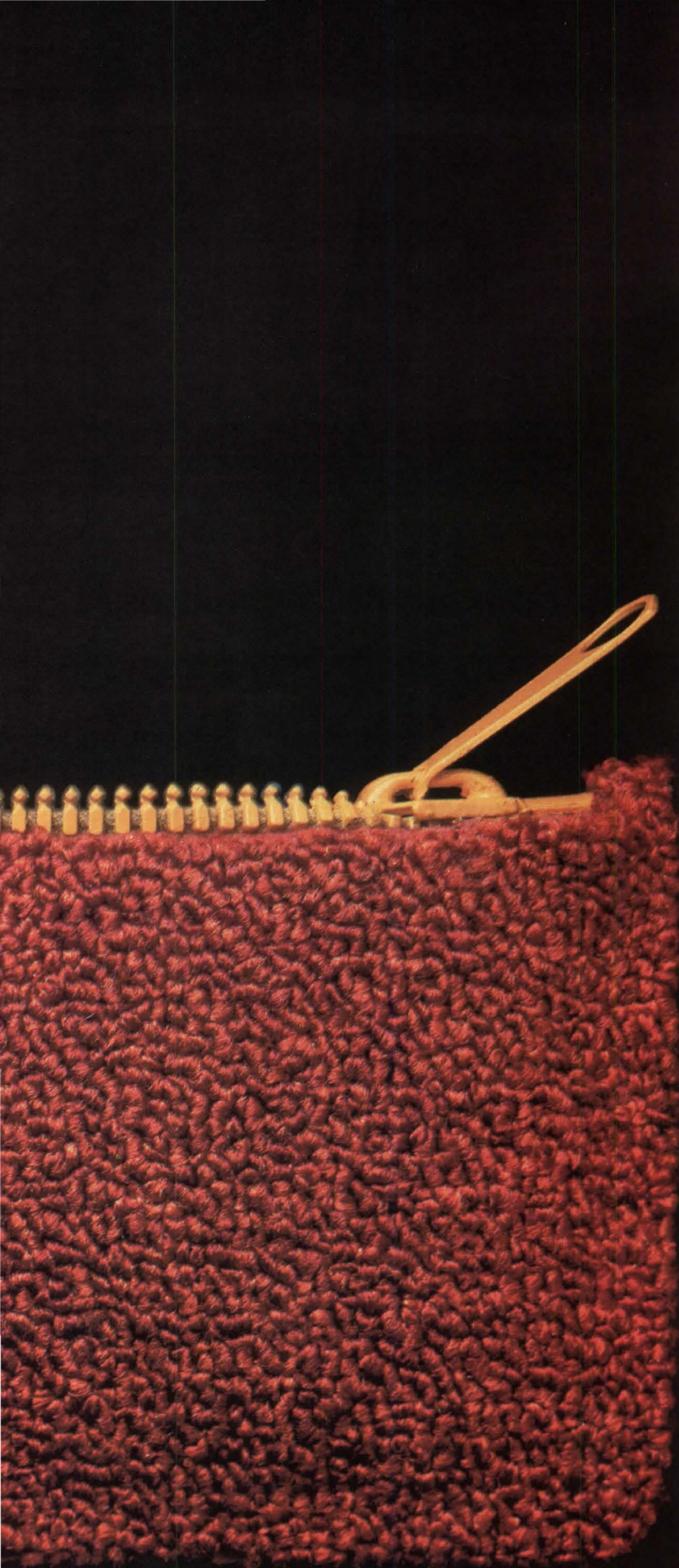
Credit correction

The architects for Philadelphia's Market East Station (Dec. 1984, p. 16) are the Vitetta Group (Day & Zimmerman, engineers).

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Photos of house by Lee Temple (P/A, Feb. 1985, pp. 40–42) were by Eduard Hueber.





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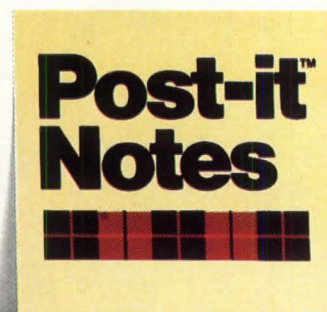
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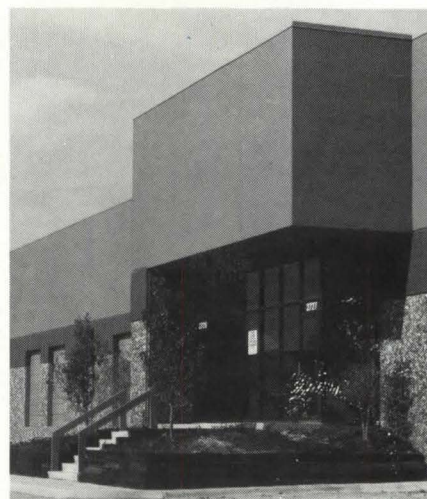
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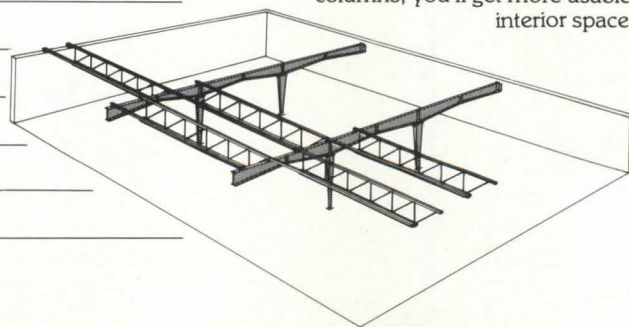


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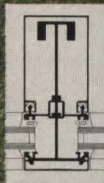
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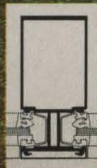
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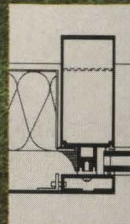
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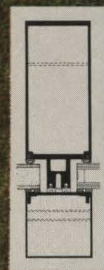
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P/A News report

- 23 *Foster in Hong Kong*
- 24 *A new architectural press*
- 27 *Cincinnati Modernism*
- 41 *In progress: Mitchell/Giurgola*
- 51 *Calendar*

At last: The first Presidential Awards

Ronald Reagan's memorandum establishing the quadrennial Presidential Design Awards program offers the following rationale: "The Federal government is the nation's largest single builder, printer, and user of design services." The program, now couched in language citing needs for "cost-effectiveness" and "accomplishing more with less," caps efforts begun over a decade ago at the National Endowment for the Arts by the late Nancy Hanks, then its chairman, to reward and recognize excellence in federal design.

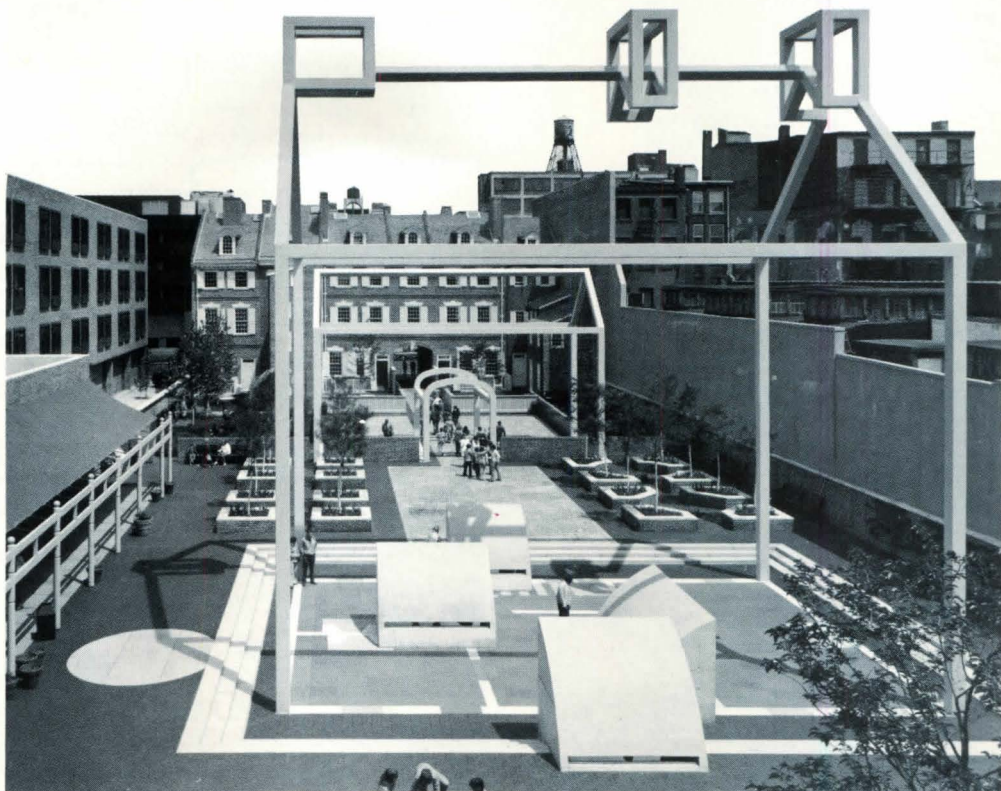
Mr. Reagan recently presented the program's first awards in Washington to 13 projects, following deliberations by 14 jurors from the fields of architecture, graphic design, urban design, interior design, engineering, and industrial design. The National Park Service was a big winner, but the field included many other acronyms from Washington's alphabet soup.

Three awards went for excellence in graphic design and communication (NASA, DOT and the NPS). Four were for what can best be described as federal programs, ranging from the national historic preservation tax credits (NPS) to a flood control and pollution abatement program for the Charles River in Boston (Army Corps of Engineers). The GSA's art-in-architecture program took an award ("Six million dollars, and they put a giant baseball bat in front of an office building!" was a bystander's comment). Two elegant civil engineering feats—the Linn Cove Viaduct in Asheville, N.C. (NPS) and the Intercity Bridge in Pasco/Kennewick, Wash. (FHA)—were also recognized.

Three awards had to do with buildings: Venturi, Rauch & Scott Brown's Franklin Court (P/A, April 1976, p. 69) in Philadelphia for the national bicentennial (NPS); infill housing in Charleston, S.C. designed by Bradfield Associates and Middleton, McMillan Architects (HUD); and public housing in San Mateo, Calif., designed by Backer Arriagón & Ross with landscape architects P.O.D., Inc. (HUD). St. Paul's Lowertown Redevelopment Corporation (HUD) was also recognized for its ongoing programs.

Only one award went for something that might actually be called a product: "The Seattle Foot," a remarkable prosthetic device developed by the VA for lower-limb amputees. In the awards ceremony this got the longest and loudest applause.

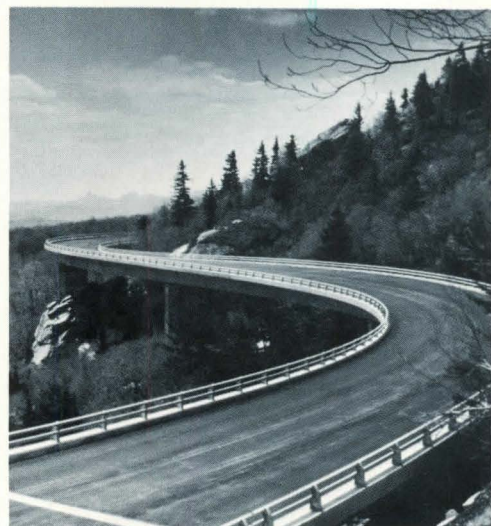
With aptness that was perhaps inadvertent, jury chairman I.M. Pei remarked on the significance of White House attention to design "when so many other important matters



Franklin Court, Philadelphia, Pa.



Housing, Charleston, S.C.



Linn Cove Viaduct, N.C.

place demands on the President's prime time." Pei also mentioned the benefits of government-backed design awards programs in many of the industrialized nations that compete against U.S. companies in world markets. He then suggested that the new U.S. Presidential Awards might similarly press American private industry towards better design.

On this point, however, Pei was probably stretching things: most such programs abroad (for example, the British Design Council's) encourage private business, not government. They reward products, not bureaucratic programs, a strategy *this* President might well be expected to embrace.

All the same, it is nice to see crisp, sensible

graphic design rewarded (even if the IRS Form 1040 is proudly displayed as an example). And one can only admire the fine and varied works of the National Park Service. One last irony, lost amidst the awards presentation hoopla: Many of the federal efforts rewarded would have been eliminated or severely curtailed in this Administration's past proposed budgets, and likely will be cut in the next cycle as well. **Thomas Vonier**

Mark Cohn

Courtesy, Presidential Design Awards Program

Pencil points

Thomas Hall Beeby of Hammond Beeby & Babka, Chicago, has been named Dean of the School of Architecture at Yale University.

Richard Rogers is this year's recipient of the Royal Gold Medal for Architecture. The Medal is conferred annually by The Sovereign, based upon the recommendation of the RIBA Council.

The 1100-year-old temple at Borobudur (P/A, Nov. 1984, p. 104) was heavily damaged in late January by nine bombs planted in the bell-shaped towers on the temple's upper level. No group has yet claimed responsibility for the attack on the Indonesian monument, which was reopened in 1983 after an eight-year, \$20 million restoration.

Attention would-be critics! Submissions to the annual Douglas Haskell Awards for Student Architectural Journalism are due April 15.

• Entries, which may consist of a news story, essay or feature article, book review, journal, or book on architecture, interior design, urban affairs, or related subjects, must be accompanied by a 100-word statement of purpose, audience, and publication particulars. Eligibility is limited to enrolled students. (The jury discourages submission of material developed solely for class requirements.)

• This year's jury: Jane Holtz Kay, architecture critic for the Christian Science Monitor; Martin Filler, editor of House & Garden; Stephen Kliment, executive editor, Whitney Library of Design; Daralice Boles, of P/A; and Bartholomew Voorsanger, principal, Voorsanger & Mills.

• Contact the New York Chapter of the AIA, 457 Madison Ave., New York, N.Y. 10022 for details.

Mitchell B. Rouda has been named editor of the AIA's Architectural Technology magazine. Like Lou Marines, the AIA's new executive vice president, Rouda is a "graduate" of Haines Lundberg Waehler (HLW), where he served as director of communications. Rouda is a former associate editor of the magazine Process: Architecture. He is the third editor of AT since its founding in 1983.

Steven K. Peterson has been named Director of the Institute for Architecture and Urban Studies, N.Y. Jon Michael Schwartz is the new Director of Education and Pat Sapinsky, Director of Public Programs.

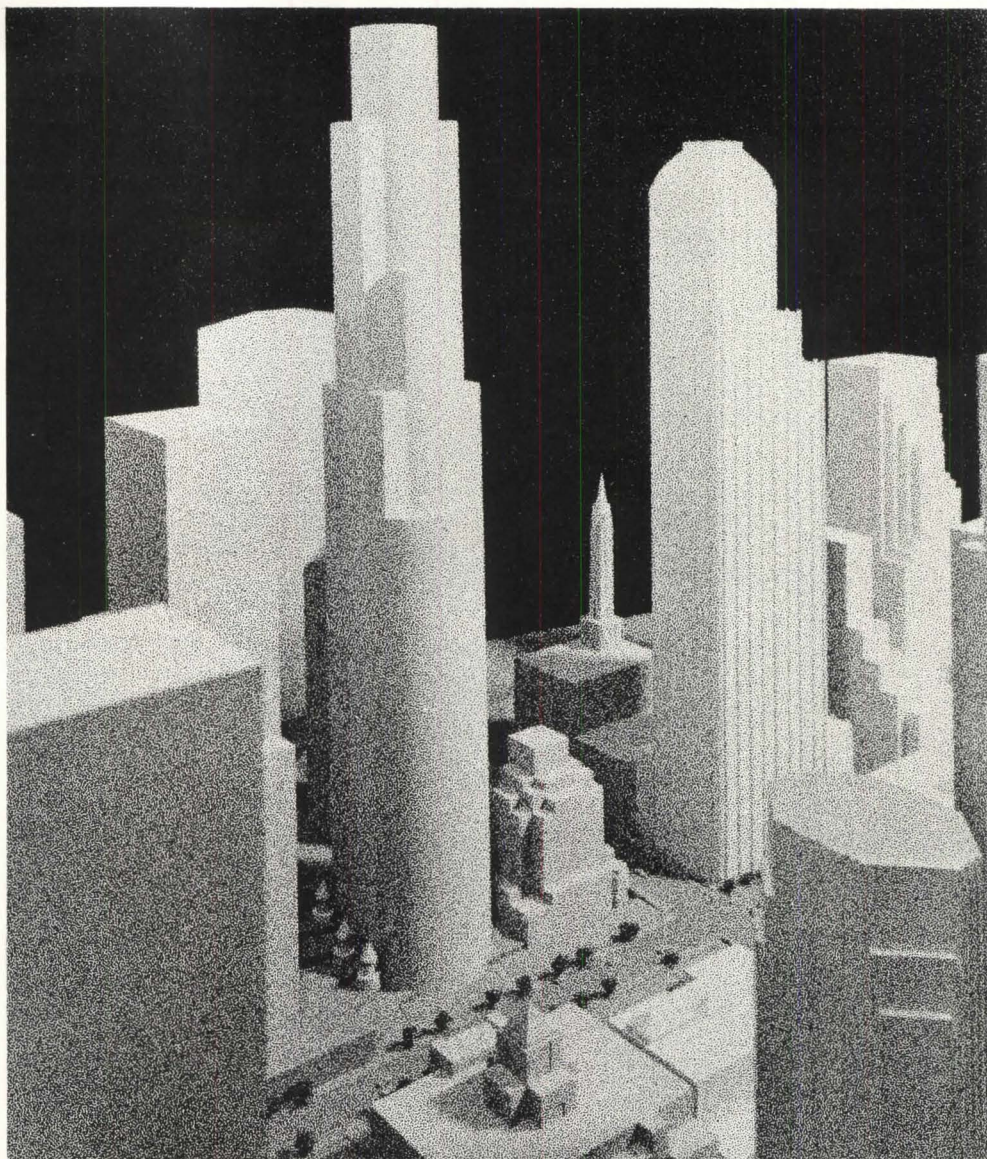
• They plan two new postgraduate programs for the fall of 1985: a [Pencil points continued on p. 36]

Redefining Downtown L.A.

When weak, old landmarks are felled for the sake of brave, new skyscrapers, developers cheer for progress and urban designers mourn for cultural heritage, or so the standard scenario goes. But in Los Angeles, a slew of abstract cultural values—once promoted mainly by designers and docents—are getting a spectacular economic boost. An enlightened developer—Maguire/Thomas Partners—and a progressive city agency—

Cobb and Harold Fredenburgh in charge), and next door, a \$337 million tower by Philip Johnson and John Burgee.

However, the dramatic physical equation—that it takes two mountains (2.5 million square feet) of commerce to pay for one molehill (160,000 square feet renovation; 200,000 square feet expansion) of culture—is somewhat misleading, since air rights, although the most visible, are not the only valuable variables. A complex combination of density transfers, tax benefits, land sales, and tax increment funds was structured to finance the library's renewal. The pending



Towers by Pei (left), Johnson and Burgee (right), and Harwood K. Smith (foreground) surround Central Library and HHPA addition.

Community Redevelopment, or CRA—have drafted a giant deal that may simultaneously raise the civic value of "cultural heritage" throughout the nation, fix new levels of architectural quality for Los Angeles, and pinpoint a lively new center for its downtown. The expectations are big, but so is the proposed project, Library Square.

Downtown's Central Library—a 1926 Art Deco landmark by Bertram Goodhue—will undergo a \$110 million renovation and expansion by architects Hardy Holzman Pfeiffer Associates. But the city isn't paying. Two new skyscrapers, built across the street, will foot most of the bill: a \$315 million office tower by I.M. Pei & Partners (with Henry

project is, among other things, a landmark example of "public/private partnership." "It's probably providing more money for public use than anything that has been done in the country," says Robert Maguire, who initiated the proposal to prevent the library from selling off its outdated building and valuable land to build a modern plant elsewhere. (A second developer and other private investors have since come on board.)

But the Library Square project means more than preservation diplomacy to Los Angeles. "It absolutely defines the center," Maguire says. The two office buildings will transform the downtown skyline: Pei's 70-story stone cylinder will be the city's tallest

and boldest tower when it appears in the late 1980s; that should make Johnson's 65-story tower, with its Napoleon III-style roof and finials, the wryest and the second tallest—barring any competition by the early 1990s. A third participant—a half-million-square-foot, 30-story office tower from architect Harwood K. Smith and developer Lincoln Properties—is accorded a smaller share of density transfers and design superlatives.

The ground plane gains two new public spaces: a new library garden and the "Bunker Hill Steps." Lawrence Halprin will wrap the Steps around the circular Pei tower base, line them with water cascades and cafés, and invite Angelenos to use their Mediterranean climate the way Romans do in their Piazza di Spagna. Across the street, the new garden will direct pedestrians into the library rotunda, so that Goodhue's unique cruciform floor plan may regain its ideal use as the "crossroads of the city." Consequently, CRA administrator Edward Helfeld anticipates the library's new potential as a downtown pedestrian magnet: "The library is more important than all the museums, the music center, and the theaters because it appeals to such a wide spectrum of people."

If Library Square is completed as planned, only two downtown megadevelopments will rival it for quantity and quality of space. Both stand almost adjacent to the library site. One project is Maguire's own, the one-million-square-foot Crocker Center; the other is the one that got away, the four-million-square-foot California Plaza, part of Bunker Hill. In 1980, Maguire lost that CRA competition with a brave proposal that dwarfed the others with its urban design acumen (supplied by Pelli, Gehry, Moore, Hardy, Halprin, Myers, Legorreta, Perloff, Contini, and Sussman). Now, with the grimmer winning scheme (mainly by Arthur Erickson) so near completion, Maguire may get the chance to dwarf it again—this time with real buildings.

Barbara Flanagan

The writer lives in Los Angeles and writes on architecture and design.

P/A editors win awards

"American dreams," the July 1984 editorial on the subject of public housing projects written by P/A Editor John Morris Dixon, has received a Jesse H. Neal Editorial Achievement Award in the category of best staff-written editorial or series. The Neal Awards, which are given to individual editors, not to publications, are sponsored by the American Business Press. A total of 30 winners, including 15 awards, were selected out of approximately 600 entries and honored at an awards ceremony on February 28 in New York. Listed on the award were John Dixon; Virginia Chatfield, Copy Editor; David A. Morton, Executive Editor; and Kenneth R. Windsor, Art Director.

P/A Senior Editor Thomas Fisher is the recipient of a National Association of Home Builders Golden Hammer Award for his article "Instant Housing," in the same issue. Fisher was awarded second place in the magazine category.

Hongkong Bank: building of the year?

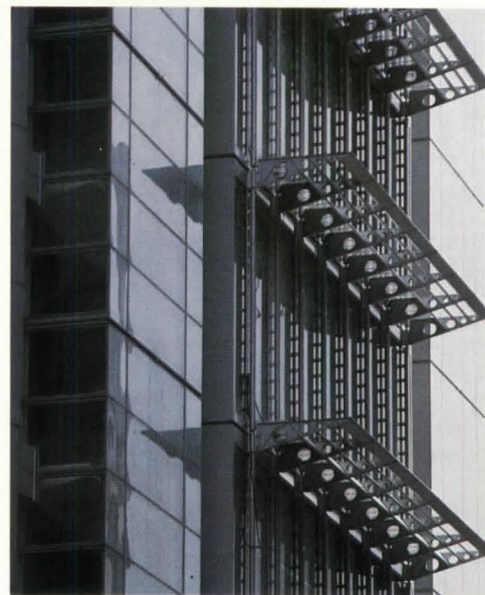
Few buildings of recent vintage have excited the advance acclaim accorded Norman Foster's Hongkong and Shanghai Banking Corporation. The 43-story headquarters, shown here as it appeared two months ago, breaks new ground in every aspect of skyscraper construction—save perhaps that of height. Its structural system, devised by Norman Foster Associates with the omnipresent, and it seems omniscient, Ove Arup & Partners

engineers, employs a sophisticated system of tubular steel box-truss masts supporting five sets of two-story suspension trusses. These in turn carry vertical hangers from which are suspended stacks of up to nine stories (hence the unusually high amount—75 percent—of usable floor space, compared to the average 60–65 percent).

A veritable vertical city, the building also embodies certain social or programmatic innovations, based upon a rethinking of how people actually use an office building. High-speed elevators stop only at the 11th, 20th, 28th, and 35th floors, with intermediate floors connected by escalator. Movement to and through the building has been carefully choreographed, from the public Galleria and 170-foot-high banking "cathedral" right up to its crowning glory, a helipad.

Although he reportedly objects to the label "high tech," Foster is for many architects that movement's most convincing and accomplished apostle, and his Hongkong bank its much anticipated apogee. As bureaucrats and diplomats work out the terms for China's repossession of the British colony in 1997, the project has also taken on a peculiar geopolitical resonance. The \$640 million headquarters is an extravagant, not to say quixotic, symbol of the Bank's faith in Hong Kong's future. Due for completion this fall, it may well be the building of the year. **DDB**

Foster's bank is already a landmark on the Hong Kong skyline (left and bottom). Screens (below) double for windowwashing.

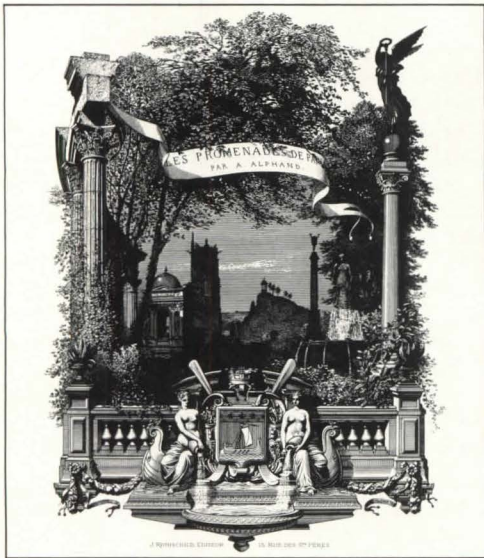


Photos: John Nye



Princeton's new pushcart press

Kevin Lippert founded the Princeton Architectural Press in 1981 while still a graduate student at Princeton University. His first offering, a facsimile of J.N.L. Durand's *Recueil et Parallèle des Edifices de Tout Genre*, was an expensive undertaking, but the boxed, limited edition of 200 copies sold out despite a \$150 price tag. For his second subject, Lippert chose Paul Letarouilly's 1840 *Edifices de Rome Moderne*, condensing the three-volume



Reissued Alphand.

original into a single, hardbound book at the more accessible price of \$55. The first of a series, Letarouilly was followed by a reproduction of the renowned 1847 *L'Architecture de C.N. Ledoux*. The third and most recent addition to the series is the lush and elegant facsimile of *Les Promenades de Paris*, which includes 530 line engravings and a fabulous full-color series of lithographs depicting botanical subjects by Baron Haussmann's lieutenant Adolphe Alphand.

Although the reprint series has proved extremely successful (Letarouilly and Ledoux are both in third printings), Lippert has also moved into the more risky business of new publications. The Press published the first volume of the Princeton Journal, *Ritual*, and is now at work on the second, entitled *Landscape*. Other spring titles include *Venezuelan Vernacular* by Federico Vegas; *The Writing of the Walls*, a collection of essays by Anthony Vidler; Thomas Schumacher's study of Giuseppe Terragni's *Danteum* (the English translation); and *The Palladio Guide*, a traveler's catalog to the works of Andrea Palladio that lists hours, routes, and references, compiled by Caroline Constant. Lippert also plans a series of monographs on the work of young architects with the first subject, Steven Holl. His latest, and perhaps greatest, coup is the contract for a monograph titled *Michael Graves: Buildings and Projects, 1981 to 1985*, due out this October.

This young press shows much promise: watch for its offerings in your local a + a bookstore, or write for the catalog to Princeton Architectural Press, 40 Witherspoon St., Princeton, N.J. 08540 (609) 924-7911. **DDB** ■

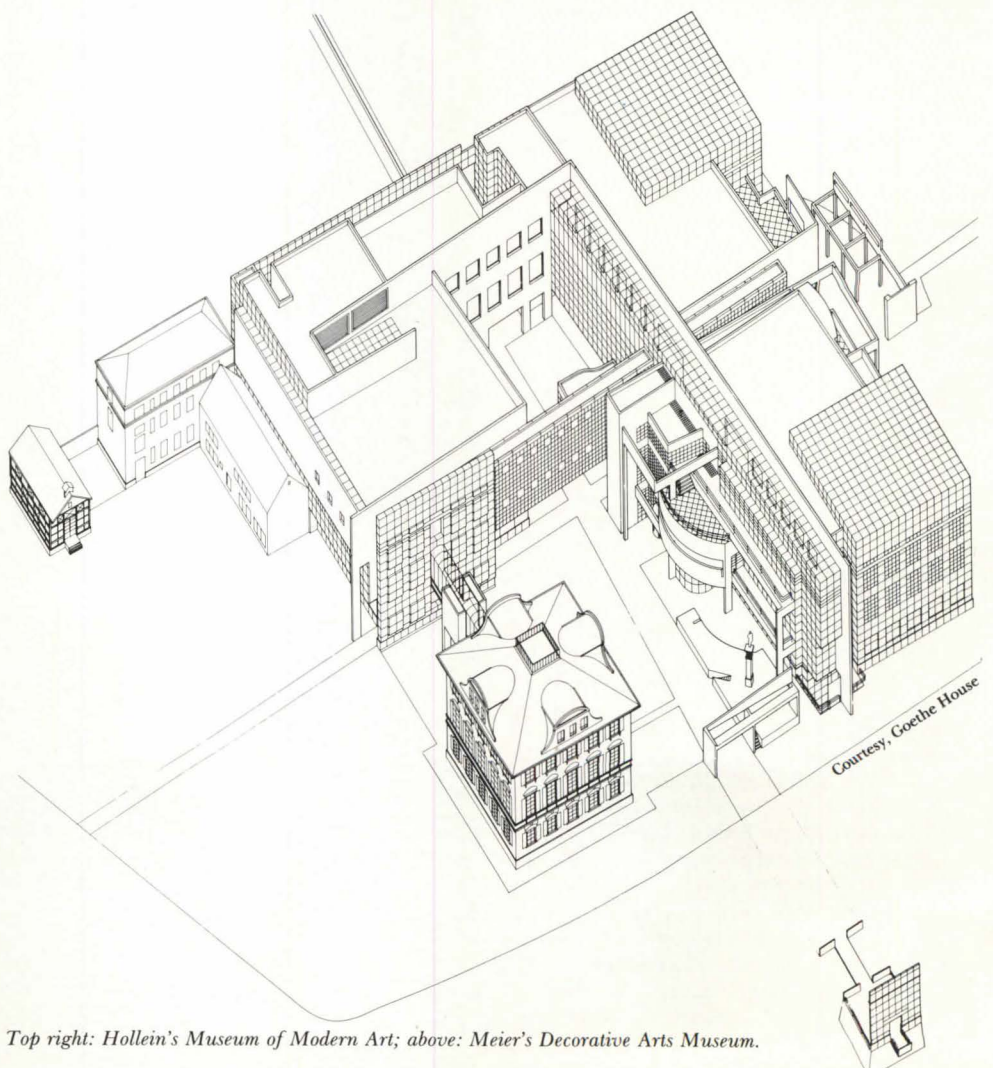
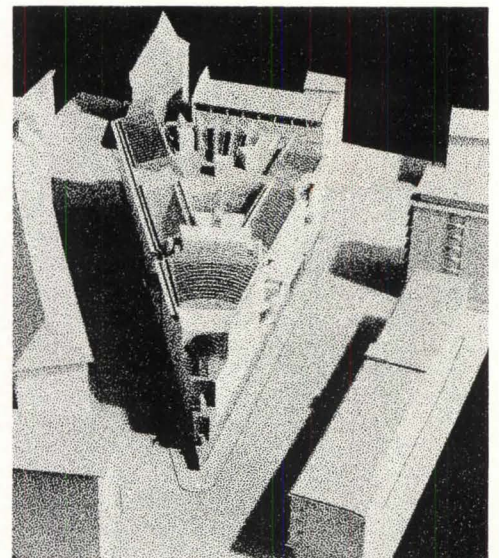
Frankfurt: New and old

Until March 16 at the Goethe House in New York (and subsequently in twelve other cities in the U.S. and Canada), hangs an exhibition of works by Richard Meier, O.M. Ungers, Hans Hollein, and others. This is remarkable for two reasons: first, the drawings and models all represent real projects commissioned by and for one city—Frankfurt-am-Main, West Germany; and second, most are museum buildings.

Towards the end of the 1970s, Frankfurt—or Bankfurt, as the Germans call it—decided to balance its reputation as a financial center by tending to its cultural soul. The city granted commissions, either outright or by invited competition, to outstanding German and international architects for the design of numerous important buildings, most of which are shown in the current exhibition. The three dozen selected drawings and six models, the accompanying audio-visual presentation, and the catalog document not only the individual products but also Frankfurt's steadily changing attitude towards "New Building in a Historic Context," as the exhibition is called. First on display is the faithful (as far as possible) reconstruction of the 15th- and 16th-Century façades of the central Römerberg Square's east side; next, the contemporary designs for a row of townhouses, each by a different architect—Charles Moore and Adolfo Natalini among them; and finally

the thoroughly Modern, but still contextual, freestanding Decorative Arts Museum by Richard Meier.

The finest point of the process—the various ways in which individual creativity and respect for context can coexist—is illustrated in the most splendid section of the exhibition, in the front salon of the Goethe House. Here, drawings for Meier's museum hang alongside Hans Hollein's Modern Art Museum and Josef Paul Kleihues's Ancient History Museum. Meier's drawings, which include his graphic analysis, are sublimely rational, with pristinely delineated grids and



Courtesy, Goethe House

Top right: Hollein's Museum of Modern Art; above: Meier's Decorative Arts Museum.

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shifted grids, overlaid on a luxuriantly wooded site. Hollein's drawings—for a building that pushes to the very edges of its difficult, wedge-shaped site—include eccentric sketches of highly personal images energetically scratched onto Plaza Hotel stationery. Kleihues's are clean and craftsmanly, appropriately representing the pure yet richly evocative new wing and the existing (rebuilt) 14th-Century Carmelite Monastery to which it is added.

The exhibition brings to light not only the subtle issue of contextual design, but also a more dramatic one: the sheer audacity of a city that has dared to create, almost in one blow, an entire museum district. Across the river from central Frankfurt, in the residential Sachsenhausen area, stood a number of turn-of-the-century villas on wooded properties, which the city wanted to preserve. In most cities the glib solution, "Have the municipality buy the villas and turn them into museums," would not be feasible, but in Frankfurt it was, and the Riverbank of Museums was conceived. Joining the Staedle Art Gallery and several other existing museums are Ungers' Architectural Museum and Helge Bofinger's Film Museum, both completed last summer, and Meier's Decorative Arts Museum, to open next month. With the as yet unfinished museums in central Frankfurt mentioned above, the number reaches a dozen, astounding in a city about the size of Atlanta, as Richard Meier, Keynote speaker at the Goethe House exhibition opening, pointed out. *SD*



Modern models: Carl Strauss and Ray Roush

The best of Cincinnati Modernism was the work of Carl Strauss and Ray Roush, celebrated in an exhibition last month at the city's Contemporary Arts Center. The show, organized by local architecture critic Jayne Merkel, was accompanied by a catalog, house tour, and symposium that starred the firm's most famous alumnus, Michael Graves.

Merkel titled the program "In Its Place," and her catalog is a model case study of the

manner in which the challenging ideals of Modernism were learned, reconstructed, or adapted to a Midwest city by a pair of sensitive practitioners. Such Strauss/Roush homes of the 1950s as the Lawson Reed, Carl Strauss, and Donald Jacobs houses recall Eames, Mies, and Neutra, molded to suit the Cincinnati landscape of steep hills and river views. These structures are not rooted in, but in dialogue with their place of residence, reflecting both a universally cultivated framework of design and the localized lives of elite clients.

Merkel's breezy discussion of these houses is by far the best part of this exposition on localized Modernism. The firm's larger buildings are mediocre, at best, and attempts on the part of the architects to adapt their Modernist conversation to the babble of architectural tongues spoken in the 1960s and 1970s fail to convince. The lack of explanatory plans in either catalog or show is a mistake; still worse are the photographs by local "nationally known art photographer" Corson Hirshfeld, who loses his subject at the rear of a forced perspective.

Perhaps architects now have enough distance from the revolutions that established and then disenfranchised Modernism to understand its many local manifestations. Cincinnati's example should encourage other cities to examine the place of Modernism in their particular vernacular. *Aaron Betsky*

The writer is assistant professor of architecture at the University of Cincinnati.

Bad reviews in Boston

Philip Johnson and John Burgee may be the prince(s) of players in Dallas, Houston, and other cities of "tomorrow," but they're getting bad reviews in historic Boston. The architects' two design extravaganzas for Downtown and Back Bay have not only raised specific resistance but have inspired neighborhood, preservation, and urban groups to strengthen their hand against other such projects in the booming city.



International Place



New England Life

International Place, a collection of five glass towers of 11 to 45 stories high (P/A, March 1983, p. 26), is on its way back to court. "Too monumental, too megalithic," the Boston Preservation Alliance charges. The \$200 million project for Fort Hill is "not appropriate for a 19th-Century city." The Alliance claims further that the State of Massachusetts did not enforce a proper environmental impact review, and worries about the detrimental effect of wind, shadow, and sheer presence next to a downtown historic district. While the Alliance lost its suit in January, it has put in an appeal that could delay the project for six months, if not indefinitely. Ignoring both the appeal and a Feb. 27 hearing demanded by the Massachusetts Historical Commission, the developer proceeded with construction, prompting the Alliance to seek an injunction to stop building.

Similar distress over Johnson/Burgee's second project, the New England Mutual Life Building in Back Bay (P/A, Feb. 1984, p. 66), has caused another set of activists to mount a similar multipronged attack. The 26-story, block-long building, alternately called by opponents a "Philco radio" and "tombstone," propelled the organizing of a new group, "Citizens for a Better New England Life," spearheaded by Robert Manning, former editor of the *Atlantic*.

"We think the scale is much too big," says Manning, who worries about wind, the disruption of Back Bay's delicate water table, and the assault on Trinity Church next door, recent winner of a damages suit against the John Hancock Building. To stem destruction of the low-scaled block, which includes the delightful Edwardian Colton building, the



Top: Strauss residence (1947); above: Jacobs house (1957).

Photos: Corson Hirshfeld

Citizens plan to seek landmark status for that single structure and, like their fellow activists downtown, to take the project to court.

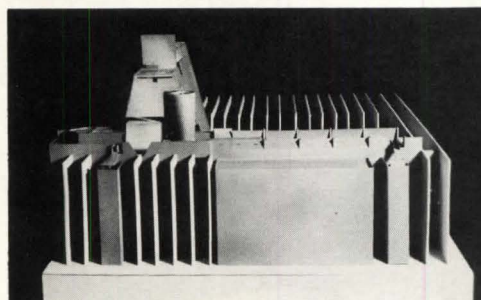
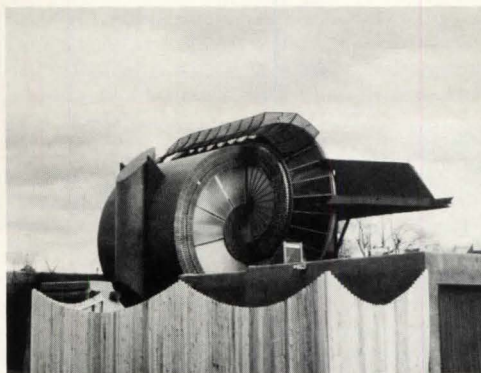
But the issue for Boston goes beyond these two blocks. The frantic pace and massive scale of developments have made the city a real estate hot spot and potential ash heap for older urban values. These two very visible conflicts have caused the city's defenders to mobilize in a broad-based effort to stop the show. *Jane Holtz Kay*

The writer is architecture critic for the Christian Science Monitor and author of Lost Boston.

Organicism: a neglected tradition

"The Tradition of Imagination in Architecture," at the Storefront for Art and Architecture, New York, featured the work of architects Bart Prince and Neil Denari.

Albuquerque-based Prince, a former apprentice and associate of the late Bruce Goff who is now completing the working drawings for Goff's last work, the Shin'enkan Museum, Los Angeles, shares his mentor's love of unusual materials and biomorphic forms. His 1978 Hanna Studio Addition in Albuquerque, for example, consists of two intersecting ellipsoids atop an existing flat-roofed adobe house. More sculpture than building, its curved forms suggest a flower or a seashell. Inside, carpeted surfaces follow the curve of the shell, merging floor with wall and ceiling.



Neil Denari monastery project, 1985.



Above and above left: Bart Prince, Hanna Studio in Albuquerque, N.M.

Although organic architecture is presently out of vogue in some circles, it springs from an American tradition still popular in the Midwest and Southwest. While Prince professes a disregard for theory, his architecture has its own strong, polemical undercurrent.

In contrast, Neil Denari's three projects from invented programs demonstrate an overt concern with polemics. Combined with his preference for Platonic solids, this tendency results in a style that might be described as Goff meets Ledoux. *JW*



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Fame or fashion: two stories

How do you alter a building that's as famous as its style is out of fashion? Two recent projects, on different coasts by different architects, solve that problem with similar resourcefulness and restraint.

One project occupies a square vestibule next to the rotunda in John Russell Pope's 1941 National Gallery of Art in Washington, D.C. Museum officials, noting that people entering the building from Constitution Avenue weren't always aware of the main galleries one floor above, asked Philadelphia architect Hymen Myers of the Vitetta Group/Studio Four to design an opening in the main floor that would allow a view of the rotunda from the lower entrance. Departing from I.M. Pei's Modernist approach in the East Wing, Myers returned to Pope's Classical original for precedent. He designed a circular opening that echoes the curve of the rotunda without interfering with public circulation, and a solid marble balustrade that matches Pope's stonework and repeats his railing details. Myers' work is entirely self-effacing; it looks as if it's always been there.

On the West Coast, Ramona's Cafe by architects Ferneau and Hartman stands at the base of Berkeley University's Wurster Hall, designed by Vernon DeMars, Donald Olsen, and Joseph Escherick in 1960 for the College of Environmental Design. Here, too, lay the temptation of clearly differentiating new work from old. But Ferneau and Hartman



National Gallery's new Oculus.

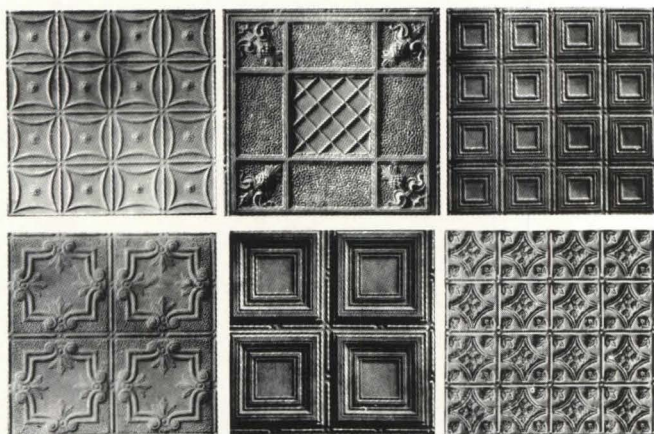


Ramona's Cafe.

resisted, choosing instead to reinterpret the building's brutalist aesthetic. Wurster's concrete brise-soleil is recalled in the intersecting slabs of the terrace wall and outdoor tables. Its large scale is repeated in the exaggerated dimension of the light fixtures and the high, wide-slat benches; and its raw toughness is echoed in exposed ducts, unpainted wood,

and metal gratings. By magnifying those Brutalist qualities, Ferneau and Hartman have created a new work at once tougher and softer, and more playful than the original.

These two projects may differ in function and appearance, but they show how best to alter a noted building: defer to its fame and forget fashion. **TF**



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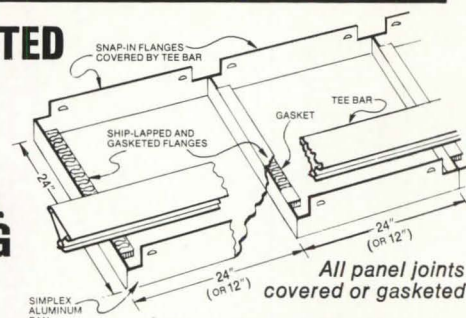
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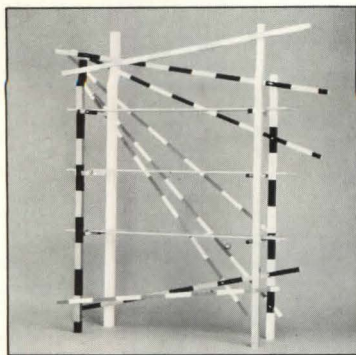
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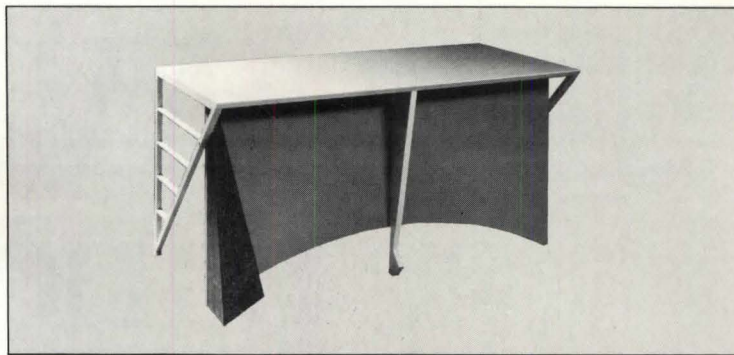




Pierre Sala, collapsible shelves (VIA).



Pelhaitre-Pagnon, Chaise Brazil (VIA).



Joseph Valerio, Obelisk Bureau (Maville).

New signs at the Salon du Meuble

Despite subfreezing temperatures and frequent snow flurries, over 1000 vendors and 45,000 professional visitors turned up for the Salon International du Meuble in Paris last January. The show, one of several annual European furniture fairs, provides an opportunity for manufacturers to promote their latest wares to domestic and foreign buyers. This year, with the strength of the dollar overwhelming most European currencies, Americans were particularly welcome guests.

Dominated by conventional or reproduction antique furniture, the fair nevertheless provided a showcase for new and more innovative work, much of it relatively inexpensive and cleanly detailed, demonstrating the

influence of the Modern movement and high tech to a greater extent than Memphis or Post-Modernism. Straight lines, bright colors, laminated and lacquered finishes, glass, metal, and puffy upholstery predominated, with hardly a scrap of natural wood.

Some of the most outstanding examples in contemporary design were to be found in the VIA display. This organization was established to promote new talent in the French furniture industry. Its offerings ranged from the serious, high-tech design of Phillippe Starck (named Designer of the Year by the Salon) to the humorous "collapsing" furniture of Pierre Sala and the "recreated" furniture of such luminaries as Frank Lloyd Wright. Also notable was the work of VIA designers J.M. Wilmotte and Daniel Pigeon.

A second, surprising collection of work was assembled by a Spanish trade association. En-

titled SIDI, the exhibition featured innovative and beautifully crafted furniture, praiseworthy for both freshness of approach and inexpensive price tags. A third, unusual group came about without the benefit of an umbrella trade organization. The Milwaukee Collection is the work of American designer Joe Valerio and French manufacturer Maville Interiors, employing that international material ColorCore in combination with birdseye maple veneer and enameled metal. The company hopes to produce a series of signature works by other designers.

The tremendous variety of contemporary work evident in a fair customarily dominated by traditional furniture could indicate that the public is ready for some fresh ideas. Both lively and inexpensive, these European innovations may have an impact on American design. **Barbara Goldstein**

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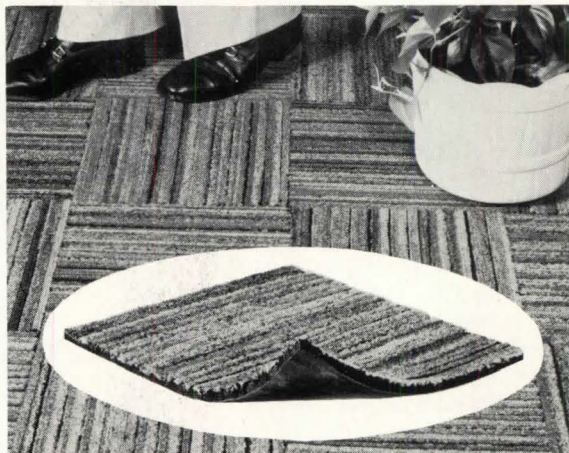


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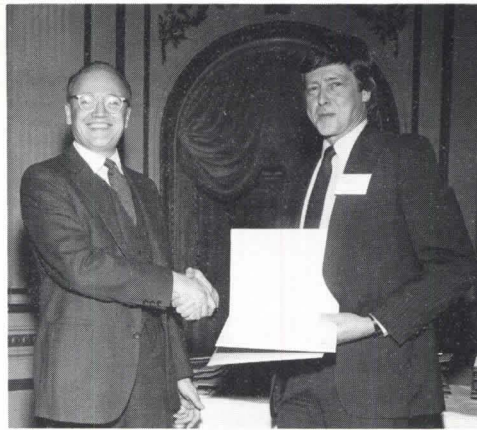
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P/A Awards at the Plaza

The 32nd annual *Progressive Architecture* awards ceremony took place at the Plaza Hotel in New York on Friday, January 25. Some 350 professionals from the architectural community gathered in the Grand Ballroom to applaud their colleagues' achievements as the 31 winning teams and their clients were officially recognized. All winning projects in architectural design, urban design, and research were published in the January issue of P/A.

Winners of the 10th annual P/A AdAwards were honored at a separate occasion, also on January 25. More seminar than ceremony, this year's AdAwards presentations opened up the selection process, so that winners and losers alike might better understand what makes a winner. A panel composed of the original four jurors offered candid assessments of each winning ad. Shirking no subject, the jurors singled out one ad for its "hands-on" approach to the product, another for its sex (actually "sax") appeal (we leave it to you to guess the ad in question). Good design got high marks, as did comprehensive copy. For the complete list of winners, see P/A, Feb. 1985, p. 25. ■



Top: Jorge Silvetti with P/A Editor Jim Murphy; above: Marcy L. Wong with P/A Editor Tom Fisher.

Academic encounter

Some 60 students from seven different universities met at INDESEM, the International Design Seminar, held in Delft, Holland, during the last week in January. The week-long seminar/charrette was convened in honor of Aldo Van Eyck's retirement as Professor of Architecture at the Technical University of Delft. The topic was one of Van Eyck's favorite paradoxes: namely, finding the "right size for both the very large and the very small"; the specific problem was a truck stop.

The results were as varied as one might expect from such an international roster, which included students from MIT, and the Universities of Antwerp, Barcelona, Geneva, Genoa, and Oslo. The critics—Aldo van Eyck, Herman Hertzberger, Mario Botta, Peter Pragnell, Georges Descombes, Lucien LaFour, and Julian Wickam—proved catalytic in the lively and at times emotional discussions. Van Eyck's loquacious manner and charismatic persona provided a stable backdrop for sessions which often verged on anarchy, while Hertzberger's spirited and humorous comments added relief when the discussion threatened to become too profound. Finally, Botta's sensitive analysis provided poetry where the realities of the problem required transcription into artform. ■

Paul Lukez

The author, a participant in the seminar, attends MIT's Graduate School of Architecture.

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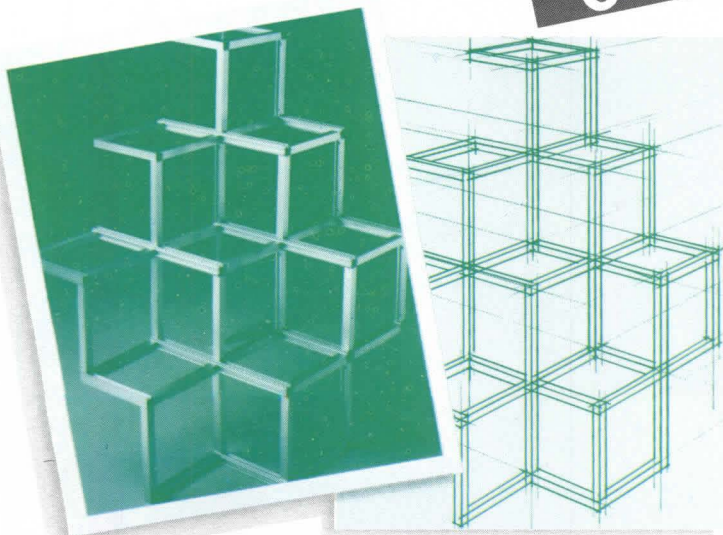
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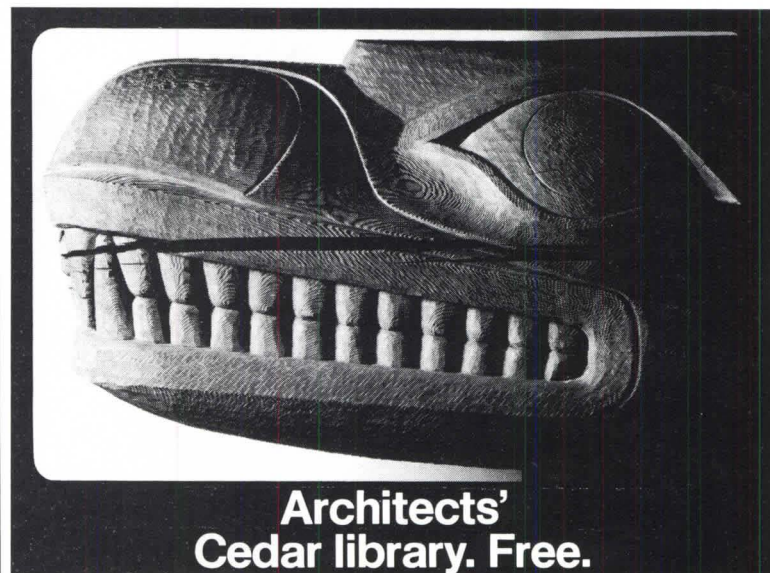
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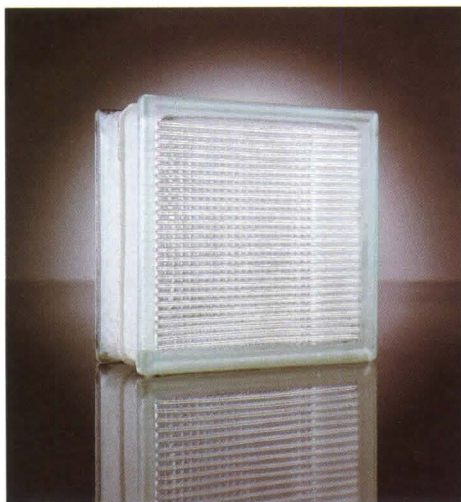
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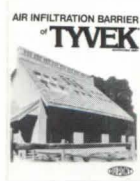
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Watch for Art & Design, a new monthly publication, launched in London in February, as a companion to Architectural Design magazine. Regular contributors will include Leon Krier and Charles Jencks.

Architects for Social Responsibility will auction off more than 200 original architectural drawings by Oscar Niemeyer, Ricardo Bofill, and others in May. For information contact the Max Protetch Gallery, 37 West 57th St., New York, N.Y. Proceeds will benefit ASR programs.

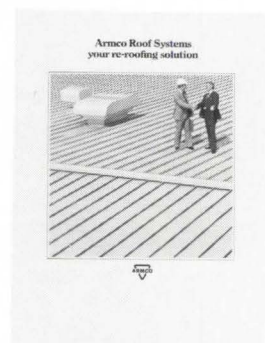
Architects Robert Geddes and Robert Brown have been appointed urban design consultants to the Philadelphia City Planning Commission. Their mission: to pick up where Edmund Bacon left off to plan a new Center City.

The Governor of Illinois has launched a state-wide furniture design competition. Over \$15,000 in prizes are promised, and the winning works—to be announced at NEOCON in June—will be built by 12 cosponsoring manufacturers to furnish the Governor's new digs in Chicago's jazzy State of Illinois Center (Helmut Jahn). Sorry: State residency is a strict requirement.

New York developer Harry Macklowe says his 65-story tower, two lots down from Carnegie Hall, is really 78 stories tall. Following Donald Trump's dubious example, Macklowe simply skips numbers 17 to 29, claiming that since his floors are 13 1/2 feet high, or 4 1/2 feet higher than the norm, his 18th floor is really the equivalent of a conventional 30th. (He also omits unlucky 13 and counts the mechanical 17th as three ordinary floors.)

• City reps are quoted in the New York Times as saying that Macklowe's method may amount to fraudulent advertising.

The three-volume Architecture of Sir Edwin Lutyens has been reissued by the Antique Collectors' Club. The memorial edition, first published in 1950, covers country houses, gardens, and commercial and cultural commissions through drawings and photographs. The Club will produce 1500 numbered sets at \$350 each. Contact the Club at 5 Church St., Woodbridge, Suffolk, England.



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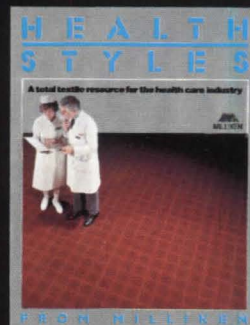
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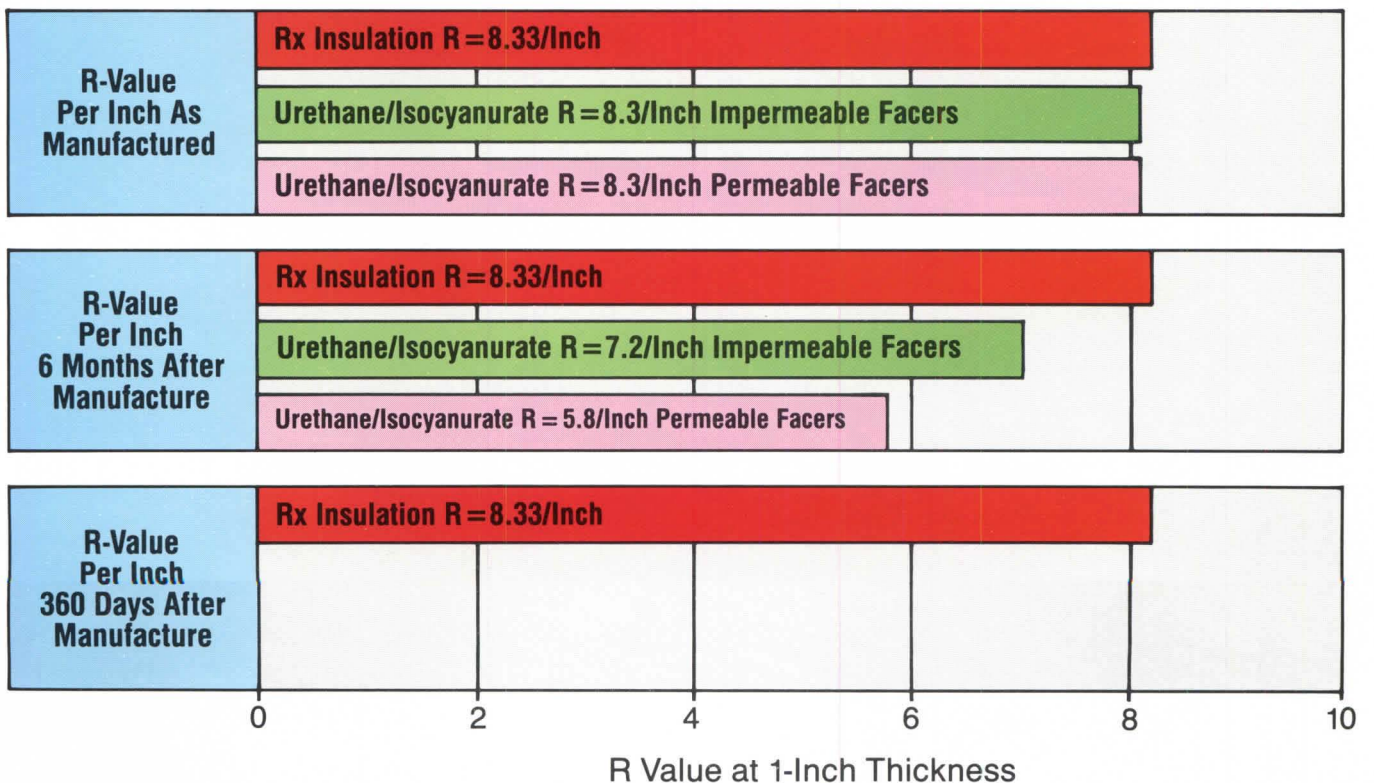
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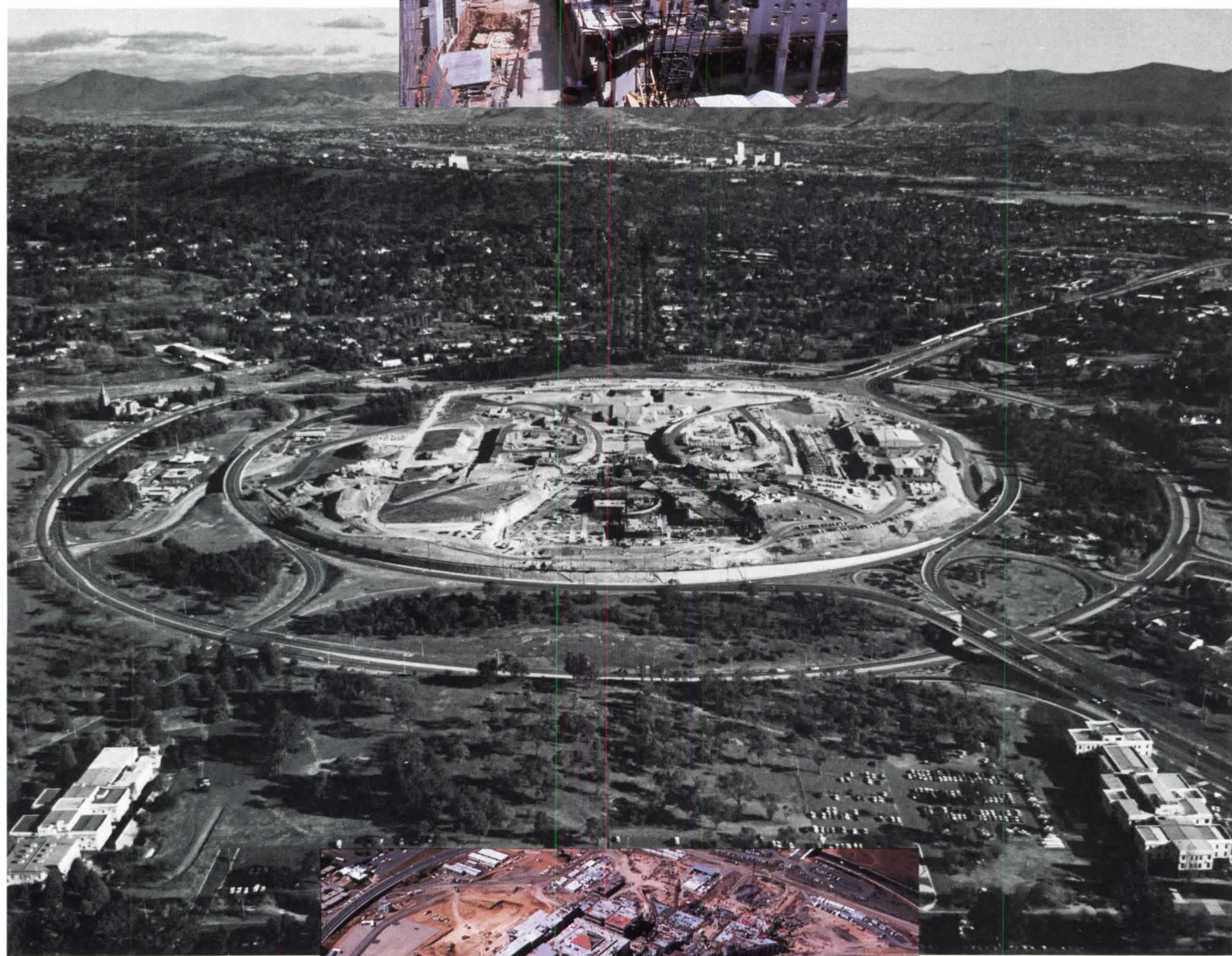
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In progress



This portfolio of works in progress by the Mitchell/Giurgola firm of New York and Philadelphia complements coverage of the Volvo headquarters (pp. 65–76).

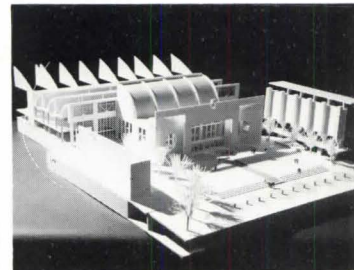


Parliament House, Canberra, Australia. Mitchell/Giurgola & Thorp Architects, Canberra, Australia. The new Parliament House, Australia's Acropolis, has been under construction since 1981 and is due for completion in 1988. Joint venture architects Mitchell/Giurgola and Australian Richard Thorp were awarded the commission in June 1980 after an international competition (P/A, March 1981, pp. 88–95). The complex of legislative and executive buildings, situated at the point of convergence of two principal urban

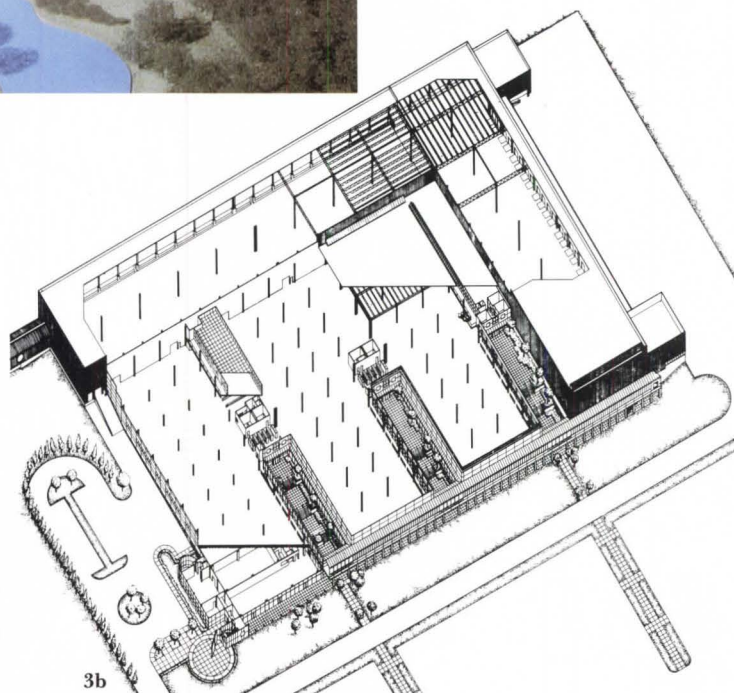
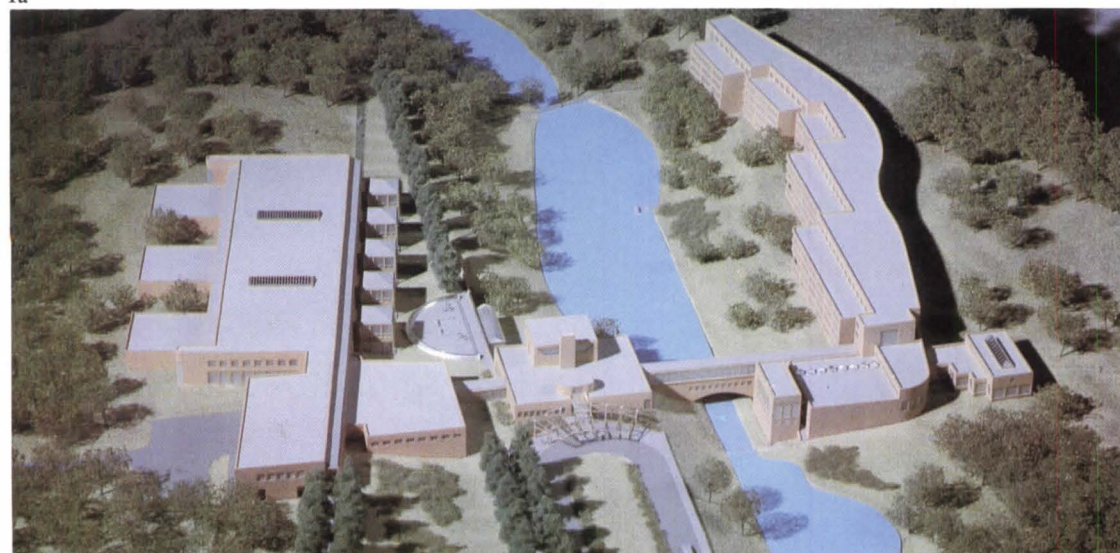


axes, completes and enhances Walter Burley Griffin's 1912 plan for Canberra. Set into the rounded Capitol Hill, the scheme concentrates all ceremonial or public functions in a linear sequence along the central axis; two great arcs (under construction, top) separate these common areas from the House and Senate chambers, each with its attendant offices and support facilities. Construction photographs taken last December (above) convey the emerging pattern and character of the architecture.

Photos: Broches



Photos: Eric Mitchell



Tom Bernard

1a, 1b Convention Center, San Jose, Calif. *Mitchell/Giurgola Architects, Philadelphia, Pa.* Due for completion in 1988, this building is a major part of the ongoing revitalization of downtown San Jose (P/A, Jan. 1985, pp. 54, 143). The bulk of the building is set back, allowing space for an existing library and two proposed hotels. The three main exhibit halls, articulated by their shallow roof vaults, are set atop parking and lined with the principal public spaces which benefit from natural light.

2 Customer Executive Education Center, IBM, Palisades, N.Y. *Mitchell/Giurgola Architects, New York.* Intended to provide a total learning environment for executives, this facility is divided into three interconnected structures, grouped around a series of ponds in the western half of the site. A central reception/dining hall is flanked by a serpentine residential wing and fitness center to the north, and a low block of offices and classrooms to the south. Construction should be completed in 1987.

3a, 3b Master Plan and Phase I Assembly/Storage, Knoll International, East Greenville, Pa. *Mitchell/Giurgola Architects, Philadelphia.* This \$1.4 million assembly and shipping facility will be completed this year. Robots rule the L-shaped high-bay shipping and storage areas, while human workers occupy a lower ceilinged production area broken up by landscaped courts. Reception, dining, and office space are housed separately. The exterior is paneled in white with a red cornice.

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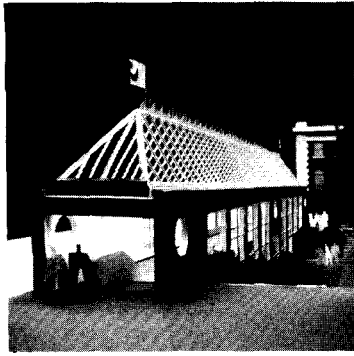
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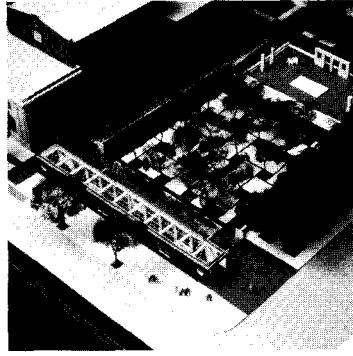
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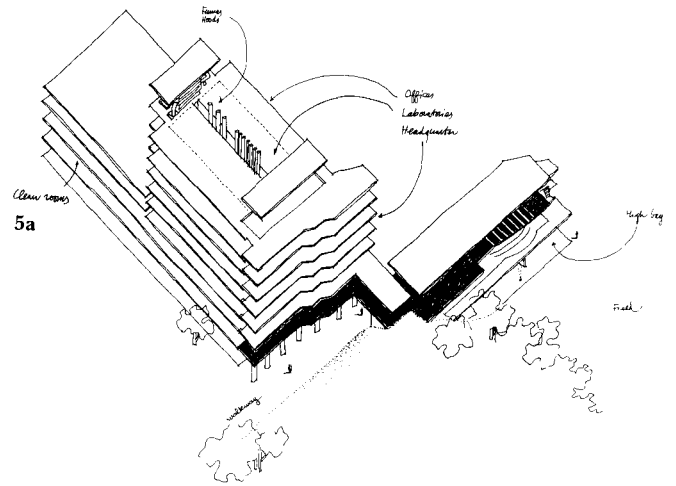
4a



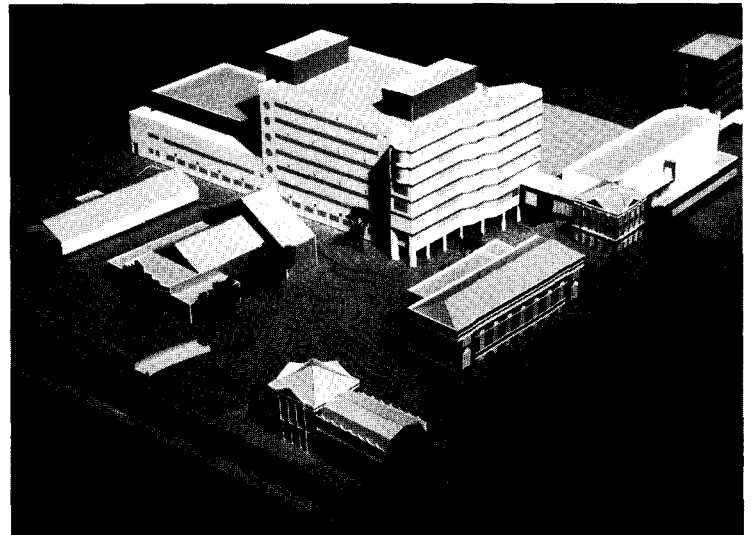
4b

4a, 4b Columbia Avenue Station Improvements, City of Philadelphia and Temple University, Philadelphia, Pa. *Mitchell/Giurgola Architects, Philadelphia.* The chief element in the improvement of this busy subway station is a new pavilion over the entrance stairs. Its glazed hip roof lets sunlight into the depths, while the structure itself, along with a wall of trees, encloses a former empty lot and creates an outdoor plaza. Filled with benches, greenery, and sculpture, the plaza will provide an informal entrance to Temple University when completed this spring.

5a, 5b Center for Industrial Innovation, Urban Development Corporation, Rensselaer Polytechnic Institute, Troy, N.Y. *Mitchell/Giurgola Architects, New York.* Now nearing completion, this facility is designed to create an interface between academia and industry, providing laboratory, educational, and light manufacturing spaces. The building reflects its tripartite program, with a high central block containing offices and classrooms and two lower wings for assembly, one of "clean" rooms and the other high-bay, flexible space.



5a



5b



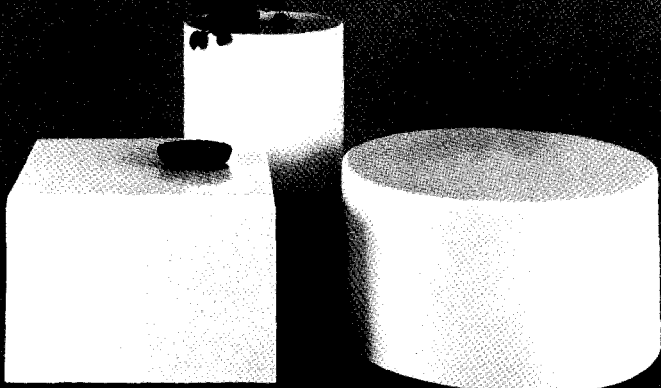
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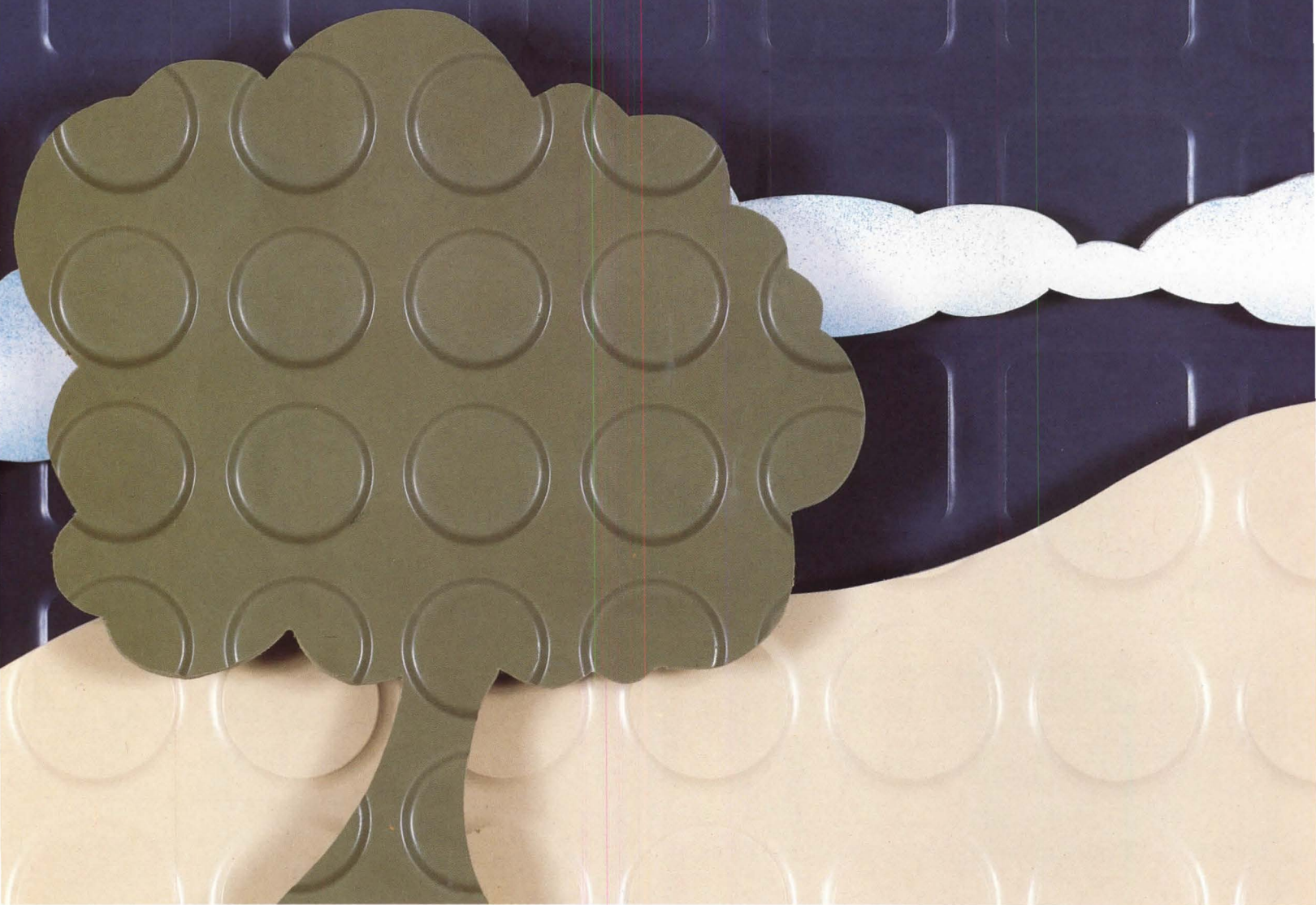
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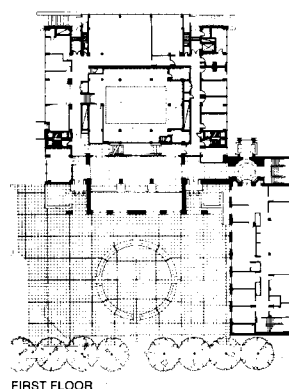
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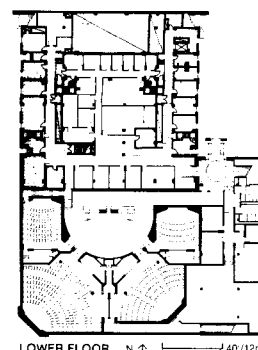


6a



6b

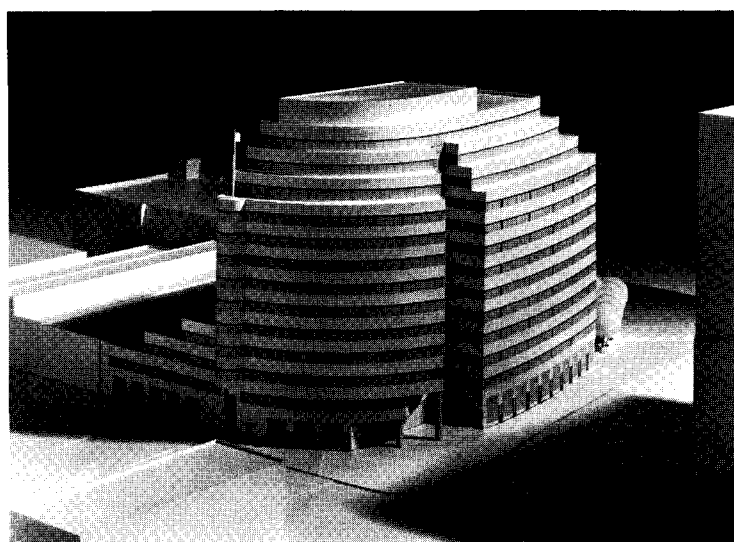
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6a, 6b Annenberg School of Communications Expansion, University of Pennsylvania, Philadelphia. *Mitchell/Giurgola Architects, Philadelphia.* This \$6 million project combines a new three-story office wing with the partial renovation and complete functional reorganization of the existing facility. An extension of the existing building creates a new façade with symmetrical entrances and a three-story atrium lobby connecting new and old buildings. Four new lecture halls are located beneath the entrance plaza.

7 Three hundred Atlantic Street, Stamford, Conn. *Mitchell/Giurgola Architects, New York.* This downtown speculative office building for F.D. Rich Co. stacks 12 office floors above ground-level retail and a double-height public arcade, with adjacent parking garage. Located at the first major intersection north of the I-95 exit, the building's façade is curved to imply a "gateway" to the central business district and acknowledge the new Performing Arts Center across the street. The \$25 million project is under construction.



7

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To register and receive a competition kit, send a non-refundable check for \$25 payable to the *Village of Oak Park SRDC* to:

Gregory E. Buckley, Competition Coordinator
Studio Row Design Competition
1 Village Hall Plaza
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Requests for competition kits must be received no later than 5 p.m. on April 15, 1985. Competition kits will be mailed on April 19, 1985. Stage I submissions will be due on June 14, 1985.

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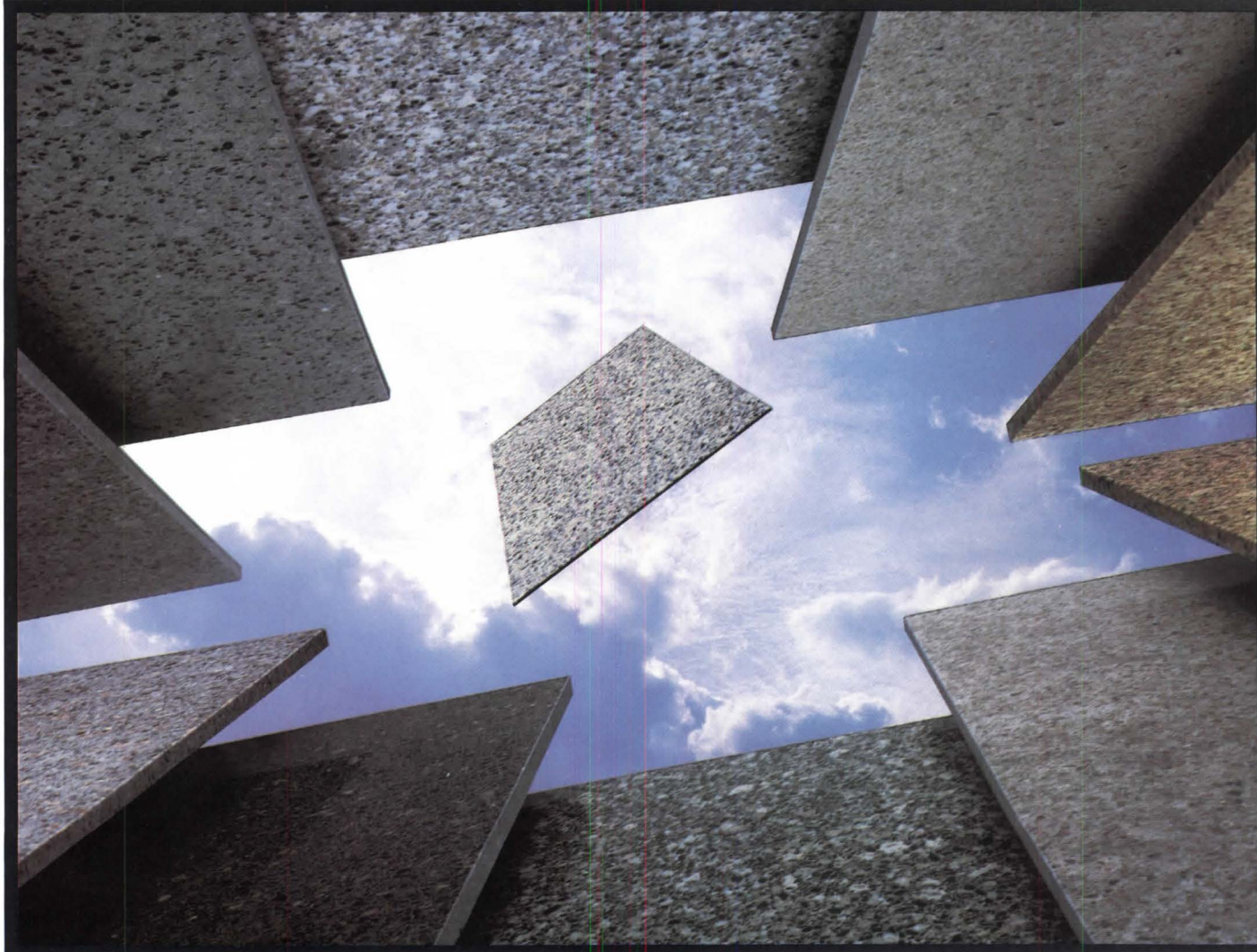
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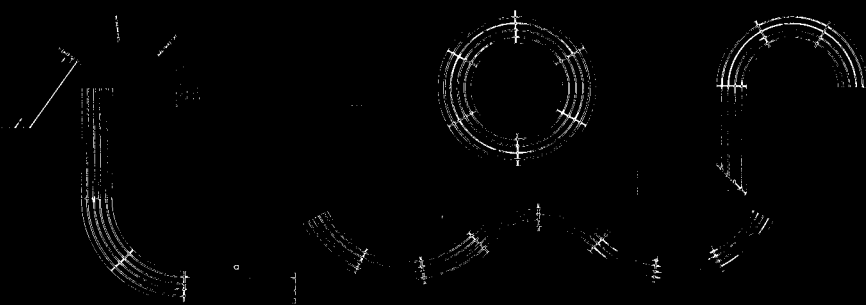
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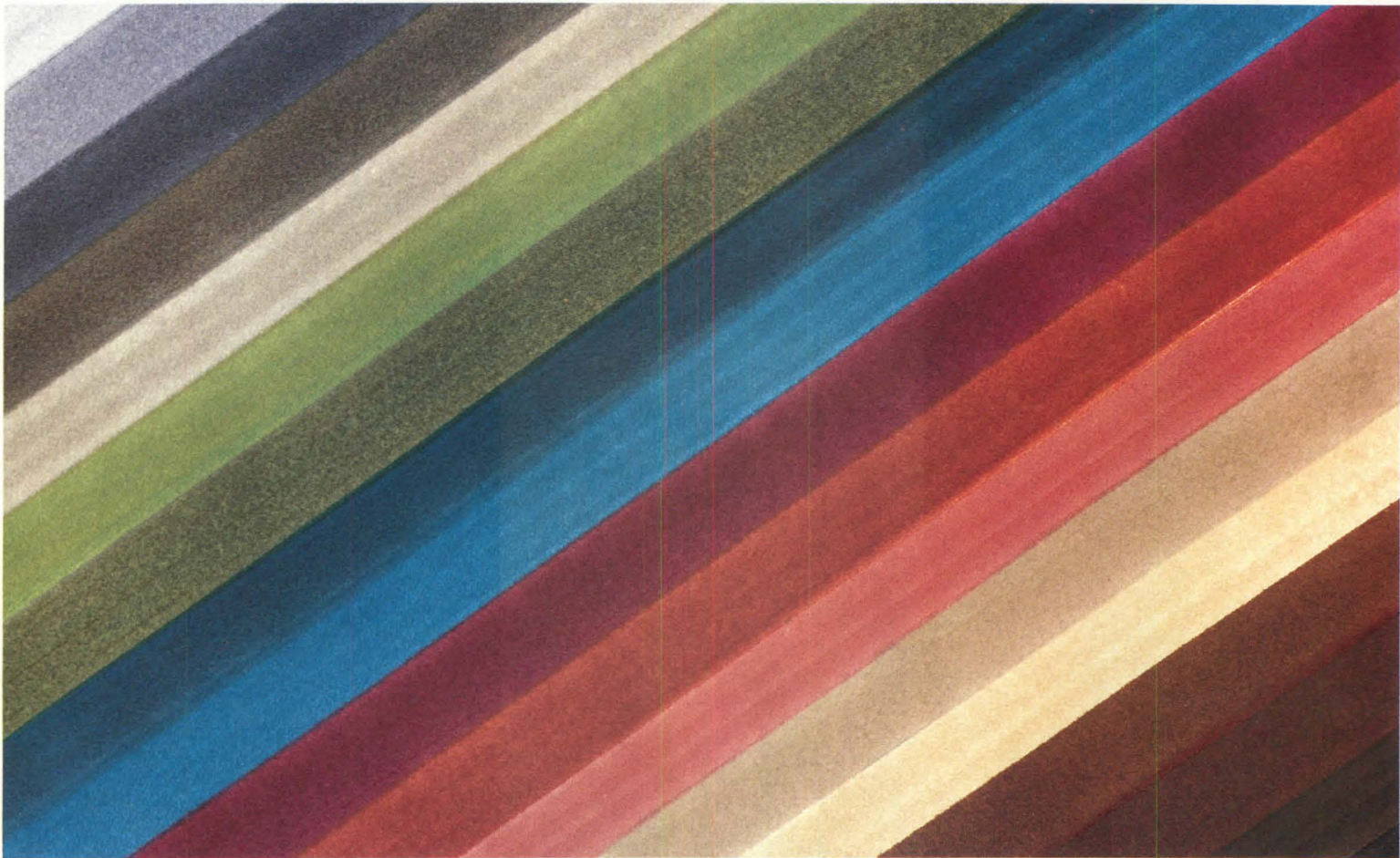
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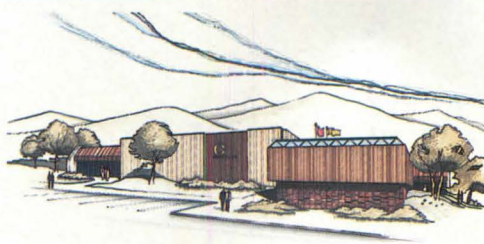
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P/A Calendar

Exhibits

Through March 21

Tadao Ando: Intercepting Light. The Urban Center, New York.

Through March 23

Made in USA: New American Innovations 1985. Gallery 91, New York.

Through March 24

Honor and Intimacy: Architectural Drawings by AIA Gold Medalists, 1907–1983. The Octagon, Washington, D.C.

Through March 30

Scott Burton: Geometric Granite Furniture. Max Protetch Gallery, New York.

Through April 7

Chicago Furniture: Art, Craft & Industry, 1833–1983. Renwick Gallery, National Gallery of American Art, Washington, D.C.

Through April 7

The European Iceberg: Creativity in Germany and Italy Today. Art Gallery of Ontario, Toronto, Canada.

Through April 14

Kandinsky in Paris: 1934–1944. The Solomon R. Guggenheim Museum, New York.

Through May 11

For the Floor: Contemporary Artists' Rugs. American Craft Museum II, New York.

Through June 2

New England Furniture: The Colonial Era. DeCordova and Dana Museum and Park, Lincoln, Mass.

March 20–April 20

Hans Hollein. Philippe Bonnafont Gallery, San Francisco.

March 25–April 5

Mario Campi. Columbia University, Graduate School of Architecture and Planning, New York.

June 6–August 4

Art + Architecture + Landscape. San Francisco Museum of Modern Art, San Francisco.

Competitions

April 5

Deadline, Making Shelter. Contact The Harvard Architectural Review, Issue VII, Gund Hall Room 323e, 48 Quincy St., Cambridge, Mass. 02138.

April 15

Deadline, Haskell Awards for Student Architectural Journalism. Contact New York Chapter, AIA, 457 Madison Avenue, New York, N.Y. 10022.

April 15

Deadline, request for information, Oak Park Design Competition. Contact Gregory E. Buckley, Studio Row Design Competition, 1 Village Hall Plaza, Oak Park, Ill. 60302.

April 30

Registration deadline, The Homeless at Home. Contact Glenn Weiss/Kyong Park, Storefront for Art and Architecture, 51 Prince St., New York, N.Y. 10012 (212) 431-5795.

May 1

Entry deadline, IDEA85, Industrial Design Excellence Awards Program. Contact IDEA85, IDSA, 1360 Beverly Rd., Suite 303, McLean, Va. 22101 (703) 556-0919.

May 2

Deadline for submissions, RIBA International Student Competition. Contact RIBA Education Dept., 66 Portland Place, London W1N 4AD, England.

May 15

Deadline, QUEST competition to develop new uses for cement. Contact Fuller International, Inc., 2040 Avenue C, P.O. Box 2040, Bethlehem, Pa. 18001.

June 3

Entry deadline, Ninth Annual Lighting Design Competition, Halo Lighting Division, McGraw-Edison Co. Entries postmarked on or before May 17 are eligible for cash bonus. Contact The Hanlen Organization, 401 N. Michigan Ave., Chicago, Ill. 60611 (312) 222-1060.

Conferences

March 25–27

13th Annual Federal Programs Conference, Committee on Federal Procurement of Architect/Engineer Services. Loews L'Enfant Plaza Hotel, Washington, D.C. Contact COFPAES, % ACSM, 210 Little Falls St., Falls Church, Va. 22046.

March 27–29

West Week 1985: Form and Purpose. Pacific Design Center, Los Angeles, Calif. Contact Jim Goodwin, PDC (213) 657-0800.

April 13–14

Urban Pedestrian Systems. Walker Art Center and University of Minnesota, Minneapolis, Minn. Contact (612) 375-7622.

April 14–18

Computer Graphics '85 Conference & Exposition. Dallas Convention Center, Dallas. Contact National Computer Graphics Association, 8401 Arlington Blvd., Suite 601, Fairfax, Va. 22031 (703) 698-9600.

April 16–18

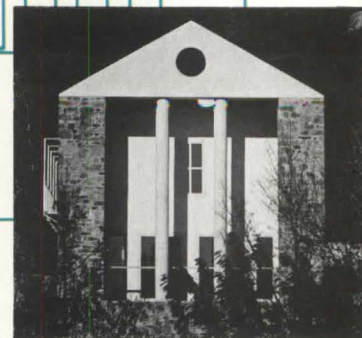
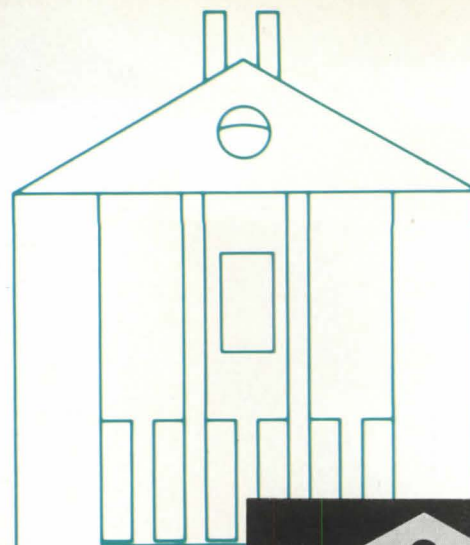
Lighting World III: International Advanced Illumination Conference & Exposition, New York Hilton Hotel. Contact Robert A. Weissman, Vice President, National Expositions Company Inc., 14 West 40th St., New York, N.Y. 10018 (212) 391-9111.

April 17–21

Thirty-eighth Annual Meeting, Society of Architectural Historians, Westin William Penn Hotel, Pittsburgh, Pa. Contact The Society of Architectural Historians, 1700 Walnut St., Suite 716, Philadelphia, Pa. 19103-6085.

April 18–20

Canexus 85: By Design. Harbour Castle Hilton Convention Centre, Toronto, Ontario. Contact George Nutter, 211 Consumers Rd., Suite 300, Willowdale, Ont. M2J 4G8 (416) 493-8710.



Campi et al, Casa Maggi, March 25, Columbia Univ.

Edward Hueber

May 8–12

Scandinavian Furniture Fair '85. Bella Center, Copenhagen, Denmark. Contact Scandinavian Furniture Fair, Center Boulevard 5, DK-2300 Copenhagen S, Denmark. (011) 45 1 51 80 00.

May 12–16

Interior Design International. Olympia, London. Contact British Information Services, 845 Third Ave., New York, N.Y. 10022 (212) 752-8400.

May 14–15

Workspace 85: Space as Function, Space as Image. Moscone Center, San Francisco. Contact Charles Yourd, 44 Montgomery St., Suite 500, San Francisco, Calif. 94104 (415) 931-8255.

June 3–7

A/E Systems '85. Anaheim Convention Center, Anaheim, Calif. Contact A/E Systems '85, P.O. Box 11318, Newington, Conn. 06111.

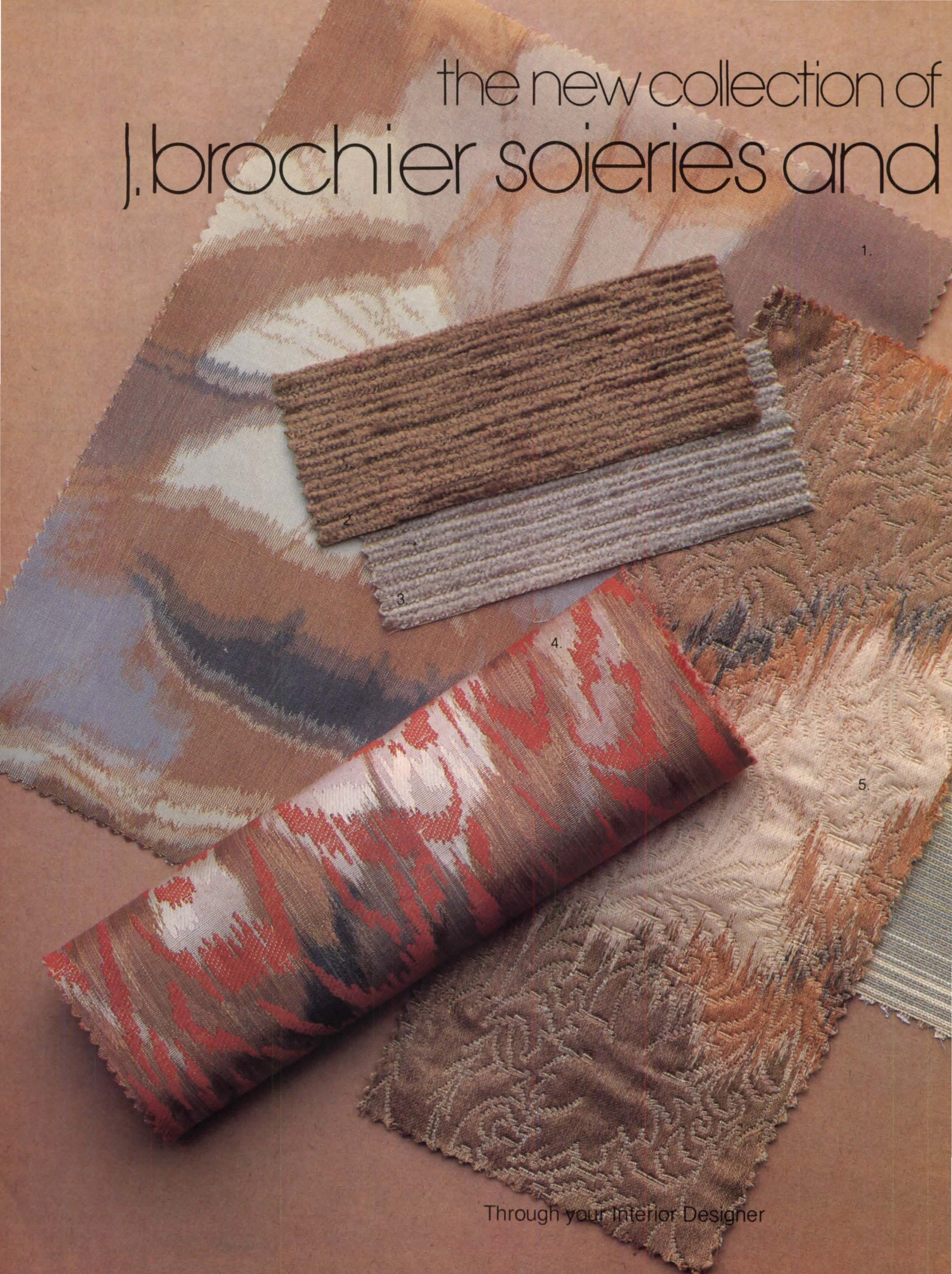
June 3–9

InterArch '85: 3rd World Biennale of Architecture, Sofia, Bulgaria. Contact Georgi Stoilov, Union of Architects in Bulgaria, 3 E. Georgiev Str., Sofia 1504, Bulgaria. Tel: 442673.

June 10–13

EDRA16/1985: Environmental Design Research Association Conference, New York. Contact Madeline Goss, Conference Administrator/EDRA 1985, Environmental Psychology Program, The Graduate School and University Center of the City University of New York, 33 West 42nd St., New York, N.Y. 10036 (212) 790-4553.

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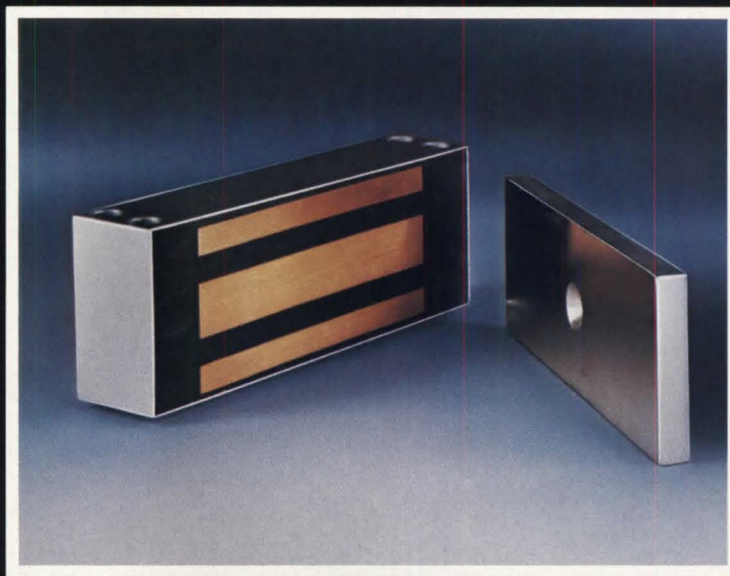


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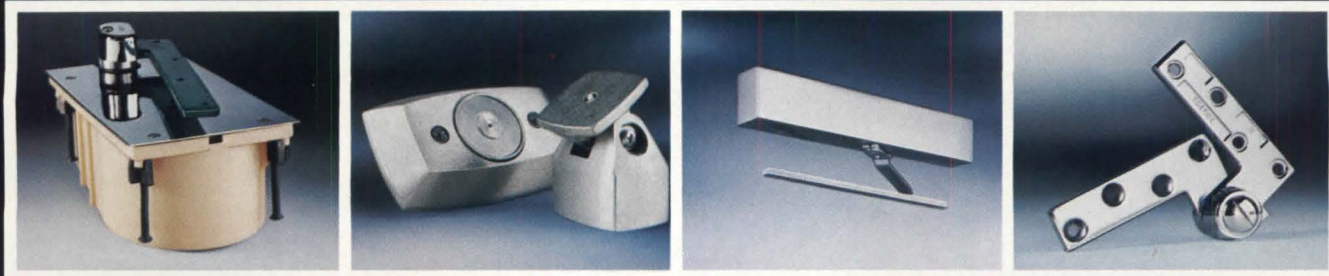
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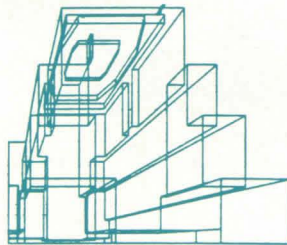
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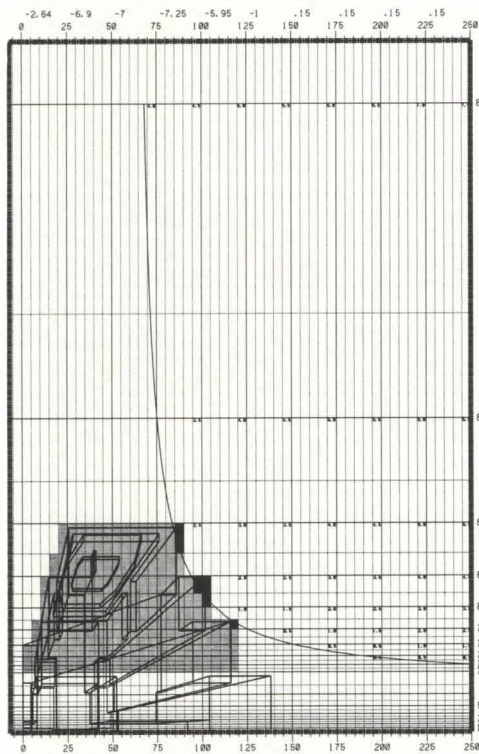


Computers: Developing a micro practice

It's hard to pick up a professional magazine these days without observing numerous advertisements touting the benefits of yet another CADD product. Although many of us may be jaded by all the attention that these products have been getting, some truly exciting things have been happening to CADD, particularly those designed for the low end of the market. Stimulated by the significant penetration that the microcomputer has been making into design offices, albeit for word-processing and accounting purposes, software developers are beginning to see an attractive market emerging for PC-based CADD software. Thus, over the last year some dozen such software packages have entered the market. Most of them cost under \$2000 and require another \$5000 in hardware (graphic board, hard drive, digitizer, and plotter) beyond a typical PC.

Although the capabilities of PC-based CADDs vary, the potential exists for these products to make an important contribution to design practice. Unfortunately, the majority of the developers of these products are more interested in wowing the designer with so-called design features (often presented as soon-to-be-released features) such as 3-D, hidden line removal, rotation, zooming, solid modeling, color infill, etc., than serving the practical needs of the profession. If all these so-called design features were present in one PC-based CADD product, the 16-bit PCs that dominate the market today would have neither the storage nor the computational ability to handle the job. The developers of these products are well aware of this problem, but would probably counter by arguing that the next generation of PCs with 32-bit processors, virtual memory, and multitasking will solve this problem. This is no doubt true; however, while we are all waiting around for this hardware to appear, I wish these developers would spend less time duplicating what mini and mainframe CADD systems can do and more time linking what they already have into design practice.

To understand what such a shift might mean, we need only look at the tremendous strides that have been made in business software, moving as it has from simple, single-purpose programs of some three years ago to today's very powerful integrated software packages. Ironically, the phenomenal success that integrated software continues to have is not a matter of fancy features; although



some offer quite exciting options, better single-purpose programs can be found for each of the integrated software's separate applications. Instead, their success lies with their ability to structure previously dispersed office tasks into more integrated practices. To illustrate how such software might work in a business environment, let us assume that a business manager needs to put together a weekly sales report. He or she would first enter sales data on a standardized database and manipulate that data for regional breakdowns via a spreadsheet. The results could be graphed and/or embedded in a word-processed report that could then be sent by way of electronic mail to the company's regional offices. Such software becomes in effect an electronic desk, holding all the necessary tools needed to execute typical business tasks, and costs less (usually less than \$500) than a year's worth of typing supplies.

Developers of PC-based CADD software should take heed of such developments: By keeping their CADD products simple and stressing integration rather than focusing on all the graphic razzle-dazzle, they will be providing a much more valuable tool to the designer. By this I mean they should be attempting to insert their products into one of the several currently successful integrated software packages (the developers of these encourage such insertion in order to create

- 55 **Computers:** Harvey Bryan
- 56 **Law:** Norman Coplan
- 57 **Specifications:** Walter Rosenfeld
- 59 **Research review:** Thomas Fisher

a market for their products). This creates in essence an integrated design, production, and drafting environment for the PC. Although several PC-based CADD developers claim their products have the ability to pass their data files to integrated software packages, when I tried them, none of them worked as well as I had expected.

The following is a simple scenario of how such an integrated design office environment might operate. A designer using the CADD feature would not only generate a building design but also would designate several attributes for each of the unique elements of that design (e.g., a wall might have a name, construction type, color, U-value, etc.). Once the designer is satisfied with what is on the screen, the graphical and attribute information could be transferred to a database, where data are organized on a master spreadsheet. Questions could be asked of the database (e.g., How large is my building?), or a template could be used to manipulate the spreadsheet in order to generate anything from a cost estimate to a door schedule. The results of this could be stored and/or embedded in a report or specification by way of the word-processing feature. During specification writing the designer might want to access CADD once again, particularly since more and more detailing is moving to an 8½" x 11" format and being placed in the specifications. A PC with one of the new exchangeable hard drives could store several thousand details which, if properly indexed, could be easily retrieved and modified for a current project. Specification writing might also be in need of a communications feature able to access some large external database, perhaps for product information (on some yet-to-be-developed electronic Sweets Catalog), and desired information could be reviewed, edited and embedded in the specifications. In addition, numerous other features could be added.

For all this to occur, however, we will need to demand from the PC-based CADD developers at least the same level of integration that our colleagues in the business community enjoy. And we must demand of ourselves the confidence to take a risk: buy a PC, try it, if only for word processing, and show the potential developers of software that there really is a market. I am sure most of you will find the results of such an experience highly satisfactory. **Harvey Bryan** ■

The author maintains a small practice in Belmont, Mass., and is on the faculty of MIT, where he also directs the Designers Software Exchange.

Computer image: Skidmore, Owings & Merrill.

Law: Without signed agreement fee may be at risk

It is conventional wisdom that in the absence of a written owner-architect agreement, executed by both parties, expressly setting forth the architect's fee, the amount of his compensation may be at risk. The absence of such a written agreement, however, does not mean that an architect has no protection at law and must rely upon the good faith or perhaps whim of his client. It does mean that he may have to litigate his claim for compensation and perhaps receive substantially less than he anticipated. The uncertainties of such a litigation are reflected in the North Carolina case of *Willis v. Russell*, 315 S.E.2d 91.

In this case, the plaintiff-architect sought damages against the defendant-client for approximately \$74,000 for breach of contract. This claim arose out of the following facts. The architect had been employed by the defendant to help him develop a 160-unit condominium project that would meet the approval of the town board and to obtain the needed variances. The architect obtained the variances and thereafter estimated the cost of the project to be in the sum of \$10 million. The architect indicated that his fee would be 2.25 percent of such cost, or \$225,000, and that his fee for the schematic design phase of the project would be 15 percent of his total fee, or \$33,750.

The defendant-developer, before proceeding, sought further corroboration of the cost estimates that he had been furnished. During this process the architect told the developer that his fee schedule incorporated a 25 percent profit and that he would require approximately \$15,000 up front in "hard money" for preparing the schematic design for the project; the balance of his fees could be deferred until the developer obtained a construction loan.

The plaintiff-architect commenced the schematic design and delivered a proposed written contract covering his services and compensation. When the schematic design was approximately 75 percent completed, the owner advised that he would not sign the contract because it was too complicated, but assured the architect that he was going ahead with the project and approved his schematic design. Shortly thereafter, the defendant-owner informed the plaintiff-architect that he had found another architect who would perform the project without requiring any money in advance and the architect was told to send a bill to the defendant for what was owed him. The plaintiff submitted a bill for approximately \$74,000: \$4400 for the preliminary work such as obtaining the zoning variances; approximately \$19,000 for completing 75 percent of the schematic design work; \$8500 for his profit on the schematic design phase; and \$48,000 for his estimated profit on the other phases of the project. The architect had received approximately \$5700, but the owner refused to pay the balance of his bill.

The defendant sought a dismissal of the architect's action on the ground that he had failed to prove the existence of a contract and on the ground that the condominiums could not be constructed because of the zoning laws. The trial court rejected the defen-

dant's motion and directed a verdict in favor of the architect in the sum of approximately \$7000. In reaching this figure, the trial court concluded that the defendant had only agreed and was obligated to pay approximately \$15,000 for schematic design services, which included consultants that were never engaged, leaving a total of approximately \$11,000 due for the schematic design phase of the services. The trial court concluded that since this phase had been only 75 percent complete, the plaintiff was entitled to approximately \$8000 against which he had received \$2000, leaving a balance of \$6000. The court added an extra \$1000 allegedly for plaintiff's inconvenience. Both parties appealed this verdict.

Upon appeal, the appellate court concluded that whether the defendant had agreed to retain the architect for the entire project or only for the schematic design phase was an issue of fact that should be determined by the jury, not the court:

"A jury could properly find . . . that defendant expressly contracted with plaintiff for either the schematic design work or for the entire project on the fee basis that plaintiff testified was discussed. Defendant's refusal to execute a written contract so providing does not necessarily establish that plaintiff's services were not accepted, as defendant contends; the intent of the parties controls such matters, and acceptance may be manifested orally or by conduct, as well as by a signature."

The appellate court further ruled that if the jury should find that there was an oral contract for the entire project based on the fee schedule discussed and the defendant breached such a contract, the measure of the architect's damages would include plaintiff's prospective profits as well as the fees for work performed. The general rule in North Carolina, stated the court, "is that prospective profits prevented or interrupted by breach of contract are recoverable when it appears (1) that it is reasonably certain that such profits would have been realized except for the breach of contract, (2) that such profit can be ascertained and measured with reasonable certainty, and (3) that such profits may be reasonably supposed to have been within the contemplation of the parties, when the contract was made."

If the jury should conclude, however, that the parties had no express contract, then the architect's compensation for services rendered would have to be measured by their "reasonable value" and the trial court's formula would be improper, the court ruled. In order to recover, the plaintiff would have to establish the reasonable value or market value of his services for the work that he contributed.

Under the court's decision, it is conceivable that a jury could award the plaintiff his full damages as claimed. It is perhaps more likely that such an award would be limited only to the fee earned for schematic design services, or a fee based upon the reasonable value of the architect's services, both of which awards would be substantially less than the architect's claim. This uncertainty, as well as the cost of litigation, would obviously have been avoided if the architect had insisted upon a signed written agreement before commencing his services. **Norman Coplan, Hon. AIA** ■

The author is a member of the law firm Bernstein, Weiss, Coplan, Weinstein & Lake, New York.





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Specifications:

Games manufacturers play

Specifiers generally work with manufacturers, need and appreciate manufacturers, and, of course, specify building products produced by manufacturers. And yet sometimes specifiers and manufacturers become adversaries when they should be teammates. Often this is the result of games manufacturers play. Here are some examples.

Product shuffle: New products appeal to architects. They promise a fresh approach, a new visual experience, a new solution to a problem, lower material or installation cost, or other attractions. But new products can also represent new problems. An architect willing to try a reputable manufacturer's latest façade material specified it extensively on a new fast-track industrial building. Only when serious delays prompted a trip to the factory did it become clear that the product had been oversold and could not yet be produced in the required quantities. The large order had greatly exceeded the plant's start-up production capacity, a fact not disclosed by the optimistic manufacturer.

Even where production is well established, another problem can occur when the product line is "restyled." Now the manufacturer can't provide the same design, color, or pattern as before though it's needed for repair, remodeling, or additions to the existing facility that used it earlier. How can the manufacturer balance the need for novelty in aid of sales and the need to supply reorders without generating unbearable inventory burdens? Owners, architects, and specifiers have a stake in such decisions.

A third version of "product shuffle" is more subtle. The product is withdrawn from the market because of insufficient sales or as a result of marketing reorganization, but little or no announcement is made. Of course it isn't realistic to expect advertising expenditure at this stage of a product's life to equal that made at its introduction, but some effort has to be made to tell the specifier to switch to something else in time to prevent descriptions of unavailable items from getting into the next project manual. Sometimes the manufacturer just doesn't do it.

Direct sale: Encountering strong sales resistance from the architect or specifier, the frustrated manufacturer's representative contacts the owner directly to present the product, attempting an end-run around the obstacle. Maybe this tactic will succeed occasionally in bringing pressure to bear on the specifier, but its long-term cost to the manufacturer will be great. Nothing is likely to irritate the specifier more, and the representative's next visit to the architect's office may be a lot less friendly as a result. Undermining the owner's confidence in a consultant professional can't be a good way to promote a product in the long run.

Queue: While situations in which the manufacturer's representative or literature fails to disclose limitations on a product's use are now far fewer with the advent of explicit product warranties, consumer rights laws, OSHA, and SpecData formats, one area where clear and responsible answers are needed still remains. Even if the product is just right for the intended use and is pro-



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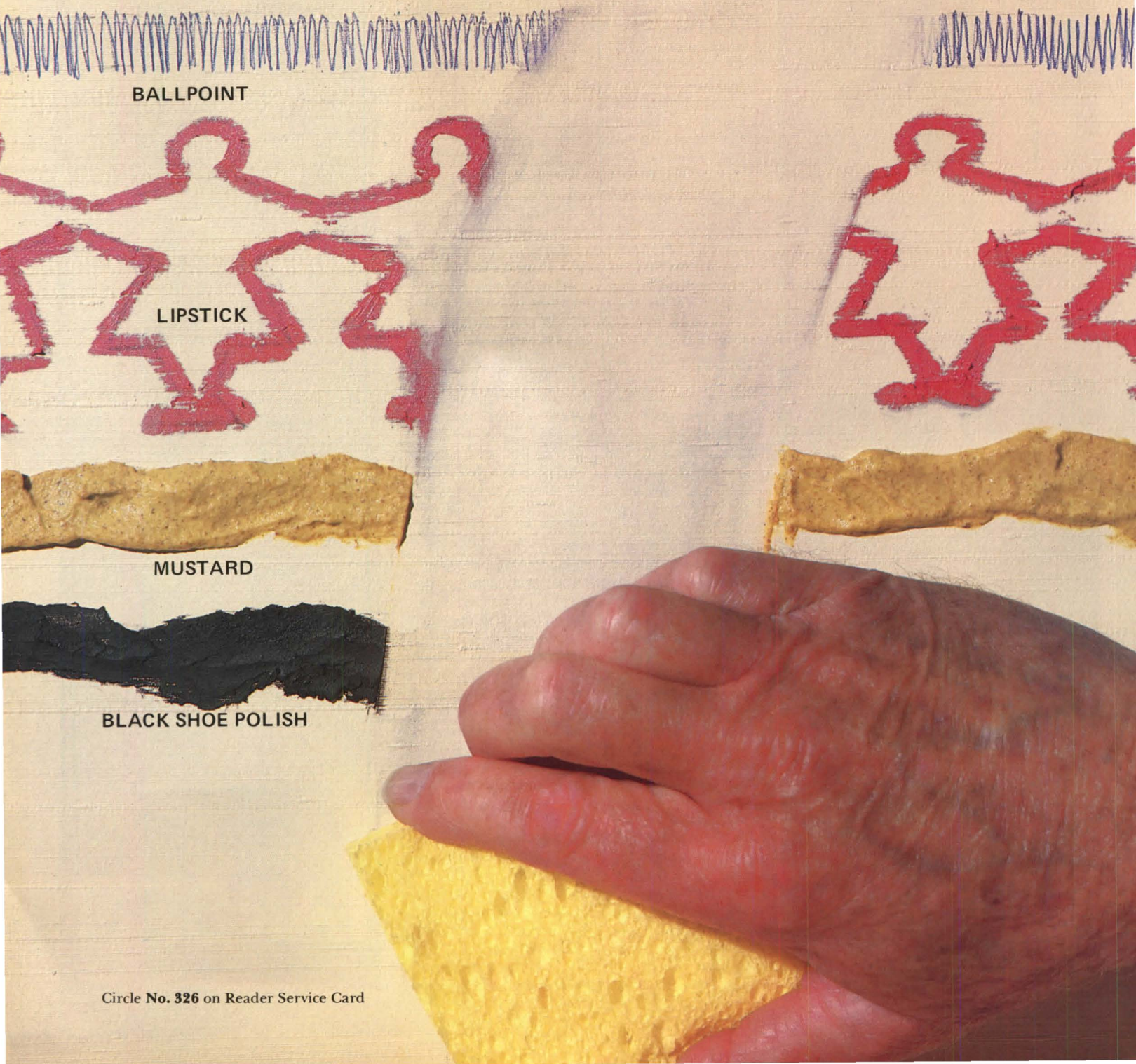
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duced in the required size, shape, color, quantity, and design, the manufacturer is playing the wrong kind of game if there is no mention that an unusually long lead time (like 18 or 24 weeks) is required for delivery after an order is placed. The manufacturer has a responsibility to warn the parties so that early orders can be arranged rather than creating a trap that may disrupt the whole project. Sandbagging the specifier and the contractor isn't an effective way of keeping their good will and encouraging further dealings.

Hideout: Perhaps the worst sales tactic the manufacturer can use is to hide. Of course it's bad faith to hide when something goes wrong with the product; but if the architect can't find the manufacturer's name, sales location, phone number, or local representative in the first place, there's far less likelihood that the product will be used at all. And yet this has often been a major problem, particularly for small manufacturers in many parts of the country. Only recently have services such as Sweet's "Buy-line," helping architects to find information about those companies using its catalog service, and local CSI chapter directories come to the rescue. Privately published regional directories of manufacturers, products, representatives, contractors, and dealers such as New England's "Big Book" have also been a big help and a ready resource. The industry needs more of them.

Try this (you'll like it!): The new product you have just been shown doesn't seem to have many installations in your area, in your state, or, in fact, anywhere in the U.S. Tests, reports, photos, and literature all seem to have foreign origins. It is said to work well in Canada, Germany, Switzerland, or some other distant place, but are the conditions really the same there? Are trade jurisdictions, workers' habits, temperature extremes, maintenance attitudes, and a host of other conditions sufficiently like the ones in the area where the building is to be built so that all the bugs are out? Who knows (whom you could ask)? Introducing a new product into the U.S. takes time and involves risks. Architects and manufacturers both need to recognize this fact in analyzing the potential of unknown products, whatever their history or origin. And the manufacturer needs to be frank about the product's local track record, or absence thereof, rather than trying to brush it all under the rug.

There's no doubt that most manufacturers are generally highly supportive of architects' and specifiers' efforts, and particularly helpful in providing reliable information and aid in getting their products specified properly. It's only sometimes that they carry out policies that make specifying more difficult. How nice it would be to put back in the drawer some of the games manufacturers play. **Walter Rosenfeld, AIA, CSI** ■

The author is a principal of The Architects Collaborative in Cambridge, Mass.

Research review: Beam daylighting

Most daylighting research has focused on perimeter light shelves and glazing or interior atriums. Those strategies, though, are not always feasible in high-rise buildings or tight, urban sites. This research into the development of a "Horizontal Remote Light Distribution" system, conducted by David Eijadi and David Bennett with BRW Incorporated for the Department of Energy, offers a promising alternative.

The system uses simple optical principles to beam sunlight striking the roof of a building deep into its interior. It has a movable heliostat that tracks the sun and reflects the light onto a rooftop mirror. That redirects the light through vertical light shafts contain-

ing Fresnel converging lenses that move the light over long distances or angled mirrors that redirect the light into horizontal light plenums for distribution over large floor areas.

The researchers examine the various architectural and economic implications of the system. They look at different configurations of the heliostat and mirrors, at how to move light horizontally through plenums above and below ceilings, and at how to provide diffuse task or indirect ambient daylighting within windowless spaces. The ongoing research will produce design and cost guidelines, and include results from the field testing of actual fixtures. For further information contact David Eijadi, BRW Inc., 700 Third Street S., Minneapolis, Minn. 55415. **TF** ■

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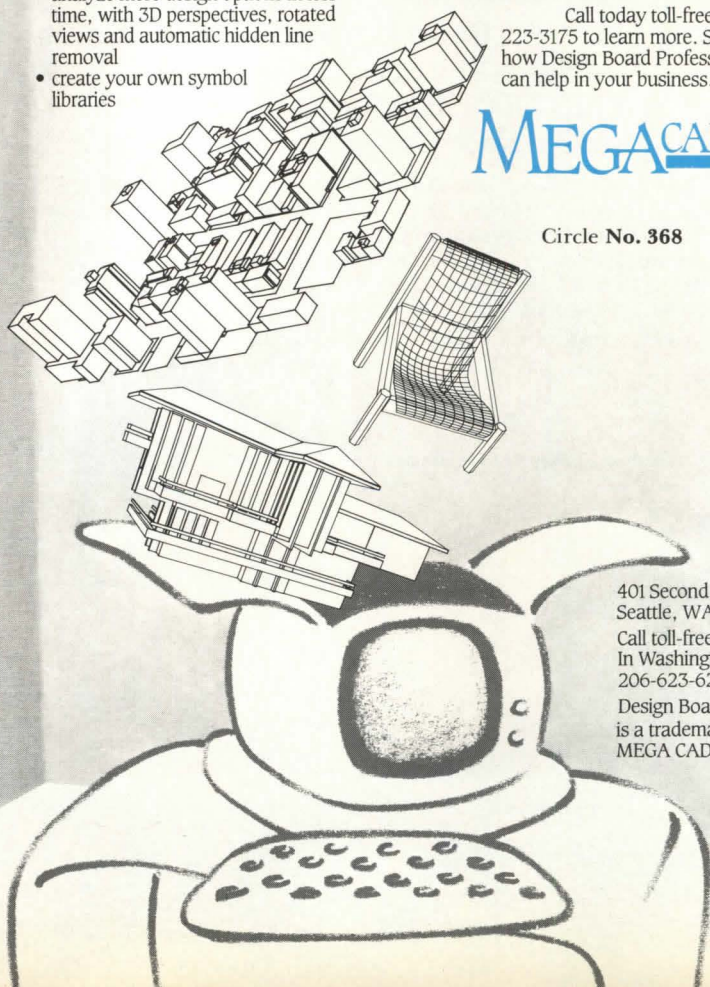
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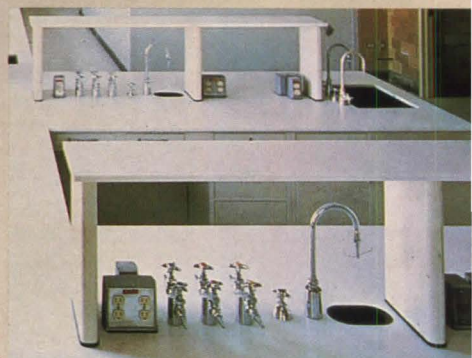
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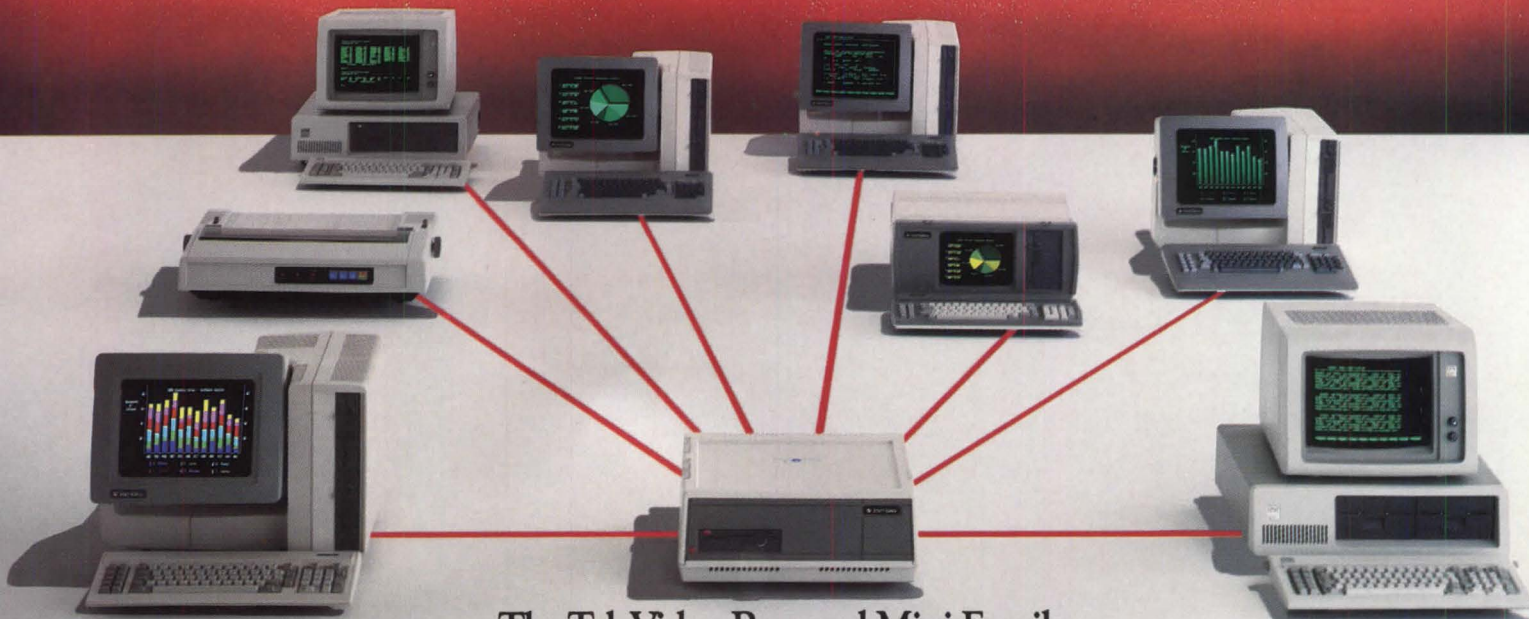
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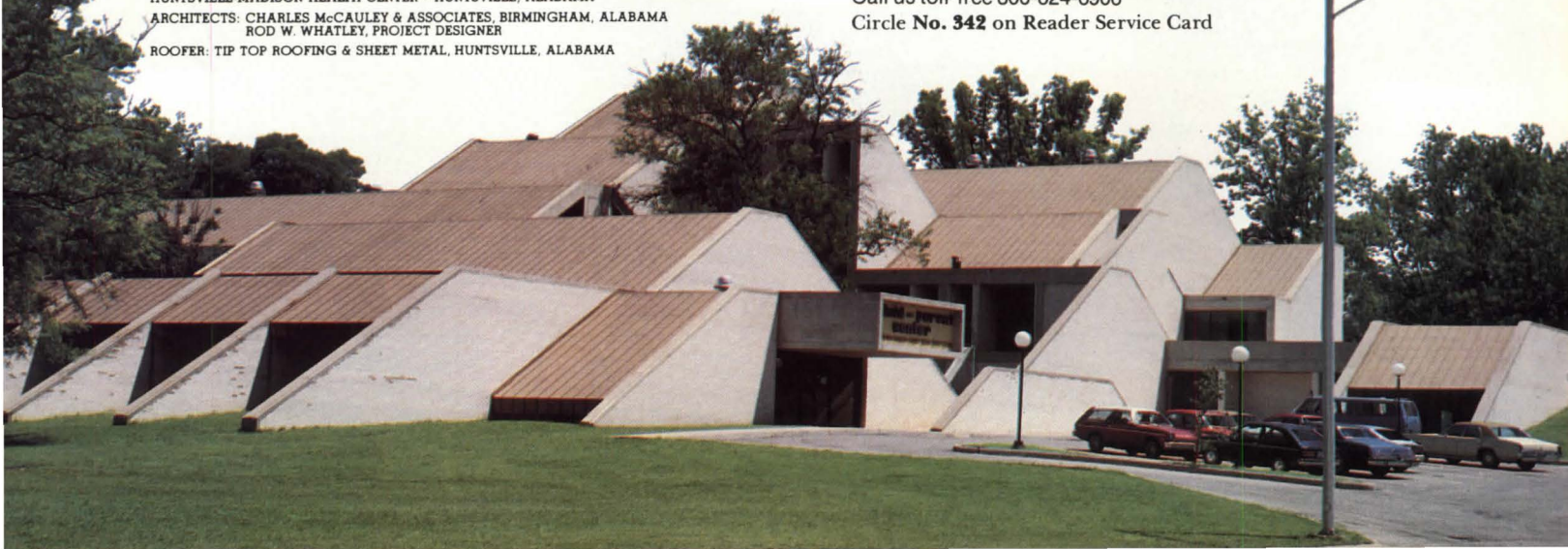
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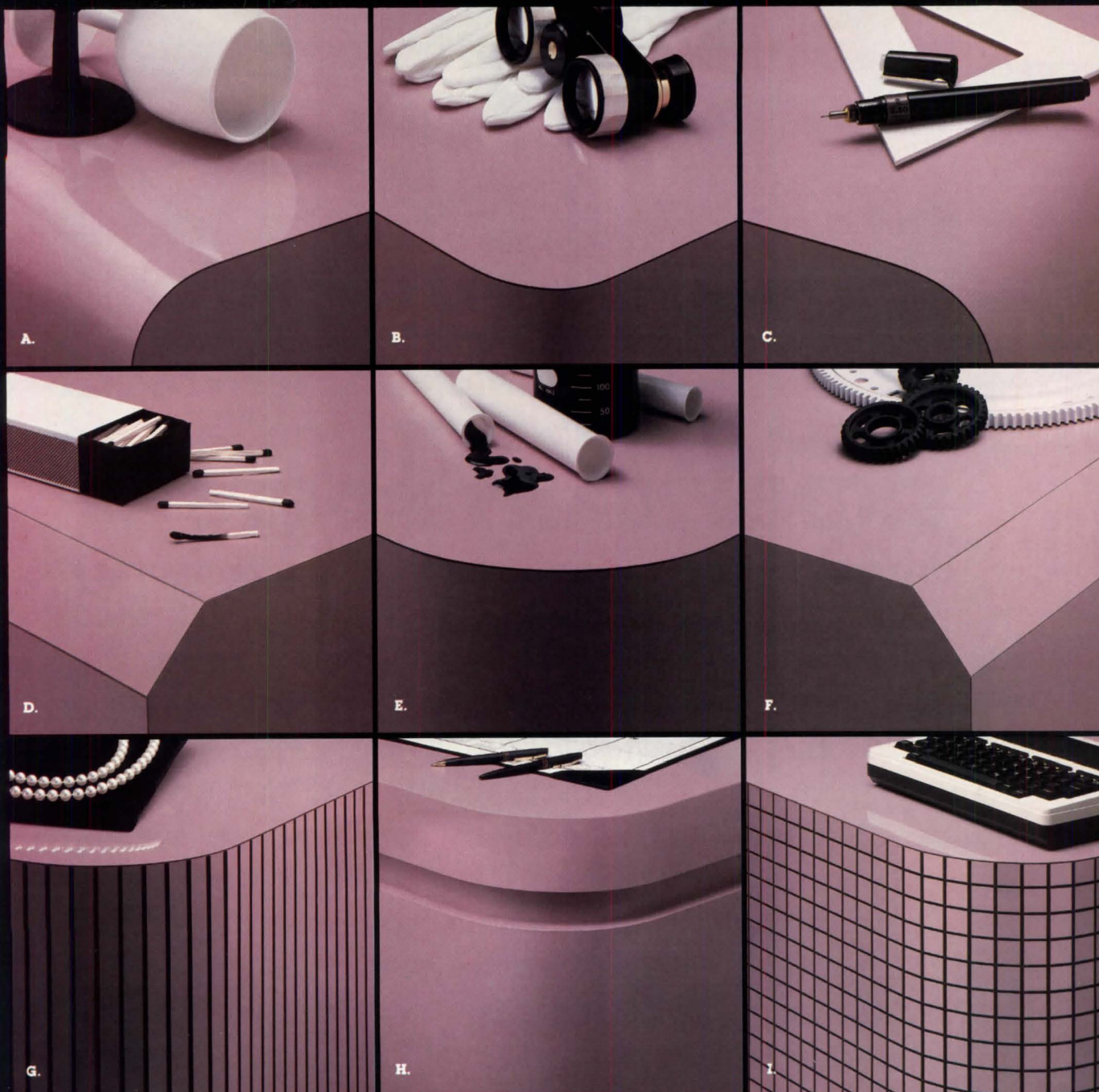
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In the main entry (facing page), a brass lighting fixture by Howard Brandston hangs in a cove under the conical skylight. Bronze doors by Lin Utzon, and also her rugs (seen in bottom photo), represent Mitchell/Giurgola's concern for crafts of high artistic levels. Metal gears set into a terrazzo section of the granite floors are a reminder of Volvo's origins—the name itself is Latin for "I roll." The cylindrical light monitor in the hall leading to the corporate wing (above) presents an interesting foil to the main entry skylight. The free-standing gallery (left), enclosing the east side of the courtyard, provides an airy path to executive quarters.

The new corporate headquarters for Volvo that Mitchell/Giurgola has built in Gothenburg, Sweden, in association with Owe V. Svård's AKOS office, is not quite what one might expect. This rather rambling building, although clearly acknowledging the Scandinavian heritage, combines that aesthetic with a Mediterranean sensibility through its extensive use of such warm-climate devices as "open" (glazed) loggias, porches, terraces, a garden, and an interior courtyard. While the use of such elements in a northern climate may seem unusual (although all glass areas are double- or triple-glazed), Giurgola offers valid explanations.

"It's not only the climate," he says, "but something about the way light comes through a window; in Australia it's one thing,

but if you're in Scandinavia, it's another kind of thing." There, where he spent childhood summers in places he's always loved ("as northern people like to go south, southerners like to go north"), Giurgola says, "You almost have to make a building like a watercolor . . . a diaphanous thing you enter into." In a sense, a building in Scandinavia should have a certain immateriality because, Giurgola explains, during long summer days you see the building all the time, so it should blend into the background, into the sky. But in the winter months of long and dark days, he says, the feeling of confinement can become very oppressive; there always has to be a relationship to the out-of-doors.

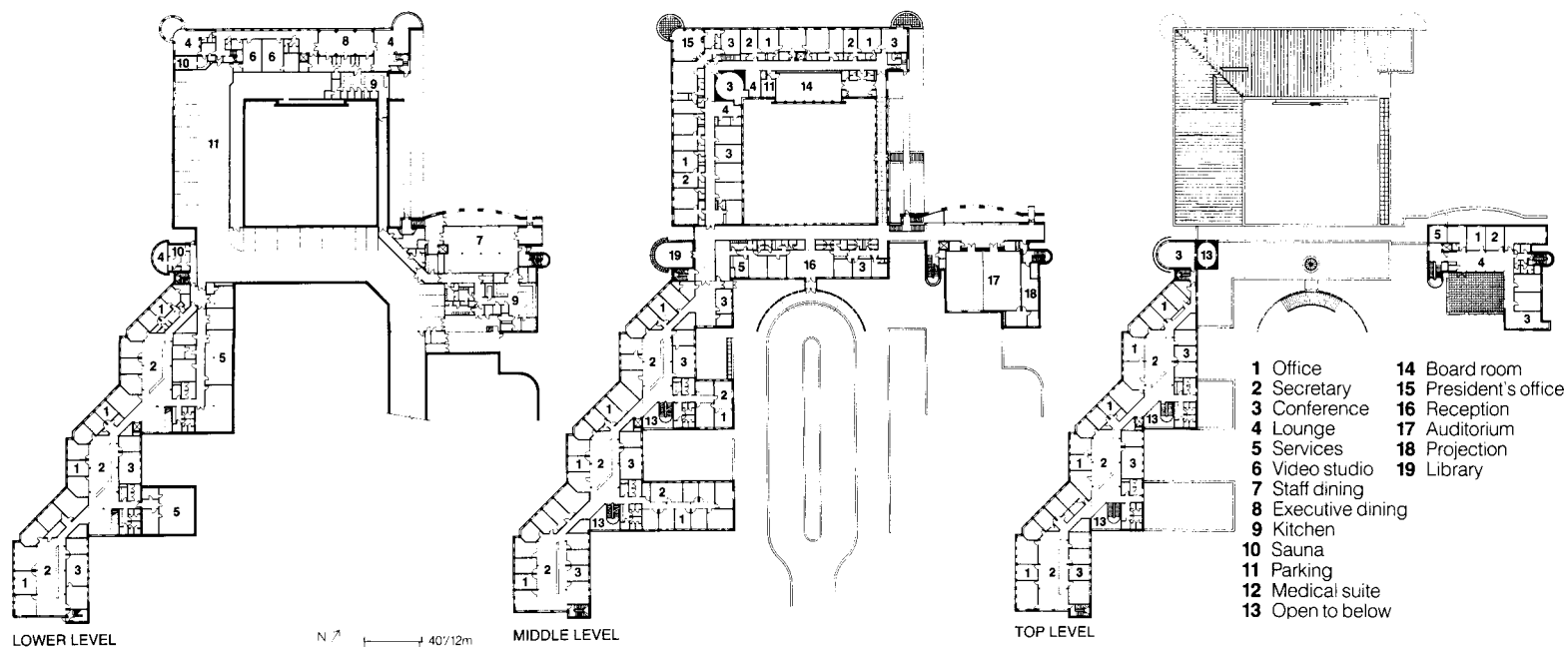
"I like to have a relationship with nature," Giurgola says; "to go to the site, to touch the

stones." Unlike the orthodox International Modernists who could site a building with indifference to location, Giurgola says, "If I do something in a different cultural context, it should relate to that culture and context. Bramante," he notes, "was one man in Milan and a different one in Rome."

Remembrances

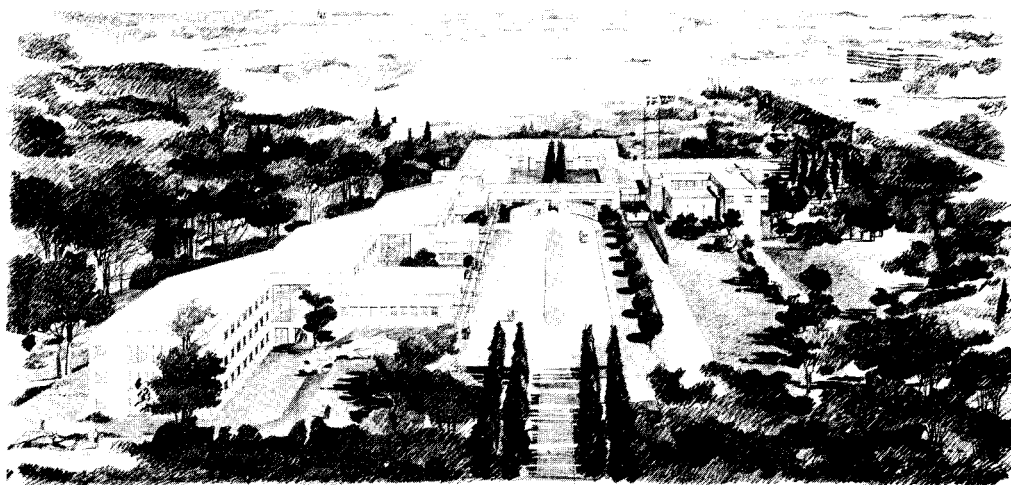
Few architects are likely to talk about Proust when discussing their work, but for Romaldo Giurgola, such a reference is not at all irrelevant. "For an architect," he states, "Proust is essential. Proust always liked images and memories, and architecture is like Proust: images build on each other." But, he says, "You can't build architecture out of images directly, or literally," which, he adds, "is the





The new Volvo Corporate Headquarters is sited along the crest of a hill, overlooking the company's assembly plants below, and the harbor beyond (see site rendering, right). The building's three main components include the corporate wing at the west of the entry drive (facing page top left), the visitors' wing at the east (seen on facing page, from the east in middle photo, and from the north in bottom photo), and the executive quarters surrounding the atrium between those two wings, behind the main entry (p. 65). The 115,000-sq-ft building is constructed of cast-in-place concrete frame with precast concrete wall panels "outlined" in granite corner insets (photos left).

A long drive winds up the hill, through low trees and granite outcroppings to end in a formal motor court (right, and p. 65), recalling the entry courts found at traditional Swedish farms. A marble screen in front of the entry is topped by a protective canopy of metal and glass—an element reminiscent of the early industrial age, but largely done away with in the Modern period.





In the galleries surrounding the atrium (above) and garden (facing page top), floors are paved in tones of gray granite, and the stone is also used for the benches, which enhances their gardenlike aspect. Lin Utzon's ceramic tile mural facing the south side of the atrium behind the main entry follows her line of "Platina" tableware, which is also produced by Royal Copenhagen Porcelain and is glazed in the same cobalt and platinum against a white background. The screen (facing page top

right) descends from this middle level to the lower level where it mediates between the east garden and the staff dining room (p. 74 bottom, p. 75 top). In a top-level lounge (facing page bottom) near the terrace above the auditorium, blue couches and Lin Utzon's rugs provide a cool accent in the light, warm space.

problem with Post-Modernism." In his essay in the new *Mitchell/Giurgola Architects* (Rizzoli, New York, 1984, with Foreword by Kenneth Frampton), Giurgola amplifies this when he writes, "At the foundation of architecture is a cultural tradition which has nothing to do with the random exploitation of the forms of the past." Nevertheless, "we do work with memories," he continues, "but architecture should result not in a representation of images, but rather from a synthesis of images," which are synthesized into something different. But that something is not necessarily beauty in the conventional sense, and on this score Giurgola writes (in the Rizzoli publication), "To have 'beauty' as an obvious objective is merely to play to the galleries, and more often than not it constitutes a game which is unproductive of lasting values. I'm seeking," he says, "order through the harmony and relationships of things."

The new Volvo Corporate Headquarters is not a beautiful building in the conventional sense, and since a large part of the 150,000-square-foot, three-story complex is either stepped back or else pushed over its hilltop site, one cannot accuse it of playing to the crowds for dramatic effect.

The building is approached by a long drive through a rocky, evergreen forest, terminating in a formal, paved motor court that is reminiscent of the courtyards often found in traditional Swedish farmsteads. Inside, other Scandinavian references are also to be seen: the all-white interior with light wood casework and furnishings, and large glazed openings framed in warm teak, call to mind an ambiance that might also be found in the work of Aalto, Asplund, or Jacobsen.

In the galleries surrounding the inner courtyard, and particularly in the freestanding, all-glazed one enclosing the east side, one can remember Utzon's Bagsvaerd Church (P/A, Sept. 1980, p. 165). That build-





ing's large, blocklike exterior might also be recalled in Volvo's west wing, where one could also see a reminder of Josef Hoffmann, and particularly the massive, outlined forms of his Palais Stoclet. At the entry, with its glass canopy and conical skylight, one could think of Stirling or Rossi, and in the inner courtyard it is easy to imagine the atrium of a Roman villa.

It could also be asked if Giurgola quotes himself. Certainly the screen, which appears at the entry and in the east garden, is a device that the firm has used on numerous occasions over the past years. Its purpose, though, "is not like it was with Kahn," Giurgola says, "who used the screen to define volume." Nor is it only for framing views, but primarily, he

explains, "to release the mass of the building into the landscape."

Program and organization

The complex came about as a result of Volvo's merger with a large Swedish holding company, thus initiating the need for quarters for a new leadership group. This group would establish policy and direction for the component companies, including Volvo's car, truck, bus, and airplane engine divisions, and the holding company's processed food and energy divisions, but it would not be closely involved in the day-to-day operating decisions of the various divisions.

The new facility's three components are in effect three separate buildings connected by a courtyard gallery that runs the width of the complex from east to west. At the west is the zigzagged corporate wing where various administrative tasks take place in an open office environment in which all employees have views to the outside. At the east is the visitors' area, the smallest component, containing large assembly areas, employees' café, and offices for visiting officials. Between the two are the executive and reception areas surrounding an open courtyard.

Underlying order

To the questions concerning fragmentation, nature, and light, Giurgola speaks quite



The lounge (facing page) at the north corner of the lowest level of the building, near the executive dining room, looks out on Volvo's assembly plants below, near harbor of Gothenburg. The large wall painting is by U.S. artist Jennifer Bartlett, who also did other works around the building (p. 75). The president's office (above and left), at midlevel in the northwest corner of the building, is one of the few areas without specifically designed and manufactured Swedish furniture.



In the president's conference room (left) and in the executive boardroom (above), all of the furniture, as is all of it throughout the building except for that in the president's office, is Swedish-designed and manufactured, and represents the architects' interest in encouraging Scandinavian furniture production. In these rooms, also, murals and rugs are designed by Lin Utzon.

clearly and directly in summing up his feelings about the Volvo building in particular, and about all of his work in general. "I'm beginning to sense there is always an underlying order necessary (between) nature/building, light/building, and program/building," he says. "Eventually the whole thing has to be crafted together; there has to be a seeking of harmony. You can't be too contradictory. There is fragmentation, but it's not enough to talk of contradiction always. The underlying order has to be there."

In this case, the underlying order does not come about through obeisance to any particular principles of Modernism or of Post-Modernism, but from exactly what Giurgola talks about: a synthesis of ideas, references, and beliefs directly related to the program, the site, and its context. One could argue that there is a strong element of Modernism in this building, especially in the Aaltoesque (but not prescription Modernist) plan fragmentation resulting in the building's accommodating relationship to both its site and its users. But there are also references to other traditions, which could contribute to a Post-Modern classification. The building, however, does not fit into either category because it is neither. It is exactly what Giurgola says it is—a synthesis. But it is a synthesis of many things, most of which have little to do with the conventional isms of architecture. It is basically an architecture that has produced a rather complex and fractured form of considerable richness, which contradicts the result one would presume such form would produce, by being rendered with great clarity, eloquence, and simplicity. It may represent the ultimate synthesis. If one could agree with Giurgola that "in the final analysis, an architect . . . must simply strive to do 'good' work," one can also argue that by his own example he clearly exceeds his own modest aim. **David Morton** ■



In the executive dining room at the rear of the lower level (top) are more works by Jennifer Bartlett and Lin Utzon, including the latter's "Platina" dinnerware by Royal Copenhagen Porcelain. The staff dining room (above) looks through a concrete-panel-clad screen and into the east garden (facing page top).



At the north end of the building (right), Jennifer Bartlett's table and chairs, and house, are works represented in various materials, mediums, and sizes both inside (above) and outside, continuing Mitchell/Giurgola's tradition of placing high-quality art within and about their buildings.



Volvo Corporate Headquarters

From the highway below, before one begins the drive up to the building, its west side gives only a hint of the riches that are to be found above.



Project: Volvo Corporate Headquarters, Gothenburg, Sweden.

Architects: Mitchell/Giurgola Architects, New York (Dart Sageser, Mark Markiewicz, Romaldo Giurgola, project architects; Joe Lenzling, Larry Kenny, Deborah Wolinsky, Pam Berg, Mark DeShong, Judy Mattingly, project team).

Associated architects: AKOS (Owe V. Svärd, Gerhard Goehle, Allan Taylor, Bente Ploem, Kennet Johansson, Arvo Jaepinen, Kjell Haakansson, Evar Kristensson, Rutger Andersson, Gunilla Jiven, Howard Etherton).

Client: AB Volvo, Gothenburg, Sweden.

Site: at the crest of a hill on a granite outcropping overlooking the harbor and main assembly plants of Volvo, covered with wind-blown pines and small birch trees typical of Sweden's west coast.

Program: corporate headquarters for new corporation formed as result of merger of Volvo and a large holding company; total area of 115,000 sq ft to accommodate about 120 people.

Structural system: cast-in-place concrete with flat slab and precast deck; direct bearing on bedrock.

Major materials: precast concrete wall panels with granite corner insets, teak windows, double- and triple-insulating glass, gypsum wallboard and precast plaster, granite, wood, and carpeted flooring.

Mechanical system: central steam; low temperature hot water radiation and fan coil units.

Consultants: Arne Johnson Engineering, structural; AxRo Consult AB, mechanical; Hugo Theorells Engineering, plumbing; GeKab, electrical; Howard Brandston Lighting Design, lighting; Peter Rolland and Associates, landscape; Scandiconsult, civil engineering; Mitch-

ell/Giurgola Architects, AKOS, interiors.

Artists: Lin Utzon, Jennifer Bartlett.

General contractor: F.O.

Petersson.

Costs: Not available.

Photos: Keld Helmer-Petersen.

Two hospitals

Two well-planned hospitals, one in the Northeast, one in the Southwest, illustrate contrasting stylistic approaches.



Bayonne Hospital, Bayonne, N.J. (top) and Scottsdale Memorial Hospital North, Scottsdale, Ariz. (above).

Pragmatic ornamentalism

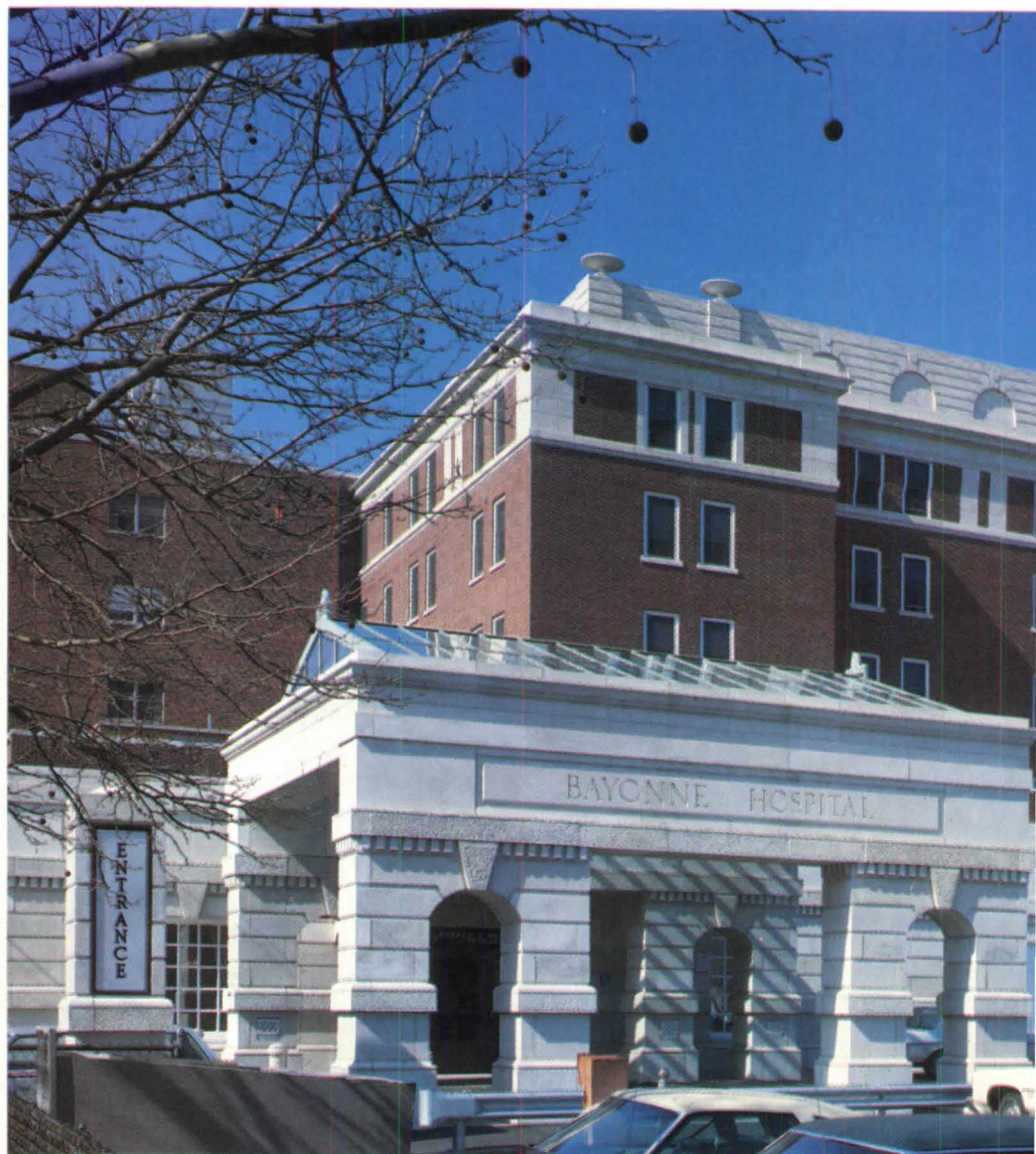
*A 1980 P/A citation:
Ewing Cole Cherry
Parsky modernize
a hospital and give it
traditional façades.*

In 1979, the Board of Directors of Bayonne Hospital hired Ewing Cole Cherry Parsky, a Philadelphia architectural firm with extensive experience in hospital design, to correct the problems of a complex that was built with piecemeal additions over the years. The hospital needed more space, its circulation was disorganized, and it lacked a clear identity in its community. The architects were to plan the renovation of about half of the existing 160,000 square feet and design a 124,000-square-foot addition, while preparing a master plan for possible future expansion. The design team included as project designer John Blatteau, a young architect known for his interest in the Classical language of architecture and his experience as a health care planner.

Though the architects wanted from the outset to propose traditional façades for the new addition, style was not in the forefront of their minds for the first six months of schematic design. During this time, in their meetings with the directors, they proved themselves sensitive to the clients' needs—for new replacement beds, for the expansion of nearly all the departments, and for the rationalization of the complex. Only after this did they present the Board with a model and elevations of the new one- and six-story additions, and the clients, confident of the architects' judgment, were pleased with the traditional style.

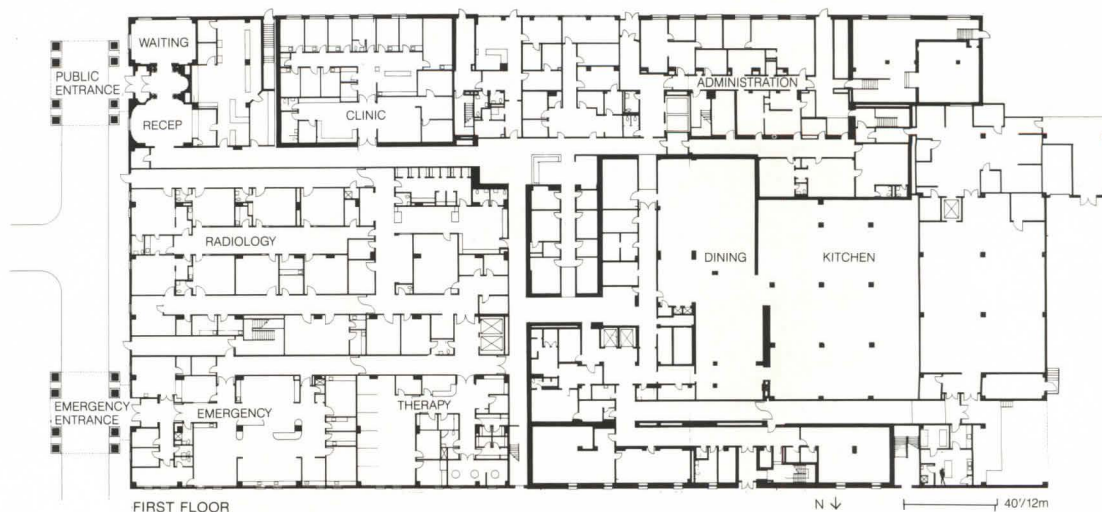
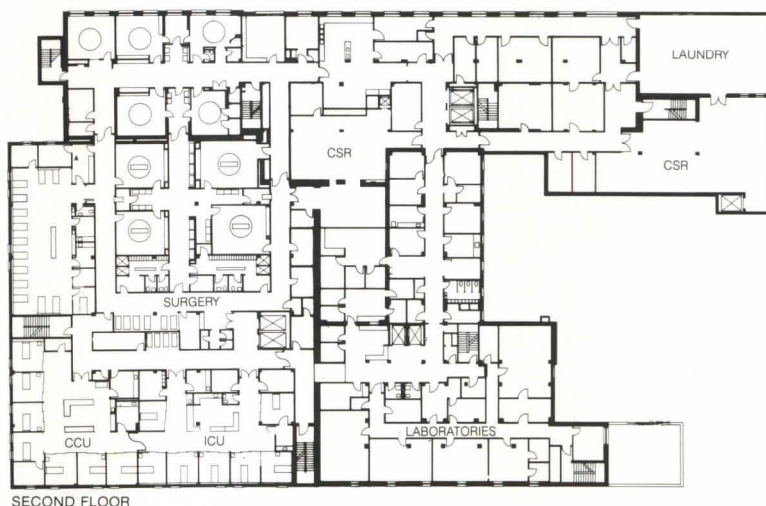
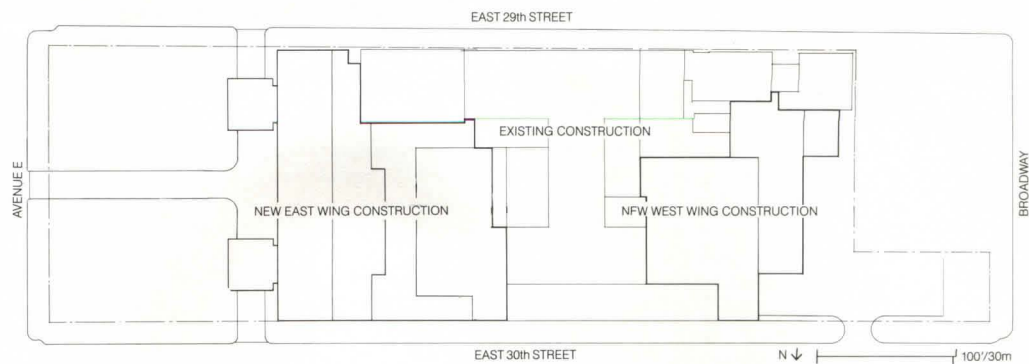
Project principal Robert Parsky explains that the Board members—who represented a true cross section of the community, and who devoted generous time, weekly, to the development of the design—believed that a historical look would be most acceptable to the Bayonne community at large. They also wanted a clear sense of entry, which was provided in the design by two drive-through pavilions, one for the public entry, and one for the emergency department. They felt, as did the architects, that the proposed design was clearly identifiable as a hospital, in contrast to the anonymity of modern buildings, and that its cast stone and brick façades gave it suitable importance as a public edifice.

The traditional language was to be brought into the interior, as well, in the





The Roberson Pavilion addition to Bayonne Hospital (above) uses an inexpensive brick façade, which is elaborated at the base and top by Classically inspired cast stone details. Most prominent are the two glass-roofed entrance pavilions, one leading to public lobby (above and left), one to emergency department.



The Roberson Pavilion and Bayonne Hospital renovation

Project: The Roberson Pavilion and Bayonne Hospital alterations, Bayonne, N.J.

Architects: Ewing Cole Cherry Parsky, Philadelphia (Robert M. Parsky, project principal; Boyd C. Wolfrod, project manager; John M. Blatteau, project designer; Orfeo L. Contento, project architect; William C. Morlok, health care planner).

Client: Bayonne Hospital, Frederick J. Whelpley, Executive Vice President.

Site: 202,000 sq ft, containing the

original hospital, bounded by four city blocks in downtown Bayonne.

Program: New one-story and six-story buildings of 123,700 sq ft. Alterations of 74,000 sq ft in existing buildings add 144 replacement beds.

Structural system: Six-story addition: cast-in-place concrete, spread footings. One-story addition: fire-proof steel, spread concrete footings.

Mechanical system: New HVAC systems throughout. High-pressure

steam power plant. Four-pipe heating and cooling system with fan coil and central air-handling units. Energy recovery system and new energy-efficient centrifugal chillers.

Major materials: Exterior: cast stone and brick; double-glazed windows. Interior: metal stud and drywall partitions finished with tile, vinyl wallcovering, or paint. Flooring: carpet and vinyl tile (see Building materials, p. 178).

Consultants: Architectural interiors: Ewing Cole Cherry Parsky; interior design: William Sklaroff Design Associates; structural: DiStasio & Van Buren Inc.; mechanical and electrical: John C. Morris Associates.

General contractor: Torcon Inc. **Costs:** \$17,800,000 (new: \$98 per sq ft; alterations: \$51 per sq ft), 1983.

Photos: Tom Crane Photography.

lobby, reception room, and waiting lounge, to provide a warm and nurturing atmosphere for those experiencing a stressful situation. More stylistic care would be lavished upon these rooms, whose programmatic needs were unlikely to change, while all other departments were designed for flexibility, with gridded ceilings and gypsum board walls to accommodate the frequent changes they require.

The program

The hospital's major requirement was not to increase the number of beds—300—but to nearly double the floor area so that the ideal of 1000 square feet per bed would be approached. Almost half of the existing beds were replaced by new units, and nearly all departments were modernized. The 18-bed Obstetrical Department, not heavily used by the community, became a 9-bed unit, with single rather than double rooms and improved plumbing. The Operating Rooms were redesigned with a clean corridor/soiled corridor scheme, and several of the departments—radiology, emergency, and physical therapy, among others—were incorporated into the new six-story tower. Patient rooms throughout were designed according to one specific hospital layout concept, which locates the bathroom at the exterior wall, next to the window, and frees the entire internal wall for glazing, to allow patients a full view of the corridor and involvement with the comings and goings of nurses and visitors, and providing nurses ease of supervision.

Pragmatism

The whole building was brought in within the budget, confounding typical expectations that "traditional" costs more. As John Blatteau points out, given any budget, one *can* do traditional. In the case of Bayonne Hospital, the structure itself was sensible, with no tricks and no hidden structural gymnastics. Its windows are inexpensive, as is its wall system—floor-to-floor brick walls on angles—half as costly as the least expensive curtain wall considered. Given the straightforward nature of the basic scheme, frills such as terrazzo flooring in the lobby and exposed cast



stone lintels (see P/A, June 1983, p. 94) could be absorbed in the budget.

The individual ornamental forms were adopted from standard source books for the Orders—Ware, Vignola—then modified to suit the specifics of materials and building scale. More significant is the attitude towards the application of ornament in relation to the overall building form. For this, Blatteau looked back not 150 years but to the more recent, and pragmatic, past. He looked to a generic public architecture seen, for example, in Philadelphia buildings from the first two decades of this century: Money is spent where it counts for the viewer—at the base and again at the crown, against the sky—and the shaft is relatively simple. Two buildings on Independence Square, Philadelphia, represent this approach, explains Blatteau: The Curtis Publishing Building of 1910 by Edgar Seeler has fancier lintels and more marble than the Public Ledger Building of 1924, by Horace Trumbauer, but they both take essentially the same form, with marble bases, brick shafts, and stone caps.

At Bayonne Hospital, classically detailed cast stone veneer enlivens the base, which is further elaborated by the two glass-roofed cast-stone entrance pavilions. Cast stone reappears at the top as urns, cornices, beltcourses, and arches in a light-colored brick field.

In selecting the Bayonne Hospital design for a P/A Citation in 1980, juror Robert Stern said, "This is a nice looking project that looks like a public building, which is important, and that has dignity." The completed building satisfies its complex programmatic requirements, delights the community, whose representatives worked so hard to achieve it, and also lives up to Stern's judgment.

Susan Doubilet

The architects brought the Classical motif into the public entrance lobby (facing page), waiting room (this page, top), and reception hall (middle). They designed the columns, moldings, and reception desk, and incorporated terrazzo flooring, while interior design consultants selected

the furniture. The typical patient room (bottom) has its bathroom at the exterior wall, leaving the corridor wall free for glazing.



Skillful contextualism

Celebrating the hues and the textures of its surroundings, a new hospital by The NBBJ Group offers an oasis.

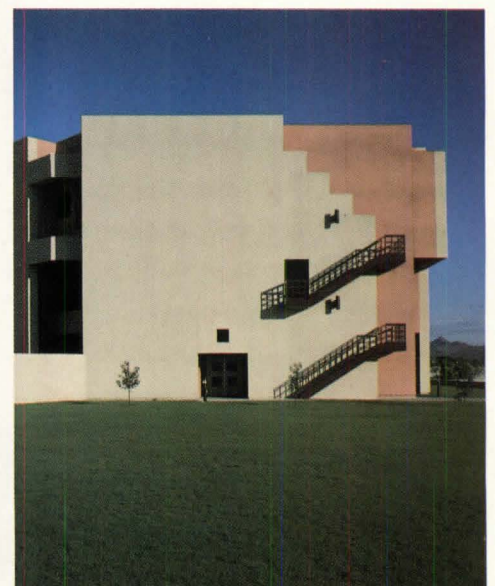
While it has been shown that health-care facilities need not be ugly, few being built or added to even today achieve much sensitivity in design. Scottsdale Memorial Hospital—North, by The HBBJ Group, is an example of the few. Scottsdale, Arizona, is growing, and the most rapid growth is to the north, away from Phoenix. Providing hospital care for this area will be an ongoing challenge.

Because the city's central hospital is located on a site that constrains growth and is distant from newly developing neighborhoods, the new facility will bear the brunt of expansion needs. The site selected, 38.5 acres of flat desert bisected by a small arroyo, is large enough to accept the growth. Located 8.5 miles northeast of downtown Scottsdale, the spacious land is being surrounded with residential developments at a rapid rate.

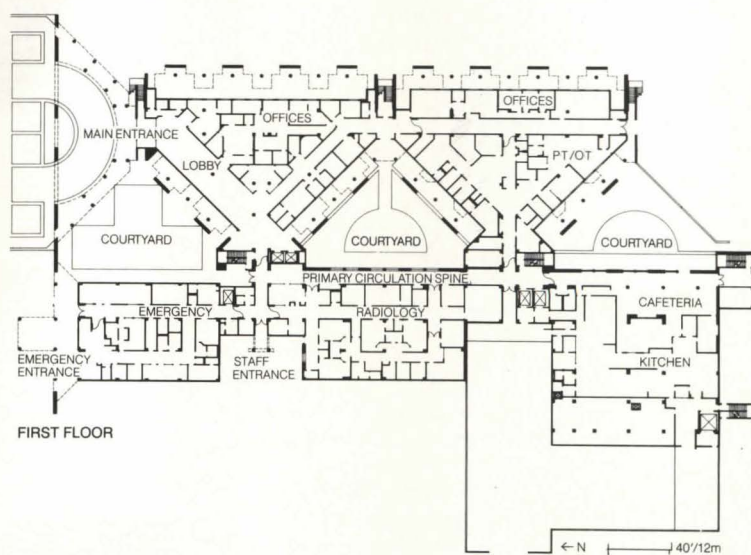
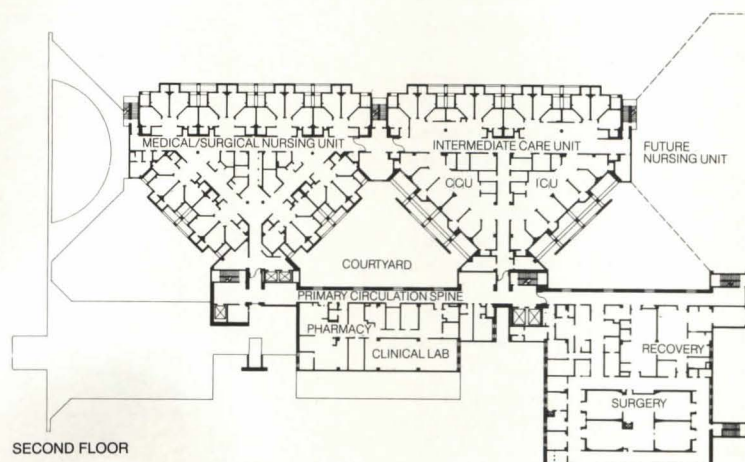
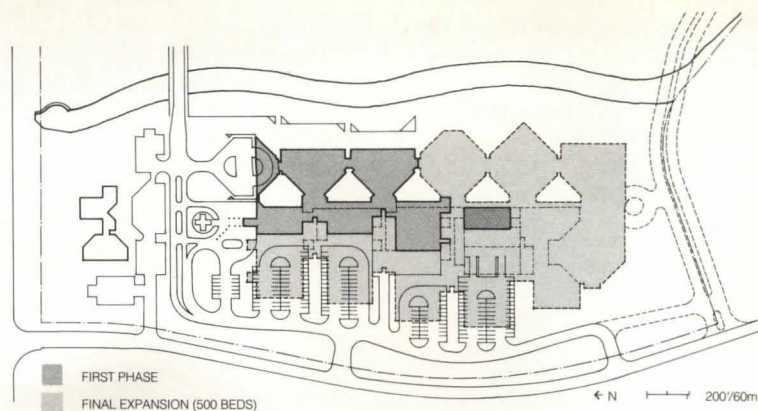
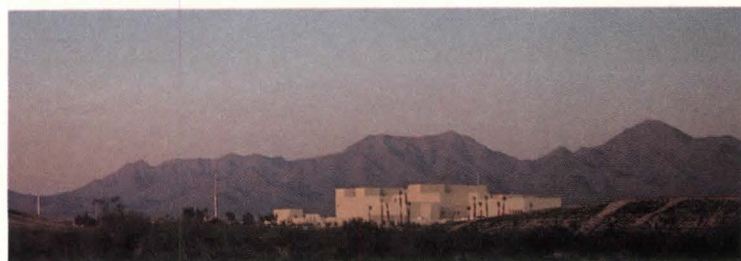
A phased master plan for the hospital was a clear mandate from the beginning. Despite auspicious design beginnings, however, clear plans often become a hopeless muddle when expansion approaches its planned final stages. There can be few building types more thoroughly disorienting and mazelike than a hospital with multiple shortsighted additions. Because of increased competition with private health-care organizations, a superior scheme was needed on a strict timetable.

To the architects, growth seemed most comfortably accommodated along a spine, with pods along both sides of this circulation device. The first phase, shown here, provides primary health care with a 120-bed capacity. Expansion to the planned 500 beds will be accomplished (with minimal disruption to functions in service) by adding nursing units along the spine, and by additions to the clinical, laboratory, and surgical units to the west.

Preserving the arroyo that divides the site, the hospital and its expansion are kept within the western half of the available land. Be-



In response to solar loading, façades on the east (top) and in courtyards (bottom left) offer screened views. The south end of the complex (above) allows a skillful transition from east



to west massing, and will form the point at which future nursing unit expansion will begin. Western building massing (above) is more blocky, with minimal openings.

Scottsdale Memorial Hospital—North

Project: Scottsdale Memorial Hospital—North, Scottsdale, Ariz.

Architects: The NBBJ Group, Seattle, Wash., architecture; Business Space Design, Seattle, interiors (NBBJ: James Jonassen, partner in charge; Erich Griebeling, project director; Patrick James, project designer; Lois Wardell, project manager; Roger Wallace, technical architecture; Warren Nevins, construction administration; Derek Selfe, cost estimating. BSD: Marian

Martin, principal in charge; Laurie McLaughlin, project manager; Craig Hanson, designer).

Client: Scottsdale Memorial Hospital.

Site: flat desert site of 38.5 acres.

Program: phased development beginning with 120-bed hospital for primary care and expanding to 500 beds in the future.

Structural system: cast-in-place concrete walls on concrete spread footings, metal deck.

Major materials: concrete walls with metal studs and stucco or gypsum surfaces, paint (see Building materials, p. 178).

Mechanical system: central energy plant with gas-fired boilers and chillers; zoned HVAC with component mechanical rooms in each building element for reheat system and energy conservation thermal transfer equipment.

Consultants: George Hoagland & Associates, architecture; Susan E.

Colledge & Associates, interiors; Skilling, Ward, Rogers & Barkshire, structural; Boullion, Christofferson and Schairer, mechanical; Coopers and Lybrand, program; Manahan and Cleveland, food service; William Larson, landscape.

General contractor: Kitchell Contractors, Inc.

Cost: \$19.79 million (\$125 per sq ft), includes sitework, landscaping, and interior finishes.

Photos: Peter Aaron © ESTO.

cause infrequent rains in many parts of the Southwest are known to cause threatening flash floods, cities like Scottsdale have developed plans for such occurrences. The arroyo on the site is thus dedicated to flood control under heavy runoff conditions, and to park and bike path uses at all other times. It has been widened to 160 feet and the depth was increased to 12 feet, and plantings meld it into the sweep of green onto which patient rooms face.

In recognition of the climate and solar orientation factors, and in combination with functionally discrete parts, the plan has evolved in quite logical increments. Patient rooms and public spaces have been carefully thought out in terms of comfort, ambiance, and view. Every effort has been made to limit or eliminate any hint of institutionality and, in fact, to promote as much "resort" feeling as possible.

Thus the patient rooms in nursing units have views of the distant hills or of the courtyard "oases" circumscribed between the triangular nursing pods. Outside walls of these units face east to incur the least heat buildup from the sun, and all patient rooms are protected by their façades. With windows set deep within the wall, these façades have become very effective screens that imbue the building elements with interest, depth, and scale qualities that are striking. In the expansion phases, similar nursing units are almost insured and similar siting strongly suggested.

On the western side of the spine, facilities such as laboratories and surgical suites—those uses for which windows are unnecessary—are located, with suggested expansion indicated for direct add-on to the west. There are no window openings facing the often brutal western sun. Because of the cellular makeup of the elements, the windowless bulk of the west façade does not become too overbearing, taking on an interesting aspect resulting from the massing of almost pure elements. Whether these elements will still be unprepossessing after the final phase is complete, and the residential area to the west is closer, remains to be seen.

By far the most compelling attribute of the building (for the observer, if not necessarily for the patient) is its sensitivity to the colors and surfaces of the Southwest. The stucco screen walls with their deeply held window openings produce a delightful play of light and shadow, turning the function of sunshading into an artful composition. (And



this from an architectural office in Seattle?)

Where the blank western surfaces turn the corner, a skillful transition of color and form makes the jump easily to the more active walls on the east. At the main entry, a cool, shadowy portico area makes the psychological adjustment from the intense sun to the welcoming reception area. The building looks to be a very good Arizona neighbor, and it seems to be a well-planned health-care facility. Along the way, it also got to be good architecture. **Jim Murphy** ■

Patient room views through sunscreens (top) are enhanced by room plans that place beds at an angle. As much as possible, all environments within the hospital are kept free of institutional qualities. Corridors are enlivened with color (above) as cheerful on the interior as the outer walls (facing page) suit the surrounding hues of desert and mountains.



Vestpocket villa

For his own small house, architect Thomas Gordon Smith overrides suburban tract constraints with evocations of Pompeii and Baroque Rome.



A 17th-Century English verse extolling the view from the "brow of Richmond Hill" (page 89) is inscribed around the Pompeian/Baroque living room of this house in an unprepossessing neighborhood of Richmond, California. The house itself is modest in most respects: 1500 square feet in area and two-and-a-half stories high, it has a slightly higher profile than the ranch houses lined up along its street. Yet the use of this inscription by architect Thomas Gordon Smith is neither so far-fetched nor so pretentious as one might first suppose.

Smith, a native of Berkeley and a graduate of the university there in painting and architecture, is steeped in California's traditional identification with Mediterranean Classicism. Like the revered Berkeley architect Bernard Maybeck (1862–1957), Smith seeks to execute his Classicism within the real world of contemporary materials and generally limited budgets. This is his second constructed project; the first was a pair of houses in Livermore, California (P/A, Oct. 1981).

Returning from a year in Italy, 1979–80, as a Rome Prize recipient, Smith had versed himself in the architectural theories of Bernini and Borromini as well as academic treatises on Roman wall painting. He was moved to call his synthesis of these sources "literate Classicism." But literacy did not entail literalness. Fidelity to prototypes was a luxury his commissions did not permit.

An interest in using elements and materials from the Classical vocabulary, beyond what was available and affordable, led Smith to haunt stone yards, salvage companies, and demolition sites. He disclaims nostalgia as a motive, however. Having lived with his reused shards, Smith now says that he would willingly exchange them for new counterparts of his own design.

The first impression of the house is of a self-conscious, monumental statement. Through its height and formal connection to the street by means of a pergola on paired columns (salvaged from a sanatorium in Livermore), the façade eclipses its neighbors on the block. A revetment of marble and Texas limestone enriches the front. Yet the warm wood trellis and the scale of the entrance porch state that this is a home, not a mansion. Smith has used his knowledge of Baroque hierarchical composition to achieve a dramatic yet human-scaled approach. The smaller, paired columns of the porch, salvaged from the same source as those of the pergola, support a tall, narrow second-story bay proportioned to frame a large arched window with double-hung sash—one of three salvaged from St. Anne's Home in San Francisco.



Overshadowed, literally and symbolically, by the second floor, the ground floor is a functional dormitory for the Smiths and their four children, and a rather constricted one. But for the visitor this situation is invisible. Just inside the door, the light and airiness of the stairwell beckon one to the upper floor, where a generous kitchen/dining room is made more gracious by the big bay and the stairwell windows.

The climax of the house and the focus of much of Smith's creative energy is the living room at the back. Here a square comprising about half of the floor area frames a diagonal composition of two ovals. The northwest corner of the house, at one end of the axis, is opened to the view toward Mt. Tamalpais through arched windows. In the opposite corner, an interior alcove with a balcony above houses a virginal. Triangular alcoves in the other corners convolute the room but take up little precious space. The plan is also described in the floor, where a black concrete surface is set with fragments of marble to form a terrazzo in geometric patterns.

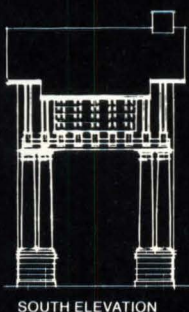
Smith has chosen this place to apply his ideas about synthesizing elements of historical Classicism into a current, practicable approach. Thus, while the spatial concept stems from the Baroque, the decorative scheme is based on the third style of Roman/Pompeian wall painting. The paintings, which Smith executed in four days on the wet, integrally colored plastered walls, use the colors typical of this style. Though, by themselves, the black walls would have made the room gloomy, the brightly colored scenes and painted framework light the room.

Has freighting the major space in the house with a heavy load of history and symbolism made it unlivable? Apparently not. Early on, the Smiths noticed that their children had turned the floor into a board game, using its patterns for hopscotch or tracks for toy cars. Another benefit of the concrete floor is its capacity for storing the western sun's heat on cold days, making the room a comfortable place.

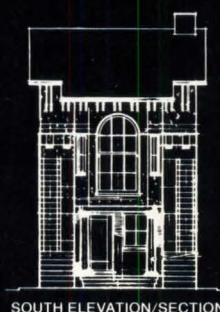
Though it is safe to predict that the Smith family will outgrow the Richmond house and move on to other versions of their dream house, it is less easy to assess what meaning the house will have for future owners. Smith rightfully does not want his approach labeled Romantic Classicism; his heartfelt desire is to give Classicism a present-day reality. Yet, viewed from the world that is real for most of us, this house speaks most eloquently as a map of one of our fondest dream trips: the one in which we ascend from ground-floor reality to a world transformed by illusion into our lost Arcadia. *Sally Woodbridge*

Front and sides of the house are a contrast of Classical symmetry and unabashed functionalism (drawings below); front wall details were simplified in execution. Main rooms are on piano nobile above ground-floor dormitory. Dining/kitchen area (below) runs the stylistic gamut from Classical colonnade (purchased new, not salvaged) to exposed appliances; above its ceiling is a playroom. Main axis of the Baroque living room (facing page) runs through

corner, between arched windows that frame view above neighboring houses and across the bay. Dark marble and terrazzo floor stores heat so well that stove planned for opposite alcove has not been needed. Theme of Smith's frescoes is the passage of time: scenes around painted oculus on ceiling depict the stages of life; on the upper walls, four scenes from the myth of Persephone symbolize the seasons; at eye level, sketches of gas stations mark this century's progress. In-



SOUTH ELEVATION



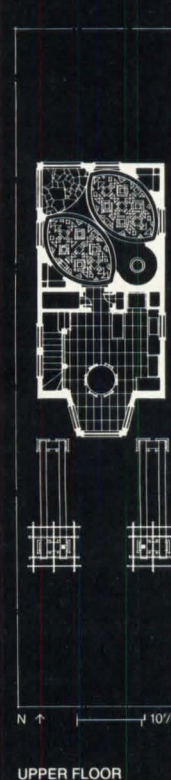
SOUTH ELEVATION/SECTION



WEST ELEVATION



SITE & LOWER FLOOR

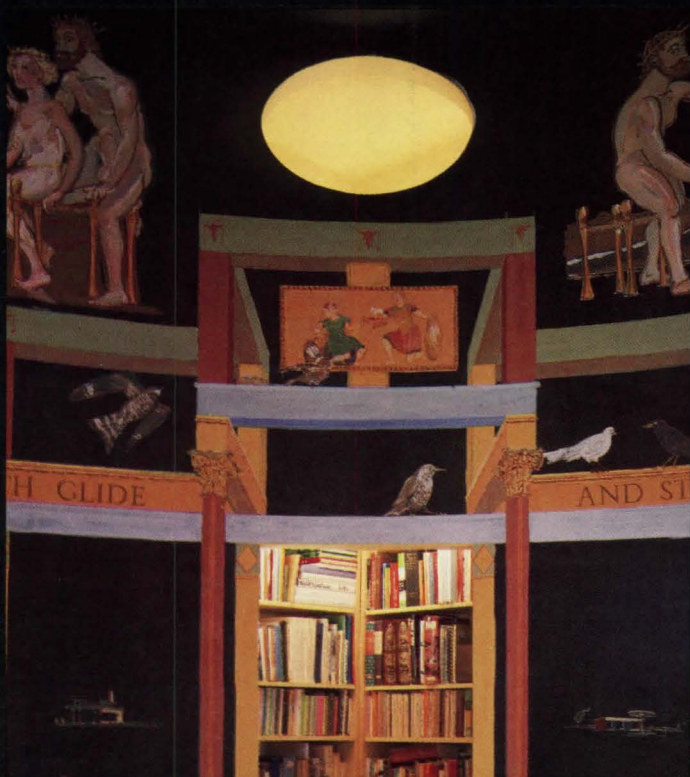
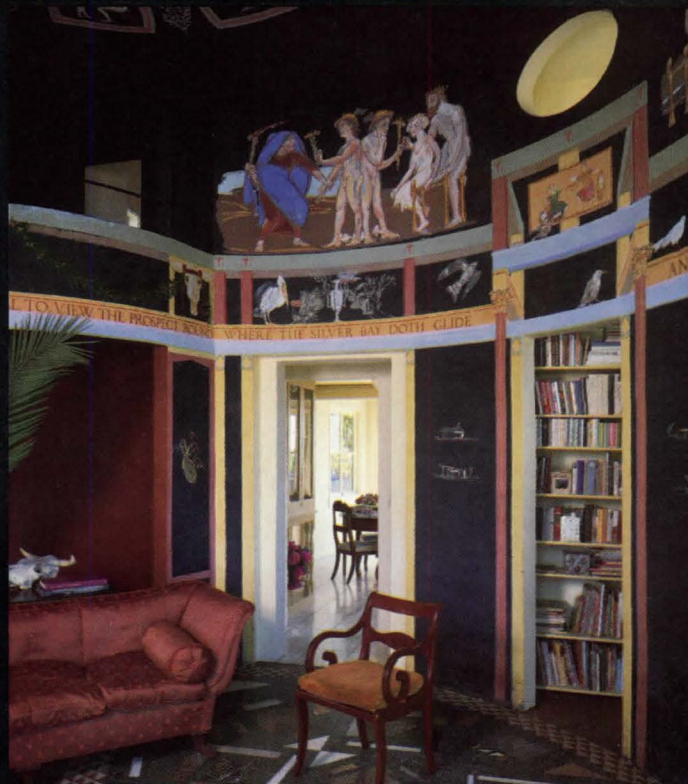


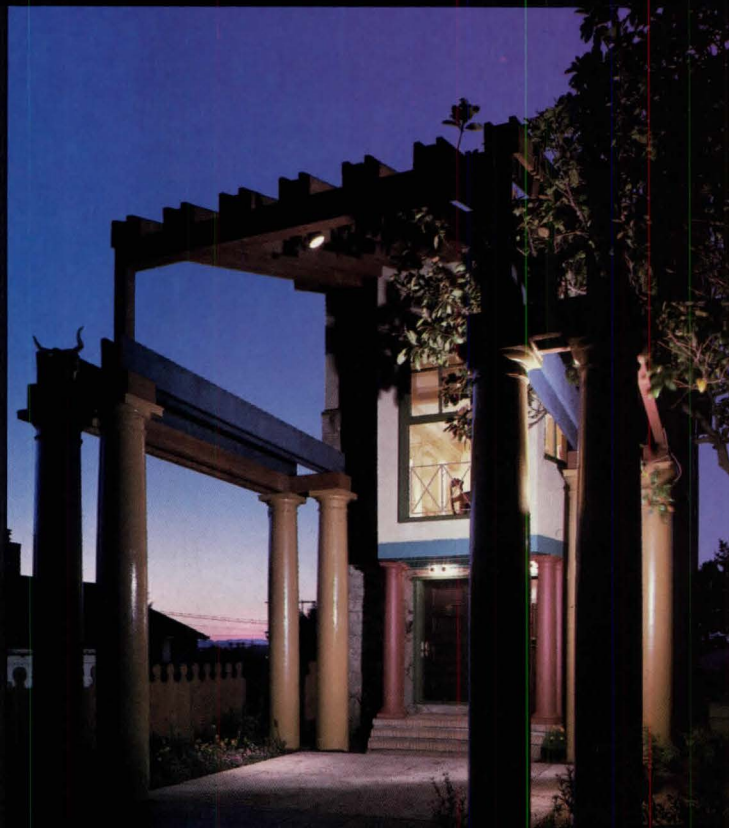
UPPER FLOOR

N ↑ 10'/3m

scribed around frieze is the following
verse by Thomas D'Urphey, set to
music in 1692 by Henry Purcell
(edited to replace "Thames" with
"Bay"):

*On the brow of Richmond Hill
Which Europe scarce can parallel
Ev'ry eye such wonders fill
To view the prospect round
Where the silver Thames doth glide
And stately courts are edified.*





Dusk photo of entry pergola shows paved entry/parking court flanked by linear flower beds (simpler than on plans). Columns among flowers generate Arcadian image despite narrowness of plot, nearness of neighboring houses. Smith considers sunset sky integral part of California Classical tradition.

Project: Richmond Hill House, Richmond, Calif.

Architect: Thomas Gordon Smith, San Francisco.

Client: Thomas and Marika Smith.
Site: lot 25' x 100' in a dense neighborhood of post-World War II houses, terrain sloping slightly to west toward San Francisco Bay. Buildable area limited by zoning to 19' x 32', with 35-ft height limit.

Program: five rooms plus attic playroom. Total floor area, including circulation and mechanical space: 1597 sq ft. Entry court: 400 sq ft.

Structural system: perimeter spread footings. Wood frame (2x6 walls; 2x10 floors and roof).

Major materials: exterior—cement plaster, integrally colored; oolitic limestone (Texas shell), roman brick, redwood columns; interior—plaster walls, marble floors in foyer and dining area, marble and terrazzo in living room (see *Building materials*, p. 178).

Mechanical system: gas-fired forced air furnace.

Consultants: Carole Schemmerling, horticulture; Stephen Tipping & Associates, structure; John Ross, mechanical.

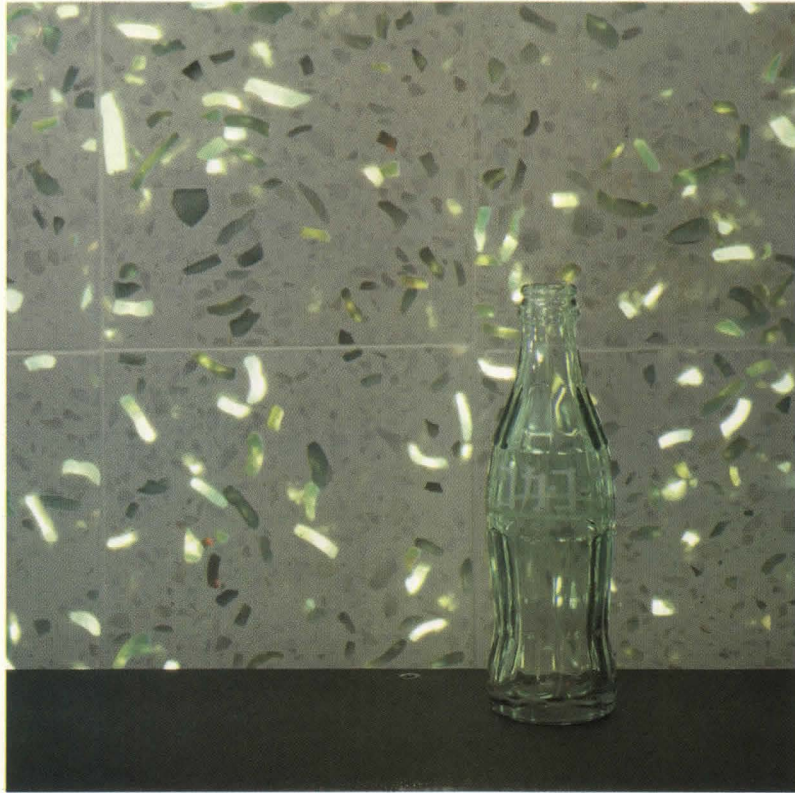
General contractor: M.T. Wilson.

Cost: \$95,000 (\$65 per sq ft) including landscaping.

Photographs: Henry Boles.

Cultural exchange

Tokyo designer Shiro Kuramata introduces a world-famous bottle to a well-known building material, producing revolutionary results.



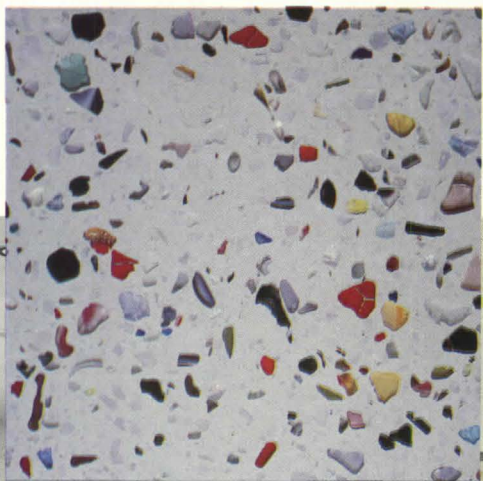
Oberto Gili

A welcome parallel to the Japanese influence on fashion design has been a similar influence on the design of the spaces in which these fashions are sold. So it is hardly surprising that when Issey Miyake, the dean of Japanese fashion, opened his first U.S. boutique, at New York's Bergdorf Goodman, he asked Shiro Kuramata to design it. Kuramata, one of Japan's most innovative and prolific interior and furniture designers, has created shops for Miyake in Tokyo and Paris. And while continuing this collaboration gave the space a look consistent with that of its predecessors, the project also gave Kuramata the opportunity to continue his experiments (which include furniture and tiles) with that time-honored material, terrazzo. Kuramata had already effected a startling transformation of the material in the Tokyo boutique by making it with pieces of brightly colored glass and using it for

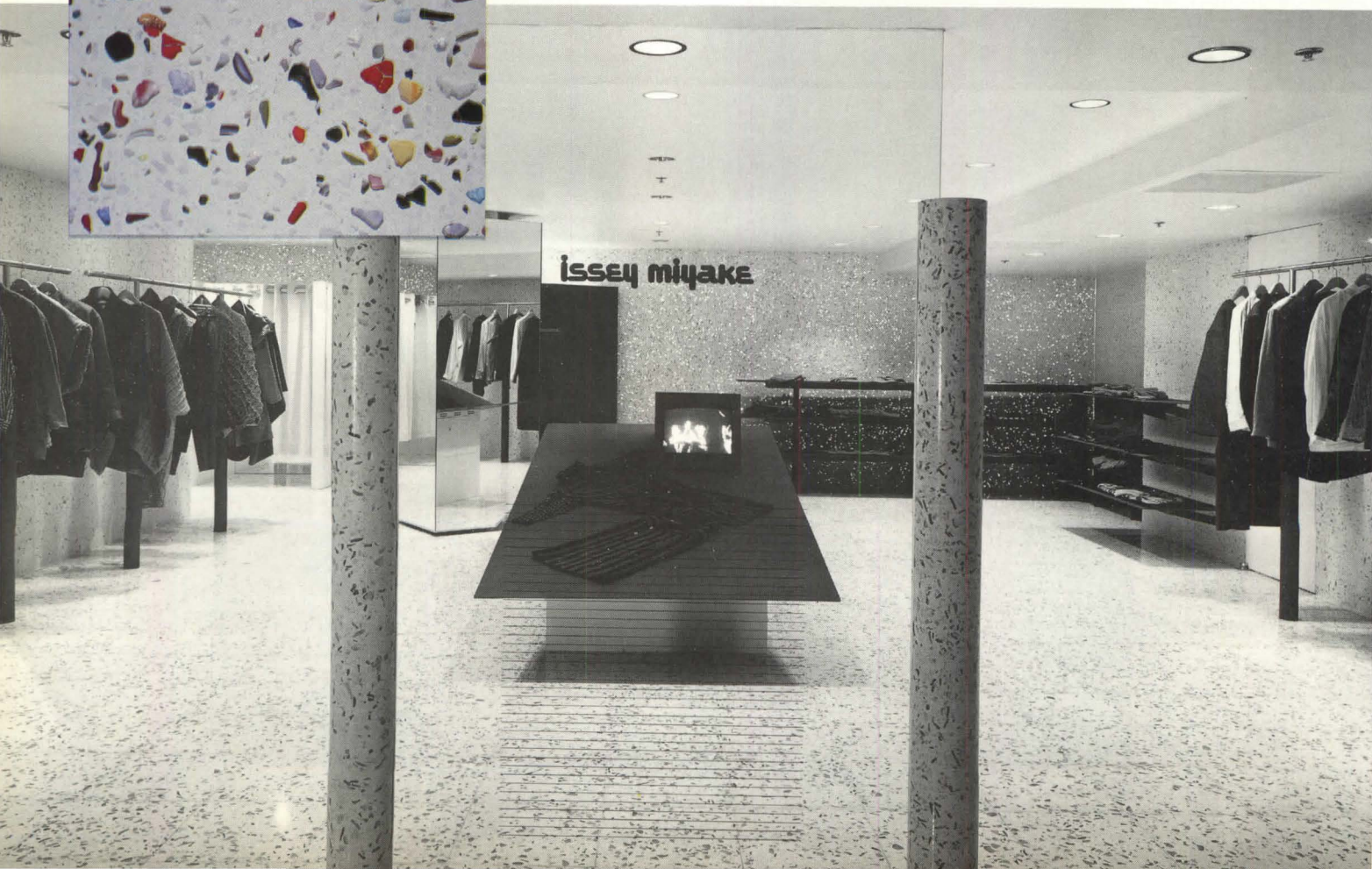
A glass panel flanked by a pair of terrazzo columns marks the entrance to the Issey Miyake boutique at Bergdorf Goodman (below). Display fixtures are minimal, with steel-pipe racks, gray steel shelves, a central table housing a video monitor that shows the latest Miyake collections, and the yellow chair against the backlit terrazzo wall (facing page, below). A structural column was mirrored; dressing rooms are at the rear.



Mitumasa Fugituka



Takayuki Ogawa



Mikio Sekita

The New York Issey Miyake boutique is the latest of several of Shiro Kuramata's experiments with terrazzo. His first, using brightly colored pieces of glass, produced the Miyake boutique in Tokyo, two tables for Memphis (Kyoto, facing page, left), and a 40-cm-square tile for Ishimaru Co. Ltd. of Japan. A gray terrazzo is used for a table manufactured by Cremotta and for another Ishimaru tile (below right).

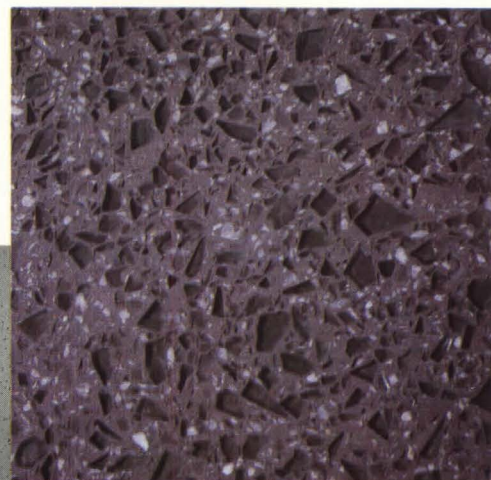
floor, walls, and furniture; the result looked almost good enough to eat. In the New York boutique, Kuramata again used glass, but this time it was a pale green bottle glass—from Coca-Cola bottles, in fact. "I wanted to give something back to the United States," he explained.

The uncompromising minimalism of the Miyake boutique, which occupies a prominent place on Bergdorf's ground floor, is balanced by the innate sensuousness of the terrazzo, which Kuramata intended both to harmonize and contrast with Miyake's clothing designs. And the translucent glow of the boutique's backlit rear wall effectively challenges the traditional notion of terrazzo as an opaque material. It seems that Japan has once again taught an old Western dog new tricks. Terrazzo—not to mention Coke bottles—may never be the same again.

Pilar Viladas ■

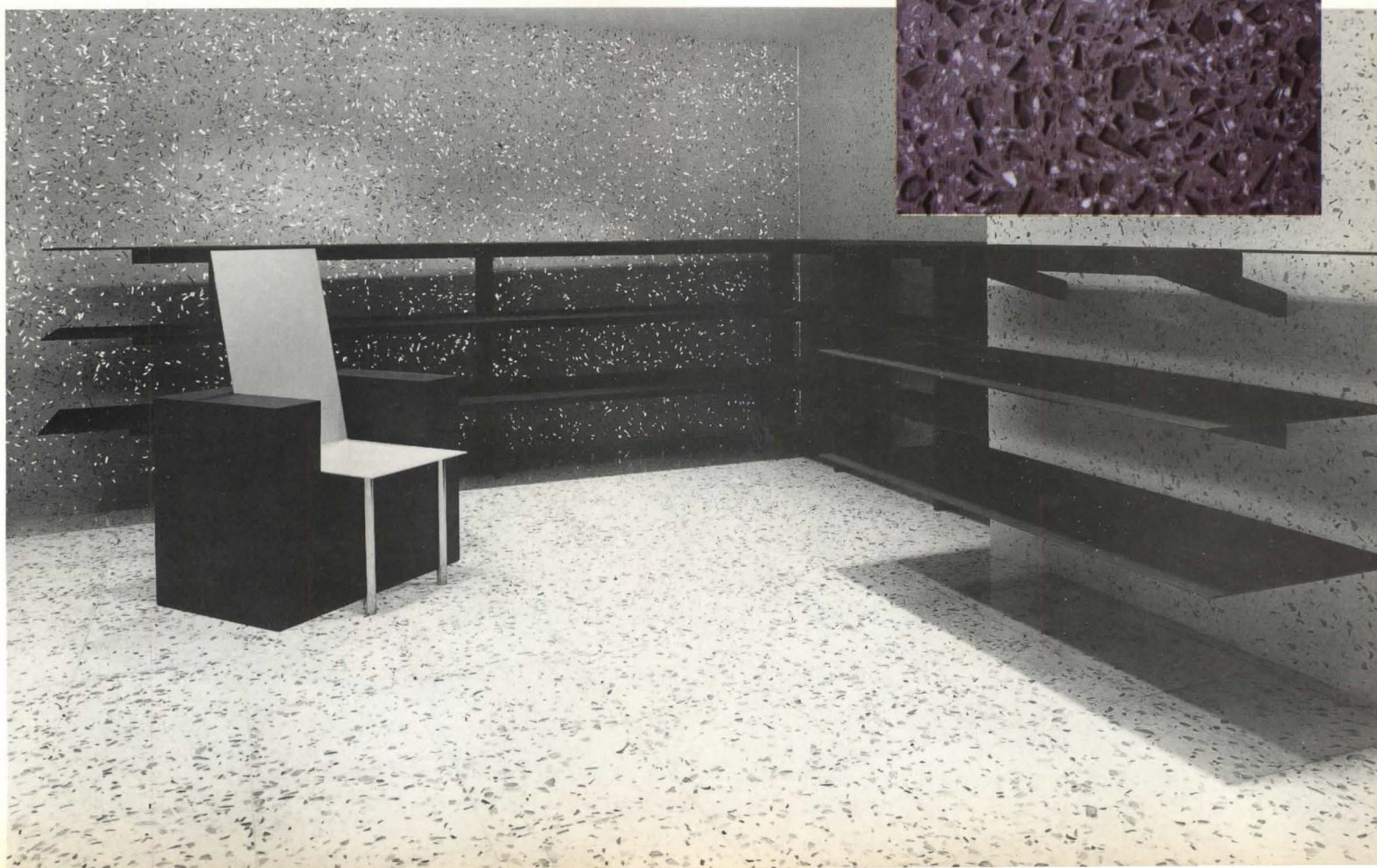


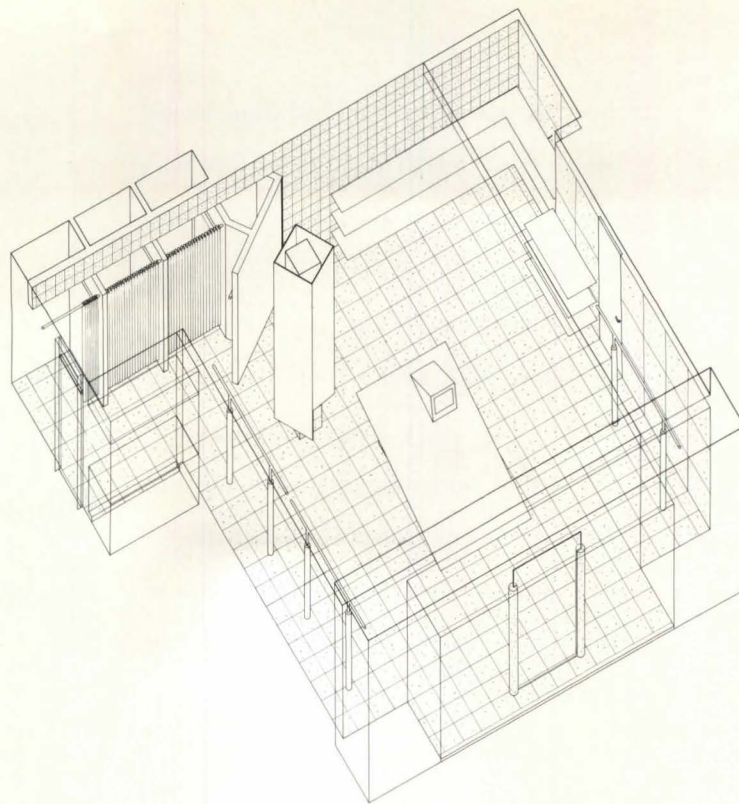
Mitumasa Fugituka



Takayuki Ogawa

Mikio Sekita





Project: Issey Miyake boutique at Bergdorf Goodman, New York.

Designer: Kuramata Design Office, Tokyo, Japan (Shiro Kuramata, principal in charge).

Program: a specialty-store boutique,

consisting of approximately 816 sq ft of display, dressing-room, and storage areas.

Client: Issey Miyake International Inc., and Bergdorf Goodman.

Cost: withheld at client's request.



Mikio Sekita

Liberty update

The Statue of Liberty commemorates more than our independence or our alliance with the French. It stands as a memorial to 19th-Century technology. At the time of its completion in 1886, it held the record as the largest concrete pour and the tallest iron structure; soon after its completion, it received one of the first passenger elevators and indoor lighting systems. The current restoration shows every sign of carrying on that tradition. Not only does it utilize the newest technology, some never before used in a building. Its methods and materials promise to change building conservation as much as steel, concrete, elevators, and lighting have architecture.

Some of the technology used in the statue's restoration is new only in the sense of its having been largely forgotten. Repoussé is a good example. Used initially in forming the statue's copper skin and now in replicating the statue's flame and torch, repoussé involves the pounding of copper over an anvil to give it the proper shape and to increase its hardness. French artisans will perform the restoration work as they did the original construction.

Other parts of the restoration utilize rather ordinary technology simply applied in new or controversial ways. Take the structural repair of the statue's shoulder. Problems with the structural integrity of that joint existed from the moment Bartholdi, the sculptor, shifted the statue's outstretched arm at the last minute, apparently against the advice of Eiffel, the engineer. "We think," says project architect Robert Landsman, "that Eiffel may have quit the design team over that change, for we have no record of his involvement after that point." The shift in the angle of the arm created point loads against unbraced beams, producing unwanted torsion.

Structural reinforcement in the 1930s alleviated but did not solve the problem.

Swanke Hayden Connell, Architects, and engineers, Ammann & Whitney, favored completely rebuilding the shoulder, "in the spirit of Eiffel's original design," as engineer Edward Cohen put it. But the National Park Service has decided to keep the existing patchwork of iron in place as a record, and reinforce it with new steel.

The Park Service has taken a seemingly opposite approach with the statue's flame. Originally an all copper-clad form, the flame, soon after its erection, had glass panes cut into it in an effort to convert the statue into a lightbeacon. Those changes have become historical in their own right, but the Park Service has decided, instead, to restore the original flame form. Their reasoning? The rejected scheme for the shoulder had no historical basis; the solid flame has—with numerous historical photographs as proof.

Detective work

Unfortunately, only a few good photographs exist of the flame as finally installed. (Bartholdi, according to associate architect Thierry Despont, apparently made another last-minute change in the shape of the flame when he saw it erected.) The restoration team has matched the flame in that one photo using digitized, photogrammetric images of the current flame (produced by researchers at the University of Denver) and plaster models photographed at the same angle as the original.

Diagnostic techniques, equal in their sophistication to photogrammetry, have played a crucial role elsewhere in the restoration. French and American scientists with the Park Service have used ultrasonic calipers to gauge the thickness of the copper skin by measuring the rate at which sound passes through the material and converting that time lag into a linear dimension; x-ray equipment to locate cracks or voids in the iron

The attention to the Statue of Liberty's restoration has taken interest away from its technology. The latter, though, may have the greater architectural significance.



Technics: Statue of Liberty restoration

structure by recording the passage of x-rays through the material; anemometers to measure wind forces; and stress gauges to detect overstressed members. Not every old building requires such diagnostics. But should the need arise, "many of those techniques are available from the better testing laboratories," says Park Service architect John Robbins.

Technology on loan

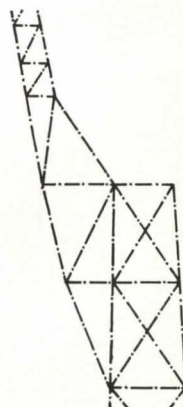
Most of the diagnostic techniques used on the statue come from disciplines other than architecture, a transfer of technology that characterizes much of the restoration. For instance, the copper flame will receive a nonspecular gold finish matching the original. While the Park Service has not made a final decision on the method of application, the architects have proposed either brush-plating (a technique in which the gold is deposited electrolytically using the metal surface as an anode and the brush as a cathode) or tank-plating (a technique, used by NASA in its space program, in which electrically charged metal is dipped into a tank of gold). Brush-plating allows in situ work but makes it difficult to control the gold's thickness, while tank-plating allows greater control of thickness but requires large tanks and the brush-plating of seams. Both extend the life of the gold coating beyond the five to seven years expected from gold leaf. (To provide the necessary galvanic separation between the gold and the less noble copper, the entire flame will be copper and nickel plated prior to its gilding.)

A transfer of technology also has occurred with the replacement of the flat and curved bars that support the inside of the statue's skin. The original bars were made of puddled iron. While a remarkable material in that it doesn't propagate cracks because of the many inclusions in its mass, the puddled iron has rusted wherever it has been in direct contact with the copper saddles that attach it to the statue's copper skin. The restoration team considered replacing the iron with copper, but thought that the heavier copper might alter the statue's period of vibration. They have chosen instead two iron alloys: 316 L stainless steel, a low-corrosion metal used in the food processing industry, for the curved bars, and ferrallium, a stronger metal used by the British Navy as a bronze replacement, for the flat bars. Teflon tapes with a nonacidic, pressure-sensitive silicone backing will provide additional galvanic protection between the stainless steel and the new tough-pitch copper saddles.

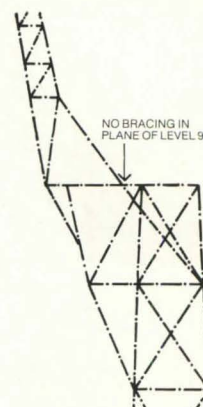
Two-hundred-ton presses will bend the stainless steel bars to fit the profile of the copper skin. To relieve stresses caused by their fabrication, the curved bars will undergo resistance annealing, a process that passes an electric current between an anode attached to one end of a bar and a cathode to the other. Dipping the bars in a nitric acid solution removes any ferrous inclusions that the stainless steel might have picked up during their bending. Says Larry Bellante of GSGSB, the Statue of Liberty Foundation's staff architects, "The statue's location adds to the restoration's difficulty. We wanted to remove contaminants in the curved bars just prior to their installation, but we have to do that work on shore because of the problems



The scaffolding (above and right) has to withstand 100 mph winds without ever touching the statue over its 150-foot height. The contractors adapted an aluminum scaffolding used for hoisting that has five times the structural stability and four times the loading capacity of ordinary staging. The statue's shoulder (right and below) was not built according to Eiffel's design, but wanting to preserve those changes, the Park Service has elected to repair rather than replace the existing iron structure.



EIFFEL'S ORIGINAL DESIGN CIRCA 1880



AS BUILT IN 1885



The statue's flame (top) was originally all copper-clad and gold-leafed; the glass was added later with the installation of interior lighting. The replacement flame (above), seen in model form, will return to the original design, with high-intensity lights, hidden behind the torch's railing, shining on the nonspecular gold finish. A University of Denver team used photogrammetry to record the old flame.

handling the acid baths."

Recording the shape of the curved bars also had its difficulties. The restoration team investigated various laser and process molding techniques to see if they could record the shape of the bars in place, but nothing proved as accurate—or as laborious—as removing each bar and using it as a template. To prevent undue stresses from developing in the statue during the fabrication of the new bars, only four bars from opposite sides of the statue will be removed at any one time, preceded by extensive bracing.

Charting new territory

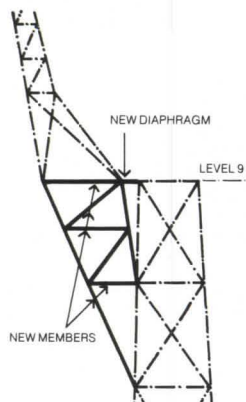
The importance of the statue's restoration may lie less with the technology transferred from other disciplines, than with the technology developed specifically for this project. Says Howard Brandston, lighting designer for the restoration, "The statue motivated people to push the state of their respective arts. The number of technological breakthroughs is extraordinary."

The lighting of the statue certainly numbers among them. General Electric has developed a new metal halide fixture for lighting the statue's exterior. It not only has better color rendition and lower wattage than comparable fixtures; it has a narrower beam spread ($<10^\circ$), allowing the precise aiming of light to eliminate shadows; a more adjustable focal length, allowing the amount of light on the statue to increase as it rises; and a greater intensity (1 million candlepower per light), allowing the placement of fixtures farther away from the statue, in five pits buried in the surrounding lawn. Brandston wants to use the new technology to realize an idea, sketched by Bartholdi in the 1870s, but technically impossible at that time: having beacons of light coming from Liberty's splayed crown. He sees that idea, along with others such as outlining the island in blue lights or having smoke emanate from the torch, as "ways of enhancing the statue's presence in New York's harbor." The Park Service has not accepted that argument.

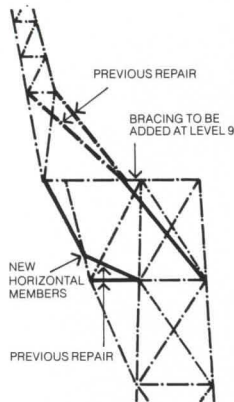
Lighting the statue's interior involves fairly ordinary technology, creatively applied. Outward-facing fluorescent fixtures, plugged into continuous wireways that run up the outside of the main pylons, will light the structure and skin without being visible from the circular stairs. Tiny, 24-volt ribbon lights within a narrow metal housing along the stringer will illuminate the stairs themselves. "The lights should have an expected life of 90,000 hours," according to project architect Robert Landsman.

The circulation systems, for both people and treated air, take some larger technological steps. On the circular stairs, new stainless steel treads, designed to fit over the existing iron treads, will contain carborundum to improve traction—a combination of materials, according to Landsman, never before tried.

The stairs' 16-inch-diameter center pipe doubles as a supply duct for the HVAC system. "It seemed the simplest way of getting air up to the statue's crown," says engineer Pat DiNapoli. "We placed the air handlers behind acoustical barriers under the statue's skirt, running more supply ducts up the outside of the pylons and exhausting air through operable transoms in the crown." Since fully heating or cooling the uninsulated statue is

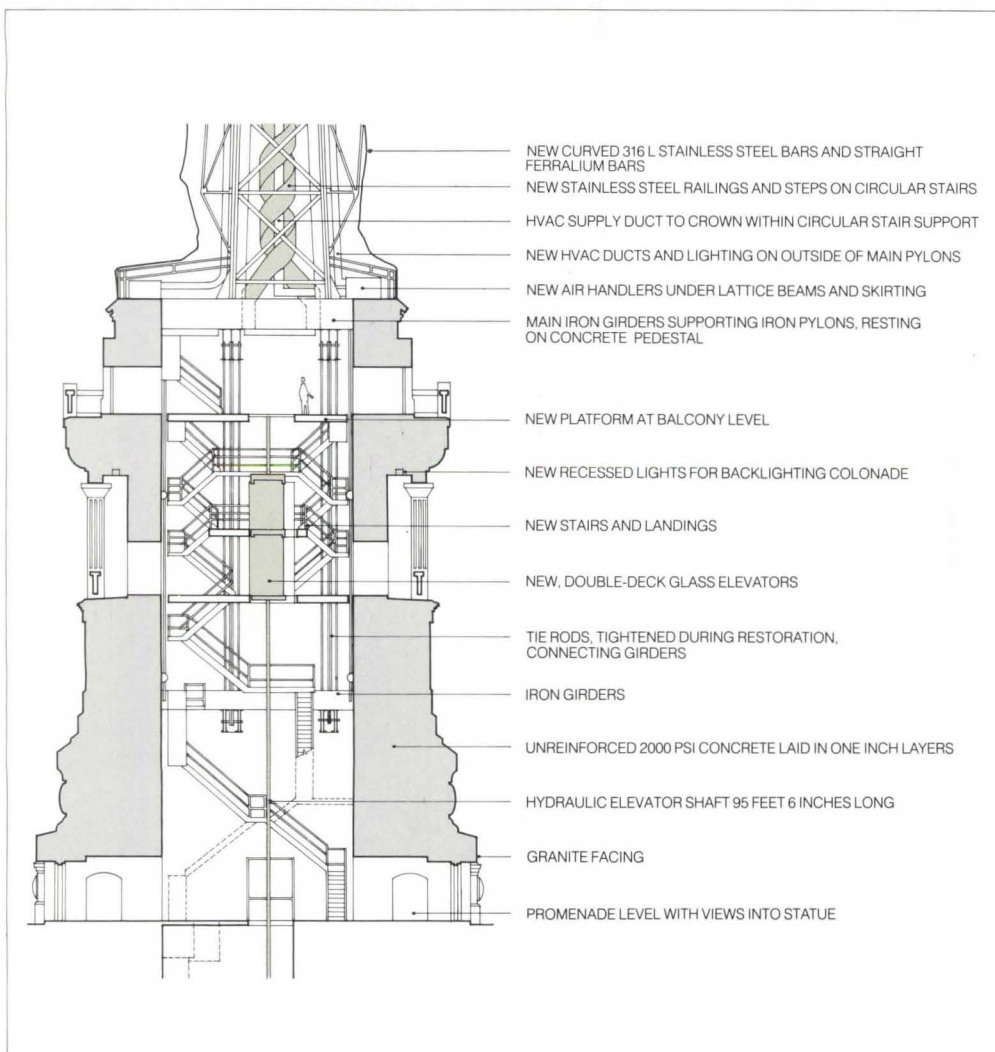


1984 REPLACEMENT SCHEME



1984 REPAIR SCHEME

Technics:
Statue of Liberty restoration



not possible, supply registers will dump treated air onto the stairs and platforms.

To move people up and down more efficiently, the restored statue will have the tallest hydraulic elevator in the country—a double-deck glass elevator carrying people 95 feet-6 inches from the base of the pedestal to the colonnade level. It will also have an emergency rack and pinion elevator of the type used on construction sites.

The elevators are part of a complete redesign of the statue's circulation system. Old stairs and landings that obstructed views have been removed, new stairs and rest platforms will be constructed, and the paths of people ascending and descending the statue will no longer cross. "People will have a much greater sense of the space within the statue," says Landsman, "with a view from the base of the statue up to Liberty's neck."

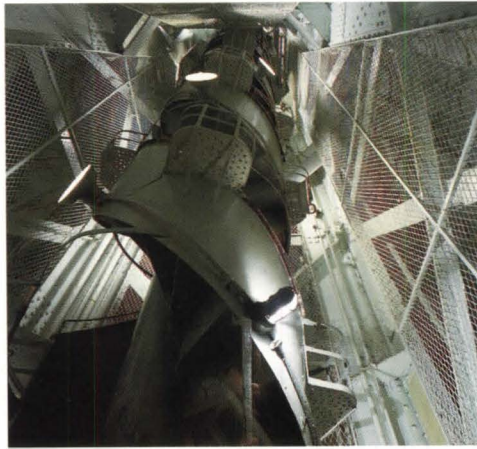
Coming clean

Of all the technologies developed for this project, though, none have the same mix of high tech and common sense as the methods used to remove coatings. The statue leaked from the very beginning, so an initial asphaltic coating was applied to the inside surface of the statue, followed, over the years, by coats of oil, aluminum, and most recently vinyl paint. The Park Service wanted those coatings removed, if for no other reason than to check the condition of the copper's inner surface. Concerned about the hazards of solvents in an enclosed space, they tested various abrasive removal techniques but found that none penetrated the resilient vinyl coating without increasing the blasting pressures above acceptable levels. Then, based on a reference in a steel painting manual, the Park Service decided to test liquid nitrogen. Although not normally considered a paint remover, the liquid nitrogen worked perfectly, freezing upon contact and causing the paint to simply fall off. (It doesn't work nearly as well on wood, iron, or stone.)

To remove the initial asphaltic coating, the Park Service again tested various commonly used abrasives such as rice husks and walnut shells. Only one abrasive left no corrosive by-product and removed the asphaltic coating at a low 50 psi pressure—a material that also had the lowest cost: coarse-grained sodium bicarbonate. The sodium bicarbonate's only disadvantage lies in its attraction to water, requiring the use of dryers in the compressor and at the nozzle. Keeping the interior of the statue free of pollutants during the removal of the paint has led to the use of a vacuum blasting machine that emits abrasive from one nozzle and immediately vacuums the residue through another.

Cleaning the statue's main structure involves blasting the puddled iron with an aluminum oxide abrasive down to white metal and immediately applying an inorganic water-based zinc primer as a rust inhibitor. (The water-based zinc primer, used to avoid hazards within the poorly ventilated interior, came out of research done for NASA.) A polyurethane or epoxy top coat will provide graffiti protection.

The statue's exterior may receive a detergent wash, but its protective copper oxide patina will remain intact. Where new copper sheets will replace those damaged, a copper oxide patina will be applied, accomplished



by dipping the new copper in a dilute solution of potassium chlorate and copper sulfate.

Liberty and technology

When the Statue of Liberty reopens on July 4, 1986, its technology may not concern many people. The statue's symbolism has always overshadowed the structure itself, even though the technology advanced by its construction—the concrete and iron, elevators and lighting—has certainly contributed as much as its symbolism to our actual freedom. The restoration of the Statue of Liberty may

not have the same far-reaching effect, but dismiss it we should not, for who can say what may come of ferralium or liquid nitrogen or ultrasound or any of the other new technologies used in the restoration? If nothing else, they have made, in Howard Brandston's words, "the statue's restoration, for the first time, fantastically practical."

Thomas Fisher ■

The photo-montage of the statue (below) gives some sense of what it will look like once restored, with the gold finish on the new copper-clad flame. The grouped photographs (opposite below) show the interior before and during restoration. The before views (top) show the peeling paint and poor lighting. Those taken during restoration (bottom) show the cleaning process and diagnostic equipment.



Project: Statue of Liberty Restoration, Liberty Island, New York.

Architects: Swanke Hayden Connell Architects, New York (Richard Seth Hayden, partner in charge; Robert Landsman, project director; Dominic Scali, job captain; Jeremiah King, Mary Jo Burke).

Associate architects: The Office of Thierry W. Despont, New York (Thierry Despont, partner).

Client: Statue of Liberty/Ellis Island Foundation, Inc.; National Park Service.

Site: 16-acre island in New York's harbor.

Program: refurbish structure and skin of statue; improve ventilation and visitor circulation; redesign entry and lobby, lighting, and chemical and electrical systems.

Structural system: lightweight puddled iron cantilevered trusses anchored to mass concrete with two levels of dunnage girders and tie rods.

Major materials: copper skin with ferralium and stainless steel 316L armature, tough pitch copper saddles, gilded copper flame, mass concrete foundation with granite facing (see Building materials, p. 178).

Mechanical system: oil-fired boiler, electric centrifugal chillers, hot water heating system, ducted tempered air system in statue.

Consultants: GSGSB, staff architects to Statue of Liberty/Ellis Island Foundation; Ammann & Whitney, structural and mechanical engineers; Howard Brandston Lighting Design Inc., lighting; John A. Van Deusen & Associates, Inc., elevators.

Construction managers: Lehrer/McGovern.

Cost: \$30,000,000.

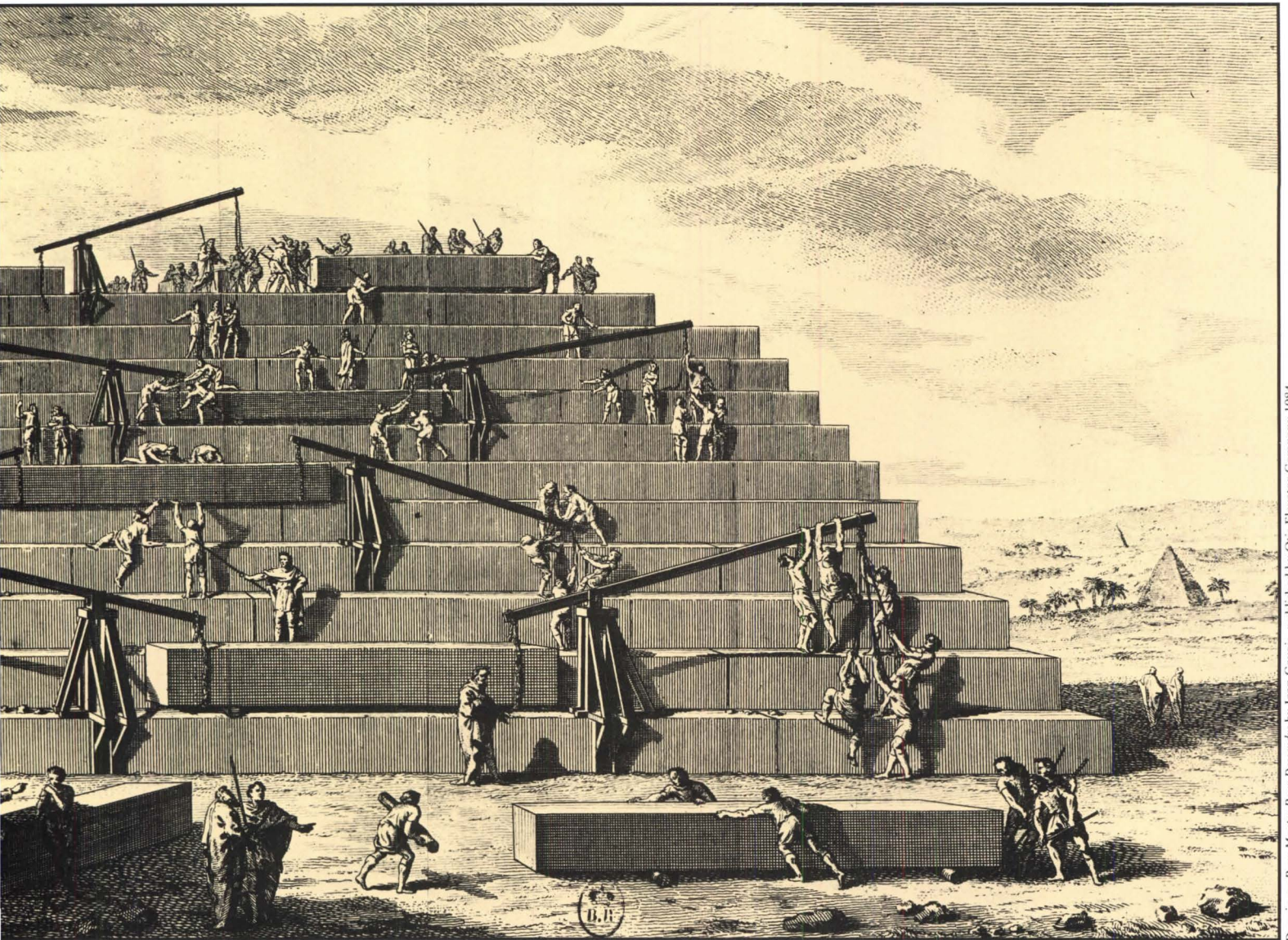
Photography: © Dan Cornish.

Acknowledgments

The author would like to thank the following people for their contributions to this article:

Richard Hayden, Robert Landsman, William Koelling, Swanke Hayden Connell Architects; Edward Cohen, Pat DiNapoli, Ammann & Whitney; Larry Belante, GSGSB; John Robbins, National Park Service.

Ascending rooms



Drawings: *Pour Monter Pour Descendre* by Jean Gavois, published by Otis Elevator Company 1984

□ **A**s any commercial leasing agent will attest, it's not easy disassociating a building from its elevators. For visitors whisking through lavish entrance lobbies, paying little attention to the building, elevators provide a first and formative impression of a place. Nearly everyone remembers—unfavorably—elevators that are slow, noisy, bumpy, dirty, or otherwise objectionable (often with offensive “music”).

After a long period of seeming general indifference to the visual aspects of elevators—while many technical advances were being made—building owners and architects have renewed their interest in the design of these “ascending rooms.” This interest has been spurred, in part, by the popularity (which is

not universal; surprising numbers of people do not like to ride them) of “scenic” elevators. Introduced to contribute to the architectural dynamics of atriums and tall lobbies in new hotels and retail centers, they are supposed to amuse the people on board and those above and below. Rare is the owner or architect today who will be satisfied with a manufacturer's standard elevator car offering.

Pushing or pulling

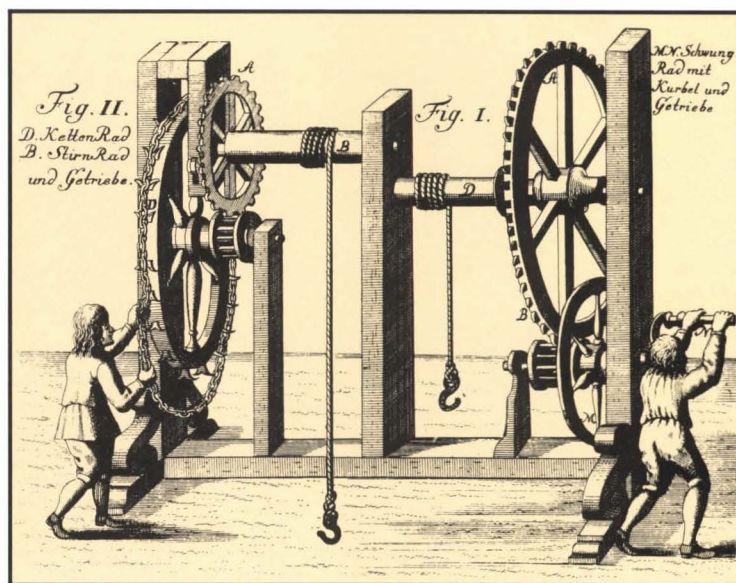
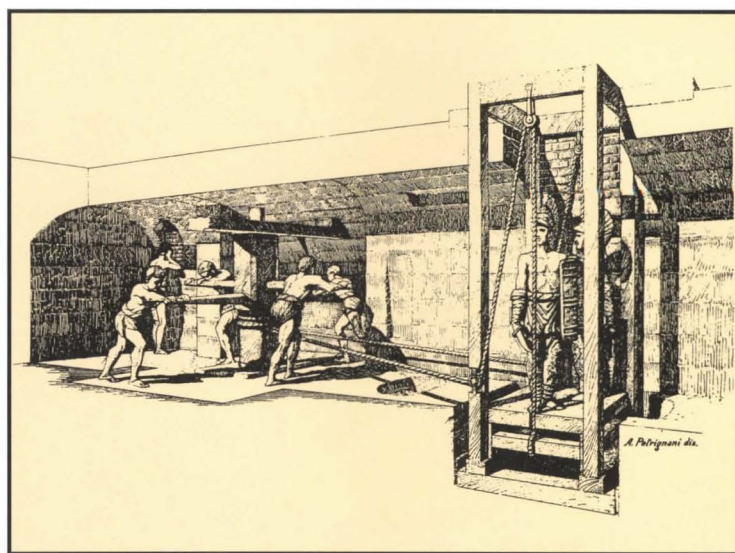
There are two main types of passenger elevators available to the contemporary building market, each with specific properties and applications:

- **Traction elevators** can travel very rapidly and have the advantage of “returning” the energy used to operate them; on downward trips, the electrical motor becomes a generator and sends electricity into the building's power network. They are the only answer for high-rise buildings, and may be preferred for other applications because they are speedier and more responsive, but also more expensive, than hydraulic systems.

- **Hydraulic elevators** are not counterweighted, and cars travel at slower speeds than in traction-type designs. Hydraulic machinery is smaller than traction machinery but the systems are less flexible and are generally limited to low- and mid-rise applica-

The problems of lifting people and goods, both during and after construction, are hardly new to building. The pyramids present an early and daunting example that is still perplexing because the precise methods used are not known. Based on accounts by Herodotus, this view (opposite) posits a system of levers and rollers. Elevators made from woven baskets and pulleys are depicted in drawings from 1000 B.C. This much later view (below left) shows Virgil descending from the

bedroom of Caesar's daughter by similar means. Precursors to modern elevators can be seen in the capstan-and-pulley devices used to lower gladiators into Roman amphitheaters (below). The age of enlightenment brought new fascination with—and, eventually, understanding of—things mechanical. Lifting mechanisms like these from the 1600s (bottom) were common.



tions. They cost about half the initial cost of their traction counterparts.

Strong growth is projected in the hydraulic elevator market, in part fueled by the continuing strength of low-rise commercial construction. Occupant expectations and access requirements for the physically and visually handicapped are other factors that have helped bolster the low-rise market for the relatively inexpensive, reliable service provided by hydraulics. Hydraulic technology, which has lagged behind developments in traction systems, is likely to receive greater research and development attention in the next few years.

While significant strides have been made recently in elevator machinery, the most interesting and innovative technical developments have come about in traction elevator control and dispatching systems, and in car designs for all kinds of elevators. Although architects are generally most concerned with car design, it pays to know something about control, dispatching, and drive alternatives.

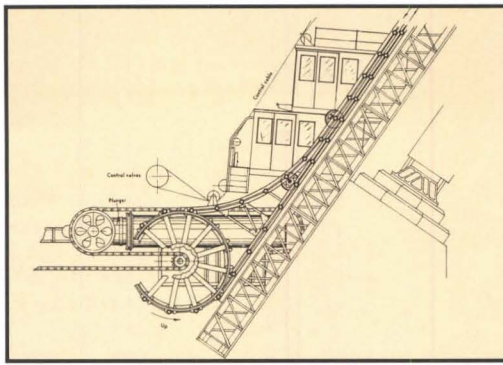
At least you don't have to tip on holidays

Except where protected by labor agreements or preferred by custom, elevator operators have been a thing of the past for 25 years. Beginning shortly after World War II, electromechanical controls began to replace car attendants. Now, at least for traction systems,

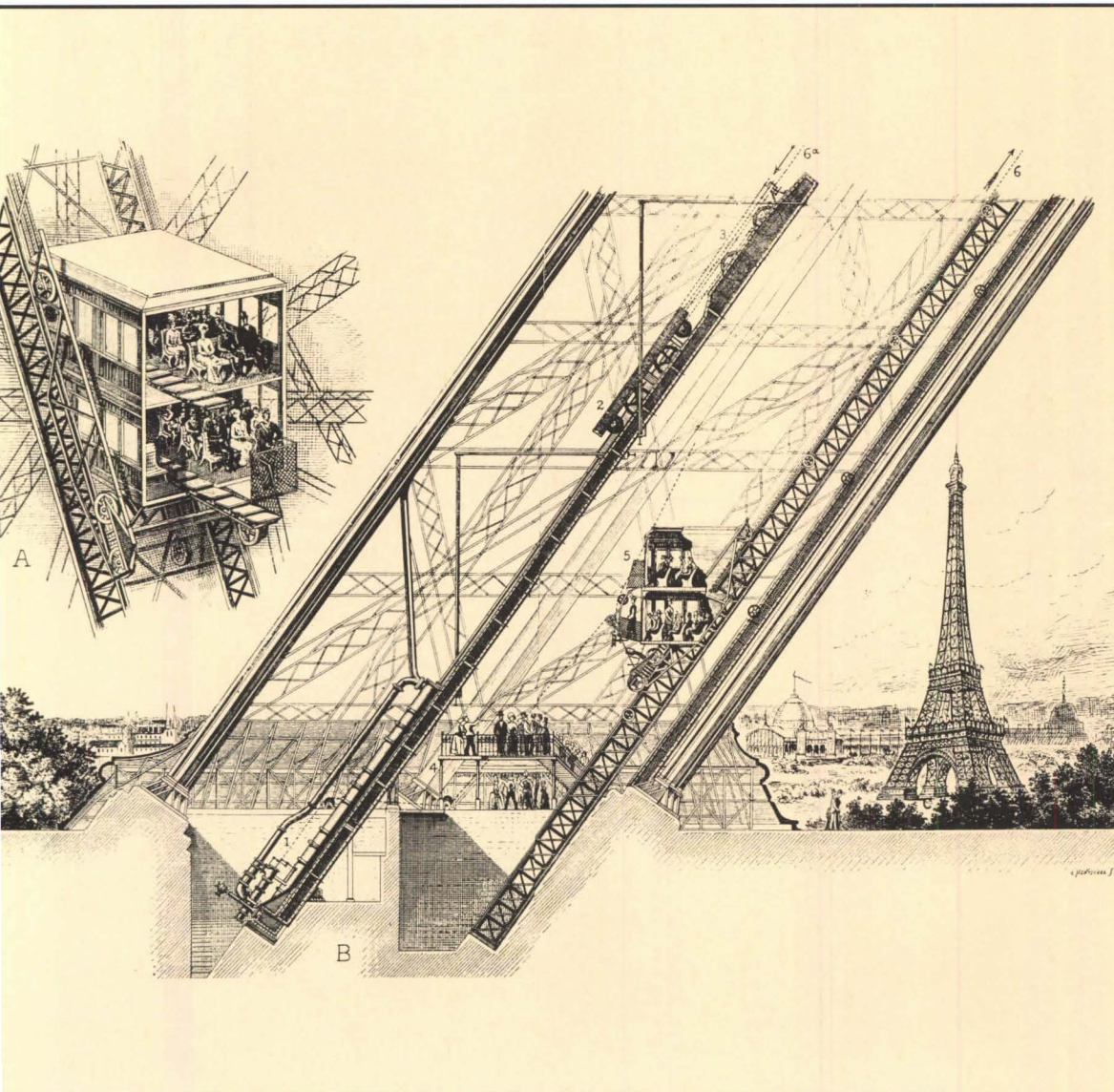
those systems are giving way to microprocessor-based systems, some of which make routine and emergency voice announcements to waiting and riding passengers.

The major advantages of microprocessor-based control and dispatching systems are their relative light weight, flexibility, efficiency, and ease of maintenance. With fewer moving parts than their predecessors and with reprogrammability of electronic circuitry, the new elevator control systems are the most highly evolved of the new generation of "smart" building technologies. They are capable of self-diagnosis, in much the same way that a personal microcomputer can

Technics: Passenger elevators



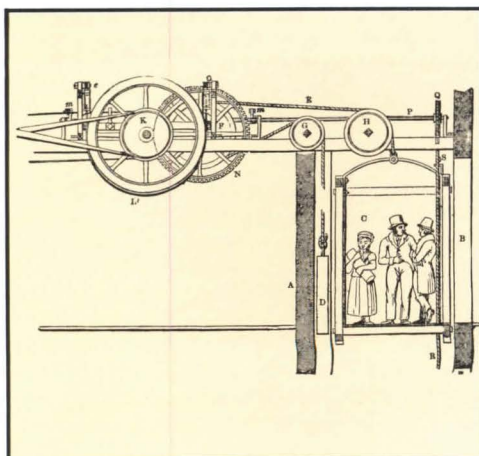
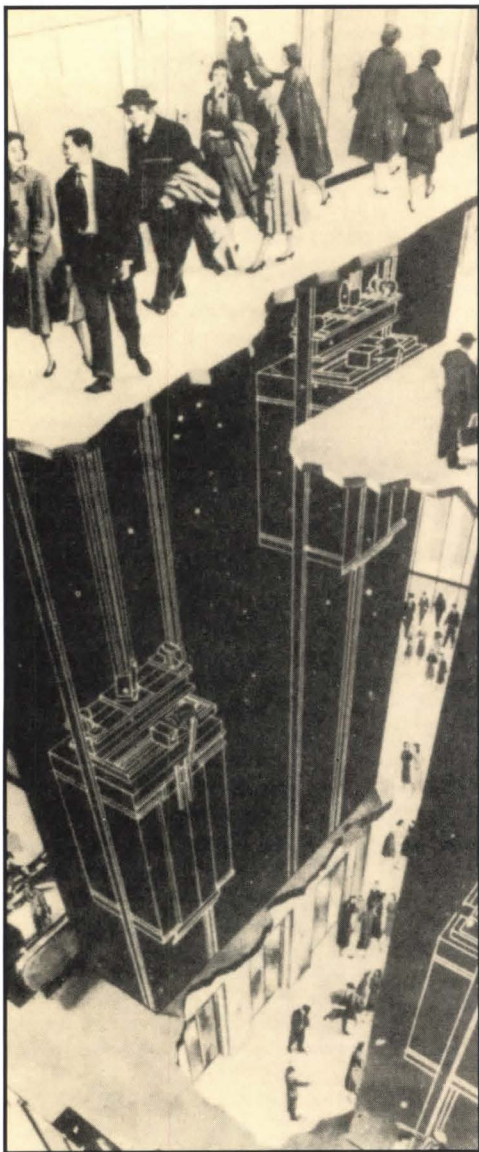
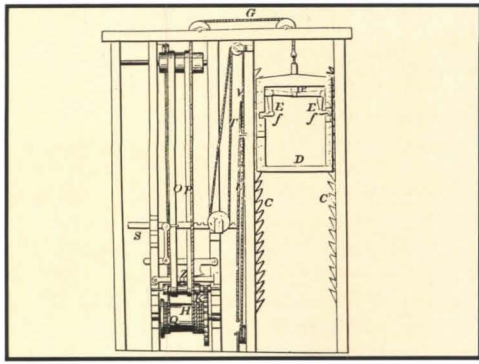
The double-decked elevators used with Gustav Eiffel's tower in Paris (left and below) created a sensation in the 1880s. They have been replaced, but the new elevators remain notable both for their unparalleled views and the fact that they must travel in two directions to follow the inward-curving shape of the pillars, from the ground to the first and second stages. The new 20th-Century elevators have tripled the speed and capacity of their predecessors.



America's industrial boom in the last half of the 1800s spurred technical developments in elevators and spawned some of the companies that remain dominant today. The Otis "standard" elevator (above right) was a hybrid of present-day drive systems that combined a hydraulic column with a series of vertically aligned pulleys. A maker of iron bedstands who sought to solve the problem of raising and lowering the

goods in his factory, Elisha Otis became world-famous for his patented "safety elevator," which combined an effective lifting apparatus with a rack-and-pinion safety lock (opposite top). He demonstrated the system dramatically by cutting the elevator cables at the 1853 New York exposition. Use of elevators was widespread before Otis. The counterweighted "teagle" from the 1840s (opposite bottom) was a highly influential mechanism and is credited as one of the earliest mechan-

ical passenger elevators. After a heyday through the 1930s and 1940s as objects of lavish decoration, elevators became sleek, modern, attendant-free and push-button operated. The 18 elevators used in the U.N. building (opposite middle) were among the first to use push-buttons. They expressed the futuristic look that characterized much industrial and architectural design in the 1950s.



identify the source of—and even prescribe treatment for—an internal problem.

The control and dispatching circuitry senses and evaluates almost instantaneously the status of all cars in a system and correlates car positions and directions of travel with the number and location of "hall calls" from waiting riders. By means of strain gauges on car bottoms, the system can sense the loads being carried by cars and will prevent fully loaded cars from stopping for new passengers until room is available. Priority can be assigned to contiguous calls, and the systems can anticipate demand based on programmed probability factors. The systems can adjust automatically to the peaks and valleys in elevator traffic that occur during a day.

Microelectronics control the door-opening mechanisms and dwell-time. They also serve to level the cars at hall stops. The new systems even aid in compensating adjustments for the stretching of hoist cables that occurs over time as a normal consequence of operation. The operational software can be reprogrammed to accommodate such things as shifts in elevator demand or changes in fire safety procedures.

New computerized controls and dispatchers can also be overlaid on existing electromechanical elevator systems, without interruption of elevator service or major changes in cars, hoisting, or drive equipment. "Overlay" systems can lead to great improvements in elevator dispatch time, energy efficiency, and handling capacity. Old buildings can be made to seem new (if you believe the testimonials) just because the elevators move more efficiently.

Drive equipment for both traction and hydraulic systems has become smaller, quieter, and much more efficient. There have also been major strides in the commercial application of drive designs whose principles have long been understood.

A major manufacturer now offers a variable frequency drive system that uses a bank of direct-current batteries. The batteries are trickle-charged by low-voltage single-phase electrical power, cutting installation costs, and can help to shave peak loads as well as trim use of standby generators in emergencies. Although competitors express doubts about battery maintenance needs, the technology is highly developed, widely applied, and offers significant advantages. An Otis spokesman says, "We're confident that variable frequency is the drive of the future."

Design aids

With all of the alternatives involved, deciding on the right elevator configuration and design is not a simple matter. A substantial enterprise has grown up around the field of elevator planning and consulting.

"Underelevating" is a prime hazard to be avoided. In the words of an adage quoted by a seasoned elevator salesman, "It's pretty hard to add another elevator once the place is built." There are so many factors involved in elevator planning that even apparently "simple" jobs quickly become complicated. Architects frequently retain elevator consultants to study needs; in some buildings the costs of elevating can approach a tenth of the budget, justifying this expense.

Major manufacturers offer, free of charge, computerized planning and analysis services that are especially useful during preliminary stages of design. The key factors in elevator planning include:

- **Interval.** This is the average length of time a passenger must wait for a response to a summons. In most high-speed elevators the design objective ranges from 20 to 30 seconds. Longer intervals may be acceptable in some situations and at peak times.

- **Handling capacity.** In offices this refers to the percentage of a building's total occupancy that can be handled over a five-minute period. This figure hovers around 12 percent, but varies. Some experts believe that new electronic office work environments are reducing overall building population densities, thus hiking the handling capacities that can reasonably be designed for, and possibly reducing overall elevator demand.

By integrating principles from queueing theory, knowledge of elevator capabilities, and assumptions about building population loads and traffic patterns, these computer-aided elevator planning and analysis tools provide quick and reliable answers to basic questions about the number, size, handling characteristics, and layout of needed elevators. Varying configurations, speeds, and capacities can be studied quickly, with accompanying cost data. The results from these analyses, however, are only as good as the data used to derive them. It is important to have reliable population estimates and projections of demand patterns.

Learning from experience, industry experts suggest that particular planning attention be paid to elevators serving basement floors. For example, as a cost-cutting step, the attempt may be made to have only one elevator in a bank of three descend to a below-grade parking area. Passengers wishing to reach the basement during peak periods may have to transfer at the lobby level from one car to another; others who don't wish to travel to the basement may be forced to take the ride down before they can go up. Day in and day out, the experience grates. Attention to details of rider comfort and satisfaction only begins with the planning stage, however.

Fear of flying

In industry parlance, ride quality is crucial to passenger satisfaction and comfort. People are especially sensitive to lateral acceleration and motion, which can cause extreme discomfort beyond certain limits. Proper car rail alignment is critical for smooth lateral travel, and some elevator companies recommend repeated realignments as part of the elevator break-in and shakedown period.

Provisions must also be made for the relief of high air pressures induced within hoistways by fast-moving cars, especially at higher levels. Manufacturers also provide comfort-based recommendations for rates of car acceleration and "jerk," the rate of change in acceleration.

Finally, because noise can intensify the passengers' sensations of any of these factors, various steps must be taken to isolate, insulate, and deaden elevator noises at their source. This is also a consideration for interior spaces adjacent to elevator shafts.

Technics: Passenger elevators

Steel boxes that move

Elevator cars are frequently manufactured not by elevator companies, who provide the lifting, drive, control, and guidance systems, but by specialized fabricators. Some elevator suppliers and carmakers believe that architects too often overlook several key factors related to car design:

- **Specifications and scheduling.** Long lead times are needed for car manufacture, and detailed design decisions must be made before fabrication can begin. The "bane of elevatordom," according to one manufacturer, is the car allowance, a cash set-aside in

passenger unit, its top removed and its interior outfitted with a protective plywood shell, can serve, but only if this use is anticipated and provided for in advance.

The general construction work may of course proceed apace without definitive design specifications for the elevator, but owners, contractors, and architects may be in for bad surprises if the cars are not ready when they're needed. Interior upper-floor finishing, final framing and close-in around shaft openings, and early tenant occupancy can be held up waiting for the elevators. In decision on such seemingly small matters as

tomized control panels or floor annunciators, may further delay car construction, because these are often made by still other subcontractors. Any deviation from standard offerings will require longer lead times.

Some fabricators also report growing difficulties with the integration of lavish lobby treatments and elevator door surrounds. Elevator entrances are high traffic areas, subject to all sorts of unintentional abuse from furniture moving and deliveries. They call for special attention from the standpoints of durability and maintenance.

- **Interior finishes.** Durability and resistance to vandalism are major concerns. Some materials are not permitted by fire codes, while others present severe difficulties from the standpoints of cleaning and repair. It is always advisable to take these factors into account well before final design decisions are made, and to remember that initial appearances can quickly change. Also, building materials when static and when seen from a distance may impart an entirely different visual sense and physical performance when they are viewed from a few inches away and are made to move in response to the car's motion. Elevator lighting, too, may create unforeseen problems and unexpected opportunities, especially in fully enclosed cars. Weight of materials is not an inconsiderable design criterion. With the direction of the industry toward ever lighter main cab components, there are real incentives for using lightweight finishes. "You have to remember," says a major fabricator, "that you'll be hauling that weight, whatever it is, up and down for 25 years or more." With corresponding requirements for counterweights, a heavier car calls for beefing up structural systems, at an even greater cost.

Those transports of delight

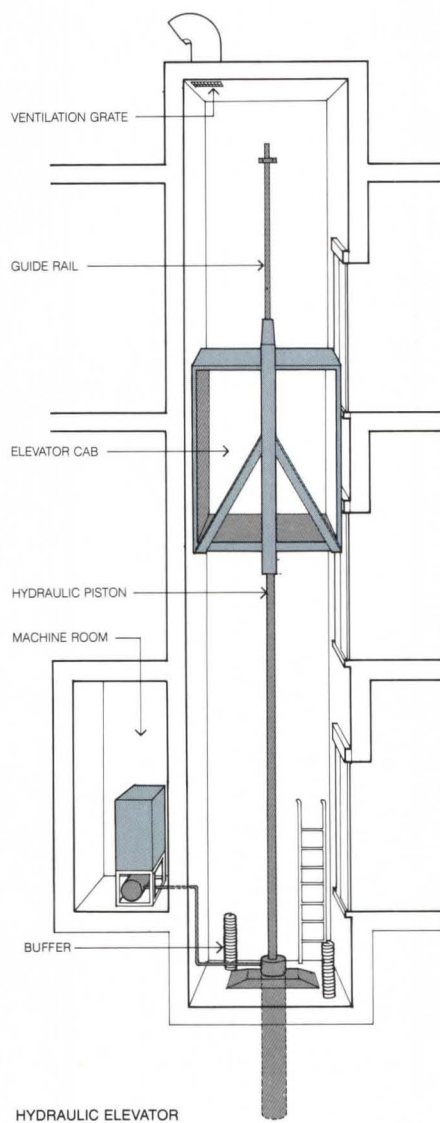
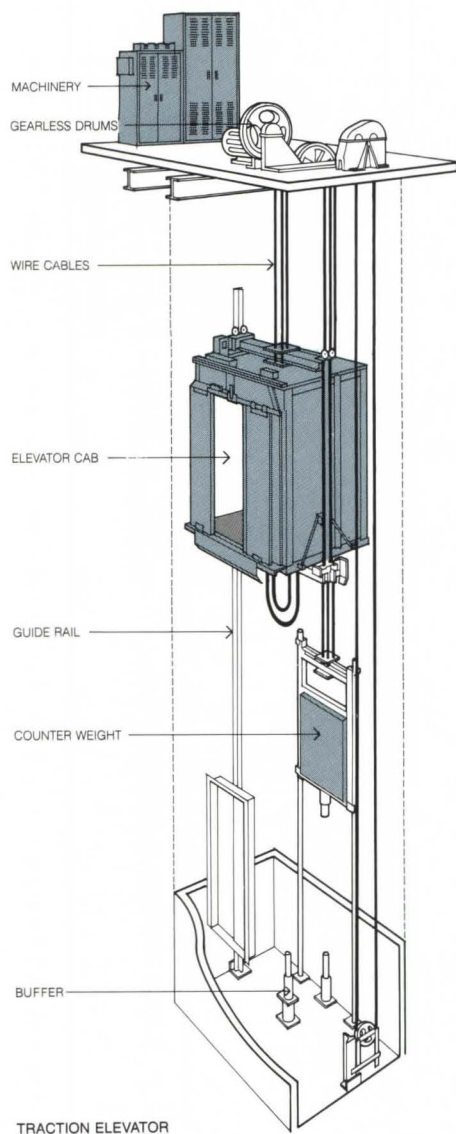
If architecture can be called frozen music, then some of the new elevator cars are surely frozen Muzak. While the marketplace seems to reward decorative excess, the increasing popularity of ever more opulent cars offers this hope: It may lead to reexamination of car glazing, cladding, and structural framing alternatives, as well as to a search for new ways to overcome the tricky challenges posed by guideways exposed to views or the elements. Experimentation with new materials that are lightweight, ultra-high-strength and impervious to the elements could produce exciting new results.

Owners and developers will seek from architects, and architects will themselves search for, ever newer ways to express and exploit the architectural kinetics of vertical movement. There is much for architects to explore in elevator design and in the technology of lifting people. **Thomas Vonier**

Acknowledgments

The author would like to thank the following for their assistance in providing information useful for this article: George David, Martin Kraegel, and Merton Meeker, Otis Elevator Company; Ronald Boice, Westinghouse Elevator Company; John Sala, Schindler-Houghton Elevator Corporation; Bruce D. Woodward, National Products, Inc.; Dick Vinciguerra, Tyler Elevator; Daniel Odom, Dover Corporation.

The author is a Washington, D.C., architect and that city's correspondent for P/A.



- the bid documents for fabrication and furnishing of the elevator car. Until the contract is let and work is underway—too late, in many cases—there may be no firm idea of what is going to be done.

- All members of the building team are advised to consider carefully the sequence of construction steps surrounding elevator hoistways. Elevators are increasingly on the critical path in construction projects. It is important to identify and plan for the stages at which the elevators will be needed, to permit timely and proper completion of the construction work. Interior drywall application, for example, can be eased and sped up considerably by having an elevator dedicated to lifting long gypsum board sheets; a finished

color, which can be held off for other parts of the building, will hold up the fabrication of an elevator car, which must be painted in a factory setting before much of the fitting work can begin.

- **Tolerances and details.** One fabricator puts it plainly: "Architects just have to realize that these things move around. They're subjected to lots of different stresses, and they're made using materials and techniques that will not permit certain tolerances." Very fine joints and reveals may be difficult or impossible to achieve. Cars and their details must be designed to permit them to move and go out of square in response to varying forces. Corners and joints are especially troublesome. Special components, such as cus-

Technics-related products

Elevator and Escalator Systems brochure provides information on gearless, geared, and hydraulic systems. Cab interior finishes for ceilings, walls, and doors are described and illustrated. The 20-page brochure also has a section on elevators for the handicapped. A general guide on preparatory requirements for the architect, general contractor, and electrical contractor is included. Schindler-Houghton Elevator Corp.

Circle 200 on reader service card

Custom elevator cabs for single or multiple installations are available made from standard or unusual materials. The company also offers the Change-A-Panel® system for updating or replacing old or worn panels. Wood panels can also be rejuvenated by re-finishing. Parkline Corp.

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Elevette® 2100 home elevator has a carrying capacity of 450 pounds. Sizes range up to 12 square feet, and the cab is 7 feet high overall. Elevette is constructed with an aluminum frame for lighter weight. Light switch and floor selection buttons are flush mounted, with emergency stop controls located in the interior front frame. Standard interior panels are a choice of woods, with other options available. Inclinator Company of America.

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Elevators for private residences, described in a four-page brochure, can have from two to six stops—10 to 50 feet travel distance. Features include hand rail, push-button operation with emergency stop switch and alarm button, telephone, and door locking devices for entrances. Steel-reinforced cabs are offered in several standard sizes with a selection of wood-grain sides, ceiling with recessed light, and carpet or tile finish on the floor. D.A. Matot.

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Residence elevators for multilevel houses or condominiums are quiet, easy to operate, and can be installed in most homes. Cabs are equipped with hoistway door interlocks, emergency stop switch, telephone, mechanical alarm bell, and overhead car light with switch. There are three models: Lectro Lift, with 350 or 500-pound capacity, and Super Lectro Lift, with 700-pound capacity. Standard finishes are French walnut, Designer oak, and white. Sedgwick Lifts, Inc.

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Elevator interiors color brochure shows some of the many materials available for cab interiors. They include tambours, metals, cork, laminates, marble, and fabrics, alone or in combinations. Ceiling grilles can be made to specifications, and interiors can be of Class A fire retardant materials to meet local codes. National Products, Inc.

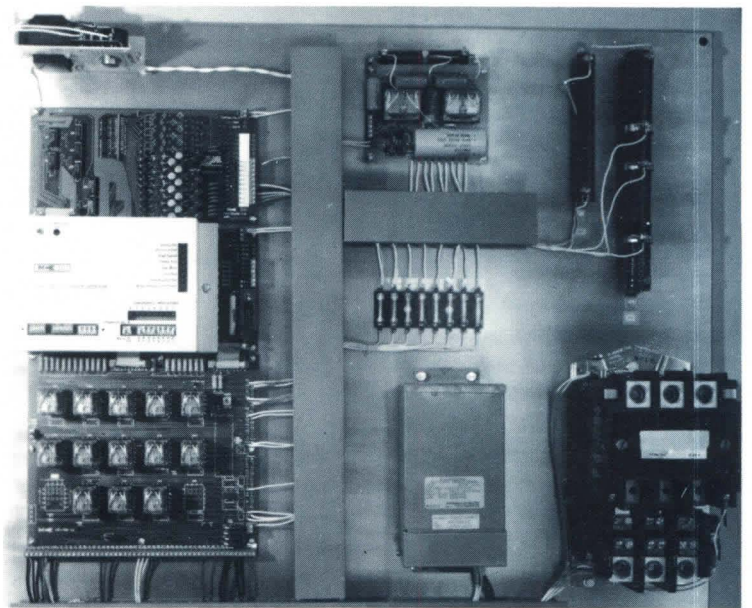
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Elevator products brochure describes and illustrates dumbwaiter, conveyor, and swing elevator doors. Drawings show installation details, and specifications are provided. The doors are available with a UL 1½-hour B label. Included is a description of the Magicart® system for moving carts automatically from floor to floor, for example, in hospitals. The Peelle Company.

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Therm-L-Brush™ fiber gaskets, made from densely packed nylon filaments, seal off air, smoke, and noise infiltration from elevators. An installation in place for seven months indicates that the gaskets remain flexible and do not interfere with door operation. Besides sealing corridors from smoke in the event of a fire, the gasket strip also helps to reduce heating and cooling costs. Sealeze Corp.

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HMC-1000 Hydraulic Microprocessor Controller for elevators protects mechanical and electrical equipment from major failures. It provides functions such as fire service and duplexing. The controller operation is quickly and easily modified to meet code changes or customer requirements. Elevator Equipment Co.

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'Talking elevators' are made possible by a speech reproduction technology being used with Otis Elevonic and MRVF elevators. The messages are recorded on tape, then converted to digital images, which are transferred to memory chips. The system, contained in the operating panel, has a basic vocabulary of 110 words and phrases indicating the floor number, the direction in which the cab is moving, and special safety messages in the event of an emergency. The system has the capability of recording regional accents or foreign languages. Otis Elevator Company, North American Operations, United Technologies.

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World Class Series elevators for low- and mid-rise buildings and medium-speed operation use microprocessor technology. Designed for fast, efficient installation in buildings on fast track construction schedules, their advanced structural techniques, lightweight components, reduced building loads, and space-saving machine room design reduce construction, installation, and operating costs. Cabs are offered in a choice of fixtures and finishes. The microprocessor monitors up to eight elevators per bank to minimize passenger waiting time. Westinghouse Elevator Company.

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Impulse® signal fixtures for elevator cab and hall provide a custom-designed appearance to any elevator system. The fixtures are angled for easier reading, and the modular concept makes it possible to change names, symbols, and directional information as needed. They are available in a variety of finishes and are designed to blend with a wide range of architectural styles. The system is illustrated and described in an eight-page brochure. Dover Elevator Systems, Inc.

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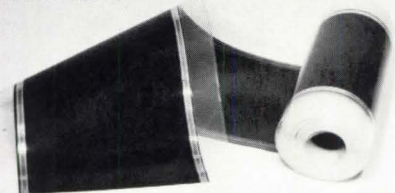
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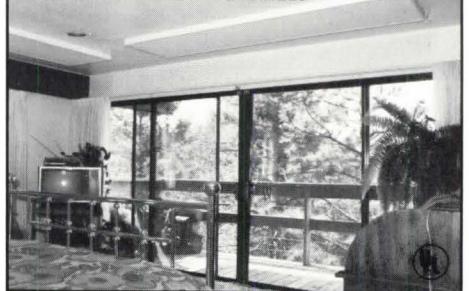
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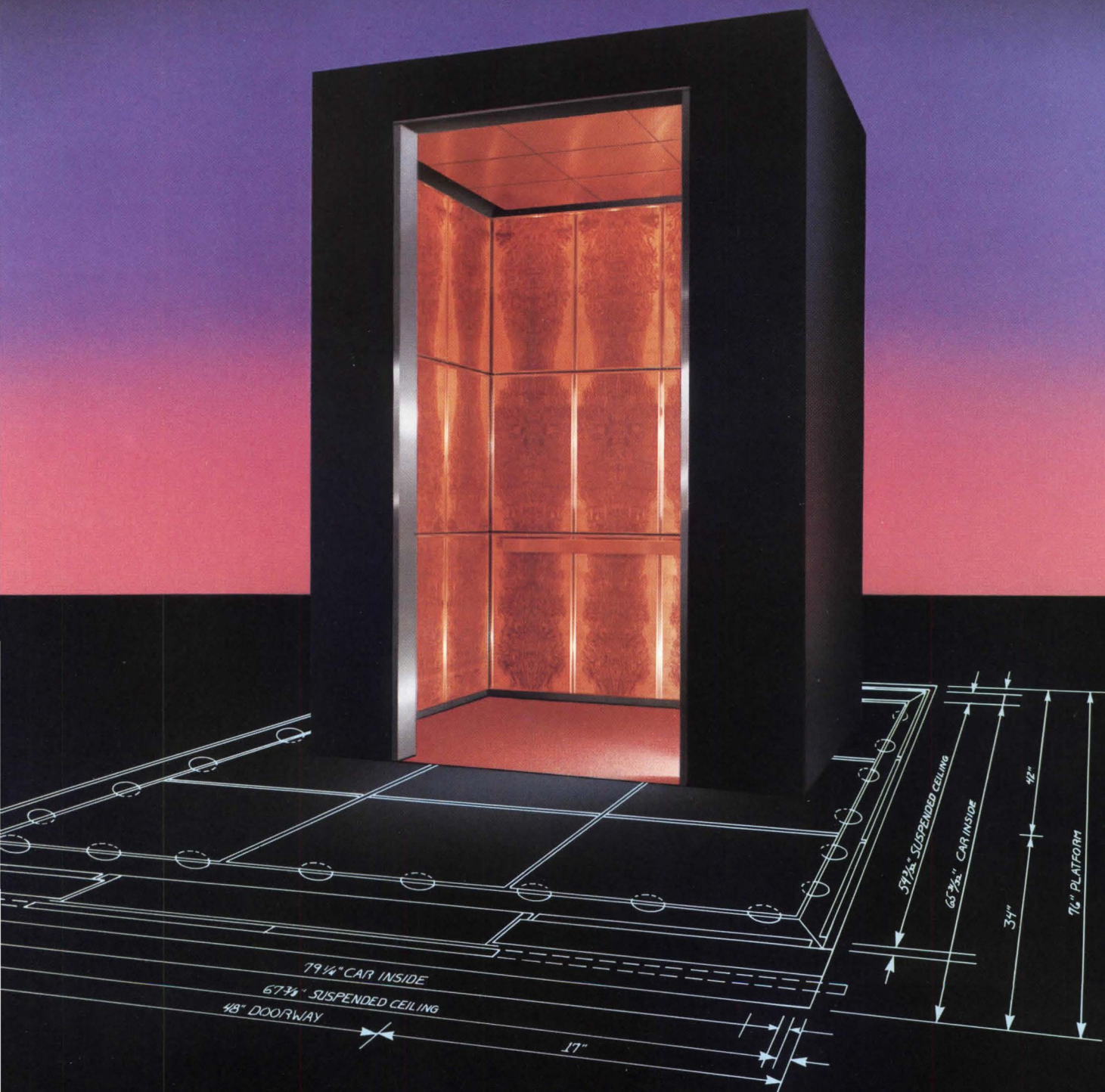
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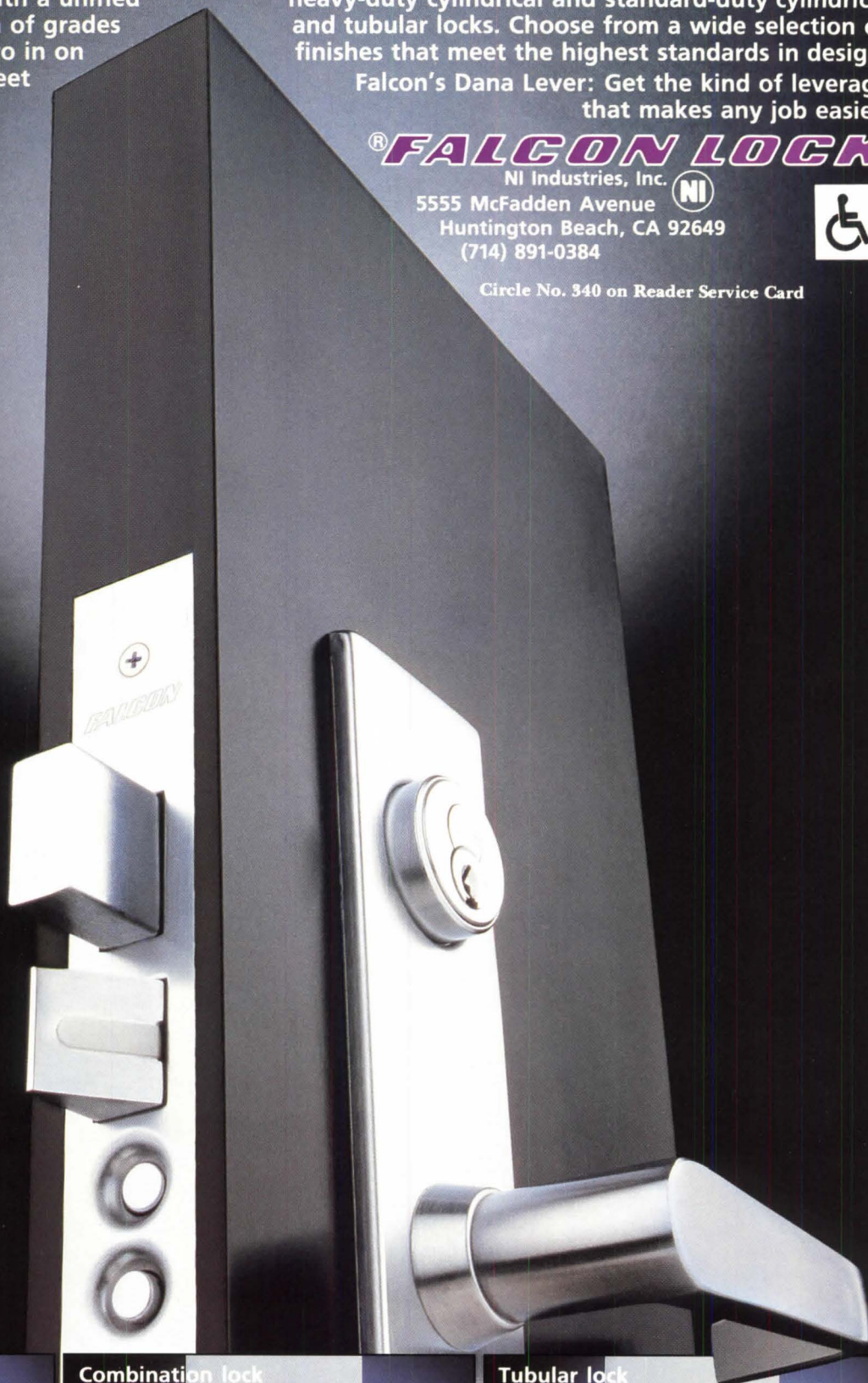
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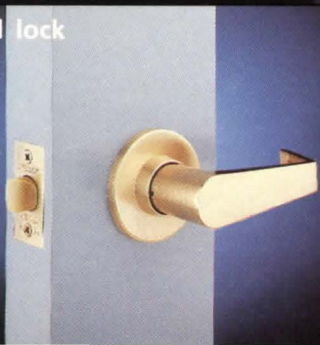
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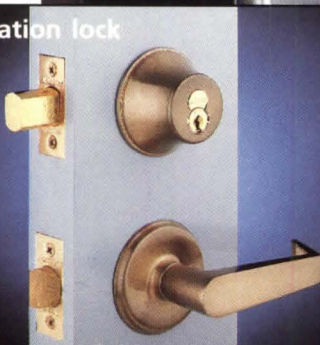
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- * INTERIORS magazine for the computer service to help attendees locate companies by product category.
- * PANEL OPTICS for providing the illuminated directional signs which can be seen at various points in the exposition hall.
- * PROGRESSIVE ARCHITECTURE magazine for producing the LIGHTING WORLD III Official Show Directory.
- * TRIONICS Corp. for supplying the electronic message boards in the registration area.

Registration will take place in the promenade area on the 2nd floor of the Hilton.

Registration hours are:

- Tuesday 8:00 A.M.—5:30 P.M.
- Wednesday 8:00 A.M.—8:00 P.M.
- Thursday 8:00 A.M.—5:00 P.M.

A badge allowing entrance to the exhibits for all 3 show days is \$5.00.

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Representative	Purple
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Other	Yellow

Offices

Show Management office will be located on the 2nd floor promenade, adjacent to the registration area. Information regarding LIGHTING WORLD IV will be available throughout the show.

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- Cafe New York (Coffee House): 24 hours a day, Lower Promenade
- Mirage (Cocktail Lounge): 11:30 A.M.—2:00 A.M., pianist every evening, Hilton Lobby
- Hurlingham's (Restaurant): Hours vary, pianist every evening, Hilton Lobby
- Pursuit of Happiness (Restaurant/Discotheque): Call for Information 212/977-9898

Lighting World III is Sponsored By:

The International Association of Lighting Designers
30 West 22nd Street
New York, NY 10010
212/206-1281

The Illuminating Engineering Society of North America
345 East 47th Street
New York, NY 10017
212/705-7913

The New York Section of the Illuminating Engineering Society
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Welcome



INTERNATIONAL ASSOCIATION OF LIGHTING DESIGNERS, INCORPORATED (212) 206-1281
30 WEST 22ND STREET, 4TH FLOOR, NEW YORK, NEW YORK 10010

Welcome to LIGHTING WORLD III.

The International Association of Lighting Designers (IALD) is proud to co-sponsor LIGHTING WORLD III, the largest lighting exposition and conference ever presented in the United States.

Each new LIGHTING WORLD generates more enthusiasm than the last. This year, with 50,000 square feet of exposition space, we were completely sold out months ago. Our seminar program is the most comprehensive ever given on lighting-related topics and has inspired tremendous interest. It is the educational value of LIGHTING WORLD that the IALD considers of most importance to the design and engineering community.

For members of the IALD, the fact that so many lighting designers, architects, engineers, interior designers, and manufacturers take part in LIGHTING WORLD reflects both the spirit of cooperation necessary to successful lighting design, and an increased understanding of the importance of light as an element of architectural and interior design.

Join us at LIGHTING WORLD IV in Los Angeles in 1986.

Jeffrey A. Milham, IALD
Program Coordinator



Illuminating Engineering Society
of North America

Rogers B. Finch, PE, CAE, MIES
Executive Vice President

345 East 47th Street
New York, New York 10017
212 705 7913

Welcome to LIGHTING WORLD on behalf of the Illuminating Engineering Society of North America.

An exciting and informative program has been planned for you.

We are pleased to be associated with this exposition, designed to bring timely and useful information on the state-of-the-art to the lighting community.

Rogers B. Finch
Executive Vice President



Illuminating Engineering Society
of North America

New York Section

345 East 47th Street
New York, New York 10017
212 705 7926

The members of the New York Section of the IES welcome you to the third and most spectacular Lighting World. Everyone who has helped to produce this conference is excited by its growth and magnitude. The breadth of opportunities it offers to anyone active, or interested in architectural lighting, is unsurpassed.

The New York Section offers an opportunity to you too. If you live or work in New York, we invite you to join the largest IES section in the country. We encourage your participation in educational seminars, monthly professional development programs, and many other activities including Lighting World. Your involvement can help to sustain the energy and spirit of Lighting World throughout the year.

Sincerely,

JoAnne Lindsley
President
IES, New York Section

CREATIVE
TRADE SHOW
MANAGEMENT



NATIONAL EXPOSITIONS COMPANY, INC.

14 WEST 40th ST., NEW YORK, N.Y. 10018 212/391-9111 CABLE: NEXPOCO

LIGHTING WORLD has again demonstrated dramatic growth; paralleling the international awareness of the importance of the architectural lighting industry. The LIGHTING WORLD exposition represents a 30% increase over our last show. We urge you to consult the floor plan in this directory so that you can be certain to visit all the exhibits. Each exhibitor will display its latest products. Signs have been placed throughout the exhibit areas to help you locate all of our exhibiting firms.

The educational program has also been expanded. The sponsoring associations have again assembled an exciting roster of industry leaders who will provide information and insights of value to all those involved in the design and specification of lighting.

Rounding out "LIGHTING WORLD III" is our most ambitious special events program. We sincerely hope that you will participate in as many of our show features as possible. They have all been specially designed to enable you to enhance your professional skills.

As announced, LIGHTING WORLD has become an annual event. LIGHTING WORLD IV will take place May 11, 12, 13, 1986 in the Los Angeles Convention Center. This ultra-modern facility will provide space for our continued growth. The May dates will not overlap with the Hanover Fair, thereby insuring our greatest international participation in the show to date.

We hope that you find LIGHTING WORLD a stimulating and profitable experience. It is our great pleasure having you with us.

Cordially,

Robert A. Weissman
Vice President

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Design: Ernesto Gismondi

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Speaker on
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Flexibility Above All

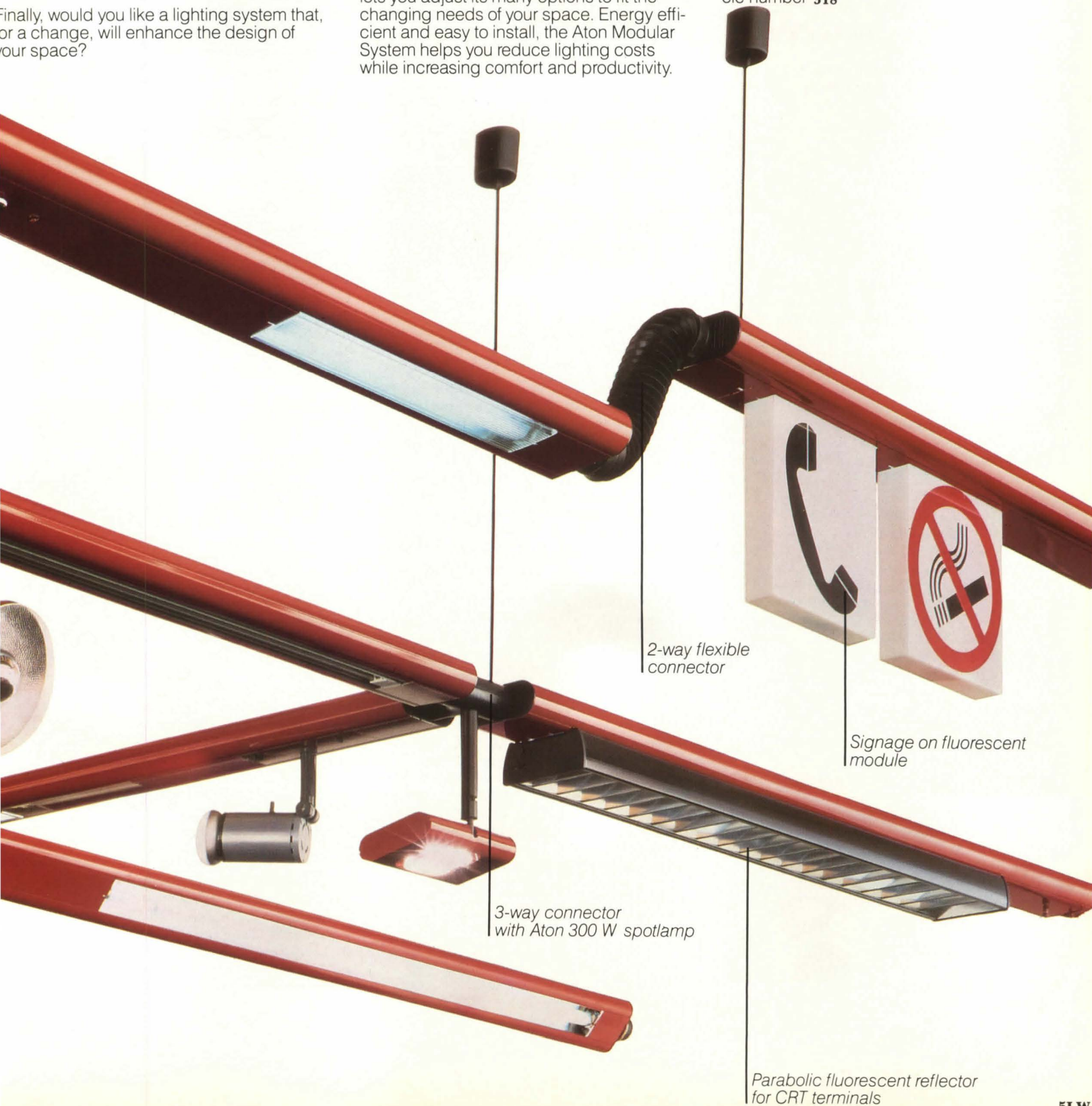
Does your space need more than just regular fluorescent lighting? Do you need lighting for CRT terminals, indirect lighting, spotlighting, track lighting, halogen lighting, incandescent lighting, signage, electrical outlets, or loudspeakers?

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Schedule of Events

Monday, April 15, 1985

6:00 P.M.

**The University Club, One West 54 St.,
N.Y.C.**

New York Section Illuminating Engineering Society Lumen Awards Dinner and Ceremony

Speaker: Dan Flavin

The 20th annual Lumen Awards banquet celebration will be held in conjunction with LIGHTING WORLD III. The Lumen Awards program is sponsored by the New York Section of the Illuminating Engineering Society with the support of the New York Designers Lighting Forum. The program was conceived and developed to encourage and publicly recognize excellence, professionalism, ingenuity and originality in lighting design.

The keynote speaker for the evening will be the award-winning light artist Dan Flavin. Mr. Flavin has been involved with light as an art form since the early 1960s. Through the personal commendation of Marcel Duchamp, he received an Award in Art for 1964 from the William and Norma Copley Foundation of Chicago. His work has been recognized by the National Foundation on the Arts and Humanities, and has been featured internationally in dozens of one-man exhibitions. These have been mounted at such institutions as the Corcoran Gallery of Art, Washington, D.C., the Museum of Contemporary Art, Los Angeles, the Leo Castelli Gallery, New York, the Guggenheim Museum, New York, Gallerie Yvon Lambert, Paris, and the Art Institute of Chicago. Mr. Flavin's projects are on display at several permanent installations including the Kröller-Müller Museum, The Netherlands, and Grand Central Terminal, New York.

Tuesday, April 16, 1985

8:30-10:00 A.M.

**Trion Ballroom,
New York Hilton
Opening Breakfast**

Welcoming Address:

Edward I. Koch,

*Mayor of the City of
New York*

*Keynote Speaker: Paul
Goldberger, Architect-
ure Critic, The New
York Times*



The official opening of LIGHTING WORLD III will take place during a conti-

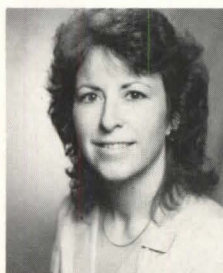
nental breakfast which traditionally is attended by a cross section of design professionals, politicians, manufacturers, and the press. During his welcoming remarks, Mayor Edward I. Koch will formally proclaim April 14th to 20th Lighting Week in the City of New York. Paul Goldberger, in the keynote address, will give an overview of lighting in relation to architecture and interior design.

11:00-12:00 noon

Session A-1

**Trion Ballroom,
New York Hilton
Energy Optimization and Quality
Lighting Design**

*Speaker: Hayden N.
McKay, Howard
Brandston Lighting
Design Inc.*



The challenge of designing lighting systems that meet the qualitative goals of the owners and users, while using energy wisely and effectively, will be addressed. Since energy used for lighting is a product of both the connected load (power) and the duration (time) or percentage of power that is used, design strategies will be discussed that reduce both power and time. Common misconceptions and misapplications of "energy saving" technology, including lamps, ballasts and control devices, will be covered. A final topic will be the impact of energy regulation codes and standards on the practice of lighting design. The presentation will be heavily illustrated with slides.

Ms. McKay, a registered architect, has practiced architecture and lighting consultation in Los Angeles, Washington, D.C., New York City, and England. A former Assistant Professor of Architecture at the University of Maryland, she has presented papers at meetings and conferences held by the ASID, IES, and the CAD Design Center, and has been guest lecturer for architectural programs at a variety of educational institutions, primarily on the subjects of daylighting and energy conserving design. In her current position, she has been project manager for a variety of lighting design projects.

2:30-4:30 P.M. Session A-2

Trion Ballroom, New York Hilton

What's New in Light Sources

Dr. S.H.A. Begemann, Philips International B.V.

Greg E. Dore, General Electric

Jack Hoffman, Osram

Al Katz, Voltarc

David Krailo, Sylvania

Thomas Madonia, North American Philips

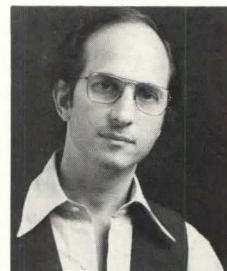
Paul Wasdyke, Duro-Test

*Willard L. Warren, Lighting Unlimited (Mod-
erator)*

There has been an exciting increase in new lamps available from manufacturers both here and abroad. Internationally-known experts will describe and demonstrate these new light sources, new colors, new shapes, and new applications. By popular demand, this is a repeat session from LIGHTING WORLD II. While the title remains the same, the content will be entirely new.

6:00 P.M.

**Palace Theater,
1564 Broadway,
New York City
A Night on Broad-
way with Jules
Fisher at "La Cage
Aux Folles"**



World-renowned theatrical lighting designer and producer Jules Fisher will discuss the lighting design for "La Cage Aux Folles" prior to the evening performance. This special presentation on Broadway show lighting will explain the subtle nuances of this extravagant branch of lighting design. "La Cage Aux Folles," the winner of six Tony awards including 1984's Best Musical, is the hottest show on Broadway. Tickets will be limited, so make reservations now. At a special drawing, 50 lucky people will be chosen to go backstage after the performance.

Jules Fisher's extensive career has included the lighting for over 100 Broadway and off-Broadway productions including "Frankenstein," "Beatlemania," and "American Buffalo." His Tony award-winning productions of "Pippin," "Ulysses in Nighttown," and "Dancin'" are representative of his credits. In the world of music, Mr. Fisher served as production supervisor on tours for such groups as Kiss, the Rolling Stones, and David Bowie, as well as the rock concert tour of "Tommy." Mr. Fisher also serves as a theater consultant to architects around the country.



Wednesday, April 17, 1985

**9:00–12:00 noon 2:00–5:00 P.M. (repeat)
Mercury Ballroom, New York Hilton
Lighting Design Communications
and Documentation**

David Apfel, David A. Mintz, Inc.

Susan Forbes, Forbes-Ergas Design Assoc.

Robert Prouse, Jules Fisher & Paul Marantz, Inc.

Gene Stival, Howard Brandston

Lighting Design Inc.

This three-hour workshop explores communication and documentation methods that link architect and/or interior designer with the lighting designer. Lighting designers will view an interiors presentation and then prepare their individual lighting design solutions to the situation. For both interior design and lighting design, there will be extensive slide presentations with color boards, renderings and, most importantly, a "take home" book that documents the total workshop. Special emphasis will be placed on what a lighting designer needs to know from an architect or interior designer and what must be conveyed to an engineer.

Mr. Apfel is an associate of David A. Mintz, Inc., and an associate member of the ASID. In addition to being a member of the IALD and a board member of the DLF, he has taught at the Parsons School of Design. Ms. Forbes is a principal and partner in charge of design at Forbes-Ergas Design Associates. Her awards include the 1983 Resources Council/Designer magazine Design Elements Award for window graphics at Michaels of Madison Avenue restaurant, the 1978 S.M. Hexter Award for residential interior design of the year, and Lumen Awards in 1974, 1976, and 1977. She serves regularly as critic and guest lecturer for various New York design schools and was recently appointed to serve on the Mayor's Advisory Committee for Design for the City of New York. Mr. Prouse is a senior associate with Jules Fisher & Paul Marantz, Inc. A member of numerous professional societies, he received a Master of Architecture degree from the University of Colorado at Boulder. He teaches lighting at Columbia University, Pratt Institute and Parsons School of Design. Mr. Stival, an associate of Howard Brandston Lighting Design Inc., is an architecture graduate of Pratt Institute. He has designed the lighting for a number of theater and contract projects including some notable museum exhibits. He also has experience in the construction field preparing bids and supervising renovations.

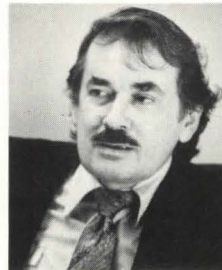
9:30–10:30 A.M.

Session B-1

**Trianon Ballroom,
New York Hilton
Getting Brightness
Relationships Right**

Speaker: John R.

Brass, Lighting Research and Development Inc.



When a promising lighting design falls short of expectations, often the problem can be traced to improper brightness relationships within the various visual scenes of a given environment. This is most likely to happen when it is assumed that full compliance with footcandle (illumination) codes and standards will ensure good vision. This presentation will show how the designer's visual concepts can be successfully defined and implemented by the use of perspective views and the principles of brightness relativity. In order to avoid a common point of confusion, the conceptual difference between brightness and illumination will be explained at the beginning of the presentation by the use of visual aids.

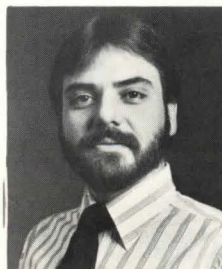
Mr. Brass began to specialize in lighting system design in the late 1950s while working as an electrical engineer. In 1974, after a period with a manufacturing company during which he developed a successful high performance product line, he established Lighting Research and Development Inc., a lighting design firm based in San Rafael, California. Mr. Brass teaches extension courses at the University of California and has been published widely.

11:00–12:00 noon

Session B-2

**Trianon Ballroom,
New York Hilton
Daylighting: Practical
Assessment and
Recommendations**

*Speaker: David Lynn
DiLaura, Lighting
Technologies*



Although daylighting offers major potential lighting design and energy conservation benefits, the design community remains shy about assigning to it a significant role in lighting design. The reasons for this appear to

be historical and technical, and peculiar to North American practice. This presentation will describe the steps practitioners can take to become comfortable with daylighting. A handout will be provided that includes a summary of available information, self-study material, and design resources. Simplified techniques that are useful in investigating daylighting feasibility in the early stages of design will be presented.

Lighting Technologies, the firm founded by David DiLaura, conducts research in illuminating engineering, does software development, applied mathematics research, professional education instruction and seminar development, and lighting product evaluation and development. Before founding Lighting Technologies in 1982, Mr. DiLaura was in charge of lighting calculations and measurements for the lighting group at Smith, Hinchman & Grylls. He is head of the undergraduate program in illuminating engineering at the University of Colorado.

2:00–5:00 P.M. (repeat)

**Mercury Ballroom, New York Hilton
Lighting Design Communications and
Documentation**

This workshop is a repeat of one given earlier in the day. See description under 9:00 A.M.

2:00–3:30 P.M. Session B-3

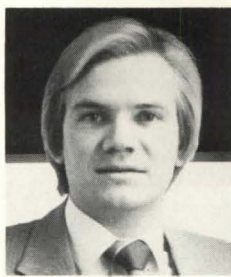
**Trianon Ballroom, New York Hilton
The Work of the Light Artist**

Speaker: Barbara Haskell, Curator, Painting and Sculpture, Whitney Museum of American Art

This presentation will be an overview of the history of contemporary artists who work with light. In addition to work exhibited in galleries and museums, artists have used light and light sculpture as major elements in architecture. The works of Stephen Antonakos, Dan Flavin, Robert Irwin, Charles Ross, James Turrell, and Douglas Wheeler, as well as other well-known and emerging artists, will be presented during this visually exciting session.

4:00-5:00 P.M.
Session B-4
Trianon Ballroom,
New York Hilton
Computer Aided
Design and Present-
ation Methods for
Lighting

Speaker: David L.
Munson, Hellmuth,
Obata & Kassabaum,
Inc.



This presentation will show the latest computer methods of demonstrating lighting designs in numerical data, as well as computer simulations of daylighting and artificial illumination. The use of mainframe and microcomputers will be discussed. A slide and video presentation of computer animations and various other methods of presentation will be made.

Mr. Munson is responsible for lighting design and solar studies on HOK projects, from conceptual architectural design through preparation of construction documents and specifications. His projects have received numerous awards nationwide. He co-authored a book entitled "Planning and Designing the Office Environment" which received the ASID Joe Polski Award for the finest literary contribution to the interior design field.

6:00 P.M.
Rendezvous Trianon Room, N.Y. Hilton
Designers Lighting Forum Honor Award

The New York Designers Lighting Forum Honor Award is one of the most prestigious of lighting awards. It was established in 1974 to recognize outstanding achievement in and contribution to the field of lighting design, theatrical lighting, fixture design and production, and/or education in the field of lighting or related disciplines.

The DLF Honor Award has been given to the outstanding lighting designer and educator, Paul Marantz. A cocktail party and "roast" will allow the lighting community to meet and honor this prominent lighting designer. He, in return, will offer a slide presentation and discussion of some of his most significant lighting projects.

In the past, the award has been given to Warren Platner, interior designer; Richard Kelly, architect and lighting designer; Edison Price, fixture designer; Howard Brandston, lighting designer; Lesley Wheel, lighting designer; James L. Nuckolls, lighting designer and educator; William Blitzer, lighting manufacturer and designer; and Lewis Smith, lighting designer.

Thursday, April 18, 1985

9:30-10:30 A.M.
Session C-1
Trianon Ballroom,
New York Hilton
Approaches to Resi-
dential Lighting
Speaker: Robert A.M.
Stern, FAIA



Mr. Stern will discuss the importance of lighting design in his architectural projects. With the assistance of a slide presentation, he will consider the many ways that natural and artificial light limit and lead his design decisions.

Mr. Stern is a practicing architect, teacher, and writer. His firm has received numerous awards for design including the Honor Award of the American Institute of Architects (1980), and the Distinguished Architecture Award of the New York Chapter of the AIA in 1982 and twice in 1984. He has lectured extensively in the US and abroad, and is the author of several books including "40 Under 40: Young Talent in Architecture." Mr. Stern prepared the commentary for the book "Philip Johnson: Writings." Two books on Mr. Stern's work were published in 1981: "Robert Stern," edited by David Dunster, and "Robert A.M. Stern, Buildings and Projects 1965-1980," edited by Peter Arnell and



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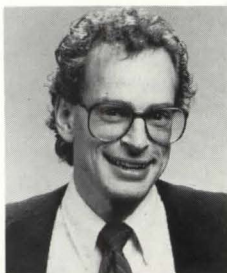
See us at Lighting World III, the New York Hilton, April 16-18
BOOTH #112

THE SPERO ELECTRIC CORPORATION
18222 Lanken Ave., Cleveland, Ohio 44119 (216) 486-0666

Ted Bickford. His work has been exhibited at numerous galleries, universities and museums. Mr. Stern will host an eight-part, eight-hour documentary television series to be aired on PBS in 1986 and entitled "Pride of Place: Building of the American Dream."

**11:00-12:00 noon
Session C-2
Trianon Ballroom,
New York Hilton
Lighting Design
Approaches for
Electronic Offices**

Speaker: Gary R. Steffy, Gary Steffy Lighting Design Inc.



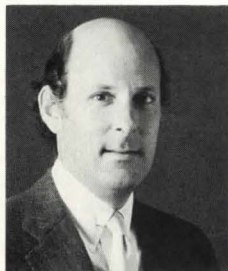
The visual display terminal (VDT) is at the forefront of America's transition from machine age to information age. With these high-tech tasks, spreading lots of light equally in all directions throughout the office generally does not provide appropriate light. Lighting can act as the key interface between man and computer. Mr. Steffy will present a comprehensive lighting design approach for electronic offices. He will demonstrate that proper evaluation of a host of subjective and objective lighting/vision/perception criteria can help provide successful electronic office environments. He will also discuss some of the states' pending legislation on VDTs and European VDT lighting standards and guidelines. Mr. Steffy will provide

several case studies including the Steelcase Corporate Headquarters open plan offices.

Mr. Steffy has received several awards for his work, including the Interior Design magazine/IBD 1983 Grand Award Winner, and the 1984 IES Edwin F. Guth Memorial International Illumination Award of Merit. Mr. Steffy is immediate past chairperson of the IES VDT Subcommittee and lectures at Michigan State University. He has had a variety of articles published within the last year.

**2:30-3:30 P.M.
Session C-3
Trianon Ballroom,
New York Hilton
A Personal View:
Lighting of Retail
Spaces**

Speaker: Kenneth H. Walker, Walker/Group, Inc.



Mr. Walker will give a very personal view of the problems, opportunities and symbolism in lighting retail spaces. Included will be examples of a variety of store types, from department to discount.

Mr. Walker has been active in all aspects of design for many years. He has taught at the Rhode Island School of Design, Harvard

University, MIT, and the Architectural Association in London. A painter and graphic artist, he has received many awards in the field of graphic design, industrial and interior design, as well as architecture. Mr. Walker is committed to the preservation, renovation and adaption of our architectural heritage and has successfully restored offices, retail spaces, banks and shopping centers. He is Chairman of the Art Advisory Committee of Brown University and a member of the Associate Council of the Museum of Modern Art in New York.

**4:00-5:00 P.M. Session C-4
Trianon Ballroom, New York Hilton
Decorative Fixtures in
Architectural Lighting**

Speaker: Charles Stone, Jules Fisher & Paul Marantz, Inc.

This session will be a historical overview of styles and functions of the decorative fixture, the design and development of special fixtures, and the architect/lighting designer collaboration.

Mr. Stone is a senior associate with Jules Fisher & Paul Marantz, Inc. His experience covers a wide range of architectural and theatrical projects which include lighting for concert halls, museums, hotels, offices, and large atria, as well as live performances and special events.



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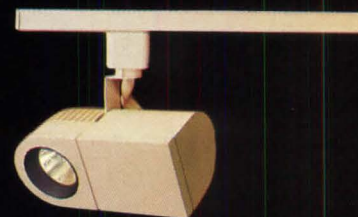
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Exhibitors' Index



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AFG Inds., Cincinnati Gasket, Gray Glass, Torstenson Glass 139-24 Queens Boulevard Jamaica, NY 11435 (718) 297-4444	124	Prismatic and textured glass lens for lighting fixtures.	
A.L.P. Lighting & Ceiling Products, Inc. 5458 North Mason Avenue Chicago, IL 60630 (312) 774-9550	307	Parabolic louvers, decorative panels, lenses, diffusers, louver panels, globes, shapes, replacement wraparounds, lamps and speciality items.	
ARC Sales Inc. 72 Loring Avenue Salem, MA 01970 (617) 745-2249	106	Architectural HID accent lighting fixtures. BAG Turgi HID lamp starters and ignitors. Bender and Wirth sockets and lamp holders.	
Abolite Lighting, Inc. Center & Wood Streets W. Lafayette, OH 43845 (614) 545-6374	450	Indirect lighting, porcelain RLM's.	
Altaluze SPRL Rue de L'Eclipse 2 6 Eclipsstraat 1000 Bruxelles Brussels, Belgium	211	Lighting products	
American Louver 7700 Austin Skokie, IL 60076 (312) 470-3300	154	Lighting louvers for fluorescent fixtures.	
American Scientific Lighting Corp. 669 East 7th Street Brooklyn, NY 11218 (718) 851-4577	315	Energy efficient lighting, fluorescent and H.I.D. fixtures, screw-in conversions and wire-in retrofits, fluorescent wattage reducers, specialized lighting devices.	
Amerlux, Inc. 15 Patton Drive West Caldwell, NJ 07006 (201) 228-0049	721-724	Interior linear fluorescent tubes, interior display lighting, exterior site lighting; lighting poles.	
Architectural Cold Cathode Lighting 350 West 31st Street New York, NY 10001 (212) 594-1960	601	Colored photos of installations and cold cathode lighting assemblies.	
Architectural Record 1221 Avenue of the Americas New York, NY 10020 (212) 512-2858	504	ARCHITECTURAL RECORD is edited for architects and engineers engaged in building design and product specification. It is recognized as a leading professional publication in the architectural field with a large and experienced editorial staff.	

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Fisherman's Road—Box G
Truro, MA 02666
(617) 487-3437 or (800) 235-2201
- Brandhurst Inc.**
87 Sand Pit Road
Danbury, CT 06810
(203) 798-1131
- Brilliant Lighting, Inc.**
1323 Truman Street
San Fernando, CA 91340
(800) 423-5665 or (818) 365-6976
- C.E.W. Trading Inc.**
15775 North Hillcrest/Suite 508
Dallas, TX 75248
(214) 960-1993
- Capri Lighting, Sub. of Thomas Industries**
6430 East Slauson Avenue
Los Angeles, CA 90040
(213) 726-1800
- CEAG Electric Corp.**
1324 Motor Parkway
Hauppauge, NY 11788
(516) 582-4422
- Chloride Systems, U.S.A.**
Mallard Lane
North Haven, CT 06437
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- 514** Total programmable lighting control systems for use in creating energy saving visually exciting lighting environments.
- 735** Manufacturer of steel lighting structures, sports lighting, high mast, architectural.
- 231** Decorative lighting for contract and residential application.
- 190** Aton modular lighting system. Wall, ceiling and task fixtures.
- 240** Manufacturers of custom decorative lighting for hotels and other commercial spaces. Now adding an imported line of small decorative fixtures.
- 233** Light conveyance systems to include: Designer's resource series, great space illuminators, fiber optic systems, optical wall sconce systems.
- 166** Low voltage high output linear light strips and marquee functional lighting—for interior and exterior use—curves, angles and straight configurations.
- 137** Bend-A-Lite looks like neon but is completely flexible. It is a series of parallel tungsten bulbs wired one inch apart and then coated with a solid transparent PVC layer ½ inch thick. It can be cut every 18 inches with scissors. Available in 7 colors.
- 422** Self-luminous exit signs—are always illuminated yet consume no electricity and need no wiring. Meets national model codes.
- 447** High style contemporary lighting for residential and contract. Products are manufactured using highest quality West German parts. Full color catalog available.
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Tupelo, MS 38802
(601) 842-7212

Delta Lighting Systems Inc. 406
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Baldwin Park, CA 91706
(818) 960-7611

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Devoe Lighting 326
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145 Lighting products

219 Manufacturer of high performance specification grade fluorescent lighting.

140 Current issues of CONTRACT Magazine

606 The Flexiwatt System[™] provides automatic and/or manual adjustment of fluorescent lighting fixtures to utilize natural daylight or eliminate uneconomic overlighting.

128 Indoor fluorescent fixture for commercial, industrial and residential use.

437 Innovations in energy efficient lighting for commercial, industrial, architectural, roadway and special applications.

611 Designers and prime manufacturers of engineered lighting products for hazardous locations, vandal-resistant, correctional and institutional markets.

506 Commercial/industrial fluorescent & H.I.D. lighting, flexible wiring systems.

406 Architectural and decorative area lighting.

508 Architectural landscape lighting products, security, outdoor area, wall packs, bollards, weatherproof exits, designed to give specifier continuity of appearance.

326 Devoe creates a broad range of innovative architectural and commercial lighting products as well as sport systems for tennis and racquetball.

703 Parawedge and eggcrate louvers, lenses, baffles, safety sleeves, drop pans, CRT louvers, replacement wraparounds. Lighting control products from plastic and aluminum.

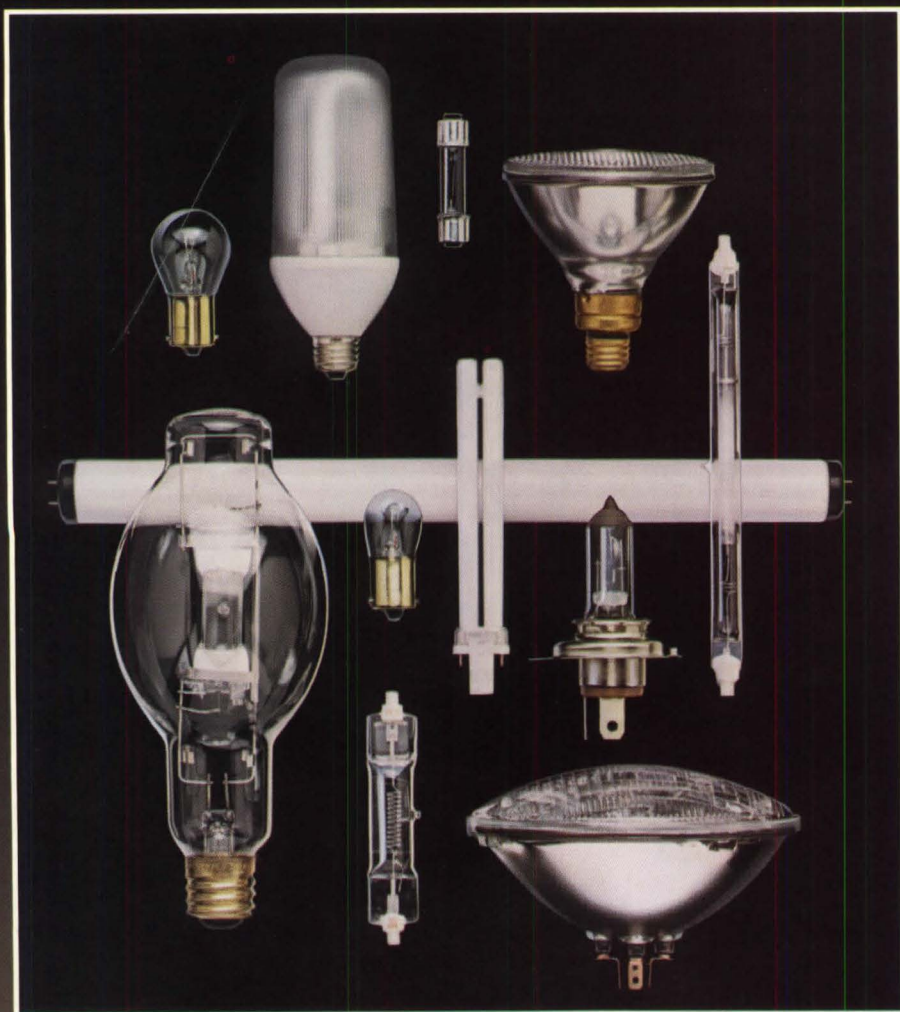
310 Special effect entertainment and theatrical lighting controllers and dimmers, special effect architectural programmable cross faders, strobe lights, light tubing.

219 Emergency lighting products, exit signs, flexible wiring systems and power communication products.

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- 605** Specification grade outdoor lighting fixtures for walkway, roadway and area lighting and decorative, state of the art distribution.
- 731/732** A major supplier of contract lighting for hotel chains, restaurants and commercial buildings throughout the world.
- 421** Incandescent, track, fluorescent lighting and special applications of the above.
- 504** The Electrical Construction Communications Center of McGraw-Hill Information Systems Company includes ELECTRICAL CONSTRUCTION & MAINTENANCE and ELECTRICAL WHOLESALING magazines and ELECTRICAL MARKETING Newsletter. Information is also available in a variety of other sources offered by these periodicals.
- 313** ELECTRICAL CONSULTANT Magazine, read by designers and specifiers whose primary job function involves electrical products.
- 729/730** Architectural and energy management lighting control products.
- 323** Elkamet plastic lamp enclosures for luminaires: seamless and virtually unbreakable spheres and cubes from high performance, uv-stabilized plastic-materials. (UL-approved)
- 607** Asymmetric lighting instruments for wallwashing and indirect applications. Task/ambient lighting (fluorescent) for open plan offices.
- 449** Complete line of battery powered emergency lighting equipment; fluorescent packs; AC, AC/DC and self powered exit signs; AC power systems.
- 320** Endless Energy offers a two-year warranty on its full line of transformer based lighting power reduction systems for fluorescent and HID applications.
- 453** A business newspaper edited for energy conservation efforts in the commercial, institutional and industrial sectors. It provides energy managers with timely information on technology, government legislation and techniques directed towards energy management.

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702 Decorative luminous ceiling lenses, acrylic stained and bevelled glass and complete luminous ceiling systems.

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242 Reflectors, spinning and hydroforming and "ALZAK" finishing.

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602 Manufacturers of electronic ballasts and power supply.

202 Outdoor luminaires, indoor HID and extruded fluorescent luminaires.

443 Lamps and ballasts for all applications; full scale demonstrations of the effects of color and lighting distribution; computerized design and decision-making programs.

456 A complete line of decorative outdoor area lights, functional floodlights, bollards, poles and related brackets.

122 Commercial and industrial lighting fixtures

118 A full line of decorative outdoor lighting fixtures.

226 Lighting products

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475 Park Avenue South
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- 603** Filament wound fiberglass poles, polymer composite lampposts.
- 110** Prismatic control of light.
- 210** Lighting products
- 114** Fluorescent/incandescent wall box light dimmers custom light control systems.
- 709** Architectural and landscape lighting, underwater lighting, custom fountains and fountain components.
- 325** Four different lighting collections featuring halogen, incandescent light sources ranging in floor, wall, ceiling and table desk fixtures stocked in USA.
- 507** Low voltage tube lighting and other various low voltage products including miniature twilites and firefly.
- 105** Lighting publications including technical, design, application, energy management and recommended practices. Membership and information on meetings, seminars and education programs for the entire lighting community.
- 451** The exhibit illustrates the major activities and programs of the New York Section of the IES, including the Richard Kelly Scholarship, the Lumen Awards, monthly professional development seminars, and comprehensive monthly lighting courses.
- 444** Contemporary architectural lighting.
- 116** Architectural fountain systems, underwater, architectural and landscape lighting.
- 317** Automatic, passive infra-red lighting control/occupancy sensor that reduces lighting energy consumption by turning lights on and off automatically.
- 402** Manufacturers of open ceiling decorative and custom ceiling systems
- 209** Magazines, media kits, circulation information, books.

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- 160** Contract design publication with monthly features on contract lighting. INTERIORS magazine will also feature a computer service to help attendees locate companies by product category.
- International Association of Lighting Designers, Inc.**
30 West 22nd Street
New York, NY 10010
(212) 206-1281
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- 241** IALD, a co-sponsor of Lighting World, is the professional association of the architectural lighting designer. Founded in 1969 in recognition of the importance of the role of light in architecture and interior design, IALD sponsors programs for both the established lighting designer and the student just entering the field. In addition to Lighting World, IALD administers a student intern program, an awards program, an educational program, and is involved in energy conservation standards and research.
- Motoko Ishii Lighting Collection**
Meikei Bldg. 6,
Rokuban-Cho, Chiyoda-Ku
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- 311** Combination of high-tech lighting and decorative lighting designed by Japanese Lighting Designer, Motoko Ishii, and manufactured by Lighting Collection Inc.
- ITT Lighting Fixture Division**
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- 705/706** Outdoor lighting products featuring high pressure sodium, mercury vapor, and fluorescent luminaires for commercial/industrial and utility users.
- J W Lighting, Inc.**
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- 213** Integralite—linear fluorescent lighting, JPL lighting—outdoor lighting products, Wright Light—indoor fluorescent lighting.
- Joslyn Mfg. and Supply Co.**
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- 246** Fixture lowering devices for indoor lighting systems, outdoor lighting pole system, aeronautical obstruction lighting systems and closed circuit TV systems.
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610 Functional task lighting products.

604 Indicator lights; lampholders, including wedge base type; discrete and packaged LED; wedgebase ReflectoliteTM systems.

503 Architectural fluorescent lighting equipment commercial and industrial recess and surface luminaires.

101 Decora designer line switches, Home Control System, as well as residential switches and receptacles.

445 Emergency lighting units and exit signs.

105 Monthly publication of the IES/NA features articles on current lighting applications, latest news on energy, products, industry and IES activities.

303 Dimming and control equipment for theatrical, architectural, television and film applications. Shown will be both manual and computer digital systems.

412 Track, display and accent lighting.

301 Manufacturer of outdoor lighting products, bollard style site lighting and area lighting standards, in both aluminum and steel.

713 Software tools for lighting analysis, including LUMEN-MICRO, LUMENS, and LUMEN-POINT. Microcomputer software for designers, specifiers, reps and manufacturers.

133 Commercial and residential lighting fixtures and systems, including functional and decorative types using a wide variety of light sources.

147 New Lightron 2 series fixtures—Designs—in—Linear Lighting—ambient, merchandising, vandal proof lighting and task lighting. Complete lighting systems.

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176 Specification-grade low-voltage and line-voltage lighting equipment, including track/surface mount fixtures, linear incandescent fixtures and controls.

733/734 Manufacturers of fluorescent lighting, emergency lighting, HID outdoor and industrial, down lighting, poles and flexible wiring systems for commercial and industrial applications.

107 Low voltage incandescent linear light system; high lumination in a very narrow profile; incorporates halogen lamp inserts where desired.

404 Architectural exterior lighting units, contemporary and traditional; bollards and HID interior indirect lighting units.

403 The Luminoptics Division of Universal Manufacturing Corporation designs, develops and produces electronic ballasts together with performance oriented electronic lighting control systems.

224 A line of incandescent and fluorescent full spectrum bulbs: The Chromalux and Lumichrome lines. Low voltage fixtures.

608 Electronic lighting controllers (with audio), low voltage fixtures (e.g. pinspots, rainlytes, recess highhats) helicopters, oscillators, chaser strips, rope lytes, tube lights, strobes, special effects.

220 Light dimming and control systems for architectural and energy management applications. Available to control all light sources used in building illuminations for U.S. and international installations.

158 Flexible arm task lighting for commercial/industrial applications; portable designers lamps for both residential and office environments.

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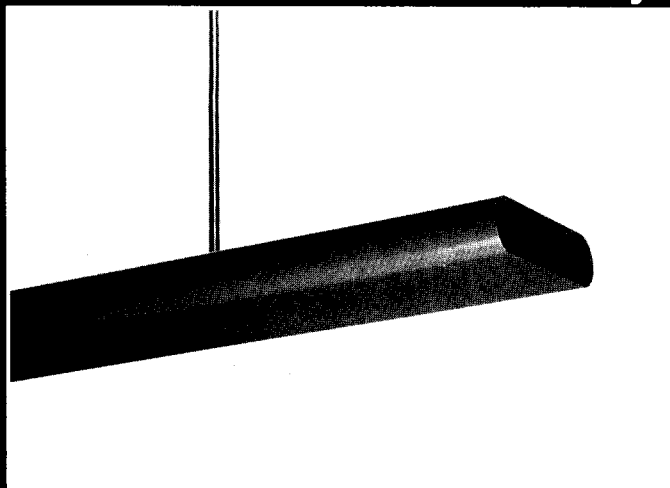
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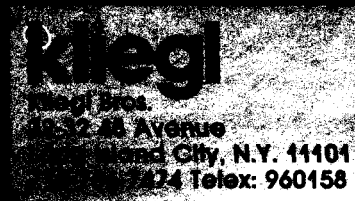
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305 Anodized aluminum 7 reflector qualities as well as decorative finishes in 19 colors. Available in sheets or coils.

123 Manufacturer of specification grade fluorescent and HID lighting fixtures and modular wiring systems.

718 Fluorescent lighting; parabolic fixture, staggered fixture, air handling fixture, wood surface fixture.

728 New lines for prime space interiors: linear and solid hardwood fixtures for general illumination, accent and wall washing. Literature available.

411 Illuminance, luminance meters chroma meters (color and lighting measuring instruments).

428 Complete line of architectural commercial lighting fixtures. Introducing specialized Miro T-70TM fixtures for energy efficient Osram HQI metal halide lamps.

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312 Self illuminated emergency exit sign "PER-MEX"[®]

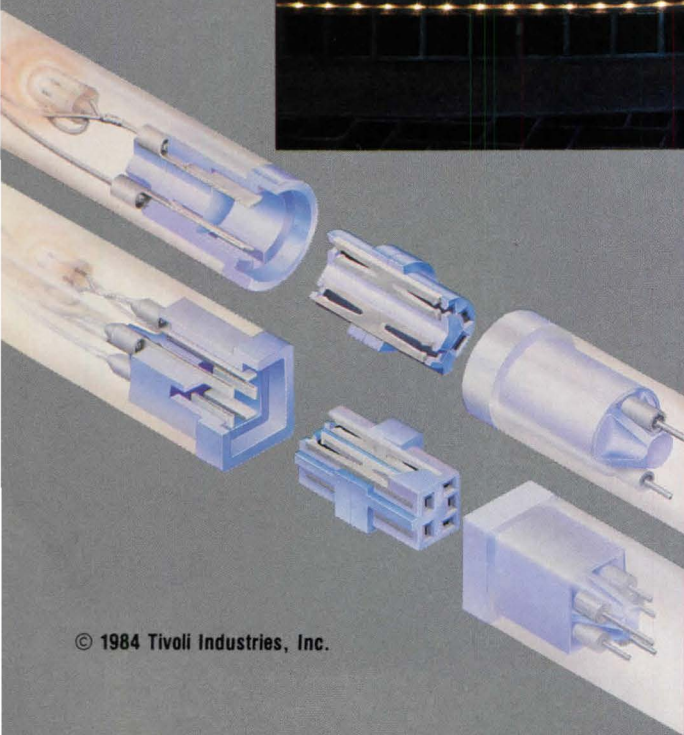
707 Association promotional materials related to benefits of membership in NEMRA—a 780-member-firm national organization of independent electrical manufacturers organization from across the nation (35 trading areas).

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324 Fluorescent lighting fixtures: commercial—recess—strips—parabolic—industrial and special applications.

138 Recessed-surface-pendant-direct-indirect-extruded aluminum perimeter—fluorescent lighting—designer portfolio—neolights-bold cel louvered ceilings.

401 Entertainment and architectural lighting.

440 Energy efficient lighting and fixtures.

245 LIGHT-O-MATIC turns off lights automatically when the last person leaves a room. Used in offices, classrooms, conference rooms, storage areas, corridors and warehouses. Can also dim lights and control HVAC, fans, etc. Savings are usually 35–50%.

186 Osram's innovative lighting solutions include new developments in metal halide, compact fluorescent, low-voltage halogen, and decorative incandescent lamps.

136 Lighting lenses and diffusers, Lensgard, Wallgard, Opus 4, Concept & Circline, Concept 6 Squarline, Concept 6 & Woodline.

431 Fluorescent lamps, mercury lamps, tungsten halogen lamps, light capsules.

200 A transparent panel, with a light source encased in its aluminum frame when switched on turns words and designs placed on its surface into glowing neon-like images.

108 Specialty lighting components, parabolic louvers, emergency battery packs, die cast aluminum parts, exit signs, fiberglass housings.

738/739 Lighting fixtures: "Commercial and Industrial Fluorescent HID"; "Suitable for Wet Locations"; "Hazardous Location"; (Hazardous Locations); "security fixtures"; "Marine"; custom designed "Specialty Lighting."

125 Linear fluorescent lighting.

219 Lighting products

414 HID outdoor lighting, functional and decorative. Cast aluminum poles.

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- 727** Publication
- 400** Lighting products
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- 409** Lighting products: luminaires for parks, streets, plazas, esplanades, and historic restorations; luminaire + post packages; also full-spectrum high-bay systems for gymnasiums.
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717 Emergency lighting and power systems.

109 Track lighting

715/716 Recessed fluorescent; decorative wood fluorescent; HID security, vandalproof HID fluorescent; utility fluorescent lighting.

501 Outdoor and indirect indoor lighting systems

112 Architectural area lighting—Profile “4” (cutoffs) and poles, floods—broadlites—HID and incandescent—Balli hi-HID indoor, enclosed and gasketed reflectors—high bays and specialties.

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434 Gallery of interior, exterior and custom lighting applications representing our simes, infranor and control divisions.

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(503) 688-7741</p> <p>Valmont Industries, Inc.
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(402) 359-2201</p> <p>Kurt Versen Co.
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(414) 354-6600</p> <p>Voltarc Tubes Inc.
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(203) 255-2633</p> | <p>185 Architectural dimming systems and controls.</p> <p>180 Structural structural support systems, track lighting, imported Italian design fixtures.</p> <p>415 Low voltage MR-16 fixture. Framing projectors, theatrical looking fixtures for commercial use.</p> <p>446 Low voltage decorative light tubing, chandeliers, curtains, bulbs and panels. Theatre aisle lighting and step lighting systems.</p> <p>314 Low voltage lighting control, time control systems for energy management, metal decorative wall plates for new and existing commercial/industrial buildings.</p> <p>432 Recessed lighting, track lighting, PL fixtures surface fluorescent, wall sconces.</p> <p>205 Solid state fluorescent ballasts for 1,2,3,4 lamp applications including Slimline and T-8 Octron lamps.</p> <p>115 Moving electronic message signs in a variety of sizes. Graphics and animation capability.</p> <p>452 Fluorescent lamp and high intensity discharge lamp ballasts. Fluor-O-Pac emergency lighting packs.</p> <p>111 Theatrical lighting equipment and supplies. Architectural instruments, dimming equipment and special lighting effects.</p> <p>308 Cast iron "Turn of the Century" ornamental outdoor streetscape equipment.</p> <p>168 Street, area and sports lighting steel structures; streetscape traffic furniture.</p> <p>448 Incandescent, H.I.D., low voltage, atrium, security lighting.</p> <p>418/419 Decorative wall brackets and pendants.</p> <p>204 Lighting products</p> |
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AAMSCO Lighting Inc.	708	Envel Design Corporation	702	Lighting Design & Application	105
AFG Inds., Cincinnati Gasket, Gray Glass, Torstenson Glass	124	Exide Electronics	701	Lighting Methods, Inc.	303
A.L.P. Lighting & Ceiling	307	Facilities Design & Management/ A Gralla Publication		Lighting Services Inc.	412
ARC Sales Inc.	106	Fantastic Plastic Inc.	139	Lighting Systems Inc.	301
Abolite Lighting, Inc.	450	Flec Systems Inc.	405	Lighting Technologies	713
Altaluce SPRL	211	Foremost Mfg. Co.	321	Lightolier	133
American Louver	154	Formed Plastics Inc.	242	Lightron of Cornwall, Inc.	147
American Scientific Lighting Corp.	315	Fyrnetics, Inc.	710	Linear Lighting Contemporary Ceilings	511
Amerlux, Inc.	721-724		602	Litecontrol Corporation	441
Architectural Cold Cathode Lighting	601	Gardco Lighting Inc./ Div. Thomas Industries		Litelab Corp.	176
Architectural Record	504	General Electric Lighting Business Group	202	Lithonia Lighting	733/734
Architel Systems Inc.	514	Guardian Light Co.		Lucifer Lighting Company	107
Area Lighting Structures Inc.	735	Guth Lighting		Lumec Inc.	404
Artemide Inc.	190	Hadco—Div. of Craftlite	443	Luminoptics/Div. of Universal Manufacturing Corp.	403
Atelier International, Ltd.	231	Halo Lighting/McGraw Edison	456	Lumiram Electric Corp.	224
		Highline Products Corp.	122	Lumitrol Corp.	608
Louis Baldinger & Sons, Inc.	240	Holophane, Div. of Manville	118	Lutron Electronics Co.	220
BeamO Corporation	233	Hubbell Lighting Division	226	Luxo Lamp Corp.	158
Belfer Lighting Manufacturing Co.	166	Hunt Electronics Co.	603		
Bend-A-Lite	137	Hydrel	110	magni-Flood, Inc.	243
Brandhurst Inc.	422		210	Marco/Marvin Electric Mfg. Co.	719
Brilliant Lighting, Inc.	447	IPI-Innovative Products for Interiors, Inc.	114	mcPhilben/Omega Lighting Div. Emerson Electric	149
		ITT Lighting Fixture Division	709	Mecho Shade Corp.	435
C.E.W. Trading Inc.	714	Illumalights/New Horizons		Mercury Lighting Products Co., Inc.	726
Capri Lighting, Sub. of Thomas Industries	143	Illuminating Engineering Society of North America	325	Metalloxyd, Inc.	305
CEAG Electric Corp.	611	The New York Section of the Illuminating Engineering Society	705/706	Metalux Lighting	123
Chloride Systems, U.S.A.	212	Illumination Concepts & Engineering	507	Mid-West Chandelier Co.	718
Colortran Inc.	145	Imperial Bronzelite		The Miller Co./Lighting Div.	728
Columbia Lighting Inc.	219	Infracon/Tishman Research Co.	105	Minolta Corp.	411
Contract Magazine/ A Gralla Publication	140	Intalite Louvers & Ceilings, Inc.		Miroflector Co., Inc.	428
Controlled Environment Systems Inc.	606	Interior Design Magazine	451	Moldcast Lighting	219
Crescent Lighting	128	Interiors Magazine	444	Moore-Lambert Industries, Inc.	322
Crouse-Hinds Lighting	437	International Association of Lighting Designers, Inc.	116		
Crownlite Manufacturing Corp.	611	Motoko Ishii Lighting Collection	317	NL Corporation	704
			402	NRD/Div. Mark IV Industries	312
Day-Brite Lighting	506	JW Lighting, Inc.	209	National Electrical Manufacturers Representatives Association	707
Delta Lighting Systems Inc.	406	Joslyn Mfg. and Supply Co.	160	National Lighting Company, Inc.	324
Devine Lighting	508			Neo-Ray Products Inc.	138
Devoe Lighting	326	K-S-H, Inc.	241	Ness Imports Inc.	401
Diversified Lighting Products Inc.	703	Keene Lighting Products	311	North American Philips Lighting Corp.	440
Diversitronics, Inc.	310	Kenall Security Lighting	213	Novitas, Inc.	245
Dual-Lite	219	Keystone Lighting Corp.	246		
Duxbury Lighting Corp.	113	Kingston Industries Corp.		OSRAM Sales Corp.	186
		Kliegel Bros.			
ECP/Energy Conservation Products	609	Koch & Lowy Inc.	155	PSI West	136
EMCO Environmental Lighting	605	Kulka Wiring Devices, Inc.	120	Panasonic Industrial Co. Special Products Division	431
EMR Lighting	731/732	LAM Lighting Systems	454	Panel Optics	200
Edison Price Inc.	421	Lazin Lighting	219	Paraflex Industries	108
Electrical Construction & Maintenance	504	Ledu Corporation	161	Paramount Industries Inc.	738/739
Electrical Consultant Magazine	313	Leecraft Mfg. Co., Inc.	103	Peerless Electric Co.	125
Electro Controls	729/730	Legion Lighting Co., Inc.	207	Prescolite/Div. U.S. Industries	219
Elkamet-Werk		Leviton Manufacturing Co., Inc.	725	Prodel Inc.	414
Lahn-Kunststoff GmbH	323	Lightalarms Electronics Corp.	438	Progress Lighting/Sub. Kidde Inc.	156
Elliptipar, Inc.	607		720	Progressive Architecture	178
Emergi-Lite, Inc.	449		610	Prudential Lighting	740
Endless Energy Inc.	320		604		
Energy User News			503		
Fairchild Publications	453		101		

QL Inc./Quality Lighting	309
RLR Industries Inc.	208
Relco	720
Restaurant & Hotel Design Magazine	727
Roctronics Entertainment	400
Roxter Manufacturing Corp.	737
Scientific Lighting Products	736
Self-Powered Lighting Inc.	436
Sentry Electric Corporation	409
Shakespeare Co.	229
Siltron Illumination Inc.	717
Silver Line Lighting	109
Sim-Kar Lighting Fixture Co., Inc.	715/716
J.H. Spaulding Co./Indalux	501
Spero Electric Corp.	112
Staff Lighting Corp.	173
Starfire Lighting	427
Sterner Lighting Systems Inc.	434
Stonco Lighting	130
Strand Century	127
Sure-Lites, Halo	
Div. McGraw Edison Company	206
Swivelier Company Inc.	201
Sylvania Lighting	182
TIR Systems	408
Theatre Techniques Inc.	185
Thunder and Light Ltd.	180
Times Square Lighting	415
Tivoli Industries Inc.	446
Touchplate International Inc.	314
Trakliting/Troy Lighting	432
Triad-Utrad	205
Trionics Corp.	115
Universal Manufacturing Corp.	452
Universe Stage Lighting	111
Valley Iron & Steel Co (VISCO)	308
Valmont Industries, Inc.	168
Kurt Versen Company	448
Visa Lighting	418/419
Voltarc Tubes Inc.	204
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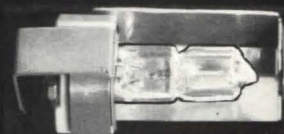
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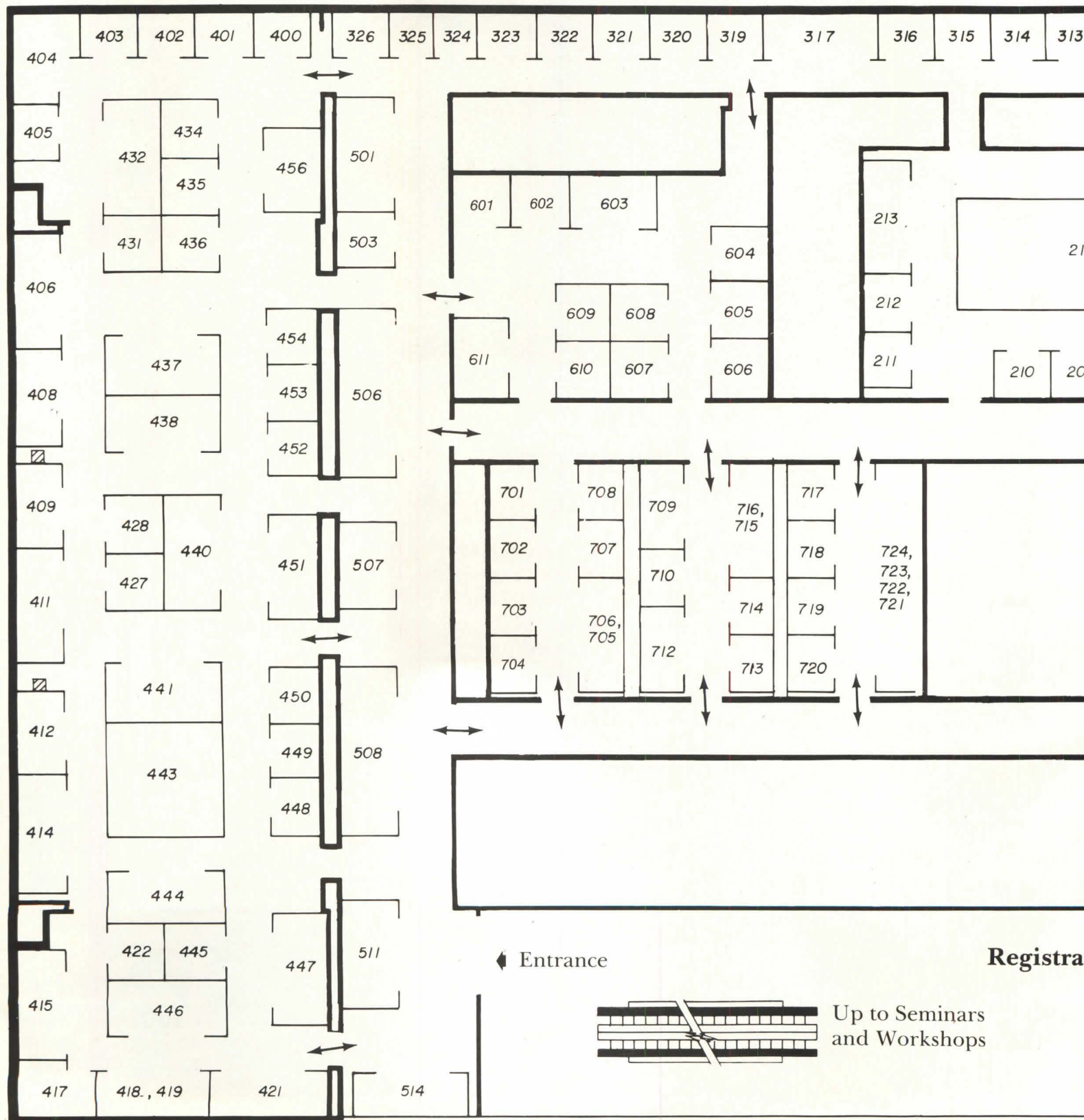
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P.O. Box 370375, Miami, FL 33137 • Telex: 358432

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Circle No. 365 on Reader Service Card

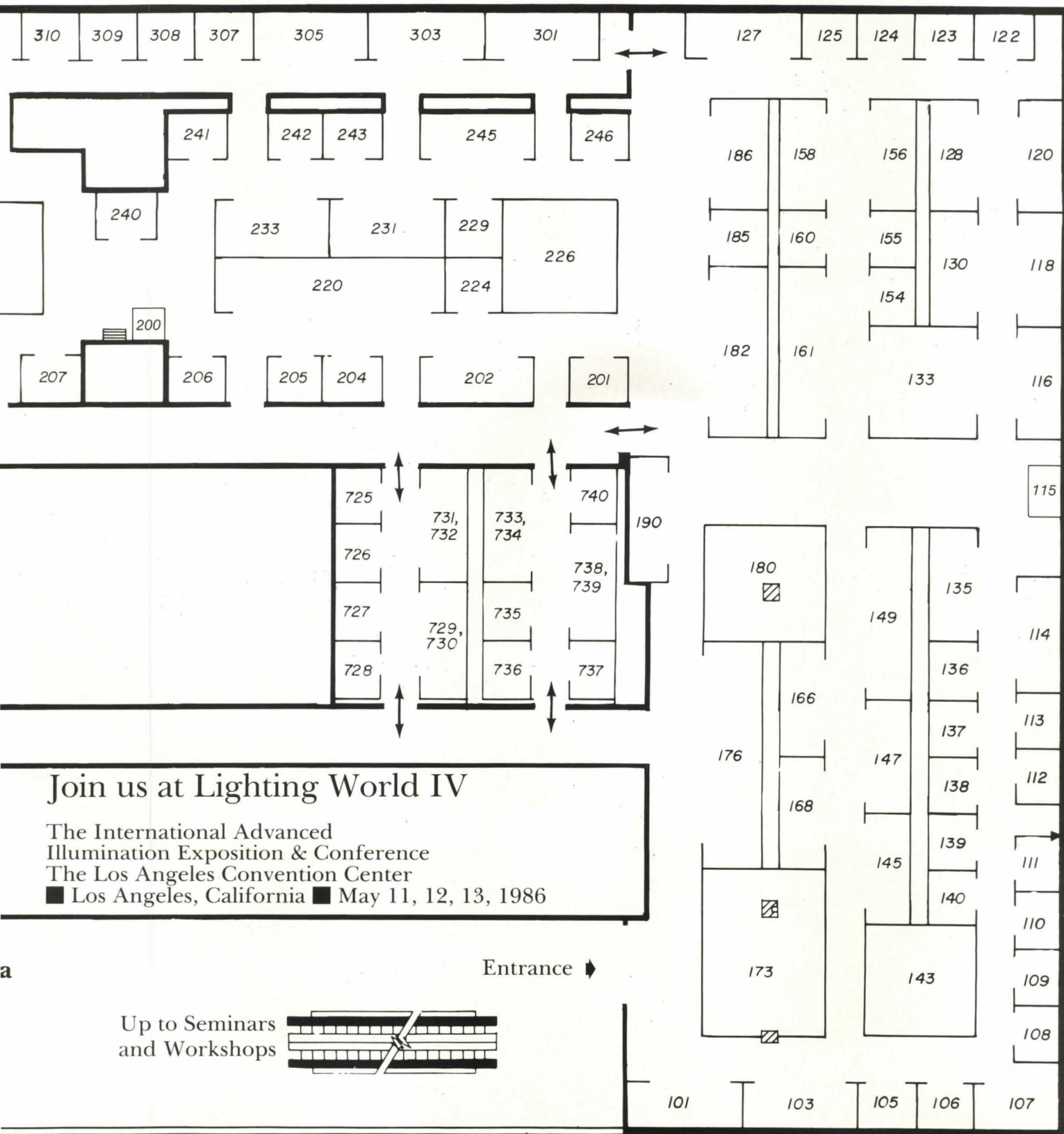
Lighting World III Floor Plan



The arrows on this floor plan indicate access points for the various areas of the exhibit floor.
 Enlargements of this plan with reference indicators are posted in selected spots on the exhibit floor.

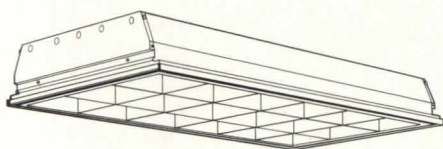


Be Certain to Visit All of the Exhibits.





Products



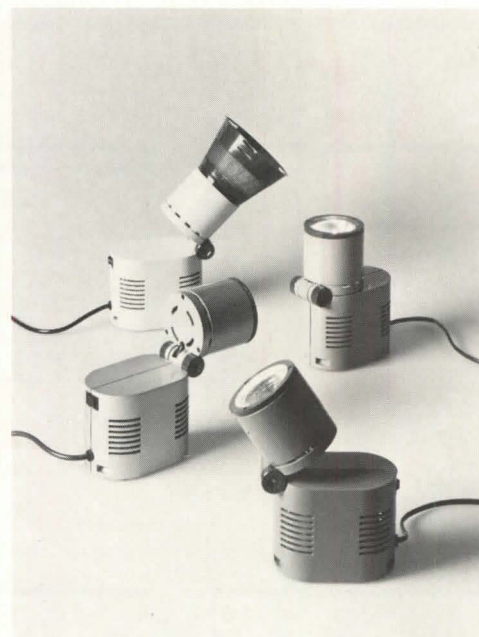
Day-Brite: Long recognized as a leader in specification grade products, Day-Brite Lighting proudly features their 2, 3, and 4" Paralouver lines at Lighting World III.

Circle 104 on reader service card



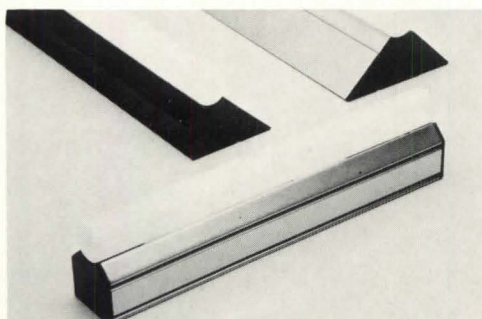
Atelier International: Has introduced Crisol, a new small-scale pendant lamp from the design team of King, Miranda, and Arnaldi. Made of pressed, etched glass, Crisol's cone-shaped diffuser is suspended by two braided steel cables which conduct low-voltage electricity from a transformer in the ceiling rose to a single 50-watt Halogen bulb.

Circle 160 on reader service card



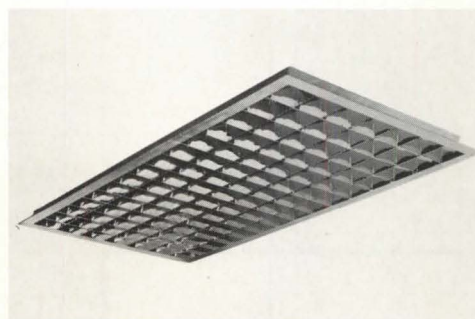
Artemide: The Pilade series, designed by Ernesto Gismondi, is a series of spotlamps available with the MR16 projector bulb or the PAR36, featuring table, clamp-on, track and wall models.

Circle 102 on reader service card



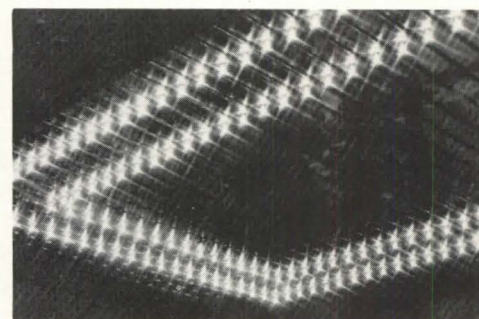
ALKCO: Will feature new decorative linear incandescent fixtures called Lincandescent[®], used singly or in continuous patterns for warm ribbons of accent lighting.

Circle 100 on reader service card



American Louver: The Paracube III louver achieves the high CU's (low .70's) of a lens, while retaining the cut-off angle (30°) of a fully specular vacuum-metallized parabolic louver.

Circle 101 on reader service card



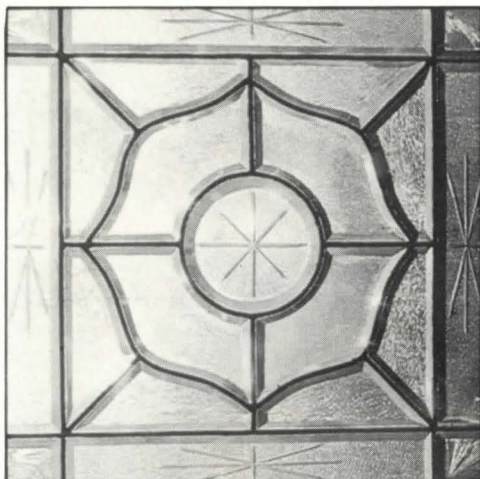
Belfer: Manufacturer's 1985 Linear Lighting Guide includes information about low-voltage high-output miniature lighting, line-voltage functional lighting, and indoor/outdoor marquee lighting strips.

Circle 103 on reader service card



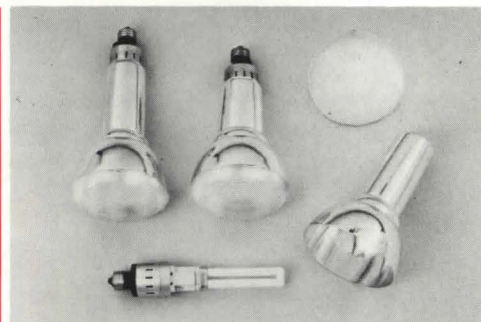
Devoe: Pictured is one of the company's more famous projects. The Brendan Byrne Arena in the New Jersey Meadowlands shows our illuminated handrails.

Circle 106 on reader service card



Envel Design: Will display its 1985 line of stained, beveled, embossed, and graphic energy efficient decorative luminous ceiling lenses and systems. Please stop by!

Circle 109 on reader service card



ECP: The Model 510-RFL uses a 5, 7 or 9 watt fluorescent twin tube lamp. The retro-fit unit screws in to the existing incandescent socket of a recessed hi-hat and replaces up to 100 watts.

Circle 110 on reader service card



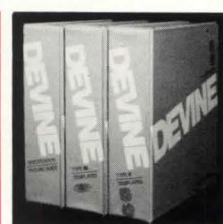
Diversitronics: The PLC-6 is a six channel, field programmable, crossfader which allows programming, storage, and instant recall of any of four distinct, forty (40) step programs.

Circle 107 on reader service card



Emergi-Lite: Introduces the new BX70 series: Universal Die Cast Aluminum Exit Signs. The BX70 series features precision die-cast aluminum construction, a slim profile and universal mounting.

Circle 108 on reader service card



Devine: 3-volume catalog library includes more than 150 fixtures for outdoor area, security and landscape lighting applications; and two volumes containing computer-drawn templates.

Circle No. 105



flexibility in
graceful design
combines
incandescent-fluorescent
low voltage-track lighting



Card Party Store—Boston, MA
Jon Greenberg & Associates—Store Designers & Planners
Lighting Consultants: Illuminating Concepts.

LINEAR CYLINDRICAL SYSTEMS LCS2 LCS4

The art of lighting for merchandising—the creativeness of the designer of commercial interiors—the unlimited solution: Monopoll—2" dia. Varipoll—4" dia. systems.

- shapes to adapt with the architectural concept of the ambient—countless possibilities.
- decorative, display, and functional general lighting in a single suspended structure including incandescent, fluorescent, low voltage and track luminaires.
- lighting perfection where it's wanted—by means of inserts matching a module suitable for the most complex layouts.
- extruded aluminum, white, bronze, polished anodized.

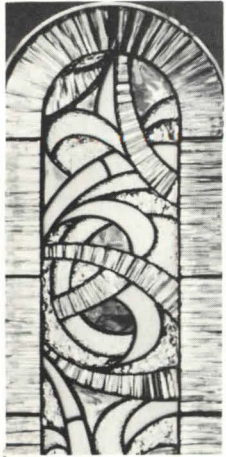
OMEGA
the lighting specialist for the architectural interior



OMEGA[®]
LIGHTING

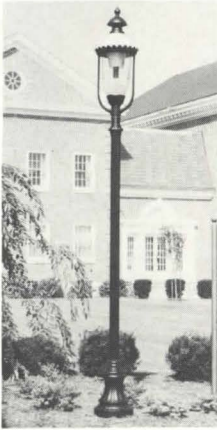
EMERSON ELECTRIC CO.
270 LONG ISLAND EXPRESSWAY/MELVILLE, NEW YORK 11747 516-293-8500
In Canada: Emerson Electric Canada Ltd., P.O. Box 150, Markham, Ontario, Canada, 416-294-9340

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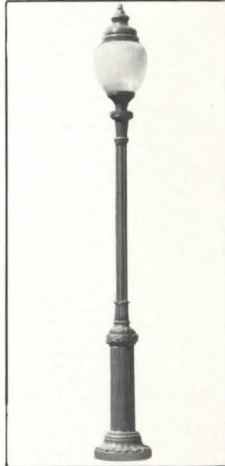
Fantastic Plastic: Custom handcrafted panels enhance the quality of light for your innovative design concepts. Unlimited textural effects and nuances of color can be produced. Create your own design or let us do it for you.

Circle No. 111



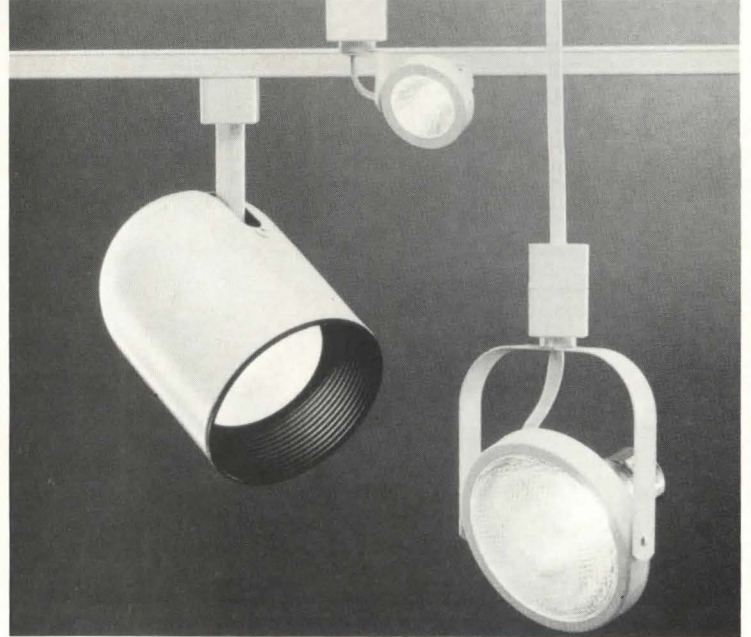
Hadco: Yesterday's replicas and today's progressive designs constructed of durable cast aluminum and engineered to meet today's lighting requirements. Versatility in sizes, mounting arrangements and lighting sources to meet your needs.

Circle No. 112



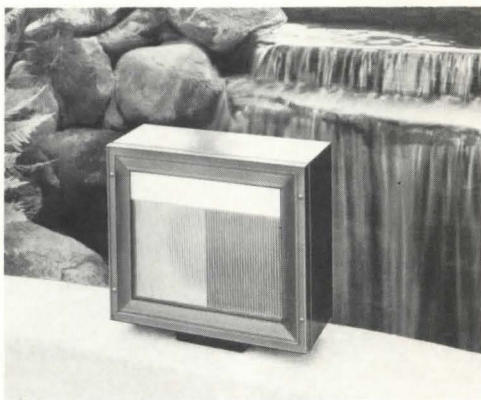
Highline: A variety of high-strength, maintenance-free, highly-detailed polymer composite replica lighting poles designed to replace or simulate old cast iron decorative poles are now available from Highline Products Corporation.

Circle No. 114



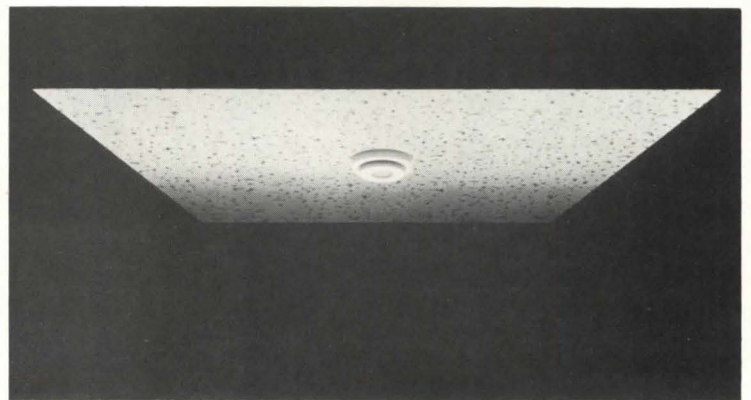
Halo Lighting: Presents a greatly expanded product line, aimed at architects and designers. A brand-new technical catalogue provides full information about design directions.

Circle 113 on reader service card



Hydrel: Expanded line of architectural and underwater lighting, featuring the new "1000 Series" System that meets a wide range of indoor/outdoor needs with one basic fixture.

Circle 115 on reader service card



Infracon: Turns office lighting on and off as it detects and responds to changes in radiated heat caused by the presence and movement of a human body. After installation, the only visible portion of the system is the sensor's bezel, which measures less than 3 inches in diameter.

Circle 116 on reader service card

END GLARE



LAM lighting systems illuminate spaces appropriately. No glare. No harsh shadows. No undue hot spots.

From open spaces to VDT stations to private offices, LAM systems help you realize your lighting design objectives.

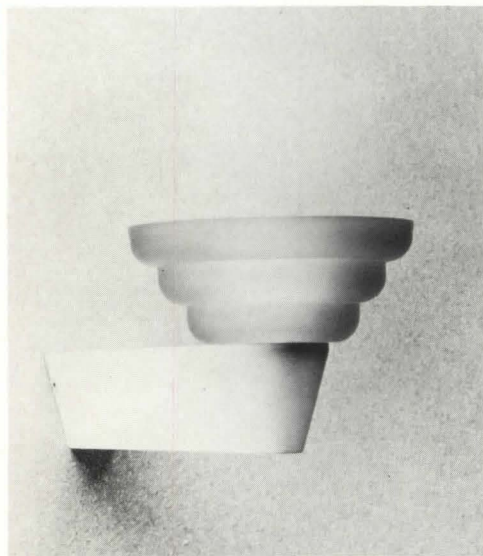
No matter what the period or the plan, specify LAM indirect lighting systems. Turn light into day.

LAM LIGHTING SYSTEMS, 94 New Salem Street, Wakefield, MA 01880, 617-245-5115.



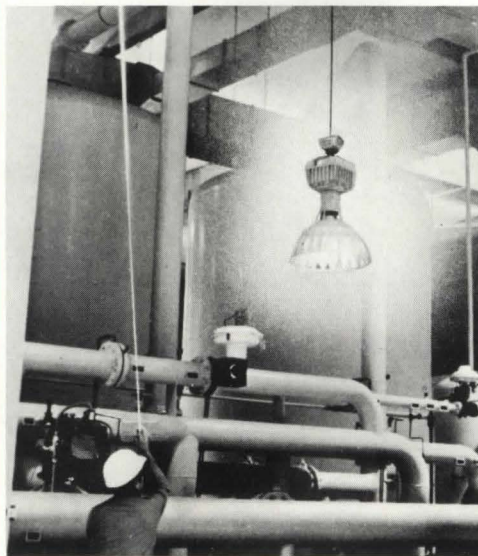
LAM
LIGHTING
SYSTEMS

Circle No. 362 on Reader Service Card



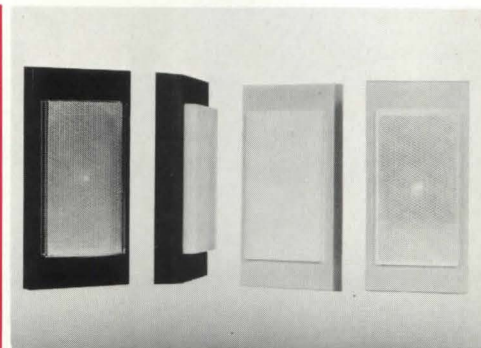
IPI: Designed by Roberto Pamio for Leucos, Nelly is available in floor and wall versions. The reflector is of Murano glass, specified for 150W halogen, and available in three color variations.

Circle 117 on reader service card



Joslyn: Wherever fixture height creates problems, Joslyn-Thompson® lowering systems are the solution, available for surface mounted, flush mounted and area outdoor lighting pole applications. Eliminates scaffolding, ladders, catwalks and special high lift equipment.

Circle 118 on reader service card



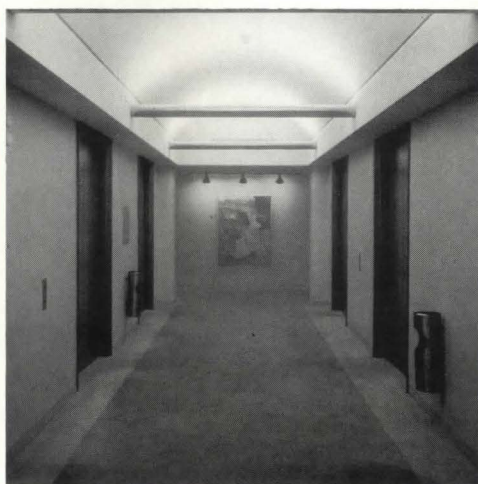
Kenall: Announces the reintroduction of the original Sentinall light fixture. The Sentinall features a durable exterior diffuser, an energy efficient light source and the slimmest profile in the industry.

Circle 120 on reader service card



JPL: The icon floorlight for lamp sizes 70 to 400 watts metal halide or high pressure sodium in one compact cast aluminum housing.

Circle 159 on reader service card



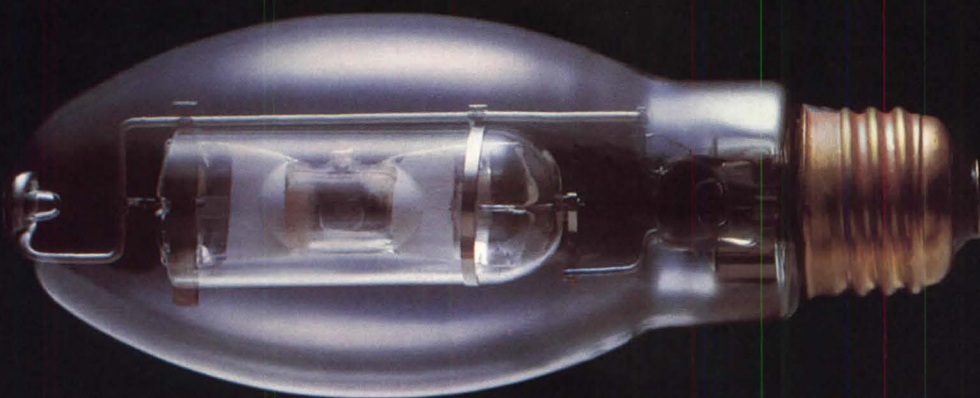
Integralite: Featuring new round and rectangular profiles of the latest in the state of the art of linear fluorescent lighting systems.

Circle 158 on reader service card



Keene: Features indoor/outdoor medical and industrial lighting equipment. Pictured above is the Silhouette Area Rectilinear Fixture. Come meet the rest of the Silhouette family.

Circle 119 on reader service card



We've added a whole new dimension to our Metalarc line.

Introducing the 100 Watt Metalarc® lamp.

It's everything designers have been looking for in a metal halide lamp.

It's small. So it performs like a true point source for more accurate and more controlled lighting. What's more, it fits comfortably in low ceilings.

It's warm. With a correlated color temperature of 3200K, it has all the superb color rendering attributes of our Metalarc line.

It's compact. The 100-watt Metalarc lamp fits neatly into most new low profile luminaires.

It's incredibly efficient. At up to 85 lumens per watt, the 100-watt Metalarc lamp makes the perfect addition to our energy-saving ESP family of Sylvania light sources.

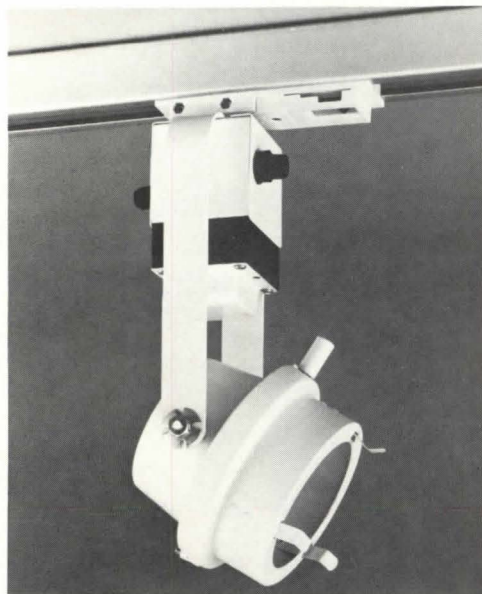
In short, it's a lighting designer's dream come true. And why not. There's no other metal halide lamp like it. For more information, contact your IED

Independent Electrical Distributor or write or call GTE Products Corp., Sylvania Lighting Center, Danvers, MA 01923 (617) 777-1900 ext. 2650.



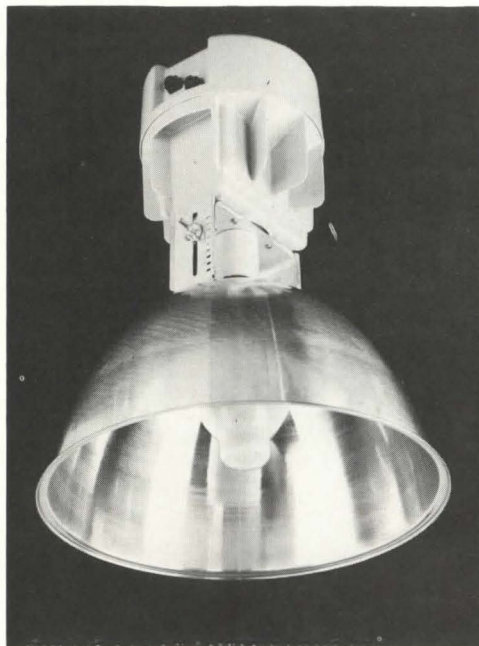
SYLVANIA

GTE



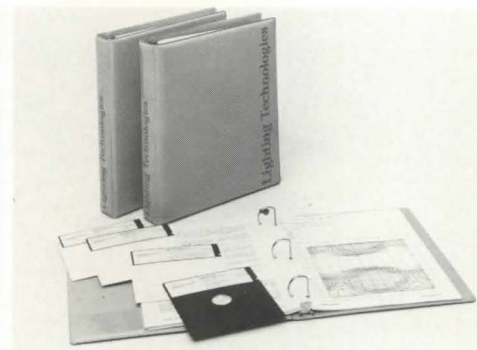
Lighting Services: Announces that it has designed and engineered a new optional built-in dimmer for practically all standard and low voltage LSI units.

Circle 126 on reader service card



Keystone: Keybay is a new H.I.D. High-Bay Industrial fixture offered by Keystone Lighting. It features die cast aluminum power heads and Tab-lok precision adjustable reflectors.

Circle 122 on reader service card



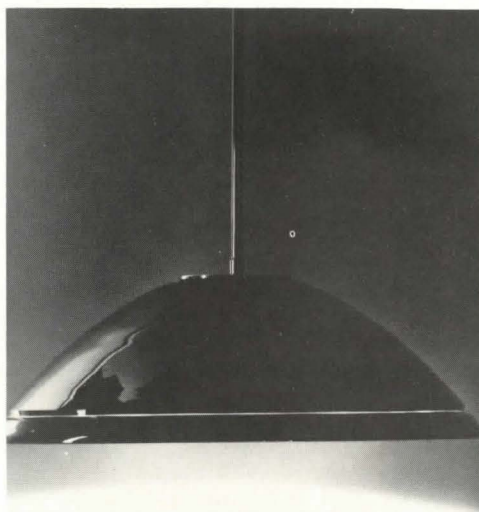
Lighting Technologies: Software Tools for Lighting Analysis: LUMEN-MICRO and LUMEN\$ for indoor applications, LUMEN-POINT for outdoor lighting. For designers, specifiers, manufacturers and reps. For IBM microcomputers, compatibles.

Circle 127 on reader service card



LAM: Will display quality glare-free systems with fluorescent and HID sources for offices, VDT areas, institutions and other spaces requiring visual comfort and efficiency.

Circle 125 on reader service card

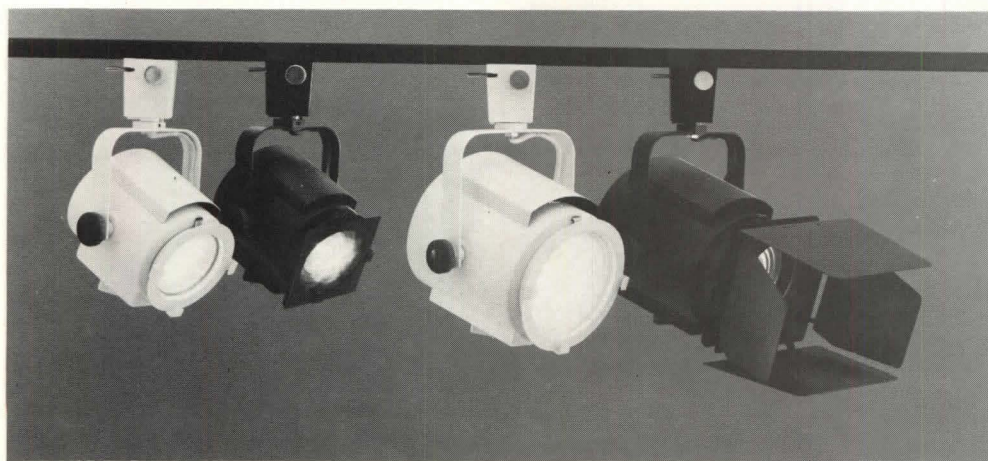


Koch & Lowy: Features a number of different models suitable for task and ambient lighting, including Eagle and Wings, designed by Piotr Sierakowski.

Circle 123 on reader service card

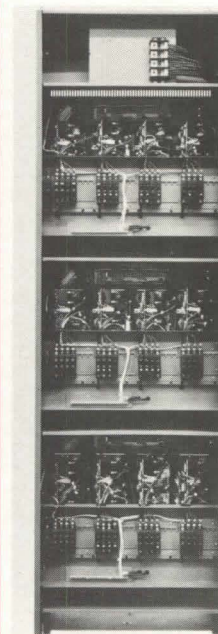
Kulka Smith: Manufacturer of lampholders for indoor and/or outdoor use for fluorescent low pressure sodium and PL style lamps.

Circle 124 on reader service card



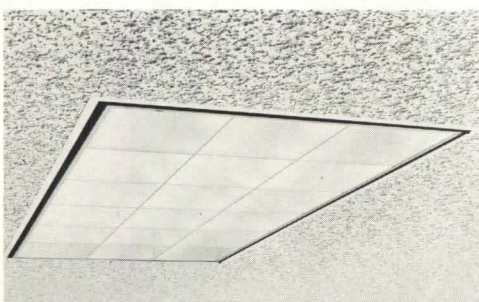
Lightolier: Designer and manufacturer of high-performance illumination systems and stylish lighting products. Lightolier will display a number of functional and decorative fixtures.

Circle 128 on reader service card



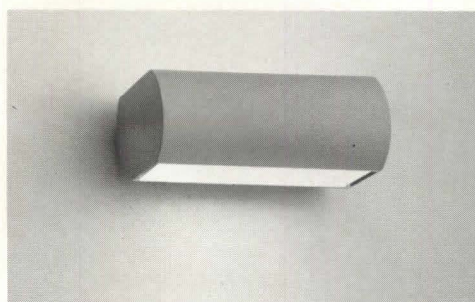
Lutron: Dimmer Panels DP-4, 8, 12 are electrical enclosures for dimming modules and related equipment. These dimmer panels provide very high density systems.

Circle 133 on reader service card



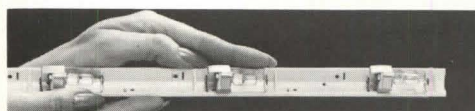
Columbia Lighting: Manufactures a complete line of specification grade fluorescent luminaires for installation in offices, institutional and commercial buildings. Key products are the Parabolume series, recessed troffers, designer fluorescent and specialty lighting.

Circle 161 on reader service card



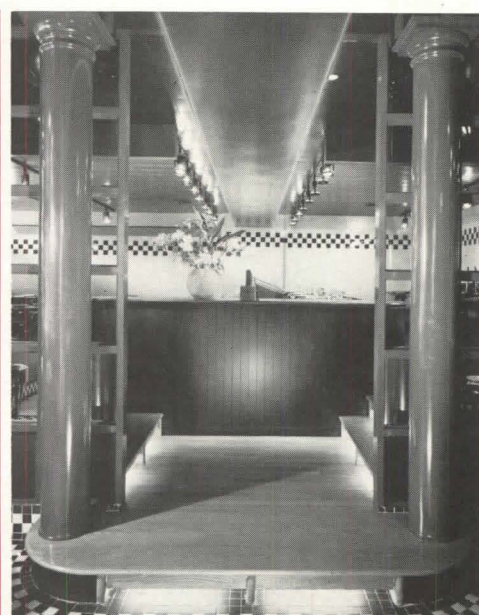
Litecontrol: The Turbo is one of four wall sconces in the manufacturer's architectural series designed for twin tube compact fluorescent lamps. The fixtures are available in several different shapes.

Circle 129 on reader service card



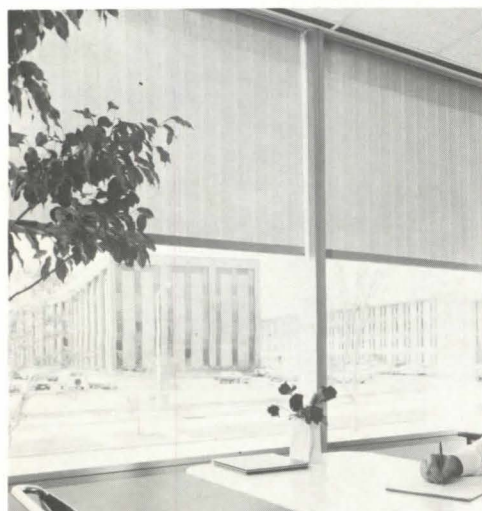
Lucifer Lighting: Which brought to the lighting industry a unique low voltage linear lighting system, followed by halogen adapter inserts, has now introduced the new Lucifer Incandescent Linear Tube System.

Circle 131 on reader service card



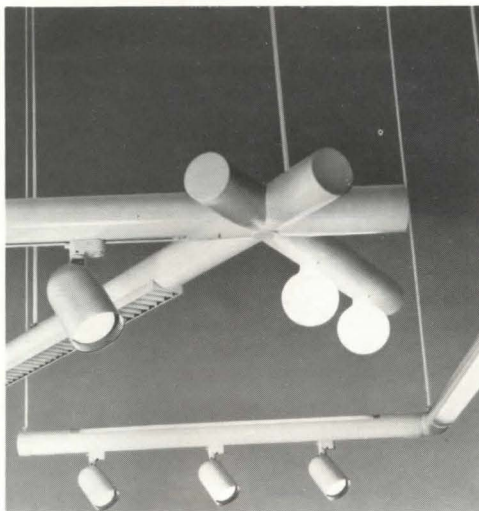
Litelab: Will exhibit specification-grade low-voltage and line-voltage fixtures, including track/surface-mount and linear incandescent models, and control equipment.

Circle 130 on reader service card



Mecho Shade: The Mecho and Electro Shade Systems are well-constructed and conceived total hardware systems for operating solar control shades on almost any size and style glazing.

Circle 135 on reader service card



mcPhilben/Omega: Shown at the mcPhilben/Omega lighting display: two new modular lighting systems combining decorative display and functional general lighting in a single suspended structure including incandescent, fluorescent, low voltage and track luminaires.

Circle 134 on reader service card



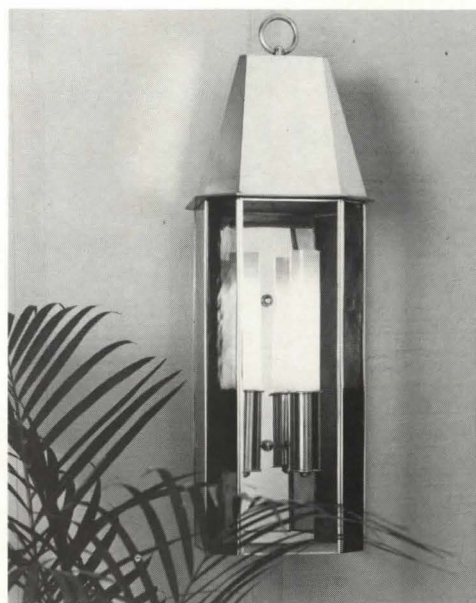
Mercury Lighting: All-aluminum damp location fluorescent luminaire currently installed in some of the most prestigious buildings in the country. Complements a full line of fluorescent fixtures.

Circle 136 on reader service card



Lumec: Beyond an extensive, standard luminaire selection, Lumec responds to unique applications with a dynamic designer team, developing innovative units from architects' and engineers' original concepts.

Circle 132 on reader service card



Moore-Lambert: New Designer series features solid brass, handcrafted glass and exceptional quality throughout. Unique Torches with PL type lamps for excellent energy economy make for exciting lighting.

Circle 138 on reader service card



Metalloxyd: Will exhibit anodized aluminum used in louvers, reflectors and for decorative applications. Finished products using Metalloxyd, Inc. material will also be shown.

Circle No. 137



NL Corporation: Designers and Manufacturers of Recessed, Incandescent and HID, Trak, Church, Fluorescent and Custom Lighting since 1905.

Circle 140 on reader service card



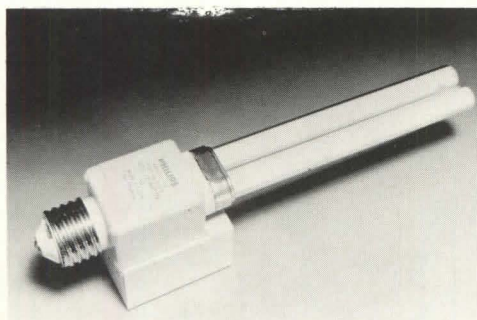
Moldcast Lighting: The new Modules III "sharp cutoff" luminaire and the versatile MDL multi-distribution luminaire will be featured along with other Moldcast high performance architectural luminaires.

Circle 162 on reader service card



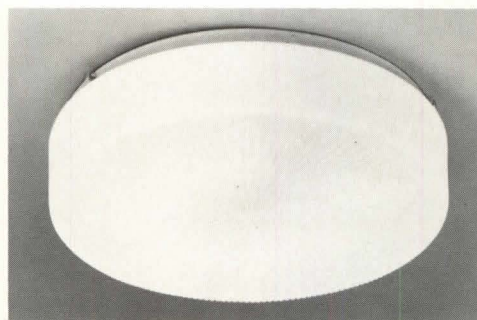
Motoko Ishii: Combination of high-tech lighting and decorative lighting designed by Japanese lighting designer, Motoko Ishii, and manufactured by Lighting Collection Inc.

Circle 139 on reader service card



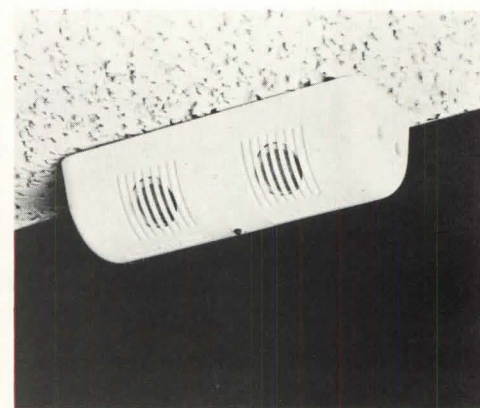
North American Philips: PL series of fluorescent lamps offers high efficiency, good color rendering and long life in a miniature, single-ended tubular shape presently available in four sizes.

Circle 141 on reader service card



PSI West/PSI South: A leading manufacturer of lenses and diffusers for the lighting industry. Featuring: Lensgard, Opus 4 and Concept 6 Light Assemblies.

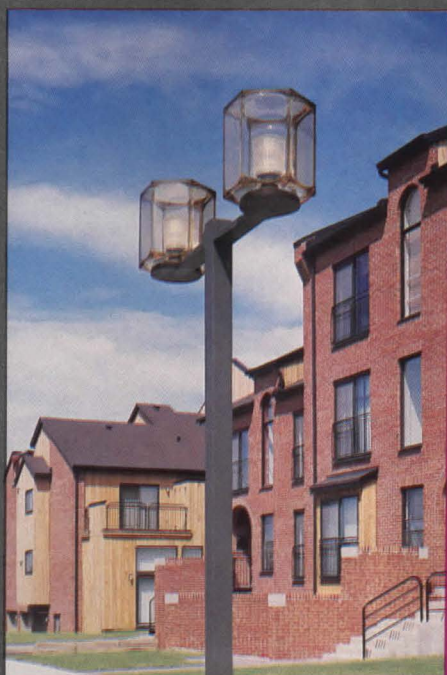
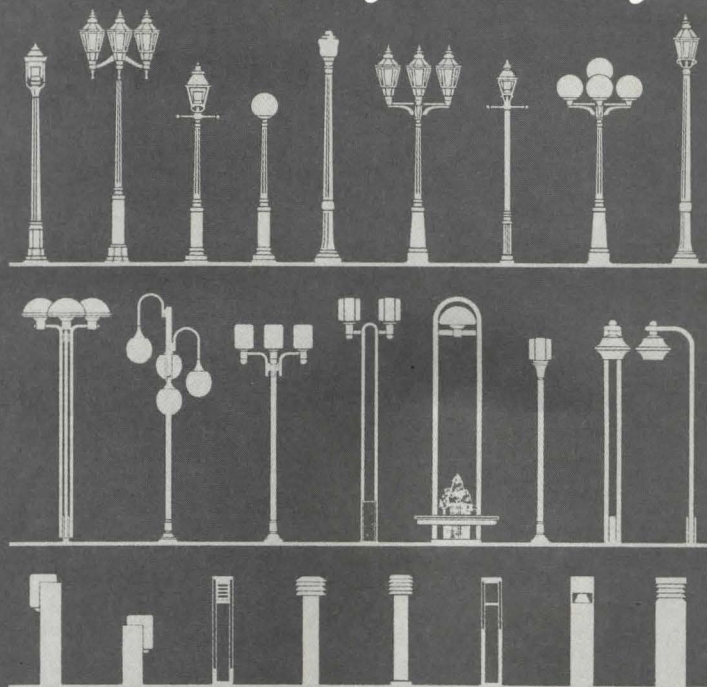
Circle 143 on reader service card



Novitas: Light-O-Matic turns off lights, automatically, when the last person leaves a room. Can also dim lights and control HVAC, fans, and other mechanical systems.

Circle 142 on reader service card

The Lumec Design Advantage



Lumec broadens the potential for distinctive harmony between luminaire and landscape with a remarkably varied selection of designs:

- The Traditional Series, honoring an esteemed heritage with authentic character and detail.
- The contemporary Landscape Series featuring extensive, subtle, aesthetic options, for a more precise solution to project requirements.
- The Bollard Series, engineered for tough efficient performance, yet charming in any season.

Need a one-of-a-kind luminaire? Lumec brings to life innovative units derived from architects' and engineers' original concepts.

LUMEC INC.

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J7E 4K3

LINCANDESCENTS™

masterful strokes
of incandescent warmth
convert ambience
into ambiance

LINCANDESCENTS.™

The flattering warmth of incandescent lighting has taken on a linear dimension. Continuous lengths of low-lustre incandescent light create a new elegance in interiors, allowing the designer to "paint" a space with the color rendering which makes people look and feel their best. LINCANDESCENTS; no longer a missing color in the designer's palette for commercial and residential settings. Contact your local ALKCO representative or write us for literature.

Elegance and attention to detail. The LINCANDESCENTS' source is presented on a continuous 45° beveled platform to emphasize the beauty of its pure form and to maximize the utilization of its light output. One or two triangular side reflectors can be added, transforming the appearance of LINCANDESCENTS to make a variety of expressive design statements.



LINCANDESCENTS come in three lengths and can be mounted end-to-end for longer runs of continuous incandescent illumination.



12" 20" 40"



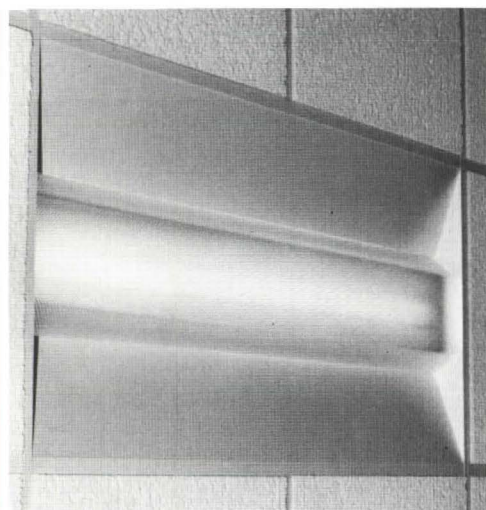
ALKCO
enlightens
your tasks.



ALKCO

A SUBSIDIARY OF JAC JACOBSEN INDUSTRIES, INC. 11500 W. Melrose St., Franklin Park, Illinois 60131 (312) 451-0700

Circle No. 321 on Reader Service Card



Paramount Industries: The Flexillum JEM with an all-new look is an innovative approach to illumination for the conventional 2 x 4 grid ceiling. It is highly efficient and has the ability to utilize one, two, or three lamps.

Circle 144 on reader service card



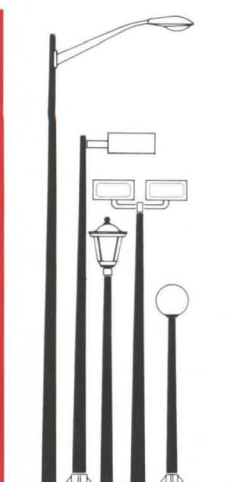
Progress Lighting: New micro-size track lights featuring standard voltage (120V) MR-16 lampholders, plus 12-volt MR-16 lampholders with new transformer options.

Circle 148 on reader service card



Sentry Electric: The SCP luminaire that lights up New York's Central Park is now available with decorative matching post for street, park, or walkway. Other Victorian, Renaissance, or modern design luminaires available.

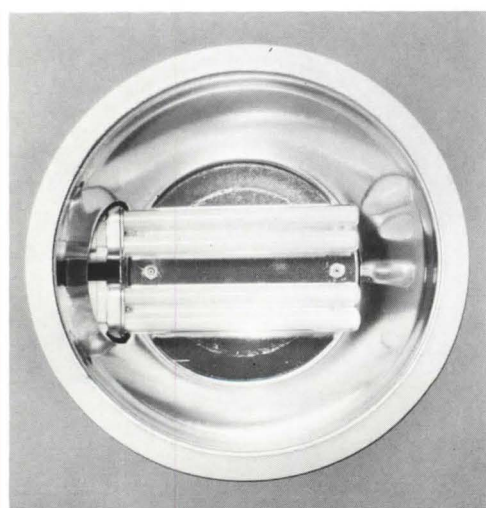
Circle No. 149



Shakespeare:

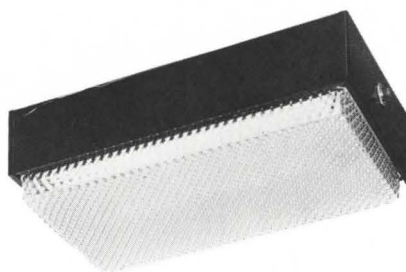
Fiberglass light poles are durable, aesthetically pleasing, versatile, economical, lightweight and easy to install. Available in six colors for residential, commercial and electric utility applications.

Circle No. 150



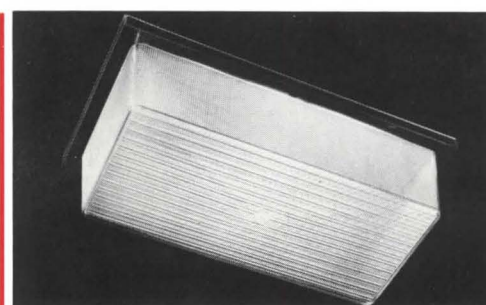
Prescolite: Featuring the Midas family of products which combines standard product convenience, availability, and price with custom system technology and sophistication. More imagination from Prescolite Controls.

Circle 146 on reader service card



Siltron: One of the oldest manufacturers of emergency lighting and power equipment, introduces the Li'l Elf, an attractive alternative to emergency lighting.

Circle 151 on reader service card



RLR Industries: V610 & V713 VANDAL Type Prismatic Lens-Hi-Impact, Hi-Strength, Hi-Heat UV Stabilized Polycarbonate-Can be used with—PL Bulbs, HPS 35W, 50W 70W-Incandescent & LPS Bulbs.

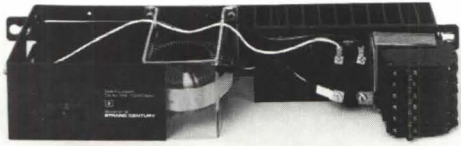
Circle 163 on reader service card

Prodel: Introduces the V.I.P., high quality cast aluminum with a natural finish. Available in three dimensions with wattages varying from 35 to 1147 watts using HID lamps.

Circle 147 on reader service card

Peerless: The even illumination of Peerless' Very Wide Spread Indirect System is ideal for lighting VDT spaces, where "hot spots" produce glare on screens.

Circle 145 on reader service card



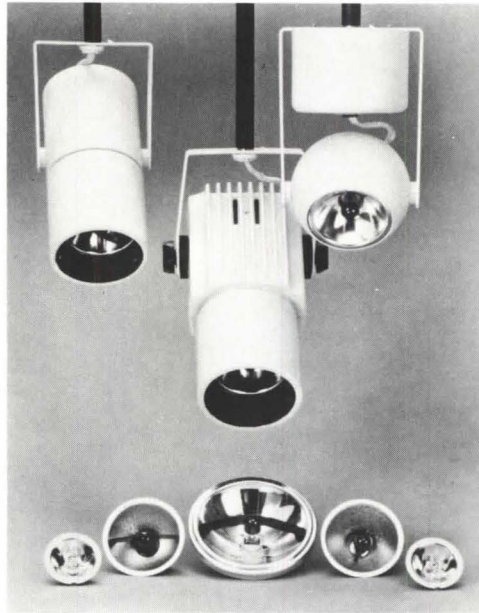
Strand Century: Eviron 2 by Strand Century is a "state of the art" dimming system for architectural lighting control. Incandescent, fluorescent, cold cathode, and low voltage dimming available. Featuring user-friendly advanced control technology.

Circle 152 on reader service card



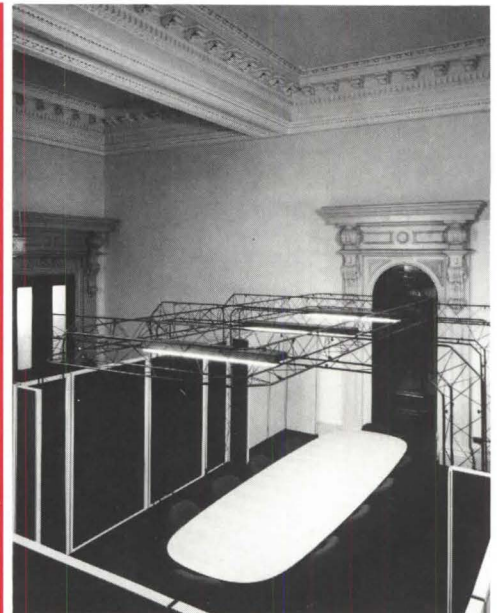
Triad-Utrad: A division of MagneTek, Inc., will display a complete line of electronic BallaStar ballasts for 1, 2, 3, and 4 lamp fluorescent and T-8 Octron applications involving 14 products in both 120 and 277 volts.

Circle 155 on reader service card



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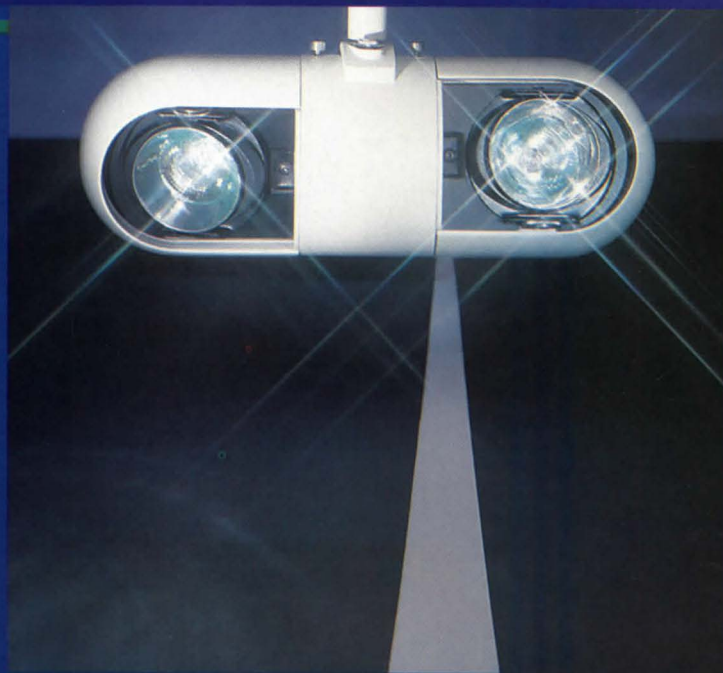
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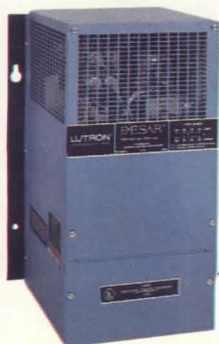
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Books

Early Aalto

Alvar Aalto's architecture is considered Modern, yet exhibits a traditionalism revealing the cultural and architectural heritage he worked within, and a design sensibility that is not specifically Modern in conception. Unlike a number of his contemporaries, Aalto did not use industrialized processes as a compositional technique for his architecture, but instead incorporated traditional and historic as well as Modern ordering methods and sources of expression in his work. Increased understanding of Aalto's production, especially his writings and early works, indicate more fully the influences from Finnish Classicism and National Romanticism, Scandinavian vernacular architecture, and from the Classical and vernacular traditions associated with the Mediterranean that also informed his architecture.

Since his death in May 1976, the corpus of literature assessing Aalto's architecture has increased substantially. Inquiry ranges from historical investigations and evaluations of Aalto's work—focusing upon his relationship to contemporaneous trends in Modern architecture and Finnish architectural and cultural history—to critical interpretations seeking to situate his architecture within a wider theoretical framework. Both modes of discourse are important, as they begin to address the true substance of his architectural contribution, eschewing the long-held notion that Aalto's architecture was primarily a combination of irrational and organic elements and attributes too enigmatic for critical interpretation and assessment. While we have gained deeper insight to Aalto's architectural productivity, the experiences that formed his personality remain incomplete. Göran Schildt's *Alvar Aalto: The Early Years*, the first of an intended three-volume biography, begins to penetrate and unravel the facets of Aalto's early life and career.

Schildt's 30-year close friendship with Aalto places him among the few individuals capable of interpreting the influences and experiences shaping the Finnish master's life. A prolific author, he has had complete access to all primary material (letters, manuscripts, sketches, paintings, architectural drawings, etc.) that comprise Aalto's archive. But it should not be assumed that Schildt is Aalto's Boswell; he is rather, as asserted in the introductory chapter, Aalto's Gibbon. As a result, *The Early Years*, which covers the period from Aalto's birth in 1898 until he moved his office from Jyväskylä to Turku (1927), achieves significance through its

Alvar Aalto: The Early Years by Göran Schildt, translated from the Finnish by Timothy Binham. New York, Rizzoli International Publications, Inc., 1984. 292 pp., 278 illus., \$35.

documentation and critical interpretation, as well as through articulating the factors guiding Aalto's personal development.

Family and forest had a major impact on the young Aalto. While his familial context represented the duality of *fin-de-siècle* Finnish society—the Scandinavian liberalism represented by his mother's Swedish-speaking family, and the nationalism concomitant with his father's Finnish-speaking heritage—both families were inextricably tied to Finland's forests: his father J.H. Aalto was a district surveyor, while his maternal grandfather Hugo Hamilkar Hackstedt was chief instructor at the Evo Forestry Institute. The forest is a "common denominator" for the three generations, and Aalto's intimate contact and understanding of the Finnish forest, beginning in childhood, achieves significance in his later work. For as Schildt clearly explains, "This is not a matter of romanticism or mysticism, but of their opposite, an extreme sense of reality; a sharing in nature's own wisdom and reality."

Jyväskylä, where the Aalto family moved in 1903, was "an intellectually lively town," of some 3000 inhabitants. In detailing the myriad events influencing Aalto's childhood, Schildt covers a wide spectrum. The more important factors include: the social and political climate in Finland in the early 1900s, and J.H. Aalto's participation in the events of the day; the free-spirited community of families that comprised the typically Finnish townhouse compound the Aaltos owned (especially the young Aalto's friendship with Aku Nyberg, a village ruffian); the death of Aalto's mother Selma Hackstedt in 1906, and his father's remarriage in 1907 (to Selma's sister Flora); attendance at the Jyväskylä Lyceum, and matriculation in 1916; and the summers the family spent in Lovisa and Alajärvi. Events of this period, as discussed by Schildt, formed a number of attitudes that governed the mature Aalto's career.

While there is a general awareness of Aalto's student days at the Technical Institute in Helsinki, Schildt's documentation fills in the interstices. The context of the Institute, the influence of Aalto's teachers and his classmates, his student projects, and the "commune" of four students from Jyväskylä in his Aunt Helmi's flat in Helsinki are discussed in conjunction with Aalto's extroverted and gregarious manner. Schildt details his imprisonment in 1916 for supposed involvement in the "Jaeger" Movement, and his participation in the Finnish Civil War (1918). During this time Aalto worked in architectural offices in Vaasa and Helsinki, received several commissions in

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Alajärvi (where his parents had moved in 1918), and traveled to Sweden.

Although Aalto's early career has recently received attention (in Malcolm Quantrill's *Alvar Aalto: A Critical Study*, Schocken Books, New York, 1983), Schildt expands our understanding of the period from graduation through the time his office was located in Jyväskylä. In addition to providing a more comprehensive presentation of Aalto's early architectural commissions, Schildt elaborates on the trips abroad, the architectural contacts he was developing throughout Scandinavia, the journalistic activities he engaged in while his practice developed, the role played by Aino (his first wife) in the office, and the important architectural competitions Aalto entered, which eventually led to relocating his office in Turku in 1927.

One section of *The Early Years* (this volume is more than a biography) analyzes specific thematic concerns that Schildt finds central to Aalto's architecture, and is informative in describing the broader context of influences informing his design attitudes. The relationship between painting and the applied arts to Aalto's design process is critical; as Schildt points out, painting allowed Aalto freedom to explore compositional issues unencumbered by architectonic restrictions. Aalto's use and transformation of architectural precedent, the influence from Mediterranean sources in his early work, and the influence of Finnish and Scandinavian contemporaries also receives discussion. While Aalto emphasized the social and public responsibilities of the professional—an attitude gained from his father and grandfather—he was a Diony-

sian, not Apollonian, designer. As Schildt notes: "He did not shoot arrows of logic; instead, he reestablished our weakened contact with the earth, with growth, community and the subconscious forces inside us . . . he spoke out for the multi-dimensional, interactive and fertile."

Toward the end of the book, Schildt further discusses Aalto's attitude concerning the relationship between man, nature, and building; the recurring presence of the externalized interior space in Aalto's compositions; his preference for hybrid, or multi-purpose, building programs (programs containing unique or autonomous spaces in addition to the more normative range of spatial requirements); and as the last chapter is called, his interest in "Anarchism as an Architectural Principle," which forms the basis of his ordering and compositional technique. In these chapters, Schildt elaborates on the influence of such authors as Goethe, Kropotkin, Darwin, Burckhardt, and the Finnish architect-critic Gustaf Strengell, among others, on Aalto and their impact upon his design attitudes and sensibilities.

Taken together, the first two sections of *The Early Years* provide significant insight into Aalto's background and the attitudes informing his early designs. Moreover, Schildt places Aalto within the larger context of early 20th-Century Finnish architectural development, articulating both his confluence with contemporaneous trends and the emergence of the particular directions and themes that would permeate Aalto's entire career.

Vitally important is the final section of the book, which contains as complete a "List of Works Between 1912 and 1927" as has yet been published. This section, which describes each work and its existing status, contains a number of new, heretofore unpublished examples of Aalto's early work. This section of the book, coupled with the family portraits and photographs; drawings, cartoons, and paintings by the young Aalto; student projects done at the Institute of Technology; early essays and articles from magazines, newspapers, and pamphlets; and the architectural and applied designs that are interwoven throughout Schildt's well-written text, provides the most complete view of Aalto's early career to date. Although this is a biographical work, the absence of an index is extremely unfortunate, given the wide scope of discussion contained in the volume.

While many works are still to be written about Aalto's architecture, and not without justification or necessity, Schildt's work, when all three volumes are completed, will stand as the primary biography. If the forthcoming volumes are of comparable quality and insight as this excellent one, Schildt will have well fulfilled his role as Aalto's Gibbon.

William C. Miller

The reviewer is an architect and associate professor at Kansas State University, Manhattan. His book, Alvar Aalto: An Annotated Bibliography, was published by Garland in 1984.



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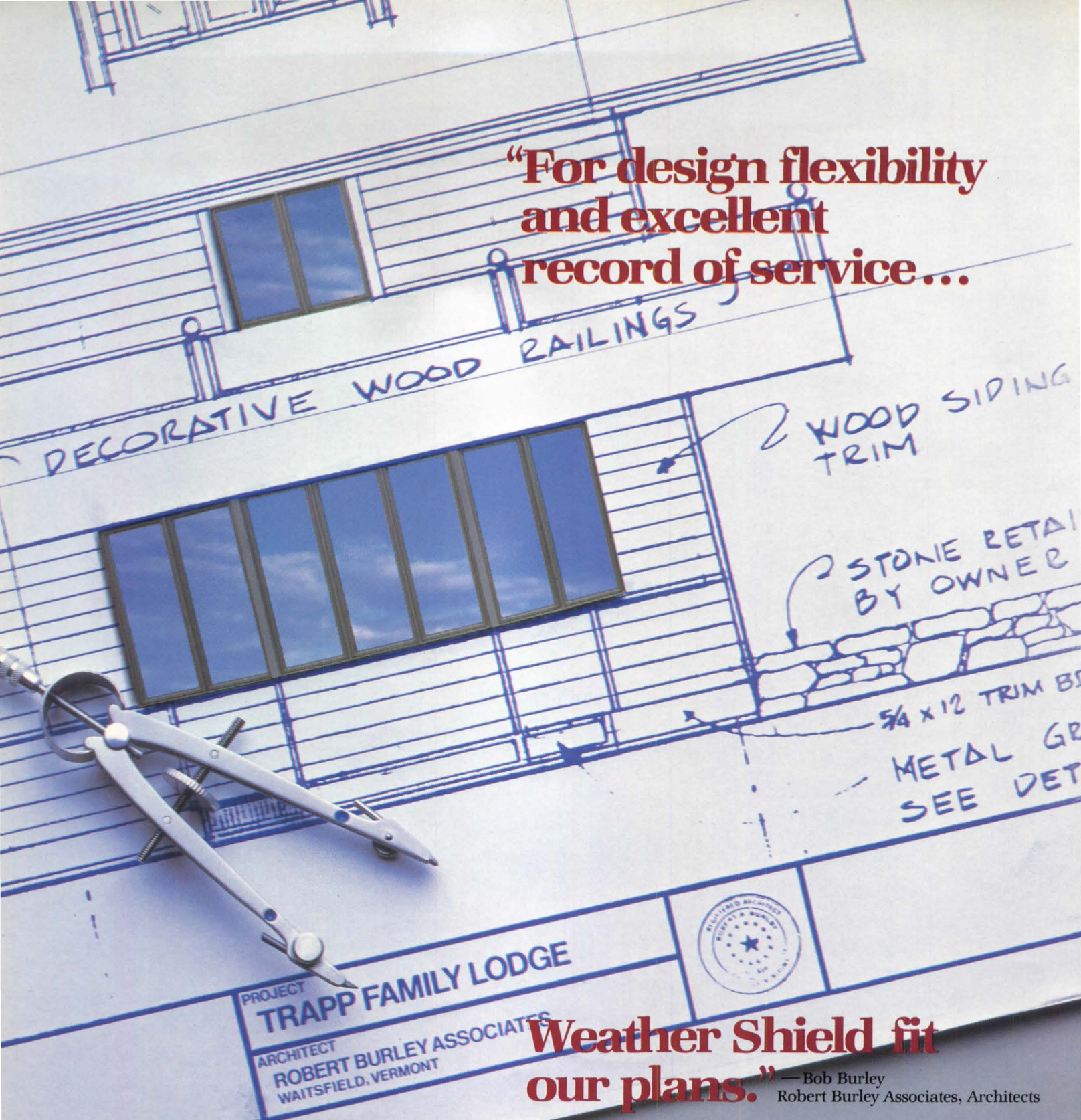
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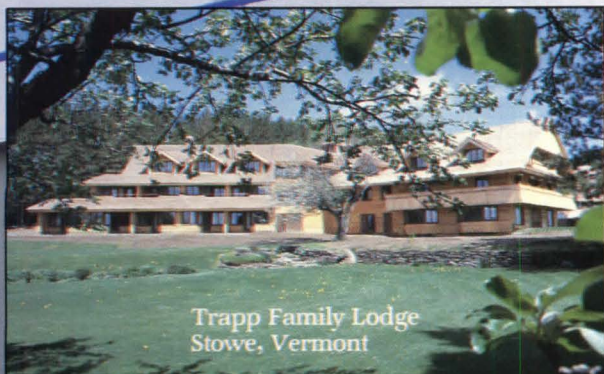
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New products and literature

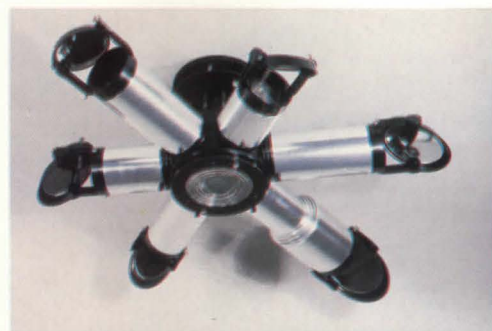
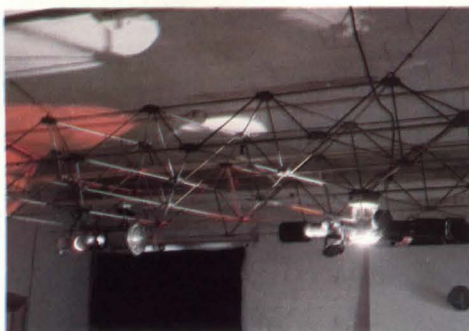
- 105 *Products related to elevators.*
- 173 *Light-splitting system to direct or disperse light.*
- 175 *Products and literature of general interest.*

BeamO

It sounds like science fiction: a corporation with the name BeamO manufacturing a light conveyance system that consists of luminositor condensers, projection tubes, modulators, and adaptors. But the principles behind the product are really quite simple.

The system does what its name suggests—it conveys light from a single source to remote locations. The luminositor condensor is a cylinder containing either a quartz halogen or a metal halide lamp that splits the light into two, four, or six beams. Projection tubes, attached to the luminositor, contain lenses that focus the beams: the longer the tube, the narrower the beam. The mirrorlike modulators, attached either to the projection tubes or to a remote surface, direct or disperse the light, depending upon their angle or reflective properties. Supplemental beam-splitting and beam-bending tubes further divide or focus the light, while stencil adaptors can create patterns of light and fiber optic attachments, points of light.

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The photograph of the light conveyance system (top right) shows the cylindrical luminositor condensor, the radiating projection tubes, and the attached, mirrorlike modulators. The photograph (top left) is of BeamO's optical labs in Cambridge, Mass. Grenekers showroom (bottom) indicates some of the varied lighting effects possible with modulators and adaptors.

Steve Berger

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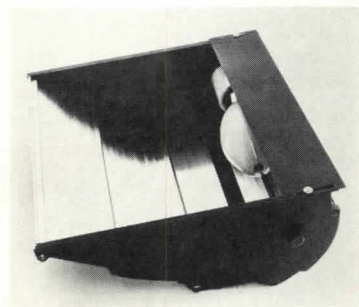
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New products and literature



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Circle 212 on reader service card

Ceramic tile catalog shows four new product lines and new colors in five current lines. It also offers natural marble tile and a line of contemporary bathroom accessories. The 44-page color catalog shows installation products and describes color coordination, mural, and swimming pool design services. Architectural specifications are provided. American Olean Tile.

Circle 213 on reader service card

Enkasonic™ matting, developed to meet sound rating requirements under ceramic tile floors, also is effective when used under marble, hardwood, stone, wood parquet, vinyl tile, and carpet. An eight-page brochure provides information about the product and its installation under several types of flooring. Case studies include sound transmission ratings of actual installations. American Enka Company.

Circle 214 on reader service card

Door systems architectural design guide, an expandable notebook, includes product literature, specifications, and architectural details for Benchmark doors. It covers bifold closet doors, fire-rated steel doors and frames, sidelights, and replacement doors. All details are reproduced on vellum for accurate direct tracing onto working drawings. General Products Co., Inc.

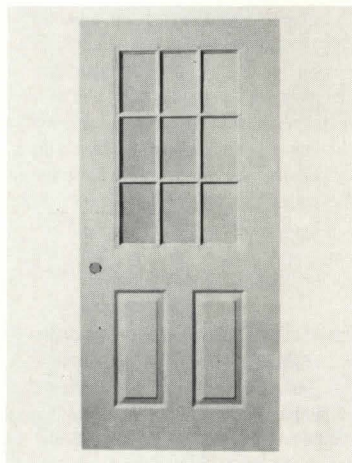
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Circle 216 on reader service card

AE-200 air-to-air heat exchanger catalog provides details about benefits, including energy savings, as well as installation and technical data. The rotary matrix wheel has up to 80 percent heat recovery capacity. NuTone Housing Group, Scovill, Inc.

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Circle 218 on reader service card

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Circle 221 on reader service card

A professional drawing kit with basswood or white melamine drawing board has black steel end cleats for durability and accurate registration. The kit has a rule pulley system and is easily set up on four collapse-resistant legs, which secure at a 45-degree angle. Options include the Armoredge rule, which has a transparent edge that resists nicks and dents. Mayline Co., Inc.

Circle 222 on reader service card

Lamp Technical Guide, Publication 9200, describes GE's complete line of incandescent, fluorescent, and high intensity discharge lamps for commercial, industrial, and residential lighting, as well as ballasts. The 84-page guide gives tips on color selection and describes a line of fluorescent lamps that combine high efficiency and good color rendering properties. General Electric Co.

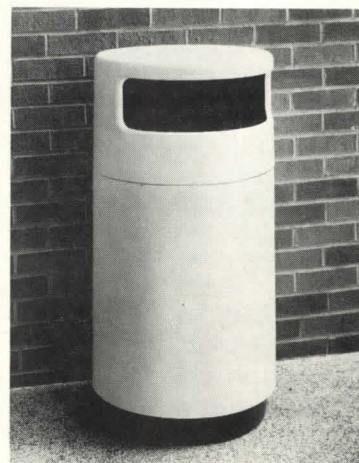
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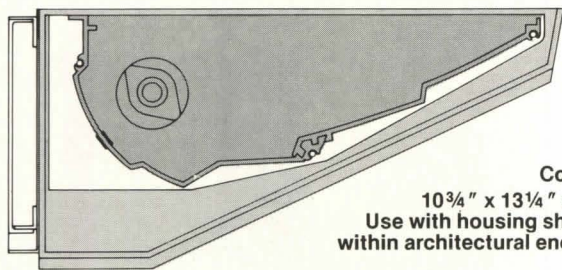
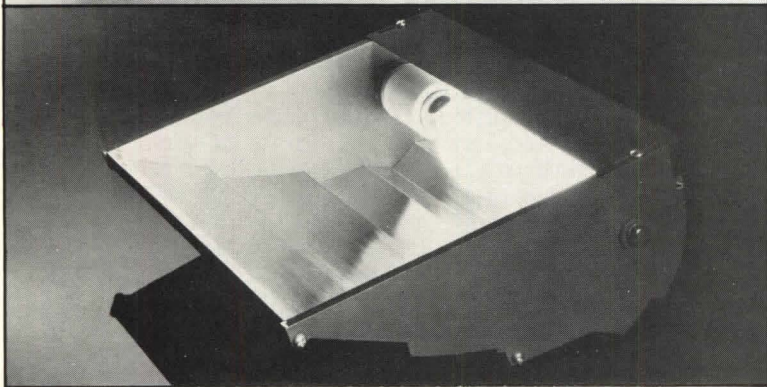
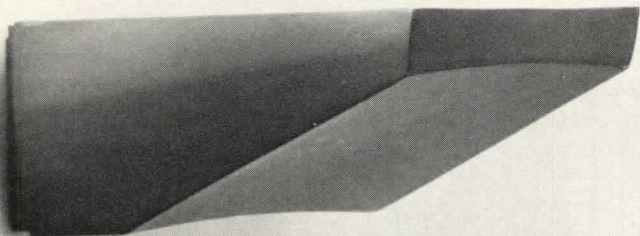


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Fiandre Ceramic Granite™ is a porcelain stoneware that is 30 percent harder than granite from the quarry. It is resistant to wear from weather, mechanical stress, and chemical attack, yet it takes a high polish. It offers good skid resistance and requires very little maintenance. Trans Ceramica, Ltd.

Circle 232 on reader service card

Neo7 Panel System, designed by Don Albinson, is introduced in a 12-page color brochure. The panel hinge connector, described in the brochure, provides system adaptability. An accompanying 14-page brochure explains the basic system and added features, the electrical system, panel-hung components, and EDP equipment. There are also planning templates and sample workstation layouts. Domore Corp.

Circle 233 on reader service card

Corian Building Products Guide, developed for architects, builders, and designers, details and provides specifications for the complete product line. Applications include countertops, vanities, laboratories, wall panels, tub and shower surrounds, and wainscoting. There are also shaped products such as vanity tops with single or double bowls, integral kitchen countertops and sinks, drop-in lavatories, and specialty products. Diagrams of recommended vanity top installations are included, along with recommended adhesives and sealants. Du Pont Company.

Circle 234 on reader service card

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*James W. Rivers, Vice President
The Mathes Group (formerly Mathes, Bergman
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"We've been implementing a Du Pont overlay drafting program for large and small projects for six years," says Mr. Rivers, "and we estimate a 30% savings in drafting time as a result. We also save time on corrections because we don't have to redraw floor plans every time there's a change.

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Note: Place St. Charles is a joint venture of Mathes, Bergman & Associates, Inc. and Moriyama & Teshima Planners, Ltd.

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- ☐ Send me your new brochure on overlay drafting.
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Decora® wiring devices full-color brochure covers switches, dimmers, combination switch/receptacles, receptacles, and fan controls. There is also a home control system that provides electronic control of lighting and appliances. The catalog provides numbers, rating, description, and sizes where applicable. Colors are mahogany brown, ivory, white, and ebony. Leviton Manufacturing Co., Inc.

Circle 235 on reader service card



The Columbia Seating Collection, designed by Kurt Kuhn, includes executive chairs with high or low backs; cantilever chairs with or without arms; and conference chairs with high or low backs. Ergonomic molded plywood shells have polyurethane foam and fiberfill padding for seating support and comfort. Executive models have the Ergomatic mechanism that allows the front edge of the chair to remain stationary as the user tilts back; pneumatic height adjustment; cushioning springs; and tilt tensioning control. Gilbert International.

Circle 236 on reader service card

Children's environments design guide offers complete specifications, installation information, and space planning ideas for bilevel structures. The structures, which are illustrated in the brochure, are intended for pediatrician waiting areas, hospitals, and similar uses. Playscapes™ Children's Environments.

Circle 237 on reader service card

Wilsonart Design Group 1™ laminates are offered in 160 solid colors, woodgrains, and designs. The Color Quest™ solid-color laminates have high gloss, matte, or embossed grid texture finishes. Other groups included are tannery, quarry, Woodgrains Plus™, and patterns that coordinate with solids. A ten-page brochure shows the full Design Group 1 in color. Ralph Wilson Plastics Co.

Circle 238 on reader service card



The Menhir table system, designed by Lodovico Acerbis and Giotto Stoppino, consists of a steel support column around which a series of round marble elements can be stacked to create a variety of configurations. Square, round, oval, or oblong glass tops in several sizes complete the table. Stacking elements are available in Pentelic white, red Alicant, black Marquinia, and gray Carnic marble or beige Roman Travertine. Stainless steel columns in six heights have a brushed or burnished finish. Atelier International, Ltd.

Circle 239 on reader service card

Adoquin natural stone, used for centuries as pavers in Mexico, comes in several subtle tones of gray, tan, and rose, as well as black and white. It is available in different shapes suitable for interior or exterior paving, steps, pool coping, and door surrounds. It also can be sculpted into fountains and statues. Color photos in an eight-page brochure show shapes, colors, and some typical installations. Materials Marketing Corp.

Circle 240 on reader service card

Building materials

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

Scottsdale Memorial Hospital—North, Scottsdale, Ariz. (p. 82). Architects: The NBBJ Group/Business Space Design, Seattle. Mineral cap sheet, roofing: Owens-Corning. Fluid-applied elastomeric membrane: Carboline Company. Batt and rigid insulation, roof: Certainteed and Owens-Corning. Lightweight Zonolite roof insulation: W.R. Grace. Interior joint covers, earthquake/expansion: Architectural Art. Roof expansion joints: Johns Manville. Concrete reinforcement: Bethlehem Steel. Structural steel and metal deck: Peck Steel. Gypsum board and studs: U.S. Gypsum. Stucco, Portland cement: Bouma Corporation. Fiberglass reinforcing: Owens-Corning. Integral water-proofer: Larsen. Metal lath and gypsum sheathing: U.S. Gypsum. Special coatings: Mac-

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Elevator; elevator doors, Courion Industries. Pneumatic tube system: MCC Powers. Fabricated rails: Peck Steel. Pole-mounted exterior lighting: Kim. Recessed fluorescent interior lighting: Globe. Panelboards and switchboards: General Electric. Patient wall module: Hill-Rom Company. Plumbing fixtures: Kohler. Plumbing fittings/showerheads: Chicago. Flush valves: Sloan. Mirrors and accessories: Bobrick, Accessory Specialties. Recessed sprinklers: Central Sprinkler. Gas-fired heating system: Cleaver Brooks. Component mechanical rooms (AC): WEBCO. Pneumatic control systems: Honeywell. Carpet: Bentley Carpet Mills. Lamps/lighting: Nessen Lamps, Deena Contract Lighting. Open office work stations: Modern Mode. Desks: Risom Marble Corporation. Files and shelving: All-Steel. Bedside cabinet: Nemschoff. Conference table: Howe. Cafeteria tables: Thonet. Chairs: Jack Cartwright, Herman Miller, Hiebert, Thonet, David Edward, Krueger. Lounge seating: Metropolitan Furniture, Herman Miller. Lobby seating: Brayton International. Blinds: Levolor Riviera. Upholstery ma-

terials: Boris Kroll, Knoll Textiles, Maharam Fabric Corporation.

Roberson Pavilion and Bayonne Hospital alterations, Bayonne, N.J. (p. 78). *Architects: Ewing Cole Cherry Parsky, Philadelphia.* Foundation: United Steel Products. Cast stone and brick: W.N. Russell. Windows: Pella. Skylights: Fisher. Doors: Stanley Door; Empire Lumber & Millwork. Interior flooring: Flexco; American Olean; Orion Nova. Roof: Polylite Roof Deck. Paint: Pratt & Lambert. Hardware: Bilt-Rite, TMI Greensteel. Intercom: Executone. Lockers: Republic Steel. Elevators: Otis. Lighting: Keystone; Prescolite. Plumbing fixtures: American-Standard; Sany Metal; Accessory Specialties. Heating system: Trane. Carpets: Lee's Design VI. Furniture: Metalstand; All-Steel; Arnold; Nemschoff; Intrex; Johnson Industries; Kenmore; Krueger; Gunlocke; GF; Hardwood House; Shelby-William; Stendig; Stow-Davis; Thonet; Jack Cartwright; Madison, Mueller. Blinds: Joanna Western Mills. Drapery: Ben Rose, Inc.; Maharam; Lee/Jofa; S. Harris; Kirsch Hardware.

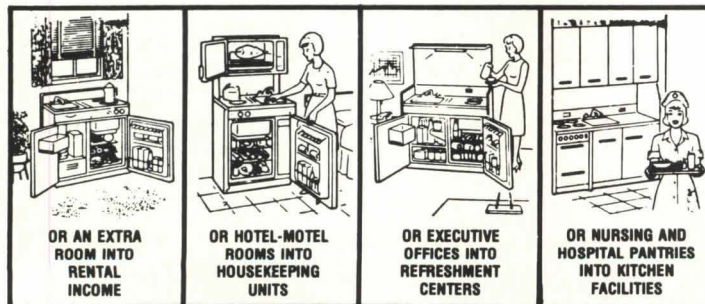
Upholstery materials: Design Tex; Guilford; Arc-Com; Naugahyde; Jack Lenor Larsen; Valley Forge; Ben Rose. Accessories: Smith Metal Arts; Peter Pepper Products; C.I., Rubbermaid.

Richmond Hill House, Richmond, Calif. (p. 86). *Architect: Thomas Gordon Smith, San Francisco.* Asphalt roofing: CertainTeed. Trim paint: Boysen & Fuller. Dining room lighting: New Metal Craft. Plumbing fixtures: American-Standard. Heating system (80,000 BTU forced air, gas fired): Janitrol.

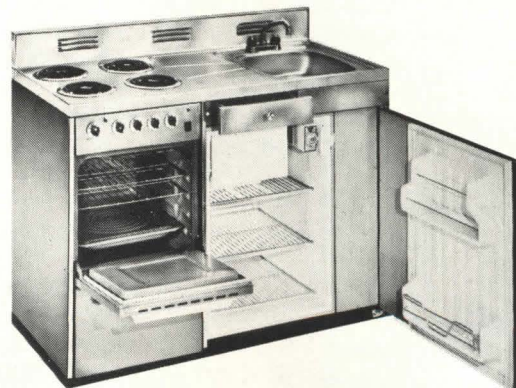
The Statue of Liberty Restoration, Liberty Island, New York (p. 95). *Architects: Swanke Hayden Connell Architects; The Office of Thierry W. Despont, New York.* Double-deck elevator: National Elevator. Emergency elevator: Linden/Alimak. Stainless steel stairs and railings: Grossman. Lighting: General Electric. Hot water boilers, oil-fired pumps, heat exchanger: Kerby-Saunders. Cooling tower, separate chiller: Baltimore Tower. Hinges: Stanley. Security/detection/fire/intercom system: Honeywell.



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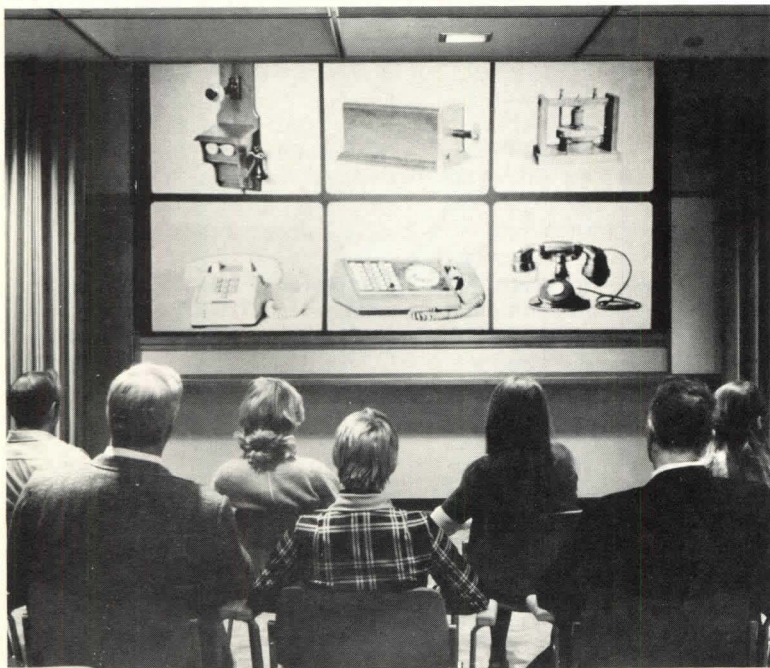


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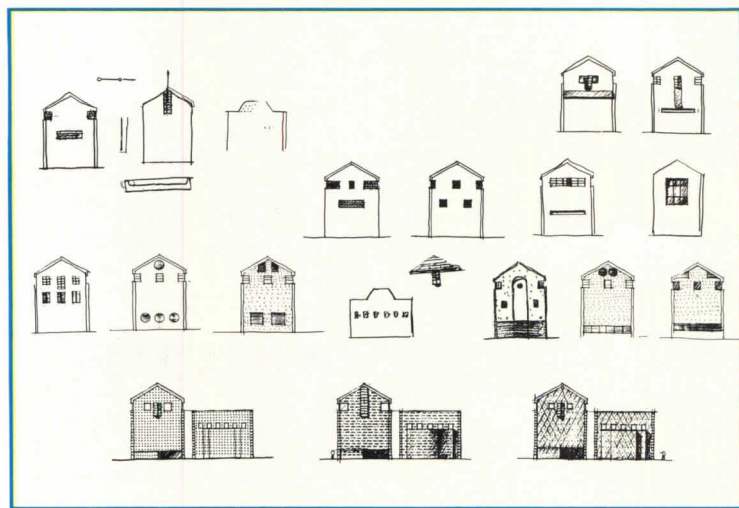


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P/A in April



Sketches for Rice University School of Administration
Cesar Pelli & Associates, Architects

Energy-conscious design

Energy strategies will be examined through case studies of four exemplary buildings. Widely separated, in Boston, Boise, Minneapolis, and Tallahassee, and representing a variety of program demands, the four structures combine formal elegance and sensitivity to context with innovative approaches to heating, cooling, and lighting.

Technics: Insulation

This technical update on the possibilities of insulation will stress the advantages and special demands of "superinsulation."

Pelli at Rice

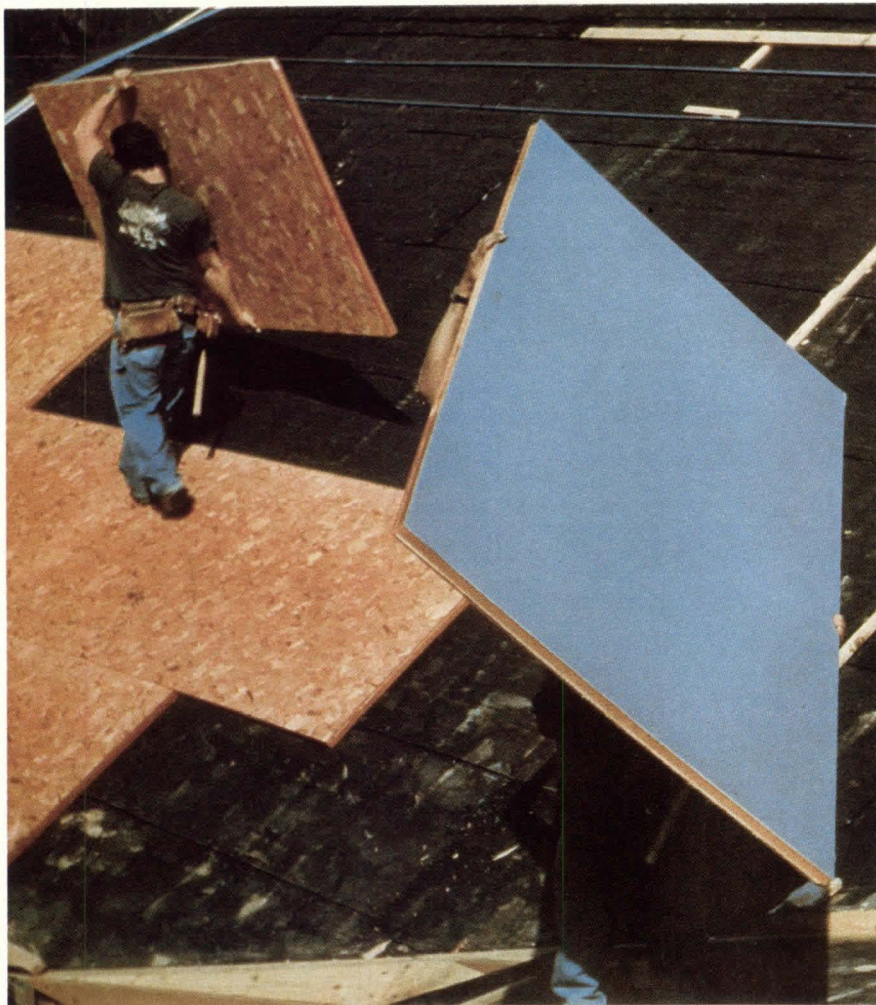
Rice University's new School of Administration building is Cesar Pelli & Associates' first completed institutional building and Pelli's first masonry-clad structure. Its response to the traditions of this unique campus, its use of nonhistorical ornament, and its formal clarity make this building a rich object lesson.

Other works of design

Included in the issue will be an article on a winery by the promising young firm, UKZ, and an examination of the studio compound—utilitarian and serenely elegant—that artist Donald Judd has created for himself.

P/A in May

Again this year, P/A will bring you a special May issue on Computers in Architecture, this year focusing on how computers fit into practice and can open up new areas of practice. The issue will also report on the winners of P/A's fifth annual International Furniture Competition.



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Architectural Design Faculty Positions

The Department of Architecture at Temple University solicits applications for appointments commencing Fall 1985. Assistant/Associate Professor: Full time; tenure track. Teaching includes design studio, computer graphics, and construction technology areas. Other responsibilities include scholarship, research or practice, and departmental administrative work. Distinguished visiting professor/visiting critic: Full or part time. Applications or nominations sought for senior level visiting positions in design and/or history and theory. CADD Wizard: Joint appointment with relevant engineering department. Responsible for teaching, research, and development of regional CADD center. Same peripheral responsibilities as assistant/associate professors above. Adjunct professors/studio critics: at various ranks, part time at all levels. To teach studio and lecture courses. The Department of Architecture offers a five year undergraduate curriculum leading to the B.Arch. degree. Please respond with a letter of interest stating the position sought, a curriculum vitae, and the names of three references before April 15, 1985 to: George L. Claflen, Jr., Chairman, Department of Architecture (084-53), Temple University,

Philadelphia, PA 19122. Temple University is an Equal Opportunity/Affirmative Action Employer.

Assistant Professor, Department of Architecture, North Dakota State University. 9 month basis beginning September 1985. Teaching architectural design and lectures/seminar in area of interest. Masters degree in Architecture or related field required; office and teaching experience considered. For full consideration, application should be made by April 15th. Send Application, resume and references to: Search Committee, Department of Architecture, North Dakota State University, Fargo, ND 58105. NDSU is an Equal Opportunity Employer.

Chief of Project (Energy Conservation)—East Africa; start 3/85 for 18 mths.—2 yrs. Required: Advanced architectural or engineering degree. Experience in energy conservation in building sector; passive solar construction, some familiarity with solar/wind technologies. Good French. Desired: previous project management experience; previous LDC living experience (prefer Africa). Send CV to D. Read, VITA, P.O. Box 12438, Arlington, Va. 22209 or call (703) 276-1800.

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Faculty Position—Architecture

Full time beginning September 1, 1985. Principal teaching responsibility will be for undergraduate courses in Architectural Design studios and courses in Design Theory. In addition, the position could involve courses in Architectural History. First professional degree in Architecture with Master's Degree in Architectural Design; a record of successful college teaching and professional achievement preferred. Rank: Assistant Professor. Salary negotiable. Submit application letter, resume and the names of 3 references by March 15, 1985 to: K. Michael Hays, Chair of the Search Committee, Department of Architecture, Rhode Island School of Design, Two College Street, Providence, R.I. 02903. RISD is an Equal Opportunity Employer.

Historic Preservation Planner

The Graduate School of Architecture & Planning, Columbia University in the City of New York, announces a full-time faculty vacancy in its Historic Preservation Division to teach historic preservation planning and policy beginning Fall 1985. Requirements: Advanced degree (or equivalent experience) in preservation, planning, or a related discipline. Must be able to address national physical planning and preservation policy issues using the New York metropolitan area as a teaching laboratory. Teaching responsibilities: Five courses including team teaching in introductory course, a lecture and a studio in preservation planning and policy, tutorial as masters thesis advisor, and an elective to be developed in the instructor's specialty. Salary negotiable. Send curriculum vitae along with syllabi of similar courses taught, scholarly articles, publications, and other evidence of profes-

sional ability to: Chester H. Liebs, Chairman, Division of Historic Preservation, 400 Avery Hall, Columbia University, New York, NY 10027 by April 15, 1985. Columbia University is an Affirmative Action/Equal Opportunity employer.

MIT, Professor of Computer-Aided Design

Tenure-track position as Assistant/Associate Professor of Computer-Aided Architectural Design, available fall 1985. This position supported the Department's commitment to development of computer graphics beyond drafting aids into design and architectural modelling tools, and combines research and teaching in this area. Emphasis is on preparation of students for professional practice. Candidate selected will also be involved in Project Athena, MIT's \$70-million experiment in computer-assisted education. Qualifications include strong architectural design ability and experience; BArch or MArch degree minimum; expertise in designing with computers, including familiarity with database structures and micro-processors. Experience in teaching and in software development related to computer graphics and advanced programming techniques desirable. Resume and references to Professor John R. Myer, Head, Department of Architecture, MIT, 77 Mass. Ave., Cambridge, MA 02139 by March 15, 1985. MIT is an Equal Opportunity/Affirmative Action Employer.

MIT, Two Faculty Positions in Architectural Design

As a result of serious curriculum review, MIT's Department of Architecture has opened two positions in architectural design, available fall 1986. One: senior teacher of architectural design. Individual selected will be a distinguished designer whose contribution to the field demonstrates mastery of formmaking. Potential to expand design theory and teaching method in the Department a criterion for choice. Principal responsibility will be design studio teaching in professional program. Some teaching experience required. Conditions of appointment open to negotiation—options range from Adjunct to Professor with tenure. Two: tenure-track position as Assistant or Associate Professor. Candidates should be designers of achievement and promise. Experience in teaching and BArch or MArch degree required. Combined involvement in teaching and architectural practice highly desirable. Responsibilities include design studio teaching, thesis supervision, design-related courses, or research. Resume and letter explaining experience in teaching, practice and/or research by March 15, 1985 to: John Myer, Head, Department of Architecture, Room 7-303, MIT, Cambridge, MA 02139. Brochures requested after initial screening. MIT is an Equal Opportunity/Affirmative Action Employer.

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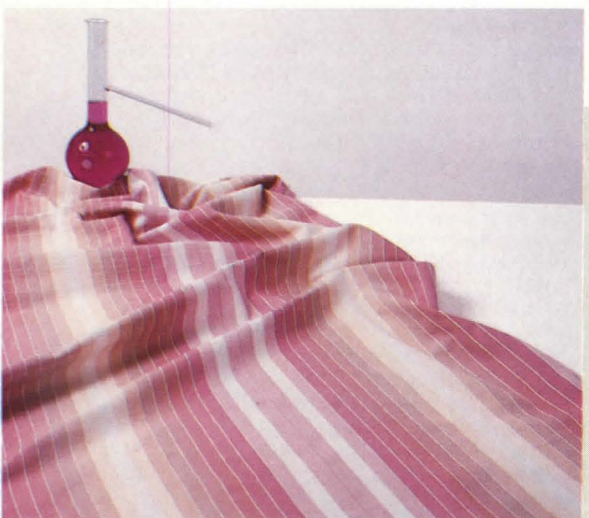
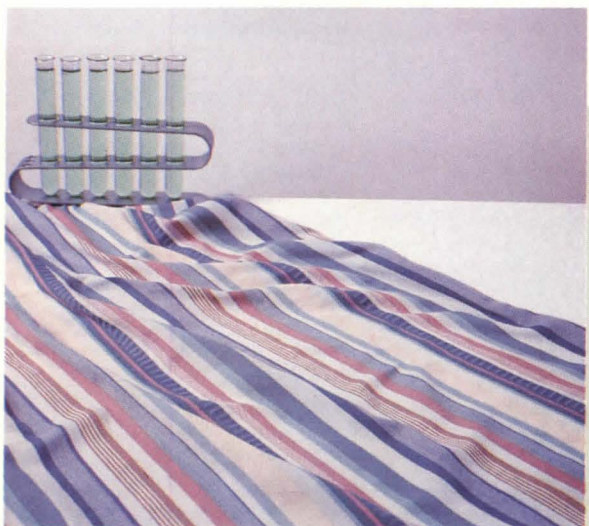
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The School of Architecture at the University of Virginia is seeking outstanding candidates for fulltime tenure track and part-time positions in architecture. The candidates should be qualified to teach architectural design at both a graduate and an undergraduate level, as well as

teach in another area of curriculum such as basic design, building technology, architectural theory, urban design theory and methodology. Qualifications shall include prior teaching experience with evidence of a developed didactic orientation, advanced professional experience, and prior success in research and/or scholarship. Please submit resumes and three letters of reference to Chairman, Division of Architecture, University of Virginia, School of Architecture, Campbell Hall, Charlottesville, Virginia 22903. Women and minorities are encouraged to apply.

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Architect-Engineer. Highly motivated architect-engineer in private practice, 22-years experience, 18 years as principal of own firm. Multi-disciplined registrations (10 states +) as architect, structural engineer, professional engineer, NCARB certification. Well versed in computer applications and systems applications. Has developed and operated many custom computer programs. Highly diversified in CAD operations. Has been directly responsible for marketing, contract administration and CEO of 15-man firm with projects acquired in the \$20,000,000+ range. Experienced in wide variety of project types. Amiable, gregarious, 45 years of age, married, one child, excellent health, instrument-rated pilot, member of professional organizations, very aggressive. Ideally suited for large non-A/E corporation in management

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Advertisement

Small Firm's New Golf Ball Draws Hole-in-One Letters from All Over U.S.

Seller Guarantees Ball Will Cut Strokes—or Money Back
64 Times More Accurate

By Mike Henson

NORWALK, CT—A small company in Connecticut is selling what might be the most hook-free, slice-free ball in golf. Unsolicited hole-in-one letters from men and women all over the U.S. suggest it is 64 times more accurate than a well-known distance ball. Some report holes-in-one the first time they use it!

The ball is called Guidestar and its unusual accuracy comes from a new, patented, oversized core that helps control it like a gyroscope. Because the core maintains near-perfect balance, it reduces the chance of an abnormal spin caused by an imperfect stroke. Abnormal spins are what cause a ball to hook or slice.

The company has conducted many tests on the ball, but the best proof of its accuracy comes from a file-full of letters like these: "Shot my first hole-in-one the first time I used Guidestar on my home course. Great Balls! . . ." "After 26 years of golf during my first round with Guidestar I made a hole-in-one!"

There is even a letter from New Zealand where a minister scored a hole-in-one with the ball.

The ball is extremely lively and high compression. Bounce it on a concrete floor and it comes back at you like a rifle shot.

According to a spokesman, "The Guidestar will equal any pro-line ball on distance, but on accuracy they are no

match for it, and accuracy is what counts. It's not fun hacking through bushes looking for a ball that suddenly went left or right. These hole-in-one letters are the best proof we could have that Guidestar's patented core helps keep shots down the middle."

In light of tests and that file-full of hole-in-one letters, the company guarantees Guidestar will cut a golfer's score dramatically. If it doesn't they will take back the balls within 30 days used, and refund their price promptly.

They also guarantee Guidestar's patented construction will save a golfer money. If he ever cuts one, he can get *three new ones free*, if he returns the damaged ball with 50¢ for postage.

If you want to save money on lost and damaged balls, cut strokes and (who knows?) watch breathlessly on a par 3 as Guidestar's new, patented core carries your tee-shot toward the cup!—then try this new ball. You can't lose. A refund is guaranteed if you don't cut strokes.

To order Guidestar send your name and address to the National Golf Center (Dept. G-255), 500 S. Broad St., Meriden, CT 06450; (or call 203-238-2712). Include \$21.95 (plus \$1.75 shipping) for one dozen; \$19 each for two dozen or more. Six dozen cost only \$99. *Free* shipping on two or more dozen. You can split your order between white and Hi-Vision yellow on a dozen basis.

To charge it include your card's name, account number and expiration date. No P. O. Boxes, please; all shipments are UPS. CT and NY must add sales tax.

Guidestar conforms to U.S.G.A. Rules and can be used in tournament play.

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Howmet aluminum door frames have cleaner and sharper lines than steel frames. So, when you specify aluminum, you get frames that are much more aesthetically appealing.

Also unlike steel, Howmet frames are readily adaptable to sidelites. And a sidelite can be a *bright*, attractive addition to any office.

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A/E Systems	14	Halo Lighting Div., McGraw-Edison	10LW	Omega Lighting	38LW
Alkco Manufacturing Co.	48LW	W.P. Hickman Co.	28	Owens-Corning Fiberglas Corp.	10
AllianceWall Corp.	31	Highline Products Corp.	33LW	PPG Industries: Glass	190
Allied Corp.	26	Insoport Industries	15	Peerless Electric Co.	1
Alumax Aluminum Corp.	174	KDI Paragon, Inc.	46	Pittsburgh Corning Corp.	35
Alumax Magnolia Division	187	Kawneer Architectural Products	18, 19	Prescolite	167
Amarlite/Arco Metals Co.	C3	Kimberly Clark Technical Papers	108	Progress Lighting	112
Andersen Corp.	4, 5	King Refrigerator Corp.	181	Quantum Manufacturing	106
Arc Com Fabrics, Inc.	185	Kliegl Bros.	24LW	RPI Designs	44
Architel Systems, Inc.	24LW	Koch + Lowy	22LW	Rambusch	176
Armco Building Systems	17, 36	Koppers Co., Inc.	38, 39, 183	Red Cedar Shingle & Handsplit Shake Bureau	34
Armstar	47	LAM Lighting Systems	40LW	Rixson-Firemark	54
Artemide, Inc.	4, 5LW	Jack Lenor Larsen	56, 57	Russwin Div., Emhart Corp.	43
Azrock Floor Products	C2	Lees Carpets, Burlington Industries, Inc.	2	Saddlebrook	50LW
Aztech International, Ltd.	106	Leviton Manufacturing Co., Inc.	19LW	Sentry Electric Corp.	31LW
Louis Baldinger & Sons	9LW	Longlites	1	Simplex Ceiling Corp.	30
Bally Engineered Structures, Inc./ Allegheny International	25	Lucifer Lighting Co.	33LW	Sitecraft	48
Boussac of France	52, 53	Lumec, Inc.	47LW	Spero Electric Corp.	8LW
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L.E. Carpenter	58	Marathon Carey-McFall Co.	180	Summitville Tiles, Inc.	171
City of Phoenix	169	mcPhilben Lighting	38LW	Tarkett, Inc.	179
Click Systems, Inc.	34	MEGA CADD, Inc.	59	TeleVideo Systems, Inc.	62
Columbia Lighting, Inc.	16LW	MBCI-Metal Building Components, Inc.	20	3XM, Inc.	32
Columbia University	44	Midland Dexter	49	Thunder & Light	52LW
Consolidated Aluminum	40	Milliken & Co.	37	Tischler & Sohn	16A-16H
Construction Specialties, Inc.	C4	3M/Commercial Office Supply Div.	16	Tivoli Industries, Inc.	26LW
Da-Lite Screen Co., Inc.	182	Moore-Lambert Industries	8LW	Tyler Elevator Co.	107
DesignTex	189	R.C. Musson Rubber Co.	32	United States Aluminum Corp.	9
Dover Elevator Systems, Inc.	33	National Golf Center	186	Weather Shield of New England	172
duPont Co.—Antron	12, 13	National Partitions and Interiors, Inc.	106	Ralph Wilson Plastics Co.	64
duPont Co.—Corian	60, 61	Neo Ray Products, Inc.	24LW		
duPont Co.—Industrial Systems Architectural Films	177	Nora Flooring	29		
duPont Co.—Tyvek Housewrap	36	North American Philips Lighting	14LW		
Falcon Lock	110				
Flexco	45				
Follansbee Steel Corp.	63				
Formica Corp.	50				
Forms + Surfaces	6, 8				
Four Seasons Solar Products Corp.	178				
GTE Sylvania	42LW				
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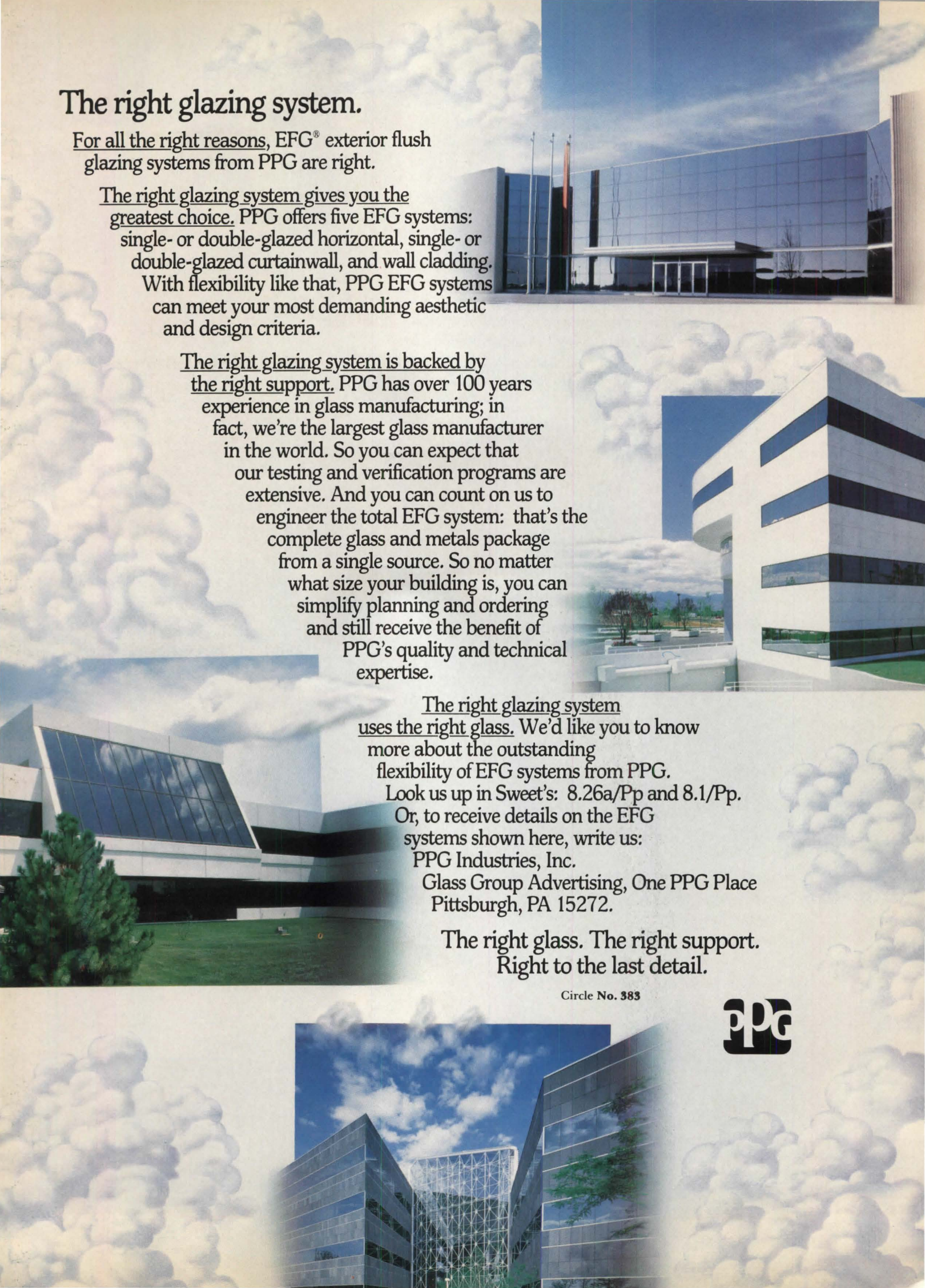
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