Progressive Architecture

February 1984

Special issue: Johnson and Burgee



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Practice and progress

On going improvements in P/A itself deserve to be examined in the light of our relationship to the field of architecture as a whole.

> Occasionally, it is valuable on this page to share with readers some of the thinking behind the magazine itself. (But only occasionally; the purpose of this page is not to promote P/A to its readers.) We have worked out some changes and refinements in the publication for 1984, and I would like to explain them in the light of our current concerns.

> A significant addition to our editorial contents this year is the Practice department, published in the "front of the book" (starting on page 57 this month, page 69 in the January issue). This is the beginning of a program to publish timely articles on many aspects of professional practice—incorporating our established columns on law and specifications but expanding into numerous other areas. Our plans for this year include articles on such topics as computers, drafting systems, and contractor relations, all by experts in the subjects discussed.

> Our decision to give more of our pages and attention to practice subjects is, frankly, a bit overdue. In the 1970s, we felt comfortable focusing P/A's editorial content almost exclusively on design and technical matters, which are after all the special areas of expertise that architects offer to society. We expected other publications—particularly those of professional societies—to fill the need for "How to run your firm" articles, but we were largely disappointed. Recently, we have seen an increase in sound articles on practice, but we feel there is much territory yet to be covered.

In making plans for our practice department, we have kept in mind the fact that P/A is edited for readers at all levels of experience and in many kinds of offices. This is not a magazine directed only to partners and principals, and it is no place for articles along the lines of "How to squeeze the maximum profit out of your employees' labors." Most people in the design professions are employees. We would like to believe, however, that most of them want to know about factors and procedures that contribute to the success of a firm one they are with, one they may join, one they may commission or consult.

Of course, P/A has never stopped writing about practice in the course of covering architectural accomplishments, and the economics of the profession were scrutinized in our Money and Architecture features (December, 1982). We have also been showing increased concern about the professional organization and strategies in our features on firms, such as the profiles of Kohn Pedersen Fox (Oct. 1983) and Johnson/Burgee (this issue). Our article on current design in Vienna (next month's issue) will not overlook the economic place of architects there.

Another kind of change now going on at P/A is a refinement of the way the magazine looks and the way it reads. The format established in 1980 was excellent enough to make P/A one of five finalists for the National Magazine Awards in the category of design in 1981. And it has had an observable influence on other magazines. By 1983, however, we felt a need to improve on this basically sound design. We wanted a clearer distinction between different kinds of text, more color reproductions, of better quality, and a greater variation in scale and texture between articles; we want a clearer sense of order among articles in an issue and in the placement of editorial pages in relation to ads. With the collaboration of two fine young designers (January P/A, p. 33), we have accomplished much in this area and laid the groundwork for future improvement.

In terms of editorial content, we have some other fine tuning in mind. We expect to rely somewhat less on the publication of new buildings, further diversifying the kinds of design articles that you will be seeing in P/A. We are by no means playing down the coverage of new buildings, which every survey proves to be the kind most appreciated by readers. We plan, however, to treat different buildings more differently—emphasizing such aspects as design review process, construction details, or energy strategies—to extract more specific lessons from specific examples.

All of these refinements and adjustments will matter only if our editors and contributors continue to survey the field of architecture with superior perception—and courage—identifying those ideas and accomplishments from which P/A readers can really learn. To rephrase and badly mangle Mies's dictum, divine details don't count unless you've got the right parti.

John Maris Dife

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Views

Church-skyscraper rapport

Holy Ghost Church in Denver will certainly not be a "plaza sculpture" in the design for a high-rise by C.W. Fentress and Associates, as described in "Pencil Points" (October P/A, p. 49).

The Church will not only be reflected in the glass of the 550-foot Tower, but will reflect the Church's presence and concern for the downtown area, as the late Helen Bonfils, the communityminded benefactress, envisioned in 1946 when the edifice was built. The Church of the Holy Ghost is a primary concern of everyone committed to serve those who live and work in the city and especially to care for the needy of all classes.



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The Church will hardly be a "plaza sculpture." A sculpture is lifeless, the Church is living and alive—through its people. It gives dignity, meaning and hope to life. The plaza is a unique tribute to the progress of all styles of life. Together they will add to the richness of the downtown urban fabric. Father C.B. Woodrich, Pastor Church of the Holy Ghost Denver, Colo.

[We are pleased to present the pastor's view. It is some consolation to us that the proceeds of this air rights windfall will help "the needy of all classes."— Editors]

Stucco repairs

In Thomas Fisher's article on acrylic stucco (P/A, Dec. 1983, pp. 83–87), I was noted as giving a professional recommendation which was the exact opposite of the recommendation I actually made. Concerning loose stucco at the Greek Revival Alsop House, at Wesleyan University, Fisher states that I recommended re-adhesion of the loose stucco, and that architect Edwards chose the less risky, and indeed more sensible, course of replacement in kind.

I enclose copies of the correspondence documenting my actual recommendation that "loose stucco should be removed" except for areas, protected within the porches or perhaps under the cornice, where original material could be preserved for its archival value, using my adhesive process.

The article's complete misstatement gives the impression that an architectural conservator recommended an innovative and risky treatment and that an architect was needed to restore common sense.

Morgan W. Phillips Architectural Conservator Society for the Preservation of New England Antiquities Boston, Mass.

Photo credits

In the article on Arthur Brown, Jr. (P/A, Dec. 1983, pp. 64–71), photos 11 and 12 should have been credited to Gabriel Moulin Studios, 20 and 21 to Pacific Gas and Electric.

Contractor's due

Contractor for the de Menil house by Gwathmey Siegel & Associates (P/A, Dec. 1983, pp. 47–57) was Caramagna and Murphy of East Hampton, N.Y.

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WON-DOOR FIRE GUARD

P/A News report

Three Arquitectonica projects are shown In progress, p. 36; D.C.'s Old Post Office and Disney's EPCOT are the subjects of Perspectives, p. 41; and Pencil points can be found on p. 26.

Miami week for arts both fine and deco

After more than a year's delay, caused by misbehaving stucco and a staggering \$16.5 million renovation of its smokeevacuation system, the first part of Johnson/Burgee's \$25 million Miami-Dade Cultural Center opened in mid-January.

The Center for the Fine Arts made an impressive debut with its inaugural exhibition of over 200 works of art from 60 leading U.S. museums. As organized by Director Jan van der Marck, the show expressed the qualities unique to our museums: civic pride, connoisseurship, and patronage. It seemed a bit ironic, however, that the works were selected to represent each institution's major period of acquisition, since the Miami Center itself, van der Marck made clear at the opening, "will not form a permanent collection, but will be an exhibition agency." Inside, the real problem was that it did in fact look more like some kind of agency than a museum. The two-level, 34,000-square-foot space is little more than a box, and a relatively boring one at that. The almost total absence of daylight and uniform artificial lighting throughout do not help matters.

Outside, though, things were livelier. The raised 33,000-square-foot quarry tile plaza, which the Center shares with the soon-to-open Miami-Dade Public Library and Historical Museum of Southern Florida, shows every sign of becoming a quite exciting place. Enclosed by the Mediterranean-style buildings of shellstone and stucco with their terracotta tile roofs, it has already been used for large gatherings on several occasions and has shown itself to function superlatively as a grand outdoor room in the manner of the great Italian piazzas. And that, after all, is what Philip Johnson has repeatedly said the complex is all about.

Deco weekend

Across town at the same time, the 6th Annual Art Deco Weekend was held in Miami Beach's National Historic District. The days of street fairs, seminars and lectures, films and fashion shows were more heavily attended than ever,



Dade County Center for the Fine Arts.

and the restored Deco hotels were fairly bursting at their seams. But not all was fun and games. During the weekend, vigorous protests were issued against the possible demolition of 1: the wonderful Art Deco flower market in Berkeley, Calif., to make way for a shopping mall, and 2: a stunning 1937 nautical Moderne house in Tulsa, Okla., which the new owner wants to replace with something more along the lines of what he has been quoted as calling French Palladian. [DM]

The last word

Selected as this year's recipient of the Municipal Arts Society President's Medal, the 77-year-old Philip Johnson was honored by an exhibition at the Urban Center in December, curated by Virginia Dajani. "Philip Johnson Ar-chitect: The First Forty Years" hit the familiar highlights of an eclectic career, from the Cambridge house designed for his Harvard thesis (1943) to the Times Square towers (1983). Johnson's penciled remarks added spice (and, no doubt, price) to elegant black-and-white photographs of built works, but the architect remained silent on the most recent projects, including the Honolulu Neiman Marcus and 33 Maiden Lane, which were presented in model form.

Pencil points

With the blessings of MoMA (Mies archives), three Catalonian architects are reconstructing Mies van der Rohe's Barcelona Pavilion (1929). Knoll will furnish the remake, opening next fall.

Robert Venturi has been named recipient of the 1983 Louis Sullivan Award by the International Union of Bricklayers and Allied Craftsmen.

University of Houston architecture students call Johnson/Burgee's design for their College of Architecture (P/A, July 1983, p. 22) a mere imitation and, they say, a bad one at that. They claim that it copies Ledoux's House of Education (1773) and sets a bad example for the school; their protests made the front page of the Houston Chronicle.

• School officials, however, are delighted both with the design and with the free publicity.

The moribund Atlanta Underground may yet be revived with the aid of the Rouse Co. The developer plans a \$120 million "Seaport" of the south, with offices, restaurants, and theaters.

Blueprint, London's Skyline magazine, gives all the dirt on British Design, as viewed by editor Deyan Sudjic, contributors Colin Amery, Dan Cruickshank, and other aficionados.

• The new tabloid, a definite hit with the Brits, hasn't yet made it to American bookstores.

Also in London, the future of the obsolete Battersea Power Station (elevations by Sir Giles Gilbert Scott, 1933) remains uncertain.

• Developers have been invited to present proposals for the valuable property.

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• Contact MRH Associates, P.O. Box 11316, Newington, Conn. 06111.

Hardy Holzman Pfeiffer Associates has withdrawn from the Willard Hotel (Washington, D.C.) restoration project.

Architects for Social Responsibility is seeking to expand its national base through the establishment of local chapters.

• Contact ASR, 225 Lafayette St., New York, N.Y. 10012. Often ironical, the running commentary ranged from art-historical analysis (of the Amon Carter Museum, 1961: "My earliest revolt from the International Style") to self-deprecation (of MoMA's West Wing, 1951: "I was not sad when this building was torn down. No one else cried either."). Two of Johnson's most (in)famous projects are consigned once and for all to the history books. "Enough stones have been thrown," he writes of his Glass House (1946), and "This building has been written about too much" of the AT&T. [DDB]



Installation with Lansner's folding screen; Braun's chair; Jackson's rug.



Millard's Prometheus chair.

Young blood

New York architect Dennis Miller recently abandoned the profession to devote his energies to bringing furniture and accessory designs by young Americans to the design professional. Dennis Miller Associates now distributes the work of over a dozen designers, among them Daniel J. Lansner and Jack Millard, both of whom received citations in the Third Annual P/A International Furniture Competition-the former for a folding screen, the latter for a wood side chair called Prometheus. Other designers represented include Steve Ditch, Michael Braun, Elizabeth Jackson, and James Johnson. For more information, write to Dennis Miller, 300 East 57th Street, New York, N.Y. 10022. [PV]

Be it ever so humble

"Home Sweet Home: American Domestic Vernacular Architecture," the citywide show sponsored by the Craft and Folk Art Museum from October through January, was the most extensive architectural exhibition to be mounted in Los Angeles in recent memory. Organized by graphic designer/colorist Gere Kavanaugh and architect Charles Moore, Home Sweet Home included every imaginable category of domestic architecture from grass huts to airstream trailers to the Hearst Castle. If it was a house, it qualified for inclusion. While the rigor and quality of the separate exhibitions was extremely uneven, what they lacked in scholarship they made up in quantity and enthusiasm. The 14 shows, three-day symposium and expanded catalog (edited by Moore, Kathryn Smith, and Peter Becker, and available from Rizzoli) also demanded extreme energy from those who sought to take it all in.

Two shows focused on architectural elements. "The Front Porch," curated by Davida Rochlin, at the Craft and Folk Art Museum, took a romantic look at the way Americans use outdoor space in their homes, with appropriate quotations drawn from American literature. Charles Moore's multimedia installation "Cabin-Temple-Trailer," at the LAICA gallery, examined symbolism in American houses. His presentation, the richest overall, included a beautiful series of documentary photographs, along with small- and large-scale models of colonnades, log cabins, trailers, and houses, although it lacked an adequate explanation of the basic thesis.

Several of the exhibitions had little to do with vernacular architecture per se, but explored the influence of domestic architecture on other art forms. "Building by the Little Folks," a small exhibi-



Charles Moore, "Temple, Cabin, Trailer."



Ed Mayer, Redwood Lathe, "The House That Art Built."

tion at the Pacific Design Center, gathered together American building toys. "The House that Art Built," at Cal State/Northridge, examined the use of house imagery in the work of many artists including Donna Dennis, Tony Berlant, Roland Reiss and Siah Armajani. Another exhibition on the Hearst Castle presented Julia Morgan's drawings of one of America's most eclectic houses, hardly a vernacular structure but certainly influenced by the Spanish and rustic traditions, among others. The remaining shows covered such topics as American Indian dwellings, the California ranch house, and the common American bungalow.

Altogether, while the exhibition did little to clarify the definition of "vernacular"-that overused and abused term-it did weave an amazingly complex tapestry around the theme of domestic architecture. Summarized by Charles Moore in his exhibition essay: "What this exhibition really deals with is cultural baggage, the imperatives as well as the enthusiasms that we Americans have brought with us from somewhere else. We have combined this baggage with our responses to a particular landscape, setting, neighbors, and a set of climatic and other conditions." [Barbara Goldstein]

Re-issue

For those of you who have long admired Richard Riemerschmid's elegant wood armchair in The Museum of Modern Art's design collection, the good news is that now you can have one (or two, or six) of your very own: Jack Lenor Larsen is manufacturing the chair under an agreement with the German designer's estate.

Riemerschmid (1868–1957), an avid supporter of the Jugendstil movement and a key figure in early 20th-Century German arts and crafts, designed the



Riemerschmid chair.

chair in 1899, soon after he turned from painting to design. The Larsen reproduction, in solid beech, is available in natural or ebony finishes, with an upholstered seat. [PV]

Restoring the Isle of Tears

The rusting hull of the original ferry that shuttled immigrants to Manhattan still lies half submerged in its slip on Ellis Island, where it was left to rot 20 years ago. Now, as restoration efforts seek to rectify damage to the landmark done equally by nature and by man, the wreck remains a poignant symbol of the long years of neglect.

Although 40 percent of the U.S. citizenry can trace at least one ancestor through Ellis Island, the immigration facility has been effectively closed to business since 1954. In 1964, the Ushaped island was made part of the Statue of Liberty National Park, but it remained essentially untended until 1974, when funds for a watchman and tourist ferries from Manhattan were approved. As the Island and its sister Statue approach their 100th birthdays, a bluechip committee is raising funds for restoration (P/A, Sept. 1983, pp. 41, 44). Five million dollars has already been spent to repair the island's seawall and \$1.5 million to replace windows and roofing in the Main Hall. Architects Bever Blinder Belle and Anderson Notter Finegold are currently working up plans for the complete restoration of the



Ellis Island.

Main Building and ticket annex, to be completed in time for the 1986 Statue celebrations. The remaining 30-odd buildings, some of which date from WPA days, will be readied for the Island's centennial in 1992.

The present ruinous condition of the complex makes restoration a tricky business. Unchecked for 20 years, a tremendous amount of moisture has seeped into the stone and clay walls, and a 2-mm crust of salt deposits is eating away the limestone cornices of the Main Building. Inside, much of the 1½-inch horsehair plaster has crumbled down and is not salvageable; decorative tile work, however, may be replaced with surplus tiles found in the basement.

Tricky, too, are the philosophical issues involved. As a matter of policy, the National Park Service does not "reconstruct" its holdings to "recreate" a particular era. But Ellis Island has been

P/A News Report

greatly modified over time, and major elements of the Main Building, such as the enormous entrance canopy and the Hall's grand stair, up which all immigrants walked, scrutinized for limping or shortness of breath, have long since been removed. Architect John Belle argues for the reconstruction of these key elements, which date from the island's peak immigration period (1911-1915) and for the removal of modifications made by subsequent "tenants" (World War II prisoners and the National Guard in the 1950s) whose presence bore no relationship to the island's principal historic role as gateway to America. Similarly, the Park Service is considering dredging the ferry wreck, while the architects would prefer to preserve the romantic ruin in situ. The Park Service is continuing to review these and other proposals.



Main Hall, Ellis Island.

Of still greater significance are the asyet unspecified plans for the southern portion of the island where contagious disease patients were housed. Two years ago, the Park Service issued an RFP to private developers, but did not follow through; more recently the idea of developing this portion of Ellis as a luxury conference center for corporate executives was raised by former Secretary of the Interior James Watt. Supporters of the scheme say that funds generated by the conference center will ensure proper, continued maintenance of the historic structures. But the phenomenal success of the Statue of Liberty/Ellis Island fund-raising committee, headed by Chrysler Chairman Lee Iacocca, may eliminate the need for any private development on the island, thereby properly preserving the "Isle of Tears" as a public park for all Americans. [DDB]



GBQC, Speed Museum.

Up to Speed

The handsome addition to the I.B. Speed Art Museum in Louisville by Geddes Brecher Qualls Cunningham is a notable architectural achievement in a city whose generally pedestrian contemporary design has until now been challenged only by Michael Graves's Humana Tower, under construction. The new Speed wing also marks the emergence of Robert Geddes as a Post-Modernist.

The \$3.5 million addition retains the scale, material, and visual rhythm of the 1927 Beaux-Arts main building by Arthur Loomis. Narrow "lintel" and "pilaster" panels of the same dark green Vermont slate that clads the museum's 1973 wing define a series of bays along the windowless facades.

The appropriately restrained exterior is very attractive, but the interior is absolutely stunning. The GBQC wing, which doubles the museum's exhibition space, is reached by a grand staircase approached across Loomis's original entrance hall. The new block consists of eighteen 20' x 20' "cabinet" galleries (twelve on the upper level, six below along with a traveling exhibition area and educational facilities) organized around a two-story skylighted sculpture court. Diffused natural light, which emanates from hidden vaulting, is directed to the linen-covered walls of the upper-level cabinets. These galleries are grouped in threes, and each trio is color coded: green for Italian art, blue for French, burgundy for Dutch, taupe for Flemish.

Geddes' earlier work often paid homage to Aalto, Gropius, and Le Corbusier, but the intimacy of the Speed galleries, the vaults, saucer domes, and abundant ellipses, are clearly inspired by the work of Sir John Soane, specifically the Dul-



wich Gallery of 1811 and his housemuseum of the same period. Respectful references are also made to Geddes' former teaching colleague Louis Kahn.

The inaugural exhibition in the new Speed is a major show of the work of that ultimate Neo-Classicist, Ingres. Fittingly, "In Pursuit of Perfection: The Art of J.A.D. Ingres" will move on to Kahn's Kimbell Museum in Fort Worth. [William Morgan]

William Morgan is Professor of Fine Arts, University of Louisville.



Hans Scharoun, Weissenhof housing.

Restoring the Weissenhof, Stuttgart

The disparate elements of the Modern Movement first came together, and formed the unified expression later termed the International Style, at the Weissenhofsiedlung in Stuttgart, 1927. There, under the direction of Mies van der Rohe, 16 architects from five European countries designed and saw constructed a group of demonstration hous-



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Over the years, the Weissenhof has become a point of international pilgrimage for architects and students, but the complex itself has suffered. Some of the original construction work was shoddy, and the flat roofs and windows leaked. Nor have its caretakers been uniformly conscientious. Subject of continued controversy, the Weissenhof was reviled as a "suburb of Jerusalem" by the Nazis, who produced a doctored photograph showing Arabs and camels as tenants. A counter-demonstration housing project of wood structures with gabled roofs was built nearby in 1932-33. Originally commissioned by the municipality of Stuttgart, the Weissenhof passed into the hands of the Reich government, and plans were made for its demolition in 1940. The war intervened: for a time the complex served as troops' barracks, and Mies's apartment block was converted for use as a children's hospital. Several buildings were destroyed or damaged during Allied bombing raids.

After the war, reconstruction was haphazard and often inaccurate. Pitched roofs were added to the buildings of Ludwig Hilberseimer, Hans Poelzig, and Peter Behrens, and roof apartments were built over the double-family house designed by Le Corbusier and Pierre Jeanneret. Later proposals for the sale of the Weissenhof by the government led to a large international protest in 1977 by the architectural and scholarly community. Professor Jürgen Joedicke, the noted architectural historian who teaches at Stuttgart, held a symposium on the Weissenhof, and in 1981 the Ministry of Building ordered a complete restoration program.

The preservation plan accepted in May 1983 calls for a three-stage work schedule. Restoration of housing by Hans Scharoun, J.J.P. Oud, Le Corbusier/Jeanneret, and Peter Behrens is to be completed in 1983–84; that by Mies (half of his apartment block), Josef Frank, and Mart Stam to be undertaken in 1984–85, and that by Victor Bourgeois, Mies (the remaining portion), and Adolph Schneck to be completed in 1985–86.

The basic restoration plan calls for stabilization where necessary and exterior reconstruction of stucco, paint, windows, flashing, and fittings. Interiors are to be upgraded with plumbing and wiring, but there are no plans for a "period" restoration unless requested by the tenants, who will have the right to return. To date, only Le Corbusier's single-family house retains a "real" 1920s interior.

When complete, the restoration should once again make apparent the



differences between architects who have been historically lumped together as a single force. Behrens' apartment block, for example, appears as a conventional design of the period, merely stripped of ornament, in contrast to the radical, weightless boxes of Mies, Stam, or Le Corbusier. The colors revealed by paint research may also surprise some visitors: Scharoun's house has brilliant orange soffits, while Le Corbusier's has a dark brown base and window trim.

The interiors are not open to the public; however, some can be visited by prior arrangement with the site architect, Herr H. Naegele, Am Weissenhof 21, 7000 Stuttgart 1, while restoration work is in progress. These are revealing, both for the minimal standards applied at the time and for the attempts made by residents to adapt them to more traditional notions of interior space. For instance, vestibules were added to almost all of Oud's units. The restorations expose not only the accomplishments but also the failed expectations of these 20th-Century landmarks. [Richard Guy Wilson]

Richard Guy Wilson is Chairman, Division of Architectural History, University of Virginia, Charlottesville.

Architectural Technology

The AIA's new quarterly—Architectural Technology—has arrived, and while it has its shortcomings, it gets an A for ambition. The magazine covers an impressive range of topics, including computers, energy, law, research, practice, and the design process. It uses computers not only for its own typesetting, but as a way of accepting contributed articles and distributing material to its readers. And it brings that material to life with clever graphics and generally well-written prose.

Yet the magazine, at least in its first issue, falls short of its stated intentions, as phrased in the editorial: "Firmness, Commodity, and Delight." The technology of construction, despite the magazine's name, receives scant attention, while the coverage of design is limited to pure process. Those gaps are surprising given editor Oliver Witte's claim in his editorial that "the return of the notion of architect as master builder" was a prime motivation for the magazine.

The real flaw of Architectural Technology lies in the attempt to be all things to all people—a delusion as fatal to a magazine as trying to be a master builder is to an architect. What we need more of, and what Architectural Technology has shown itself quite capable of providing, is the careful analysis of that sea of technical information in which we all must swim. [TF] P.S.: Editor Oliver Witte has since left the magazine.



Rebuilding Bayard

Renovation of Louis Sullivan's Bayard Building, the Chicago architect's only built project in New York, is nearing completion after three years of sporadic work. The project, originally undertaken by Joseph Pell Lombardi, is now largely in the hands of Wright devotee Edgar Tafel, who has affected a pragmatic adaptation of Sullivan's original design for Bayard.

The architectural importance of the Bayard Building is unquestioned: Upon its completion in 1898 it was hailed by critic Montgomery Schuyler as "the nearest approach yet made, in New York at least, to solving the problem of the skyscraper. . . ." The 12-story Bayard Building was the first structure in New York to break away from a more common layer-cake articulation and formally stress its verticality in alternating steel bearing piers and terra-cotta mullions.

The decorated terra-cotta façade, which was completely steam cleaned two years ago, had remained relatively untouched over the years. The entrance vestibule and the store spaces were "modernized" about 30 years ago, however, and their original decoration was stripped or covered over. According to a large promotional booklet published in 1900, the main entrance vestibule had been "finished with marble mosaic floors, polished marble walls, and Mexican mahogany." The booklet also describes a partition-since removed and replaced by a wall-between vestibule and store "made entirely of ornamental iron and polished plate glass." The proposed reinstallation of this partition and all but a narrow border of the mosaic floor were deemed too costly by the present owner, Kerway Realty Corporation. Instead, renovator Tafel-who according to the owner was hired because he had been a student of Frank Lloyd Wright, who in turn had been a student of Louis Sullivan-concentrated on the wood-framed glass doors of the lobby, which he designed to incorporate three cast-iron balusters removed from the original stairway. Tafel also added a ceiling skylight, reminiscent of those Sullivan used in his later bank buildings, and small wooden screens-elements more akin to Sullivan's or Wright's residential buildings-hiding the modern radiators of the vestibule and lobby. Last, the architect traced the large soffit panels on the underside of the cornice, and reduced and rearranged them as a plaster-cast frieze in the vestibule. The cumulative effect is not a restoration but an entirely new entrance space made up of an amalgamation of Sullivan's organic motifs.



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P/A News Report

The steam-cleaned Bayard Building.

Ironically, so-called "antigentrification" laws, which zone the Bayard Building spaces for manufacturing purposes only, may hinder plans to restore the ground floor to its original commercial uses. The owner, who would convert the store spaces into art galleries, now faces an extended appeals process mandated by the Landmarks Commission and the City government.

[Peter L. Donhauser]

Peter L. Donhauser is a graduate student of architectural history at Columbia University, New York.



Tamaccio/Twardzik, "Balloon frame" cart.

The pushcart war

Philadelphia's Foundation for Architecture sponsors a mid-fall Beaux Arts Ball, with all the trimmings—balloons, outlandish feathers, ribbons, hats, and sequined masks. As part of their support for the Foundation, the Pennwalt Cor-





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P/A News Report

poration sponsors a design competition related to the ball. This year's problem was the design of pushcarts to be used at the Ball to pass out all the trimmings. The eight winning entrants (out of 50) were given \$1000 per cart for its construction in the month preceding the Ball. Winners in the student category were: Kathleen Burns (Philadelphia College of Art), Susan Parnes (Drexel University), Steve Patrick (Drexel), and Fran Read (Drexel). In the professional category, winners were: Andrea Marks and Leigh Gronet (Malish & Piven), Van Potteiger, Bill Fox, and Ann Riggan (Cope Linder Associates), Lee Tamaccio and Robert Twardzik, and a team called "The Cartel," comprising William Becker, Pat Callaghan, Dan McCoubrey, Gerald O'Malley, James O'Malley, Audrey Smith, and Eileen O'Malley.

Judging the competition were Edna Andrade, artist and Professor Emeritus of the Philadelphia College of Art; Laurin B. Askew, Jr., Vice President and Director of Design for The Rouse Company; Gerald Cope, partner in Cope Linder Associates, architects; Louis L. Dorfsman, Director of Advertising and Design, CBS; Noel Mayo, President of Noel Mayo Associates; James Murphy, P/A; and Ray Murray, co-host of the KYW TV Evening Magazine. signs take on an oddly utopian aura. Consider their assumptions: 1) that the buried superhighway and landfill park will be built as planned; 2) that the 10year master plan is still valid in terms of land use designations and park footprints; 3) that the as-yet unplanned blocks separating the park from the city (shown completely blank in the schemes) will extend the existing street grid and adopt the scale of adjacent neighborhoods.

Given those rather broad assumptions, the plans appear to be competent and comfortable solutions. Their differences can be roughly cast as follows: Alternative A is a green "beach," B a string of formal, outdoor rooms, and C a linear

Below: Alternative A, South meadow; bottom: Alternatives B and C.





Westway wonderland

Three alternative schemes for the proposed 93-acre Westway State Park were quietly put up for public review last month in New York. They are the product of four years' work by the joint-venture team of Clarke & Rapuano; Venturi, Rauch & Scott Brown; and Salmon Associates.

Presented in a vacuum, isolated from the political controversy that has plagued Westway throughout its 10-year history, these otherwise very "real" deversion of Central Park. All three show a continuous esplanade, bike paths, recreational piers, and other traditional park components.

So charged with political implications is anything to do with Westway, however, that conventional design concerns seem somehow petty and these specific alternatives vaguely irrelevant. No park design, however delightful, could convince staunch opponents that the brave new world of Westway is worth the expense. [DDB]

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In progress

These three projects carry the distinctive signature of Arquitectonica, executed in ordinary or opulent materials.

1 Banco de Credito, Lima, Peru. Architects: Arquitectonica, Coral Gables, Fla. This 350,000-square-foot headquarters for the largest private bank in Peru is located at the foot of the Sierras outside Lima. The four-story courtyard building, lifted on pilotis and broken at one end, is patterned on the exterior with mullionless strip windows and diagonally mounted black marble. Its courtyard façade is irregularly fenestrated and clad in local pink slate. The bank agency, cafeteria, and auditorium are all articulated as separate forms in white marble, which slide under the building.



3 Capital Park West, Houston, Texas. Architects: Arquitectonica, Coral Gables, Fla. This 3.3 million-square-foot office complex near Houston is bounded by two low-rise parking structures that run the full length of the site. Four 15-story office buildings of related design frame two gateways at either end. At the center stand three glass towers sculpted in the "primary" forms of triangle, circle, and square. The tallest, a 42-story triangular skyscraper, is patterned with random red laserlike lines.

1b EXTERIOR ELEVATION





2 Horizon Hill Center, San Antonio, Texas. Architects: Arquitectonica, Coral Gables, Fla. This "monumental arcade" is in fact four glass towers linked at the upper six stories to provide larger, more flexible offices for an "anchor" tenant. One of the four houses a hotel and health club, with offices in the remaining three. The arcade rises above a retail mall. The six-story parking podium is topped by restaurants and recreation facilities. Tennis courts cantilever over a street of shops slicing through the platform, and a private club, styled à la Southfork, faces its own formal garden at one end of the arcade.





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D.C.'s new-Old Post Office is assessed as a role model for future developments, and Orlando's EPCOT Center is reviewed after its first year in operation.

The Old Post Office: Unique or ubiquitous?

High on its own success at the Old Post Office in Washington, D.C., the General Services Administration seems prepared to clone its showpiece all over town-and country. The published list of properties for which the GSA would "entertain" proposals for commercial development similar to the OPO's "Pavilion," includes the FBI, IRS, NASA, and GSA headquarters buildings, and, Weinberger willing, the Pentagon. Outdated post offices in Dallas and Atlanta may soon sprout hanging plants and twinkle lights, and D.C.'s long-suffering Union Station may succumb to the final indignity of boutiquification.

Ten years ago, the GSA was forced to preserve its white elephant (the agency actually issued an RFP for the demolition of the Old Post Office) by more far-sighted citizens including Nancy Hanks, Arthur Cotton Moore, and the members of Don't Tear It Down. The Old Post Office, with its arts tenants (the National Endowments for the Arts and Humanities, the President's Council on the Arts and Humanities, the Advisory Council on Historic Preservation, and the Institute for Museum Services)



The Old Post Office and its "Pavilion" in Washington, D.C.



was supposed to be the model mix of commerce and culture mandated in the 1976 Public Buildings Cooperative Use Act.

Sadly, the cultural component is the weakest part of the Post Office program. Actors on an awkward stage can be easily seen but scarcely heard; musicians and jugglers fare better. Ironically, the noise from the stage has proved so bothersome to Federal workers on the upper floors that the performance schedule is now limited to lunchtime and evenings.

There is, however, much to praise at the OPO, most of it the work of Arthur Cotton Moore Associates, in joint venture with McGaughy, Marshall & McMillan, Associated Space Design, and Stewart Daniel Hoban, the team that won the Federally sponsored competition in 1977. At last this grand interior has been placed in the public domain; moreover, the opening up of the former "basement" mail-sorting areas beneath the truss has actually clarified the relationship of court within court. People passing through the upper floors' generous corridors finally have something to look at below. (Conversely, the lighting in these corridors has been carefully confined to new sconces on the cortile columns-no overheads to mar the view from below.) The 1899 Richardsonian shell, designed by Willoughby J. Edbrooke, supervisory architect for the Treasury Department, has never looked better: With its new color scheme, reglass-cage elevators, and stored reopened skylight, the cortile outdoes the Capitol rotunda, its only serious rival in this city, for sheer spatial drama.

But the "Pavilion" (why the standardized name? What's wrong with the Old P.O.?) with its semistreamlined curves and awkward entrances which "dish down" from the sidewalks to the belowgrade mall, adds glitter but little glamour to the stately space. Rather than adapt the mall to the building, architects Benjamin Thompson Associates copy their own (better) Faneuil Hall interiors for the Evans Development Company.

As for the office space, only the fifth floor, where the postmaster's elegant old offices were located and where the appointed agency heads now reside, retains the spirit of the original. The upper office floors, while never as opulent, were once well-proportioned, lighted, and ventilated; now, however, dropped ceilings drastically reduce once generous floor-to-ceiling heights, cutting off precious daylight. The building's simple square circulation pattern is completely obscured in a maze of government-issue office partitions, and operable windows have been sealed shut to save costs.

At least these windows still offer spectacular views of the Beaux-Arts buildings in the Federal Triangle or of Pennsylvania Avenue, that once seedy thoroughfare which continues to improve. With the opening of the OPO, this Federal ghetto can expect still more activity both during and, more important, after hours. When the top-floor museum, with its Ditchley bells (a Bicentennial gift from the British) and tower observation deck, opens this spring, the tourists will come in droves.

They will come to visit the Post Office, not the Pavilion. In planning future Pavilions, GSA may dilute the impact of its own original. The OPO has always been a one-of-a-kind place in Washington. It should stay that way. [DDB]

EPCOT one year after

The designers of Orlando's EPCOT have assiduously applied lessons learned in Anaheim and elsewhere, but the place falls short of Disney's original vision. The "Experimental Prototype Community of Tomorow" breaks little new





EPCOT's scaleless entrance sphere and miniaturized Doge's Palace.

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EPCOT's updated Tomorrowland.

ground compared with its Magic Kingdom predecessors. Moreover, it forms a harrowing prospect as a prototype and lacks any real sense of community.

EPCOT is a collection of separate pavilions, each offering well-"imagineered" rides through a maze of disconcertingly meaningless, but nonetheless impressive, corporate-sponsored exhibits and displays. The shows within are pure Disney, with full use of the animated 3-D Disneyland figures. The overall effect is not unlike a well-done but modest world's fair. The World Village follows with a collection of expertly rendered stage sets depicting the Disney versions of Italy, England, Mexico, France, Spain, Germany, Canada, and Japan. Signs in the shadow of the Eiffel Tower promise the arrival next year of Israel and Morocco.

These small-scale foreign architectural caricatures are alluring (especially fine is Italy's Doge's Palace, minus pigeons and water), but on close inspection disappointing. To the architect, admittedly a distinct minority among World (Village) travelers, it is sad to see so little in the way of authentic construction and detailing.

Most disappointing is the absence of any vision concerning what a community—of tomorrow, yesterday, or today, here or elsewhere—could or should be. EPCOT was originally intended to house some 20,000 residents, but in reality has none, unless one counts the 6000-plus workers who arrive each morning to prepare for the day ahead. The notion of community is missing not only in EPCOT and the World Village, but in the whole Disney complex.

Disney reportedly learned from Anaheim, where surrounding non-Disney attractions, hotels, and food operations nearly overwhelm Disneyland and clearly claim a large portion of the visitors' dollars. Near Orlando, all is controlled—if not owned—by Disney, right down to the public bus transportation that links hotels to the Shopping Village, EPCOT, and Disney World.

Traveling the great spaces between, one is almost wholly dependent upon motor vehicles, a General Motors vision of the future. (Appropriately, GM is sponsor of a major EPCOT attraction, the "World of Motion.") A raised monorail does connect Disney World with EPCOT and runs right through the frequently pictured Disney hotel, but it can be boarded only at very distant points for an extra fee, and it already shows signs of becoming a Raymond Loewy-styled "future antique."

An undisputed success at the gate, EPCOT is too deeply rooted in the traditions and shortcomings of the suburban hinterland. It's a pristine attraction, not a prototype community. Offering a nostalgic vision of a future that is clean (the paramilitary sanitation brigades are dispatched via walkie-talkies), comfortable, and safe, EPCOT is ultimately stultifying and devoid of the vitality one might expect of places intended for people. If this is what's in store tomorrow, give us the world of yesterday. [Thomas Vonier]

<complex-block>

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P/A Calendar

Exhibits

Through Feb. 19

Design in America: The Cranbrook Vision 1925–1950. Detroit Institute of Arts. Subsequent dates: **Apr. 18–June 17**, Metropolitan Museum of Art, New York.

Through Feb. 20

The Art of Designed Environments in the Netherlands. AIA Building, Washington, D.C.

Through Mar. 3

Contemporary British Architects including Nigel Coates, Eric Parry, and Peter Wilson. Facade Gallery, 741 Madison Ave., Third Floor, New York.

Through Mar. 4

Russel Wright: American Designer. Renwick Gallery, Washington, D.C.

Through Mar. 4

Lights, Camera, Action: New York's Silent Film Studios. New York Historical Society; also, through Mar. 11, Artists' Views of Central Park: 1814–1914; through May 6, Shanties to Skyscrapers: Robert L. Bracklow's Photographs of Early New York.



Raymond Hood, "Manhastan 1950," 1929

Through Mar. 7

Architecture of Raymond Hood. Whitney Museum of Art at Philip Morris, New York.

Through Mar. 15

Metamanhattan (urban design proposals for Manhattan). Whitney Museum of American Art, Federal Hall National Memorial, 26 Wall St., New York.

Through Apr. 17

Compact Comfort: Apartments and Bungalows in Chicago, 1890–1940. Chicago Historical Society. Also, **through Aug. 31**, Chicago Furniture: Art, Craft, & Industry.

Feb. 15-Mar. 15

Robert B. Marquis: Architectural Sketches & Desk Notes. Philippe Bonnafont Gallery, San Francisco.

Feb. 21-Mar. 22

OSU Center for the Visual Arts Design Competition. Gallery at the Old Post Office, Dayton, Ohio.

Mar. 3-Apr. 13

The End of the Road: Vanishing Highway Architecture in America. Edison Community College, Ft. Myers, Fla.

Mar. 4-Sept. 3

The Folding Image: Screens by Western Artists of the 19th and 20th Centuries. National Gallery of Art, Washington, D.C.

Mar. 6-31

Green Architecture, drawings by Barbara Stauffacher Solomon. The Urban Center, New York.

Mar. 6-16

Chicago's Famous Buildings. Ball State University, College of Architecture and Planning, Muncie, Ind.

Mar. 18-May 27

The Product of Design: An Exploration of the Industrial Design Process. The Katonah Gallery, Katonah, N.Y.

Apr. 4-12

Casa Tile '84, Italian Trade Center, 499 Park Ave., New York.

Competitions

Feb. 15

Entry deadline, Colorcore "Surface & Ornament" Competition II (for completed installations or in-production designs). Contact Colorcore "Surface & Ornament" Competition, Formica Corporation, One Cyanamid Plaza, Wayne, N.J. 07470.



From "Compact Comfort."

Mar. 15

Entry form deadline, ASID International Product Design Competition (submissions due Apr. 27). Contact ASID, 1430 Broadway, New York, N.Y. 10018 (212) 944-9220.

Apr. 1

Entry deadline, design of a 200car parking lot in downtown Columbus, Ind. Contact Theodore Liebman, Liebman Ellis Melting, 330 W. 42 St., New York, N.Y. 10036 (212) 239-8080.

May 8

Closing date, Tomorrow's Think Tank Today: An Electronics Research Laboratory (open to architecture students). Contact Think Tank, RIBA Education Dept., 66 Portland Place, London, W1N 4AD (enclose self-addressed A5 envelope).

May 15

Entry deadline, National Student Design Competition on Metal Building Systems. Contact Butler Architectural Design Competition, P.O. Box 32314, Washington, D.C. 20007.

Conferences, seminars, workshops

Mar. 1-3

Condes, Dallas Contract/Design show, Dallas Market Center.

Mar. 2–3

Project 9401—Designing the Future, University of California, Berkeley. Contact Guidelines, Box 456, Orinda, Calif. 94563 (415) 254-0639 or (415) 254-9393.

Mar. 12-16

RESTORE intensive workshop, masonry maintenance and restoration. Contact RESTORE, 19 W. 44 St., Suite 1701, New York, N.Y. 10036 (212) 382-2570.

Mar. 19-21

Energy Technology Conference and Exposition, Sheraton Washington Hotel, Washington, D.C. Contact ETC, 966 Hungerford Dr., #24, Rockville, Md. 20850.

Mar. 22-24

West Week, West Coast contract/ design show, Pacific Design Center, Los Angeles.

Apr. 13-15

Revitalizing America's Historic Resorts, 11th Annual Back to the City Conference, Miami Beach. Contact Miami Design Preservation League, 1300 Ocean Dr., Miami Beach, Fla. 33139 (305) 672-2014.

Apr. 25-29

1984 annual meeting, The Society of Architectural Historians, Minneapolis/St. Paul. Contact SAH, Suite 716, 1700 Walnut St., Philadelphia, Pa. 19103.

Apr. 26-28

1984 Wind/Solar Energy Technology Symposium, Columbia, Mo. Contact Linda Rodden, Engineering Conferences, 1020 Engineering Bldg., University of Missouri-Columbia, Columbia, Mo. 65211 (314) 882-3088.

Apr. 27-29

Legacy and Change: Caring for Historic Religious Properties, New York. Contact Preservation League, 307 Hamilton St., Albany, N.Y. 12210 (518) 462-5658.

May 6-10

AIA Annual Convention, Phoenix, Ariz. Contact AIA (202) 626-7300.

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PA Practice

Advanced systems drafting in the large firm

Advanced systems drafting is a production system that combines overlay and composite drafting, keynoting, photo drafting, and computer-aided drafting where applicable with final printing by color offset. Not only does it prepare a firm for computer-aided drafting in teaching personnel to think in terms of layering drawings. It also gives the architect better control over consultants' work, since floor plans originate with one source. It reduces the architect's drafting time from 30 percent to 65 percent over traditional drafting, and reduces the amount consultants must draw by 30 percent to 40 percent, since they neither draw the architectural floor plan(s) nor make changes in them. It produces documents that are more easily interpreted through the use of color offset printing and more easily revised because dimensions, notes, grid lines, and similar data on separate overlays are not erased. It works well with fast track construction, allowing a contractor to begin pricing from one overlay sheet while architectural personnel continue working on other overlay drawings. And it provides the architect with a new marketing tool. Many clients are attracted to systems drafting because it lowers costs for their projects, results in fewer addenda due to drawing inconsistencies, and allows a faster start-up for construction.

For an advanced systems drafting system to succeed, management must make a total commitment to its implementation. They must allot the necessary time and personnel, and they must budget adequate funds to support the system's development.

A task force, with representatives from in-house departments and consultants' offices with whom the firm normally associates, should help in the development of a systems drafting program. The time required should not exceed six months and the cost not more



This diagram shows how photography aids the systems drafting process.

then \$20,000. The total cost for time and purchase of basic materials and equipment thus should not exceed \$35,000. (Other automated equipment and its required space would be in addition to this cost.)

Management should then appoint a production coordinator to head up the systems implementation. The coorMore efficient ways of generating project documents through systems drafting, and what to do with documents upon project completion are the two topics covered this month in P/A Practice.

dinator would establish and maintain drawing standards, act as liaison between the firm and external reproduction specialists, establish project times and printing budgets, supervise development of standard details and an office drafting manual, investigate new drafting materials and methods, study ways to integrate computer-aided drafting into the systems drafting program, and initiate a training program for the production staff and consultants in the use of the system. Most failures can be attributed to improper training of production personnel and lack of communication between the various disciplines assigned to the advanced systems program. Methods that can be employed for training the staff include: having a reproduction specialist and the production coordinator conduct an in-house demonstration; providing production personnel with concise typewritten procedures; encouraging principals, project managers, and production staff to avail themselves of systems drafting seminars and workshops; subscribing to publications and purchasing books on systems drafting; and developing a slide presentation illustrating the drafting program to production personnel.

Every firm has equipment that can reduce time in the production of drawings. Typewriters, word processors, micro processors, plain paper copiers, and diazo printers can all be integrated into the new production system.

The basic materials and equipment required for advanced systems drafting include:

Drafting film: Overlays must be drawn on .004-inch (4-mil) polyester drafting film with a matte tooth finish on one or both sides. A preprinted nonreproducible grid in ¹/16-inch increments, placed on the backside of the drafting film, aids in lining up stick-on material and provides a guide for freehand lettering. Drafting film used for plotting data on the ink plotter can have a matte finish on one side and no grid.

Punch: Polyester drafting film and sepia slicks are punched along the top trim margin space with a special punch made for this purpose. Punching can be done [*P*/*A Practice continued on page 58*]

P/A Practice

at the reproduction firm, but usually at a cost of $25 \notin$ to $50 \notin$ per sheet. To reduce time and cost, a firm should purchase a punch and do this work in-house.

Drafting pens: Jewel point, technical drafting pens produce excellent linework. To ensure that linework and lettering remain clear and sharp when reduced 50 percent, any point smaller than "0" should not be used.

Polyester sepias: Polyester sepias or "slicks" are no-matte, 3-mil, clear film, chemically treated on one side. The slicks are exposed to light on the vacuum frame and developed on the diazo printer. The film is a stable material not affected by temperature changes, and is used in overlay drafting for making exact-size copies of single or combined sheets. The sepias cannot be drawn on and are punched for placing on the register bar in the vacuum frame or drawing boards with overlay sheets above.

Pin bar: A "pin bar" or "registration bar" is used by architectural and engineering staffs to align punched base and overlay sheets. The pin bar is a stainless steel strip 26¹/₂ inches long with seven, ¹/₄-inch round protruding nubs that fit snugly in the prepunched holes in the polyester drafting sheets. The reprographic and lithographic shop uses matching pin bars for mounting sheets on the camera backboard and press for photo work and offset printing.

Vacuum frame: A vacuum frame or contact frame is used in overlay drafting for printing sepia base sheets and compositing base sheets with overlays for progress or check prints, and may be used for compositing and screening sheets for final printing of bid sets using a diazo printer.

In overlay drafting, there are two main types of drawings—base sheets and overlay sheets. A base sheet has the "general data" usable by other disciplines. A base sheet is an architectural floor plan. An overlay contains information that applies to a single sheet. A typical overlay might include the A/C supply or return duct plan or a dimensioned floor plan.

Base sheets are drawn by the architect, then printed as polyester throwaway sepias or slicks. The sepia sheets are punched and distributed to all disciplines for them to begin their work. The architectural production staff and all consultants do their respective work on polyester overlay sheets placed over the sepia base sheets.

To use overlay drafting effectively and efficiently, the individual layers or overlays must be planned prior to drawing the first line. Without the proper development of a plan prior to beginning an overlay drafting job, the job will, more than likely, be a disaster. The steps to follow in producing overlay drafting are: Consideration of the job production schedule and techniques that will ensure development of documents in minimum time and expense. For example, CAD may be the best method for producing a new project, but photodrafting would be the fastest method of producing drawing sheets for a renovation project. Development of a simple indexing system for compositing the final overlay drawing sheets with base sheets. Preparation of an index of drawings in sufficient detail to identify what information is needed for the construction documents. Preparation of an organizational plan, which further illustrates how overlay sheets are constructed and finally printed, and coordinate the plan with consultants for their concurrence. Development of mini-drawings that reflect the Index of Drawing sheet. The drawings should indicate graphically to scale the format and information required for each sheet in the working drawing set. Extraction from the job plan of a printing schedule that will be a concise record of what sheets go together and a complete list of information required by the reprographic firm to offer a final printing proposal.





Another system associated with an advanced systems drafting program is composite or cut-and-paste drafting. With composite drafting, the production staff assembles, rather than draws, a final working drawing sheet.

The final composite is created from various sheets of various sources by pulling them together horizontally. Repeat information is saved and reused by making high contrast prints of each drawing or notation and pasting them down into a carrying sheet. The carrying sheet is completed by adding title block data and then forwarding the sheet to the repro shop for making into a washoff polyester print. The washoff print is treated as an original tracing by adding to or subtracting from it as any other tracing.

Another technique often used in systems drafting is photodrafting. Photodrafting, especially for renovation work, saves many hours of drafting by photographing the building's features, in lieu of measuring and then drawing every detail. Photodrafting demands a photo, transferring its image onto polyester drafting media, and then modifying the photo image with drawing construction notes and dimensions. When completed, the photo drawings are sent out to print. If the overlay process is chosen, simply do additional sheets, and photographically combine the sheets.

Computer-aided drafting is another tool that is useful in certain parts of the drafting process. It is sometimes more expedient not to use CAD (such as in renovation work) or to use CAD in combination with other systems drafting techniques. Computer-aided drafting is effective in the production of documents such as floor plans, reflected ceiling plans, furniture layouts, and mechanical, plumbing, and electrical drawings. Wall section and related drawings also can be developed quickly if there is an established data base. But retrieving standard office details from the office files and pasting up to make a finish sheet is normally faster than retrieving and plotting with CAD.

Advanced systems drafting produces drawings in color, using the color offset press for final printing. Original drawing sheets are reduced 50 percent or to a size that fits an average size offset press. Plates are made of each drawing sheet and placed on the offset press for printing in the color designated by the project manager.

If the original drawings are produced by CAD, then the data are placed on magnetic tape, the tapes are photoplotted onto negatives, and plates are made from the negatives for the offset press. Laser plotters are being considered by some lithographic firms in lieu of photoplotters, since laser plotting is faster and produces better quality by transferrring data directly to offset plates.

Too often, firms implement only a partial systems drafting program, hoping to integrate it into traditional production methods. That is rarely successful. Once management understands systems drafting, they will see that the only way that they can expect major benefits is with a commitment to a total systems drafting program. [Edgar Powers, Jr.]

Edgar Powers, Jr., CSI, is an associate with the firm Gresham, Smith & Partners.

Retention of project records

If the only problem were getting rid of the paper in our offices, the answer would be simple. We could fill our wastebaskets and go home early. The trash men would have a field day. But project documents have an initial reason for existing, and it is increasingly important to determine what to keep, for how long, and in what form.

Most project documents must be re-



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tained beyond the moment. The requests of attorneys for documents are familiar, often relating to lawsuits filed long after a job is completed and forgotten. Governmental agencies, the Internal Revenue Service in particular, also send us to our files. Such demands are usually of the nuisance variety but are undeniable.

Of more immediate value to a firm are the direct benefits of readily accessible archives. Valuable past lessons, hard won and then lost when key personnel leave the office, can still teach. Information on product performance, contractors, and design standards can be dredged up for reference. The effort (and cost) of preparing documents for remodeling and tenant revisions are greatly eased when original drawings and specifications are available. Indeed, access to such data is an effective tool for selling the firm's capabilities to new clients as well as past ones.

Obviously, records cannot be retained forever. So it is helpful that federal and state guidelines have been set for retention of records pertaining to salaries, taxes, and other accounting data. In states with court-tested statutes of limitations, the end date for lawsuits relating to professional liability for a project can also become the day for housecleaning. For instance, Illinois at present has a 12year statute of limitations with an additional 2-year discovery period. Hence, crucial records are usually kept for a minimum of 14 years. Before purging any documents, however, consider their continuing value to the office. Perhaps they should be sent to the original client as a goodwill gesture.

"Crucial" may apply to much paper. Certainly contract drawings (original tracings or prints) should be retained at least through the statutory period. With them, an office should retain final mechanical and electrical shop drawings. Field record documents should be kept for the same length of time. Design sketches, on the other hand, may be framed and sold at a local gallery immediately after project closeout.

As with contract drawings, originals or a record copy of specifications should be kept until the statutory period has expired. The file should include addenda, bulletins, and ideally, information on installed products. Spec originals and superseded draft pages should be maintained at least until project closeout. Because product literature, codes, and reference standards are usually available from manufacturers and libraries, copies used for a particular project may be retired early. A project correspondence file should consolidate the design professional/ client contract, letters, transmittals, and review documents, eliminating duplications and organizing them in traceable order. But in-house paperwork that later could be incriminating should be removed. There is no moral or legal mandate to save for posterity memos that record in-house disputes or point out errors that cannot be corrected.

In most offices, project records are usually archived in boxes after being forced from the back of file drawers. That is all right if they are stored in a secure, fire-safe, accessible place. For long-term storage, also consider the use of microfilm. Take time to prepare an index for each project and note the statute of limitations date on each box.

Then, before consigning documents to hoped-for obscurity, do one more thing. Prepare an abstract of useful information on each project, such as the job title and file number, location, building type, client's name, contractors, consultants, dates, and maybe cost and area data. You will probably use it sooner than you think. [William T. Lohmann]

William T. Lohmann, AIA, FCSI, is Specifications Manager for Murphy/Jahn, Chicago.



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I'd rather be interesting

P/A devotes this issue to the current work of Philip Johnson and John Burgee.

> This is the year of Philip Johnson and his firm, now called John Burgee Architect with Philip Johnson. Johnson's "first 40 years" as a graduate architect (the last 16 with Burgee) are being honored by an exhibition-notable for the architect's breezy comments penciled on the photographs-mounted at the New York Urban Center (p. 25). He has been awarded the President's Medal by the City's Municipal Art Society. He has been chosen as one of the 50 "American Originals Who Made the Difference" for Esquire magazine's Golden Anniversary Collector's Issue (along with, among others, Jonas Salk, Alfred Barr, Elvis Presley, Bill Levitt of Levittown fame, and the founder of McDonald's, Ray Kroc). And most significantly, his firm is now completing a formidable number of large, important, and controversial buildings-five of which are featured in this issue (Dade County Cultural Center in Miami and 101 California Street in San Francisco have also recently opened)and an even more formidable number of projects are on the boards. The first 40 years, indeed.

> But if all this sounds too rosy for comfort, let the reader be assured that the work is not uniformly viewed with approval and awe by architects and critics. Not all observers believe, as does the *New York Times*'s Paul Goldberger, that Johnson's "restlessness" is just cause for celebration. Critics commonly complain that the work represents too shallow, too broad-brush a rendition of history. Furthermore, it is difficult to accept and be warmed by a body of work (even considering



the current projects only) that is so, in a way, impersonal that it seems to lack the signature of one creative source (in this case, a team of two, for Burgee and Johnson design together). In addition, some of the work is discouragingly ungainly and unbeautiful—Fort Hill in Boston (P/A News Report, March 1983, pp. 26–27), for example, and the Crescent in Dallas—yet "beauty" is a stated goal of the architects, and they do, in fact, seem to be aiming towards the Vitruvian "utilitas, firmitas, venustas," the latter of which they do not always achieve.

Despite these caveats, Johnson and Burgee cannot be dismissed as mere *pasticheurs* nor as

mere popularizers of history, partly because they are receiving the attention, interest, and comment of historians and critics, even as they draw the interest of nonarchitects and affect so many urban skylines. The American scene and American perceptions are strongly influenced by both important and catchy ideas, as the *Esquire* anniversary issue makes clear; and Johnson and Burgee have both.

Pop PM

The AT&T building provides every architect with an easy answer to the question posed by lay friends (who refuse to be bamboozled by words and demand examples): "What is Post-Modernism?" The AT&T is far more restrained than the blatant examples of Post-Modernism seen in the heady days early in the movement, when buildings (or interiors) were keystoned and Ionic-columned within an inch of their lives; the work of Johnson and Burgee is less intensely personal and interpretive than the designs of Michael Graves; it strays less far from the fold of High Architecture for its sources than the work of Venturi and Scott Brown; but it certainly does not care to pick up the threads of specific pre-Modernist architecture and develop them conscientiously, as do the academically correct work of Alan Greenberg and the interpretive designs of Robert Stern.

Instead, Johnson and Burgee mine architectural history for images, project the images on the big screen of the sky, cast them in contemporary materials, and still maintain, ironically, basically traditional compositions-Pop Art, two decades later. When they place a giant mansard roof 50 stories above the ground and do it in glass, as in the recently announced Times Square complex in New York, or create a crenellated perpendicular building not of stone, but of glass, as in the PPG complex, or an all-glass Deco skyscraper, as in Transco, they exaggerate scale, simplify detail, and cast familiar images in a brittle, hard-edged material-they might be recreating Matisse in Ben Day dots. Like Pop Art, the designs eschew the nonreferential abstractions of the Modernist work preceding it while retaining an impersonal, abstracting attitude towards the material it comments upon./It is not merely popular art, as its critics would maintain, but a "serious" attempt to bring humor and commentary to bear upon the historically created urban environment. Their success, it should be noted, is limited by their chosen media and the extent of their artistry.



5 University of Houston College of Architecture, Houston, Texas. Studios and teaching facilities for 640 students. Four stories, with interior court. St. Joe brick, Canadian black granite base, limestone aggregate precast columns. Copper roof. Completion: summer 1985.

6 Fort Hill Square, Boston,

Mass. Office building, retail at base, space-frame-covered atrium. "Village" aesthetic, three different curtain walls, "crashing" of forms. Gray Caledonia granite, flamed finish. To be built in two phases, dates undetermined.

7 Mercantile Financial Center, Dallas, Texas. A 60-story office tower of red granite and glass, fronted by a banking building, set in a garden. Banking building is topped by a vaulted skylight, similar to the vaulted shapes at the top of the tower.



Johnson and history

Twenty-one years ago, John Jacobus, in his Braziller book *Philip Johnson*, wrote with remarkable prescience "... the development of modern architecture as a whole has, in the early 1960s, reached a state of congestion and immobility—the avant-garde has, in part, lost its reason for being." The text, presented according to its preface as an "interim report," concluded by suggesting three possible routes that Johnson might have followed. P/A has invited Professor Jacobus to file a "follow-up" report, and this essay is found on page 98.

Johnson, as an architect, never did "not know" history. Trained first as an architectural historian, he was tainted, one might say, from the start: He was never the Modern innocent, despite his Harvard/Bauhaus-type training; and his practice was always used as an outlet for his knowledge. The Glass House integrated notions from a wide range of sources, from the Acropolis through Ledoux to Mies van der Rohe (see John Jacobus's article).

But the sources for the Glass House were applied as ideas, not resemblances, and were collected with a deliberate disregard for chronological succession and the historical process: In other words, as Craig Owens underlines in his preface to the Institute for Architecture and Urban Studies Catalogue 9, this approach typified the Modernist's "attempt to clear a space in which the new might emerge," to overcome the passive historicist attitude of the 19th Century, in which history itself, not mankind, was seen as in control. It might seem, then, that in the AT&T building, Johnson has reverted to passivity, giving in to the inevitable, "inexorable" flow of history, reverting to the preservative, comfortable forms of the familiar.

This interpretation of a "reversion," however, has two flaws: It takes the historical nature of the work too seriously-the work is both commentary and abstraction; and it underplays the strong attachment that Johnson always had to traditional forms, seen both in his writings (where he was, from early on, as Peter Eisenman cleverly points out in his introduction to Johnson's Writings, "the iconoclast driving holes into the bottom of the ship of modernism"), and in his architecture. Even the Glass House, designed after but built before Mies van der Rohe's Farnsworth House, can be seen as more of a form that is wed to the ground and tends to enclose a room (despite the glass walls) than the Farnsworth, whose roof and floor are planes that float above the plane of the terrace, floating above the ground plane. With the Boissonas House of 1956, the making of rooms, clustered, is overt. Furthermore, Johnson often proposed second versions of elevations (for example, for Asia House), cloaking the "space" that tended to be "rooms" in forms that tended to be classicizing. Finally, in the late 1970s (after

the 1001 Fifth Avenue western-style fake front, perhaps), something snapped and then, "anything went"—why be limited by the "morality" of total abstraction? If Johnson's work always was informed by

If Johnson's work always was informed by architectural history, it also was never innocent, it would seem, of his knowledge of contemporary art, which he follows closely and patronizes. His current Post-Modern work is consciously related to Minimalist sculpture the Pennzoil Building of 1977 being an obvious example. Not space confined by planes, these, but solid crystals out of which interiors, by necessity, are carved.

Flashcard architecture

For architects trained in the single-minded, if not prudish, post-World War II years (when the battles for Modern architecture were still being fought), it is difficult to accept the "frivolity," even "promiscuity," of the casual drift from style to style. Ada Louise Huxtable, in two recent articles in the *New York Review* of Books, refers to the "fancy-dress skyscrapers" of Johnson and Burgee, and picking up a cue from Klaus Herdeg, comments ironically, "Flashcard architecture! The perfect Postmodernism."

It is easy to scoff at the chameleon approach to styles, but not easy to respond to Philip Johnson's question, "Why not?" Why not do a Gothic bank, a Goodhue office building, and so on? Great 19th-Century architects changed styles from commission to commission, says Johnson. Why should we not? Indeed, there is no a priori reason to be monostyled. Perhaps polyvalance is the *zeitgeist*. Vanity Fair editor-in-chief Leo Lerman could have been referring to Philip Johnson (rather than Woody Allen's *zelig*) when he asked in his December 1983 editorial, "Is the Chameleon Man the perfect person for this moment?"

Philosophically, variety itself is no vice. Practically, in its excess, it poses two problems. First, there is the deadening of the sensibilities, the gradual loss, as Nietzsche says, of "all feelings of strangeness and astonishment" until finally one is "pleased with everything." Second, there is the difficulty of carrying out a great variety of themes masterfully. To Johnson's question, "Why not?", there is but one response: "Prove it." Johnson and Burgee's work, then, must carry the burden of proof. The work now being completed, it is interesting to note, has a certain reassuring(!) consistency compared with the wide variety of the designs now in progress.

Humor, artistry

On the boards at the Burgee and Johnson office at the moment are, among other projects: Trump Castle, a residential condominium tower in Midtown Manhattan, which looks like a bunch of vertical Crayola crayons surrounded by a moat, reached by a



8,9 53rd at Third, New York. Office tower, 34 stories, with retail at ground floor. Four ellipses in plan, tangential at the back, stepping back at three frontages. Swedish Imperial red granite, flamed and polished, horizontal stainless steel banding.

10 Tycon Towers, Tyson's Corner, Va. Three 204-foot office buildings, each a segment of an arc in plan. Entrances flanked by four 5-foot-diameter by 160-foot-high freestanding columns. Brick with aluminum-and-glass window wall infill.

11 One Federal Plaza, Maiden Lane, New York. Turreted, 28-story office building with ground and cellar retail space. Brick, granite, limestone. Completion: 1984.

12 580 California, San Francisco. Office tower, 320 feet high, with retail at base. Sardinian granite with Napoleon Red base; storefront and mansard of aluminum. Cast polyester sculptures at roof setback.

13 Times Square Development Project, New York. Four office towers, 370 to 700 feet high, forming a "square" with a central pavilion over subway station promenade. Red granite bases, shafts of limestone with glass curtain wall, glass mansard roofs.



12



bridge; a handsome, porticoed, Ledoux-like department store in Honolulu for Neiman-Marcus; and a mansarded hotel/retail complex in Dallas, trimmed with cast iron. The architects say they are "having fun," and it certainly looks that way. But would that they were having even more fun, loosening the reserve that prevents their serious (after all) granite and marble-clad forms from singing. They may be "happy," but their humor, in general, lacks the irony demanded of the Pop approach. They have not resolved the perhaps unresolvable contradiction between arch cultural commentary and the appearance, for the client's sake, of solidity and wealth.

Johnson and Burgee are good and generally responsible architects, and they have the courage to put their unusual ideas into action. But they do not reach the pinnacle where reside great artists. In the AT&T building, for example, the carved granite base is extremely beautiful: The close-up can be mastered, but the remainder of the elevation is dull. Mies van der Rohe, who could control the elegance of the total composition, used to say, "I'd rather be good than interesting." Johnson claims to prefer the opposite: "I wouldn't know how to be good."

The artistic control seems to be improving, from the AT&T onward. The RepublicBank, also a stone building, has a more satisfying relationship between wall and window, a more sensuous expression of material, and a more limpid, yet surer development of profile. In the PPG building, the rendering of crenellations in silver-framed glass comes closest to resolving the Pop/corporate conundrum.

Where does it lead?

13

In fact, Johnson and Burgee are good architects. Their partis are intelligent, as in AT&T's public lobby/loggia/skylobby organization, and sensitive, in general, to the organization of the urban context—the aim to create a sense of place at the PPG plaza being a case in point. They are generally meticulous in exploring the possibilities of their chosen materials, as can be seen in the development of the pleated glass surfaces at PPG and Transco, where reflections and double reflections create a sense of solid form and shadows.

The Johnson and Burgee building forms are unlikely to be imitated: Each is too specific, and many lack the appeal of exceptional grace. But their attitude is worthy of attention and will be recorded as a significant part of architectural history. It is an approach that collects ideas from history, interprets them physically in exaggerated forms to invite reflection and comment, and combines them not as collage, but as embodied compositions (but will the transplants take?). In legitimizing the approach by the use of materials weighted with conservative associations, it runs into the problem of irony (the renegade) versus compliance (the establishment). [Susan Doubilet] AT&T Headquarters New York, N.Y.

Not enough said

The street-level loggia is the most successful element of this much-publicized Post-Modern skyscraper.





The ATST building, which can barely be seen frontally in its entirety (top), lifts its famous head proudly on the New York skyline. The attenuated entrance arch (above) and the Golden Boy statue within the lobby (opposite page) are viewed most satisfyingly from across the street.

"This building has been written about too much," Johnson has scrawled across the AT&T photograph in the current exhibition of his work at New York's Urban Center. But he is wrong. The serious commentary has yet to begin.

As the AT&T building reaches completion on New York's Madison Avenue, it is far less extraordinary, overall, than the early hoopla would have suggested. Yet it delivers-and this is the best news-more pleasure to passers-by than anyone would have predicted. Who could have known-distracted by those flinty drawings of a pedimented granite tombstone-that the deep-cut, curved, and faceted stone piers and archways of the loggia would be so palpably fine, deep, and grand; that the loftiness of the space would be so awe-inspiring; that the play of high square openings and low arches, and the bending effect of the centrally placed oculi, glimpsed through off-center archways, would be so exquisite. The loggia-AT&T's gift to the public-is a truly fine urban accomplishment.

On the whole, however, despite its several virtues, the AT&T is merely a "good" building-and more was expected. It is not quite the scintillating Post-Modern morsel that would delight fans and infuriate Modernists, nor yet the glowing traditional cabinet filled with discreetly gleaming jewels. It is a little bit of both, and therein lies the problem. For the humor, and indeed bravado, that would place an overscaled, underdetailed pediment on the top of a 647-foot 20th-Century skyscraper is hamstrung by the use of ponderous materials, especially when these materials are discreetly hushed-as in the case of the granite finishto suit a conservative client. Furthermore, the cavalier manner that combines disparate elements-the motifs in the public lobby, for example-requires a surer sense of artistry than the architects bring into play here. Finally, the street-level public space is cleverly organized in terms of functions, but its various parts lack clear identity.

The achievements

If, for the moment, we examine the building for its achievements rather than its shortcomings, there is much to praise. There is the excellence of the loggia, as mentioned. There is the much-maligned top that, after all, provides a distinctive and far from outlandish marker on the skyline, engaging the sky and clouds most pleasantly. And the parti is ingenious: the tower, 90' x 200', is kept to the front of the small site, maintaining Madison Avenue's street line; a three-story row of shops is placed along the Galleria at the back of the site, retaining the dignity of the corporate front entrance; and the reception "skylobby" for the corporation is raised 77 feet above the ground, ensuring increased security for AT&T and leaving the ground free for a public lobby surrounded by a lofty covered public plaza, thereby meriting an increase in the zoning envelope.

The progression of spaces into the building is carefully balanced, from the controlled openness of the loggia, to the high, compressed space of the public lobby, to the low, directional elevator corridor, and finally, to the bright white marble skylobby above. While the subtle granite of the public lobby is finely detailed, the brilliantly nervous black-veined Breccia Strazzema marble of the skylobby is left simple.

The success of the carved granite at entrance level is no accident. The architects engaged the elderly Harold Swenson, a former assistant of Bertram Goodhue, to help them achieve a satisfying sequence of shapes and moldings. In some cases, styrofoam models were prepared, and reworked, and redone.

The typical office floors are generously sized and trimly finished. Floor-to-ceiling heights are ten feet, and the ceilings are neat: Air conditioning is distributed through slots between large, perforated, vinyl-faced metal acoustical panels that can be hinged down for repairs; and with task lighting at each work station, ceiling lighting is kept to a minimum, with fluorescent lighting along the perimeter and core, and some track lighting to illuminate artwork. It is interesting to note that the staff is not accustomed to the task lighting: When a worker stands up with written material in hand, the ambient lighting is felt to be insufficient.

Up against the ideal

We must, inevitably, return to the ideal image and examine where and why the building falls short.

On the exterior, it is commendable that the granite is used traditionally, so that it *looks* like structural stone, with joints (some real and some suggested within the panels) and without a polished, glassy finish. At ground level,



AT&T Headquarters

the effect is luxurious. Unfortunately, the nuance is lost above: The effect of the color and finish is dulled, a dullness exacerbated by an unexhilarating fenestration pattern and depth. Johnson agrees that the rhythm of windows is disappointing: Because of the costliness of thick slabs of granite, the windows could not be as deep as the architects wished (they have solved this problem in another way at RepublicBank); the minor mullion sections could not be round, as designed originally, and the actual rectangular configuration gives them too much prominence; and the mandated five-foot office module restricted their freedom in designing the window pattern. In short, the famous form does not glow.

Inside the subdued case, some of the jewels are aggressively white or defiantly large. In the public lobby, an oriental spell is cast by the dusky rose Byzantine-capitaled arcade, the attenuated, tentlike gilt crossvault, and the mysteriously glowing cyclorama orb—a spell that is shattered by the bold, albeit beautiful, black-and-white polished marble floor pattern derived from Lutyens. Upstairs, the voluptuous white Calacata Versillia marble staircase connecting skylobby and dining floor is, well, magnificent, but rather overblown, given its











The Byzantine forms and rosy granite in the lobby (above) create a glowing, exotic effect, disrupted by the bold black and white Lutyens-esque floor pattern and large indicator globes above the elevator doors (above left). An encyclopedia of plaza types is found, now, along Madison Avenue: There is the shop-lined Galleria (middle left and model far left) at the rear of the AT&T site, which culminates in the IBM building's Bamboo Court to the north; the loggia along the front of the tower (right); and the public plazas on the sides, under the tower (left).





RETAI

AT&T Headquarters

Dennis Wedlick, who now works for Burgee Architects, received his B.Arch from Syracuse University last year. For a class presentation, he compared the Seagram Building (1956) and the AT&T. We reproduce a portion of it here, dealing with the two curtain walls.

The Seagram Building and the AT&T headquarters, built 25 years apart, reveal very different design intentions in the expression of the curtain wall. Both are office towers, similar in plan, steel construction, number of floors, and overall shape; and both were given lavish budgets. The ground level of each tower is recessed, with the base colonnades revealing the slenderness of the steel skeletons. Upon this skeleton, the curtain walls-unlimited by budget and load-bearing considerationstook very different forms. The Seagram building uses an elaborate and carefully balanced system of structural components. The AT&T has a seemingly continuous skin of pink granite, the play of light upon forms and textures giving it its richness.

The Seagram Building: At the typical office floor (fig. 2), the pattern of standard bronze mullions is established, infilled with floor-to-ceiling glass alternating with bronze panels. At the base (fig. 3), the system continues, but is slenderer, allowing a sense of continuity from plaza to lobby. At the crown (fig. 1), the mullion system is slightly adjusted and infilled with bronze louvers surrounding the mechanical floors. At the spine-shear walls of concretegreen marble panels become the infill.

The ATST Headquarters: At the typical office floors (fig. 5), granite panels vary in thickness (2 inches and 5 inches, with 6-inch-square and 10-inch-square mullions), width, and height. Consistent joint pattern is achieved by using both real and false joints. Mullions and panels are anchored to steel tubes supported by angles at the floor slab. At the base (fig. 6), granite skin continues while backup surfaces vary (masonry, steel, and concrete), and various combinations of dowels, plates, and angles are used. To achieve "punched" windows, granite thickness and shape are varied. At the crown (fig. 4), the mass appears still greater, but is still composed of granite pieces, suspended on projecting steel parapet.

SEAGRAM BUILDING

1 CROWN CONDITION

ELEVATION

BRONZE

H-SECTION

HORIZONTAL WALL SECTION

2 TYPICAL CONDITION

ELEVATION

HORIZONTAL WALL SECTION

3 BASE CONDITION

GLASS

BRONZE

m





AT&T HEADQUARTERS



GI ASS

d

VERTICAL WALL SECTION

VERTICAL

WALL SECTION

BRONZE MULLION







HORIZONTAL WALL SECTION 5 TYPICAL CONDITION













VERTICAL WALL SECTION

BACK-UP

6 BASE CONDITION

Project: AT&T Corporate Headquarters, New York. Architects: Johnson/Burgee Architects (Alan Ritchie, associate, Rolf Hedlund, field representative). Simmons Architects, associates (Harry Simmons, Russell Patterson). Client: 195 Broadway Corp. Site: 550 Madison Avenue, in Midtown Manhattan. **Program:** corporate headquarters, with public lobby, covered plazas, Galleria, and shops at the base. **Structural system:** steel frame made up of a series of tubes, with steel-plate shear walls from foundation to skylobby.

Mechanical system: New York steam as energy source.

Major materials: Stony Creek granite exterior cladding and lobby walls. Lobby floor, skylobby floor, walls: marble. Lounge and dining rooms: teak doors, paneling. Offices: dry wall, carpeting, vinyl-clad perforated metal ceiling panels (see Building materials, p. 168). Consultants: Robertson & Fowler Associates, structural engineers; Leroy Callender, associate engineers; Mueser, Rutledge, Johnston & De-Simone, foundations; Cosentini Associates, mechanical engineers; ISD Inc., interior design.

Construction manager: Frank Briscoe Co., Inc. Crow/Briscoe, joint venture. HRH Construction Co. Photography: Wolfgang Hoyt, © ESTO.

space, its off-center location, and the restrained, authentically raised teak paneling of the adjacent lounge and dining rooms.

Even as the exterior spaces provide great pleasure to users, the relationship among the parts-the shift from street to loggia, to covered plazas, to Galleria-is problematic. The given, the street, is just wide enough to view Golden Boy in its vitrine (and the statue and pedestal are scaled for viewing from this standpoint, not from the lobby itself); but the street is not wide enough to provide the most desirable frontal approach to the giant arcade. Next, the various open spaces on the site seem almost continuous, but they are not, and their individual identities are obscured. First, there is the delightful linear promenade, or loggia, whose front is open to the street, in keeping with its portico typology, but whose back is unexpectedly open to the two covered plazas flanking the central lobby. From loggia to plazas, the clarity of the parts begins to break down; but within the tower envelope reorientation is possible. Then, the character of the open space shifts again, to become a covered linear street called the Galleria, not under the tower, but under a high, curved, transparent shed roof springing from the row of low shops along the back of the site up to the towering building beside it. Is it a street? Is it a plaza? Its identity is uncomfortably weak.

In summary

The AT&T building raises its head distinctly on New York's skyline. Its covered promenade is grand, giving pleasure to passers-by,





and it is presumably a most comfortable building in which to work. But as a landmark of the Post-Modern movement, which it already has become, it is both too flamboyant and not flamboyant enough, trying to show off, and holding back simultaneously. It dares to "do" Post-Modernism in a big way, drawing upon a variety of images, but it combines them either too aggressively (Byzantine/Lutyens), too meekly (overrestrained granite), or too obscurely (loggia/plaza/Galleria). Intoning "McKim, Mead & White" and "Raymond Hood" as sources is not sufficient; one must do something brilliant with them. In the AT&T building, the organization is effective and intelligent, but only the loggia gleams brilliantly. But then, Johnson and Burgee have many more buildings to do. [Susan Doubilet]

In the skylobby (above), the Breccia Strazzema marble is simply detailed to allow the nervous Koren-like veining to have its full effect. The employee dining room (left) is furnished with teak-paneled booths upholstered in simulated leather, and will be decorated with banners. PPG Place Pittsburgh, Pa.

Turned to stone

Why Gothic? Take a closer look at the context . . . and the curtain wall of Johnson/Burgee's PPG corporate headquarters.



The chameleonlike quality of PPG's pleated curtain wall is most evident in the tower, alternatively gridded and semitransparent (far right) or stonelike and monolithic. While PPG Plaza is not yet complete, its relationship to existing Market Square is evident from the air. Captivated by a photogenic silhouette of spires and pinnacles, the national press has presented a helicopter view of Johnson/ Burgee's PPG Place—all top. Now, with the tower occupied and the remaining buildings scheduled for completion in mid-1984, PPG can be studied from the ground up and its role in Pittsburgh's ongoing Renaissance more readily assessed.

PPG Industries, the prototypical Pittsburgh corporation, inhabits a pivotal 5.5-acre site in the Golden Triangle between Gateway Center and Market Square, a historic but seedy retailing precinct. Most of the PPG discussion to date in this magazine and others has concentrated on the overt Gothic imagery, specifically on the pleated curtain wall and projected spires and pinnacles. But the underlying planning principles exercised at PPG Place can also be traced to Gothic models. Given the opportunity to shape a city within a city, Johnson and Burgee have created an ecclesiastical cloister or collegiate quadrangle (both models are relevant). Original schemes exaggerated the enclosure, spanning the

streets with bridges, in the manner of a campus courtyard at Princeton or Yale, where arched entrances penetrate uniform, surrounding façades. All but one bridge were subsequently eliminated, as was the covered connection across Stanwix Street from the PPG Winter Garden to Gateway Plaza—a literal bridge between the two Renaissances.

Two squares

The Winter Garden is the latest addition to a city of grand public interiors—Heinz Hall lobby, the Grand Concourse, Mellon Bank hall—but the Plaza is PPG's true touchstone, its gift (one of many in this complex) to the city of Pittsburgh. The plaza acts as foil to Market Square, to the Winter Garden, and finally to its tower. Its proximity to Market Square, situated less than 150 feet away, creates a condition of double squares more common to European towns (Johnson cites Verona, Saltzburg, San Gimignano) than American cities.

The architects have chosen to play up the contrasts. Market Square is typical of the American town-planning tradition: Surrounded by discontinuous low-rise commercial structures, it is the prototypical American green, cluttered with pigeons and people. PPG Plaza is its opposite: Empty, iconic, surrounded by a uniform arcade, punctuated by crystalline chandeliers, and centered on a pink-granite obelisk, the plaza is a selfgenerating sacred precinct.

This outdoor room also finds equal and opposite expression in the enclosed Winter Garden. Café seating will turn this greenhouse into a civic social center, and its overscaled, tangible-tech truss work is a lively contrast to the more (classically) formal plaza. Even the greenery has been displaced from outside in. The game of thesis/antithesis is most clearly executed in elevation: The Winter Garden's great pointed-arch profile is turned inside out, at the base of the tower's plaza elevation, in a sequence of arched openings.

Finally the "double square" becomes a literal device in plan: The diagonally patterned plaza describes a square almost exactly equal in dimension to the footprint of the tower (set back together with the mid-rise building so as not to block noonday sun on Market Square) and the Plaza, a void, gives its solid analog, the tower, room to breathe.



PPG Place

The monumental pointed arches of the Winter Garden (right) are reversed on the tower's plaza façade (below). Storefronts sheltered beneath arcades on the plaza are pushed out to the street on the Market Square façade, with its lively shifting pattern of finials (bottom).





Why Gothic?

To the inevitable query, the disingenuous Johnson answers: "It really started with the development of the wall and the articulation of the wall, and I'm not surprised it turned out Gothic. I don't think we sat down to look at Gothic." "No, we didn't," confirms Burgee. And indeed, at first glance a glass curtain wall might seem an unlikely subject for Gothic detailing. But a pleated wall of glass is something else again, and a pleated wall of reflective glass has arguably more of the qualities of stone than of transparent glass. The analogy was carried through in the actual "Gothic" detailing of connections (more on that in a moment). The second justification is Pittsburgh itself, filled not only with examples of ecclesiastical Gothic (Bertram Goodhue's First Baptist Church, 1912, and Ralph Adams Cram's Calvary Episcopal, 1907, are both local landmarks) but also of collegiate (Charles Zeller Klauder's Cathedral of Learning, University of Pittsburgh, 1925) and anonymous commercial Gothic.




A typical tower floor (below) has 184 vertical mullions: 64 outside 90 degrees, 56 inside 135 degrees, 32 inside 90 degrees, and 32 180 degrees (the typical detail for conventional curtain walls). The pleats are resolved into spires at the top (left) and arches at the bottom (detail plan, bottom).



The alternating triangular and rectilinear piers of the plaza arcades are abstracted readings of Gothic geometry, but the tower takes a more literal turn. Johnson/Burgee are of course not the first to put perpendicular Gothic on a skyscraper. An article on PPG in this magazine (July 1979) listed as possible precursors both Henry Hornbostel's fantastic 1907 proposal for a tower addition to H.H. Richardson's Allegheny County Courthouse in Pittsburgh (itself a related Romanesque) and Cass Gilbert's 1913 Woolworth Building in New York. PPG project architect Glenn Garrison cites three specific sources: Barry's Houses of Parliament, especially the Victoria Tower, 1837-1860s (for the tower profile), Pugin's drawings and executed works (for details), and Renwick's St. Patrick's Cathedral, 1884 (for the base).

Johnson/Burgee go beyond these precedents in glazing the Gothic: Theirs is the first Gothic skyscraper to be executed entirely in glass. The use of Gothic here solves two of the curtain wall's most plaguing problems: what to do at the corner and what to do at the base. Conventional curtain walls "wrap" the corner and thereby render it a mere change in plane concealed by continuous pattern. At IDS in Minneapolis (1973) Johnson and Burgee generated multiple corners in the curtain wall to reduce the evident bulk of their tower. But at PPG the corner piers, carried straight down to the ground (the resemblance to Victoria Tower is self-evident), give solid, seemingly structural definition to the tower as it stands against the sky. The curtain wall, historically a nonstructural infill element, is here used to signify both infill and frame.

Crowned with four spires, the tower also returns to a tradition of decorated tops. But PPG's real innovation lies at the base of the building, where the pleated curtain wall is resolved into monumental arches. The transition from pleated curtain wall to base arches, patterned directly on St. Patrick's Cathedral, is if anything more complex than comparable stone connections. (A structural transition also occurs at this point: Transfer trusses shift the load from peripheral columns and beams



PORTION OF CURTAIN WALL PLAN AT TOWER BASE





In contrast to the monumental Winter Garden (top) and adjacent tower lobby (above right), the retail atrium off Market Square (above) is activated by shops and cafes. The shimmering, varied reflections in the pleated curtain wall (far right) deaden to complete opacity in the square-plan atrium.



to the central core and down.) The transition, which can be executed in stone by smooth connecting curves, must be flattened and translated into the two-dimensional vocabulary of mullions and panes.

PPG surely paid for these innovations: The price tag, unconfirmed, ranges over \$200 million for the two-million-square-foot complex. The corporation will recoup its costs in rent (PPG occupies only floors 16–29 of the 40-story tower and two floors in building two) and most significantly in image. Gothic PPG gives the company a corporate logo and its city a skyline symbol.

Secularizing the style

Such skyline sculpting has become commonplace; similarly the idea of "roaming through history," Johnson's original heresy, has gained credence. Nevertheless, the Gothic, with all its moral overtones, has remained somewhat off limits, a condition that can be traced to the distrust with which Gothic has traditionally been regarded by "rational" architects. Johnson/Burgee could have picked no better style with which to bring home Johnson's "form follows form" dictum. Ever the "functional eclectics," they have stripped the style of its moral content and divorced Gothic forms from their religious meaningas did their American precursors-and further, from their reformatory intentions, both social and architectural.

Characteristically, one of PPG's most pleasing effects is the piling up of finials when seen from Market Square as the buildings step back to the tower. Silhouetted sharply against the sky or more subtly against mansard roofs, the spires are pure patternmaking, the ultimate "play of forms in light" (Johnson still adheres to that Modernist motto). For those who still miss the point, the ever provocative architects place a Classical obelisk at the heart of it all, a monument to autonomous aesthetics. [Daralice D. Boles]



Project: PPG Industries Corporate Headquarters, Pittsburgh, Pa. **Architects:** John Burgee Architects with Philip Johnson, New York (Glenn Garrison, associate; Anne Asher, project architect; James Martin, field representative). **Client:** PPG Industries. **Site:** 5.5 acres in downtown Pittsburgh's phase-two renewal area, between the principal financial and retail districts. **Program:** headquarters for a company whose best known product is architectural glass, together with rental office and retail, split into six buildings: 40-story tower, 14-story mid-rise, and four 6-story satellites. **Structural system:** steel frame. **Major materials:** clear reflective insulating glass (60 percent vision, 40 percent spandrel); Italian (plaza) and domestic (public interiors) granite flooring; aluminum mullions (see Building materials, p. 168). Mechanical system: variable air volume conditioning system. Consultants: Robertson, Fowler & Associates, structural; Cosentini Associates, mechanical; W.A. Di-Giacomo & Associates, electrical; Claude R. Engle, lighting; Calvin Kort, elevators; Edison Parking, parking; Cerami & Associates, acoustical; Vignelli Associates, graphics; Curtain Wall Design and Consulting, curtain wall; Cope Linder Associates, retail; Zion & Breen, landscape. Contractor: Mellon-Stuart/Blount. Office interiors: ISD. Curtain wall manufacturer: Howmet Aluminum. Glass installation: Commercial construction group, PPG Industries. Cost: withheld. Completion date: mid-1984. Photography: Richard Payne.



Teatro simpatico

In their expansion of the Cleveland Play House complex, Johnson/Burgee have developed a theatrical village, with a memorable skyline, around a 1920s core structure.

Additions to

Cleveland Play House Cleveland, Ohio

Turret marks junction of old exterior (left in photo) with new. Clinker brick of original was no longer obtainable, but color match of brick is close. Brick trim and limestone fascia maintain original character. Battlements on tower introduce debatable element of fantasy. Though relatively small, the Cleveland Play House commission has a special importance for Philip Johnson: It is the first building he has designed for his native city. And this professional company, founded in 1915, was where Johnson was introduced to theater. He calls the job "a labor of love."

In the part of Cleveland where the Play House stands—about four miles from the city center—whole blocks of shops and housing have disappeared in recent years, leaving churches, hospitals, and other institutions stranded. The Play House is one of the survivors that continues to thrive. Decades ago it expanded beyond the two-theater home it built in 1927, adding a third theater in an old church, then support facilities in a decommissioned A&P. When plans were made to consolidate scattered facilities at one site, it was decided to expand the fine original structure, despite its forlorn current surroundings.

The closing of the big Sears store right next door made this choice more advantageous: The Play House was able to acquire 200,000 square feet of space and 7½ acres of parking area at a good price. With ample room for backstage facilities (plus space to rent out) in the former store, the task was to add one theater, tie the whole together with public circulation, and give the complex an image fitting its new scale and exposed situation (and in the process, hiding the bulk of the store building).

Circulation needs gave the architects an opportunity to develop a processional sequence. All three theaters were backed up to the support facilities, and public circulation extended around the perimeter. These lobbies and passages converge on a rotunda at the center of the main front; to either side are the lobby for the new theater and a much-needed lobby for the larger of the existing two. A hingelike turret space at one end gives access to the lobby of the small theater; a 250-foot-long promenade at the other end leads to the Play House Club, now installed in the former store, with parking lot entries along the way.

This necklace of circulation spaces of various shapes contributes to solving the architects' more challenging problem: how to give the cumulative complex a coherent image that can be read from the main avenue to the north, across 400 feet of parking lot. The exterior forms of the new front are almost all traceable to the original one: a small gable is repeated larger and again larger; the blind arches of the old stagehouse reappear on the



new one; the old slate roof planes are elaborated over the hexagonal lobby. A new and crucial formal element is the rotunda; with its generous portico and dome, it manages to hold center stage between two far taller stagehouses. Its forms are, in turn, echoed in the turret to one side and—less effectively—in the half-round projection that tops the promenade roof.





Inside the building, Johnson/Burgee lead the visitor first through lobbies of Early Renaissance simplicity, with strong terrazzo floor patterns underlining their geometrical variety. Their severity will be set off more effectively when and if the rotunda, now a bare shell, is completed. (Johnson cites Brunelleschi's Sacristy at San Lorenzo in Florence as the source for his rotunda design.)

Much more Modern interior treatment appears, surprisingly, in the new theater. Tiers of false galleries recall 18th-Century court theaters, but the overall neutral color and muted glitter more strongly suggest 1930s Moderne expressions of lighting technology. To Johnson, this discontinuity of style is no problem, and the Director of the Play House was happy to avoid conflicts with period décor on stage. (The main theater in the old house manages to be quite neutral while maintaining that building's Medieval/Craftsman architectural quality.) Theater front is true to rendering (top), except for unfinished details such as standing-seam metal dome roof. Forms of front are delineated well by side and back sunlight, making the most of their north-facing situation. Clerestory windows (not all in drawing) help light lobbies by day and enliven exterior at night.

In lobbies (plan and photos this page) geometries are delineated by severe plaster walls, elaborated in terrazzo floors. Rotunda (section below) remains unfinished. Interior of new Bolton theater has galleries, used only for lighting and controls, onto which metal grille lighting casts moiré patterns. Proscenium arch continues form and material of apron stairs.











the stage from the same level, which the Director prefers. The galleries suggest the enveloping form of a court theater, but they are used only as convenient light and control stations.

The design of the proscenium arch creates yet another sharp break in design character: gray-green curvilinear forms give way suddenly to angular ones in dark wood, which

SECTION THROUGH LOBBIES LOOKING SOUTH

Π

The choice of a proscenium form for the new theater is of interest, since the theater that it replaces-in the old church-was hailed in the 1940s for one of the pioneer thrust stages. After decades of experience with both types, the Director here concludes that the proscenium offers the most flexibility in what is staged and how. All 644 seats in this theater are placed on one level to eliminate the complexities of balcony access and exit, and to give the whole audience a view of





Project: The New Play House Theater, Cleveland, Ohio. Architects: Johnson/Burgee Architects, New York (Thomas Bellingham, associate).

Associated architects: Collins & Rimer, Cleveland. (Architects of original building: Charles Rowley and Philip Small). Site: 12.5-acre tract, cleared except

for existing 1927 theater and adjoining support building (formerly Sears store).

Program: new 644-seat Bolton Theater with fly loft, traps, and side stage; multipurpose studio space; series of lobbies connecting all theaters, new entries, and theater club; 52,000 sq ft of new construction. **Structural system:** steel frame. **Major materials:** brick and concrete block cavity walls; limestone trim; slate and built-up roofing; lobby walls painted plaster, floors terrazzo; theater walls plaster and fabric, floor carpeted, proscenium wood (see Building materials, p. 168).

Mechanical system: very low velocity air heating and cooling, new portions only, using heating and chilling equipment in store building. Consultants: Robertson, Fowler & Associates, structural; Cosentini Associates and Byers, Urban, Klug, White & Associates, mechanical; Claude R. Engle, lighting; Brannigan Lorelli, theatrical; Klepper Marshall King Associates, acoustical; William A. Behnke Associates, site development.

General contractor: R.P. Carbone Construction Co. Cost: \$12.5 million. Photography: Thom Abel.

carry the visual character of the apron stairs all around the proscenium frame. (At Avery Fisher Hall in New York, Johnson/Burgee also sharply distinguished the proscenium from the theater.)

Aside from jarring shifts in design at the lobby and proscenium ends, the new theater is quite admirable, both visually and functionally. The real accomplishment at the Cleveland Play House, however, is the way Johnson/ Burgee have expanded on the design vocabulary of the original building. Starting with a casual, additive form, inspired by the Northern European Romanticism of the 1920s, they have generated a more monumental assemblage—with stronger Classical references—but retained the irregular massing rarely seen in Johnson's buildings. In a body of work characterized by isolated icons, the Play House stands out for its sensitivity to place and history. [John Morris Dixon] RepublicBank Center Houston, Texas

Gothic romance

Stepbacks, gables, and textural richness put mystery back into the corporate high-rise.



RepublicBank Center is entered through the gigantic east arch of its banking hall (center). On the skyline, the stepped forms of the tower (shown under construction) relate in scale to its neighbors: the low-rise Alley Theater (facing page, left foreground); Pennzoil Place; the white tower of One Shell Plaza; and the reflective glass Allied Bank Plaza. The Texas Commerce Tower rises at far left.

While all eyes were focused on the emerging AT&T in New York, a lesser known, but in many ways more eloquent sight was taking shape in Downtown Houston. On Louisiana Street between Rusk and Capitol, the black, angular, Minimalist glass boxes of Johnson/ Burgee's 1977 Pennzoil Place now faced the red granite, Dutch-gabled and Gothic-spired towers of the architects' new RepublicBank Center. The image of these two buildings (see following pages) is the proverbial picture that's worth a thousand words about the firm's work to date. While the former revolutionized Modernist glass boxes, the latter symbolizes not only the architects' boredom with those boxes, but reveals, as does AT&T, their desire



to put the romance back into skyscrapers.

Romantic is hardly the word. Behind a 12story banking hall with a stepped, gabled roof and a monumental entrance arch rises a tower that steps up twice to create the illusion of three towers, ranging in height from just over 400 feet to just under 800 feet, each with its own stepped gable. Lead-coated copper roofs and obelisks top the building, which is clad in Napoleon red granite, in flamed, honed, and polished finishes. The tower's lower floors are treated as a base that relates to the scale of the banking hall, while the latter's overscaled entrance relates in turn to the tower, for which it also serves as an entrance, via a 75foot-high arcade that links the two structures.

Why a separate banking hall, shaped like a Dutch *stadhuis*? To begin with, the architects' original design, while quite sympathetic to *le style Pennzoil*, found less sympathy in RepublicBank Houston, the city's fifth largest bank, which, as the anchor tenant (occupying over 30 percent of the building's 1.2 million square feet), wanted something different. In fact, the bank wanted three things: a more "tradi-





RepublicBank Center

tional" design that would distinguish it from its Modern neighbors; a banking hall that was separate from the building lobby; and an answer to the problem of what to do with an existing two-story Western Union switching building that could not, for reasons of logistics and economy, be moved, despite the fact that it occupied one-quarter of the ground floor. The separate banking hall, therefore, satisfied the latter two requirements (completely concealing the Western Union building). And the form of the Dutch town hall was both traditional and distinctive, fulfilling the first requirement; to the architects, it seemed the one historic type that gave a small building a real street presence, especially when paired with a very large building. It might be added, however, that the elevations of the banking hall and the lower tower floors have much more in common with an Italian Renaissance palazzo than with a Dutch town hall, given their rusticated bases, proportions, and oversized arches.

Like Pennzoil, RepublicBank uses stepbacks and angles to create its own identity. But RepublicBank is a stone building—an important distinction for the architects. Their use of varied finishes and depths on the exterior illustrates their belief that flush stone cladding doesn't express the nature of the ma-



A section through the banking hall shows skylights set into the stepped roof, and the interior truss system. The ground-floor plan indicates the location of the Western Union building, now totally concealed by the banking hall, and the arcade that links the hall to the tower lobby.



SKYLIGHTS



The west entrance (above) completes the major arcade, on axis with Pennzoil's entrance on Louisiana Street; the two buildings (facing page) offer a telling summary of Johnson and Burgee's work to date.

FIRST FLOOR PLAN

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N->



RepublicBank Center

The ribbed, barrel-vaulted arcade (below) is spanned at three levels by pedestrian bridges with wrought-iron railings. The vault turns to glass where the banking hall meets the tower. A four-faced 1910 clock marks the crossing of major and minor axes.



terial: "It might as well be metal." Certainly the alternating rhythms of granite "ribs" and mullions, along with the heavier corners, give the tower walls an unusual depth and richness; along with the Romantic massing of stepped forms, it recalls the work of Cass Gilbert and Raymond Hood. But even this wealth of form and texture fails to enliven the monolithic masses of the long east and west walls. While John Burgee emphasized that the "relentless" five-foot planning module offers little opportunity for real rhythmic invention, stepbacks on those sides as well might have reduced some of their bulk.

Inside the building, the ribbed, vaulted arcade that joins the banking hall to the tower's elevator lobby (the east-west or "major" axis) bisects the first five floors of the tower; white bridges with black wrought-iron railings











The banking area is entered through white-lacquered wood arches; its floor is made of Napoleon red, impala black, and luna pearl granite. Skylights flood the banking hall with daylight, while the 35-foot-high mezzanine above the Western Union building is visible through the complex network of dry-wall-enclosed trusses (small photos).



Project: RepublicBank Center, Houston, Texas.

Architect: Johnson/Burgee Architects, New York (Stephen Achilles, associate). Kendall/Heaton/Associates, Inc., Houston, Texas, associate architects.

Client: Gerald D. Hines Interests. **Site:** the block bounded by Lousiana, Smith, Capitol, and Rusk Streets in downtown Houston.

Program: 1.5 million square feet of office and retail space on 56 floors,

with a separate banking hall, and 250 underground parking spaces. Structural system: structural steel on concrete mat foundation. Major materials: granite, glass, and aluminum curtain wall; leadcoated copper (see Building mate-

rials, p. 168). Mechanical systems: central plant with cooling tower.

Consultants: CBM Engineers, structural; I.A. Naman & Associates, mechanical/electrical; Gensler & Associates, Houston, interiors; Calvin L. Kort, Incorporated, elevators; Claude R. Engle, lighting; David Gibson, model office. General contractor: Turner Construction Company of Texas. Costs: withheld at request of client. Photography: Richard Payne, except as noted.



The mezzanine-level bank offices (facing page) offer a view toward the south wall of the banking hall (this page, left). On the first five tower floors (below), granite arches mark the main circulation axes; the fourthfloor employee cafeteria (in the distance) enjoys a view from the tower's octagonal windows.

traverse the space at three levels. It is grand and impressive, something that cannot be said of the north-south, or "minor" axis. Lined mainly with the blank walls that conceal the Western Union building; mechanical rooms, and the parking garage entrance, this axis begs for greater articulation.

It is the banking area itself, however, that is the real star of the interior. Rising to a height of 125 feet above a tricolored granite floor, the stepped, granite-ribbed roof houses row upon row of skylights that effectively dematerialize its mass. A vast network of white dry-wall-enclosed trusses spans the space, and to look up from the banking floor through the trusses is to see Piranesi's *Carceri* transformed into a dazzlingly white, optimistic ode to high finance.

The superscale of RepublicBank Center can be overwhelming up close, most notably in the banking hall and along the east and west façades on the sidewalk. But from any distance at all, the building's Expressionist power is captivating. It can appear alternately fanciful, energetic, and brooding—quite a range for a tall building in 1984. It could have been little more than historicist veneer applied to another dumb box. Instead, it reminds you of the days when skyscrapers were a big deal. [Pilar Viladas]



Transco Tower Houston

It towers

Art Deco "steeple" rises in lower rise development near western Houston's Galleria.



Changing its mood from sunrise to midday (opposite page), through dusk (above), Transco retains a sweeping verticality. Microwave discs visible in the openings at the top have been masked since photography by coated fiberglass panels stretched to fill rectangular openings. It soars. It is a compelling presence for miles in any direction. If Everyman were asked to picture a majestic skyscraper, the vision would come very close to this reality. Through a fortunate combination of site and area conditions and skillful height/massing/surface orchestration, Transco Tower has become one of the most self-assured buildings in recent memory—admired by lay persons and the often critical architectural community alike.

Located in the essentially suburban complex around the Galleria, 10 miles west of Houston's central core, Transco is virtually assured dominance over its 25-story and lower neighboring development. The client, Gerald D. Hines Interests with Transco Companies, Inc., wanted the building to be *the* landmark for this area in west Houston that has seen major development in the last decades. By most estimates, it should retain that status, because the surrounding hotels and retail facilities are prestigious and established, if comparatively recent; however, with Houston's relatively free zoning situation, anything *could* happen, but probably won't.

Transco Tower engages in historical and three-dimensional sleight of hand. "It was no accident," says Philip Johnson, that the building has a silhouette of the 1920s. It has a fivestory, broad base, with a nearly straight shaft, and a stepped top with a pyramidal cap. The shaft is altered by setbacks and plan alterations at the ninth, forty-ninth, fifty-sixth, fiftyeighth, and sixty-third levels. In addition, Vshaped bay windows of various sizes form vertical strips on the façades terminating at three elevations, symmetrically, on their climb toward the top.

It is an all-glass building, yet the architects wanted to imbue it with a monumental character more often associated with stone or terra cotta. Its location and 65-story height made views a dominant consideration, and prevailed in the choice of glass. In order to accomplish both character and vision goals, Burgee and Johnson decided to play off flat planes of reflective—"solid"—and gray glass—"windows"—to give the false illusion of opaque versus transparent. The gray bay window columns, especially under certain lighting conditions and viewing angles, do come off as *the* vision panels despite the fact that all except spandrel glass afford views.

But one further step was taken in design, once the concept of "solid" was born of glass. The module of the curtain wall was reduced



to stone dimensions, rendering the façades with a scale typical of this building only. It is a stone building in glass.

Since the building is seen from all sides, the shaft is symmetrical, as is each façade of the base. On the north and south, the base has



Transco Tower





LARGE BAY WINDOW SECTION, FLOORS 6-60

FLOOR 57



projecting rectilinear bays that began the verticality continued by the ones on the shaft above. The east entrance, facing South Post Oak Road, is the ceremonial portal, framed by a 75-foot-high pink granite arch. However, most occupants of the tower will enter from the west parking garage side; from here, visitors proceed to the upper lobby if on Transco business, or to the lower lobby for others.

As the prime tenant, Transco will occupy 905,450 square feet of the tower's 1.6 million gross square footage, with office space for 1300 employees. Gerald D. Hines Interests is moving its headquarters there as well, bringing in more than 250 employees. The Galleria Bank will also be a major tenant; these three account for approximately 70 percent of the building's 1,450,000 net square feet of rentable area.

In addition to connecting to the parking garage, the lobbies also provide access to an aerial walkway across the street to the Galleria complex. Lobby surfaces and pavers are granite. Each elevator cab is lined with a grid of marble, and each is different. An ascent in a green marble cubicle might be followed by a descent in a tan one. From inside the offices, the view is indeed sweeping, in any direction. The difference in glass color is not readily apparent, and the V-shaped bays add interest and a sense of much more space wherever they occur.



Projections that create much of the vertical expression are rectilinear at the base (below), and V-shaped in two sizes (larger bay in section, opposite page). Still unfinished when this was written is the extensive park with jogging trail, fountain and water walls (right).





One of the finest aspects of the tower site is the park-three acres south of the building-with a jogging trail, trees, and a 60-foothigh fountain and water walls. It will not be completed until later, but it is eagerly awaited by the client. The crowning touch on the building itself is the pyramidal top, with its revolving airport-type beacon, visible for 15 miles. The microwave discs in the recesses just below the cap have been screened by coated fabric panels stretched tightly within the rectangular openings; in this way they are hidden from view without impairing their operation. It is a temptation to wish that the top pyramid might be pitched just slightly higher to allow it to be appreciated from closer to the tower than the many blocks now required. It is perfect from a distance.

Still another of the assets most admired and remarked about by almost everyone who has seen the building in different weather and light conditions is its changing presence. It is a delight to see it change from dawn to dusk, from cloudy weather to sunny. Its tricks of solid/transparent make the observer do a double take—is it advancing or receding, reflective or dark gray? The answer, of course, is yes, and it is elegant. [Jim Murphy] **Project:** Transco Tower, Houston, Texas.

Architects: Johnson/Burgee Architects, New York (Stephen Achilles, associate) and Morris/Aubry Architects, Houston. Client: Gerald D. Hines Interests. Site: 9½ acres bounded on four sides by city streets (including park). Program: office building and corporate headquarters. Structural system: steel frame,

exterior tube, mat foundation. **Major materials:** three types of glass, anodized and coated aluminum, granite, and marble (see Building materials, p. 168). **Mechanical system:** two multipletemperature supply, constant volume air-handling units per typical floor, duct-mounted electric heat, cooling coils.

Consultants: CBM Engineers, structural; I.A. Naman & Associates, mechanical; Zion & Breen, landscape; 3D/International, interiors for Transco.

General contractor: J.A. Jones Construction Co.

Photography: Richard Payne, except as noted.

Philip Johnson: His work, his times

John Jacobus, 22 years after the publication of his monograph on Philip Johnson, places the current work of Johnson and Burgee in its historic context.



The Glass House, New Canaan, Conn., 1949.



Pavilion, New Canaan, Conn., 1962.

Classicism had never been far from the surface of Philip Johnson's work, throughout his career. Today the designs of this functional eclectic (to use his own self-designation) are, if anything, even more explicit in their references than before. In fact, Classicism is probably the stoutest of the threads, save for Modernism itself, that binds together his long maverick career. Classicism in its many guises and disguises helps us make sense out of his various forays, in seemingly unrelated directions, which otherwise might appear to be just so many false starts. An unabashed Modernist skeptic, alternately supportive or subversive with respect to contemporary trends, Johnson had a predisposition to Classicism that can be traced first to his early and abiding enthusiasm for Mies van der Rohe and that architect's special admiration for Schinkel (as unique in his generation as it is common today) as well as to Le Corbusier and his devotional regard for the unique Doric of the Parthenon. While these 20th-Century masters provided the necessary clues, Johnson did not need the authority of their views to engage in his own personal exploration and utilization of these and other aspects of the architectural past.

As early as 1932, Johnson, writing in collaboration with Henry-Russell Hitchcock in The International Style, noted how the new architecture of that epoch, although beholden to the Gothic for its structure, was more akin to the Classical with respect to design. This astute if somewhat oversimplified conclusion is an early recognition of the historical affiliations of Modernism, and implicitly of the Classical (or Academic) inclinations of such mentors of the International Style generation as Perret, Loos, and Behrens, among a host of others. Such observations, occurring early in his career, illustrate his early awareness of the contradictory roots of Modernism in 19th-Century eclecticism and historicism, though at this juncture Johnson and his coauthor were more concerned with establishing the novelty and uniqueness of the new architecture as a contemporary equal of the universally recognized styles of the great epochs of the more distant past: Ancient, Medieval, and Renaissance.

One returns to Johnson's New Canaan Glass House, completed in 1949, as an almost scriptural text for Modern architecture, one on a par with other seminal dwellings of the 20th Century by Wright, Le Corbusier, and Mies (the reader is invited to supply his own favorites). Johnson provided the illustrated historical exegesis himself in the famous Architectural Review presentation of September 1950, thus effectively combining the roles of architect and of critic or historian (a distinction already somewhat blurred in the writings of Wright and Le Corbusier). In both the house and the article we witness the willful. self-conscious telescoping of Modernist and Classicizing elements, the architect invoking in turn the foreground, middle ground, and far distance of history. In his analysis, Johnson cites the works of Le Corbusier, Mies, Van Doesburg, Choisy, Schinkel, Ledoux and Malevich as specific stimuli-a daring as well as original "confession" for the time, however commonplace it would soon become as Modernism shifted into a prosperous middle age. The functional eclecticism that would become more explicit in his designs by 1960 underlies the design of his own house, and was underscored in the subsequent rebuilding of the Guest House interior in 1952 to accommodate a plaster vaulted bedroom suggestive of yet another Early 19th-Century Classicist, Sir John Soane. Moreover, the Late Modern character of many of the 1970s buildings designed in partnership with John Burgee is already present in the self-conscious, one-eyeover-the-shoulder quality of the Glass House.

Johnson emphasizes the importance of the blank, brick-walled Guest House as a foil for the Glass House, and its role in helping determine the preliminary view and approach to the site. However, the open-closed, transparent-opaque, either-or confrontational nature of the dual composition needs further emphasis. The Glass House does not stand by itself, as it would in the works of Mies, but demands an explicit contradiction (the mute, blank brick-walled Guest House), and ultimately, in time, an augmentation. In a manner consistent with 18th-Century landscaping, the Glass House is a garden pavilion, an object in a landscape (much like the imaginary buildings in the Classical landscape ascribed to Poussin and displayed inside), and over the years the site was developed and augmented by an arcaded, precast concrete folly in an artificial pond, a subterranean tholoslike picture gallery, and finally a multifaceted Late Modern sculpture gallery. Johnson's miniature estate thus provides a documentation of his changing enthusiasms much as an 18thCentury *jardin anglais* offered a collection of miniature buildings suggestive of a variety of architectural styles and genres. The ensemble is as revealing of his complex personal attitudes and intentions as is either of Wright's Taliesins or Le Corbusier's own penthouse studio-residence on the edge of Paris.

The Classicizing strain in Johnson's work is augmented by other parallel or contrasting interests, in much the same way that the Neo-Classic or Romantic Classic generation of the early 19th Century found alternate styles, such as the Gothic or the even more exotic modes of Egyptian, Chinese, or Islamic, easy to assimilate. The search for new and distinctive forms, which inundated architecture in the late 1950s and early 1960s and which is more pronounced in the works of Eero Saarinen or Paul Rudolph, affected Johnson in a more introverted way, just at the point when he was forsaking his established Miesian vocabulary. The diversity of his designs at this juncture suggests that various factors were at work; some were personal to Johnson and his need for independent development, others were a part of the nature of the times, of the uncertainty of what to do next, which was rampant in the profession around 1960, especially in the United States.

For Johnson, the various museum buildings in Utica, Fort Worth, Lincoln, and Washington, completed between 1960 and 1963, eschewed the more aggressive form-mongering of this first or proto-Post-Modern period (though it was not called that at the time). Each represented a distinctive way of adapting Classical or academic themes such as axial symmetry, formal façades, porticoes, stairs, and domical spaces to a generalized contemporary look that simultaneously avoided recognizably Modernist or historical detail. Together with his contribution to Lincoln Center, the New York State Theater completed in 1964, which had to be responsive to the adjacent designs of Wallace Harrison and Max Abramovitz, these compositions represented a restrained corollary to the flamboyance of a Boston City Hall or a Yale Art

and most effectively and durably, by James Stirling.

Next to these and other architectural trends of the day. Johnson's work during the early 1960s seemed relatively tentative and inconclusive, and especially so when compared with the belatedly emergent designs of Louis Kahn. Today, in retrospect, Johnson's designs appear interesting in juxtaposition to those of Kahn, even though they were not alike in form or ideology. Each architect was, in his own way, exploring means of welding together the shapes and values of traditional architecture with the generalized and rationalized practices of Modernism. Johnson's way was the more obvious and eclectic, clearer in its associations, Kahn's more challenging and perplexing; nevertheless, each was concerned with enriching the limited range of forms and materials characteristic of earlier Modern architecture.

Many of Johnson's buildings of the 1960s focused upon large, regularized interior spaces in conjunction with formal symmetrical stairs, and these efforts paid dividends in two libraries completed in 1973: New York University's Bobst Library (Richard Foster, partner) facing Washington Square with its mixed tradition of 19th-Century brick row houses and a 20th-Century miscellany of taller buildings, and the large addition to the Boston Public Library (John Burgee, partner) adjacent to the landmark academic structure designed by McKim, Mead & White in 1888. On the exterior both are monumental cubic forms that seek to establish a rapport between academic Classicism and Modernism. The covert evocations of the Classical tradition that were recognizable, if not exactly visible, in the Glass House are now, in these monumental public buildings, more obvious, if not exactly explicit. Although still controversial (and their appreciation is to a considerable degree a matter of personal taste), these buildings are among the more typical and characteristic representatives of Johnson's functional eclectic stance. Their equally monumental interiors, with centrally situated spaces and



Boston Public Library Addition, Boston, Mass., 1973, with John Burgee.



New York State Theater, Lincoln Center, New York, 1964, with Richard Foster.



Munson-Williams-Proctor Institute Museum, Utica, N.Y., 1960.

and Architecture Building—dramatically contemporary structures representative of what turned out, surprisingly, to be a relatively ephemeral mode in recent American architecture. Moreover, Johnson's buildings of this period represented an unmistakably formalist contrast to the radical Modernist revival taking place in England during the late 1950s and early 1960s, a revival led by the self-styled New Brutalists, by the Smithsons,



Amon Carter Museum of Western Art, Fort Worth, Texas, 1961.



Sheldon Memorial Art Gallery, University of Nebraska, Lincoln, 1964.



Museum for Pre-Columbian Art, Dumbarton Oaks, Washington, D.C., 1963.

stairs, offer spatial effects comparable to some of the best works of the previous century, whether traditional or radical—a feat long considered to be beyond the capacity of Modern architecture.

During the past 15 years, working in partnership with John Burgee, Johnson has been increasingly involved in large commer-



IDS Center, Minneapolis, Minn., 1974, with John Burgee.



Seagram Building, New York, 1956, Mies van der Rohe with Johnson.

cial projects and skyscrapers. Many of these have been distinctively shaped glass towers that can be characterized as Late Modern. Such acclaimed works as the I.D.S. Center in Minneapolis of 1973, or Pennzoil Place in Houston of 1976, reaffirm Johnson's continued commitment to key aspects of the Modernist tradition. The laconic Miesian mode with its regular structural rhythms gives way in these new towers to a more forthright expressive punctuation of original shape and detail. Sleek, mirrored-glass skins and tight, razor-sharp edges characterize these tall buildings in a variety of shapes that echo a diversity of sources: Minimalist sculpture of the 1960s, Expressionist glass architecture of 1920, or the so-called Moderne of 1930s America-a mode that had been anathema to the Johnson of the 1930s at a time when he focused upon the more rigorously disciplined formal language of the European International Style. It would seem that the Johnson of the 1970s had rediscovered Modernism, this time in its richness and diversity in contrast to the narrow stylistic limitations that he and Hitchcock (with the encouragement of Alfred Barr) had imposed upon the architecture of the 1920s in isolating and defining the now virtually legendary International Style. Consequently, Johnson began to have less need of what might be called his Classicizing "crutch." Looking back over this recent period in his work, it seems that he was encouraged by a variety of stimuli: the work of a host of younger contemporaries ranging from James Stirling to John Portman together with the logical consequences of a partnership with a much younger architect whose prior experience had been as partner in a large commercial firm, C.F. Murphy Associates, where the literal Miesian tradition had survived far longer than had been the case with Johnson.

Given the complexity of his career, with its deceptive feints and voltes-face, which have frequently confused his public and occasionally even angered certain of them, it was inevitable that the design of the AT&T Tower on Madison Avenue in New York would strike like a thunderbolt. When the project was unveiled, it merited front-page attention in the New York Times, and a subsequent Time cover (plus story) featuring a startling full-length photograph of Johnson with the building's model clutched in his arm. It is now quite simply the most notorious building of the past few years, just as Centre Pompidou was the most celebrated and imitated structure of the mid-1970s. In key respects it turns its back upon Johnson's many-faceted past, making belated common cause with the younger architects of Post-Modernism-in fact, lending a kind of dignity and stature to that movement, which, in large part, it heretofore lacked. The mixture of historical motifs drawn from the Renaissance and the Neo-Classic, as well as from the Early Modern, and the articulation of the tower into three clearly separate components (shades of Sullivan's tripartite conception of the tall building) has tended to obscure the programmatic innovations of AT&T, especially the tall, open loggia at street level, leading to a galleria (echoes of 19th-Century Milan) at the rear. From the open spaces of the Seagram plaza and the Museum of Modern Art sculpture garden more than a quarter-century ago to this enclosed vaulted space of today is a considerable leap in urban planning, a field in which Johnson's talents regrettably have been only minimally employed. Speaking to an audience in Cambridge two years ago, he observed that the site deserved a park, not another skyscraper. Under the circumstances, Johnson has done the next best thing: a sheltered public space with a surprising degree of contemporary grandeur. In his writings he has returned over and again to the importance of space and of its sequential impact upon the viewer; unfortunately, many of Johnson's critics tend to be caught up in the surface of his forms alone, mistaking them for the essence of the building.

It is ironic that Johnson should now come full circle, or nearly so, in his attitudes towards the Classical tradition. At an early stage he needed the veil of Mies in order to work out a Classicizing design solution; now, in the 1980s, candid eclecticism is the order of the day with an increasing number of architects, for better or for worse. Post-Modernism, be it merely a passing fancy or a substantial phenomenon, has inescapably altered our perception of the idea and the reality of Modernism, whether in the "historic" monuments of the 20th Century, or in those contemporary post-AT&T designs of Johnson-Burgee, such as the "Modernistic" glass Houston Transco Tower, which in their distinctive ways are also revivalistic and eclectic. In this last instance, there is a conflation of the glass skin of today's Late Modern with the massing and set-backs characteristic of America's Skyscraper Style of the 1920s and 1930s (shades of Goodhue and of Hood).

As Johnson observed long ago: "We cannot not know the past." It could also be said that the past decade in Johnson's work demonstrates that we cannot not know the present. In this respect his work encapsulates in a sometimes logical, sometimes serendipitous or even capricious fashion, much of the 20th Century's architecture (and much of that period's changing awareness and understanding of all architecture). It is not merely that Johnson knows more about architecture than most of us; he has a better and frequently ironic idea of how to employ that knowledge creatively. Rarely an inventor, but almost invariably an intelligent user of existing forms, he remains a unique, paradoxical leader of his art in our day. [John Jacobus]

John Jacobus is Professor of Art History at Dartmouth College, Hanover, N.H. He has written about the architecture of James Stirling, and about 19th- and 20th-Century French painting, and he is the author of the book, Philip Johnson (Braziller, 1962), which he believes to be the first monograph on the architect.



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How do we determine if a gallery is overly lighted? The intensity of light is measured in footcandles or lux, with one footcandle equal to about 10 lux. In a museum's circulation spaces or in galleries with inorganic stone, metal, or ceramic objects, lighting levels can reach 300 lux or 30 footcandles year-round. Oil and acrylic paintings can take an average surface illumination of 150 lux, but most other organic materials deteriorate in light averaging greater than about 50 lux or 5 footcandles. (Those are averages. In daylighted galleries, a maximum of 300 lux in the summer can be compensated for with intensities less than 150 lux in winter.) Achieving 50 lux demands that the spaces leading to light-sensitive exhibits have progressively lower levels of illumination, that the ambient light in the gallery be even lower than 50 lux to make the objects appear brighter, that finishes in the gallery be kept dark, and that natural light be excluded or heavily filtered.

The spectrum of light

Even the shortest exposures and lowest intensities of light may not prevent artwork deterioration. We must also consider the light's spectral character. Visible light constitutes only a narrow band of wavelengths, from about 400 to 700 nanometers on the electromagnetic spectrum. Much of the damage to artwork comes from its exposure to the wavelengths on either side of that visible spectrum—ultraviolet and infrared light.

The long, infrared wavelengths generate heat that dehydrates many dyes and fibers. Because infrared light comes mainly from the sun, from tungsten lamps, and to a lesser extent from fluorescent lamps, preventing infrared damage involves excluding all direct sunlight from galleries and keeping all electric lamps away from the objects' surface.

Ultraviolet light causes even greater damage. The short, ultraviolet wavelengths alter the molecular structure of many organic materials, burn or embrittle paper and textiles, and fade or discolor dyes and oils. Sunlight has a high ultraviolet component; so do most fluorescent and tungsten halogen lamps. (Tungsten filament lamps have a very small ultraviolet output.) Specially formulated acrylic plastic sheets filter out most of the ultraviolet when placed in front of the light source, although the strongest UV filters have a slightly yellowish cast that affects the colorrendering within a gallery. Significant reductions in ultraviolet light also occur with the repeated reflection of otherwise unfiltered light off white painted surfaces. According to lighting designer William Lam, "after the first bounce, each additional bounce of daylight reduces the ultraviolet component by about 95 percent.'

The contrast of light

The ill-considered use of light in a museum affects more than the artwork. It also affects people. For example, too great a contrast in light levels between one gallery and the next makes the darker space appear gloomy and reduces our ability to see detail. Most consultants therefore do not recommend strong lighting contrasts in adjacent galleries.

A majority also disfavor too great a contrast between a gallery's background and display lighting. Some cite a 1:10 ratio between the two as a limit; others dispute that ratio as meaningless without considering what is being displayed. Many museums today use highly dramatic lighting, particularly with special exhibits. But "that results," says lighting designer Howard Brandston, "in a museum that conveys an image as a storehouse of precious objects rather than as a place for the community." How we see in a museum has a lot to do with how the museum sees itself.

The color of light

Our eyes eventually adjust, however, to even the most dramatic lighting contrasts. A more serious obstacle to the viewing of artwork is light that is improperly colored or that produces glare. We don't always perceive the differences in the spectral color of light, even though those differences can alter the colorrendering of artwork. The lower the color temperature of a lamp, the warmer its tone. The low color temperature of tungsten lamps emphasizes the reds and oranges in works of art, while the higher color temperature of fluorescent lamps usually emphasizes greens, yellows, and blues. We can correct many of the color-rendering distortions of the standard white fluorescent by using deluxe cool white or daylight lamps; and of tungsten lamps by the attachment of a pale blue daylight filter over the lamp's housing. Mixing light sources also corrects color-rendering distortions, with warmer tungsten lamps illuminating the artwork and cooler fluorescent lamps or daylight providing ambient light. When mixing light sources, it's best not to direct them onto the same surface. That only draws attention to the color differences.

The glare from light

If color-rendering involves the physics of light, glare involves its geometry. There are two types of glare-direct and reflected-and two effects from it-a reduced visibility and eye fatigue or discomfort. Direct glare occurs when a light source stands within our field of vision. That happens most often in galleries with windows next to or directly above a work of art or with low partitions illuminated on both sides. Some direct glare cannot be avoided as we walk about a gallery, approaching light sources at oblique angles, but it is inexcusable when we face the artwork. Glare reflected off the surface of an object presents a more difficult problem. To prevent reflected glare from ceiling-mounted lamps, aim the lamps about 60 degrees off horizontal

with their focus about 5 feet-6 inches above the floor. That lighting geometry strikes a balance between having lamps too close to the wall, creating frame shadows, and too far from the wall, creating reflections from low light angles.

Windows, clerestories, skylights, and even brightly lighted objects and people within a gallery also cause veiling reflections, especially if the artwork has a glass frame. (Fortunately, better environmental and security controls have allowed the removal of most glass protection.) Avoiding such miscellaneous reflections involves not letting the ambient light in the center of the gallery get any higher than that on the walls and keeping light sources as high and as close to the 60-degree illumination angle as possible.

Lighting design

The principles of museum lighting have developed over two centuries almost on a trialand-error basis. Throughout the 19th Century, most galleries had skylights and ceilings of translucent laylights. But problems with reflected glare from the bright ceiling plane led several architects in the early 20th Century to advocate clerestory lighting because of its more angled light.

Conservation standards for museum lighting did not become firmly established until the 1940s and 1950s. At the same time, advances in tungsten and color-corrected fluorescent lamps resulted in the construction of many windowless, artificially lighted galleries that tended toward the monotonous, especially when illuminated by a diffuse fluorescent light. The windowless gallery (now mostly lighted with energy-efficient tungsten lamps) remains popular among museum conservators. Daylighting, from their perspective, should exist mainly in circulation areas and serve as a contrast to the artificially lighted galleries rather than a supplement.

Yet daylighted museums have grown in number and in popularity over the last decade. They appeal to architects because of their formal and energy-conservation possibilities, and to curators because of their varied light qualities and accurate color-rendering. Daylight can be controlled with equipment, as in Roche and Dinkeloo's south-facing Rockefeller Wing at the Metropolitan Museum, with a light-reducing mesh hung behind the expansive glass walls, or as in Richard Meier's High Museum, with low-transmission plexiglass panels hung beneath skylights over lightsensitive exhibits. But most daylighted museums being built today control the light entering the galleries through more architectural means: with lanterns, light scoops, or monitors reflecting the light off louvers, panels, or screen walls. To augment the daylight, most use tungsten filament lamps to light the artwork, and on occasion, color-corrected fluorescent lamps for ambient night lighting.

The artificially lighted, windowless gallery, according to some conservators, may be the

"safest" approach, but it is the daylighted gallery that has raised the architectural community's interest in museum lighting to a level not seen since the early 20th Century. Museum lighting no longer involves just equipment; it has become inseparable from the museum's architectural form. The two must be resolved in concert with conservation requirements. Not an easy task, but then, as lighting consultant Jules Horton says, "Museum lighting can be as complicated as art itself." [Thomas Fisher]



Acknowledgments

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This sectional view, adapted from the IES Lighting Handbook, shows the optimum placement of electric lamps for preventing glare or frame shadows. It assumes an ideal utilization of light cones and a minimum effective viewing distance relative to the height of the object on the wall. In this model, height A–B is 52 inches for a 30-degree cone and A–C is 65 inches for a 60-degree cone. Increase horizontal dimensions by 1.5 inches for every 1-inch increase in the height of the object.

Further reading

Helen Searing's book: New American Art Museums (published in association with the Whitney Museum and available through the University of California Press) has an introductory essay that addresses the changing form and lighting of museums. The best general lighting reference book, with a concise section on museum lighting, is the Lighting Handbook, published by the Illuminating Engineering Society (345 East 47th Street, New York, N.Y. 10017) and available at most libraries or from the society for \$111 prepaid.

Interior technics: Museum lighting

Variations on the theme of daylighting, these museums under construction or recently completed show a range of formal ideas for museum lighting.

The Menil Collection



SECTION THROUGH TYPICAL GALLERY

Designed by Renzo Piano and Richard Fitzgerald & Partners with Ove Arup & Partners as engineers, the Menil Collection galleries have a glazed roof above large, white, ferrocement louvers that diffuse all but the early morning light. The fixed louvers or "leaves" hang from a ductile iron space frame through which run return air ducts. Incandescent lamps hang from a track along the underside of the fixed louvers, and panels fit between the louvers to close off all natural light. The roof glazing has a stainless steel coating and ultraviolet filters to reduce the transmission of damaging wavelengths without changing the spectral quality of the daylight, while the window glazing is shaded by the louvers that extend 12



feet beyond the walls of the building. The windows in the galleries are four feet wide and kept to a minimum; only those areas intended for sculpture have full-height glazing. Because of high light levels in the galleries, objects will be on display for only brief periods, when brought out from an artificially lighted storage viewing room. (Some artificially lighted galleries can accommodate the most light-sensitive objects.) An elegant solution to the diffusion of daylight, the louvers prove somewhat awkward at partition junctures and an elaborate way of blocking the excessive amounts of daylight from the glass roof. But as architect Ed Huckaby points out, "science didn't drive the solution; the emotional quality of light did."

The Cleveland Art Museum



This gallery addition to the Cleveland Art Museum by Dalton, Van Dijk & Johnson has gabled skylights with ultraviolet filters and a ceiling of translucent, acrylic laylights to further filter and diffuse the daylight. Structural and mechanical elements above the laylights were carefully placed to minimize any shadows. Fluorescent lamps above the laylight ceiling are used for night lighting; suspended track lighting is used during the day. The laylight system, similar to those used elsewhere in the Cleveland museum, offers flexibility in the arrangement of partitions as well as an even, shadowless light, although some people consider such systems to be visually monotonous.



The Portland Museum of Art







cated forms directing the light to the artwork without shadows or glare. Nevertheless, it seems to be an overly complex solution for the control of daylight.



SECTION THROUGH TYPICAL LANTERN

Far simpler and more traditional in shape are the lanterns bringing daylight into the Portland Museum of Art. Designed by Henry Cobb of I.M. Pei & Partners, with **Jules Fisher and Paul** Marantz as lighting consultants, the peak-roofed lanterns have fixed louvers on the inside of vertical clerestory windows. The louvers are hinged to allow the installation of light-reducing screens for light-sensitive exhibits. Light intensities in the summer can get above recommended levels because of the multidirectional clerestories and the fixed louvers; however, the average lux doses remain within acceptable limits while the variability of the daylight lends considerable excitement to the galleries. Because the sur-



face-mounted track lighting system is so carefully aligned with the building grid, the lamps placed in the peaked ceilings above the clerestories look as if they were an afterthought.

INSULATED GLASS STRUCTURAL FLUORESCENT LIGHT FIXTURE INCANDESCENT LIGHTS WITHIN TUBE

Anchorage Historical and

Fine Arts Museum

SECTION THROUGH PAINTING GALLERY

At the Anchorage Historical and Fine Arts Museum by Mitchell/Giurgola and Maynard & Partch, architects, with Howard Brandston, lighting designer, two central art galleries have back-to-back light scoops with deep light wells painted white to reflect the low Alaska sun. The dimensions of the light scoops were determined after extensive sun studies and model testing. The gallery ceilings curve to cast minimal shadows on the walls. Suspended in the center of the galleries are incandescent lights concealed within metal tubes, eliminating what Howard Brandston calls "the clutter of lamps" in many galleries. Concealed fluorescent lamps light the scoops at night.

E. Verner Johnson & Associates' Tarble Arts Center at Eastern Illinois University has south-facing clerestories. Lighting designer William Lam thinks that "south light has a better color and more variety than north light. It's also easier to control with overhangs and movable panels." The clerestories at Tarble have deep overhangs to shade the glass. Inside, movable panels can be raised to reduce the daylight opening on very bright days or completely closed to reduce the artwork's light exposure when the museum is not open. The light shelf and

Tarble Arts Center

SECTION THROUGH TYPICAL BAY

ADJUSTABLE PANEL FOR CONTROLLING DAYLIGHT

ų

FLEXIBLE LIGHTING

MOVABLE EXHIBIT PANEL

K

MECHANICAL

NORTH -

angled back wall of the clerestories are painted white to reduce the ultraviolet component of the daylight as it bounces off each surface. Incandescent lamps hang from pockets at either side of the clerestory opening. That, along with tapered duct chases, prevents the casting of shadows on the demountable partitions while ensuring that the light all strikes the wall at the proper angle. With a small amount of glazing and simple daylight controls, the designers of the Tarble Arts Center have achieved a lot with very little.

Hursley/Lark/Hursle



The Dallas Museum of

R

SECTION AT PERIMETER WALL

The large galleries at the Dallas Museum of Fine Arts by Edward Larrabee Barnes Associates, with Jules Fisher and Paul Marantz as lighting designers, have perimeter skylights that wash the walls with controlled daylight. Curators can vary the amount of daylight in the galleries by manually operated louvers that will be seasonally adjusted. (Paul Marantz thinks that few museums in this country are willing to pay for and maintain elaborate automatic louver systems.) A light shelf further interrupts any direct sunlight and supports track lighting along its upper and lower edge. The skylight's reflecting mechanisms, along with the coved display walls, promise a welldiffused ambient daylight.



Mayer Art Center

The Speed Museum

GALLERY GALLERY GALLERY PLAN OF ADDITION N → 20/60 SKYLIGHT VITH UV FILTER DUCT 2 LAYERS OF U.V. FILTERING TRANSLUCENT PLEXIGLASS NCANDESCENT LAMPS ON TRACKS

SECTION THROUGH TYPICAL BAY

The barrel-vaulted skylights at Phillips Exeter Academy's Mayer Art Gallery have an ingenious shading device developed by architects Amsler, Hagenah & MacLean with Jules Horton, lighting designer. The shading system consists of four shades-two opaque and two translucent. The shades can hang free at the center of the barrel vault or, in various combinations, can be attached via cables to the spring line of the vault. Lamps hang from continuous tracks at the base of the skylights, illuminating the artwork with a minimum of shadow since the ceiling slopes down to the walls. Like other linear skylight solutions, this gallery's best lighting conditions occur along the long walls, thus limiting artwork display options.





Photos: Steve Rosenthal



EMOUNTABLE PARTITION

Korean Museum

of Modern Art



In few museums has the building's plan and form been so influenced by daylighting as in the Speed Museum addition by Geddes Brecher Qualls Cunningham. Each gallery has UV-filtering skylights, a truncated and coved lighting well to spread the daylight down the walls, and a suspended laylight to prevent the focusing of light in the center of the gallery. Incandescent lamps sit on a track along the upper edge of the laylight. The design makes the display of objects in the center of the gallery more difficult, but lighting designer Claude Engle thinks that such limitations are the price for good lighting. "When we sought total flexibility in museums, the light proved too even and unexciting."



Tai Soo Kim of the Hartford Design Group, along with lighting consultants King Lui Wu and John Powell, use both sawtooth and hip roof skylights in the Museum of Modern Art in Korea. Of the two, it is the east-facing sawtooth skylights, proportioned to block out all the highest southern sun (which may require some exterior shading in summer), that, in the opinion of Mr. Wu, "are the most exciting. They do not need computerized louvers to make them work. They also allow the use of clear glass and a view of the sky." While the unshaded hip-roof skylights demand that lightsensitive objects be displayed elsewhere in the museum, the skylight designs show how simple the best daylighting can be.

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Schedule of Events

Wednesday, March 21

Pre-Market Event PDC Conference Center ASID Industry Foundation Day, Computer Systems for the Design Professional, with speaker Tom Frank, FASID.

Thursday, March 22

9:00 A.M.

Showrooms open 10:00–11:00 A.M. PDC Conference Center "Los Angeles and the Visual Arts in 1984," by Dr. Earl A. Powell III, Director, Los Angeles County Museum of Art.



11:30–12:45 P.M. PDC Conference Center "The California Difference in Painting, Design, Light, and Living," with moderator Stanley Abercrombie, Editor, Interior Design, and panelists Carol King, Editor, Designers West; Jack Lenor Larsen, President, Jack Lenor Larsen, Inc.; Eudora Moore, former director, California Design; June Wayne, artist and founder of Tamarind Lithography Workshop.



1:15-2:45 Р.М.

PDC Conference Center "California Lifestyle, Los Angeles' Major Export," presented by Jody Greenwald, ASID, IDEC, Head, Interior and Environmental Design Program, UCLA Extension.



M. Arthur Gensler

2:30-3:45 P.M.

West Hollywood Auditorium "The International Stature of California Architecture and Design," sponsored by PDC 2, chaired by Charles Gandee, Senior Editor, Architectural Record, with panelists Arthur Gensler, President, Gensler Associates; Jon Jerde, Principal, The Jerde Partnership; Robert Stauder, Principal, Hellmuth, Obata & Kassabaum; and Milton Swimmer, President, Swimmer, Cole, Martinez, Curtis.

International Stature: Products, Places, Reputations, sponsored by PDC 2 at the West Hollywood Auditorium:



4:00-4:45 P.M.

"The Design of Joseph D'Urso," introduction by Lella Vignelli, Architect, Interior & Product Designer, presented by Joseph D'Urso.

5:00-5:45 P.M.

"The Architecture of Robert A.M. Stern," introduction by Pilar Viladas, Senior Editor, *Progressive Architecture*, presented by Robert A.M. Stern. 6:00–7:00 P.M.

"A Historical Review," chaired by Charles Jencks, Author, with panelists Joseph D'Urso; Bruce Graham, General Partner, Skidmore, Owings & Merrill (Chicago); Hans Hollein, Architect; Lella Vignelli; and Wolf Von Eckardt, Design and Architecture Critic, *Time*.

7:00-10:00 Р.М.

PDC Grand Court, fifth floor, sponsored by Formica Corporation, preview and opening of Surface & Ornament exhibit.

Friday, March 23

8:00-9:15 A.M.

PDC Conference Center "Getting Paid!," sponsored by IBD, Southern California Chapter, with speaker Lorin Brennan, Attorney, Zimmerman, Rosenfeld and Gersh.



10:00–11:00 A.M. West Hollywood Auditorium "The International Stature of Furniture Design," sponsored by PDC 2, with introduction by Ralph Caplan, Journalist/Author, and presenter J. Stewart Johnson, Curator of Design, Museum of Modern Art, New



York.





Rob Quigley

11:15–12:45 P.M. PDC Conference Center "Art as Environment, Environment as Art," sponsored by The Museum of Contemporary Art, Los Angeles, with moderator Julia Brown, Senior Curator. 1:00–2:30 P.M. West Hollywood Auditorium A Charette of California Architectural Design, sponsored by

Saturday, March 24

8:00-10:45 A.M.

PDC 2, with chairman Hans Hollein and participants Andrew Batey, Partner, Batey/Mack Architects; Eric Moss, AIA; Rob Quigley, AIA; and Johannes Van Tilburg, AIA. 2:45-3:45 P.M. PDC Conference Center "The Artist as Architect: Creation of a California Beach House," presented by Carol and Roy Doumani.

Places of International Stature, sponsored by PDC 2 at the West Hollywood Auditorium: 4:00-4:45 P.M. "The Architecture of Bruce Graham and SOM," with introduction by Wolf Von Eckardt and presentation by Bruce Graham.



5:00-5:45 P.M.

"The Architecture of Gwathmey/ Siegel and Associates Architects," with introduction by Stanley Abercrombie and presentation by Robert Siegel, principal, Gwathmey/Siegel & Associates Architects.

Products of International Stature, sponsored by PDC 2 at the West Hollywood Auditorium: 6:00-7:30 P.M.

"A Historical Review," chaired by Richard Koshalek, Director, The Museum of Contemporary Art, Los Angeles, with participants Ralph Caplan, Joseph D'Urso, J. Stewart Johnson, Lella Vignelli, and Wolf Von Eckardt.

West Hollywood Auditorium PDC 2 Design Exchange, designers and executives of PDC 2 members will join Ralph Caplan, Joseph D'Urso, J. Stewart Johnson, Lella Vignelli, and Wolf Von Eckardt. 11:15-11:45 А.М. PDC Conference Center "Progressive Architecture's International Furniture Competition Winners," presented by Pilar Viladas. 12:00-1:30 P.M. PDC Conference Center Places of International Stature: The Architecture of Hans Hollein, sponsored by PDC 2, intro-

duced by Robert A.M. Stern, and presented by Hans Hollein.



2.00-3.15 PM

West Hollywood Auditorium "Between the Olympiads: Los Angeles, 1932–1984," presented by Dr. Nathan H. Shapira, IDSA, Architect and Industrial Designer, Department of Art, Design & Art History, UCLA. 4:00-5:30 P.M.

West Hollywood Auditorium The 1984 Olympics: A Los Angeles Design," featuring Jon Jerde and David Meckel, The Jerde Partnership; Paul Preja and Deborah Sussman, Sussman/ Preja & Co.

7:00-9:30 P.M.

The annual end-of-market party will be held at the Temporary Contemporary, The Museum of Contemporary Art, 152 Central Ave., Los Angeles. Tickets are \$20 per person including drinks and a \$6 tax-deductible donation to MOCA. Special transportation arrangements will be made for out-of-town guests; please indicate need on pre-registration form.

Facility Management Day

Sponsored by the members of PDC 2, this event will take place on Thursday, March 22, at the West Hollywood Auditorium. The schedule:

11:15-12:00 noon Registration 12:00-1:30 Р.М.

Lunch hosted by the 30 members of PDC 2. The keynote address, The Internationalization of Los Angeles," will be given by Rodney W. Rood, Chairman of the Board of Los Angeles Central City Association and Vice President and Assistant to the Chairman, Atlantic Richfield Company. This will be followed by Forecast: Three Views," by John Cushman, President, Cushman Realty; Edward Helfeld, Administrator, Community Redevelopment Agency; and Richard King, President, Richard King International. 1:30-4:00 P.M.

PDC 2 Member showrooms, PDC. "Meet the PDC 2 Presidents: Open House and Preview of New Products for the Office."



3:30-6:00 P.M. PDC Conference Center Facility Management Conference Workshop: "The Future of Corporate Facility Management and Design: A Forecast for Strategic Planning." Participants will be Roger Yee, Editor, Corporate Design, and Johannes Van Tilburg, AIA, President, Johannes Van Tilburg & Partners, Architects.

Exhibits



P/A International Furniture Competition, PDC Rotunda



Neutra Architecture: The View From Inside, Space 328



Los Angeles Architecture: The World in Microcosm, Space 195



Formica Corp., Colorcore "Surface & Ornament," Galleria Space



Louise Russell



American Seating

The laboratory and technical workplace will be emphasized during West Week. The firm's showroom has been expanded to almost twice its previous size to show the lab/tech stations, along with the full line of systems furniture. Howard Yarme, environmental designer and product planner, will attend West Week. Circle 100 on reader service card



oward Yarme



Arc Com

The new Banyan Wool and Banyan Knot are composed of 66 percent wool and 34 percent spun rayon. Banyan Wool is available in 18 colorways and Banyan Knot in 14; both come in 51-inch widths. Louise Russell will attend West Week. Circle 101 on reader service card



Gerd Lange



Artemide

Cyclos by Michele DeLucchi can be a wall or ceiling fixture. The combination of clear and frosted glass creates the illusion of neon light. Ernesto Gismondi will attend West Week. Circle 102 on reader service card



Atelier International

The Ring task lamp will be introduced at West Week in a new fluorescent version. Ring measures 15.2 inches high and 22.8 inches wide. All structural elements are cast aluminum and come in charcoal gray or red enamel finish. The oblong reflector and reflector support can be rotated to direct light. Gerd Lange will be present at West Week. Circle 103 on reader service card



Avery Boardman The "B.R.A.U.R.T." convertible sofa, shown here upholstered in silk, is available in custom sizes with down pillows. Circle 104 on reader service card



Baker, Knapp & Tubbs

Today's electronic office has gone 18th-Century English in Baker's new collection for West Week. The credenza is mahogany with pull-out keyboard drawer.

Circle 106 on reader service card

Gateway to the World

West Week 1984 March 22-23-24

84

Pacific Design Center



B&B America

Antonio Citterio and Paolo Nava designed the Quadrante buffet as part of a series. The frame and base come in three anodized aluminum finishes, the glossy polyester top, side, and drawer fronts in four colors, and sliding doors in frosted, clear, or cobalt blue glass. Circle 105 on reader service card



Beylerian

The Space System can be used in a variety of room types in a number of configurations. Each piece comes with a broad range of shelving or file drawers, in standard or special-order colors.

Circle 107 on reader service card



Boyd

Techlinea is a new industrial-look uplight wall bracket by Gary Cross, available in all black, or black with white, blue, or red hood. Circle 108 on reader service card



Brayton Piper, new from Michael Knoll for West Week, can be used as a dining room, conference, or side chair. It is available in plain or channeled seat and back.

Circle 109 on reader service card

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J. STEWART JOHNSON

Curator of design, The Museum of Modern Art, New York

SUZANNE SLESIN

Assistant editor, The Home Section, "The New York Times"

LELLA VIGNELLI

Architect, interior and product designer

WOLF VON ECKARDT

Design critic, "Time" magazine

during WestWeek March 22 23 24 1984 Pacific Design Center Los Angeles presented by **PDC 2** Contract Manufacturers Association/West Coast







Brickel

Ward Bennett's new Yoke Chair will be introduced at West Week. This exposed frame piece is available with a book-matched, veneered back or in a French-upholstered model. A wide selection of Brickel textiles and leathers is available. Stephen Brickel will be present at West Week. Circle 110 on reader service card



D.S. Brown The Dauphin G1602 manager's chair will be one of the pieces shown during West Week. It features tapered 11-inch legs and a polyesteracrylic blend upholstery. Circle 111 on reader service card



Castelli

Charles Pollock's new Penelope chair is made of one 18-foot-long piece of chromium-plated tempered steel rod, covered by a woven steel wire net with a resin finish. Circle 113 on reader service card

Brunschwig & Fils The Ports of Call print collection will be introduced at West Week. It includes 12 new print designs, 17 new wovens, and new colorways for present designs. There are also new introductions from the Winterthur Museum Collection. Circle 112 on reader service card



Corry Jamestown Bohl is a new European-designed chair incorporating the SAR System (support-active-relax), which fits natural body curves and moves with the sitter. The height adjustment and backrest can be controlled while the user is seated. Robert Whalen will attend West Week. Circle 114 on reader service card



Decorative Carpets Mary Vaudoit Evans designed Kasuri, a custom area rug available in any size in 100 percent wool. Circle 115 on reader service card

This chair is covered for filibustering senators, overworked congressmen, and high-powered lawyers.

For the seats of government, law offices, literary houses, brokerage houses, company presidents and senior partners, Lee Jofa presents COM, an entire collection of beautiful, bold contract fabrics. Cover yourself with Lee Jofa COM. See it at the D & D Building, 979 Third Avenue, New York, and in other major cities. (212) 889-3900.

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Hazel Siegel





Kenneth Walker



Design Tex

In response to the need for more decorative contract fabrics, the Solar Series employs subtle pastel colors and geometric patterns and is woven for durability. Hazel Siegel will attend West Week. Circle 116 on reader service card

Executive Office Concepts The Powered Mobile Computer Support Unit has a motorized platform that can raise or lower the video display terminal up to six inches. The unit is compatible with other WCF System terminal stations. Circle 117 on reader service card



Forms + Surfaces The Wood Grille Ceiling will be added to the Ceilings Program for West Week. It is available in a variety of woods or finishes. Designer Bill Brackney will attend West Week. Circle 118 on reader service card



GF

Emtech is a freestanding system of tables, seating, and storage units for the computerized office. The storage units organize every type of computer media as well as conventional paper products.

Circle 119 on reader service card

Gunlocke

The Versatable Series offers a choice of rectangular, round, and square top shapes in low, continental, and conference heights. The table comes in oak or walnut finish. Kenneth Walker will attend West Week. Circle 121 on reader service card



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Aalto Tea Trolley Design: Alvar Aalto, 1936-37

In the tea cart, Aalto continued to study the closed curve in wood, originally applied to his chairs in the late 1920's.





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and visual compatibility... no matter how often you rearrange it. And all of these benefits add up to cost efficiencies you never imagined possible.

With Harter I/F, you get the advantages of both free-standing and open plan in one complete system ... a system that is designed to accommodate information management systems and the people who use them, including a variety of easily adjustable VDT and printer stands, and a uniquely designed overhead and pedestal program for printout and media storage.

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Visual and acoustical privacy for individual workstations can be enhanced through the use of tackable privacy panels easily inserted between the overhead storage and the worksurface.

TASK/AMBIENT LIGHTING — Both task and ambient lighting are available. Task lighting is concealed beneath the overhead storage, and ambient lighting is stylishly incorporated into the product design.

SEATING — The Harter Corporation provides the largest offering of high performance task seating in the industry. In conjunction with Harter's fabric and color program, Harter I/F, HarterWall and Harter Seating perfectly blend to give you total functional and visual coordination.



WIRE MANAGEMENT/POWER ACCESS Harter I/F's wire management system allows power, communication and signal wires to be laid into a concealed channel at the back of the worksurface. If workstations are linked together, the wires can be passed through from one to the next. Harter I/F also offers optional power access just under the worksurface with the exclusive POWERWALL III electrical system.



ADJUSTABLE VDT STANDS — A variety of adjustability features in VDT and Microfiche reader stands are built right into the system to allow you to satisfy individual task requirements. Also available are options such as a document holder and an adjustable palm rest.



FREE-STANDING PRINTER STAND — Compatible both functionally and visually, the printer stand features a printout storage shelf and slotted surface allowing for continuous operation.



PANEL SYSTEM COMPATIBILITY Also available with Harter I/F is a complete acoustical panel system for perimeter division of a work group and for workstations where even greater visual and acoustical privacy is needed.

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NY/





Goldreif

"Light" finishes in kitchen cabinetry will be featured during West Week. The 60 CM 600 style is blue-gray with white trim and navy bow handles.

Circle 120 on reader service card



Michael Stewart



Harter

The I/F workstation is designed to open up the traditional cubicle setting for clerical or managerial levels. The tackable panels provide visual and acoustical privacy. Seating shown is from the HarterMartinStoll "N" Collection. Nicola Balderi will be present at West Week. Circle 123 on reader service card



Harbor Benedetti

Any of the company's 26 standard colors may be ordered for the Mobile Pedestal. It comes in several drawer combinations with optional casters. Maurice Heaton will attend West Week.

Circle 122 on reader service card



Haworth

New for West Week will be an expansion of the company's color and textile program. The seamless upholstery is shown here on the SystemSeating II and III chairs. The 119 new colors complement the existing vinyls, leathers, and laminate surfaces. Michael Stewart will attend West Week. Circle 124 on reader service card



International Tile

Brand 117 is a new glazed ceramic roofing tile in various shapes, sizes, and colors. It is fire, rain, and wind resistant.

Circle 126 on reader service card



New chairs with an uncanny intelligence that seems to anticipate your every move. Lean forward, the chair leans with you. Relax. Stretch back. It responds with unwavering support. When you lock the seat into any of 10 positions, the back retains lumbar height control and continues to flex independently. You make these fingertip adjustments while seated. Effortlessly.

The arms and bases are made of a satiny new anti-static material which is smooth, soft and warm to the touch. Ideal for a trouble-free relationship with you, your desk, and your clothes.

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Design: Jorgen Kastholm Licenser: Kusch + Co.









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Robert Siegel



Dewey Hogdon



ICF

The Biach chair, designed for the Biach residence in Vienna in 1914 by Josef Hoffmann, has been entered into the company's re-creation series. It features a solid beech frame, available natural or stained ebony or rosewood, and has a matching settee. Robert Siegel will attend West Week. Circle 125 on reader service card



Intrex

The Omaha Desk will be introduced at West Week. Designed by Paul Mayen, it features rounded ends and little visible hardware. It is part of the new Omaha Series and is available in 16 high-gloss colors, 7 woods, and 5 burls.

Circle 127 on reader service card



Kasparians

Two tubes of steel interlace to create the light yet strong Esse Chair. Designed by Leonard Scott, the chair frame comes in a variety of fused polyester finishes. Paul Jezek will attend West Week. Circle 129 on reader service card



Jofco

The F9072 Executive desk is part of the Transitional 9000 collection. It features an inlay top that can be changed in the field in less than one half hour. Tops are contrasting or matching wood with 14-carat gold tooling.

Circle 128 on reader service card



Kimball/Artec

European-designed Canetto will be unveiled at West Week. The seating line features executive tilt and task seating (left), and sled-base and straight-leg guest/conference chairs. Artec will show the new Fahgus seating (right), also from West Germany. It has a 180-degree leg that, joined with other units, creates the whole column leg. Dewey Hogdon will attend West Week. Circle 130 on reader service card



West Week '84





Richard Meier





Knoll

A disk drive hanger frame, located under the desk, frees more work space on top. The VDT keyboard is fully adjustable for the frequent user. Richard Meier will attend West Week.

Circle 131 on reader service card



Boris Kroll

Shinano is a member of the Regatta Collection that includes sturdy Jacquard weaves and hand screened prints. Shinano is 72 percent rayon and 28 percent cotton in 10 colorways. Lisa Kroll will attend West Week.

Circle 133 on reader service card



Koch + Lowy Perla is the new clam-shaped table lamp imported from Italy. It comes in a polished brass or opaque glass finish.

Circle 132 on reader service card



Krueger COM, being introduced to the Western design community for the first time, can be used alone or in any combination to create clusters or operating islands. Andrea Orsi will attend West Week. Circle 134 on reader service card

W#/

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To receive a color brochure describing the complete Aton Modular Lighting System, write to Artemide on your letterhead or circle number **305**

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DesignTex introduces EnviroTex...the newest and most comprehensively integrated contract fabrics and vinyls for institutional and health care application. 209 choices of extraordinary weaves, knits and textures for cubicle curtains, draperies, upholsteries, wall coverings, bedspreads...environmental enhancement styled and designed by Hazel Siegel. Meets every code requirement from Boston to San Francisco with inherently flame resistant Trevira® polyester. Washable to 160°F. Colorfast. Completely practical. Totally beautiful. EnviroTex!

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Jack Lenor Larsen

Clino Castelli



Jack Lenor Larsen The Riemerschmid chair, originally designed by Richard Riemerschmid in 1899, is being revived by the company. It is constructed of solid beech and is 31 inches high. Jack Lenor Larsen will attend West Week. Circle 135 on reader service card



Lee/Jofa

Kente, a new cloth collection that takes its name from the Tulani word "intertwining," has three series of African-inspired design: Akwete (left), Kamasi (center), and Igarra (right). Designed by Anne Hahn, the cloth is 100 percent cotton and 54 inches wide.

Circle 136 on reader service card



Madison

Umanoff-Huin Associates designed this new conference table with a scratch- and burn-resistant top and cylinder base. Shown here with the C30R05 chair, the table comes in almond, black, or cranberry finish. Circle 137 on reader service card



Mansfield Manor These stacking tables in bone inlay are part of the Marquetry Collection. Inlays of mahogany, limba, and ebony are also available. Circle 138 on reader service card



Herman Miller Additions to the color, fabric, and finish system of the Action Office will be introduced at West Week. Clino Castelli will be present at West Week. Circle 139 on reader service card SU/



Al Fiori



Monteverdi-Young

This boomerang-shaped desk has a sunken letter tray with 1/4-inch solar bronze glass lid and solar glass desk pad. It is made of walnut with a burl insert top, lacquer finish with chrome kick base.

Circle 140 on reader service card



Morrison

The Periwinkle bracket is made of solid brass or steel. Standard finishes are polished brass, black nickel, oilrubbed bronze, and spray white. Custom colors are available. Circle 141 on reader service card



Pacific Condi

The new Megalfa system includes separate table/desks with drawers contained in the top, which are fitted with shelves, pedestals, bookcases, files, drawers, etc., as needed. Al Fiori will be present at West Week. Circle 142 on reader service card



Poggenpohl The SI kitchen is a new approach for the company in wood cabinetry. Oneinch-wide vertical bands of wood veneer contrast with horizontal lines along the top and bottom of drawers and doors.

Circle 144 on reader service card

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Systems with a Commitment to Choice and Performance

SunarHauserman boasts more systems to divide space effectively than any one in the marketplace-ceiling to floor,

bullet tops, Elements and edge detail, shown which link SunarHauserman Systems here in a Cameron are the S Drawers workstation.

And all are compatible one with another. Skillfully detailed, they work well together but avoid unnecessary regimentation. Designer Glynn Brown sums it up: "The appeal to the client is performancethe Race[®] system's capacity for physical change and wire handling that no other system has."

What's true of the wire and space management Race System, designed by Douglas Ball, is also true of Douglas Ball's post/panel PAS System and his Douglas Group of desks and enclosures in wood. His Uniwall and S Drawer storage systems are another of the unifying links in all his system designs. And now, the recently introduced Cameron Group, is Ball's design response to the continuing necessity and place in the world of office work, for the free-standing desk with attendant work and

Douglas S work module. Maple wallmounted shelf and runoff.

tion raceways are accessed from end panels or longitudinally on runoffs.

The Cameron Group combines Ball's design skill and knowledge of production in wood and metal with the company's manufacturing and engineering capability in both. The details, finishes, and colors of Cameron are designed to fit with Race[®], with Design Option[™] Wall and Panel Systems. The latter is the first system to offer virtually unlimited choice: full-height walls, panels and post/panels. These systems have modular, interchangeable components worktops, drawers, storage units in a wide selection of material, fabric, and finish. And the Electronic Support

Furniture, introduced in Chicago this year,

wall to wall and many in between.



storage units. The electrical and communica- is design-engineered to work smoothly with Design Option[™] post/panel or full-height walls as well as with sophisticated electronic equipment. It consists of free-standing elements, combined with connecting tops-in almost unending ways-for data entry and retrieval, systems analysis, programming-in fact, any function of the electronic workplace.

All systems reflect quality, care, and commitment from SunarHauserman people-from designers, engineers, installers and servicemen. Full-height walls, low walls, panels and pads-all are movable, with unique visual and functional features designed into them. The systems work together for a total environment that fits usual and unusual needs of office, manufacturing facility, or institution. With their special perspective,



Design Option wall panels covered in *Donegal* with mahogany Cameron.





Race System beam with mounted single point tops. DST, Inc., Glynn Brown Designer, Kansas City.

based on decades of experience in the production of responsive product, Sunar-Hauserman is expert in environments which support business goals. They have an obligation to choice and performance.

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PAS System with Uniwall Wells Fargo Data Center, Skidmore, Owings & Merrill, architects, interior design.



left: above: Electronic Full-height Support moveable Furniture Design System. Option walls and panel system.



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Ben Rose



Platt

Capri Lighting's Odyssey No. KT616 features a low-voltage quartz track swivel fixture and comes in polished brass and chrome, matte black and white. Circle 143 on reader service card



Harvey Probber New for West Week are the Activity Center Modules (ACM). This ergonomically designed system has nine elements including desk pedestals, wire management ducts, storage cabinets, screens, walls, etc. Circle 145 on reader service card



Ben Rose

Ice caps reflected on river surfaces inspired Yukon, a loose arrangement of rectangles in one or three colors. Ben Rose will be present at West Week.

Circle 148 on reader service card



Saporiti Italia

Eighteen is a modular sofa with long elastic seats into which cushions are fitted. Sections come in linear, angular, square, or half-round terminal, or with built-on side coffee table. Circle 200 on reader service card





Ron Rezek

Stan Hutchinson



Ron Rezek/Lighting The Ron Rezek Table Group includes a table (shown), desk, and drafting table whose plastic-coated steel legs are held rigid by tension cables and compression rods. Ron Rezek will attend West Week. Circle 146 on reader service card



Scandiline

The Comprehensive Desk System (CDS) is designed to link several pieces of furniture and thus save space. All pieces are available in oak, teak, or walnut. Stan Hutchinson will attend West Week. Circle 201 on reader service card



Shelby Williams This new stacking chair is from the "Flux" series. The seat and back are of molded high-density polypropylene, and the tubular metal legs have a polished chrome finish. Circle 202 on reader service card



Sinclair

For seating and walls, the new Shetland comes in 16 color blends and is made of 40 percent wool, 30 percent nylon, and 30 percent modacrylic. Circle 203 on reader service card



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Circle 205 on reader service card



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West Week '84

 $\Sigma /$



Smith Metal Arts William Sklaroff has expanded the Radius Two Collection to include melamine plastic in several colors. Circle 204 on reader service card



Stark Carpet The Matisse Collection of 100 percent textured wool carpets is available in widths to 13'2" in light bage

in widths to 13'2" in light beige, dark beige, tan, sienna, gray, and white.

Circle 206 on reader service card



Davis Allen



Stendig

Andover is the first in a line of furniture designed by Davis Allen and manufactured by the firm. The frame is solid beech, and seat upholstery can be chosen from Stendig textiles, COM/COL. Allen will attend West Week.

Circle 207 on reader service card



Stroheim & Romann Hokkaido is part of the JAB European Collection and is available in five colorways. All JAB Collection designs are silk. Circle 209 on reader service card



Stow/Davis Elective Elements 1 is an architectural system that provides power distribution, wire management, acoustical controls, and diversity. Circle 208 on reader service card

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West Week '84



Charles Pelly



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The Tinta System, by Manfred Petri, is a comprehensive modular system of casegoods components, work surfaces, and vertical panels which can be assembled separately or in one complete office environment. Petri will attend West Week. Circle 147 on reader service card



Manfred Petri



Raoul Schoumaker



Sunar/Hauserman

Charles Pelly's Christa Chair will be on view at West Week. It is made from a stamped-steel shell and molded cushion, with armrests that can be upholstered or covered with self-skinning foam pads. Pelly will attend West Week. Circle 210 on reader service card

Unika-Vaev

Reminiscence features 100 percent worsted wool yarn in 10 colors to coordinate with Unika-Plush, a mohair pile fabric. Circle 211 on reader service card



Westinghouse

Dactylo seating features a variety of posture control adjustments. Adjustable backs, 2.2:1 synchronous posture control, and permanent release which allows for free tilting movement are all standard. Raoul Schoumaker will be present at West Week. Circle 212 on reader service card

WH/

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Circle No. 333 on Reader Service Card



Neuropsychiatric Institute, Vienna, by Boris Podrecca.

Vienna will be the subject of a critical survey in the March issue. Living in the awesome remains of an empire, Viennese architects subsist largely on small-scaled alterations to their city, yet they turn out work that has an intensity of ideas and a polished execution that commands worldwide attention. P/A has long followed and published the work of Vienna's Hans Hollein; in this issue, senior editor Susan Doubilet introduces to the American press the accomplishments of lesser known, highly creative Viennese designers.

Works of Frank Gehry and Antoine Predock—the new Temporary Contemporary museum in Los Angeles and a nature center in Albuquerque—will be featured as well in the Design section of the March issue.

Technics: Jails and Prisons will address the particular design and technical problems involved in the design of correctional facilities. An article by P/A contributing editor Thomas Vonier will portray the new strategies involved in this now very active area of architectural practice.

April P/A will include—as our April issues have for five years—substantial feature content on Energy-conscious Design. This year, the April P/A will also feature several buildings notable not primarily for their energy strategies, among them the new Dallas Museum of Art by Edward Larrabee Barnes Associates.



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Books

Het Nieuwe Bouwen, De Stijl, De Nieuwe Beelding in de architectuur/Neo Plasticism in Architecture, edited by Cees Boekraad, Flip Bool, Herbert Henkels. Delft University Press, The Netherlands, 1983. 179 pp. De Stijl 1917–1931: Visions of Utopia, edited by Mildred Friedman. Walker Art Center, Minneapolis/Abbeville Press, New York, 1982. 255 pp., \$39.95, \$24.95 paperback. The De Stijl Environment by Nancy J. Troy. The MIT Press, Cambridge, 1983. 254 pp., \$45.

The De Stijl Environment Nancy J. Tray USAN STJJL BJ7-1931 BJ7-1931 EE Sisions of Utopia

and introspective meanings throughout the theories. The resolution of the De Stijl paradox lies in its avant-garde character. Thus a kind of popular imagery vs mind-boggling literature—especially of Van Doesburg—has a certain similarity in its radical, coalescive character.

In his continuation as a theoretician, Boekraad expounds on the intellectual exactitude and precision of Van Doesburg's art, and it is evident in the text that Van Doesburg is his preference over the rest of the De Stijl group showing an affinity that dates from the time his research on him began in 1968. Boekraad also presents Van Doesburg as a critic, and like Van Doesburg, shows a highly critical mind in revealing criticism with cognitive description.

Unfortunately, with Boekraad as well as the other writers, the aesthetic, formal analyses are often either superficial or

De Stijl

The newest English language contribution to the literature on De Stijl stems from the movement's home base. As the catalog, in Dutch and English, for a major exhibition at the Gemeentemuseum in The Hague last year, De Nieuwe Beelding in de architectuur is grand in its choice and presentation. But because of the financial restrictions, there is no color for an art form so dependent on it for its vibrant expression and spatial perception. Nevertheless, the catalog is interesting. Its interest stems from deviating from the usual art historical standards and being, at the beginning, delightfully unconventional. Instead of depending solely on historical essays, the catalog opens, after a brief introduction, with Van Doesburg's complex thoughts to show that the movement depended on this artist; it then proceeds to introduce an unusual dual reading of quote and image, showing the parallels that exist between them. Thus, rather than galloping into intellectual presentations, there is this piece of Van Doesburg's theoretical writing in his original style. Van Doesburg shows extremely penetrating perceptions in a partial definition of beelding (plastic). In drawing a parallel between the formal aspects of De Stijl and its musician Jacob van Domselaer, however, there is no effort to connect and elaborate tonal and formal relationships, although Van Doesburg is cognizant of nearly all of the arts. One of the most dominant parts of his aesthetic doctrine is about the positive and negative colors. And following this we are told of the absence of the meaning of "form," i.e., "form" is replaced by an element of the purest expressive means. In his aesthetic schema, he draws the obvious-a tie-in between himself and Mondriaan. The aesthetic declarations of this piece are priceless-they add the theoretical backdrop to the actual formal relationships, although this rarely means a 1-to-1 relationship. And the fact that this essay heads the catalog shows, as mentioned, that it is a primary source and not an addendum as artists' texts amidst histories, as usually occurs.



The unusual arrangement of the catalog follows with a scheme of pictures and a paralleling quotational theory in which authors Henk Engel, Pieternel Fortuyn, and Jan de Heer are very clever at the pairing. Van Doesburg's words form the majority because he is the backbone of the movement. His claim that formal relationships constitute contrast and tension suggests the images of seated nude and stained glass with its abstract "composition" with which they are paired.

After these two nonconformist contributions, the catalog launches into a regular format, but the third piece is rare in the comprehensive character it gives to the topic, while the four remaining essays focus on primary subjects.

The third contribution is the most intellectual and praiseworthy, with Cees Boekraad's digestion of all the theories and facts of the issues of De Stijl, and his imposition of theoretical and historical insight and literary projection. The thesis of the piece shows De Stijl in its combination of "progressive social criticism with artistic innovation." Also, as part of this thesis, Boekraad asks if De Stijl exists. This is his paradox, whose meaning is conveyed by pointing out that De Stijl's visual influence on the human environment was and still is enormous, whereas there are ambiguous too sober—the theories and facts of history are truly observed whereas the comparisons involving the visual are sometimes poorly stated. Yet formal insights do crop up sharply in the Hague catalog now and then, as in the Oud/Spangen affair and in the Oud/Mondriaan section. But mostly formal analysis is too low-keyed.

Yve-Alain Bois, who began his De Stijl studies as a youth, has written two articles for this catalog. The first is on De Stijl's Parisian experience, the second on axonometry. The French episode is packed with meaty information germane to the topic, but for me I would have concentrated on the most polemical topics, Cubism and Le Corbusier, since any definition of the main spirit of the De Stijl movement must come foremost to grips with these. The axonometry piece is not so successful because the history of rendering architectural space is traced more or less chronologically up to date, and only at the very last is there an attempt to show the explosive tour de force of this mechanical device in its modern phase. And there is no discussion-only a mention-of the 19th Century's contribution, as Banham has shown us with Choisy. Bois's last statement of the infinite extension of axonometric drawing is only a beginning for this fascinating spatial ploy.

Surprisingly, but deservedly, a short (seven-and-a-half-page) article on De Stijl's urbanistic activities is incorporated into the catalog. The theoretical basis for the author, Umberto Barbieri, was the 1927 jubilee issue of De Stijl in which Oud, van Eesteren, and Mondriaan were featured. The public housing of Oud is testy, since housing in itself does not constitute a pluralism of activity. But there is no doubt about the urbanistic validity of van Eesteren even if his stress on science is a bit icy. At the polar opposite, and the most startling addition to urbanism, are Mondriaan's totally aesthetic conceptions. The article's intent is more understandable if it is realized that it is intended as a polemical retort to Manfred Bock's stance in "De Stijl and the City" in the Minneapolis catalog. But how should we be expected to know?

Taking up from here is an almost recherché De Stijl topic, Mondriaan's architecture, by one of the three editors, Herbert Henkels. Henkels's most obvious observation is that all of the other arts associated with Mondriaan's painting are subsidiary to the painting (p. 164). Most of the material presented provides evidence that architecture does not measure up to paintings' merits. Yet architecture is still primary in his *oeuvre*, in its spatial and social contexts, and Henkels touches on Mondriaan's architectural effect on other designers. Despite the secondary role Mondriaan gave to architecture, as Henkels relates, it "determines our entire constructed environment" and its plastic means should be pure.

A concluding remark on the Hague catalog is in order: It is a good handmaiden of the exhibition, but no informer of it, and provides excellent documentation on De Stijl architecture, but is sometimes weak in its conclusive logic.

Although not as well balanced conceptually, the Minneapolis De Stijl catalog is a more attractive object than the Hague one in one respect: It includes color which, as previously stated, was so important to the movement's social utopian aim (which is the sub-theme of this earlier catalog). The color expression in the primaries projecting forth in the red, vibrating on the datum in the yellow, and receding in the blue was effectively conveyed by the Theosophist mathematician, Dr. M.H.J. Schoenmaekers, whose important influence on the movement has had extensive treatment in H.L. Jaffe's *de stijl 1917–1931: the Dutch Contribution to modern art.*

The catalog contains two basic architectural pieces. Sergio Polano, in "De Stijl/Architectur-Nieuwe Beelding," addresses himself directly to this major art, yet starts out, like Boekraad after him, by saying that the nature of architecture is elusive. Its core idea, he says, was



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Krueger P.O. Box 8100 Green Bay, WI 54308 (414) 468-8100 mainly pictorial, although he then admits of its main propeller—the theoretical aspect. But here is where the article fails, because only short quips of the De Stijl architectural stars are drawn, and both pictorial analyses and theoretical conceptions are left out.

Kenneth Frampton's piece on Neoplasticism and architecture, which shows an ongoing interest in De Stijl dating back at least to 1969, expertly gives us insights to the movement and its historical relationships. He shows the historical influence of Frank Lloyd Wright on Jan Wils, Grandpre Moliere on Oud, and of elementarism as a whole on such as Dick van Workom and Peter Eisenman in a precise, formally analytic way. Yet he drops words like dematerialism and pinwheeling effect without enough definition.

Besides two excellent illustrative essays on the Schroeder house and the Café Aubette, there are three other articles associated with the architecture: the ones by Manfred Bock and Martin Filler, which are good contributions, and that by Nancy Troy. Troy's piece is a prelude to her own *De Stijl Environment*, which is both fine and questionable. Her thesis in the book is the collaborative track the De Stijl group took, which relates to the Art Nouveau/Gesamtkunstwerk (total

art work) source. The most positive feature of the book is its full historical exposition of the movement within her more aesthetical thesis. Such places as Spangen, Drachten, Weimar, and even Mondriaan's last studio in New York are described with verve and complete command of information. The writing is crystal clear but sometimes stiffly formal. But, unfortunately, there is not as much interpretation in terms of formal analysis as there is pure description. For example, despite the numerous beautiful color prints, there are few attempts to convey their expressive values. "Dynamic" is the most predominant image she gives, even though color, as a subtheme throughout and most emphatically so in her last two chapters, deserves a host of other descriptions.

On the other hand, the concept of "environment" included in the title of the book is carried out well; not only the De Stijl artists' relationships are expounded, but international artists/architects are considered also. The term "environment" also conveys space, and Troy attempts to convey the qualities of such highly complex splintered sticklike space as that of Piet Zwart, but does not do it quite as effectively as she might. Another concept mentioned at the begin-"plasticism," ning was which was

sloughed off with "shaping, forming." A book which seems to want to be at the pinnacle of De Stijl literature should recognize the seminal meaning of this complex term. Mondriaan's essay and Van Doesburg's important books are a beginning for a concept that also conveys orderliness. Nancy Troy is often erroneous with details. She claims that Oud's DeVonk house is symmetrical all over, without noting that Van Doesburg's asymmetrical tile detailing makes for an eye-boggling effect. Nevertheless, she has presented us with a splendid volume of De Stijl literature.

In all, these English texts on De Stijl are worthy additions to the literature of the movement. Each contributes in its own way towards social and aesthetical articulation, but because the Hague catalog provides such an inventive presentation and introduces a new way of organizing ideas, its merit stands out from the rest. Further, the frugality of this catalog is compensated for in a most important respect—in spending funds for translation so that not only the athome Dutch reader was respected but a second significant language could learn of and delight in De Stijl as well.

Reviewed by Suzanne Frank, an architecture historian living in New York.





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PA Products and literature

This month the products and literature section begins with items related to the Technics article on museum lighting, pages 104-110.



'Museum Lighting' provides case histories of solutions to lighting problems in three museums: The Lehman Wing of the Metropolitan Museum of Art, New York; the Neuberger Museum, SUNY, Purchase, N.Y.; and Gallery 77 of the American Museum of Natural History, New York. The eightpage brochure includes photos that show the types of displays in each museum, along with detail drawings of fixtures used to light them. Lighting Services, Inc. Circle 213 on reader service card

'Lighting control media digest' illustrates in color and provides brief descriptions of parabolic louvers, decorative ceiling panels, lenses, and diffusers representative of those offered. Among products available are filter ray shields that filter out ultraviolet rays. The company also provides design and engineering services and custom replacement wraparounds for existing fixtures. A.L.P. Lighting & Ceiling Products. Circle 214 on reader service card

'Precise Accents' brochure presents three track lampholders that use tungsten halogen lamps for controlled light, energy-cost saving, and excellent color rendition. The MR-16 lamp has an intense white beam for precise, bright accent lighting. The dichroic reflector filters infrared rays to help prevent color fading. The brochure includes application and design data. Progress Lighting.

Circle 215 on reader service card

Lighting fixture condensed catalog illustrates several types of chandeliers and modular task and ambient lighting. Also included are tungsten halogen task lighting using miniature fixtures with precise beam control, spot-lights, and trackmounted fixtures. Several styles can be custom fabricated to dimensional specifications. Modulighter, Inc.

Circle 216 on reader service card

Bulb jackets and clear UV films are said to allow transmission of virtually none of the ultraviolet light without reducing visible light. Available as sleeves for bulbs and as sheets or roller shades for windows, the material protects against fading from sunlight and fluorescent lighting. The jackets are removable and reusable when fluorescent bulbs are replaced. Solar-Screen Company.

Circle 217 on reader service card



Low-voltage Lytespan® fixtures with internal transformers can be used on standard Lytespan track. They accommodate MR-16, PAR-36, or R-14 lamps. The 16-page catalog has application and specification data to assist in the selection of appropriate lighting. Lightolier. Circle 218 on reader service card



Skylight brochure contains photographs, system details, and specifications for the company's complete product line. The 36-page, four-color brochure discusses materials, finishes, and coatings and includes skylights, walkways, domes, and heat and smoke vents. Naturalite, Inc. Circle 219 on reader service card

Domed skylights standard,

"AAMA 1606-82: Voluntary Uniform Load Structural Standard for Plastic Domed Skylights," enables the comparison of structural load capabilities of various skylights for particular climates and usage. Its companion publication, "AAMA 1605.1-1982: Voluntary Standard Uniform Load Test Procedure for Thermoformed Plastic Domed Skylights," outlines procedures for a prequalification test for weathering of glazing material and a uniform load test for fully assembled thermoformed plastic domed skylights. The set, \$4.50, is available from Architectural Aluminum Manufacturers Association, 35 E. Wacker Dr., Chicago, Ill. 60601.

'Skylighting Design Handbook'

explains the use of skylights to provide natural daylight to minimize lighting energy costs. It includes design guidelines for optimum savings and comfort. A case history chart shows actual savings in lighting energy and heating/cooling costs in an installation in Arizona. Wasco Products, Inc.

Circle 220 on reader service card

'Plexiglas® in Architecture' is a 20-page brochure that explains the use of Plexiglas acrylic sheet in buildings. It lists types available and provides property data and design considerations. Among the grades for special applications is Plexiglas G, UF (ultraviolet filter) sheet that absorbs ultraviolet radiation and protects displays against its damaging effects. Rohm and Haas Company.

Circle 221 on reader service card

Skylights with retractable

shades control excessive solar heat gain and thermal heat loss. The units have thermal breaks to eliminate through-metal conductivity, and insulated domes are factory sealed to prevent dirt infiltration. Single, multiple, sloped, vaulted, and ridge types are described and illustrated in an eight-page brochure. Skyview Control Systems, Inc.





Custom-extruded skylights of aluminum are the subject of a 44-page catalog. Completed projects, illustrated in color, include hotels, commercial buildings, shopping malls, and museums. Drawings show construction details, and photos illustrate the many types of skylights available, from single slope to vaults and domes. Specifications are included. Super Sky Products, Inc. Circle 223 on reader service card

P/A Products and literature

Custom greenhouse, walkway, skylight, and dome systems are shown and described in a fourpage brochure. Details of a tubular skylight system are included, along with specifications. Fourcolor photos show typical installations. J. Sussman, Inc. *Circle 224 on reader service card*

Horizonvault[®] barrel vault skylight has an extruded aluminum sill and caps and an extruded neoprene gasket. It can be single, double, or triple glazed, with manually or electrically operated sections. Glazing caps attach to the sills with no need for exposed fasteners, for a burglar-resistant installation. O'Keeffe's, Inc.

Circle 225 on reader service card

Skyroofs in various shapes and in sizes to cover areas from small courtyards to 100-foot spans are made with diffused-light-transmitting panels to eliminate hot spots and glare. The panels, with U-factors of .40, .24, and .15 and shading coefficients of .16 to .66, have an exterior surface that is virtually maintenance free. There are also fire-rated systems available. A portfolio of literature shows typical installations. Kallwall/Structures Unlimited. *Circle 226 on reader service card*

Atmosphere and environment

instruments and systems for libraries, art galleries, and museums include: an ultraviolet light monitor to measure the proportion of UV in natural or artificial light; an illumination level meter; and solar radiometer and transmittance meter. There are also several instruments for measuring and recording relative humidity. Science Associates Incorporated. *Circle 227 on reader service card*



The Jacquard collection of upholstery fabrics is made from 75 percent flame-retardant SEF modacrylic and 25 percent nylon. The small patterns are Safety Dot, Safety Square, and Safety Octagon, all geometric figures on solid ground. The fabrics are 54 inches wide, and all are available in 45 coordinated colors. Coral of Chicago. *Circle 228 on reader service card*



Advocate carpet, woven in the Kara-Loft technique, retains its hobnail pattern even under heavy traffic. Because the carpet has looped yarns slightly higher than cut yarns, the cut pile does not obscure the pattern by covering the loops. Manufactured from Antron nylon, Advocate is available in 25 solid-tone colors. Karastan Rug Mill. *Circle 229 on reader service card*

Opaque drawing revision material is a pressure-sensitive, vellum-based appliqué that accepts pencil or ink drawing or typing. It allows revisions or corrections to be made to original drawings, and is especially useful for microfilm purposes. The special adhesive gives the sheet 93 percent opacity, completely covering the information underneath. Stanpat Products, Inc. *Circle 230 on reader service card*

Taperlite roof insulation is a lightweight, tapered, noncombustible, nonabsorbing material used for sloping flat roofs. Made from perlite board, with ¹/₄-inch or ¹/₈-inch slope per foot, it provides good drainage and the additional benefit of extra insulation required to support the tapered panels. Super "K" Industries, Inc.

Circle 231 on reader service card

Acousti-san[®] ceiling panels

provide a ceiling that has acoustic properties and meets sanitary requirements. The panels are made from a glass fiber composite that is sealed in Du Pont Tedlar® film, yielding an NRC value up to .95. The Tedlar film, of polyvinyl fluoride, is impervious to common solvents, greases, acids, and other chemicals and can be steam cleaned. Suitable for use in healthcare facilities, the ceiling panels are available 2' x 2' and 2' x 4' in several thicknesses. They have a Class A flame spread rating of less than 25. Craxton Products, Inc. Circle 232 on reader service card

The Shibumi Collection of

prints and authentic reproductions of Japanese hand-wovens is made from a balance of coarse and refined cottons. Patterns have rich colors with subtle details. Blacks and browns have red, green, and white accents. In the IBD annual competition, the Gold Medal for upholstery fabrics was awarded for the Shibumi woven fabrics. Groundworks, Inc.

Circle 233 on reader service card

Intersept[®] is an antimicrobial substance integrated with the primary vinyl layer of carpet backing. It migrates upward and is activated by moisture in spills to inhibit the growth of microorganisms. It also acts against molds, mildew, and fungi. Intersept is concentrated at the base of the carpet pile, where it controls the spread of bacteria beneath the surface. Interface Flooring Systems, Inc., Healthcare Group.

Circle 234 on reader service card



The Williams wheelchair is made from composite materials for reduced weight, compared with those made from metal tubing, and for resistance to corrosion from moisture and chemicals. It has special foot and leg rests that adjust to accommodate several positions. The chair has a sculptured foam cushion in a choice of colors and textures. Armrests retract into the seat base, allowing exit from either side of the chair. Spokeless wheels adjust independently of each other. The wheelchair is designed to be used in a shower or whirlpool. Ronald H. William & Consultants.

Circle 235 on reader service card

"Thin Granite,' a full-color, eight-page catalog, covers largesize panels, available in ³/₄-inch and ¹/₂-inch thicknesses, for outdoor or indoor use. It describes the broad range of granites available, and provides detailed information on installation and fabrication. Marble Technics, Ltd.

Circle 236 on reader service card



Mobius Seating: conference and bar stool have metal frames with full suspension springs that accommodate a leather sling seat and back. Frames are either chromium plated or finished in four baked enamel colors to blend or contrast with the leather covers. The executive/secretarial model, which comes in high and low back versions, is offered in a choice of upholstery leathers and five frame finishes. It has hydraulic lift and tilt/lock mechanisms, covered casters, and a five-prong base. Cy Mann Designs Ltd.

Circle 237 on reader service card

Shower equipment to meet barrier-free accessibility codes includes a preassembled module that has panel-mounted grab bar, antiscald valve, and handheld spray. It is described in a 16-page brochure that also covers multistall units with one section to accommodate a wheelchair, wall and panel shower units, and optional equipment for barrier-free installations. There are guidelines for renovation of several types of installations. Bradley Corp. Circle 238 on reader service card

All-aluminum raised floors for Nuclear Magnetic Resonance (NMR) installations are nonferrous and nonmagnetic. The system of panels and pedestals provides space to accommodate cables, power lines, and piping that link the NMR with computers and support equipment. Interchangeable parts provide the flexibility to alter or expand an installation. The highstrength floors offer positive grounding for static control and are completely fireproof. Floating Floors, Inc.

Circle 239 on reader service card

Ultra-Board asbestos-free building board can be used as wall and ceiling lining, insulation panels, partitions, soffits, and infill panels. Composed of cement bonded with cellulose and other organic fibers, it is said to be lighter weight and to offer higher impact resistance than asbestos board. The machinable. maintenance-free boards are available in 8' x 4' and 10' x 4' sheets in four thicknesses: 3/16, 1/4, 3/8, and 1/2 inch. BRIT-AM Venture Marketing, Inc. Circle 240 on reader service card



The Everychair Series, which was recognized with a 1983 IDSA Certificate of Design Achievement, consists of a side chair, an armchair, and a lotusback chair. The chairs are of solid beech construction with upholstered seat and back or upholstered seat and wood back. Finishes available are natural, stained, or black epoxy. Peter Danko & Associates, Inc. *Circle 241 on reader service card*

'Architects Guide to Drapery Hardware' is divided into three sections: custom drapery heading systems; selection and performance data for track systems; and basic component parts and specifications for each track system. The 28-page guide has detail drawings that illustrate each hanging method and features of each track. Baton-draw systems and the Electrac® electromagnetic system for closing draperies are included. Kirsch Company. *Circle 242 on reader service card* **Graphic arts equipment** planning guide suggests darkroom designs and construction and darkroom layouts for several basic systems, and illustrates equipment included in each. Equipment templates are provided for use with floor plan grids. The 16-page guide has camera specifications and plumbing specifications for various sink models. nuArc Company, Inc.

Circle 243 on reader service card

The Telalarm, a security product described in a four-page brochure, is a telephone communicator, an automatic alarm dialer, and remote telephone controller. Burglar, fire, or emergency alarms activate an automatic dialing sequence over standard telephone lines to a central area. Security personnel can operate cameras, lights, sprinklers, or gates. Trigon Electronics, Inc. *Circle 244 on reader service card*

Circle 244 on reader service cara

The System 2⁶⁹ workstation offers several options for the office using information processing. Two workers can share a computer or, with the addition of a turntable, three can have part-time use of a CRT. There is also a corner CRT work surface with pull-out keyboard drawer. Other features include task and ambient lighting combined into one unit, overhead cabinets with flip-up front, and pedestals/lateral files. Conwed Interior Products Division.

Circle 245 on reader service card



The Catalina chair, with a stainless steel or painted gunmetal frame, has a seat height of 15 inches, back height of 27½ inches. Seat options are wood lacquer, wood lacquer with loose pillow, or upholstered seat. NPM Incorporated.

Circle 246 on reader service card



TOGO seating, designed by Michael Ducaroy, is constructed of foam of different densities and has covers quilted with Dacron. The group, which includes a chair, a corner unit, two- and three-seat settees, and a footstool, can be used in several combinations. Ligne Roset. *Circle 247 on reader service card*



Kidstuff printed fabrics in the Pediatric Print group are 100 percent Trevira polyester with inherently flame-retardant yarns and low smoke properties. Designed by Rob Rose, Module is available in a 12-inch repeat in one or three print colors; Module I Linear has a 12-inch repeat in one print color; and Module II Linear has a 24-inch repeat in two print colors. The fabric is washable for economical maintenance. Ben Rose, Inc. *Circle 248 on reader service card*

Stainless steel as an accent in curtain walls is illustrated in a 20-page brochure. The finish can reflect or diffuse light with a pewterlike or mirror finish. Several buildings are shown with descriptions of finishes and data about location, architect, and contractor for each. Cupples Products Div. of H.H. Robertson Company.

Circle 400 on reader service card

Sup-UR-Shield sarage doors, for warehouses and similar installations, combine foamed-inplace polyurethane insulation and weather seals at the perimeter and between sections to help prevent loss of conditioned air. The door is constructed of galvanized steel that is primed and has a baked-on acrylic resin finish coat. Standard operation is by hand pull, with electric operation optional. Specifications. descriptions, and illustrations are provided in a four-page brochure. Overhead Door Corporation.

Circle 401 on reader service card

Washroom and shower room

designs are shown in plans in a 26-page brochure. The manual provides layouts that make economical plumbing connections and use washfountains that can serve up to eight people at a time. Several styles of washfountains for two to eight people and showers that can be used by as many as six people at a time are illustrated. Bradley Washfountain Company. *Circle 402 on reader service card*

Elevator/escalator maintenance

brochure describes how the Westinghouse preventive maintenance system reduces breakdowns and emergency repairs. The 16-page, four-color brochure explains the benefits of a planned program for preventive maintenance to repair minor faults before they result in serious breakdowns. The program is tailored to the needs of each building. There is also a hot-line telephone number for emergency repairs. Westinghouse Elevator Company. Circle 403 on reader service card



The Compact folding chair, designed by Lawrence Minsker for contract or residential use, is approximately one inch wide when folded. The back becomes a handle when the chair is folded. The frame is chromium plated; back and seat are covered in Ultrasuede in a wide choice of colors. Dux Interiors, Inc. *Circle 404 on reader service card*



The International Collection of boardroom accessories by recognized designers includes beverage services, ashtrays, and vases. Designers represented are Alvar Aalto, Arne Jacobsen, Valto Kokko, Erik Magnussen, Timo Sarpaneva, and Tapio Wirkkala. Accessories are available in red. white, or black molded plastic, stainless steel, mirror chrome, brass, or antique bronze. The collection is described and illustrated in a 12-page color brochure. Smokador/A Globe Weis Company.

Circle 405 on reader service card

Concealed door closers in the 600 series provide control for medium-traffic doors weighing up to 200 pounds. The closers feature concealed mounting designed to reduce vandalism and maintain architectural aesthetics. They are fully adjustable and are available for center-hung or offset doors. The closers are described in a brochure that includes architectural drawings and a list of optional accessories. Rixson-Firemark.

Circle 406 on reader service card

Castlegate® Insulated Steel

Doors handbook provides information about steel door framing, insulation factors, and repair of dents and scratches. The three sections cover product specifications, installation, and trouble shooting. United States Gypsum Co.

Circle 407 on reader service card

Batten-Tite architectural metal roofing systems, described in a four-page color brochure, resist weather extremes. They are designed for watertight integrity on slopes from 11/2 in 12 and up, and have joint expansion and contraction controls. Panels are standard 21 inches wide and up to 40 feet long. Metals include aluminum, copper, stainless steel, terne-coated stainless and precoated steels with clear or bronze anodized or Super-Cote 1 fluoropolymer finishes. MM Systems Corporation. Circle 408 on reader service card

Aluminum seating systems for spectator seating are illustrated and described in a 12-page. full-color brochure. They are available as individual seats or benches, with or without backs. The seating can have electrostatically applied finishes in eight colors or can be made of anodized aluminum in five colors. Details show accessories and installation dimensions. Also included are portable bleachers and park benches. Howmet Aluminum Corp., Specialty Products Div. Circle 409 on reader service card



Contract/residential seating, inspired by tractor seats, is finished in either mirror chrome or baked enamel colors. The molded metal seat is contoured for comfort and has a stable base. The chairs are available in either table height or in counter height with rubber-clad footrest.

Bieffeplast USA. Circle 410 on reader service card

Commercial roofing systems

brochure also covers waterproofing, dampproofing, and roof insulation. The 24-page brochure provides general requirements and specifications for several types of roofing, over concrete, wood, or steel decks, and roof insulation. Construction details are included for conventional built-up roofing and for Flintlastic® modified bitumen roofing. Genstar Building Materials Company. *Circle 411 on reader service card*

Roof insulation and compo-

nents for single-ply and built-up roofing and shingled roofs are the subject of a 24-page catalog. Insulation materials include perlite, urethane, isocyanurate, and composite sandwich boards with several types of facers. The brochure also describes the Perma-Fastner® attachment system and Metalastic® expansion joint covers. International Permalite, Inc.

Circle 412 on reader service card



CAD graphic plotter, microcomputer-based Cadliner CD-1100, draws five languages, numerals, and graphic forms and symbols. Graphic forms include rectangular, circular, oval, linear, and parallel line. The three drawing functions are standard, monitor, or memory. Max Business Machines.

Circle 413 on reader service card

High-pressure laminate doors are available in several colors, patterns, and finishes. Standard doors have a particleboard core and are premachined for hardware. Special types include: fire-rated, to meet fire-labeling requirements of 20, 45, 60, or 90 minutes; lead lined; and staved core. The doors are described in a four-page brochure that also provides general specifications. Alfab, Inc.

Circle 414 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.

AT&T Corporate Headquarters, New York (p. 70). Architects: Johnson/Burgee Architects, York. Structural steel: New Bethelehem Steel. Steel deck: H.H. Robertson. Concrete: Julius Nasso/S&A Concrete. Granite: Castellucci & Sons. Gypsum board: U.S. Gypsum. Anodized aluminum: Wausau Metals. Painted aluminum: I.B.G. International. Extruded bronze: Canadian Rogers Eastern Ltd. Hollow metal: American Steel Products. Painted galvanized steel: Cornell Iron Works. Ceilings: Industrial Acoustics Corp. Copper roofing: A. Munder & Son. Waterproofing: New York Roofing, Tremco Products. Fiberglass insulation: Robert A. Keasbey Inc. Architectural woodwork: L. Vaughn. Italian marble walls and floors: P. Bratti. Masonry and plaster: Long Island Lath & Plaster. Epoxy paint on roll-up doors: Sherwin-Williams Paint. Kitchens: Ideal Restaurant Supply. Lighting: Lightolier, Edison-Price. HVAC: Trane, Barber Colman, Baltimore Air Coil, Carrier, Honevwell computer control system. CCTV studio: Fiorentino Associates. Seminar and board room audio-visual equipment: George R. Snell Associates.

PPG Place, Pittsburgh, Pa. (p. 76). Architects: John Burgee Architects with Philip Johnson, New York. Steel: U.S. Steel. Glass and paint: PPG. Aluminum mullions: Howmet. Electric decking: H.H. Robertson. Granite: (wall surfacing) Mt. Airy; (floor surfacing) Rock of Ages, Cold Springs, North Carolina Granite, and National Granite, domestic; Savema, Italian. Revolving doors: PPG Herculite, Crane Revolving.

Additions to Cleveland Play House, Cleveland, Ohio (p. 82). Architects: Johnson/Burgee Ar-chitects, New York. Reinforced concrete foundations: Cleveland Cement, Bethlehem Steel. Brick: Glen Gerry. Wood windows: Duratherm. Aluminum-and-glass entrances: Kawneer. Hollow metal doors: Pioneer Industries. Steel overhead doors: Kinnear. Thin-set terrazzo floors: O.A. Bertin Co. Slate roof: Buckingham Virginia Slate. Ternecoated steel roof: Follansbee. Insulation: Taperlite, Grefco. Alkyd paint: Sherwin-Williams. Custom lighting fixtures: Novelty Lighting. Theatrical lighting panel: Strand Century, with Cerone Vincent. Heat ex-changer, pumps, coils: Bell & Gossett. Air-handling unit: Carrier. Theater sound system: Sound/Com Corp. Stage rigging: Tiffin Scenic Studios.

RepublicBank Center, Houston, Texas (p. 86). Architects: Johnson/ Burgee Architects, New York. Structural steel: Mosher. Curtain wall system: Cupples. Granite: Continental Marble & Granite. Leadcoated copper: Seline Sheetmetal. Exterior doors and windows: Midwest Iron. Interior metal doors: Pearland. Teak doors: Eggars. Acoustical ceiling: Armstrong. Paint: Benjamin Moore. Elevators and escalators: Shindler/Haughton. Ornamental ironwork: Midwest Iron. Interior lighting: Edison Price.

Transco Tower, Houston, Texas (p. 94). Architects: Johnson/Burgee Architects, New York, and Morris/ Aubry Architects, Houston. Curtain wall: Cupples. Glass: LOF. Curtain wall finish: clear anodized and medium gray Kynar by PPG. Spanish pink granite: Continental Marble and Granite. Metal deck: H.H. Robertson. Elevators: Westinghouse. Elevator cabs: National Elevator Cab. Marble in elevators: Marble Technics. Façade lighting: Keene Lighting. Lobby lighting: Edison Price.

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Circle No. 336 on Reader Service Card

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Architect: Career opportunity for registered architect with 10–15 years experience to assume leadership of an established architectural office with 21 people located in midwest. The individual must have integrity, leadership qualities, high design standards, marketing skills and ambition. Ownership potential. Send resume to Box 1361-425, *Progressive Architecture*. Equal Opportunity Employer.

Architect: Challenging opportunity to head a design team in Corpus Christi, Texas for established architectural firm. Individual must have demonstrated management ability and experience in design, technical coordination and construction administration. Self motivation is imperative. This firm is an Equal Opportunity Employer. Please send resume and photograph to Box 3070, Corpus Christi, Texas 78404.

Architectural Design Faculty Positions-The Department of Architecture at Temple University solicits applications for appointments commencing fall 1984: Assistant/associate professors; full-time, both tenure track and non tenure track appointments may be available. Teaching includes a design studio and related specialty courses in energy, computer aided design, theory, technology, or history. Responsibilities include teaching, scholarship, research or practice, and departmental administrative work. One of the three positions available is to have a research focus, the others, a practice orientation. Adjunct professors/studio critics; at various ranks, part-time. To teach design studios at all levels. One position will be at the senior level. Adjunct professors; part-time, non tenure track. To teach lecture courses in energy, computer aided design, planning, housing, behavioral factors, theory, and history. The Department of Architecture offers an accredited five year undergraduate curriculum leading to the B. Arch. degree. Please respond with a letter of interest stating the position for which you are applying, a curriculum vitae, and the names of three references before March 15, 1983 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.

Architectural Illustrator

We are looking for a talented illustrator to join with us in serving our architect clientele with presentation art. Applicant must be capable of producing entire renderings and/or sketches in an accepted media on a professional level. Position will lead to direct contact with our clients in a decision-making capacity. The artistic environment, salary and benefits package make this position truly rewarding. Send resume and 35mm slides or photos to: Richard Howard, Howard Associates, Inc., 5800 Monroe St., Box 403, Sylvania, OH 43560. Architectural Specification Writer: Dallas based firm with commercial highrise, retail, hotel and mixed use projects; full time position; minimum 5 years experience. Call or send resume and salary history to WZMH Group Inc., 1600 Southland Center, Skyway Tower, Dallas, Texas 75201, (214) 747-3445, Mr. R. Niemi.

Architectural Specification Writer: Skidmore, Owings & Merrill, Architects/Engineers are currently reviewing resumes for the position of Architectural Specification Writer. Bachelor Degree and three to five years experience required. Salary commensurate with experience. Send resume to: Skidmore, Owings & Merrill, 5251 Westheimer, Suite 200, Houston, Texas 77056, Attn: R.A. Kuca. An Equal Opportunity Employer.

Architecture Faculty Positions Undergraduate architecture program (B.A.) seeks two faculty for tenure track positions. First position (tentative) in architectural design with secondary specialization in urban planning, urban or architectural history (preferably modern). M. Arch or Ph.D. in architecture. Resumes, references to Nicholas Adams, Chairman, Dept. of Art and Architecture, Lehigh University, Bethlehem, Pa. 18015. Second position (anticipated) in computer aided design with interest in building systems, high-rise or urban habitat. One third teaching (undergraduate architects/graduate civil engineers), two thirds research in Institute for Study of the High-Rise Habitat. Ph.D in civil engineering or architecture. Send resume and letters of reference to Lynn Beedle, Chairman Search Committee, Institute for the Study of the High-Rise Habitat, Fritz Lab (#13), Lehigh University, Bethlehem, Pa. 18015. Deadline for application 1 March 1984. Lehigh University is AA-EOE.

Architecture: University of Cincinnati, School of Architecture, and Interior Design. Assistant Professor, tenure track beginning September 1, 1984. Teach design for commodity, firmness and delight at introductory levels. Substantial theoretical, technical and historical component to the design instruction, and successful candidate may be asked to contribute to a series of lectures of introduction to Environmental Design given to combined class of freshman architects and interior designers. May also be asked to contribute to teaching design communication skills. Master's Degree in Architecture required; Ph.D. desirable. Professional design experience highly desirable. Send curriculum vitae and examples of design and scholarly work by March 26, 1984 to: John Meunier, Director, School of Architecture and Interior Design, College of Design, Architecture, Art, and Planning, University of Cincinnati, Cincinnati, Oh. 45221. University is an Equal Opportunity, Affirmative Action Employer.

Clemson University is searching for a Dean of the College of Architecture. The College is made up of the Departments of Architectural Studies, Building Science, History and Visual Studies, and Planning Studies. It offers baccalaureate degrees in Design and Building Science and graduate degrees in Architecture, Fine Arts, and City & Regional Planning. The total enrollment of the College is over 500 and the faculty numbers 50. Candidates with suitable professional, educational and administrative credentials are asked to respond with a resume and references to Ralph E. Knowland, Chairman, Dean Search Committee, College of Architecture, Clemson University, Clemson, South Carolina 29631 by March 1, 1984. Clemson University is an AA/EOE employer.

Dean of Architecture and Environmental Design-California Polytechnic State University, San Luis Obispo, California: The School contains accredited baccalaureate programs in Architecture, Architectural Engineering, City and Regional Planning, Construction, and Landscape Architecture, as well as Master's programs in Architecture and City and Regional Planning. The position is available July 1, 1984. Applications and nominations should be received by April 1, 1984, though recruiting will continue until the position is filled. Information and application instructions may be obtained from Dr. Tomlinson Fort, Jr., Provost, California Polytechnic State University, San Luis Obispo, CA 93407. Affirmative Action/ Equal Opportunity/Title IX Employer.

Director of Interior Design: Midwest Interior Design Firm with nationwide practice invites applications from persons with capability to lead/manage programming, space planning, interior design detailing. Responsibilities include planning, organizing and controlling of interior design functions and personnel, plus marketing. Qualifications include a college degree in architecture and/or interior design, a minimum of ten years experience and expertise in interior design for institutional, corporate and commercial clients. Qualified candidates are invited to forward their resume with salary history in complete confidence to: Box 1361-424, *Progressive Architecture*. An Equal Opportunity Employer.

Faculty Position In Architecture teaching computer applications in architecture, periodically offering Architectural Design studios. Possible involvement in Architectural technology courses. NAAB accredited degree with Masters in Architectural Design, technology or computer application required. Rank: Assistant Professor. Send application letter; resume; names of 3 references; and samples of work by February 28, 1984 to James Barnes, Chairman of Search Committee, Rhode Island School of Design, 2 College Street, Providence, RI 02903. RISD is an Equal Opportunity Employer.

Faculty Positions In Architecture—The Pennsylvania State University: Continuing positions available beginning August 25, 1984. Primary responsibility will be directing basic design and visual communication studios at the second year level and architecture design at the third year level with correlated seminars on architectural language and methodology. CAD studio application capabilities preferred. Terminal professional degree and registration desirable. Rank and salary open, based upon qualifications and teaching experience. Application deadline: March 1, 1984. Submit applications and resume to: Head, Department of Architecture (A), 206 Engineering Unit C, The Pennsylvania State University, University Park, PA 16802. An affirmative action equal opportunity employer.

Full-time and Part-time lectureships available for 1984–85 AY. Teaching areas: Upper Division Design, Practice and support areas of the curriculum. Rank and salary commensurate with qualifications and professional experience. B. Arch or appropriate professional degree required. Send request for application to: Chairman, Search and Screen Committee, Architecture Department, California Polytechnic State University, San Luis Obispo, CA 93407. Closing date: March 15, 1984. Affirmative Action/Equal Opportunity/Title IX/Rehabilitation Act of 1973 Employer.

Historic Preservation Planner: The Graduate School of Architecture and Planning, Columbia University in the City of New York, announces an anticipated full-time faculty vacancy in the Historic Preservation Division for Assistant or Associate Professor, depending on experience, to teach Historic Preservation Planning, beginning Fall 1984. Requirements: Advanced planning degree, Masters with experience in historic preservation, or Ph.D. with scholarly publications related to preservation; preference given to candidates with a degree in architecture, B. Arch. or M. Arch. Must be able to address both physical and policy issues of preservation planning. Will teach five courses during the year; introductory team teaching in theory of historic preservation; tutorial as masters thesis advisor; preservation planning studio; preservation planning lecture course; and a fifth course to be developed as the instructor' specialty. Some combination of academic and non-academic Historic Preservation Planning preferred; salary negotiable. Send curriculum vitae with brief description of at least two of the above courses to: Anthony Alofsin, Associate Chairman, Division of Historic Preservation, 400 Avery Hall, Columbia University, New York, New York 10027, by April 27, 1984. Columbia University is an Affirmative Action/Equal Opportunity Employer.

Interior Designer/Assistant Professor: Architectural Interior Design Background, terminal degree in field or degree with commensurate professional design experience. Teach drafting, space planning, lighting and general design procedures. \$19,000–\$23,000; tenure track; Aug. 20. Letter of application, three recommendations, slides. Deadline: February 27, or until filled. AA. E.O.E. Jack Hanna, Art Department, University of Houston, 4800 Calhoun Houston, Tx 77004.

Princeton University—School of Architecture is seeking candidates for the position of Assistant Professor of Architecture, for undergraduate and graduate programs, to teach design and a related area of study, such as computer-graphics, building technology, or history and theory. Applicants should send resumes before February 29 to: Faculty Search Committee, School of Architecture, Princeton University, Princeton, NJ 08544. Princeton University is an Equal Opportunity/Affirmative Action Employer.

Reps Wanted: Mfr. of precast concrete site furnishings seeks reps nationwide to call on architects, colleges, developers, landscape architects, park directors, tourist sites, etc. Please send info. on current lines, personnel, and territory to Architectural Precast, Inc., P.O. Box 23110, Columbus, Ohio 43223, 614-875-0963.

Tenure track positions at Assistant/Associate Professor rank available beginning September 1984. Rank and salary commensurate with qualifications and professional experience. Teaching areas: Upper and lower division design and practice, and Environmental Sciences Support Systems. B. Arch or appropriate professional degree required. Send request for application to: Chairman, Search and Screen Committee, Architecture Department, California Polytechnic State University, San Luis Obispo, CA 93407. Closing date: March 15, 1983. Affirmative Action/Equal Opportunity Title IX, Rehabilitation Act of 1973 employer.

The School of Art and Architecture at the University of Southwestern Louisiana is seeking a Head of the Department of Architecture. This is a 9-month, continuing position beginning August 1, 1984. Rank and salary negotiable; will depend on qualifications and experience. A terminal degree in Architecture (M. Arch. Minimum) and U.S. registration are required. Applicant must have administrative, professional, teaching and administrative experience as well as a genuine interest in cross disciplinary activities and the visual arts. Send letter of candidacy, resume, three letters of reference and a philosophical statement with regard to teaching and administration to: Rusty Bernard, Chairman, Q-S-N Committee, School of Art and Architecture, USL Box 43850, Lafayette, LA 70504. Deadline for receiving applications is February 15, 1984. The University is an Equal Opportunity, Affirmative Action, employer.

UNCC's architectural program, which is dedicated to addressing major architectural issues, seeks faculty committed to working together to provide innovative, holistic and rigorous architectural education. Desire persons to teach in first/second, third/fourth, and fifth year studios, and conduct a lecture or seminar courses in an area such as: fundamental visual design, architectural structures or ECS, site design, environmental behavioral design, interior design/planning, design theory or construction materials. Prefer persons with M. Arch. or equivalent including prior teaching and/or practice experience. Long term tenure track and one-two year visiting faculty positions are available, including position of Distinguished Visiting Professor. Salary and rank commensurate with qualifications. Forward letter describing teaching and design thoughts with vitae to: Dean Charles C. Hight, College of Architecture, UNC-Charlotte, Charlotte, N.C. 28223 Affirmative Action/Equal Opportunity Employer.

Deadline for receipt of applications is March 1, 1984.

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Design Architect, currently sole owner of small 8 yr. old firm with broad range of projects encompassing educational facilities, health facilities, commercial, residential. Wish to relocate my family in Southeast or Southwest. Desire to associate with firm seeking new energy in rendering/ delineation and strong conceptual design. Position should have opportunity to lead to equity position in firm. Please direct all replies to Box 1361-426, *Progressive Architecture.*

Services

RitaSue Siegel Agency⁽⁵⁰⁾, a recruiting service to find architects, interior, graphic and industrial designers, marketing and sales support people for consultants and businesses. Confidential. Nationwide, international. 60 W. 55 St., New York, NY 10019. 212/586-4750.

Hemsher Associates, an energy management, controls and instrumentation consulting firm. Seeking position as a member of the Architect's design team for commercial building projects where comfort, energy-efficiency and quality environmental control is a high priority. Includes computer-based Facilities Management Systems and smoke control. 3025 Washington Rd., McMurray, Pa. 15317, (412) 941-3080.

Notice

Please address all correspondence to box numbered advertisements as follows:

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Check or money order should accompany the advertisement and be mailed to Job Mart % Progressive Architecture, 600 Summer Street, P.O. Box 1361, Stamford, CT 06904.

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