

#### AGA KHAN SCHOOL OF NURSING, KARACHI, BY PAYETTE ASSOCIATES AND MOZHAN KHADEM

A SCHOOLHOUSE IN MANHATTAN BY CONKLIN & ROSSANT "IS MODERN ARCHITECTURE DEAD?" BY ADA LOUISE HUXTABLE EUROC HEADQUARTERS, MALMO, SWEDEN BY STEN SAMUELSON BUILDING TYPES STUDY: INDUSTRIAL BUILDINGS FULL CONTENTS ON PAGES 10 AND 11

## ARCHITECTURAL RECORD

OCTOBER 1981



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LETTERS TO THE EDITOR continued from page 4

I read the article "Caveat Architectus: Facade Inspection and the Design Professional" by Barry B LePatner in the July 1981 issue of ARCHITECTURA RECORD [page 57 et seq.]. Our office has spent many hours of time researching the various problems involved with the Chicago Municipal Code require ment for inspection of masonry buildings. In addition to the information contained in Mr. LePatner' article, there are several additional major stumbling blocks that make it difficult for architects and engineers to perform these inspections.

The first major problem involves union work rules, which forbid more than two persons to be present on a scaffold at any time. Additionally, the union requires that both men on the scaffold be union workmen. Therefore the architect or engineer would have to become a member of the union and would have to be one of the two mer on the scaffold. This additional requirement makes it virtually impossible for architects and engineers to perform this type of work directly.

Another problem that we have encountered is one of liability. If we proposed that the actual inspection work be done by a skilled masonry workman, who is a member of the union and can be present on the scaffold, we would then have to rely upon his experience and thoroughness in reporting his findings to the architect or engineer who would finally write the report. Our insurance carriers indicated that if this individual was not an employee of ours, they would not be responsible for liability created by his inspection work.

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heat gain in the summer. In the long run this can amount to the biggest savings of all.

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#### NEWS REPORTS

#### lardirosian suit is settled $\gamma$ the AIA and architects

e American Institute of Architects d an architect who was suspended om its ranks for an ethics violation ve reached a \$700,000 out-ofurt cash settlement and a promise at institute records of the suspenon would be expunged.

"I was totally vindicated," said am Mardirosian, the Washington, C. architect who was suspended the AIA National Judicial Commite and its Board of Directors for plating the "supplanting rule" of A's since-abandoned mandatory de of ethics. Under this rule an stitute member could not seek sign contracts held by another ember until the contract with the chitect was terminated and the secid architect formally notified the st.

Mardirosian, a partner in the stomac Group, filed suit in Federal burt, arguing that the supplanting le was a restraint of trade, violating e Sherman Antitrust Act. In June, 179, Judge John Sirica, of Watergate me, agreed with him. Rather than to trial to establish the amount of images, the AIA elected to seek the agotiated settlement.

Shortly after Judge Sirica's ruling,

and in part because of it, AIA abandoned its mandatory code of ethics, including the supplanting rule, and replaced it with the voluntary statement of ethical principles.

The AIA would not quote an exact cost to the AIA of the law suit. However, Mardirosian will be paid \$700,000 in three installments over a two-year period. The Institute's own legal costs have been about \$500,000, and, although it will not have to pay for Mardirosian's lawyers, the Institute has agreed to give \$60,000 toward the legal expenses of Seymour Auerbach, of Chevy Chase, Md., the architect who brought the charges against Mardirosian and who was also named in the suit. David Meeker, AIA's executive vice president says that the Institute's assessment and fees will be paid partly by insurance and partly by the Institute's reserve fund.

The case was complicated and subject to a variety of interpretations. But essentially: Under a 1968 Act of Congress, the Department of the Interior's Park Service was authorized to begin refurbishing the historic Union (train) Station in Washington as a national visitors center. Initially, congress gave the government the right to build the center, and to construct a new railroad passenger station and some parking facilities, in conjuction with a consortia of railroads that own the center.

Under a later Act of Congress, the Park Service was given direct responsibility for the project. By then, Auerbach had been selected as the designer and Mardirosian had been chosen as the Park Service's special consultant to oversee the work of the designer and the contractor.

Later, Auerbach's contract was terminated "for the convenience of the owner" and he was paid \$700,000. The contract was then awarded to Mardirosian's firm.

"I was never notified," said Auerbach, claiming that Mardirosian did not follow the steps prescribed in the AIA's code of ethics when he took over the job. Mardirosian was suspended on the basis of Auerbach's complaint to the AIA.

Mardirosian rejoined the AIA as soon as his suspension was revoked. All record of his suspension was removed from AIA files.

"When the Mardirosian case first came up, I vowed to fight to the bitter end," said R. Randall Vosbeck, AIA's president. But lately he has lost much of this conviction. Many of the ethical canons were little more than a business "crutch," says Vosbeck today. In a letter, he has assured AIA's 37,000 members, who are still divided over the issue of mandatory ethical codes, that the settlement was, "fair, the least costly route, and in the interest of AIA members." And David Meeker says, "We continue to advocate a rigid adherence to a strong ethical standard.

However, Auerbach and many others feel that this case is, in part, responsible for a weakening of AIA's ability to discipline its members.

Other professional design organizations feel that the impact of the settlement will reach beyond its architectural foundations. Milton Lunch, general counsel of the National Society of Professional Engineers called the settlement another blow against professional societies that try to maintain a meaningful professional ethical standard.

The Interprofessional Commission on Environmental Design, an organization of construction design societies, is considering its own attack, through Congress, on judicial restriction of their ethical codes. Meeker, himself, has been meeting for several years with an adhoc group of professional societies, including doctors, lawyers and accountants, on a strategy for mounting such a legislative campaign. — *William Hickman, World News, Washington* 

#### attery Park City ground lease terms are concluded and developers are chosen

he Battery Park City Authority conuded the terms of a ground lease r its six-million sq ft commercial ore area with Olympia and York this ugust. The Authority has also condionally designated six development ams for the residential section of e "Rector Park" area of Battery rk City, according to Richard A. uhan, chairman and chief executive ficer of the Authority.

The Battery Park City commeral core, designed by Cesar Pelli ithin the guidelines of Cooper Eckut Associates' Master Development an, will include four towers of grane and reflective glass, ranging from to 50 stories and framing a 3.5 irre public waterfront plaza on the udson. A glass-enclosed winter garen containing shops and restaurants ill open out to the plaza.

"This is an important day for tttery Park City," said Kahan on ugust 18. "With today's announceent on the development of the commercial core, and the designation today of developers for the second phase of residential construction, we have made substantial progress in moving Battery Park City from plan to reality."

Subject to negotiations, the 1,809 units built in this area will be a model for future residential development on the 92-acre site.

The residential site development teams were chosen from 27 firms that responded to the Authority's April request for proposals. They are:

• Center for Housing Partnerships.

• Goodstein Construction Corp; Milstein Properties, Inc.; and Dic-Under-Hill Construction Company.

- Housing Innovations, Inc.
- Jason D. Carter and Assoc.
- LRF Developers, Inc.
- Rockrose Development Corp.

The residential buildings will be located on four blocks surrounding Rector Park, one of the major open space areas planned for the Battery Park City development.

The guidelines for residential buildings, prepared by Cooper Eckstut Associates, require that developers avoid a "project" or "superblock" look, and that they instead reflect the variety of building types and groupings common to older New York City neighborhoods.

"We're investing in good design because we know it's good economics," Kahan said. "Better design means higher real estate values and a larger income flow to the public as well as the private sector. This should materially aid the Authority in meeting the requirements of its financial workout."

The master plan for the entire Battery Park City landfill site calls for 16,000 residential units, south and north of the commercial core. Thirty per cent of the land will be used for public open space.

Architects have not yet been

chosen for the residential site, according to Tucker Ashworth, of the New York State Urban Development Corp., and no completion date has been set yet. However, construction on the first of the commercial site's four parcels is expected to be finished by the end of 1984, and the entire commercial core is scheduled for completion by the end of 1987.

-Andrea Gabor



#### merican Academy in Rome nounces competitions

ne American Academy in Rome has nounced its annual competition hedule for architecture and landape architecture:

The Rome Prize Fellowship in the ts and humanities include several llowships in architecture and one in ndscape architecture. The prizes include a one-year residence at the Academy in Rome, a monthly stipend, a studio, room and board, and a travel and supplies allowance.

• The National Endowment for the Arts sponsors four six-month architecture fellowships and one, or more, six-month Mid-Career fellowships in architecture landscape architecture and design, with terms similar to those of the Rome Prize. • The Graham Foundation for Advanced Studies in Fine Arts is sponsoring a new six month Mid-Career fellowship, with terms similar to those of the Rome Prize. Deadlines for all the above mentioned fellowships is November 15, 1981. Contact: American Academy in Rome 41 E. 65th St., New York, NY 10021.

• The Steedman Fellowship in Architecture is offering a one-year residence at the Academy in Rome. Contact: Steedman Committee, School of Architecture, Washington Univ., St. Louis, Ml 63130.

• The National Institute for Architectural Education is offering a six-month traveling fellowship. Contact: The National Institute for Architectural Education, 139 E. 52nd St., New York, NY 10022. — A.G.

-more news on page 37

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#### udget wringer may squeeze ubsidized housing again

ubsidized housing is going to be put brough the Reagan budget wringer t least one more time. The "safety et" for the poorly housed isn't going b get much bigger than it is now, and h all likelihood the net is going to let hore poor people pass through withbut catching them.

This seems clear from the proosal of Housing Assistant Secretary hilip D. Winn who, in a department nemo that was leaked to the press, roposed to cut spending authority in ne 1983 budget for subsidized housng down to \$13.8 billion, compared to the 1982 figure of \$22 billion.

There are about three million nits now under Federal subsidy.

Àt that level it would take about 20-to-40 year period to add anothr 140,000 subsidized units to the rogram in 1983, compared to the 50,000 additional units provided for the 1982 budget fixed when Congress decided to add fewer subsidized units than the 175,000 units Reagan asked for in his budget at the beginning of the year. Originally, President Carter had asked for 260,000 additional units in his last lame duck budget last January.

Winn's memo indicates that budget-cutter David Stockman still is the biggest housing policy-maker in the Reagan cabinet. Winn even suggested that one option would be not to add any units in 1983. But his recommendations are subject to acceptance or modification by Housing Secretary Pierce before they go through Stockman's budget shredder. Winn wants to convert existing apartments to subsidized housing rather than construct new units.

Winn, other top HUD officials and President Reagan's housing commission keep seeking new, less expensive ways to deliver housing subsidies. Various voucher proposals are being considered, but insiders say that they tend to be too expensive, and therefore don't stand a chance.

Housing block grants to states and large cities are also under consideration, but, so far, HUD officials and housing commission members show no signs of reaching a concensus.

The government is attempting to cut back on effective demand for subsidies by re-defining those who are "truly needy". One change, already enacted, limits housing subsidies to families with incomes of no more than 50 per cent of the median income of their area.

According to Rep. Charles E. Schumer (D-N.Y.), the "ultimate impact will be to destroy the healthiest and most viable public housing projects" by ruling out most working families. But he points out that Pierce can "cushion the impact of the law" since it allows him to allocate ten per cent of the national total of vacancies to families earning more than 50 per cent of the median income in their area. —Donald Loomis, World News, Washington.

#### African and Asian desert architecture: exhibit on sand castles at Columbia University

The exhibit "Spectacular Vernacular: Traditional Desert Architecture from Vest Africa and Southwest Asia" reing shown at Columbia University his fall proves that the deserts of Africa and Asia may be dry, but they re not barren.

The exhibit's black and white nd color photographs were collectid and shot by Jean-Louis Bourgeois, n architectural historian, and Carllee Pelos, a photographer. "We vere stalking the desert for beauty," aid Bourgeois. "African art has a proud place in world art history. Now 's the turn of African architecture."

Buildings from Mauritania, Seneal, Mali and Niger, as well as Afghanstan, Pakistan and India are repreented in the exhibit. These buildings re made of sun-baked brick or simily desert-dryed sand that, according o Bourgeois and Pelos, can be fash-



ioned into pillars, facades and walls like those of the west African mosques.

"Our show illustrates the beauty cement is replacing," said Pelos, "Far more expensive than mud and far hotter, cement in the desert is cruel. Desert architecture needs to advance back to mud."

The exhibit at Avery Hall from Sept. 17 to Oct. 14, weekdays, 10-8, and Saturday afternoons, has been sponsored by the Columbia Graduate School of Architecture and planning as part of its Centennial. Admission is free. -A.G.

#### ingineers worry that Brooks Law architect/engineer selection process may be endangered

The American Consulting Engineers Council (ACEC) is worried that federal gencies will begin following a proturement directive that could undernine the Brooks Law Architect/Engiture selection process.

The Directive, known as Office of Management and Budget Circular A-76, tells the agencies they must compare the cost of acquiring goods and services from the private sector with the cost of using federal workers or the same purpose. To do this, ome agencies have started asking or price proposals from potential uppliers of goods and services.

This runs right up against the brooks Act, according to which agenties must rank A-E Design firms on he basis of competence, before discussing fees.

Larry N. Spiller, executive vice president of the ACEC, has a solution: when a regulation is in conflict with a law, follow the law. Then, of course, the Brooks Law would prevail.

The issue bubbled to a head recently when the Department of Energy advertised for price proposals to provide "Engineering support services." Spiller fired off an angry letter to the Department reminding it that the Brooks Law prohibits the solicitation of price bids.

But, according to the Department, this particular procurement was not covered by the Brooks Law because it was not for engineering or architectural services in connection with construction of a public facility. Nevertheless, ACEC firms are "deeply concerned that use of the term 'support services' (for professional technical services procurement) may prove a continuing vehicle whereby all DOE Architect-Engineering service will henceforth be obtained using price submissions by interest firms," according to Spiller.

Now ACEC president William R. Ratliff has entered the fray. In a letter to Donald E. Sowle, Administrator of the Office of Federal Procurement Policy he argues that Office of Management and Budget Circular A-76 should be modified to clearly state that fee quotations cannot be solicited for Brooks Law-type procurements. — William Hickman, World News, Washington

#### Seminars offered in Florida, New York and Wisconsin

A variety of seminars are being offered for architects and engineers in Wisconsin, Florida and New York, during October through December. • The seminar on "Design Loads for Structures" offered by the University of Wisconsin-Ext./Engineering on October 15-16 will address the sort of structural problems that make bridges blow in the breeze. Although the idea for the program was conceived before the Hyatt skywalks crumbled under the rhythm of hundreds of dancers, the Kansas City collapse should trigger greater than usual interest in one of the Department's seminars, according to Rolf Killingstad, Program Director. The Program will address such factors as floor, wind, snow and seismic loads; and how to recognize when extraneous conditions may make code minimum design loads inadequate. The fee is \$220.

The University of Wisconsin-Ext./Engineering will also offer a workshop, "Passive Solar Building Design and Construction," on November 10-13. The program is an introduction to passive solar design principles, microclimatology, design details, costs of building materials and retrofit possibilities. Calculation procedures for all phases of passive solar design, insulation systems and thermal storage and computer simulation techniques will also be covered. Donald Schramm is the Program Director. For information on either seminar contact: the University of Wisconsin-Ext./Engineering 432 N Lake St., Madison 53706; 608/262-3748 or 608/262-2061. Fee is \$520.

• A "Symposium on Thermal Insulation, Materials and Systems for Energy Conservation in the '80s" will be held in Clearwater Beach, Florida on December 8-11 at the Surfside Conference Resort. The symposium will discuss the testing of thermal insulation materials and systems, and will focus on economic and health considerations. The program is being sponsored by the American Society for Testing and Materials Committee C-16 on Thermal Insulation in cooperation with the Department of Energy and Oak Ridge National Laboratory.

The Downtown Research & Development Center, in conjunction with KBS Development Associates, Inc., veteran mixed-use developers, will offer a seminar, November 16-18 in New York City, on "How to Plan, Package and Develop Mixed-Use Centers Downtown." It will cover all stages from initial conception to construction and rent-up. This is the 22nd in a series of downtown revitalization seminars offered by the Center. For information contact: Mary Dalessandro, Coordinator, Downtown Research & Development Center, 270 Madison Ave., Suite 1505, New York, NY. 10016; 212/889-5666. -A.G.



From time immemorial to time immemorial black and white remain the classic colors. Sherle Wagner Sherle enjoys working with them because they make shape bear the full esthetic burden. And Mr. Wagner, Sherle ever the sculptor, responds to the challenge by shaping these new china basins into the classics of to the challenge by shaping these new china basins into the classics of to the imaginative ways you can accessorize them.

r ago, this riverfront plan t Cambridge, Mass. won 0 HUD award for urban n that will change its /l of warehouses and ıg lots. Now Skidmore, gs, and Merrill, winners design competition by r-Manley Developers, designed one of the first buildings, a 231,000 office building and museillery adjacent Lechmere The Canal Office Park, is it, two-and-four-level, l-use structure, with a cting four story atrium uspended exhibits. The ng features one level of and a restaurant, three of office space, and ground parking.

e think the project has potential because of its nity to downtown Boston," said David Geller, of Wilder-Manely. "It's similar to the Quincy Market and Boston Waterfront." Other construction or rehabilitation projects are an old unused courthouse that will be refurbished, an addition to the Sonesta Hotel. an office tower and the Park that links the new area to the county courthouse and shops that act as a buffer between

the older neighborhood and its new neighbors on the Charles. The building is scheduled to begin construction in spring of 1982, and to complete construction about

Combination office building and exhibition gallery for award-winning East Cambridge riverfront





#### I designs a new Hartford insurance tower

wo-faced 24-story Hart-Steamboiler Inspection nsurance Co. building in ord, Conn. was designed kidmore, Owings and I. From the freeway and River it appears as a d form divided by deing bays, and from the town side as a tower ding in a series of set-

backs. Large landscaped terraces lead to the building from a pedestrian bridge and garage. The lobby is also four levels connected by a stairway and landscaped terracing. The walls of One State St. are flame cut and Napoleonic Red granite, the windows of dualpaned, tinted glass. It is scheduled for completion in 1982.

#### Portland's mixed-use ClockTower to enliven downtown

The ClockTower in Portland, Ore. has adopted the "live, work and play in the center of the city" theme of Seattle's Heron's Market Place. The mixed-use, 29-story, highrise was designed by Stastny Graham Architects, David Wright of Bumgardner Architects and James Hamilton. The project,

by the Heron Development Company, contains 17 floors of office space, retail shops, a restaurant, eight floors of housing, and a 4,000 member athletic club. It also contains underground parking. Construction is scheduled to begin in early 1982 and to be completed by 1983.



## DESIGN AWARDS/COMPETITIONS

American Institute of Steel Construction 1981 Architectural Awards of Excellence. A broad range of building types i represented among the six winning designs in the twentieth AISC Architectural Awards program (illustrated below and on the following five pages). The impressive variety of formal means and structural ingenuity displayed in these buildings reaffirms the stated purpose of the Institute's citations: "To recognize and honor outstanding architectural designs in steel and to encourage further exploration of the many esthetic possibilities inherent in steel construction." This year's entries were judged by Jacques C Brownson, director of the Colorado State Buildings Division in Denver; Bruce J. Graham, FAIA, of Skidmore, Owings & Merrill in Chicago; Philip J. Meathe, FAIA, of Smith, Hinchman & Grylls Associates in Detroit; Walter P. Moore, Jr., Ph.D., P.E., of Walter P Moore and Associates in Houston; and R. Randall Vosbeck, FAIA, president of the AIA.



#### HARBORPLACE

Baltimore, Maryland Architects: Benjamin Thompson & Associates Structural Engineers: Gillum-Colaco General contractor: The Whiting Turner Contracting Company A year-round focus for Baltimore's downtown renewal area was the aim of architects Benjamin Thompson & Associates in their design for Harborplace, an \$18-million project developed by The Rouse Company (RE-CORD, October 1980). Over 200,000 square feet of restaurants, cafes, retail stores, stands, and kiosks create the lively atmosphere of an urban marketplace, while providing access to pleasure boats and a public waterside promenade. The two low pavilions that frame the L-shaped site were limited to 40 feet in height in order to protect views of the harbor

and an historic schooner permanently moored there. Although devoid of period detail, the pavilions were intended to recall old buildings that formerly stood on nearby wharves. Cast-in-place concrete columns inset from the transparent outer walls support lightweight steel-frame roofs. Porticoes announce major entries to the colonnades, balconies, and walkways that encourage circulation throughout every level of the complex. For maximum flexibility and natural ventilation, glass lean-tos projecting into the walkways open with overhead garage doors. Awnings,

balcony overhangs, heavy roof insu lation, and tinted glass minimize hea gain during the warmer months Roofline illumination and glowing dormer skylights signal nightly pro grams of commercial activity an entertainment. The AISC awards jur observed: "There is a very high leve of quality here, as opposed to the shopping center quality usually found in America. This excellence, in both management and architecture, ha done more than anything to revitalize the Baltimore Harbor. Its impact or people is tremendous: it attracts then and they are comfortable here,"



#### RMAN MILLER ATING ANUFACTURING ANT

nd, Michigan tects and engineers: *ill Rowlett Scott, Inc.* ral contractor: ns-Ames-Kimball Company

"This is an amazing structure for an industrial plant," one juror commented. A sense of well-being among employees was a top priority for architects Caudill Rowlett Scott in their plans for the first segment of a three-unit seating-component factory in Holland, Michigan. The nucleus is a skylighted, landscaped "people place." Shared by executives and factory workers as a common entry and social area, this atrium will also be available for community activities. Daylighting is used throughout the building to combine energy efficiency with a pleasant ambience. Angled strip windows at eye level offer views of the surrounding countryside. In order to finish construction within an 11-month schedule, "offthe-shelf" systems were used. A twoway open-web steel joist system spans the one-story, 40-foot grid. Insulated, pre-assembled wall panels are faced with stainless steel outside and high-gloss white enamel inside. "The acrylic clerestory both top and bottom definitely makes the project," the jury concluded. "The mechanical system is very well integrated, and the stainless-steel skin is just plain classy."

Balthazar Korab photos





HOUSE IN CHICAGO

Chicago, Illinois Architects: Krueck & Olsen Architects Structural engineers: Gullaksen & Getty General contractor: owner Architects Krueck & Olsen conceived this house on Chicago's Near North Side as a harmonious component of the urban grid. Yet, even though the rectilinear modules of plan and structure repeat the geometry of a standard city lot, their orientation and the materials with which they are clad furnish the light, openness, and accessibility more commonly associated with suburban living. Enclosing a central garden court, the U-shaped 5,000-square-foot house is organized into three pavilions: a two-story living area, the owner's sleeping quarters, and a service wing with guest accom-

modations and a sun terrace overhead. The building's delicate latticelike framework was realized with an all-steel structure. Shop-fabricated angle frames are bolted to steel beams spanning the second floor and roof, and bar joists bear floor and roof loads. "Superbly detailed," said the jury. "The steel erectors would like the way all of the bolts are in the same direction and all of the bolt heads are lined up on axis." A prefinished steel window system inset with insulating glass units of varied translucency is carried by the angle frames. Ribbed steel siding blocks the view

from adjacent buildings and ste grating serves as an entry screen. luminous variant on the structural gr is provided by glass block in a curve stairwell, the floor of a steel bridg over the living room, and a strip wi dow, all of which glow with artific illumination. The jury praised the el gance of the design no less than restraint: "One of the nicest thin about this house is that you're cor pletely unaware it is there on the street. It fits just right in the neighbo hood. The use of materials and colo is almost traditional. . . . It rea belongs in Chicago."



#### -Blessing

#### IGGS & RATTON STRIBUTION NTER AND ANUFACTURING CILITY

nonee Falls, Wisconsin ects: J.D. Ferris & Associates aral engineers: Gillum-Colaco al contractor: ager Construction Company

Sixty-four acres of sloping land along a highway in Menomonee Falls, Wisconsin is the site of this 744,000square-foot complex designed by J.D. Ferris & Associates of Chicago. The client specified 420,000 square feet for light manufacturing, with a clear height of 22 feet and a three-ton load capacity at panel points 10 feet on center; 300,000 square feet for a service-parts distribution center, with a clear height of 28 feet; and 24,000 square feet of column-free office space. The architects minimized earth work by mounting the manufacturing area on a concrete slab that steps

down six feet (following the slope of the site) to the warehouse, while maintaining a uniform roof line. Offices occupy a free-standing structure linked to the main building by a series of passageways and courtyards. The use of a 30- by 50-foot structural bay throughout the project met all requirements for loading and ceiling height, and permits flexibility in equipment placement and mobility for workmen and machines. For rapid construction, totally shop-prefabricated, prefinished steel curtain-wall panels with insulation and finished interior surfaces were employed.

Varied in height to fit the slope, the panels resemble a series of 10-footwide ladders, with "stringers" of Tsections and "rungs" of eight-inch channels five feet on center. Steel plates were welded in place within the five- by 10-foot module. Installation of panels as soon as the structural frame was complete enabled the client to move in six months ahead of schedule. "The beautiful articulation of the wall shows that quality detailing pays off," the jury commented. "This industrial building will be a good neighbor by esthetically adding to the community."

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## UNPLAIN GEOMETRY

The solution for the Augusta Richmond County Civic Center was Alcoa Alply panels.

Architect: I. M. Pei and Partners Wall Panel Distributor: Whelan Manufacturing Co. — Trenton, N.J.

The Stolle Corporation A Subsidiary of Aluminum Company of America

## ALCOA

#### Some positive thoughts amid economic gloom

ince taking office in January, the Reagan Administration has faced the twin economic roblems of pervasive inflation and a sinking economy. Although the Administration has onsistently advocated an ambitious four-part strategy for resolving these problems, it had nmediate access to only two of the four policy tools—deregulation and restrictive monetary iolicy—that it needed to implement its plans. Unfortunately, deregulation is slow-acting, whereas a tight money policy is such a blunt instrument that it must clobber the economy specially construction—before it can affect inflation. Now the situation is changing. Congress is given the Administration the two remaining, more positive, parts of its program—budget ontrol and tax cuts—to bring to bear on the economy's difficulties.

Of course, not everyone is convinced that ecent changes in economic policy are for the etter. Shortly after Congress passed the tax nd budget bills, but before they were fully nplemented, doubts about the effectiveness of this approach crystallized, particularly vithin the financial community. Investors' concerns stem from the likely (in their view) ontinuation of the aggressively restrictive nonetary policy which has smothered finanial markets for most of the past two years. In effect, this sustained policy has generated a ubstantial backlog of credit demand by forcng many businesses, state and local governnents, and potential home buyers either to porrow short-term at ever higher rates or to vive up borrowing altogether. Whenever ates appear to soften, these denied borrowers pour into the financial markets in search of longer-term, relatively cheaper credit. Consequently, the financial community is deeply troubled about the availability of sufficient funds to finance both this pent-up credit demand and any additional credit demands arising from an economic expansion.

During the summer, first the Congressional Budget Office and then the Administration confirmed Wall Street projections that the 1982 fiscal budget could run \$20 billion higher than initially forecasted, even with the recently legislated shearing. This news heightened the financial community's phobia that continued large Federal borrowings would combine with an extremely restrictive monetary policy to crowd private borrowers out of the markets, thereby intensifying the economic slump without providing any lasting improvements in inflation.

Clearly that is one possibility. On the other hand, passage of the tax and budget bills offers the Administration and the economy new, badly needed maneuverability. No longer must the Administration rely solely on an unrelenting monetary policy, with its



attendant adverse effects on economic growth, to curb inflation. Instead, judicious employment of the new policy tools could create room for a more flexible monetary policy—a very valuable option in the delicate operation to stimulate the economy without rekindling inflation.

For instance, having successfully challenged the sacrosanct belief that the nondefense portion of the Federal budget is uncontrollable, the President and his aides are currently (early September) reviewing *his* belief that defense expeditures must rise dramatically. A prompt Presidential announcement of a stretch-out in defense spending next year would go a long way toward alleviating investor worries about bigger Federal deficits. It would also help to soothe mounting fears about the ability of the militaryindustrial complex to increase 1982 defense production substantially without triggering another round of higher inflation.

Cumulatively, over the coming months, the recently enacted multi-year tax cuts have tremendous potential as an anti-inflation policy and producer of additional savings (both of which would considerably ease the burden on monetary policy) because they are stimuli to economic growth. Any initial reduction in tax flows to the Treasury (which would adversely affect the Federal deficit) could be more than offset through the benefits of larger flows of money into the hands of businesses and consumers.

Consumers have three choices for using the additional dollars, all good. They can spend them, save them, or repay debts with them (another form of savings). The two savings acts will place more funds in the financial markets for business, government, and consumer use, while the spending act will beef up the currently lagging demand for goods and services. Businesses will respond to the stronger demand through increases in production and sales, raising their cash flows. Now able to keep more after-tax dollars, they can use these internally generated funds either to restructure their balance sheets through repayment of expensive short-term debts or to finance new investments. Debt repayment will increase the available supply of funds for investment in the markets, whereas investment decisions will expand economic activity.

Frustratingly, since we have been struggling so long, even these new policies cannot lower inflation, or turn the economy around, overnight. The diverse sectors of the economy, particularly the financial markets, will need some time to acclimate themselves to these new policy initiatives. For residential and nonresidential construction, this means several more months of listlessness before the rumblings of a recovery are heard early next year.

Phillip E. Kidd Director of Economic Research McGraw-Hill Information Systems Company

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# OTimothy Hursley/B. Korab Ltd. photo

## SETTING A STANDARD FOR ARCHITECTURE IN ISLAM:

The Aga Khan School of Nursing in Karachi, designed by Payette Associates and Mozhan Khadem

 ${\sf H}$ is Highness the Aga Khan is probably the world's leading patron of architecture. In March 1978 he established the Aga Khan Award for Architecture to teach the Muslim world how architecture and planning can affect their way of life for better or worse, and to encourage Western architects to pay more attention to the culture of the Islamic people for whom they are presently building in great volume. To this end the Aga Khan has already held five seminars (March 1979, pages 117-124; August 1979, pages 87-92; August 1980, pages 86-89), awarded a half-million dollars in prizes (November 1980, pages 104-127) and established a joint program at Harvard and MIT to train architects to build in Muslim countries.

Not so many architects in the West know, however, that long before he brought his concern for Islamic architectural environment into such brilliant and generous focus, the Aga Khan had been an active builder of schools, medical facilities and housing in his role as head of the Ismaili Community, a small Muslim sect engaged in construction all over the Islamic world. Last February he opened the Aga Khan School of Nursing in Karachi, Pakistan (these pages), phase one of a \$100 million teaching hospital to be completed in 1984. Although the design of the entire hospital was begun in 1972, six years before the Award for Architecture was officially launched, the completed segment must, of course, embody many of those aims of the Award which are applicable to a huge secular complex constructed for humanitarian purposes. Consequently the School of Nursing can and will be judged by criteria the Aga Khan himself has done so much to formulate.

The design of this new medical facility is being done by Payette Associates, Inc., a Boston firm distinguished for its hospital work, and design consultant and specialist in Islamic architecture Mozhan Khadem-an Iranian architect who formerly had a practice in Teheran. Khadem, who has been working on the project from the beginning, has since moved to Boston and has only recently become a member of the Payette firm. Payette and Khadem were joined at the outset by landscape architect Garr Campbell, who first began work







The Aga Khan Hospital and Medical College in Karachi, Pakistan is scheduled to open by 1984. Undertaken by the Ismaili Community, a Muslim sect for whom the Aga Khan is spiritual leader, the teaching hospital will be the largest health project of the many they have built. The first major component of the complex to be constructed is the School of Nursing (photos above and

left) dedicated last February, and now housing and teaching approximately 110 young women. The school lies to the northeast of the complex (as indicated on the site plan). Focused upon ten landscaped courtyards, this inward orientation as well as the building's proportions, structural system, materials and details prefigure the architectural vocabulary of the entire \$100 million facility.

verandahs. Thus each nurse's unit is cross ventilated. Other spaces are enclosed by terra cotta grilles, known locally as *jali* screens. on the hospital while a member of Sasaki Associates. Campbell continues on the team as a member of the staff of the Aga Khan.

#### THE AGA KHAN SCHOOL OF NURSING

fit for the hard life in the rural villages where they are needed. This argument, however, assumes that the primary motivation of the typical nurse is to acquire and enjoy material comfort, a reductivist theory which does little justice to the humanitarian aims of the nursing profession.

Payette, Khadem, and Campbell have paid unprecedented attention to the development of ornamental themes within the interiors and gardens, because these aspects of the design are among the particular interests of the Aga Khan and his brother Prince Amyn. The style, materials and execution of the ornamentation for the nurses' building and courtyards is the first manifestation of the decorative system the designers have established for the complex as a whole. It does connote luxury-more by the intense effort that has been lavished upon design and craftsmanship than by the conspicuous consumption of expensive materials. The ways in which marble, tiles, and teak as well as their decorative motifs have been selected and used, however, belong to Muslim court craft traditions, not the vernacular craft of the villages.

This seems appropriate. The complex when complete will be the largest and most consequential single building project undertaken in the Karachi region since Pakistan became a country. It will be an eminent cultural manifestation like a great university. Thus there is good reason for its ornament to emulate the grand, rather than the village, tradition. The application of craft, whatever the social provenance of the materials and designs chosen, revalidates ancient building traditions. Hand skills are labor intensive, an important criterion in the developing world. Their use by architects honors, trains, and gives work to masons, carpenters and artisans of all sorts. Indeed, the medical complex is perceived by the Aga Khan and Payette as providing not only an education in medicine but in the neglected building trades.

If the ornament in the Nursing School can be said to partake of court traditions, it is contrastingly true that the building forms themselves derive from the regional vernacular. They are horizontal, oriented inward toward courtyards, and have flat terra cotta roofs shaded and cooled



The structural frame of the School of Nursing is of reinforced concrete with concrete slab floors. Because the climate of Karachi is hot and dry except during June and July when humidity becomes extreme, walls are of double masonry block with insulation between the layers to reduce the absorption of heat. Because this method of construction is familiar to the local Pakistani craftsmen, it will be used not only for the School of Nursing but throughout the entire project. The textured cement plaster finish used upon all exterior wall surfaces—except those which are accented with marble—is known as "weeping" plaster. For this building the color pigment has been mixed with the plaster, not (as is more usual in Pakistan) painted on the surface. The mix is dribbled onto the wall surface by an ancient handcraft method not unlike decorating a cake. The tiny vertical shadows produced by this method reduce glare and the light color, matching the surrounding desert, lessens heat absorption. The terra cotta roof tiles are within the same range of warm tones.

Landscape architect Garr Campbell devised the planting schemes for all the courtyards. The drawing below is based on one of his sketches.





#### THE AGA KHAN SCHOOL OF NURSING

by wind scoops, ancient thermal devices still to be seen in the local villages. The wings of the nurses' unit have been constructed economically (concrete frame with cement block infill) and surfaced with "weeping plaster," a dribbled striated finish characteristically used on humble surfaces and never until now on a major Pakistani building. "By chance we stood next to a garden wall," recalls Payette. "We liked its texture and found the local craftsmen who knew how to do it-so we worked it out with them." Thus the design team has demonstrated, by selective use of ornament and appropriate adaptation of vernacular forms and finishes, that the traditional regional language of Islamic buildings can be suitable for contemporary use.

Since the Aga Khan Award for Architecture jury cited many of its award-winning buildings for demonstrating this very quality, it is more than a happy circumstance that the Aga Khan's first megastructure should possess it too-but with a difference. Most of the award-winning buildings which draw from tradition are small structures closer in scale to the older prototypes from which their forms and ornament were derived. The Hospital and Medical College, when complete, will be comparable in size to other major projects under long-term development in the Muslim world. Few of these structures appear to make any but the most superficial use of traditional language. By building what may be the first that does, the Aga Khan once more sets a standard.

-Mildred F. Schmertz THE AGA KHAN SCHOOL OF NURS-ING, Karachi, Pakistan. Owner: The Aga Khan Hospital and Medical College Foundation. Architects: Payette Associates, Inc.-principal-in-charge: Thomas Payette; design team: Peter Haney, John Ruffing, Dan Meus, Jonathan Warburg, Gary Graham; project manager: Dennis Kaiser. Design consultant: Mozhan Khadem. Local consulting architect: Bhamani Associates Ltd. Consultants: Garr Campbell/Sasaki Associates and Aiglemont Secretariat (landscape); Farouk Noormohamed (site); Simpson Gumpertz & Heger, Inc. (structural); Mushtaq & Bilal (local engineering); Lehr Associates (mechanical/electrical); Anwar Saadat & Co. (local mechanical); Zaheeruddin & Partners (local electrical). General contractor and construction manager: Turner International Industries, Inc.





passageways marble has bee used for wall and column sur faces close enough to touc (photo above) and to accen special places such as entr ways and foyers. Since marbl is very durable, easily cleaned readily available in Karach and prized as a decorativ material, it will be use throughout the hospital com plex, in traditional Muslim pat terns, for paving, courtyards pools and wherever else a enrichment of detail is de sired.

Muslims have traditional used calligraphy as architectur al ornament. The inscriptions often beautifully designed, ar quotations derived mostl from their religious poetry The galvanized steel gate (lef has two messages in inter twined Kufic script. Along the top the Muslim will read: "Go is great, there is no god bu God." At the bottom it says "Enter therein in peace and peace will be upon you."

th nursing student has her 'n private room and sink. e room functions as a prie study as well as a bedom. Although, as has been ted, each of these rooms is ented to the prevailing eezes and cross ventilated, ovision has been made for e eventual installation of air nditioning units. Each bedom opens upon an outside en gallery soon to be coverby a trellis of bougainvillea ich will provide shade and vacy for students on their iy to the toilet and shower cilities at the junction of each ng. The cabinet work and ings of these student rooms e of the highest standard.





Thomas Payette and Mozhan Khadem are working closely with the Aga Khan and his brother Prince Amyn Aga Khan in the development of appropriate Muslim ornament for the entire hospital facility. The sketch (left) by Payette Associates renderer Jim Gabriel is one of an elegant series he has made to help refine and present various Islamic decorative treatments to these most exacting of clients. The first distinguished results of this effort can be seen in the photographs below of a lounge in the School of Nursing, ornamented in teak and tile.

As Mozhan Khadem describes it, the use of decorative motifs will follow Muslim artistic traditions. For example, throughout many of the corridor elevations and medical school waiting areas, a horizontal band of colored tiles will delineate the wall or entrance, wind around a corner, and continue to thread its way through the complex. According to Khadem, the interior wall treatments will be part of a continuous exercise of surface treatment, which also includes courtyard landscaping in an integral way. While such wall treatments will seldom depict a story, they are imbued with symbolic cultural and theological meaning, as are the wall surfaces of most major Islamic monuments.



## A NEW-FASHIONED SCHOOLHOUSE

The strategem that gives the baffling facade of the Ramaz School its arresting presence uses the artist's tricks of perspective to indicate three dimensions on a flat surface. Seen in that way, arched windows become bay windows, and slanted windows become a painter's garret. The "garret" does in fact face north, and the windows do in fact light the school's art studio. Thus William Conklin weaves fancy and function in one master stroke.

The flat face of the school carries "postmodernism" well beyond the experimental hesitancy that often characterizes the early stages of a sweeping esthetic change. Describing his design approach at Ramaz, Conklin writes, "As architecture moves away from modernism and the ideological identification of form with function, the role of architectural form as a conveyor of meaning begins to emerge."

The design indeed encompasses all the concepts so dear to contemporary architectural theorists—imagery, context, symbolism, historical reference—and does so commar ingly, if in unexpected ways. At the sar time, Conklin has not simply discarded t worthwhile theories of modernism, such functional expression. "The facade serves both the frontispiece and the 'key' to t building," he says. "It can be analyzed several equally valid ways, revealing t many layers of imagery and meaning."

Built in a side street on Manhattan's E Side, the school has as neighbors brownsto townhouses and larger apartment building Its height was restricted to seven stor (there are two full floors below grade), a the facade is divided into five well-defini bays proportioned to suggest the houses th used to occupy the site.

The new building accommodates son 500 students in grades 8 through 12 (kinde garten through grade 7 are taught els where). The Orthodox Jewish day schor established 109 years ago, offers its coeduc tional student body a dual curriculum th includes conventional Western disciplines



©Wolfgang Hoyt/ESTO Photographics



#### THE RAMAZ SCHOOL

well as Hebraic and Talmudic studies.

In plan, the floors are pinned by a vertical axis with stairs and two-story student lounges. Large windows above the entrance mark this axis on the front facade, the compositional element becoming a metaphorical school tower. Still pursuing this metaphor, Conklin sees at the top, interrupting the parapet, "lyrical aluminum waves [that] suggest the ringing bell of the mirage school."

Beyond secular images like art studios and school bells, however, Conklin wanted to convey the religious nature of the school. The arches at the pinnacle of the tower can also be read as the Tablets of the Law, or as the domes of Jerusalem. And important spaces like the Beth Midrash (religious study) are distinguished by "bay windows."

The most important of the school's reli-

gious spaces is, of course, the chapel. Here Conklin has allowed himself an almost painterly approach to symbolism. The chapel's blue-glazed "bow window," isolated at one end of the second floor below a pulvinated "course," hovers above the city's skyline as depicted by glass blocks set in the granite base. The chapel also sits on a high podium approached by "steps" from the sidewalk. (The ghost of the old townhouse stoop? In any case, "it is no surprise to discover that there are twelve steps.")

The building also contains conventional educational facilities-classrooms, laboratories, a library. Seniors, who carry especially demanding courses in Hebrew history, law and languages, have classrooms of their own on the fourth floor, one of them sporting an honorific "bay window." Ordinary class-





LOWER FLOOR I

ИЕСН.

DINING

STREET FLOOR



LOWER FLOOR 2



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THIRD FLOOR

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ЩМП

BETH MIDRASH

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SIXTH FLOOR

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The shaped windows that punctuate Ramaz School's street facade individualize interior spaces. Above, from left to right: the art studio (an artist's garret in perspective on the exterior), the *Beth Midrash* (a bay window), and a student lounge (a school tower, or Tablets of the Law). In the chapel (below), the Tabernacle is framed by an arched blue window. The *mehitzah*, grilles behind which women sit at Orthodox services, are pocket screens that drop into the faces of the pews when not needed.





rooms and faculty offices have tall, narrow operable windows.

The school, which insists on extensive physical education and which supports a busy program of extramural games, required a gymnasium with a full basketball court. The building also accommodates a separate auditorium and a dining room, which is served by separate meat and dairy kitchens.

Indoors, corridors and student lounges are color-keyed in subtle, carefully calculated combinations of medium-intensity pastels two cool (bluish and greenish, say) with one warm (pinkish, perhaps), or, it might be, two warm and one cool. Classrooms, which all have windows, have simple white walls. The auditorium takes a quieter atmosphere with the same pewter-colored aluminum used on the building's exterior: flat metal panels cut to resemble drawn theater curtains frame real curtains of aluminum beads. Seats are upholstered with dove-gray wool.

One finishing touch remains to be completed: landscaping on the third-floor terrace for student lounging. The architect now has in design a demountable wood *sukkah*, an arbor that supports hanging fruits and vegetables for the harvest festival. —*Grace Anderson* 

THE RABBI JOSEPH H. LOOKSTEIN UPPER SCHOOL OF RAMAZ, the Morris B. and Ida Newman Educational Center, New York City. Architect: Conklin & Rossant, Architects—William J Conklin, partner-incharge. Engineers: Severud-Perrone-Szegezdy-Strum (structural); Cosentini Associates (mechanical/electrical). Consultants: Romano-Gatland Associates (food service); Cerami Associates (acoustics). Construction manager: Morse/Diesel Inc.



The main stairway at the Ram School occupies stacked two-sto atriums in a vertical axis running fro the school's entrance lobby (le through two student lounges. Next tiered plates with donors' names (o posite), an arched mirror visua expands the volume of the lobby an the overhanging gallery. Major circ lation spaces use a palette of mis pastels, such as the yellow stairca with its apricot lining. The aluminu bead curtains that cover the wall the auditorium (below) can be drav to unveil a small tabernacle at spec services (above).







## VARIATIONS ON ATHEME

Diners at Levana's Bakery on West 67th Street in Manhattan would be surprised to hear that they are sitting in a restaurant with New York City as its stated theme—there's not so much as a passing reference to the Empire State Building or the Statue of Liberty. Though architect Rodolfo Imas intended to capture and recall the spirit of Manhattan in Levana's, he rendered the motif abstract rather than literal, oblique rather than direct opting for ambiance over caricature.

Four years after leaving Buenos Aires to establish a practice in New York, Imas makes his U.S. architectural debut with Levana's. The commission was provided by his accountant, who, along with two brothers, owned a kosher carry-out bakery: when the twin space adjacent to the bakery became available, the brothers decided to expand their operation and include table service.

Despite the addition of a restaurant, the clients wanted to maintain their carry-out business; staggered shifts for each operation suggested a clear separation of the two. Imas pushed the tables to the rear, creating a single-access cruciform enclosure (axonometric overleaf); dropped the ceiling to create a more intimate scale and add definition; and inserted an oak floor to further articulate the dining area. The sales area was placed along the transparent street facade to ensure maximum visibility of the baked goods, and for minimal intrusion upon the restaurant: the black rubber flooring is a response to the heavier flow of customer traffic. In addition to providing a display window, the formidable grid facade (infilled with wire glass) can be re-adjusted to transform Levana's from an enclosed interior bakery/restaurant to an open-air cafe: two massive doors swing open and a pair of steps pull down for seating (photo middle right). Even when closed the facade is engaging: visual syncopation is provided by three red columns and a transverse beam that frame the heavy grid. While Imas credits the facade for providing an appropriate "architectonic and urban presence," it also-owing to the strength of the steelfunctions as a night security gate.

The theme of grid-as-urban-symbol is reiterated and carried to the interior by means of a cage-like structure that serves as counter and display case for the bakery (photo far right); above the sales area, a series of cubes ascend and graduate toward the ceilNorman McGrath photos



Depending on the season and/or the hour, Levana's presents either a cold grid facade to 67th Street or a highly variegated, highly punctured, and more inviting face. ing—according to Imas, "to integrate t urban environment into the space." Thou the idea is abstract, the contrast between t cold steel grid—in all of its permutations and warm wood benches, pastel pink/pea walls, and dramatic lighting is striking.

Imas felt that his scheme for the expa sion should take its design cues from the c and the raw space. As a newcomer to Ma hattan, the Argentinian architect was in pressed with what he refers to as the "Ne York urban folklore." Though seasoned Ne Yorkers may consider brownstone stoor Central Park benches, and subway grating t everyday facts of urban life, Imas identifi each of these elements as specific referer given expression in his design: they are colle tively, the motif by which Levana's achiev its New York City-theme-restaurant statu And though the source list is arbitrary, a the architectural execution highly person the resultant design does, if only figurative convey the urbane character of Manhatta while acknowledging the structural fact two distinct spaces now combined to ma one. Imas draws parallels between the ma sive grid facade and a subway gratin between the wooden benches and Central Park seating, and between the steps pulli out from the facade and a brownstone stoo considerably less arcane is the brash red lin signaling structure, both present (colum and beams) and past (where the former w once stood dividing the bakery from neighboring retail shop). And to remind dine that "the structure belongs to the building not to the restaurant," Imas outlined th transverse beams with narrow strips of m ror-creating the illusion of a section c through the building.

Although most customers will not fir meaning in all the abstract and symbolic ge tures Imas employed to provide Levana with its urbane character, it is, according the owners, a rare customer who doesr notice and applaud the design. The owne add—not incidentally—that, since the bak ry's re-opening, business is better than eve and the restaurant is flourishing. -C.K.G.

LEVANA'S, New York, New York. Owners: Avrai Maurice, and Sol Kirschenbaum. Architect: Rodol Imas—Amalka Cobdra, Ricardo Prieto (productic assistants). Contractors: Azzo Constructions (ge eral); Artistic Metal Work (storefront).



#### LEVANA'S BAKERY

By choosing a cruciform plan for the restaurant—reinforced by the track lighting, and by the intersection of transverse and longitudinal beams— Imas effectively isolated the table-service area from the bakery: the seating plan also provides every table with a corner. The benches and tables are transparent, making the diminutive space seem larger. Take-out service is facilitated by being placed between the two oversized doors—customers can enter and exit unobtrusively.













A brilliant red line cuts through the center of the kosher restaurant to signal an erstwhile wall that once divided Levana's from an adjacent retail shop: the gesture is repeated along the longitudinal beam to signal structure. A massive fountain was attached to the center column (photo top) to recognize and permit the Orthodox Jewish ritual of washing hands prior to eating.  ${\sf M}$ odern architecture has been declared dead and the wake has been held in the better art journals. News of its death has finally filtered down to that part of the popular press that is always on the alert for cultural trends to exploit. The word that modernism is out and post-modernism is in is being spread systematically and redundantly on the lecture and exhibition circuit. The schools of architecture, coming out of the chaos of the '60s and the drift of the '70s-belatedly responsive, as usual, to the call for revolution-are beginning to turn out post-modernists instead of modernists, which means that a new set of mannerisms is being substituted for an old set of clichés. Those of us who are inveterate observers of the half-truths and false premises that fuel the fashionable intellectual world are watching with mixed feelings.

I do not mean to sound cynical, because I am very much concerned with the directions now being taken. Something legitimate is going on; in the customary and inexorable way that architecture makes worlds that we

# MODERN ARCHITECTURE DEAD?

by Ada Louise Huxtable

cannot escape, post-modernism is beginning to set the stage—slowly, and in special structures—which is always how new styles begin. I find some of these directions just as intriguing as those who see the break with the conventions of modernism as the sign of a new age; I only differ with their somewhat overwrought assessment of what makes a revolution.

Other attitudes I find disheartening and even dangerous. Because, as usual, the rush to join an international coterie of tastemakers who appear to be onto something special obscures reason and judgment. The need to embrace, rather than to analyze, the fear of being branded reactionary if one does not accept the new unquestioningly, the inability or unwillingness to separate that which has genuine architectural merit from that which is merely novel or momentarily seductive, are all characteristic of our times. These are times that feed on sensation and opportunism rather alarmingly. But I suspect that we are also witnessing the classic attitudes of any period in which the proponents of change have seen themselves as apocalyptic messengers with

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the mandate to convert.

m VV hat is already clear, however, is that the m Vis a moment of some importance and mo than routine interest in architectural histor with the doctrines of modernism being se ously questioned, and new approaches ar answers being sought. In fact, the change that are taking place in theory and philosoph are far more important than much of th architectural work, and the publicity, that signaling them. And the signals are beir given in what seems like record amounts obscure and pretentious language. Whe embracing the new means rejecting the oldand when doesn't it? - a lot of mistakes judgment are bound to be made. The mo ernists are suffering from those mistake now; it is just that kind of messianic shor sightedness and self-absorption that ha made them vulnerable to attack. The pos modernists are heading for a different set of troubles.

It can be far more revealing and helpf to take a longer view, if possible, of th architectural turmoil today; to see what deat and failure are metaphors for; to try to unde stand the unique contributions of building this century rather than to condemn them ou of hand. Taste, of course, is a pendulum, an every artist is an explorer who wants to be c the leading edge of the new. Among those who follow there is a distinct disinclination t stand outside fashion and miss the action. Th historian of architecture has a sense of havin seen it all before. If it is much too early t write the history of this century, it is st worth seeking a perspective beyond th grasp of a single, and understandably sel serving, generation.

I believe that the art of architecture is uneasy but significant transition. The hig period of modernism is over; the Age of th Masters-Frank Lloyd Wright; Mies van de Rohe, Le Corbusier-is finished. We ar clearly—or I should say, unclearly—movin on toward something else; in fact, we hav been doing so for some time. But whateve comes next will be the product or inheritor of modernism, not the radical break that th new work is advertised to be. It will have a its heart the 20th-century revolution that w call modern architecture. Anything that for lows now would be impossible without those unprecedented technological and esthet innovations. No renunciation will get rid of this fact of art and history. No catalog of misuses and abuses will change it. Moder architecture is too much a part of us and or world, for reasons at once simple and prefound, to be finished by fiat. It takes a ve small vision or a very large ego to think th modern architecture can be banished as a act of will, or tossed on the historical rubbis heap. It is just not possible to repeal the sty of our time.

However, the issue is not really death; is failure. What we are being told is the modern architecture *failed*—in philosoph and practice. The inadequacies and imperfetions of modernist doctrine suddenly loop
ery large. I don't mean just for the bad uildings that litter the landscape—bad buildgs are always with us. But there is a kind of onsensus that modern architecture was ome grand, failed illusion, with the arguients ranging from the ideological to the inctional. We are given the irresistible incher that most never liked it anyway.

I cannot help wondering whether the ophisticated designs of Borromini appealed s much to the man in the street as to popes and princes. Or just what the popular asponse to some of the brilliantly perverse omplexities of the Laurentian Library might ave been in Michelangelo's time. Bernini elieved that his buildings had a divine inspition, and I doubt if he was concerned about the message's trickling down. High art has emained consistently and stubbornly indeendent of the reactions and values of most eople.

I suspect that the high art of the 20th entury will be equally resistant to opinion olls. The curious thing today is the increasing ostility toward modern architecture by the itellectual and esthetic elite. But that, I think, a function of fashion and changing generaons, and the need of the avant-garde to nove on.

There are compelling reasons to look at odern architecture with a fresh eye—to see hat worked, what didn't, and why. From ne point of view of history, modernism as a novement has already grown old; it can be neasured across two centuries. It has prouced an enormous body of work, good and ad. And it is beginning to be possible to valuate aims against results. That kind of isdom comes only with hindsight. We have better understanding of the context of hich it was a part in books like Carl E. chorske's *Fin-de-Siècle Vienna,* Peter Gay's rt and Act, John Willett's Art and Politics in he Weimar Republic. The re-evaluation is ell begun; important questions are being sked; revisionism has become a scholarly octoral industry. The challenge is to rewrite he history of the recent past with underanding and detachment. It is not easy to ass judgment on the dreams and achieveents of an age. This is an exhilarating and angerous moment for facts and balance.

as modern architecture really failed? Or re we loading onto it our perceptions of nother kind of failure—something far beond the architect's control? I believe that ve are addressing a much larger theme: the ilure of a moral vision and the breakdown f ideals of a society in transition. What we ave lost is what sociologists and psycholoists call our "belief systems"—those comnonly held convictions that guide our acts nd aspirations. No society can function withut them. Those articles of faith have been ehind everything from architecture to social olicy in our time. They were based on an verriding idealism and optimism; they were nable to survive the cataclysmic changes of ne century. The pendulum has swung to isillusion and despair.

These systems of belief were surely extraordinary. From the end of World War I to the 1960s, we believed devoutly in social justice, in the perfectibility of man and his world, in the good life for all. The Bauhaus taught that the machine would put beauty and utility within the reach of everyone. Le Corbusier's "machine to live in" and "radiant cities" would reform human habitation. We believed that the world could be housed and fed; that we could bring order to our cities; that misery and hunger are not eternal verities. We joined hands and sang "We shall overcome."

We also believed that everyone had a right to beauty, and that esthetic values equaled moral values. What was useful was beautiful and good, and what was good was good for all of us. We had only to look around to see examples. Le Corbusier singled out factories and grain elevators as admirable esthetic artifacts, because their form and function were intimately related, and their purpose was clear and undisguised.

The arts, used properly, could bring both pleasure and practical benefits to society. Architects sincerely believed that health and happiness were the natural corollaries of the right way of building; they even believed that human nature could be conditioned or changed by the right physical environment. This was the century that equated art, technology, and virtue, and concluded that the better life, and the better world, were finally within our grasp. Walter Gropius's "teamwork" and Mies's modular simplicity were meant to alleviate the inequities and inadequacies of the man-made environment. The architect was to be central to these esthetic and social solutions-inextricably linked-of age-old problems, and the gratification of new expectations.

In retrospect, the hopes and beliefs of this century have been both admirable and naïve, but they have also been humanitarian to an extraordinary degree. Perhaps we in the advanced Western countries have come as close to genuine civilization as we ever will, if we define civilization as the unselfish preoccupation with the betterment of the human condition at the highest level of shared experience and universal concern. The 18th-century Age of Reason was followed by the 19th-century Age of Scientific Inquiry, which exploded, in the 20th century, into the Age of Perfectibility through science and art. It was, of course, an impossible dream.

The changes that were heralded as liberating forces turned out to be vast and shattering, with shock waves beyond anyone's comprehension. Those changes eventually restructured—or unstructured—society. They radically altered the sense of time and the rhythms of life, and uprooted personal, family, community, and global relationships. Communications, mobility, and industrialization created a new economy and new styles of life. This "progress" had a high price there were racial and social dislocations of universal dimensions. To the transformation of environment and expectations was added the unsettling knowledge of the complexities of human behavior; vast explosions of scale did nothing to help disoriented inner lives. Tradition was destroyed, and the destruction was celebrated.

In the end, everything that was meant to illuminate or improve the human condition struck heavy blows at basic beliefs and values. The "center" was increasingly dissolved in violence. Today, the sustaining standards and restraints of centuries are gone. We live in a time of failed human relationships and unprecedented dangers, from nuclear warfare to random death. The 20th century has given us too much, too soon, too fast; it has delivered toys and triumphs and devastation. We are all victims.

René Dubos, in a recent interview, had to defend his confidence in the existence of some ultimate, Olympian plan of nature; in fact, he apologized for using the word faith. What he was actually apologizing for was *having* faith. He calls himself the despairing optimist. For the rest of us, pragmatism and cynicism are more common defenses.

Clearly it was the age, not architecture, that was coming apart during the last halfcentury. How innocent, how vain, of architects to take the blame for such cosmic catastrophes! What touching tunnel vision its spokesmen have demonstrated! Modern architecture was just one aspect of this century's flawed dream and vision of reality. Things were promised that could not be delivered. The architect produced no brave new world; he could heal neither the ills of cities nor the ills of mankind. Architecture—and architects—are now taking a terrible beating for trying.

But in the process, modern architecture literally changed the world. There is a great deal more to this remarkable story than where it fell sadly short of its own aspirations. This century's extraordinary creative energies, its genius for the new, infused all of the arts. My premise, stated before, is that modern architecture is one of this age's undeniable achievements, paralleled only by a few periods of comparable creativity. Its structure and style have already taken their place in the history of art.

Modern architecture united revolutionary theory and technological development for an unprecedented, far-reaching, and unsurpassed creative and cultural synthesis. It offered the most cohesive, innovative, expressive, and universal art form since the Renaissance. And it created masterworks to stand with any of the past, from the greatest of Wright's prairie houses and his masterpiece, Falling Water, at Bear Run, Pennsylvania, to Le Corbusier's chapel at Ronchamp. The skyscraper is a marvel of structure and design that has survived even the greed of speculators and bad city plans. But the 20th century encompasses a much greater, and more subtle and various, work than has been commonly understood. And modern architecture did something never done before: it addressed itself to the humanitarian and "Modern architecture is too much a part of us and our world . . . to be finished by fiat. It takes a very small vision or a very large ego to think that modern architecture can be banished as an act of will, or tossed on the historical rubbish heap. It is just not possible to repeal the style of our time." social concerns made urgent by the industrial revolution and the 19th-century city.

hese are the facts that no one is mentioning now. Crying failure makes a much more dramatic scenario than a balanced analysis. It was the script that served Robert Hughes so stunningly in the television series and book on modern art called The Shock of the New. But he recognized where art and building met in the 20th century; Tom Wolfe reduced it all to the level of cocktail chatter in his two Harper's send-ups. Le Corbusier's Villa Savoye, a landmark of the modern movement, Mr. Hughes told us, ended up "cracked, stained, crumbling and otherwise ruined after a few years' exposure to the elements." That ignores a long history of abandonment and abuse before and after the Second World War. What the indictment often seems to come down to, in the English critic Martin Pawley's words, is that poor maintenance equals worthless architecture. This was apparently the architect's fault for not inventing an indestructible, glistening new material to build with. This condemnation is as logical, Mr. Pawley says, as dismissing classical sculpture because the Venus de Milo had no arms

No one claims that modern architecture has been nothing but smashing successes. No one denies the tragic shortfall of intentions, or the Olympian wrong-headedness of some of its most popular practitioners and ideas. Neglect and restoration are a part of all cultural cycles.

I have never been an apologist for the modern movement. My job, as a critic, has been to question a lot of the modernists' favorite received ideas and most cherished clichés. I have watched with a great deal of uneasiness as revolutionary doctrine turned into dogma. I have often marveled at the blindness and the credulity of the faithful.

But as a nonarchitect, I was able to be a nonbeliever. I embraced history and preservation when the past was taboo. As a historian, I was an unreconstructed partisan of periods and buildings consigned to oblivion. I never accepted the visionary, sanitized planning of modernism's neat division of life into segregated zones of activity. I have always detested the open-plan house as an assault on both privacy and sanity. I have never revered the high-rise blockbuster as an esthetic icon; it may be impressive on the drawing board but it sterilizes the street. I praised variety, accident, and incident long before Robert Venturi, and I will always be grateful for his short and influential volume of 1966 called Complexity and Contradiction in Architecture. Many viewed his book as an attack on modern architecture; I thought it was much more important as a civilized lesson in how to see.

I have been fighting some of these battles for a long time, when it was very unfashionable to do so. But I have never believed, at any time, that calling the bad shots out loud denigrated or destroyed the validity of the art of our time. Now everyone has discovered

history and the environment. And architec have even discovered doors.

 ${f B}$ ut it was the architect who was the last t realize the high price paid for two of his basi beliefs: the renunciation of the past and th high hopes for the future. The rejection c history led to the unthinking destruction a the historic urban heritage and the symbol and landmarks that anchor us to meaning an place; it dehumanized the environment and denied the continuity of culture. Out of the hopes for the future came the ambitious bu badly aborted attempt to solve one of the world's most intractable problems-housing And out of civilization's most enduring collec tive illusion came the promise of Utopia. No one has develivered Utopia yet; it remains . fable for this-or any-time.

Another fable for our time is the archi tect as form-giver and master of our physica destiny. Fountainhead-style, he swings his <sup>-</sup> square from the mountaintop, offering pas sionate declarations of beauty and technolo gy to clients rushing to immolate themselve on the fire of his genius for the salvation o the world. Somehow computer drafting and rising interest rates just don't fit the image.

It is true that the architect determines the forms that serve contemporary uses-bu only up to a certain point. Those forms-Mies's pure glass and metal geometry; Le Corbusier's brute poetry in concrete-are snatched out of his hands or off the drawing board by other interests. They are co-opted corrupted, and exploited. On the way from revolutionary concept to "bottom-line" real ty, much gets lost in the translation; only Pari couture gets knocked off as consistently a architecture. The modern world is a distorte fun-house mirror of the architect's intentions The idealistic, abrasive, and visionary manifes toes of the early 20th century are curiou precursors of the bland, conformist structure that set the modern city's style. To blam modern architecture for these perversions dilutions, and falsifications is too easy a distor tion of the truth.

Again, with hindsight, it is not hard t find some basic things that went wrong. For one, the architect simply did not understan how the economic power structure of th 20th century worked. I do not refer to h frequent penchant for exceeding the budge in the interest of art. The key to his diser gagement from society was his failure t come to terms with consumer capitalisn Kenneth Frampton has pointed out that th architectural leaders of the early part of th century hitched their star, and their hopes, t the traditional idea of enlightened, paternali tic patronage. They designed villas and mai sions for the rich, and if the patrons wer industrialists, they sometimes got a factory t do. They built the prototypes that remained as singular monuments-the elite cultural of educational institution, the occasional publ building, the demonstration project. The radical innovations eventually became established lishment platitudes and, ultimately, popula clichés.

I he intention of revolutionaries, however, is to rebuild and restructure society. But the leaders of the modern movement never participated more than peripherally in 20thcentury construction; only occasional government sponsorhip gave them large commissions. This limited clientele and production were not what anyone had in mind.

The trouble was that they were selling the wrong product. Revolutionary architecture promised the perfect solution and the ultimate design, made possible by unprecedented new materials and techniques. It was a product geared to the optimistic ideals of the time. The objective was the ultimate house as a machine to live in, the building that would meet the 20th century so well on its own terms that it could not be improved on—possessing a standardized, mass-produced, eternal utility and beauty, removed from transient fashions.

But perfection was not what was wanted; the system was not geared to the definitive answer. This approach was wholly unsuited to the realities of 20th-century production and marketing-to an economy that relied on moving goods and changing tastes. What had dawned with the century was not "l'esprit nouveau," or the new spirit, but the age of industralized production that required planned or artificial obsolescence. Next year's model was always announced as a newer and better and more stylish and satisfying product. This shifting consumer esthetic took over taste and technology. Advertising superseded design. The modern architect, insisting on the one right and best way to design, was out of step and out of touch with his times. His ideas were translated by industry and promotion into novelties to be used as sales and styling gimmicks. Not surprisingly, he was disappointed and often embittered. Fighting resistance to the true word, fighting against what he considered to be ignorance and obstructionism, he saw himself as a reformer and a radical. He fought his battles, however, on esthetic, not on political, grounds.

But in the beginning, in Europe, the modern movement was very much a political movement. The esthetic of modernism was tied to radical political reform. However, the political element was of little relevance over here, and of less interest to the new art's promoters. And those social and political aspects of architectural design were soon to prove incapable of realization.

Again, with hindsight, we can see that these concerns of the modern movement were casualties of the Museum of Modern Art's celebrated exhibition and book of 1932, *The International Style*, by Henry-Russell Hitchcock and Philip Johnson, which introduced the new work to this country. There was a section on housing in the exhibition, but it was secondary to the insistence on form. This was probably one of the most influential events in the history of criticism and connoisseurship. The sociology and politics that infused the European revolutionary ideology were removed for the American public; the tastemakers considered them

unimportant and nonessential. Rereading *The International Style* is a sobering experience. It turned the movement into a set of esthetic exercises, or a manual of style. This "purified" architectural version of the revolution was perfectly tailored for that special moment in American art and culture when the avant-garde and the establishment met and joined forces, united in their delight with the cachet of the new.

It is particularly ironic that the architect was removed from social action as much by the intellectual leaders who adopted him as by the businessmen who ignored or exploited him. Architects who had been reaching for freedom were given a stylistic straitjacket and a limited role. The exploration of technology, the release from the canons of classicism, the revision of ideas about man and his world, were henceforth to be channeled into a system of designed esthetic choices, or nonchoices, or rules. The revolution was reduced to iconography; form became formula. The Academy was dead; the new Academy was born.

In a sense, the spirit of revolution was aborted by its champions. The big breakthrough of the early manifestos, from Italian Futurism to the profoundly influential *Vers une Architecture*, was the rejection of the traditional idea and restraints of custom and style, a rejection that opened the door to new concepts and techniques. Much was untried and experimental; certainly a great deal would not survive. But the challenge, and the possibilities, were enormous. Inevitably, of course, another style was evolving through this exploratory process.

There were some curious side effects to the systematized rigidity that took over. No one, for example, knew what to do with nonconforming talent. The work of the great Finnish architect Alvar Aalto was selectively and ruthlessly edited in exhibitions and publications to show just those aspects of his work that made him fit the picture. Only now, with the rules finally relaxed, is Aalto's very personal, elegant, and humane style beginning to be fully understood. Who knows what else might have happened without prior intellectual restraints? But the mischief was done.

And the mischief continues. It is this kind of manipulation of meaning and purpose that makes it possible to declare that modern architecture is dead, and to announce that post-modernism has taken its place. If one accepts the signs for the substance, one can put on and take off styles like fashion. Removing art from the context of history, it is a simple matter to say that modern architecture didn't matter, or had it all wrong—and anyway, the look is out. Architecture viewed primarily as a visual and intellectual experience becomes a game of skilled and artful surface effects.

And so esthetic hedonism is an acceptable substitute today for those earnest belief systems that have gone down the drain. Young architects do not understand why the revolution was necessary, or what was

Bernini believed that his uildings had a divine spiration, and I doubt if he as concerned about the lessage's trickling down. igh art has remained onsistently and stubbornly dependent of the reactions id values of most people." "Has modern architecture really failed? Or are we loading onto it our perceptions of another kind of failure—something far beyond the architects' control? I believe that we are addressing a much larger theme: the failure of a moral vision and the breakdown of ideals of a society in transition." gained in creativity, discipline, and understanding that it would be tragic to lose again. The anger and frustration that set the modernists against a dictatorial art bureaucracy and stultifying academic convention have long since faded; nostalgia has replaced outrage, and the excesses that inspired revolt are being re-embraced as benign. The conviction that beauty and utility were to be found in new materials and techniques, and that form and function could be united for a singular esthetic truth, has simply been dumped. The results are often appalling. What is really being revived, alas, is not the past so much as its familiar errors, not history so much as its mistakes. What is being jettisoned is critical to great buildings.

The reason that a man like Philip Johnson can be followed like a pied piper of architecture is that he has always been a front-line runner in the pursuit of the new, and this is a generation for which that is more important than anything else. He has a guicksilver intelligence and the ability to recognize instantly genuine talent and creativity. His own judgments of the work of others are often flawless. He is also quickly bored. What his young, and not-so-young, followers like is the shock value, as well as the hedonism, of his insistence that art is all, and his assurances that the earnest social and structural concerns of the modernists were expendable nonsense-that anything goes.

This exclusive emphasis on esthetics gives a certain consistency to his dramatic rejection of the modern movement, which he once believed in so strongly, and his easy jump into post-modernism, which turns those beliefs on their head. But his position has great appeal to architects no longer interested in saving the world because they know that it can't be saved, and that they are not the ones to save it. What they are doing, however, is trivializing architecture, reducing it to something less than its traditional role as the one art capable of uniting the real and the ideal as an expression of body and spirit, society and symbolism. The results are small, narcissistic exercises that range from the exquisite to the empty, lacking passion or conviction.

I here is more pettiness and pedantry than passion in architecture today. There is no longer the catalyst of a common enemy to fight. There are only endless and tiresome semantic arguments and the factional infighting about style. There are no heroes, and no architectural giants, because there are no causes. The causes that once united and inspired the profession have been abandoned. The sad truth is that no revolution is ever won.

Perhaps it is success that kills. Modernism was an exhilarating and seductive campaign for a long time. But it is hard to remember when anyone had to battle for a modern building. And when the struggle ceases, the victory loses meaning. Revolution leads to counter-revolution and the attack is turned against the victors. Success, as much as pow-

er, corrupts.

According to Nicholas Perry, in a revi in the *Times Literary Supplement* of Char Jencks's latest primer on post-modernis style today is conceived of as something I a trademark. "Competitive idiosyncrasy," tells us, "is the chief impression received fro the promotors of the post-modernist faith The result is often a calculated pastiche fill with private references and in-jokes. That not enough.

I do not mean to suggest that there is such thing as style, or that it is unimporta Style is the essence of art. It is the cultu index to a particular society and time. M said that style is the spirit or expression of age. Now that eclecticism is respectable ag and Dial-an-Age design is in vogue, it is far ionable to put down that definition. But M was essentially right. Le Corbusier titled 1923 manifesto *Vers une Architecture* simply, "Toward an Architecture"—n "Toward a New Architecture," or "Toward *New Architectural Style.*"

Architecture is a great deal more th style. A building is the sum of many thin over which the designer has little contr Contrary to popular belief, those dislocatio of scale and relationiship that are so much part of the contemporary scene are rarely t architect's invention. I find it necessary point out continually that a building is shap as much by law, codes, economics, clie programs, investment patterns, social need and speculative competition as by any esthe ic act. Corporate size and power, the chan from cheap to expensive energy, all tho engineering developments that serve mode large-scale enterprise and investment well-like the technology of artificial mate-play as much of a part as program structure, and image. The architect does n see himself as victimized by these factors; prefers to view them as patronage ar opportunities. But most of the time he arranging the deck chairs on the Titanic.

he creative act in architecture is basica an act of survival against tremendous odd To give these conflicting and complex cocerns form, or style, is not only a challenge of epic proportions; it is the ultimate objectiv of the art of architecture. When this transfomation occurs, in palazzo or skyscraper, fro Strozzi to Seagram, it is more than a superior building; it is one of civilization's most notab achievements.

But the dilemma the architect faces that he either designs for his art or for the reworld—and there is actually no choice if he to build at all. The act of design is in confil with everything that is part of the process of bringing the design into being. Sometimes the result is richer for its complexity, and sometimes it serves both art and society well. B architecture has been called a curious under taking in which the incompatibility of the irreconcilable is raised, occasionally, to the level of art. The result is never pure art; it always a compromise.

These are the realities that also face the

'The creative act in rchitecture is basically an act of survival against remendous odds. To give hese conflicting and complex concerns form, or style, is not only a challenge of epic proportions it is the ultimate objective of the art of architecture. When this ransformation occurs, in palazzo or skyscraper, from Strozzi to Seagram, it is more han a superior building, it is one of civilization's most notable achievements."

critic, and that is why I am so impatient with the semiotics, typologies, symbols, and metaphors that dominate so many symposiums and so much of the writing about the changing face of architecture today. I think that many of the questions being asked about architecture are the right ones, and much of the enthusiastic rediscovery of the uses of history, ornament, context, and tradition are of enormous value. Serious and provocative studies, like Kenneth Frampton's Modern Architecture, A Critical History (Oxford University Press, 1980) are appearing. Definitive documentation of modernist work is being undertaken. Le Corbusier's Sketchbooks, 1914-1948 is the first volume of four being issued by the Architectural History Foundation and the MIT Press this year. An enormous publication, due from the Garland Publishing Company next year, will reproduce all of the drawing archives of the Fondation Le Corbusier in Paris. The current wave of revisionism will write a much more accurate and revealing history of the recent past if it is not used to distort the record.

We need this period of profligate rediscovery and revision, just as we needed the modernist revolution. And every generation must discover its own truths and heroes. But I am distressed when I see the new attitudes being turned into a new set of doctrinal prejudices. We do not need to exchange one set of biases for another. There are important and promising changes taking place now in the perception and practice of building that must be properly evaluated in terms of context and continuity.

I have a feeling that when the scores are finally in and architects have stopped beating their father-figures and smashing icons, the art of architecture will have emerged into a new and very vital period. But I see it as a much broadened phase of modernism-not as the undoing of modernism. I do not like the phrase post-modernism because it implies that something has been finished and replaced. I do not see this as counter-revolution, but as part of a linked, continuous development, or the natural if somewhat stormy evolution of modernism into something of much greater range and richness. This can already be found in the work of practitioners like James Stirling, whose buildings in England, Germany, and the United States display a highly original and sometimes unsettling combination of technological and classical imagery, in which both vocabulary and scale serve complex cultural references. It can be seen in the work of Norman Foster, who continues to refine and redefine the machine esthetic. The designs of Richard Meier are an intricate investigation of the elements of the International Style for a very intricate geometry of transparency and spatial illusion-a process begun in his houses and continued through the Atheneum in New Harmony, Indiana, and the new building for the Hartford Seminary in Connecticut. The Austrian architect Hans Hollein can borrow from the Brighton Pavillion, and the Japanese architect Arata Isozaki finds sources in Pierre Chareau, but both build solidly on a modernist foundation. All of them are now receiving international commissions.

I do not mean to fall into the trap of proclaiming a new world, or a new art, or of offering versions of the latest great new truth. Like Mies, I do not think you can invent a new architecture, or a new truth, or a new world, every Monday morning. They rarely live up to the advance billing. Our world is as imperfect as we found it, and neither art nor ideology has changed it. Utopia eludes us. Groucho Marx often seems more to the point than Karl.

What I hope is that today's architects will discover some *old* truths. Like the nature of art, for example—something the modernists understood very well—far better than the world of the future. Today architecture is treated as an exercise in language and ideas; but art is an act, not an explanation, an experience of space, light, form, and function shared directly by artist and viewer.

Like all great performances, a great work of art makes complexity look simple; it is executed with style, skill, and grace. Any genuine work of art is created through tremendous discipline, not put together out of a grab bag of random references and trendy trim. Great art eliminates everything superfluous and nonessential to deliver a strong, clear message in the language of its time. It intensifies all of our responses. It is not an uncomplicated message, however, and its many levels of meaning add both subtlety and power.

In architecture, that subtlety and power come primarily from the relationships of structure to space, and the image, or style, this produces. Beauty is the experience of that image in its most basic, concentrated, and moving form. It is no accident that Euclid looked on beauty bare.

In the pursuit of a misconceived freedom, this essential structural determinant of style is being downgraded today in favor of superficial effects and questionable polemics. The art of architecture is being dangerously weakened and betrayed by some of its most vocal practitioners.

After architects have tired of their new toys and nostalgic games and run out of self-indulgences, they may go back to the real and difficult business of creating art again. They are setting a much more difficult task for themselves now; removing modernist restrictions opens all of art and history once more. The challenge, and the possibilities, are awesome. But they must rediscover the truth that all great architecture engages the heart and mind and senses through those forms and sequences achieved by direct structural and spatial expression, not through hidden meanings or decorative flourishes. Facing that truth was one of the most radical and courageous acts of modernism. When we have learned that lesson and the Miesian giants no longer threaten us, we may even discover that less is really more.

Ada Louise Huxtable



EXUBERANT CONCRETE VAULTS AND QUIET LANDSCAPED COURTS ARE CONTRASTING FEATURES OF EUROC'S NEW HEADQUARTERS





n southern Sweden, just outside the coastal city of Malmö, architect Sten Samuelson has given particularly sensuous and expressive form to a new headquarters for the Euroc Group, a Swedish conglomerate that manufactures through subsidiary companies a variety of products, many of them for the building industry. In its formal properties—its arcades, columns and barrel vaults-the design is loosely based on recollections of a Romanesque monastery that Euroc's chief executive Sten Lindh had visited at Arles in the south of France. Like the monastery, Euroc's is a closed plan that anticipates no significant expansion since it houses only executives from the parent corporation. Within its cloistered forms and inward looking atriums, a hundred or so of Euroc's top executives are offered unusually relaxed work and recreation spaces.

The entrance elements at Euroc do just exactly what good entrance elements should do. The bridge and sculptured canopy not only provide controlled, protected access, they also hold out the promise of interesting spaces within, and hint at the humanistic design values that













shape those spaces. The four landscaped atriums, the plan's principal organizing elements, break down the structure's scale, provide contained views, and reiterate the theme, felt throughout, of nature gentled by the hand of man.

The new headquarters also serves as a showcase for products manufactured by Euroc's subsidiaries. One such product is structural concrete. "One reason for using the arch as a major design motif," says Samuelson, "was the opportunity it offered to display the versatility and attractiveness of concrete as a building material. I think we have demonstrated that concrete can be a flexible and exciting medium, that a concrete arch can capture much of the effect that was achieved with natural stone in older structures." Other products are also exhibited, none more effectively than gypsum board in its interior application as a ceiling finish where it has been molded to conform to the underside of the barrel vaults (see photos on the following two pages). In addition to office space, the program also calls for a large boardroom, a lecture hall/theater, a canteen, a special visitors' dining room, and a recreation section that includes two sauna-

H F 5 51 4 1. Service Kitchen 2 3. Guest dining 4. Dining 5. Auditorium 6. Coats 7. Euroc hall 8. Lobby 9. Meeting 10. Exercise 11. Pool 12. Sauna

vaulted ceilings throughthe Euroc complex are cred using either suspended od strips, as over the pool, gypsum board in the office ces. In the latter applicato, gypsum board has been ped by wetting and moldto conform to the undere of the structural vault, n suspended using a combiion of conventional and ronventional hardware.











vedish custom diminishes stinctions between executive vels in the workspace. The fices at Euroc do not therere betray any particular hierchy, and the level of amenity high throughout. The provion of pool, saunas, and other creational facilities—togethwith separate smoking oms, are also typical of vedish tradition.









baths, a gymnasium, and a large, solar-heated swimming pool (see photos this page). Most of these spaces have vaulted ceilings and all are tastefully and functionally arranged.

Located at about the same latitude as Copenhagen, Glasgow or Labrador, Malmö is by no means a city of half-year nights, but in response to the short'days of winter, Samuelson has paid special attention to artificial lighting in his design. This concern is evident both inside and out, but nowhere is it developed more dramatically than at the entrance, where the large concrete canopy is treated almost as a lighting fixture in itself.

Samuelson's design spreads itself out comfortably on a site that is verdant and flat except for the presence close by of the large limestone quarry that was the company's first holding. But if there is tranquility in the design, there is also strength and delicacy of detail. And if there are occasional moments of flamboyance, there is also a commitment to quality—and it is keenly felt throughout.

EUROC HOUSE, Malmo, Sweden. Architect: Sten Samuelson. Engineers: Jacobson & Widmark (structural), ElectroSandberg (electrical); VVS-Teknik (mechanical). Landscape consultant: Per Friberg. General Contractor: Armerad Betong Vagforbattringar. Photographers: Jan Olsson and Jan-Erik Andersson



# INDUSTRIAL BUILDINGS

"It seems to me that there are many situations in life in which the organization is too brutal: It is the task of the architect to give life a gentler structure." - Alvar Aalto.

It is architect Laurence Booth of Booth/Hansen & Associates who cites Aalto's words as the text that guided the firm in shaping the wholly gentle structure with which this inquiry into the making of industrial buildings begins. But a like spirit informs the collection as a whole. Modest in size, in cost, and in architectural intent, the buildings are firstly and rightly efficient containers for the diverse manufacturing, warehousing, and processing operations they house. Each, however, employs the familiar idiom of the genre—function rendered without gloss or embellishment—with a light (even lighthearted) touch. And if the resulting statements are both simple and brief, they are telling as well: architectural *bon mots* that gentle the too-often brutal language of utility by speaking to their users and their surroundings with a high degree of civility—and not a little wit. *—Margaret F. Gaskie* 





3



### A workplace that celebrates the worker

As playfully precise as origami and as cheerful as a sunbeam, the embracing yellow wall fronting this laboratory equipment assembly facility aptly prefigures both the quality of the space within and the principles underlying the master plan whose first phase it completes.

The client charged architects Booth/Hansen & Associates with two tasks. The first was to augment and interconnect existing assembly, warehouse, and office space, which was contained in two unexceptionable but bland structures: one completed, one under construction, both outgrown. The second and concurrent task was to establish coherent guidelines for future expansion.

In both cases, the program derived not only from functional requirements but from a management philosophy that places a high premium on institutional adaptiveness—and on employee participation in the process.

Thus a key organizing principle was to integrate usually discrete functions in such a way that people and processes housed in the facility freely interact. (The prominent expression of the single entrance for all employees and visitors is not merely symbolic.) A further principle was open-endedness to allow for growth of the building envelope as well as for change within. And finally, the facility was to be human in scale, foster a sense of identity as well as community, and, says architect Laurence Booth, "express a certain joy."

Functionally the scheme recognizes two kinds of space (see conceptual plan below): high-ceilinged spaces with 40-foot column bays (the module of the existing elements) for manufacturing and storage areas, and twolevel spaces with 20-foot column bays for offices, laboratories, and recreation areas. Circulation is similarly differentiated into a meandering "path" for pedestrian traffic and a "road" for materials handling.

The heart of the concept, however, resides in the components introduced with the addition of the infill building shown here: welcoming "front doors" to readily identifiable reception areas, break areas that provide employees space for relaxing during the work day, and the commons by which the architects have answered the client's request for "celebration space."

HEADQUARTERS BUILDING, HEALTH/SCIENCE DI-VISION, HERMAN MILLER INC., Grandville, Mich. Architects: Booth/Hansen & Associates — partner in charge of design, Laurence Booth; associates in charge, William E. James, William Ketcham. Engineers: The Engineers Collaborative (structural); B.J. Kempker & Associates (mechanical/electrical). General contractor: Wolverine Building Products.





HERMAN MILLER HEALTH/SCIENCE DIVISION







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HERMAN MILLER HEALTH/SCIENCE DIVISION





Both for economy and because the architects and client felt the esther to be appropriate, the building erploys a no-nonsense industrial voca ulary with structural steel framin corrugated metal decking, and m chanical elements exposed throug out. In contrast, however, to the fr quent practice of color-accentia such elements, they are here set tened with white to provide a cal monochrome base for the muted prette of interior fittings.

Particular attention was given the fenestration, which is designed maximize natural light and ventilation and afford employees frequent view to the outside while minimizing soling accounts for the seemingly arbitran vagaries of the pleated facad whose vertical windows are angle to wash walls with soft diffused light but bar direct sun, an effect heighter ed by north-facing skylights.

The architects describe the cla ding as "the perfect skin"—a san wich of porcelain-enameled ste panels, insulation, and interior dryw that is durable, requires minimal ma tenance, and provides an highly efcient thermal barrier. Because t wall is nonloadbearing, the faca can undulate freely in a lively play solids and voids that is reinforced the vivid but gentle color of the faing panels, which modulate frowhite at the base to bands of lig and medium yellow.





### A photo lab as backdrop for its product

To the visitor traveling for the first time its freeway network, Detroit's outskirts seem preeminently a place of objects viewed at a distance and at speed. Which may explain the propensity of architect Kenneth Neumann, a transplanted Chicagoan, for designing buildings with multiple "fronts."

This specialized photo processing plant has three: one facing the adjacent freeway, one fronting the minor entry road, and one abutting the parking lot from which the building is finally entered. Each elevation is treated in accord with the perspective of the viewer. But each also reinforces the design motif that lifts this otherwise utilitarian, low-budget plant well above the daily: the prominent display of the client's photographic wares.

Programmatically, the central problem was to order a bewildering variety of spaces with highly specialized technical, functional, and in many cases mechanical requirements in such a way as to retain flexibility and anticipate future growth. The organizational solution is essentially circular (see plan), with a corridor loop linking related but internally independent processing areas.

Because required administrative spaces were small relative to the total area, the obvious big-box, little-box massing scheme was rejected in favor of a single-height envelope with a flat-roofed steel frame and exterior bearing walls of gray-beige concrete block. However, as these same areas, with the employee lunchroom, are among the few demanding (or permitting) windows, both were placed along the two road-facing elevations. The "excess" wall height above the vision glass encases over-size backlit transparencies that on the highway side (above) become an eye-catching elaboration on the company logo. On the road side (right) this parade of images entices the approaching visitor past the doubly curved facade to the entry niched behind its angled terminus.

This play of vivid image against neutral backdrop is carried through to the interior, where the stark white walls of corridors, offices, and conference spaces are lavishly hung with photos. The theme finds fullest expression in the customer lobby (below right), where photomurals are mounted on a ceiling-hung grid to form a dramatic canopy of rich pattern and color.

METEOR PHOTO COMPANY, Troy, Michigan. Architects: Rossen/Neumann Associates—Kenneth Neumann, project designer; William Beitz, project architect. Engineers: Theodore Letsche (structural); Professional Consultants Inc. (mechanical/electrical). Construction manager: True Management.











and spaced to read from eye level as an undulant surface of light and pattern. Each unit incorporates a horizontal element that houses downlights for general space illumination and a vertical frame that supports continuous fluorescents to light the adjacent mural. © Richard Hodge, B. Korab Ltd.





### A factory enlivened by line and color

In a nimble variation on the Detroit motif of automobile architecture, Kenneth Neumann has treated this large (90,000 square feet) but otherwise unremarkable factory and office complex as a huge highway billboard.

The firm was originally commissioned to study the feasibility of remodeling a 50-yearold facility in which previous expansions had added masonry bearing walls that limited operational flexibility and could be eliminated only at excessive cost. A further drawback was a site distant from any freeway, which rendered the building, by local standards, all but invisible.

Remodeling proving impractical, the owner elected instead to construct a new facility in an industrial park hard by a major freeway, instructing the architects to emphasize the highway exposure as an opportunity for establishing a distinct corporate image. He also requested, as well as maximum flexibility at minimum cost, development of the half of the property that lies in a 100-year flood zone as an employee recreation area.

The company produces from very light foam materials a diverse line of finished goods—from curlers to novelty toys—whose manufacture imposed no unusual demands beyond the need for large open areas that could be readily modified to meet changing production needs.

Both the functional and cost criteria could therefore be met by employing a preengineered structure that was left basically in its off-the-shelf state save for such fine tuning as disguising the awkward shallow roof slope with a parapet wall and carrying the insulated metal siding over to the adjoining small custom office unit (photos below right).

As the resulting complex was esthetically distinguished mainly by its unrelieved bulk, Neumann chose to articulate the buildings not as volumes, but as a series of right-angled planes in contrasting colors: tangerine on walls perpendicular to the freeway, bronze on the intersecting walls. The effect is kaleidoscopic, the solid orange billboard seen by an approaching motorist shifting gradually to solid bronze as the vehicle draws even with the building. In combination with bold signage, the bold color has been notably successful as a corporate image booster—a public relations campaign executed in paint.

FOAMADE INDUSTRIES, Pontiac Township, Michigan. Architects: Rossen/Neumann Associates— Kenneth Neumann, project designer; Lee Mamola, project architect. Landscape architect: James C. Scott & Associates. Interiors: Maxine Snider. General contractor: The Garrison Company.





Timothy Hursley, B. Korab Ltd.

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### An understated solar system for a warehouse

Architect Larry Yaw describes this office and warehouse complex for a leading manufacturer of skiwear as "plain vanilla." But it is plain vanilla generously sauced with amenities derived in large part from the relaxed and surehanded application of solar and thermal design features.

Concerned by high construction and energy costs, the owner asked for a simple, efficient building, and received with enthusiasm the architects' suggestions for energy-conserving measures, including solar heating.

The largest building in a light industrial area on the outskirts of Aspen, the complex is deliberately understated in design and conventionally massed with a low office element, deeply overhung on the west, stepping up and back to the greater bulk of the warehouse. The wood-framed office wing is clad with exposed aggregate panels on surfaces vulnerable to weather and with redwood siding on more protected surfaces. For the warehouse, a standard precast concrete structural system was combined with a masonry envelope to create thermal mass.

The entire complex is depressed some three feet below grade in a deft ploy that at once stabilizes interior temperatures, lowers the building's profile relative to structures nearby, and provides shelter for a series of landscaped sunken courts and a solar-heated lap pool along the south facade.

The architects' unselfconsciously ingenious approach to energy efficiency is best exemplified, however, by the warehouse solar heating system, which supplies more than 40 percent of annual heating demand. Rejecting active systems for reasons of cost and conventional passive systems for reasons of reach (the warehouse is 120 feet deep), the firm developed with its consultants a hybrid—the mechanically assisted trombe wall detailed overleaf.

Simple, efficient, easy and inexpensive to build and maintain, and readily integrated into the building fabric, this passive collector evidences a maturing attitude toward energy conservation that treats solar devices, among others, not as statements bordering on the ideological but as tools, and buildings not as their underpinnings but as their occasion.

SPORT-OBERMEYER WAREHOUSE AND OFFICES, Aspen, Colorado. Architects: Copland Hagman Yaw Ltd. — Tim Hagman, project architect. Engineers: Anderson & Hastings (structural); McFall, Konkel & Kimball (mechanical); Gambrell Engineering, Inc. (electrical). Consultants: Solar Pathways Associates (solar). General contractor: McBride Construction.















The huge (120 by 18 feet) "semiactive" solar collector on the south wall of the Obermeyer warehouse not only provides highly cost effective solar heating, it also lends interest to the long street facade, smoothing the transition from the almost domestic scale and treatment of the office wing to the greater bulk of the warehouse. The modified trombe wall (detail left) is composed of a filled cinder block mass wall, an air space for heat transfer, a dark blue stainless steel selective surface absorber plate, and low-iron-content diffusing glass on the exterior. It is hybrid in that convected gain from the wall is mechanically drawn upward across both surfaces of the absorber plate by in-duct fans at the inside top of the wall, where a network of collecting ducts captures the solar heat and distributes it throughout the building.





### A featureless computer "box" made inviting

The design problem posed by this major data processing center for a large private electric utility could hardly have been functionally more straightforward—or formally more restrictive. To ensure the security of the highly sophisticated computer operation the facility houses, the client demanded no less than an impregnable vault: a 150-foot-square reinforced concrete box with foot-thick walls, a 4-inch-deep roof, and a single entry.

Yet in deference to its neighbors in a presently nondescript but upwardly mobile section of downtown Canton, Ohio, the utility also asked that its fortress be visually unforbidding and unboxlike. The client was also concerned that the building present an open and inviting aspect both to the public and to employees, especially the 65 percent of the workforce who are on night shifts.

The design of the building exterior thus devolved almost to a studio exercise in composition using a minimum number of prescribed elements. The first necessity to be made a virtue was the requirement that the building be raised 3½ feet to clear a flood plain. Given this opportunity to dramatize the entrance at the building's northeast corner, the architects treated the entry as a separate portal, approached by stair and revealing in the reception area beyond its double glass

doors the depth and texture of a clear glass block wall on a gold-hued ground. To its left a required ramp was elaborated to pure sculpture, encased within a virtual vitrine of butted glass and set off against a background of gleaming cerulean.

Here as elsewhere materials and details were chosen to reflect in the building the qualities of the computers it houses: a sleek, sophisticated, and intricately made machine. To visually lighten its requisite mass, the concrete box was faced with a silvery aluminum skin, and to preserve the clean horizontal lines of the structure, the cooling tower and mechanical equipment housing were removed from their accustomed rooftop perch and treated as a separate design element. Sumptuously clad in black granite, this small utilitarian box contrasts strikingly-and whimsically-with the cool metallic skin of the main building in a counterpoint played up by the fire-engine red duct connecting the two.

AMERICAN ELECTRIC POWER SERVICE CORPORA-TION COMPUTER FACILITY, Canton, Ohio. Architects: The Grad Partnership—partner in charge of design, Ronald H. Schmidt; project manager, Francis X. Sloan. Engineers: Wolchuck & Mayrbaurl (structural); Syska & Hennessy (mechanical/electrical). General contractor: Gibbons-Grable Co.





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Though 90 percent of its space is secured behind a formidable mass of







## OFFICE LITERATURE

For more information, circle item numbers d Reader Service Inquiry Card, pages 189-19



BATH FIXTURES / Three new "Blended Hues"—Lavender Haze, Morning Rose and Blue Mist—are offered in the Eljer Gallery Collection line of china and cast iron bathroom fixtures and fittings. A brochure illustrates the two-tone colors, and lists compatible tiles, wallcovering, carpeting and laminates from several manufacturers. • Eljer Plumbingware, Pittsburgh.

circle 400 on inquiry card



FLOWABLE CONCRETE / Product data folder on high slump concrete explains the "Synergyzed Performance System," a flowable, high quality concrete that combines admixtures and local materials without sacrificing other important performance characteristics. • Master Builders, Cleveland.

circle 401 on inquiry card



FURNITURE CARE / Written for specifiers and end users of wood office furniture, "The Care and Preservation of Helikon Classics" covers the major elements of furniture maintenance. The four-page brochure covers dusting; cleaning of wood finishes, stainless steel and aluminum; and lists Do's and Don'ts of wood care. • Helikon Furniture Co., Inc., Taftville, Conn.

circle 402 on inquiry card



AIRPORT LIGHTING / A 12-page color brochure features complete lighting systems for airports—access roads, parking lots, terminals, aprons and ramps, and guidance equipment. Energy-efficient lighting fixtures include the RAL roadway light, said to combine esthetics and superior cutoff function for airport access roads. A "rules of thumb" section explains footcandle requirements, uniformity ratios, glare control, maintenance, and economics. • Crouse-Hinds, Syracuse, N.Y.

circle 403 on inquiry card



**PERFORATED STOCK** / A six-page "Custom Design Perforating" brochure describes a three-option process said to permit the perforating of "designs within designs", almost always without the expense of special dies. • The Harrington & King Perforating Co., Inc., Chicago.

circle 404 on inquiry card



St Moritz

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ZDUCT

<u>Luca</u>r

AIR HANDLING / Brochure on indirect evaporative cooling reviews air handling energy saving systems designed especially for commercial use, and outlines the *Z-Duct Principle*. Airto-air heat exchanger and packaged heat recovery systems are included; typical applications and available options are illustrated. • Des Champs Laboratories, East Hanover, N.J. *circle 405 on inquiry card* 

WINDOW SYSTEMS / Written for the architect and design professional, as well as for the manufacturer, *Window Energy Systems* magazine covers all types of interior and exterior, thermally efficient window treatments. It is published by the Industrial Fabrics Assn. International, a trade association of more than 1,400 firms. Subscriptions are \$25 per year. IFAI, St. Paul, Minn.

circle 406 on inquiry card

FLOOR OUTLET / A color brochure describes how the 2-in. "Poke-Thru" electrical floor outlet requires a smaller hole while about doubling communications carrying capacity of existing fittings. The outlet is fire rated for high- and low-tension, including 100 pair telephone plus power. • Raceway Components, Inc., Linden, N.J. *circle 407 on inquiry card* 

CEILING FAN / A "limited edition," the "St. Moritz" ceiling fan described in a color brochure features a chrome motor housing and clear cast acrylic blades. The fan will not interfere with TV or radio reception while operating. • Leslie-Locke, Akron, Ohio.

circle 408 on inquiry card

STEEL SINKS / A 12-page Republic catalog lists over 100 one-, two- and three-sink configurations in 18-, 20and 22-gauge stainless steel. Dimensional drawings, package units, new installation features and one-year warranty details are included. • UNR Home Products, Paris, III.

circle 409 on inquiry card

ELECTRICAL RETROFIT / A 20-page bulletin contains color photographs and descriptions of the various Square D electrical products for renovation and remodeling märkets. Product categories include medium voltage power systems; low voltage service entrance and distribution equipment; and people protectors such as smoke and fire detectors. • Square D Co., Middletown, Ohio.

circle 410 on inquiry card



**COATED STEEL PIPE** / An anti-correct sive product line for above/below ground and underwater, *Totalcoa* coated lightwall steel pipe, coupling and fittings are described in a new brochure. Suggested applications for *Totalcoat* pipe include waste an potable water, industrial plants, coo ing towers, and solar heating. • Berg er Industries International Corp., Por Washington, N.Y.

circle 411 on inquiry car



GLULAM CONSTRUCTION / "Glu lam Beams for Residential/Light Cor struction," an eight-page color bro chure, contains details and framin applications including ridge beams roof rafters, floor systems, etc. Pho tos show a variety of end uses of laminated structural timber. • Th American Institute of Timber Cor struction, Englewood, Colo.

circle 412 on inquiry ca

MATERIAL HANDLING / The "Hyster-Care" program described in a buletin is a collection of service designed for the material handlin equipment user: parts and servic support, operator training, lift truc renting, leasing and\_financing, etc. • Hyster Co., Portland, Ore.

circle 413 on inquiry car

WOOL CARPETING / Woven of continous felted wool, domesticall made Robertex contract carpetin includes "Sonata" Berber-texture pattern. A color folder illustrates a four designs in this natural-colored fire-resistant carpet line. • Roberte Assoc., Inc., Atlanta.

circle 414 on inquiry car

CONSTRUCTION PRODUCTS / A introductory brochure highlights construction and maintenance product in five groups: electrical; structura safety and security; decorative; an maintenance/rehabilitation. Poscards are included to obtain information about specific products. • 3M St. Paul, Minn.

circle 415 on inquiry ca

SIGNAGE / More than 220 identif cation products are offered in a 64 page catalog. New items include th *Flo-Code* valve marking system an other hazardous materials marking that meet DOT and EPA require ments. Signs range from self-adhesiv decals to cast bronze and aluminur plaques. • Seton Name Plate Corp New Haven, Conn.

128 ARCHITECTURAL RECORD October 1981

## PRODUCT REPORTS

ore information, circle item numbers on er Service Inquiry Card, pages 189-190



## Innovative products information retrieval system for architects and interior designers

Xetron, a Chicago-based communications firm, has designed a systematized approach to retrieving information from over 400 contract manufacturers catalogs by using one microfiche unit. Called CFDRS, Contract Furniture Data Retrieval System, it allows architects, interior designers, specifiers and contract furniture dealers to have the most upto-date information on fastchanging product information. Each of the manufacturers' product lines is photographed on microfilm and assembled in a CFDRS storage compartment measuring only 6- by 12- by 5in., and each page includes prices, specifications and photographs (shown is an example of pages from the Koch & Lowy catalog). Products are grouped by manufacturer and/or product classification for easy reference. Every month a subscriber receives an updated set of fiches to keep the file current. In addition to the microfiche viewer, an optional reader/printer can produce sharp pictures of the desired page. The basic price of the system—which includes fiche reader, file, and one year subscription to materials—is \$695. Since retrieval time is almost instant, Xetron claims to reduce specification writing time by up to 50 per cent. • Xetron, Chicago.

circle 300 on inquiry card more products on page 139





# Stop dirt at the door with style!

Construction Specialties gives you two elegant new ways to control tracked-in dirt, mud and slush.

C/S Pedigrid is a complete system of permanent recessed treads that allow dirt to fall between heelproof rail openings into a cleanable recess below.

C/S Pedimat offers the flexibility of surfacemounted installation, in addition to recessed application, and provides relief

in foot-fatigue situations. Pedigrid and Pedimat do the jobs that have to be done-stopping dirt, mud, sand, and water at the door; reducing interior floor maintenance; protecting the safety of visitors and workers. At the same time, both Pedigrid and Pedimat build the designer's palette with a broad range of contemporary colors, textures and surfaces including Dupont Antron III® carpet.

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PEDIGRID/PEDIMAT

Construction Specialties, Inc. • Muncy, PA • San Marcos, CA • Mississauga, Ont.

Architect: Hellmuth, Obata & Kassabaum, Inc

U.S. Patent Nos. 4,112,640; 4,029,834; 3,783,471 Canadian Patent No. 967.

ODUCT REPORTS continued from page 137



**CTORIAN MILLWORK** / Fourteen new products ve been added to Cumberland's line of exterior d interior solid wood millwork based on authen-Victorian designs. New items include an interior ille (top), exterior gables (center), exterior bracks and corbels; and interior fret brackets and edallions. All reproductions are made of kiln dried k or poplar, and are available in unlimited quantis. • Cumberland Woodcraft Co., Inc., Carlisle,

circle 301 on inquiry card



JMINESCENT FLOOR TREAD / Glo-Grit non-slip eads glow in the dark, and provide an extra easure of safety during power failures or in dark Ilways. Available in rolls or pre-cut treads, Glorit is made with a high-strength plastic carrier film id to be flexible and long-wearing. • MACtac dustrial Products Div., Stow, Ohio.

circle 302 on inquiry card



**PEN-PLAN PANELS** / These *Glad-Wall* panels fer a choice of either acoustic or tackable conruction, both identical in appearance with unded edges and corners with a recessed double elt. Panels of equal or different heights may be ned by means of interlocking moldings. • The ewster Corp., Old Saybrook, Conn.

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**SUSPENDED LIGHTING** / The *Tubular Lighting* system combines incandescent track lighting and fluorescent fixtures within tubes of uniform cross section. It is designed so that a track section can be coupled directly with a fluorescent section of the same diameter and appearance for the construction of two- and three-dimensional suspended fixtures. Standard finishes are bronze, matt aluminum and white. ■ Staff Lighting, Highland, N.Y. *circle 304 on inquiry card* 



**BATH ACCESSORIES** / Molded of ABS and acrylic plastics, Australian-made "Bath Mates" and "Prisma" accessories come in a range of bright colors. The collections include towel rails, rings and hooks, bath and shower shelves, soap holders, mirrors, cabinets and stools. International Inc., Los Angeles, Calif.

circle 305 on inquiry card

more products on page 141



Window Retrofit Robinson Green Beretta Corporation, Architects

## Kalwall

The most highly insulated light transmitting material. Saving energy for 25 years.

KALWALL CORPORATION 1111 Candia Road, Manchester, NH 03103, 603-627-3861 See Sweet's 8.14/Ka, 7.8/KaL, 13.11a/Ka, 13.2c/Stu.

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# If there were a better way to build an industrial door, we would be doing it.

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In striving for the perfect door, the process which evolved just happened to also produce a thermally efficient door. Logically, a polyurethane core, besides adding lightweight strength, is also an excellent insulator.

But, while simply placing foam between metal sheets may produce an "insulated" door, it does not produce a door which utilizes the other qualities of polyurethane. Only THERMACORE's<sup>™</sup> unique lamination process takes full advantage of the combined qualities of Galvalume and polyurethane.

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The THERMACORE<sup>™</sup> process begins with two sheets of embossed Galvalume steel which are fed through deadening dyes to completely flatten them before roll forming. The roll forming produces the

skins of THERMACORE<sup>™</sup> doors. During this phase, two one-inch-wide steel reinforcement strips are incorporated onto the inside skin using a hot melt process. These metal strips serve as



the bases for hardware attachments.

From the roll former, the steel moves into a temperature-controlled oven set between 104° and 108°F. Two heat sensors provide a continuous temperature readout in the control room. As the inside skin rolls through, a chemical spreader applies the polyurethane foam. This phase, as is the entire process, is monitored by television cameras to ensure even application with no air pockets and to check for any dirt or excess lubricants left from the roll former which would prevent uniform adhesion between foam and metal.

Strict quality control is an integral part of THERM-ACORE's<sup>™</sup>process. Since the foam expands and

becomes adhesive for only a matter of seconds, it must be in contact with the metal at this critical time before it hardens. Before each run of the line, the foam is mixed and lab-tested right in our own plant to ensure a density of 3.24 lb/ft<sup>2</sup>.

After the foam is applied, the inner and outer skins enter a 90'-long double band conveyor. This phase is set at a constant 104°F so that the foam expands



to a uniform density between the metal skins. Four heat sensors measure the temperature of the conveyor plates during this critical phase. If the thermostat rises above 104°F, air conditioning units immediately bring the temperature back to the correct level. THERMACORE's<sup>TM</sup>unique process can be monitored



by one man at the control panel while six inspectors also perform manual checks along the production line. The production is run by computer, programmed for each individual customer order.

This process has been shown to be the only method to produce door panels with uniform density and

adhesion. Every panel can be visually checked to determine quality without destroying the metal sheathing. That's why we're so proud of our door and the process which produces it!



## THE DOOR OF THE FUTURE IS NOW!





**ONZE-TINTED MIRRORS** / Now available for corative applications in residential interiors, proze-toned mirrors from *Carolina Mirror* are bwn in this dining room as a wall covering, adow box lighting unit, on pedestal table bases d the mirrored table. Mirrors are made of float ss in all shapes, sizes, colors and textures with h optical quality. Carolina Mirror Corp., North lkesboro, N.C.

circle 306 on inquiry card



DUNTER TOPS / Recent additions to the Panel ncepts line of open-office acoustical panel sysns, straight and curved counter tops are set on acket channels and screw in easily. The standard aight counter is rectangular, with radiused edges, ered in three-, four-, and five-ft lengths, all ins. deep. • Panel Concepts, Inc., Santa Ana, if

circle 307 on inquiry card



**ERMALIZED SKYLIGHT** / Designed to minimize indensation occurring on the inside of the skylight me, *Naturalite's* residential skylights are made m acrylic and aluminum with a polyurethane ermal break. Both L-frame and insulated curb ts meet code requirements for U value compution exemption with up to 10 per cent of the roof ea in the skylights. • Naturalite Inc., Garland, xas.

circle 308 on inquiry card



**DISHWASHER** / The *Sure-Temp* water heating system in *KitchenAid*'s "Energy Saver V" dishwashers makes provision for a variety of "real world" installation problems: reduced water heater settings, long plumbing runs, outside wall positioning, and other variables. 

Hobart Corp., KitchenAid Div., Troy, Ohio

circle 309 on inquiry card

**RESIDENTIAL CARPETING** / Geometric patterns are carved in white *Scotchguard*-treated nylon carpeting to create the "Blanc de Blanc" residential flooring line. Designs include chevrons, dominoes, lattice, palms, diamonds, diagonals, and the octagon shown here. • Horizon Industries, Calhoun, Ga. *circle 310 on inquiry card* 

more products on page 143

# How paying more for a roof insulation can cost you less!

There's more to roof insulation than an R Value and price! The physical properties can add or subtract from the performance and longevity of the roof system itself.

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ACRYLIC TABLE / Made of extra-thick Acrylite sheet material, the "U-Six Table" measures 48- by 24- by 16-ins. and has inverted U-scroll supports. Acrylite acrylic is said to be free of blemishes and tolerance distortion, with clear, un-yellowed edges. Plexiframes, Inc., San Francisco, Calif.

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AMPLIFIER / The "TU-A Series" of telephone paging/utility public address amplifiers feature built-in telephone line input transformers, and can operate from 48 vdc, positive or negative ground, or 120 vac. Units are screwdriver installed and set, and have a peak-reading LED to indicate when the amplifier is driven into clipping. Microphone wires connect directly to the screw-terminal strip. Amplifiers are available in ratings of 100, 60 or 35 watts. Bogen Div. of Lear Siegler, Inc., Paramus, N.J.

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MAGAZINE RACK / A two-tiered construction to hold magazines and books, Paul Mayen's 22-in.high rack is constructed of three 1/4-in.-thick interlocking aluminum plates mirror polished on all surfaces. = Architectural Supplements, Inc., New York City.

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# Announcing the publication of the Steel Deck Institute **Diaphragm Design** Manual

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### OFFICE NOTES

#### New offices

Meyer Chaskin, AIA announces the opening of his office for the practice of architecture located at 1616 West Loop South, Suite 306 Houston, Texas.

Vinod Dhalakia announces the opening of his office for the practice of architecture and interior design located at 89-06 120th Street, Richmond Hill, New York.

Ronald H. Schmidt, AIA announces the opening of his architectural and interior design office located at 527 Madison Avenue, New York, New York.

Allan P. Shope, Robert S. Reno and Bernard M. Wharton announce the opening of their new office for the practice of architecture, Shope Reno Wharton Associates, 18 West Putnam Avenue, Greenwich, Connecticut.

James T. Chapman joined Lee Saylor, Inc. Consulting Cost Engineers as vice president and director of marketing.

Richard J. Badt has been named an associate of Sillman/Wyman & Associates, Inc., Architects and Engineers.

Peter Simoncelli & Associates announce the appointment of Janet Flack as head of the interiors division.

The Architects Collaborative Inc. (TAC), announce the promotion of Robert D. Turner and Thomas N. Larson, FAAR to vice presidents. Sherry T. Caplan, Stephen Dauphine, AIA, Hovhannes Donabedian, AIA, William J. Higgins, Gary N. Moneyhun, Klaus Muller, Michael F. Nason and Mark J. Zarillo, ASLA were promoted to senior associates.

Frederic O. Glover, Jr. and Joseph L. Polito have been named vice presidents of The Carlson Group Inc.

H. Stacey Hillman has joined The Harsen & Johns Partnership, Architects.

The Pierce Partnership, Inc. Architects, Planners and Designers announce that Sid Trest has been promoted to associate of the firm.

The SWA Group announce that Albert R. Lamb, III, Eduardo Santaella, Martha Schwartz and Tony Sinkosky have been elected associates.

The Smith Korach Hayet Haynie Partnership announce the appointment of George H. Hohmann, AIA as associate in charge of operations of the Fort Lauderdale office.

3D/International announce that Michael J. Obringer AICP has joined the firm as senior planner and associate and William E. Diamond, II has joined the firm as a vice president and marketing representative for the architecture division.

Robert L. Drew joined the architectural firm of Turchi, Cusic & Drew Inc. as a partner.

John Carl Warnecke, FAIA, Architects announce that Steven H. Rosenfeld, AIA has joined the firm as vice president and Dennis A. Posen, AIA has been promoted to senior associate and assistant administrator of the New York office.

The firm of L.D. Williams, Architects announce that the firm will change its name to Williams/Matschulat Architects. Robert T. Matschulat has now become a full partner of the firm. The firm is located at 2525 West Evans Avenue, Suite 210, Denver, Colorado.

#### New addresses

Pedro E. Campos, AIA Architect has relocated his office to South Fullerton Avenue, Montclair, New Jersey.

Gensler and Associates/Architects announce the relocation and expansion of its San Francisco office to 22 Fourth Street, San Francisco, California.

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# Laminated architectural glass. How it spruced up this old library is a case for the books.



The restoration of Chicago's 1880's-vintage library has earned the architectural firm of Holabird & Root a coveted 1979 AIA Design Honor Award for the extended use of a building.

The design challenge was to revitalize the structure to meet modern functional standards while preserving its historic appearance. For this project, the glazing specified was laminated architectural glass, reinforced with a Saflex<sup>®</sup> interlayer of polyvinyl butyral by Monsanto. It was selected for many convincing reasons.

Safety is enhanced because tough, resilient Saflex absorbs and dissipates an impact. The strong adhesion of the interlayer to glass prevents injuries from flying or falling fragments.

Laminated architectural glass with tinted Saflex was used to reduce glare and to control solar heat gain. And it was easily fabricated into special insulated units to provide temperature and humidity control for an area containing valuable rare books. It was important that the glazing chosen could be cut to fit on site or in the shop because the library's antique iron window frames were irregular in size and shape. Laminated architectural glass is easily cut to size with simple tools, impractical or impossible with other glazings.

An added benefit is sound attenuation. Laminated glass reduced the din of traffic from nearby Michigan Avenue. And there are no maintenance problems. Laminated glass can be cleaned as easily as ordinary glass without scratching.

If your challenge is renovating one of America's great old landmarks—or building a new one there are a lot of convincing reasons to use laminated glass. Let us tell you about them. For more information and a list of the leading manufacturers of laminated architectural glass, featuring the Saflex interlayer, write: Monsanto Plastics and Resins Company, Dept. 804, 800 North Lindbergh Blvd., St. Louis, MO 63166.



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