

THE MALLS AT WATER TOWER PLACE, CHICAGO, BY WARREN PLATNER ASSOCIATES
NEW BUILDINGS BY TEODORO GONZALEZ de LEON AND ABRAHAM ZABLUDOVSKY
TWO UPCOMING HOUSES BY STANLEY TIGERMAN
VISITORS' CENTER FOR GUNSTON HALL BY PHILIP IVES ASSOCIATES
BUILDING TYPES STUDY: HOTELS
FULL CONTENTS ON PAGES 10 AND 11

ARCHITECTURAL RECORD

OCTOBER 1977

10

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Letters to the editor

After following your Human Settlements column monthly with occasional interest, I find the one in the August 1977 issue rather insulting. It seems that, in a column ostensibly written to present efforts in housing those less able around the world, you have, *de facto*, promoted what is one of the most serious situations worldwide, that of cultural imperialism.

Your story begins by stating that (infamously, I am sure) William Levitt is planning to turn a Tehran squatter settlement into a "\$600-million community for 70,000 people." The Shah and those who profit from Iran's present economic stature within the world community might be able to afford, or even promote, such trash, but to say that "although some squatters will be displaced, many will occupy the new facilities," and further down state that "apartments . . . will cost from \$40,000 to \$50,000" is to test one's credulity. I believe that there is not one housing project anywhere where a government attempting to rehouse squatters *en masse* has been successful, for any such effort by its very nature is counter to the very nature of squatters: those who take land to occupy freely and for free, to build houses as needed when needed.

It is depressing to know that the experiences of the past 20 or so years, the research done worldwide, the proposals and efforts at educating governments and public alike apparently are for naught.

It is not so much that you have published this note on Levitt's efforts, but that they do exist that makes me feel so frustrated. When companies such as his are prevented from continuing the destruction of land for the sake of "suburbanism" in this country and turn around to do it to another, one can say that all efforts are sabotaged. I hope that many more will see the irrationality of the Levitt effort.

Gerardo Brown-Manrique
Assistant Professor
The University of Oklahoma

Affectionate memories of railroad stations in Cincinnati before and after 1933 were evoked by the article on a proposed reuse of the Union Terminal. More importantly, some light has been directed to the numerous complex problems in the preservation and/or reuse of landmark structures.

With regard to the Cincinnati Terminal, perhaps the proposed performing arts center required too much of a change in the building. It would appear to some observers that an acceptable reuse of the railroad station would alter less the features that contribute to its landmark status. If preservation of the building is desired without "permanent" change introduced, a particular type of challenge is offered to the construction profession to develop a plan that satisfies both preservationists and reusers.

And a word about costs; reuse designs should do better than be competitive with new construction. The building's "shelter" being reused for new purposes contributes a cost saving that could enhance the public acceptance of a preservation project.

Willis O. Klotzbach
Consulting Engineer
and Planner
Trenton, N.J.

Unfortunately we somehow omitted Harry Seidler's name in that last form which was forwarded to us and as a result his name does not appear on the list of credits for the Torin, Australia Plant, published in the last issue of the *Architectural Record*.

It is very important to us that proper credit be given and we hope that you can print in your next issue a correction which would read as follows: Architects, Marcel Breuer and Herbert Beckhard, New York, U.S.A., Associate Architect, Harry Seidler and Associates, Sydney, New South Wales.

Herbert Beckhard
Marcel Breuer and
Associates, Architects
New York City

Calendar

OCTOBER

13-15 New York State Association of Architects Annual Conference, "Educational Exhibits," The Rye Town Hilton. Contact: Helene Conroy, AIA Executive Director, New York State Association of Architects, 13 Northern Blvd., Albany, N.Y. 12210.

17-19 The 1977 National Conference on Noise Control Engineering, NOISE-CON 77, sponsored by the Institute of Noise Control Engineering

and the Langley Research Center of the National Aeronautics and Space Administration; at the Sheraton-Coliseum Inn, Hampton, Va. Contact: Conference Secretariat, NOISE-CON 77, P.O. Box 3469, Arlington Branch, Poughkeepsie, N.Y. 12603.

24-26 Symposium 1977 of the International Association for Bridge and Structural Engineering, Kongresshalle Munchen, Messagelände Munich, Federal Republic of Germany. Contact: Secretariat of IABSE, ETH-Honggerberg, CH-8093 Zurich, Switzerland.

24-28 The first International Conference of Energy Use Management, organized by The University of Arizona and the Interdisciplinary Group for Ecology, Development and Energy (EDEN), at the Marriott Hotel, Tucson. Contact: Dr. Craig B. Smith, Energy Use Management Conference, P.O. Box 64369, Los Angeles, Calif. 90064.

28-30 Conference, "An American Architecture: Its Roots, Growth and Horizons," sponsored by the Prairie Archives of the Milwaukee Art Center and the Northwest Architectural Archives of the University of Minnesota; at the Milwaukee Art Center. Contact: Jane Glasberg, Milwaukee Art Center, 750 N. Lincoln Memorial Dr., Milwaukee, Wis. 53202.

NOVEMBER

1-3 1977 Building and Construction Exposition and Conference, sponsored by the Producers' Council; Chicago's McCormick Place. Contact: Producers' Council, Inc., 1717 Massachusetts Ave., N.W., Washington, D.C. 20036.

2-5 Symposium, "Make It Light," sponsored by the Theatre Television Film Lighting Committee of the Illuminating Engineering Society; Miami, Fla. Contact: Mr. George Gill, TTFL, '77, P.O., Box 610124, Miami, Fla. 33161.

6 62nd International Hotel/Motel & Restaurant Show sponsored by the New York State Hotel & Motel Association, Inc., and the Hotel Association of New York City, Inc., New York Coliseum. Contact: Jack Egan, International Hotel/Motel & Restaurant Show, 141 W. 51 St., New York, N.Y. 10019.

14-15 "Lighting Conference for Energy Consultants," sponsored by the General Electric Company; Nela Park, Cleveland. Contact: Mgr., Lighting Education, GE Company, Nela Park, Cleveland, Ohio 44112.

ARCHITECTURAL RECORD (Combined with AMERICAN ARCHITECT, ARCHITECTURE and WESTERN ARCHITECT AND ENGINEER)

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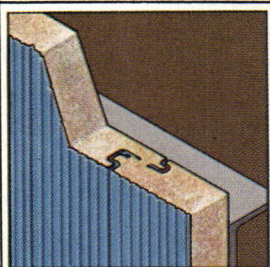
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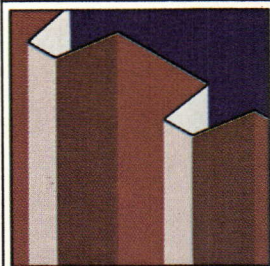
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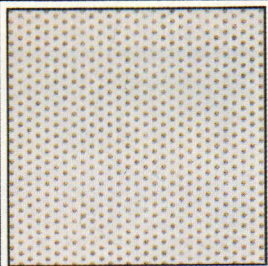
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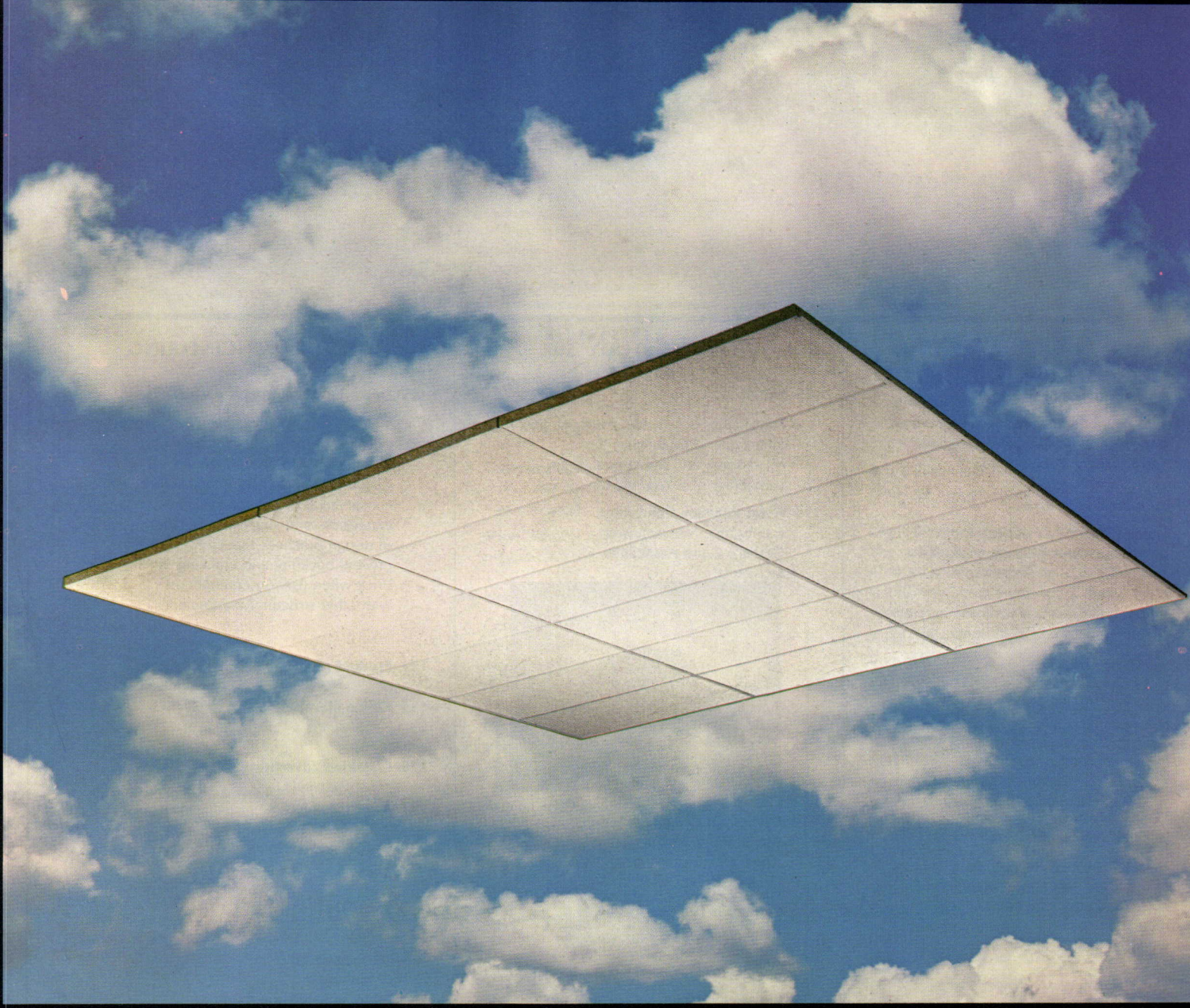
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Some news in the right direction from Washington

I only know what I read in the newspapers and press releases and copy filed by McGraw-Hill World News from Washington, but what I read is beginning to encourage me about interest in quality design in Washington.

Until fairly recently, about the only place you could go to get your heart lifted by the idea that there really was a Federal agency that cared about design was the National Endowment for the Arts. Not only has the Endowment helped to develop literally hundreds of worthwhile projects by individual artists and architects, community groups, local governments and state governments—it has clearly had (as was part of its charge) a real impact at the Federal level.

For one encouraging thing, a report entitled "Design, Art, and Architecture in Transportation" has just been issued by our Department of Transportation. Secretary Brock Adams, in his opening statement, says that, henceforth, "It shall be the consistent policy of the Department of Transportation to encourage good design, art, and architecture in transportation facilities and services. The environmental design arts shall be combined with other technical skills in an interdisciplinary approach to planning, constructing, and operating transportation systems. Funding for appropriate works of art in public spaces shall be provided for Departmental facilities and encouraged in transportation systems receiving grants under our programs."

In what I find an extraordinarily heartening statement, Secretary Brock said: "Attention to design quality can yield substantial economic benefits. Attractive and efficient design can increase ridership [indeed it can, Mr. Secretary!] and support for public transit, as well as promote safety and economy in operations. While the aesthetic benefits of design often elude quantification [said he, hopefully disarming some of the bean-counters] we recognize that transportation is not an end in itself, and that its design and operation must support efforts to improve the human environment and enhance the social, commercial, and cultural resources of our communities."

This kind of talk at the Cabinet level I find quite hopeful in general. In particular, any reader with a present involvement in transportation design might write the DOT and see if he can get a copy, which is quite detailed on matters of funding and other help available to planners of transportation systems.

In reading through the report, I came across a second heartening bit of writing that I hadn't

seen before. In President Carter's Environmental Message to Congress, he said: "The Federal government can have a significant impact on urban communities and neighborhoods both directly, because of construction of Federal office buildings and other structures, and indirectly, through its financial assistance for housing, schools, industrial parks, and transportation facilities. The design of our communities is important for livable cities, and [italics added] *each Federal building dollar should be regarded as an investment in the quality of the built environment of the nation.*"


Now, that may not rank with the Guiding Principles for Federal Architecture as a Presidential commitment to excellence, but it's sure a pretty good one, useful to quote to a lower-ranking Federal official who is leaning on you to make unwise reductions in design quality in the name of saving the taxpayers' money.

Item 3: New GSA Commissioner Jay Solomon has very publicly supported the art-in-architecture program, which has in recent years been sort of on-again, off-again. Mr. Solomon reaffirmed the government's commitment to art in all Federal buildings, at a cost of three-eighths of one per cent of estimated construction cost. Happily, the National Endowment is involved all the way. Specifically, GSA requests the Endowment to appoint a panel of art professionals to meet with the project architect to nominate three to five artists for each proposed work—which is sure a smart way to start. At present, I was surprised to learn, 88 pieces of art in varying stages of completion are planned for 56 Federal building projects, at prices ranging up into the hundreds of thousands of dollars but down to a \$750 tapestry.

Finally, I've been impressed with what I've heard from architects and Washington hands about Administrator Solomon. As the ex-chief of Arlen Shopping Center Company, he knows building and real estate and architects. He clearly plans to be an activist, to insist on being in on not just the financial decisions but the design and planning decisions (starting with architect selection), and to press the government's role as an enlightened developer—taking the lead in desirable experimentation in areas such as mixed-use, re-use of old buildings for new Federal facilities, and development of solar energy in building.

So, in sum, as advertised in the headline to this piece, some news in the right direction from Washington.

—Walter Wagner



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NEWS REPORTS

BUILDINGS IN THE NEWS

HUMAN SETTLEMENTS

REQUIRED READING

Nancy Hanks, Chairman of the National Endowment for the Arts, announced her resignation effective at the close of her second term on October 2, 1977. She informed the President of her plans at a personal meeting with him several days prior to her formal announcement. See page 34 for details.

Kent State University will go ahead with controversial plans to build a new physical education center, designed by Richard Fleischman Architects, near the site of the 1970 confrontation between National Guardsmen and anti-war protestors. Details on page 34.

Plans for the 1980 Summer Olympics in Moscow have been released by official Soviet sources. Will ambitious plans for sports buildings and housing rival Montreal in scope and costs? See page 35 for details.

Government officials, architects, engineers and consultants involved in government funded construction projects will meet at the National Academy of Sciences in Washington, D.C. on November 17-18 to attend a course on "The Government Official and A/E Contracting." The two day course is being sponsored by the five architectural/engineering societies which form the Committee on Federal Procurement of A/E Services (COFPAES), the American Public Works Association, and the National Institute of Governmental Purchasing, in conjunction with Catholic University's School of Engineering and Architecture and School of Law. For further information about the course, contact Arnold Prima, Administrator of Government Affairs, at the American Institute of Architects, 1735 New York Avenue, N.W., Washington, D.C. 202/785-7374.

A shortage of home insulation material, expected to last for at least another 18 months, could upset housing's production recovery and increase the price of new housing for buyers, Robert Arquilla, president of the National Association, of Home Builders, said recently. The shortage, Arquilla said, is caused primarily by the huge demand in the existing housing market created by those homeowners who have decided to add insulation to their homes to take advantage of the tax credits proposed in the Carter Administration energy package, which is pending in Congress.

The Mid-Atlantic Solar Energy Association has been selected to host the second National Passive Solar Heating and Cooling Conference and Workshop. This event will be held in Philadelphia, Pennsylvania, in March 1978. The Conference will include organized programs of invited speakers, presentations of papers, and keynote addresses. Papers are being solicited on the following topics: passive solar heating and cooling of buildings; passive domestic hot water systems; active/passive hybrid solar heating and cooling of buildings; monitoring and evaluation of passive solar systems; and social, political, and economic barriers to and incentives for passive solar systems. Abstracts and requests for further information should be submitted to: Passive Solar Conference, Mid-Atlantic Solar Energy Association, Department of Architecture, University of Pennsylvania, Philadelphia, Pennsylvania 19104.

Nationally recognized authorities will explore the matter of designing new structures to be placed among or near old ones at a conference in Washington, D.C., December 1-3, at the Mayflower Hotel. At least 200 architects, planners, educators, writers and local government officials are expected to participate. "Old and New Architecture: Design Relationship" will be the first national conference of its kind to be held in the United States. Cosponsors with the National Trust for Historic Preservation are the Washington chapters of the American Institute of Architects and the Society of Architectural Historians. Additional information may be obtained from the Office of Preservation Services, National Trust for Historic Preservation, 740-748 Jackson Place, N.W., Washington, D.C. 20006.

GSA Administrator Jay Solomon announces that his agency is spearheading a program to publish proven cost-saving construction techniques already used by the Federal government. Called "Crossfeed," a newsletter will circulate ideas whose development costs already have been paid for by the government. Participants include 14 other Federal agencies involved in construction, state and local governments and private building owners and designers. Ideas from these sources are submitted to GSA's Crossfeed clearinghouse which selects those it thinks have merit and publishes them as Crossfeed bulletins. These bulletins go to several thousand subscribers. Ideas are in the areas of architectural, mechanical, electrical, civil, structural, sanitary and geotechnical construction. A free copy of Crossfeed participation guidelines is available from: Director of Value Management, Public Buildings Services, General Services Administration, Washington, D.C. 20405.

Davis, Brody & Associates has won the 1977 Louis Sullivan Award for Architecture. The Award and accompanying \$5,000 prize are sponsored by the International Union of Bricklayers and Allied Craftsmen. The Award program is administered by The American Institute of Architects. The Sullivan Award, rather than recognizing the design of a single building, instead honors the work of an architect or firm over a broad span of time. To be eligible for the Award, architects must submit at least three, and not more than five, completed buildings. Previous winners of the Sullivan Award are Ulrich Franzen, FAIA; Hartman-Cox Architects, and Philip Johnson, FAIA.

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Continuing education as a requirement for recertification takes hold in California

Boosted along by consumer group concern over energy conservation, a bill in the California legislative hopper would establish continuing education requirements as a prerequisite to renewal of architects' certificates. The bill will be introduced after the first of the year and is expected to become effective January 1, 1979. To date, Minnesota and Iowa legislatures have passed enabling legislation for recertification rules. New Jersey and Florida are in the same stage as California, and Texas and Utah are approaching it. For the most part, states are passing legislation that merely instructs the regulatory boards to force some kind of professional development activity, but this is one of AIA's main concerns: the national proliferation of re-licensing regulations, all different from state to state.

The recertification issue arose in California several years ago when the state's Senate Business and Professions Committee told licensing agencies it felt perhaps recertification should not be automatic with payment of dues, but supported by continued competence. The state Board of Architectural Examiners passed this communication along to the California Council, American Institute of Architects. However, the matter didn't rest there. Consumer groups became vocal, particularly on the energy issue. This year, before the Board, several groups—spearheaded by the Sacramento-based California Citizen Action Group—charged that energy is not being managed well by design professionals.

The state examining board asked CCAIA to draft enabling legislation proposing rules and regulations for recertification of California architects, with emphasis on continued education, including—but not limited to—energy management. The bill, as drafted, does not completely satisfy everyone involved.

California will require 80 class hours every two years

Right now, in California—which has a very large percentage of the country's architects—licensing under the Architectural Practice Act is a two-year cycle costing \$20. The new regulations require that during the two-year period immediately preceding recertification, applicants for license renewal must complete 80 hours of acceptable continuing education. The basic credit unit being considered is simply 10 contact hours of classroom or qualifying instruction equals one continuing education unit. Eight units would be needed. As proposed for California architects, the 80 hours of continuing education have to be a formal experience, limited to a classroom-type activity.

Says architect Piercy K. Reibsamen, of Reibsamen, Nickels & Rex, Los Angeles:

"There probably won't be too much debate and revision. We should have a law by the end of the next (1978) legislative session." Reibsamen is chairing AIA's national Continuing Education Committee, and is also part of CCAIA's six-man professional development committee.

Says Reibsamen: "The licensee can pursue what he finds to be the most appropriate, and this is one area that may be altered. There are strong pressures from consumer groups to specify that a certain amount of professional development be in the field of energy management, conservation and efficiency, and in seismic design, too."

To run the new program, the architectural examiners board will set up a continuing education committee of between five and seven members. With five, a minimum of three will be certified architects, and at least one more architect will be added for a six or seven-member group. (The nine-member Board, itself, currently contains only three architects.) The new committee, functioning for the Board, will evaluate programs to see if they qualify toward recertification, and they will consider applications for exceptions.

Information on the education programs submitted for qualification has to be disclosed by the candidate for license renewal in signed statement, verified (such as by notary public), and carries a perjury penalty. The committee will check information on a random basis. If the statement is not approved, the applicant may be given time to correct deficiencies.

CCAIA's Professional Development Committee is now getting ready to distribute a test record-keeping package to all California architects, containing an explanatory letter plus a sample form for listing professional development activities. Says Reibsamen: "This will give them an opportunity to get a habit they'll have to maintain."

He adds: "I get irate calls every day from colleagues who object to the trend that seems

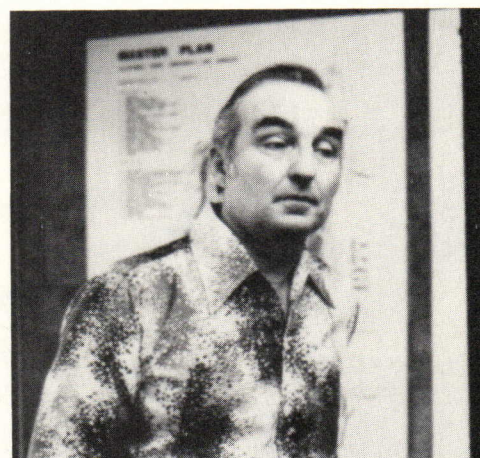
to be sending them back to classrooms. They always cite that just being in practice is professional development. But, of course, practices vary widely in terms of involvement and diversity and everything else."

Nationally, AIA may require continuing education for members

A stand against any mandatory professional development has been taken by Ohio architects. Says Reibsamen: "They say by its very nature the profession of architecture is one in which you have to develop to maintain yourself within it, that you cannot assume a static position and survive. If every architect across the country was pooled, probably at least half would say that. But we feel you can't leave the thing entirely alone and expect the profession to develop."

Meanwhile, nationally, AIA itself is in the throes of establishing a program for professional development as a membership requirement. This action was decided at the San Diego convention by the Board of Directors and approved by delegates; bylaw action is expected next May in Dallas. Says Reibsamen: "It will be regionalized as sort of a universal system, so when a state wants to introduce a recertification program the AIA standards of professional development can be used as a guideline. It would simplify the reciprocity problem."

Details of AIA's program are still being worked out, but, basically, it will allow time spent in practice-type activities to count toward continuing education units.—Barbara Lamb, *World News*, Los Angeles.



CCAIA's Reibsamen

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The debate over consolidation of arbitration proceedings is enlivened by a recent New York case

Typically, construction contracts involve owner, architect, engineer, general contractor, subcontractors and material suppliers—and the standard form contracts used provide for arbitration of all claims and disputes in accordance with the Construction Industry Rules of the American Arbitration Association (AAA). A common question arising when arbitrations are commenced over construction contract claims is whether multi-party disputes may be consolidated into a single proceeding.

by Gerald Aksen

Attorneys representing professionals such as architects and engineers usually prefer separate arbitrations. The principal argument is that it is more difficult to separate the various defenses to the owner's claim in a single proceeding, thereby prejudicing the professional.

Where the arbitrations proceed separately, the architect and contractor are not trying to exculpate themselves at the expense of the other, and, in addition, arbitrators are more likely to grant the architect's argument where they would not be simultaneously foreclosing the owner's rights to recover from the building contractor.

On the other hand, consolidating the arbitration would enable the common party to avoid the expenditures of time and money in arbitrating separately that which often entails duplications of witnesses and other evidence. In addition, the risk of inconsistent results in two separate proceedings would be avoided.

The Construction Industry Rules of the AAA are silent as to multiple party arbitration through either consolidation or joinder. In its capacity as administrator of the arbitrations, the AAA has adopted the policy of not consolidating separate arbitrations in the absence of consent by all parties or a court order.

AIA contract provisions on consolidation may not hold up in court

Since a number of key cases have been decided, the AIA has modified its standard form contract provisions on the subject. The new language relating to multiple party arbitration embodied in Art. 7.9.1 of the General Conditions of the Contract for Construction reads as follows:

"No arbitration arising out of or relating to the Contract Documents shall include, by consolidation, joinder, or in any other manner, the Architect, his employees or consultants except by written consent containing a specific reference to the Owner-Contractor Agreement and

signed by the Architect, the Owner, the Contractor and any other person sought to be joined. No arbitration shall include by consolidation, joinder or in any other manner, parties other than the Owner, the Contractor and any other persons substantially involved in a common question of fact or law, whose presence is required if complete relief is to be accorded in the arbitration. No person other than the Owner or Contractor shall be included as an original third party or additional third party to an arbitration whose interest is insubstantial."

What effect this change will have on multiple party arbitration has not yet been determined by litigation. However, drafters of the new contract language have evidently read cases on both sides of the issue, and given heed to court opinions that have consistently pointed out that arbitration clauses forbidding or authorizing consolidation would be given controlling weight. However, in states like Massachusetts, where supervening legislation authorizes court determination of consolidation, it is unlikely that the new AIA contract language will be as completely effective as the drafters had intended; particularly in view of the new language that states "No provision in any arbitration agreement shall bar or prevent action by the court (on consolidation)."

Where the courts have been confronted with the issue, there has been a split of authority with perhaps a recent trend emerging to allow consolidation or joinder under proper circumstances. Those courts refusing to order consolidation have grounded their refusal on the fact that arbitration is, in essence, a matter of contract and consequently the judiciary should not interfere or impose obligations different than those agreed upon by the parties. Thus, several states have not applied the usual court rules of consolidation and joinder. Those court cases wherein consolidation is held to be proper utilize the so-called New York rule: that is, where the issues are substantially the same and no substantial rights of the parties are prejudiced.

A New York court decision makes it harder to avoid consolidation

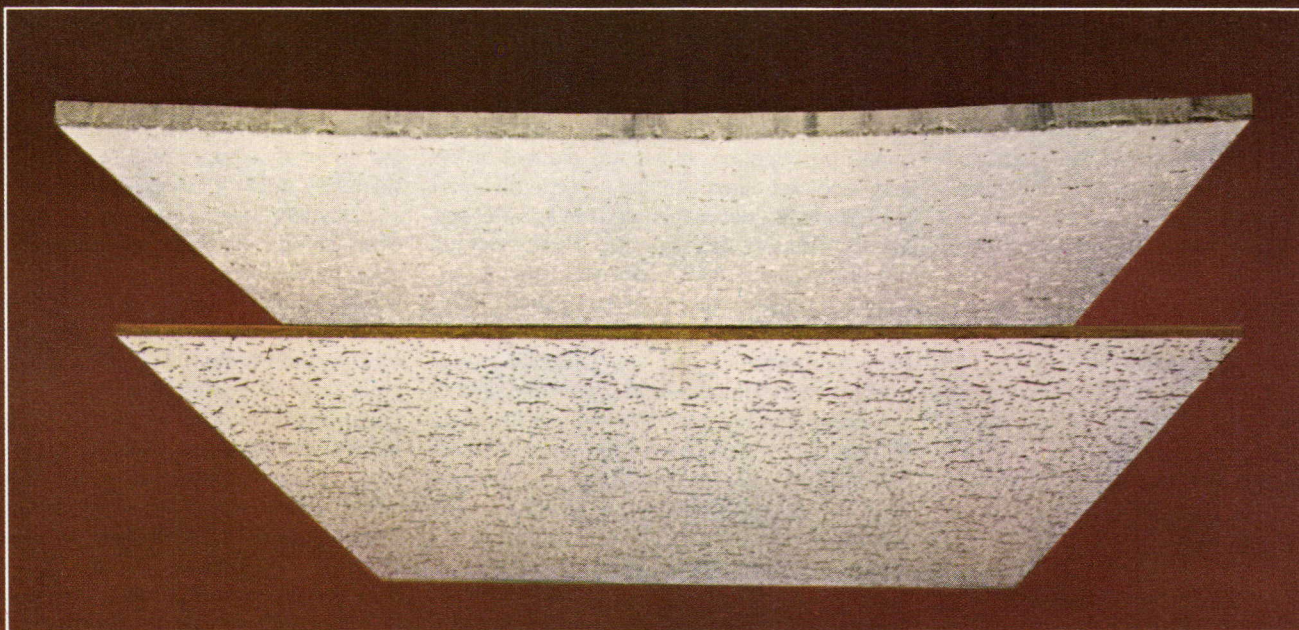
In most cases, there is at least one common party involved in the disputes to be consolidated. However, in a very recent New York case the court held that the difference in party identity, standing alone, was not sufficient to preclude consolidation since there was a commonality of context out of which two sets of claims arose. Here the questioned consolidation involved the Sullivan County Community College versus an architect it had engaged; and the County of Sullivan, the college's sponsor, versus the contractor. The court stated that "... (p) arties signing an agreement to arbitrate must be held to do so in contemplation of the announced authority of the courts to direct consolidation. If it is now desired to avoid the possibility of consolidation, appropriate provisions to preclude or limit consolidation can be drafted for inclusion in the particular arbitration agreement." The need for consistent awards in separate but interrelated disputes was cited by the court as a most important practical consideration in favor of consolidation.

Another issue of some importance concerns the oft-stated requirement that courts will order consolidation where no substantial right of a party is prejudiced. This question of prejudice appeared to be of little significance in this most recent decision from the New York high court. Instead, the court framed its consideration primarily on whether there was an abuse of judicial discretion in ordering consolidation, rather than explicitly examining the "prejudice" aspect of the facts. Therefore, it appears that in New York, now a party will be required to show some unique hardship or prejudice over and above those normally accruing from being forced into joint proceedings.

As in the case of the state statutes, the Federal Arbitration Act is silent as to consolidation. However, a Rhode Island Federal district court resorted to the Federal Rules of Civil Procedures, Rule 42(a), which expressly provides for consolidation in situations involving common questions of law or fact and to Rule 81(a)(3) which provides that the Federal Rules of Civil Procedure are applicable to the Federal Arbitration Act as to matters of procedure not covered in the latter. Finding that the disputes brought into question the inter-relationship of responsibilities between the architect and contractor and that no prejudice would result, the court granted consolidation.

Mr. Aksen is General Counsel for the American Arbitration Association, New York City.

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REITs begin the gradual process of regaining some of their former status in funding development

Remember the REITs? This is not a nostalgia quiz. The Real Estate Investment Trusts that blossomed in the early 1970's were an important source of construction money during the boom years of 1972-73-74, but they've been conspicuously absent ever since. This innovation in finance, with so much leverage and with so much concentration in commercial building, proved to be highly vulnerable to the construction cycle, soaring in times of expansion, and plummeting in periods of contraction.

The unusually severe recession that hit the construction business in 1974/75 was the undoing of the young REIT industry. In those two years, contracting for commercial and industrial building shrank by 50 per cent, leaving REITs with billions in uncollectable development and construction loans and more billions in debts owed to their bankers. Some simple numbers trace the rise, fall, and present plight of the REITs.

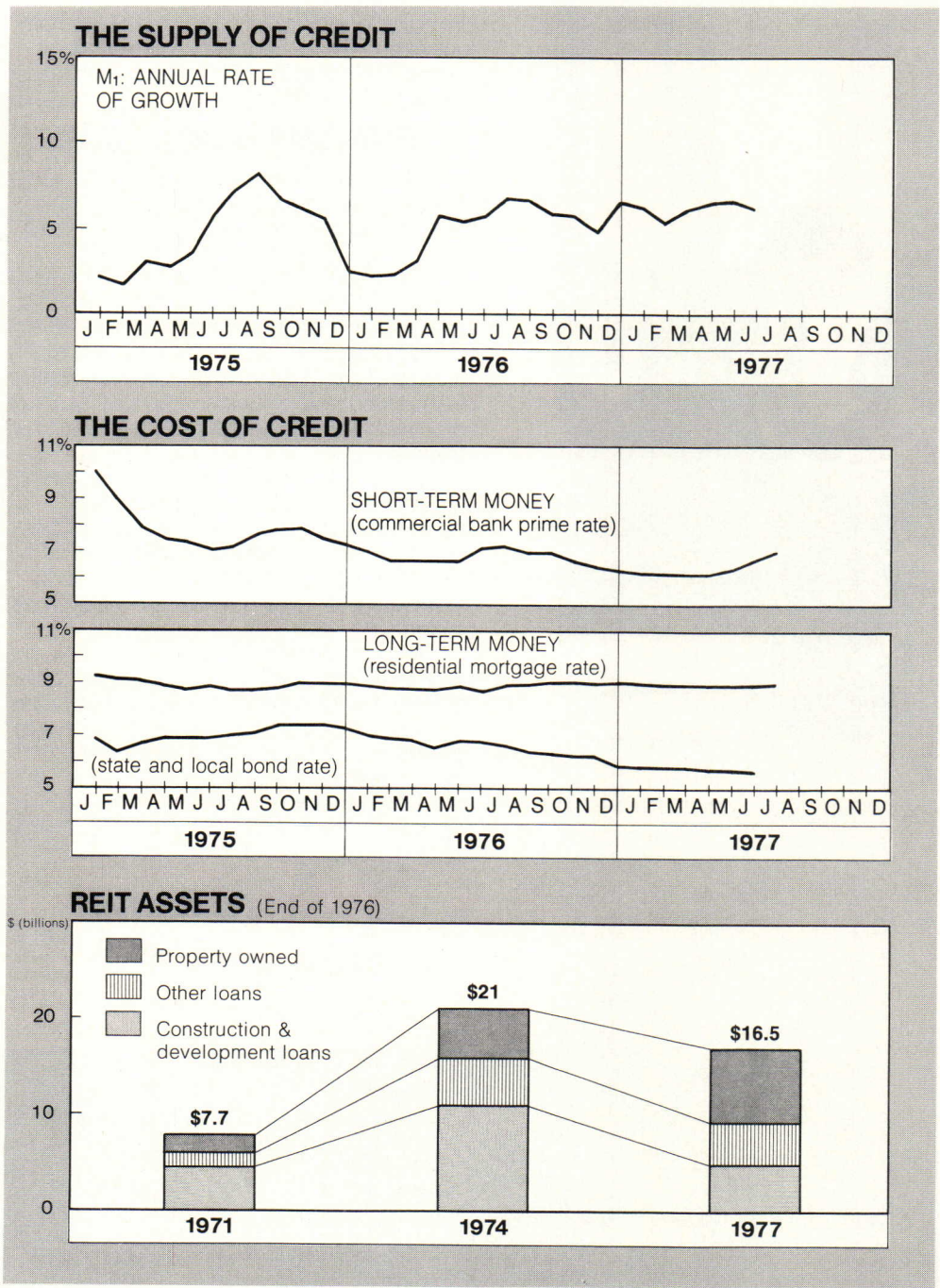
The period from 1971 to 1974 were the REIT's "go-go" years. Their holdings of development/construction loans shot up from \$4 billion to \$11 billion. Most of this rapid expansion was financed by means of short-term borrowing by the REITs—mostly bank loans and commercial paper—which also soared, from \$2 billion in 1971 to \$11 billion by 1974!

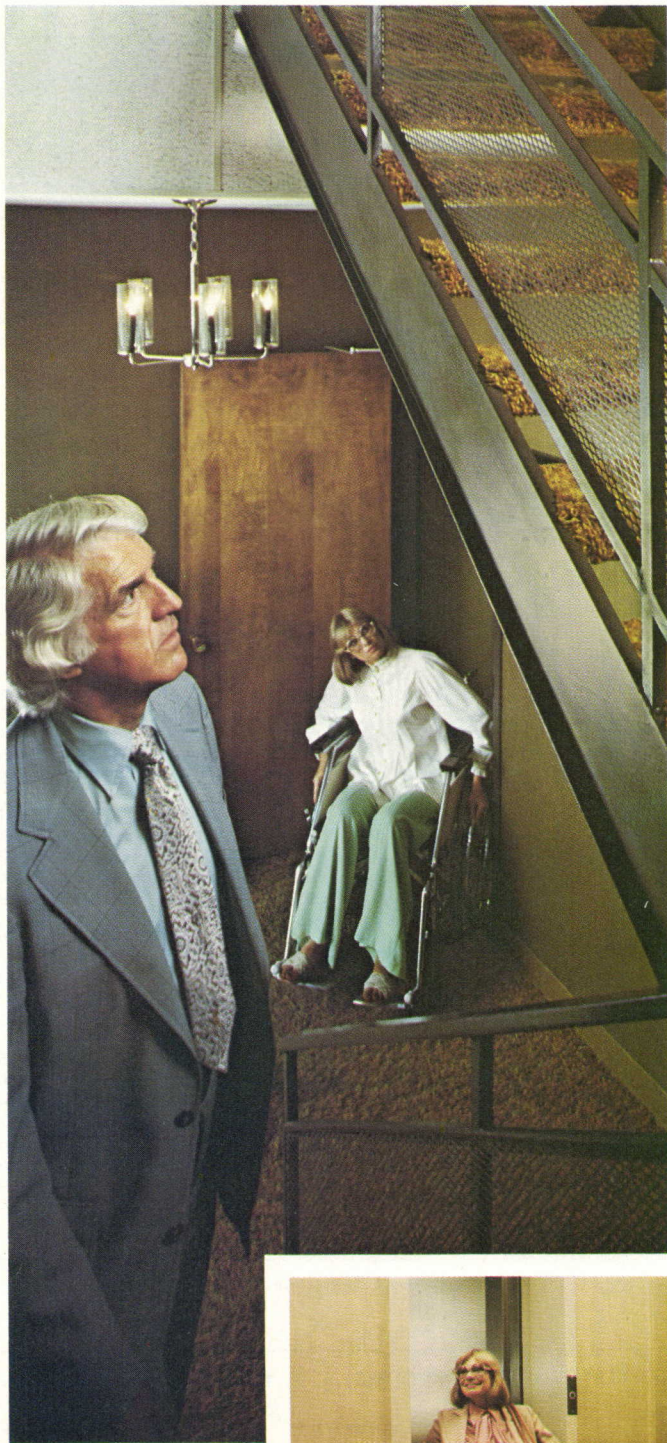
The bubble burst with the onset of recession late in 1974, setting off a scramble for solvency. To satisfy the claims of their bankers, the REITs had to foreclose on failing developers, becoming involuntary property owners in the process. During 1975 and 1976, REIT development/construction loans outstanding were reduced by \$7 billion (from \$11 billion to \$4 billion), mostly by foreclosure. Holdings of land and partly completed structures increased by a net of \$5 billion between 1974 and 1976, after a \$2 billion "asset swap" with the banks to cancel some of the REIT debt.

The REIT's—most of them, anyway—survived the ordeal at the price of becoming property managers instead of lenders. Asset swaps reduced their burdensome debt at commercial banks, but even now more than half the total of REIT assets is still tied up in real estate. This compares with only 15 per cent back in their best year, 1973.

According to the REIT industry's own trade association, regaining their former position as a source of development funds will be a gradual process, but they report that, "... early 1977 marked the beginning of a turnaround in the performance and investment activity of a large number of REITs."

George A. Christie
 Vice President and Chief Economist
 McGraw-Hill Information Systems Company





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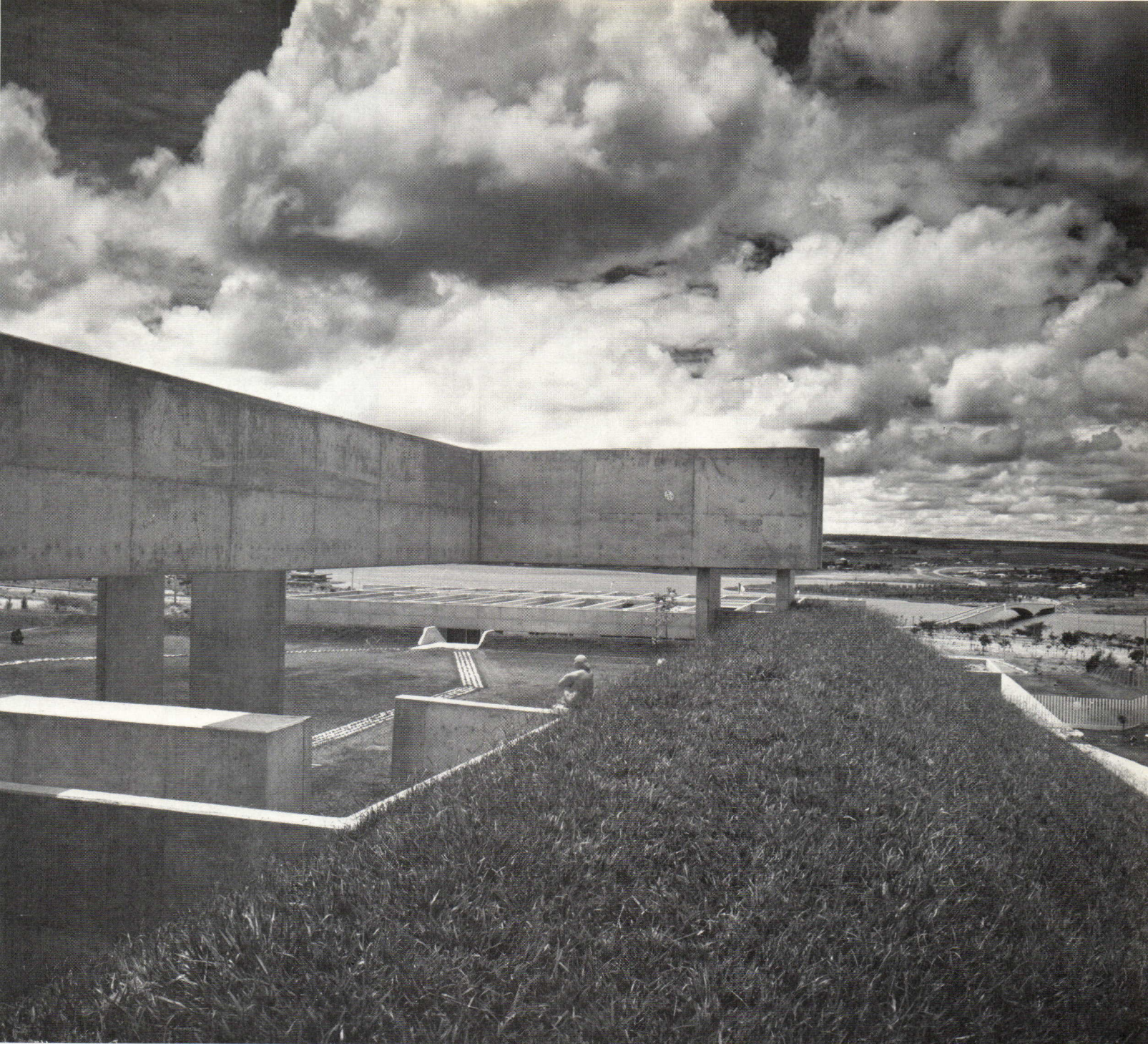
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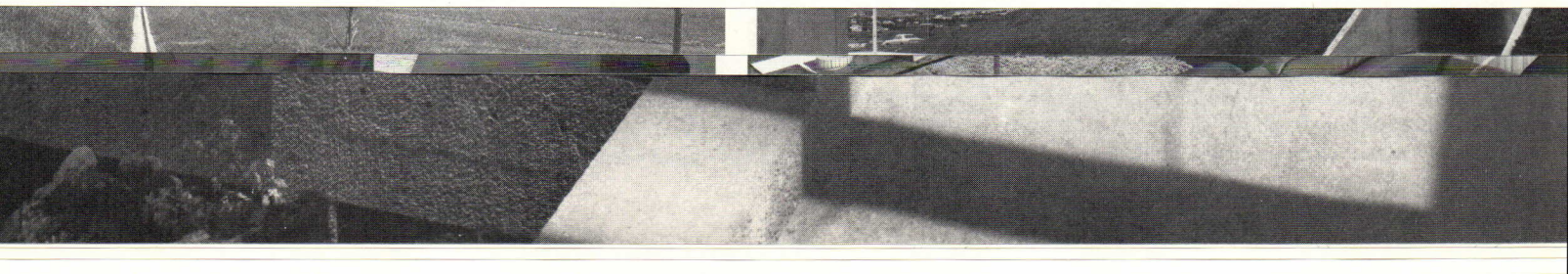
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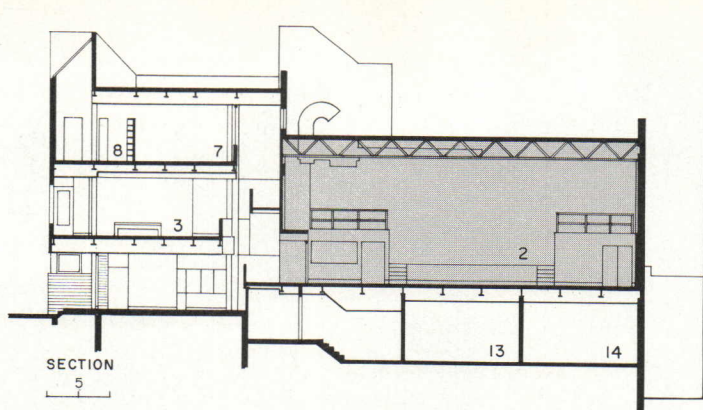
AN ARRESTING VIEW TO THE SOUTH

Two new buildings by the Mexico City firm of Teodoro Gonzalez de Leon and Abraham Zabludovsky draw our attention to important new designs south of the Rio Grande. One, south of the Orinoco and even the Amazon, is the recently completed Mexican embassy in Brasilia. The other, in Mexico's capital, is a new graduate center for social sciences—the Colegio de Mexico. Both buildings are carefully adapted by the architects to unusual sites and make extensive use of concrete both as structure and as a finish material.

ARCHITECTURAL RECORD OCTOBER 1977



AROUND A SPECTACULAR ENTRY COURT, NEW SPACES FOR LEARNING TAKE SHAPE



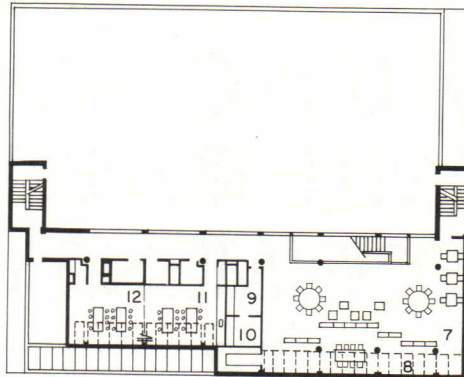
Two of the impressions the architects wished conveyed through the Webster Center design were expressed articulation and community space. At far left, the Center's facades were defined by its interior spaces and skylights, giving the steel and brick structure heightened visibility when viewed against a backdrop of older, more conventional buildings. The second floor loggia ties the Center to the community and to its site. The Center's largest activity room is the gym (below) which

occupies two floors on the building's north side while the smaller activity rooms occupy the south side (see floor plans at left and section above). The curtained stage can be seen at the rear of the gym below. Above, the interrelationship between the building's two parts is shown in the section where the floors meet at half levels along the main circulation corridors. As the architects claim, something is happening at each level along the staircase.

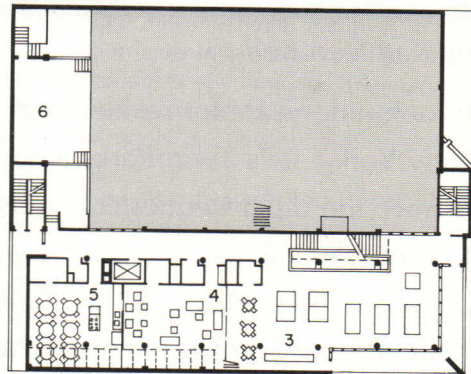


- | | |
|-----------------|-------------------|
| 1. Admin | 8. Library |
| 2. Gym | 9. Photography |
| 3. Active games | 10. Darkroom |
| 4. Lounge | 11. Arts, crafts |
| 5. Homemaking | 12. Activity room |
| 6. Stage | 13. Electronics |
| 7. Quiet games | 14. Woodworking |

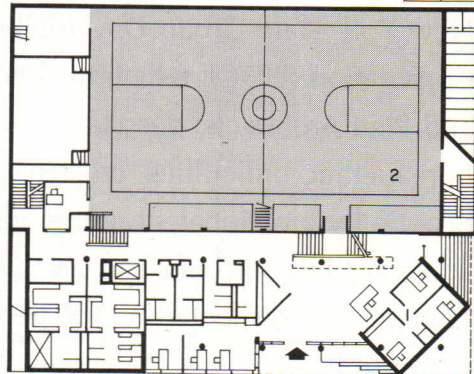
THIRD FLOOR



SECOND FLOOR



FIRST FLOOR



the Budget tried to decide which agency would run it.

Father Mario Zicarelli, the driving force behind much of the improvements in housing and education in this agglomeration of neighborhoods known as Twin Parks, is also remembered on the plaque. Just before the schematic design for the Center was presented to the City, he commented, "It's too simple. They'll never understand it."

And simple it is.

The site for this community recreation center is a cramped corner property at the intersection of two main routes of neighborhood traffic: north-south along Webster Avenue and east-west along dead-ended Ford Street and an important pedestrian easement through the Housing Authority project. The dual main entrance to the Center recognizes

this corner and provides interior and exterior gathering and milling places. (The Housing Authority's plans to make this small section of Ford Street a play street were abandoned while the Center was under construction.)

While the building's program called for it to express a welcome to the community, the City severely restricted the use of windows and other openings onto the street. To overcome this conflict, skylights and a second floor loggia overlooking the street corner were incorporated, creating a feeling of openness, bringing in natural light and connecting the Center to the community. The western side of the building and the roof were given special consideration and painted in some areas to give the Housing Authority occupants a pleasant and interesting view.

A gym takes up the whole north side of the

tiny site. The other half of the building is a three-story loft-like structure capable of being divided into smaller activity rooms. All the Center's circulation and services are situated between the two parts of the building staggered at half levels between the floors. A few rooms requiring special equipment are located in a partial basement, taking advantage of the site's natural slope and allowing them to be closed off when not in use.

On a visit during a recent school day, the dual corner entrance (steps on Webster Avenue and a ramp for the handicapped on Ford Street, see photo above) and the second-story porch and high sloping windows on the second and third stories, provided a sense of welcome despite the almost total absence of standard windows. The building's outward form follows the shape of its interior spaces to present an



articulated mass of projected "edges" that stand out in sharp contrast to the flat and regular surfaces of old-law tenements and new public housing next door. The Center is obviously a special place.

Inside, soon after school had let out, the spacious lobby was being used just as Smotrich and Platt had intended—as a general gathering place, almost as an extension of the street outside, where people going to and from the Center stopped to chat in pairs or small groups. Chairs were still stacked near one of the entrances, left over from a community function the night before. A senior citizens' arts and crafts group was at work at tables set up in the lobby, obviously enjoying the hubbub of youngsters moving through the area to and from the gym and the director's office which is located, for security and convenience, nearby.

Two young men were recruited from the general activity to give a tour through the now-three-year-old building. In the gym, which is half a level above the lobby, several groups of children were practicing basketball. The tour guides noted that the platform at the west end of the gym had been used for a play just the week before.

Walking up the broad and only partially enclosed central staircase (there are also two enclosed fire stairs at the east and west ends of the Center) to the second story game rooms, sunshine from a clerestory window in the stairwell and from the skylights on the upper floors was obvious and welcome. Overzealous pool shooters playing at the head of the stairs apparently caused the only instance of broken glass at the Center so far—in the floor-to-ceiling windows looking out on the corner

porch. A fully equipped kitchen, used for domestic science classes as well as feeding special gatherings, is on this floor. An adjacent lounge, originally intended to accommodate a senior citizens' hot meal program, can be separated from the pool room and itself further subdivided by folding walls.

Noise from the first floor activities was only partially diminished here, but on the third floor where the library, chess tables and art rooms are located, near-quiet reigned. Here as on the second floor, the skylight-like windows face south, except in the art rooms where they face north.

Even down in the basement, the electronics, carpentry and ceramics shops were all lit by sunlight from a broad screened porch at the same level, which also serves as an outdoor work area in good weather. The only major

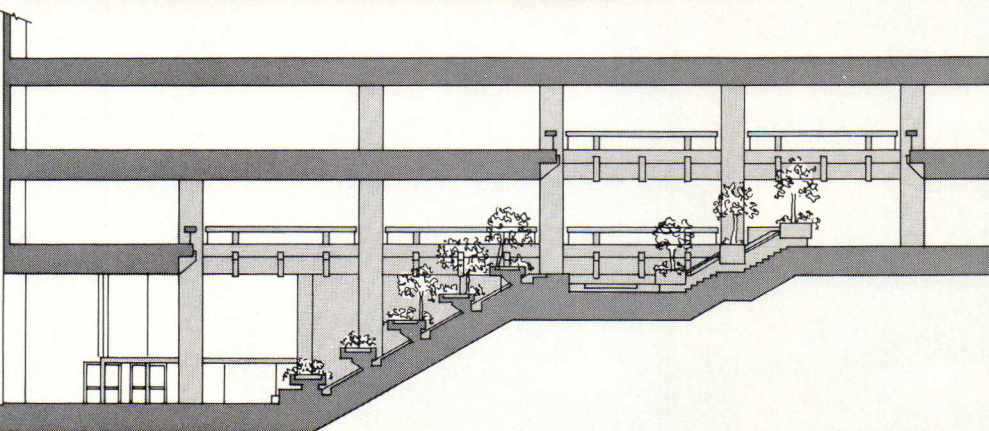
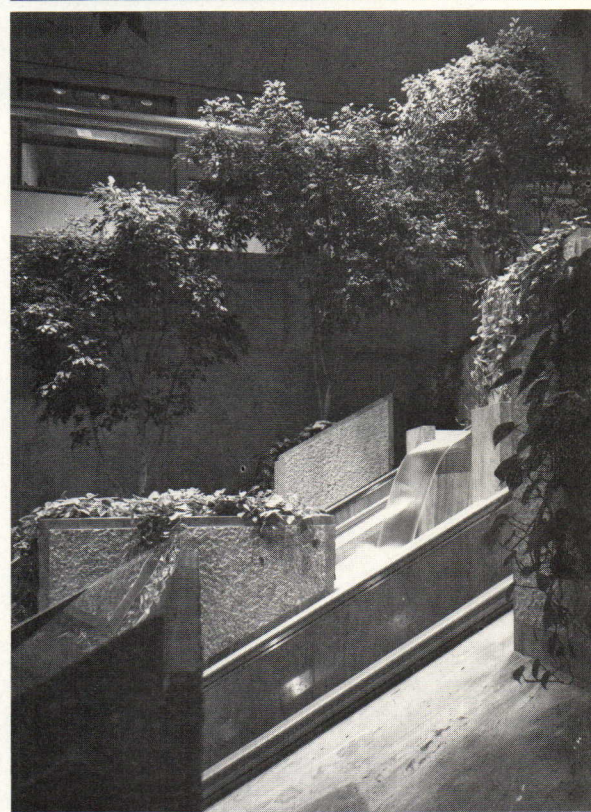




Most of us are in the habit of thinking of a work of architecture as an object, a thing to be admired from the outside for the shape it has and on the inside for the spaces it apparently creates. A broader, and almost certainly more convincing, view, though, could be devised to go something like this: architecture is not necessarily a thing at all, but is instead a selection of environmental phenomena designed to make some impression on the people who perceive it. Looking at architecture this way has several advantages, the first of which is that it includes the more common definition while allowing for others as well. Another advantage is that it puts the emphasis on people, where it properly belongs, making the question of what it is less urgent than the question of how it feels. Still another advantage is that it gives us the chance to call Warren Plantner Associates' new malls at Water Tower Place in Chicago—certainly not single objects, and certainly a long series of phenomena—architecture.

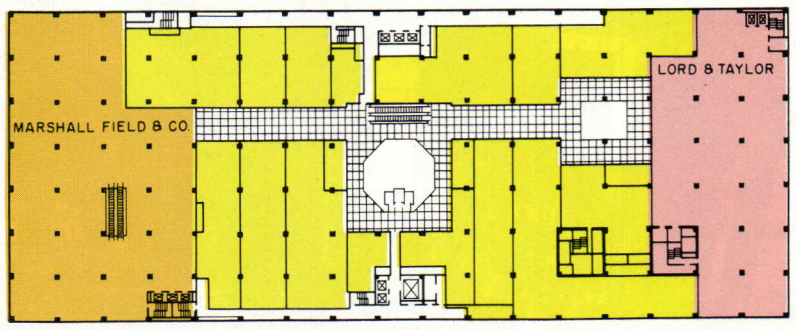
Indeed the over-all object here is in one sense its own greatest disadvantage, the thing to be phenomenally overcome. Seven floors of small and medium-size shops, beginning two floors above the ground, are buried within the building. Was there any way to bring in the business? Was there any way to make people, once they were there, feel like they were in a real place?

The first step was to create what the Platner office calls a "cascading garden"—two floors' worth of escalators, plants, and fountains that rise from the level of the street to the main floor of a "Grand Atrium" inside. Splayed outward at the top to contradict perspective and make the journey seem shorter, the escalators lead in the crowds. . .

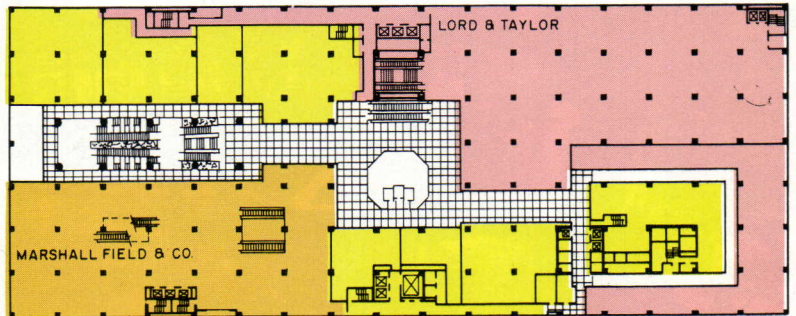




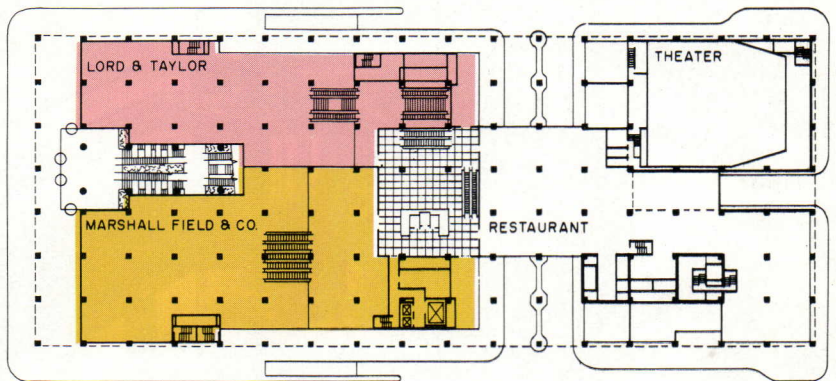
Once inside the Grand Atrium, the shopper's attention is grabbed by the shiny glass elevator shaft that slickly rises through the full height of this interior court. Balconies on the middle floors are set back to give the space a central bulge, and all around it the individual shops are located. The precise placement of these atrium stores, as well as the exact amount of space allotted to them on each floor, is determined by the amount of space left over after the two "magnet" stores of Water Tower Place—Lord & Taylor and Marshall Field—have been accounted for. Since these two stores wind up irregularly through and around the building, the arrangement of the atrium stores is similarly irregular. One of the only constants is the presence of the central court, made more memorable by the strong presence of the glassy elevators, and acting as an anchor for the otherwise random plan. Another constant is the fact that the long corridors that radiate away from it are not allowed simply to end in a blank wall, but are instead (for the eye, at least) open through small wells to a similar corridor either above or below. The four plans on the right and the section below show how the available space on each floor is shared between the atrium shops and the two large department stores. They also begin to show how all three are related to the entire Water Tower Place complex—a building with a ten-story base from which a tower rises with 22 floors for a Ritz-Carlton Hotel and 44 floors for luxury condominiums (see RECORD, April 1976, pages 136-140). According to the dictates of common-sense economic planning, the amount of public space in the atrium shopping area is minimized and the amount of rentable space is maximized. What is also maximized—phenomenally—is the sense of a great public space.



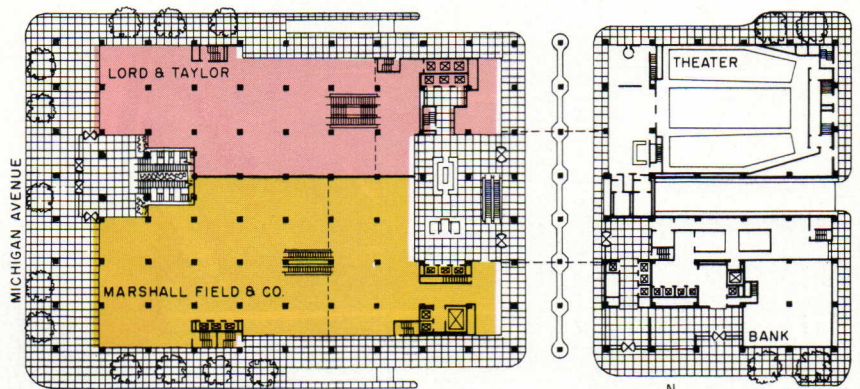
FOURTH FLOOR



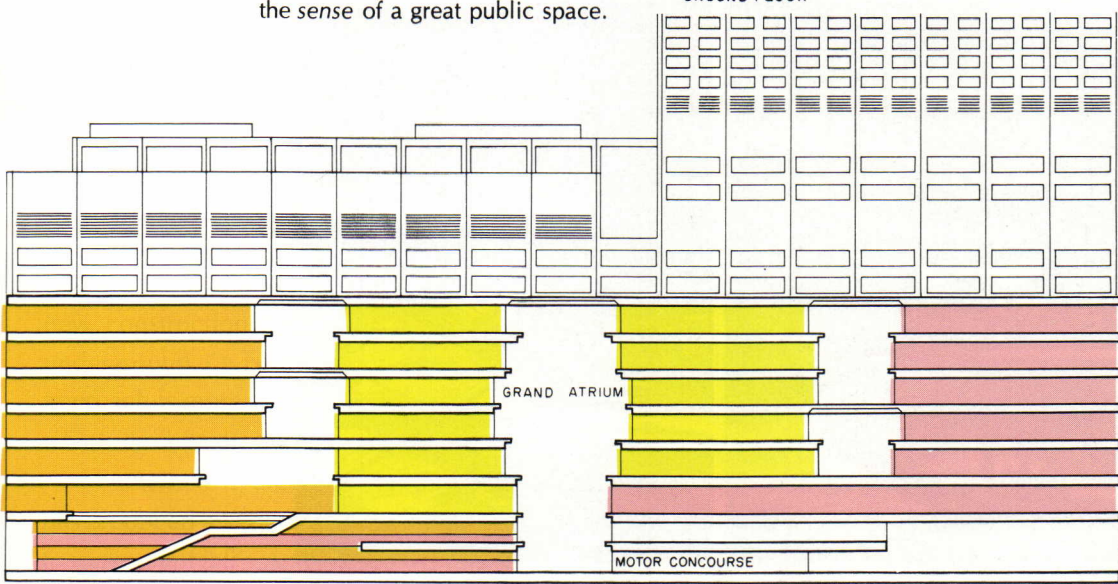
SECOND FLOOR



MEZZANINE FLOOR



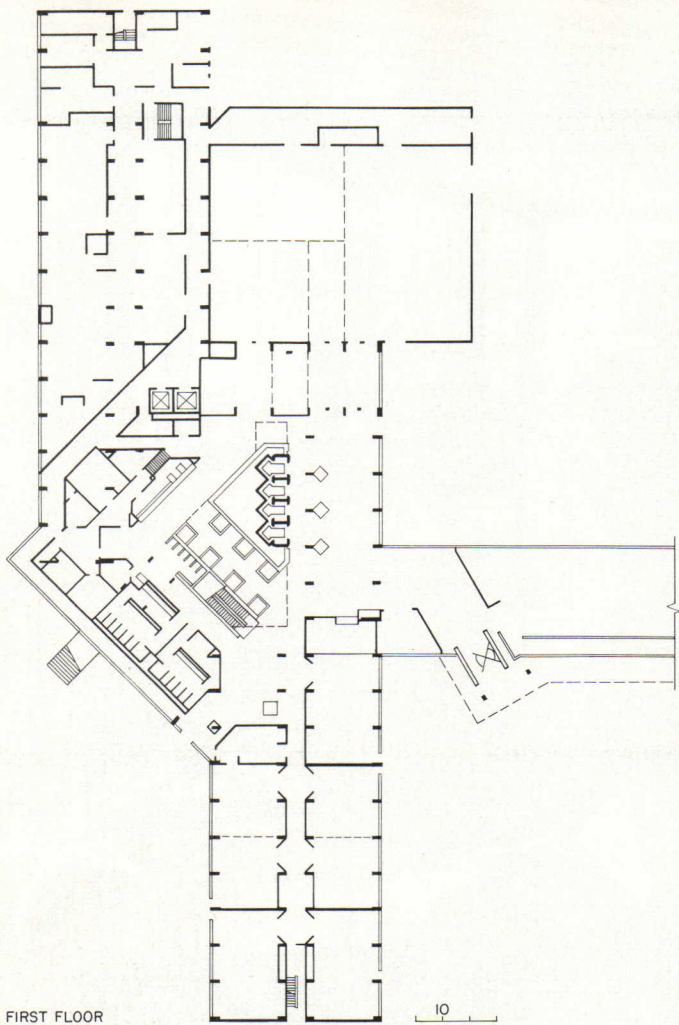
GROUND FLOOR



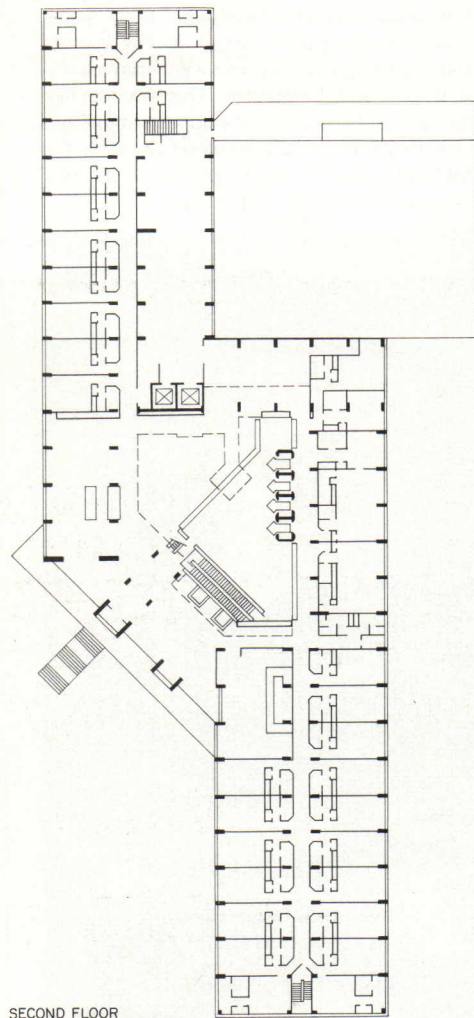
- MARSHALL FIELD & CO.
- LORD & TAYLOR
- ATRIUM SHOPS
- OFFICE COMPLEX 2 FLOORS
- 7TH FLOOR
- 6TH FLOOR
- 5TH FLOOR
- 4TH FLOOR
- 3RD FLOOR
- 2ND FLOOR
- MEZZANINE
- GROUND FLOOR

RITZ-CARLTON HOTEL 22 FLOORS

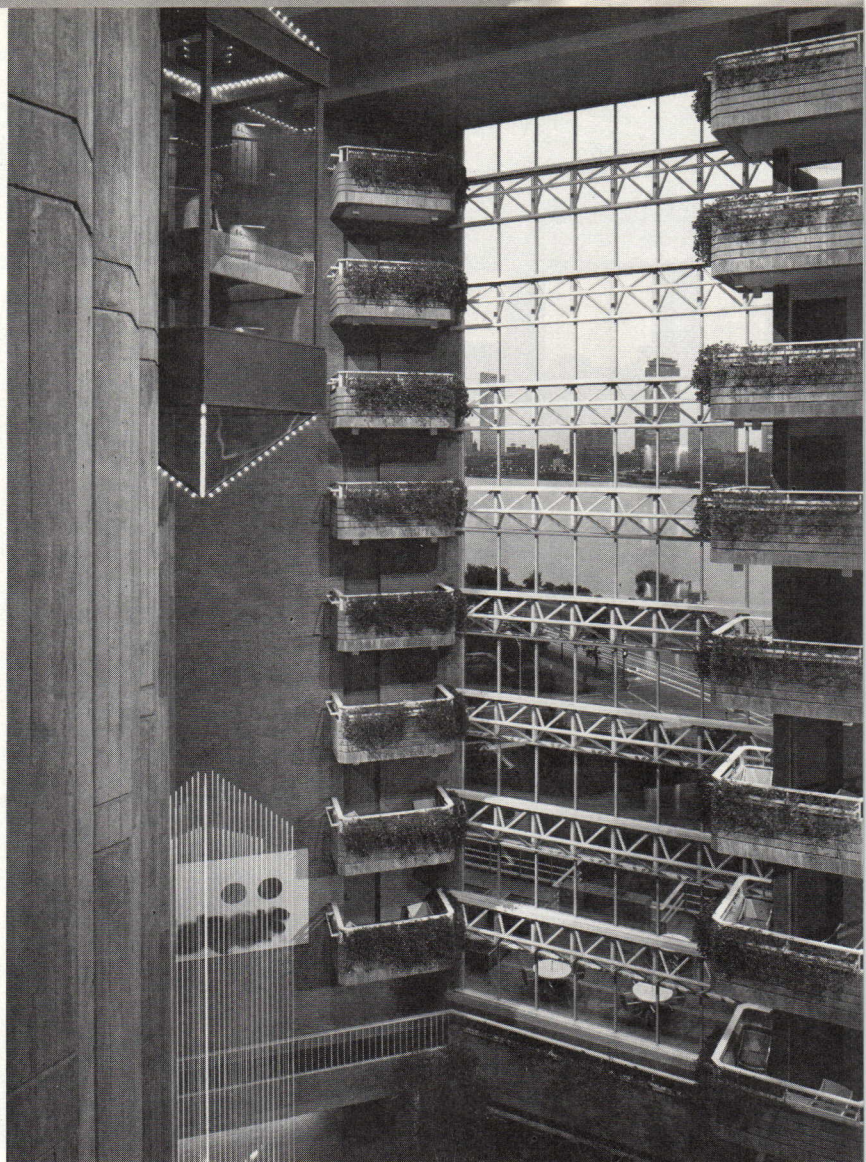




FIRST FLOOR



SECOND FLOOR



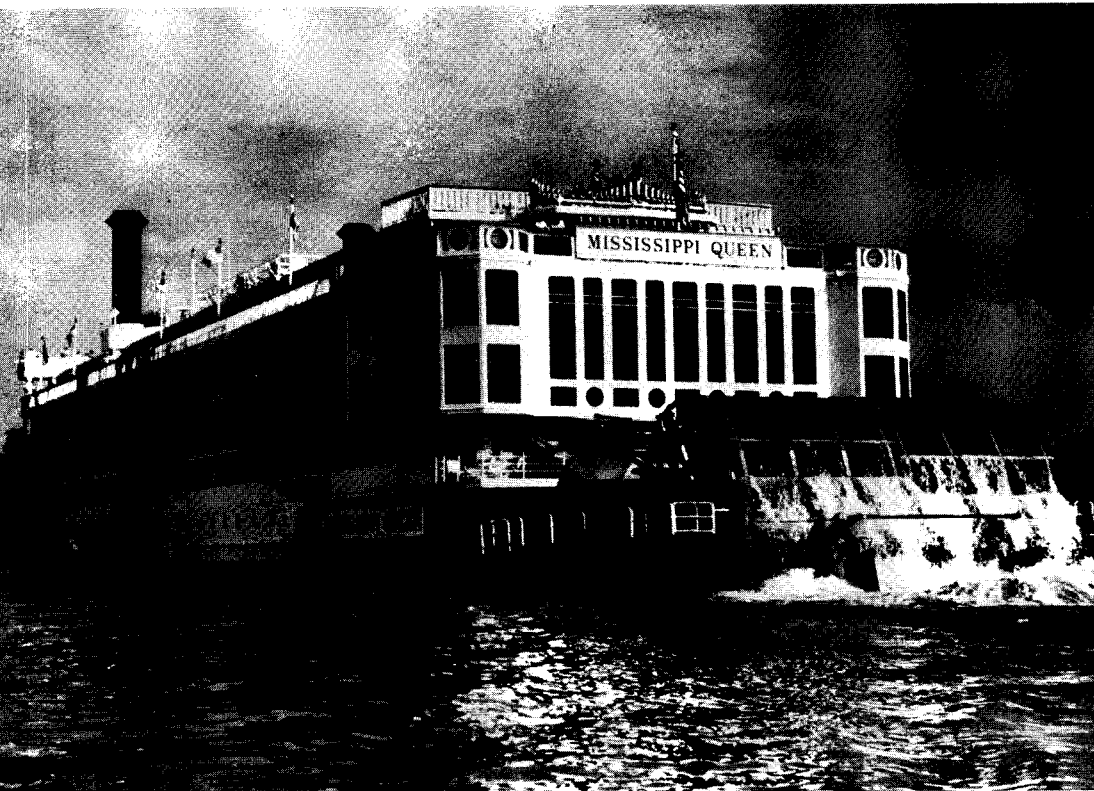
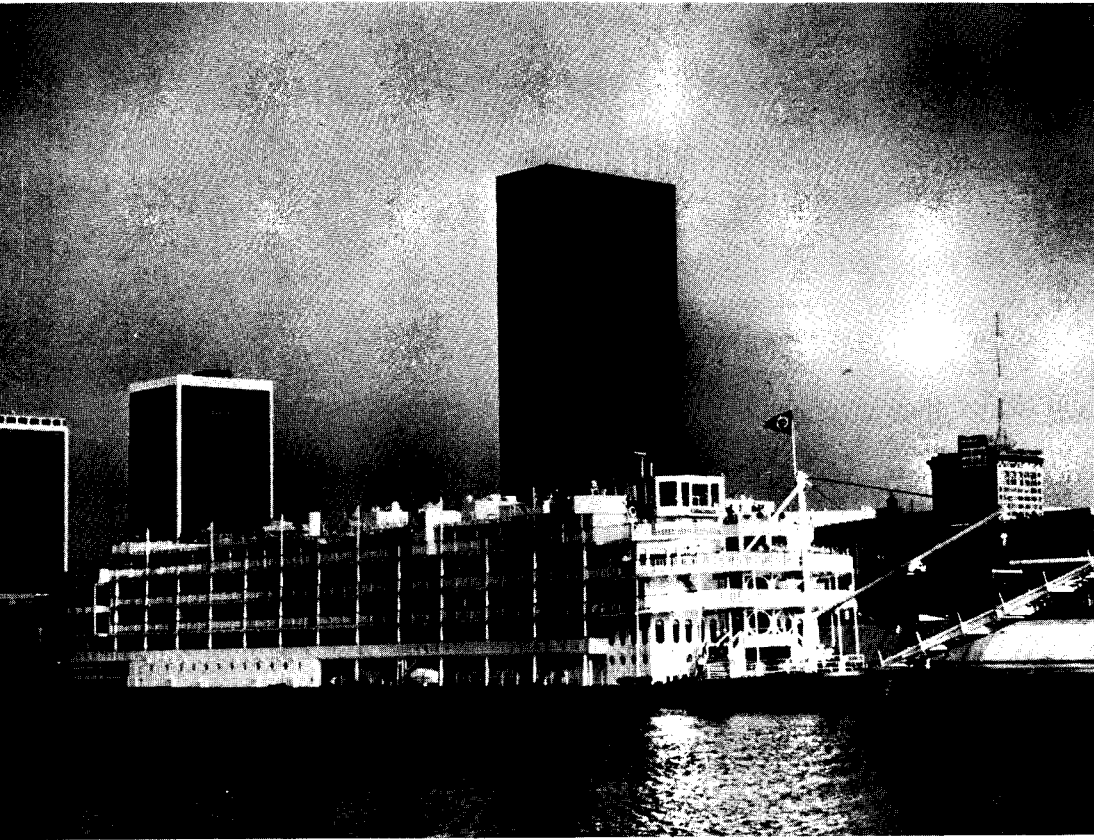
The atrium brings to mind the great interior space of the Larkin building by Frank Lloyd Wright and the glass-enclosed elevators recall his triangulated decoration. The 100-foot-high glass wall braced by space frames (another attractive triangulation) overlooks the Charles River and the Boston skyline. The introduction of natural light from a great window, rather than from the usual skylight, makes the illumination less even but more dramatic. This atrium is an immensely attractive and cheerful place, unimposing and friendly.





A LUXURY HOTEL DESIGNED TO FLOAT DOWN THE MISSISSIPPI TO NEW ORLEANS

William Muster



William Muster

The tonnage of the Mississippi Queen is 3500, it is 379 feet long, with a 67 foot beam, an 8 foot draft and a clear height from the water line of 52 feet. It carries 385 passengers and a crew of 125. The calliope, said to be the largest in existence, can be seen in the photo above, just beyond the flag. The social center of the boat is the observation deck which contains the Grand Saloon and the Dining Saloon (opposite page top and bottom).

This sternwheeler riverboat, berthed in Cincinnati, is a floating luxury hotel which made its maiden voyage last year. By the time this huge vessel (longer than a football field) left the pier, the construction costs had reached over \$23 million. The Queen features seven decks, 218 staterooms, a swimming pool, sauna, movie theater, a two-deck dining room and a grand salon. It was conceived in the tradition of the great riverboats and was built to the stringent conditions of the U.S. Coast Guard.

The preliminary design was done by Albert P. Hinckley, Jr. the project architect, who then turned it over to a firm of naval architects and engineers for the structural and mechanical development while he assembled his design team. The designers, including architect David Beer of Welton Becket & Associates who was in charge of the interiors, agreed that the ship should be designed to exploit the limitations of modern passenger ship construction; use a limited range of colors, materials and forms; and be well detailed and executed. It was to be comfortable to live on, sumptuous and quiet in its public areas with lots of brass, bright stainless steel and potted palms. A beige and brown color palette was chosen, accented by red in the cinema and green in the entrance lounge. Since the bulkheads of the ship are heavily fenestrated, the designers decided that decorative effects should be largely confined to the ceilings. These consist of asbestos-composition panels four feet wide with eight-inch gaps. Over one hundred different designs have been silk screened to these panels.

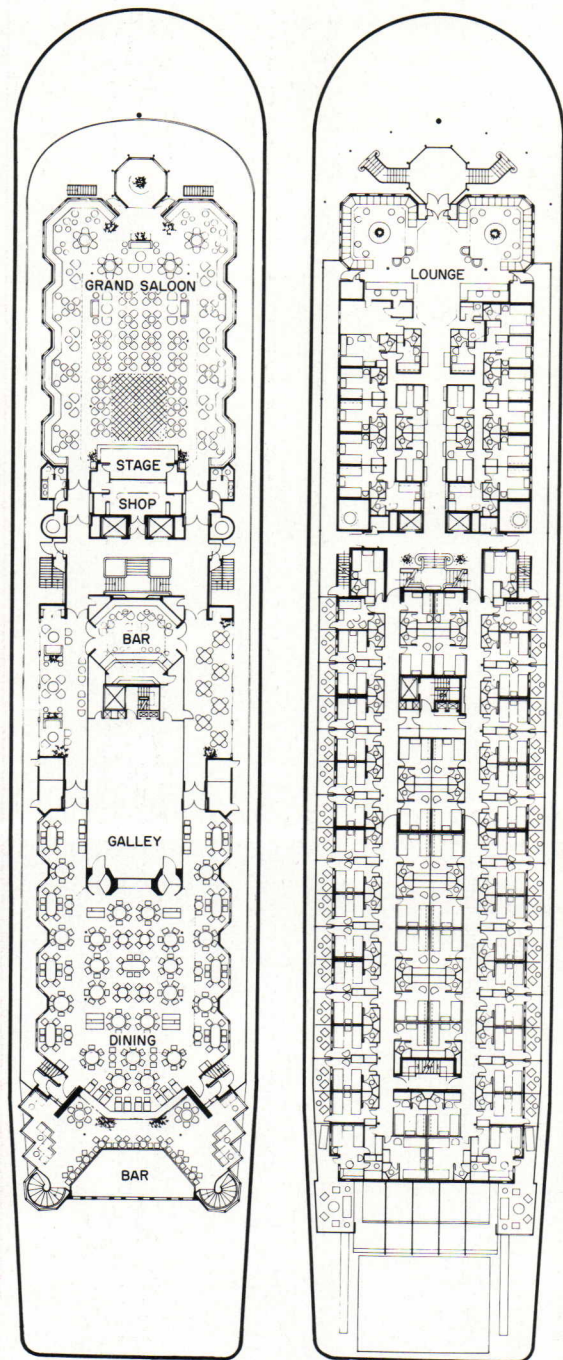
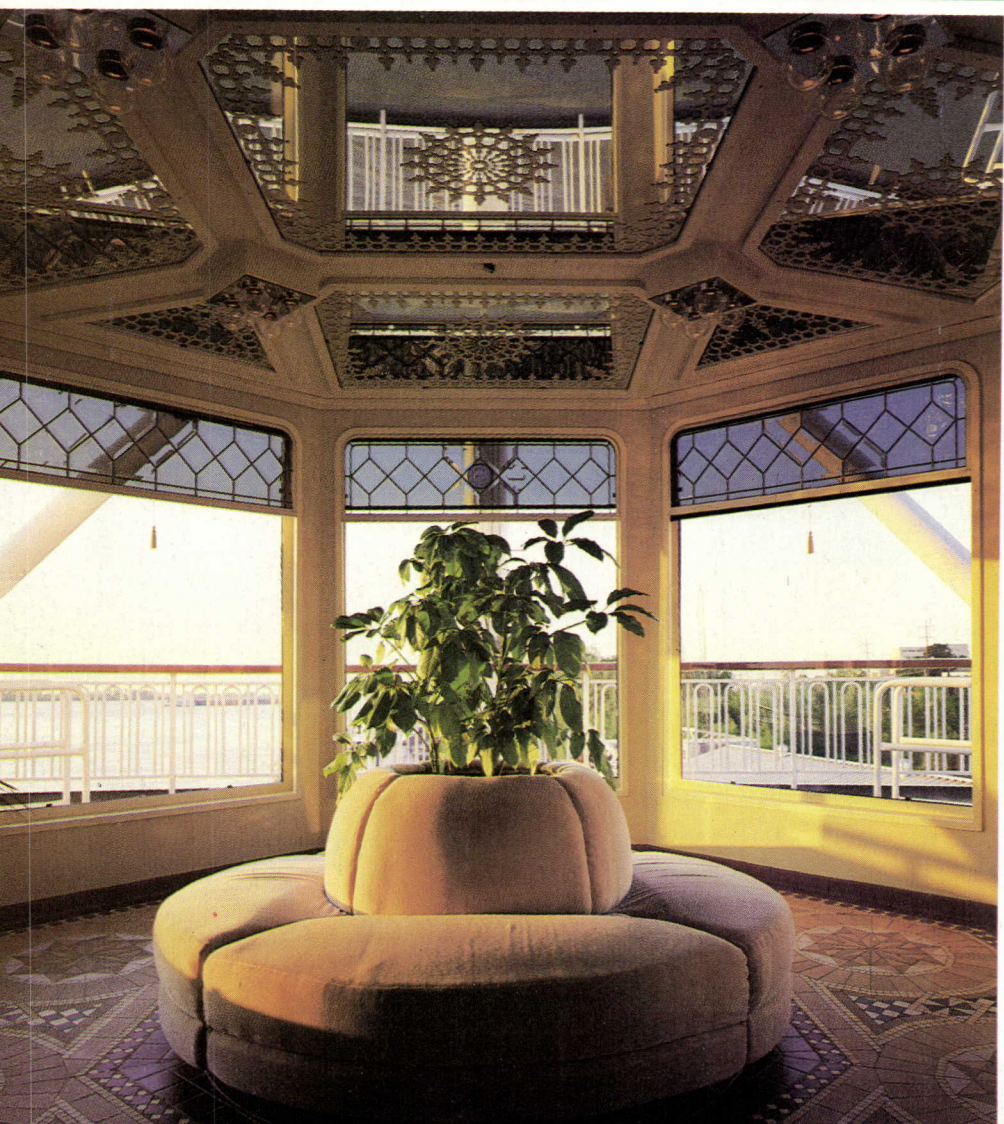
From the exterior the steamboat is in the spirit of its great predecessors, including the Delta Queen. The proportions and details are correct and there is even a calliope on the top deck. In the tradition of riverboat design, the architects put the principal public rooms on a high deck to give the passengers an unobstructed view of the passing river scene. This arrangement also made it possible to give these rooms high ceilings. (In the old ships the saloon extended the full length of the vessel with clerestory windows over the flanking rows of cabins). On the Mississippi Queen, the cabins are on the three decks below the public rooms. All have private baths and many have private verandas. The passenger decks topside have a swimming pool, a sheltered bar and a sauna. The bottom deck contains crew accommodation, storage, boiler and engine rooms.

MISSISSIPPI QUEEN STEAMBOAT. Owner: Delta Queen Steamboat Company. Project architect: Albert P. Hinckley, Jr. Exterior designer: James Gardner. Interior designers: Welton Becket & Associates—architect-in-charge: David Beer. Project director: James S. Demetrian. Naval architects and marine engineers: Three Quays Marine Services. Applied designs: Joyce Conwy-Evans, Des RCA. Other designers: Desmond Freeman (mosaic floor); Patricia Turner (mermaids); Phillip Kemp (plaster bas-reliefs of river boats); Harry Gitlin (lighting). Builder: Jeffboat, Inc.



Marvin Rand photos



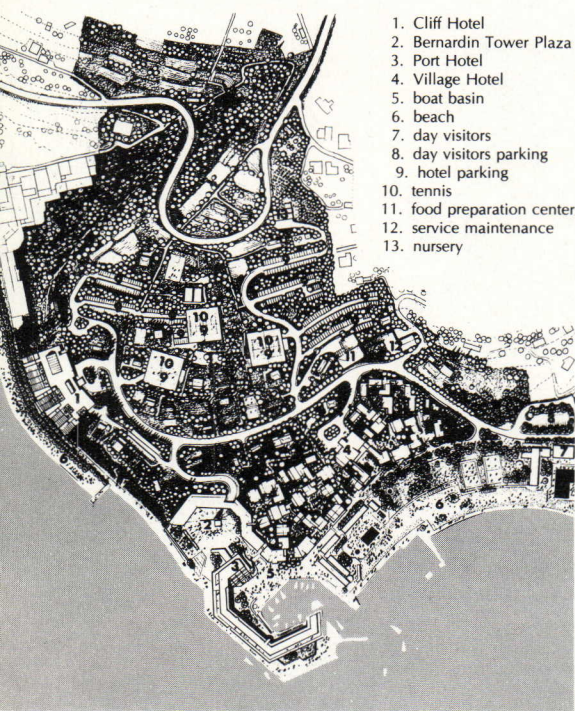


The observation deck plan is shown at the left and the cabin deck plan at the right above. The port gallery (top left) has sleek contemporary furniture in effective contrast with the nostalgic silk-screened ornament on the asbestos-composition ceiling panels. The octagonal gazebo (bottom left) can be seen in the plan at the forward end of the observation deck. It is cheerfully Victorian in its carpet, stained glass and lattices. The grand stair, an essential element in all passenger ships which aspire to elegance, is very grand indeed on the Mississippi Queen (opposite page). The basic elements of David Beer's interior design scheme are all to be found here—the mirrors, the bright metals and the panels stencilled with Victorian ornament.





A RESORT VILLAGE ON THE COAST OF YUGOSLAVIA



1. Cliff Hotel
2. Bernardin Tower Plaza
3. Port Hotel
4. Village Hotel
5. boat basin
6. beach
7. day visitors
8. day visitors parking
9. hotel parking
10. tennis
11. food preparation center
12. service maintenance
13. nursery

Only 50 minutes by boat from Venice, by way of the northern Adriatic Sea, the Hotel Bernardin Resort occupies a remarkably beautiful portion of the Slovenian coast. Nearby are picturesque maritime towns and fishing villages at the edge of a green and hilly landscape. The resort consists of three separate hotel areas for three classes of service; and complete recreational, shopping and support facilities for 2500 overnight guests and 1000 daily visitors. The 65-acre site is entered by car from a ridge from which the land slopes southward to a long man-made beach. At the west it slopes sharply to a smaller beach.

Architect Alex Cvijanovic and his team decided from the beginning that the small-scale rural quality of the region should be respected. The hotel buildings, therefore, were designed to be as low as possible and as modest in scale. Automobiles have been eliminated from the resort proper. Except for arrival and departure, all circulation is by foot, or quiet electric cart. Cvijanovic points out that the resort is extremely popular for families with small children and attributes this in part to the car-free pedestrian spaces.

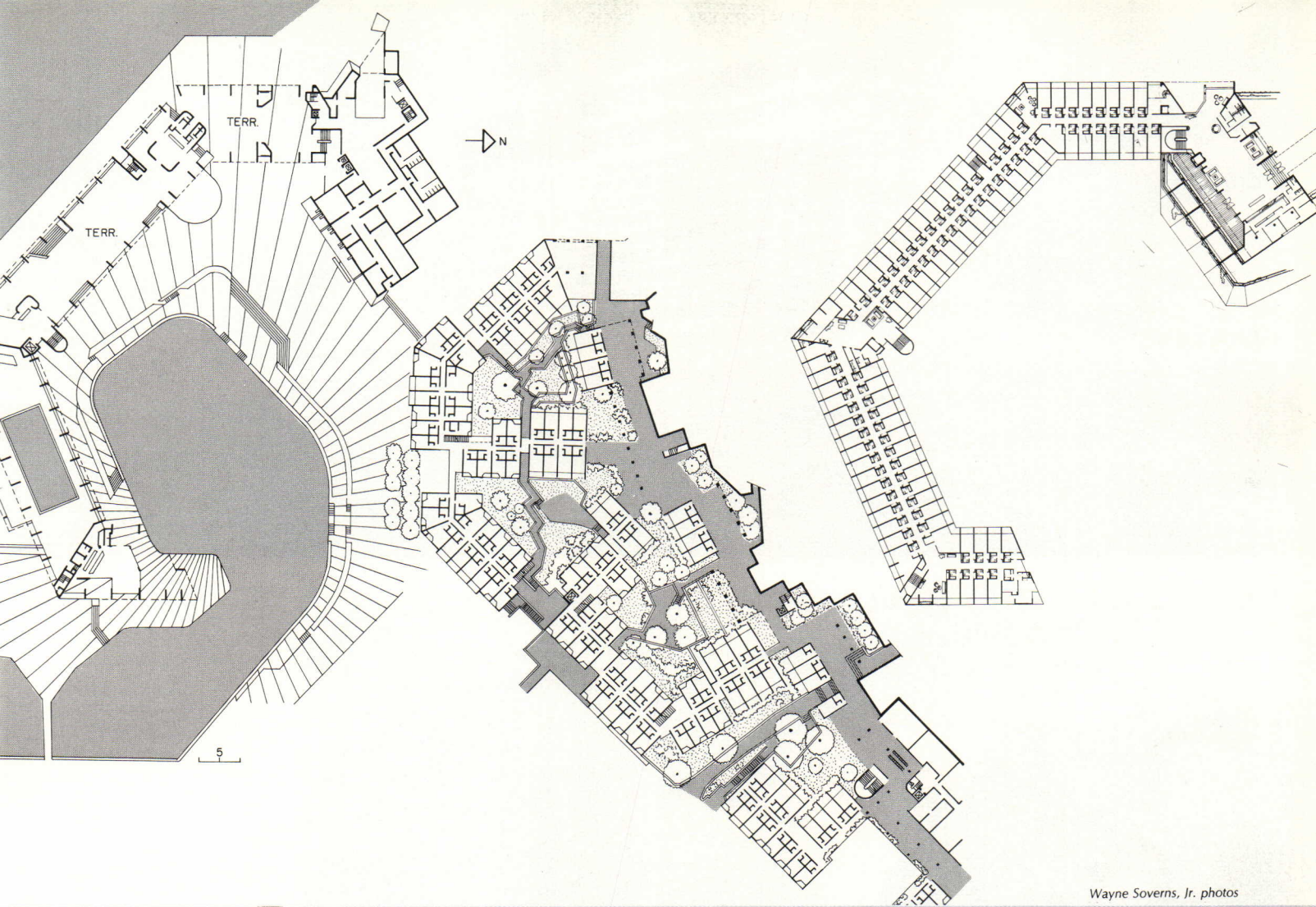
As the plot plan (left) indicates, the three hotel areas are planned midway along and at either end of the main pedestrian promenade which extends along the beach at the foot of the Bernardin hill. A landmark tower, all that remains of an old monastery, is the focal point of the new town plaza (above) at the heart of the resort. From this plaza, steps lead downward to the boat basin (opposite page) which is partially surrounded by the second of the three

hotels. All the shops and general entertainment facilities are located along the promenade, within the tower plaza, or surrounding the boat basin.

The sports areas and the parking lots are located on the upper slopes and the service buildings are near the entrance road. The tennis courts have been placed on decks over the parking, and a play area for children has been provided near the sports fields on the hillside. Facilities for bicycling, boating, snorkeling and scuba diving are located at the main beach.

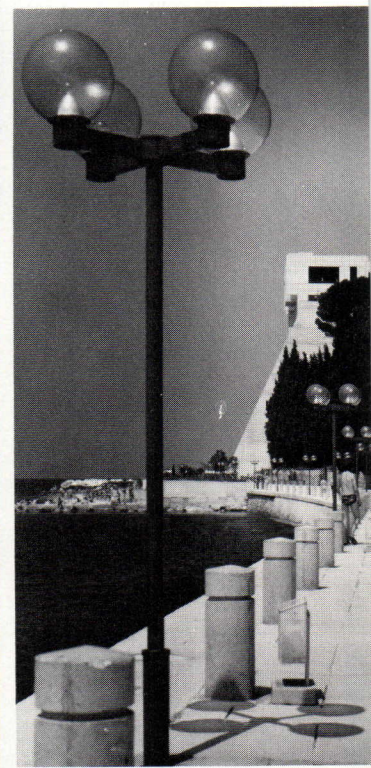
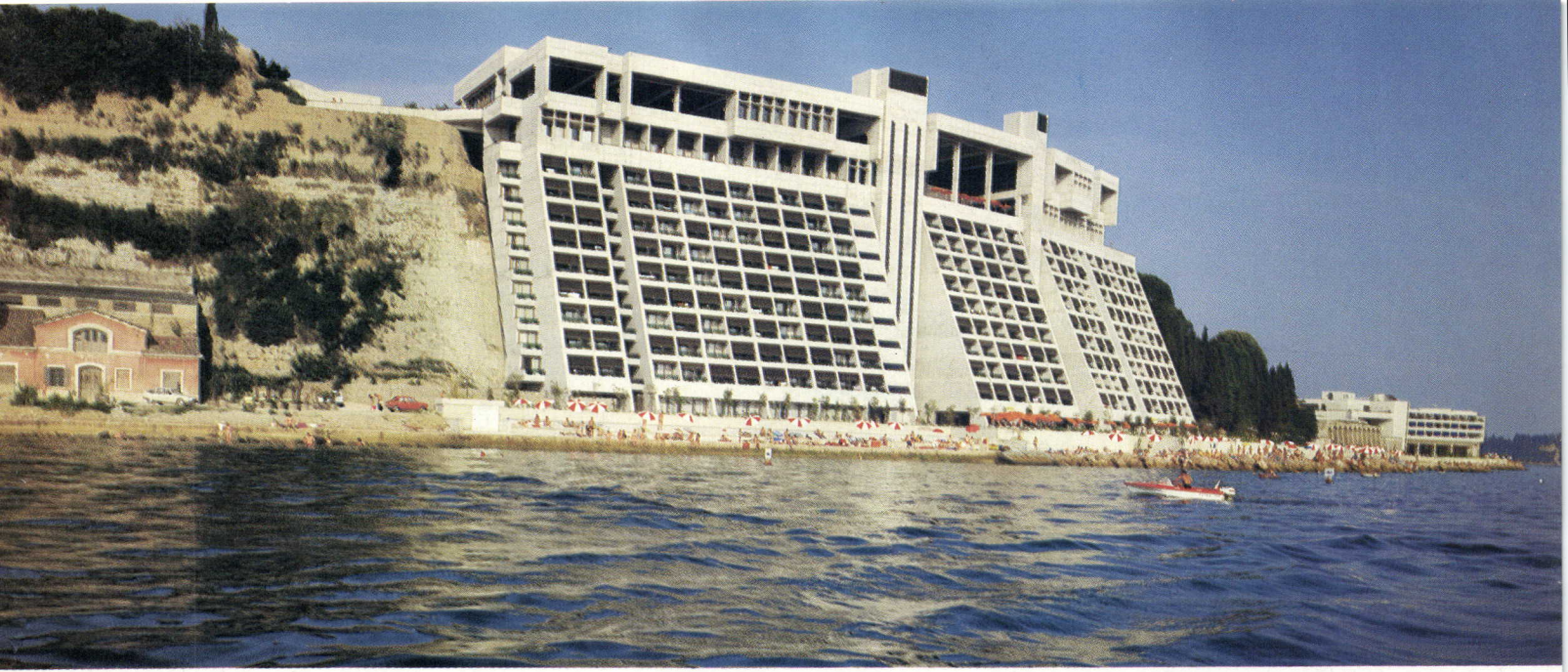
The architects selected building materials for the resort which are contemporary yet in the vernacular of the region. The walls are white stucco, the roofs a regional red tile, and all wood is left unpainted and unstained. TAC designed all the furniture and it was made in Yugoslavia.

BERNARDIN TOURISM RESORT, Piran, Yugoslavia. Owner: Hotel Bernardin Enterprise. Architects: The Architects Collaborative—principals-in-charge: Alex Cvijanovic, John C. Harkness; associates-in-charge: Perry Neubauer, Serge Cvijanovic; programming and schematic design: Roy Daley, Igor Platounoff; project architects: Tony Yamada, Srecko Diminic; supervision: George Patten, Vladimir Petokovic, Milan Paulinic; landscape: John Ritter, Robert Thompson, Nicolas Reed; interiors: Milan Paulinic, Klaus Muller. Consultants: SOCOTEC, Paris; Slovenijaproject, Yugoslavia (structural); Investbiro, Yugoslavia; IMP, Yugoslavia (mechanical); Zaldastani Associates; ZRMK, Yugoslavia (soils and foundations); Glion, Switzerland (hotel operations). General contractors: Gradis, Yugoslavia.



Wayne Sovers, Jr. photos







The Cliff Hotel (opposite page top) has been constructed against the face of a cliff at the edge of the Adriatic. At its base, facing the beach, is a broad terrace (right). All its rooms have private terraces with views of the sea. The main entrance and public areas, including a swimming pool are located at the top of the cliff and are the only elements of the hotel visible to the rest of the resort. An old garden (opposite page) and a venerable arched wall (below) separate this hotel from the Port Hotel (above). The third hotel adjoining the monastery tower plaza is essentially a village of two- and three-story houses on the terraced hillside overlooking the bay.

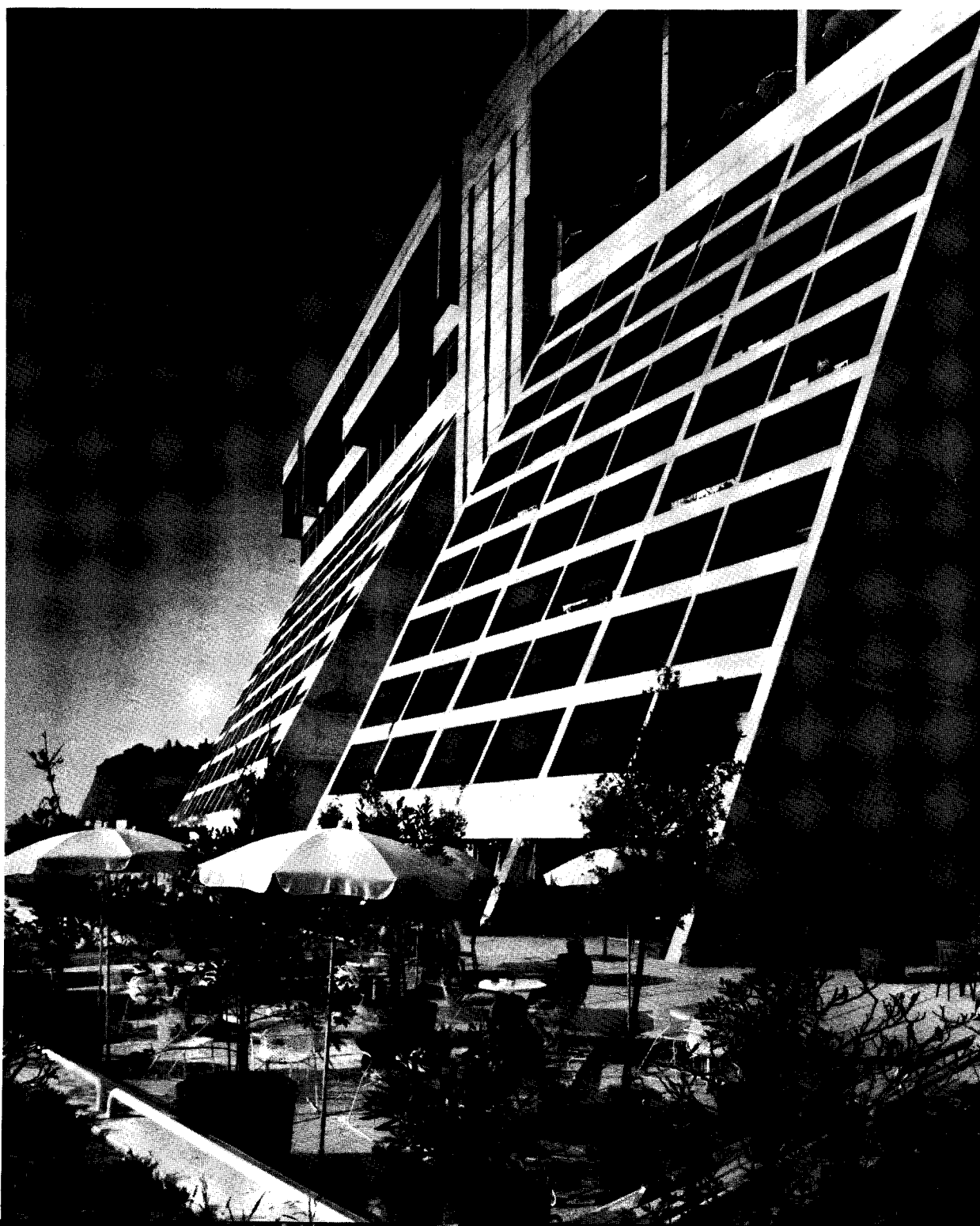




Figure 9

Too much differential movement between a brick masonry wall and a supporting concrete foundation can result in cracks as in Figure 9. The masonry expands from moisture absorption and the concrete shrinks as it cures. The solution is to avoid excessive differential movement by limiting the length of concrete and masonry walls, and placing a vertical expansion joint in the masonry one bay length from the corner (or within 30 ft).

Brick and concrete block bearing walls when mixed in the same building may cause differential movement resulting in shear cracks in transverse walls, as shown in Figure 10. The exposed brick walls are subjected to moisture and thermal expansion, while the protected concrete walls have little thermal movement, but will shorten due to shrinkage, creep and elastic shortening.

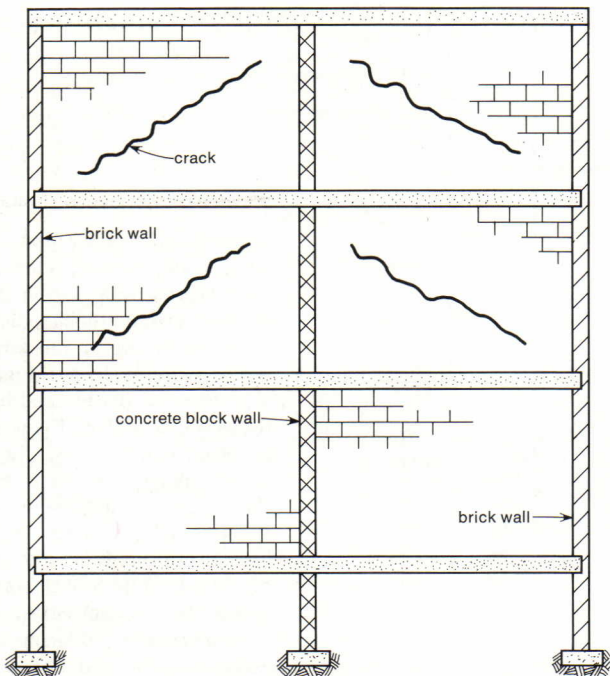


Figure 10

2) Foundations supporting masonry walls should be designed with sufficient stiffness to avoid excessive shear or flexural stress in the masonry,

3) Bond between brick masonry walls and weather-exposed continuous foundations should be broken. When tension-resistant anchorage is necessary, anchorage should not be shear resistant,

4) Vertical strains in all bearing walls in the same structure should be equalized. Highly stressed bearing walls should be built of brick masonry or concrete masonry, rather than composite brick-block masonry, unless the design specifically considers differential movement between the composite elements.

5) A building facade should be treated as discrete rectangular segments, each having the same combination of materials and the same climatological exposure. Differential movement between different masonry materials should be permitted to occur where possible. If elements are restrained, the resulting stress at the joint between different materials should not be excessive. If differential movement is permitted, joints between dissimilar materials and

panels should be flexible. Dissimilar masonry wall materials within a discrete panel should be joined with flexible ties. Masonry walls should be flexibly anchored to other walls or frames. Joints between adjacent panels should be designed with regard to sealant properties,

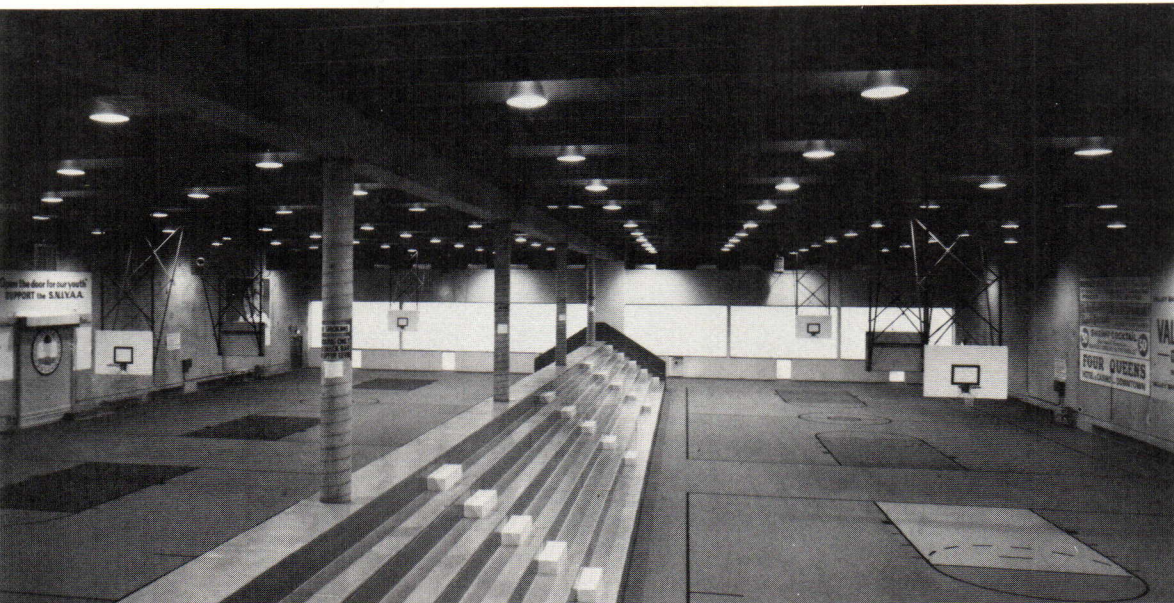
6) Generally, discrete brick masonry wall panels should not exceed 50 ft to 100 ft in length between expansion joints, depending upon the width of expansion joints, which also should occur at or within about 30 ft of wall corners and intersections,

7) Horizontal pressure-relieving joints should be placed under all shelf angles used to support brick masonry walls on structural frames,

8) Beams and columns may be enclosed by, but not encased in, masonry. Parapets should be designed in reinforced brick masonry,

9) In-situ concrete slabs supported on masonry walls generally should have a maximum dimension of 50 ft. Bond between slabs and walls should be broken and slabs should be flexibly anchored where necessary, but not at corners.

For more information, circle item numbers on Reader Service Inquiry card, pages 195-196.



Soft-surface flooring for recreation spaces

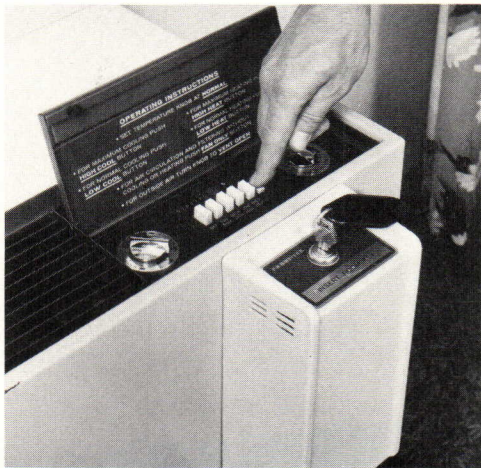
PRO-GYM, shown here covering four full-sized basketball courts, is a dense loop pile of Anso soil-hiding continuous nylon fused to a special vinyl backing. It can be installed directly over new or old concrete, as well as over old tile and maple floors. A ball is said to bounce as true on it as on traditional hard surfaces. Permanent game lines are inlaid into the surface, or may be added temporarily with special strips which mesh firmly with the **PRO-GYM** fabric. The basic color of the product is "golden oak." ■ Collins & Aikman, New York City.

Circle 300 on inquiry card

Guest-key operated hotel hvac control

An electronic control that attaches to hotel room hvac equipment, the "RMS-7" automatically shuts off the heating/cooling system when a guest leaves the room. When a guest enters, a red light on the RMS-7 reminds him to insert his room key to operate the hvac unit. The key must remain inserted for the hvac to work. Preset temperature limits are adjustable. ■ Fabri-Tek Inc., Minneapolis, Minn.

Circle 301 on inquiry card



Energy management system for small-sized buildings

Developed for the small to medium sized building, the "170" micro-computer based system is capable of controlling 10 electrical loads subject to peak demand limiting. It automatically limits the building's power regardless of building occupancy, operating conditions, and seasonal variations. ■ Powers Regulator Co., Skokie, Ill.

Circle 302 on inquiry card



Scandinavian pivot window available in U.S.

The "H-Window" provides ventilation, egress, ease of cleaning and air and water tightness in one unit, according to the company. It is equipped with a safety device to prevent complete opening when not being washed, and has a neoprene weather strip. All fittings are cold-rolled steel zinc electroplated, and standard frame

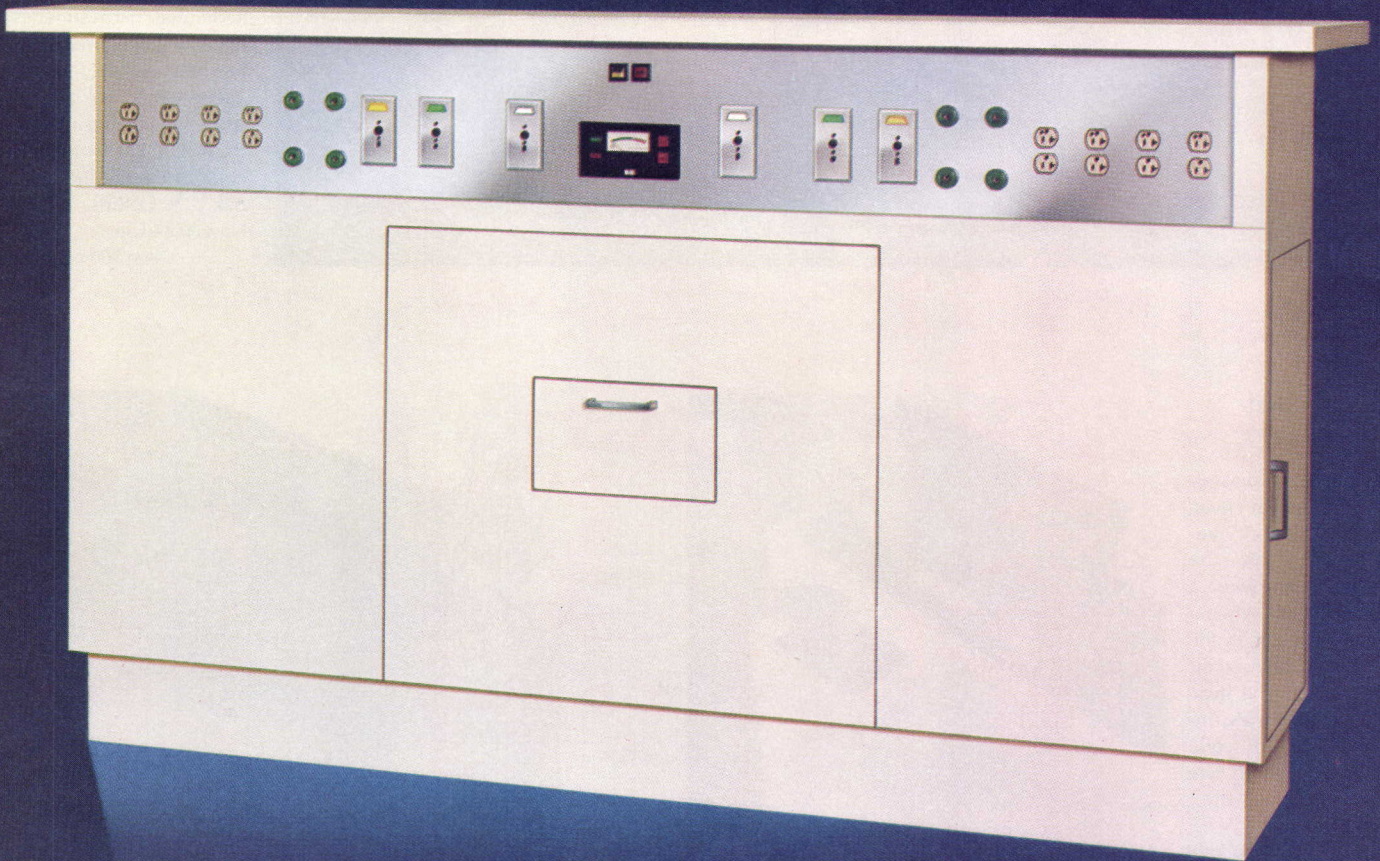
and sash materials are laminated pine or Norwegian spruce; teak is available on special order. The window is said to maintain perfect balance in all open positions, and the sash rotates 180 degrees for cleaning. ■ Norse Design, Issaquah, Wash.

Circle 303 on inquiry card

more products on page 137



Neonatal intensive care in a single, efficient package



Neonatal modules from Square D Company bring modern efficiency to pediatric intensive care areas. Each module handles up to four isolettes depending on whether it is wall-mounted or freestanding. And modules can be supplied to accommodate any number of isolettes and equipped as necessary to meet the needs of the institution or application involved. All units are constructed to meet UL 1047 requirements.

Square D neonatal modules are available with non-isolated and isolated electrical systems (where required). Medical gas outlets and all manifolding can be provided for easy connection at the site. There's plenty of storage space in each unit for linens, dressings and special instrumentation. And units can be equipped with clocks, timing devices, circuit breaker distribution panelboards with QWIK-GARD® ground

fault circuit interrupters and grounding jacks.

Let us show you how Square D neonatal modules can meet your custom requirements. Contact your nearby Square D field office, or write Square D Company, Dept. SA, 3300 Medalist Drive, Oshkosh, WI 54901. (414) 426-1330



For more data, circle 63 on inquiry card

For information, circle item numbers on Reader-Service Inquiry card, pages 195-196.

RESIDENTIAL FLOORING / Hardbound book presents color photos of resilient flooring, including *Solarian*, *Corlon*, and cushioned vinyl, and vinyl asbestos tiles such as *Excelon*. Catalog also gives installation and maintenance suggestions. ■ Armstrong Cork Co., Lancaster, Pa.

Circle 400 on inquiry card

COMPUTER GRAPHICS / The Laboratory for Computer Graphics and Spatial Analysis within the Graduate School of Design at Harvard University has published "Lab-Log," a catalog of computer programs, data bases and publications. Described are various products resulting from the Laboratory's work on the analysis and graphic display of geographic data used in the planning process. Computer graphic programs may be displayed via a line printer, line plotter and cathode ray tubes. Copies are \$1.00 each from The Laboratory for Computer Graphics and Spatial Analysis, 520 Gund Hall, Harvard University, 48 Quincy St., Cambridge, Mass. 02138.

CHIMNEY CONSTRUCTION / Industrial and utility chimneys up to 1000 ft tall may be constructed using the specialized techniques described in an eight-page brochure. These reinforced-concrete stacks meet specific environmental problems both inside and outside the structure, in terms of flue gas composition and climatic and regional earthquake conditions. ■ Peabody Continental-Heine, Chicago, Ill.

Circle 401 on inquiry card

ROOF MAINTENANCE / An illustrated manual describes common industrial roof problems and suggests the most economical repairs and maintenance technology to eliminate them. Such roof problems as flashing damage, alligatoring, blisters, torn and open seams, recoating, resaturating, venting, aluminizing, eliminating ponding water, and emergency repairs when roofs suddenly leak are discussed. ■ The Monroe Co., Inc., Cleveland, Ohio.

Circle 402 on inquiry card

FORM LINERS / A full line of architectural form liners is described in a 24-page booklet. Pictures and relief drawings are used to show each form liner available. ■ Symons Corp., Des Plaines, Ill.

Circle 403 on inquiry card

INSULATING CONCRETE / Five different roof deck designs with fire-resistive ratings up to three hours are described in a four-page brochure. Literature discusses the application of perlite concrete roofs; U-values are given for deck slabs 2- to 4-in. thick. ■ Perlite Institute, Inc., New York City.

Circle 404 on inquiry card

CLOSET DOORS/SHELVING / A color catalog presents the *Full-Vu* line of steel bi-fold closet doors and shelves for residential applications. ■ Leigh Products, Inc., Coopersville, Mich.

Circle 405 on inquiry card

PAINTING SYSTEMS / Paint catalog includes selection charts for easy determination of proper coatings products for all types of interior and exterior surfaces under normal exposures; a section on special purpose/heavy duty coatings; and complete descriptions of all of the manufacturer's professional painting systems. Test data are given for flame spread, fuel contributed, and smoke developed; OSHA colors are also shown. ■ The Sherwin-Williams Co., Cleveland, Ohio.

Circle 406 on inquiry card

SOUND CONTROL CEILINGS / A full line of acoustical tiles and panels for virtually any commercial building application is described in a 56-page catalog. Each architectural ceiling is illustrated, including felted mineral fiber tiles and panels, sculptured fiber glass panels, vinyl-faced ceilings, thermal-acoustical insulation batts and sound control batts, access ceilings, and panels for environmentally controlled areas. All technical and performance details are given. ■ Holophane Div., Johns-Manville Sales Corp., Denver, Colo.

Circle 407 on inquiry card

INDOOR/OUTDOOR CARPETING / A product reference folder contains 12 3- by 3-in. swatches of tweed-style synthetic turf in solid green tones and multi-hued colors. "Surf 'N Turf" floor covering is manufactured with a 100 per cent *Olefin* pile said to withstand extreme traffic and weather conditions. ■ Instant Turf Industries, Inc., Dalton, Ga.

Circle 408 on inquiry card

HEAVY-DUTY MATS / Detailed information on link solid, and carpet-top matting for commercial, institutional and industrial applications is given in a 30-page catalog. Included are wood and aluminum link matting; neoprene interlocking comfort drainage mats; tire fabric link mats; flexible steel mats; all-vinyl sponge matting; polyethylene platform matting; corrugated runners; and vinyl carpet runners. ■ Samuel Furiness Mat Co., Inc., Edison, N.J.

Circle 409 on inquiry card

COLORLED STAINLESS STEEL / Stainless steel treated with the *Kolorin* process has a durable and uniform finish said to retain the physical properties of uncoated stainless. It is available in four basic colors plus black, all shown in a four-page product brochure. Photos present design suggestions and applications in architecture, graphics, furniture, interiors, etc. ■ Keystone Corp., Buffalo, N.Y.

Circle 410 on inquiry card

AGGREGATE MATRIX / Fifteen colors of *HydrEpoxy 104* bedding matrix are shown in a catalog. Formulated for bonding exposed aggregate to all types of vertical surfaces, *HydrEpoxy* is water-cleanable and self-extinguishing. Product literature gives physical properties and test data. ■ Acme Chemicals & Insulation Co., New Haven, Conn.

Circle 411 on inquiry card

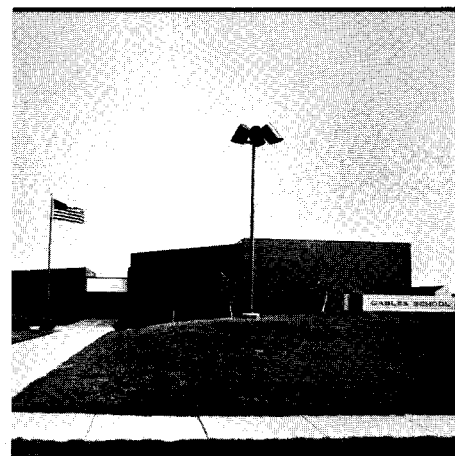
MASONRY BOND / "Swindress Bond" is suitable for corrosion protection, industrial grouting, and paving repair. Product literature describes the chemical setting inorganic polymer which is said to provide superior bonding strength to brick, concrete, tile, metal and other rigid surfaces. "Swindress Bond" will not shrink, and is said to protect against hot or cold acids and resist alkalis to a pH of 11. ■ Pullman Swindell, Pittsburgh, Pa.

Circle 412 on inquiry card

MEZZANINE SHELVING / The *Quik-Lok* basic shelving system consists of three parts, which can be assembled by hand without tools and fasteners. A four-page brochure shows how rigid double-deck storage is achieved without sway braces, nuts, bolts or clips: all *Quik-Lok* open uprights are supplied ready to accept splices for adding a second deck. ■ Aurora Steel Products, White Consolidated Industries, Aurora, Ill.

Circle 413 on inquiry card

AZTEC



There are 72 2'x4' 750 watt 277V Aztec low temperature electric radiant heating panels providing perimeter heat in the Gables Elementary School in Columbus, Ohio, just one of 40 schools in Ohio in which Aztec radiant panels now have been installed. The ceiling heaters in Gables Elementary were silk-screened to provide an architectural blend with the Conwed Fissura acoustical ceiling tiles.

Sounik-Eller-Martin
Architects, Columbus, Ohio

Van Straten & Edwards,
Consulting Engineers, Columbus, Ohio

Kevin McGovern & Associates, Inc.
250 E. Town Street
Columbus, Ohio 43215 614-224-0969
Aztec Engineering Representative

Aztec panels have a patented crystalline surface. A superior graphite element assures uniform heat across the panel. No moving parts. No maintenance. 10 year limited warranty.

For more information on Aztec electric heating panels or for the Aztec engineering representative nearest you, call or write to:

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3434 Girard N.E., Albuquerque, N.M. 87107
505-345-5631
TOLL FREE 800-545-8306

For more data, circle 64 on inquiry card

more Office Literature on page 142

Bally where all our energies
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Coolers/Freezers with special
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use less electricity, at lower
cost, than 80%* of the
Walk-Ins manufactured today.**

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Bally is the world's leading producer of Walk-In Coolers/Freezers/Refrigerated Buildings. Can be assembled in any size for indoor or outdoor use . . . easy to enlarge or relocate. Refrigeration systems from 50°F. cooling to minus 30°F. freezing. Subject to fast depreciation and investment tax credit. (Ask your accountant.) **Bally Case & Cooler, Inc., Bally, Pa. 19503.** Phone: (215) 845-2311.

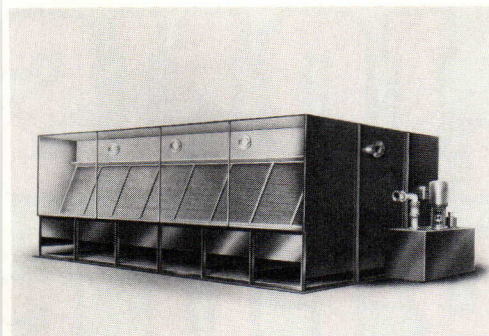
ADDRESS ALL CORRESPONDENCE Dept. AR-10

*Our estimate of the number of competitive Walk-Ins being manufactured with 2½" thick urethane . . . or 3" thick urethane . . . or wood frame panels with urethane butted in place . . . or fiberglass . . . or polystyrene . . . or other conventional materials.



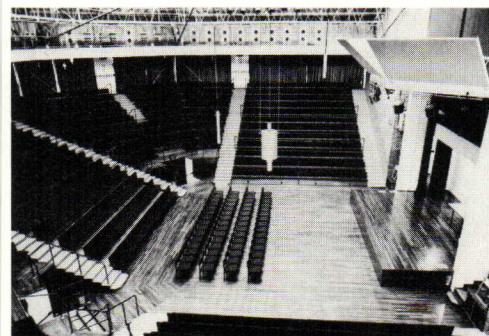
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For more data, circle 65 on inquiry card



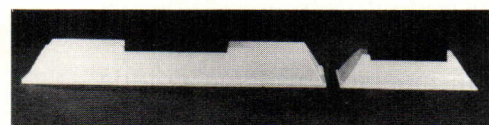
HEAT RECLAIM / The *Kathabar Twin-Cel* system is an air-to-air enthalpy reclaim unit which removes heat and humidity from building exhaust air and transfers this recovered energy to the supply air. Energy transfer medium is a bacteriostatic lithium chloride solution, *Kathene*, said to eliminate 98 per cent of the present microorganisms from both the supply and exhaust air streams. The *Twin-Cel* system will provide a constant baseline temperature and humidity state on both summer and winter modes; sizes range from 5000 to 90,000 cfm. ■ Ross Air Systems Div., Midland-Ross Corp., New Brunswick, N.J.

Circle 304 on inquiry card



ACOUSTICAL MODIFICATION / *Assisted Resonance*, a system of positive controlled feedback, modifies the acoustics of a hall itself, retaining switchable control from one acoustic extreme (speech) to the other (large orchestra or theater organ). Reverberation time is established automatically and pre-tuned, using a series of moving-coil and ceramic microphones housed in Hemboltz resonators. These are remote-coupled, and feed through multi-channel amplifiers to many small loudspeakers. Continuously-powered *Assisted Resonance* is said to provide smooth acoustic curves without conventional sound reinforcement or "equalization" systems in halls of any size, including pavilions with outdoor aprons. ■ AIRO, Saratoga, Calif.

Circle 305 on inquiry card

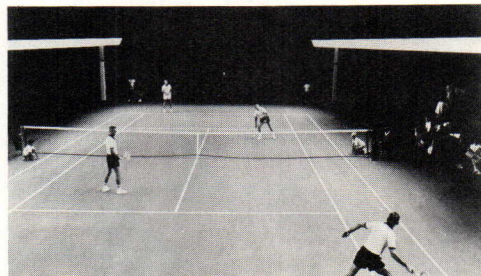


INDUSTRIAL LIGHTING / Using low-pressure sodium lamps, the *Power-Down* luminaire is said to save electricity and provide efficient lighting for industrial interior work and storage spaces. The two basic unit sizes shown cover most mounting height installations: "Lowbay" for 8- to 20-ft; "Highbay" for 20- to 32-ft heights. An asymmetric light output option for warehouse aisles throws light on vertical surfaces and permits wide spacing of units. ■ Voight Lighting Industries, Inc., Leonia, N.J.

Circle 306 on inquiry card

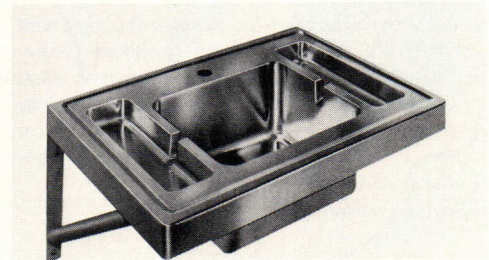
OUTDOOR TENNIS LIGHTING / Said to blanket the playing area with uniform 60 fc light, this lighting system is completely pre-fabricated. Lighting uses 16.2 kw for 60 footcandle illumination; it can be controlled to utilize either 5.4- or 10.8 kw per court, as desired, while maintaining uniformity of light. ■ Devoe Systems, Carlstadt, N.J.

Circle 307 on inquiry card



INSTITUTIONAL SINKS / Shown is a surgeon's lavatory, complete with instrument trays, one of the "Institutional Group" of stainless steel sinks, lavatories, NSF sinks, autopsy tables, urinals, cup sinks and access doors for hospitals, laboratories, etc. All products come in a variety of standard sizes and styles in seamless welded construction; exposed surfaces have a satin finish. ■ Just Mfg. Co., Franklin Park, Ill.

Circle 308 on inquiry card

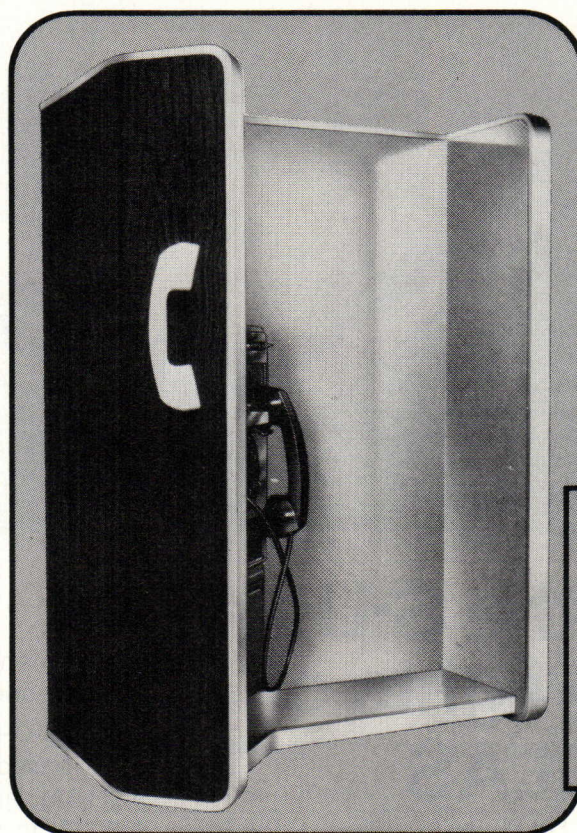


more products on page 139

Compatible Quiet

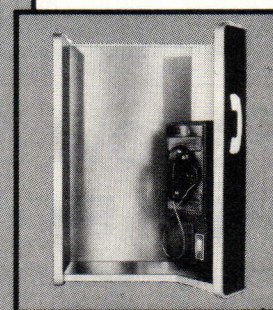
The New ADCO 20-L ACOUSTI-CALL® Booth

Compatible because it is versatile. The 20-L accommodates coin telephone mountings at either the 54" universal coin slot height or the regular height. And exterior finishes include walnut wood grain; beige or blue textured enamel paint on steel; plus stainless steel, aluminum or plastic laminate options.



Quiet because of its sound-absorbing stainless steel acoustical interior panels. And because no one knows more about telephone booth design than ADCO.

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For more data, circle 66 on inquiry card

50-year-old building converted into flexible learning center

This 850-student school is a good example of how an out-dated facility can be renovated into a flexible learning center.

Like other schools dating back to the 1920's, Rogers Elementary in Stamford, Connecticut had small, overcrowded, closed classrooms which did not meet current educational needs.

Non-load bearing partitions were removed to create larger open areas and a track mounted panel system was installed to give flexibility to the building.

Right-angle turn panels can be used to form corners or complete walls . . . structure space as needed. Changes can be made by teachers themselves. For a complete description of this system, write "Divisiflex Brochures," your name, title and phone on your letterhead. Mail to Modernfold, P.O. Box 310, New Castle, Ind. 47362.



Corridor at Rogers Elementary, Stamford, Connecticut, before remodeling.



Same corridor after permanent, non-load bearing walls were removed. Placement of panels creates teaching clusters; tackable surfaces serve as teaching tools. Fletcher-Thompson Inc.—Bridgeport, Ct., architects/engineers.

Modernfold . . . A better way to make better use of space

Modernfold

An American-Standard Company

For more data, circle 69 on inquiry card

LABORATORY EQUIPMENT / The 693-page catalog is a reference guide for a complete line of laboratory equipment for clinical chemistry; quality control for food manufacturers; water and wastewater testing; ASTM determination for refineries and gasoline plants; microbiology for industrial, educational institutions; steel and metallurgical testing; pollution control testing; power plants. ■ Scientific & Industrial Sales, Fort Worth, Tex.

Circle 426 on inquiry card

FOOD SERVICE / Over 800 items are described and illustrated in a catalog of "Bolta" plastic food-service products. The line includes dish racks, food and refuse containers, trays, tumblers, beverage servers, and related table-top items. ■ The Vollrath Co., Sheboygan, Wis.

Circle 427 on inquiry card

SPECIAL LOCATION DOORS / A four-page two-color brochure, "Specialized Technology in Doors for Engineered Environments," stresses the unusual requirements for engineered environments involving pressure (gas or liquid), blast load, noise, temperature, atmosphere and chemical reaction. Fourteen special door applications are covered. ■ Jamison Door Co., Hagerstown, Md.

Circle 428 on inquiry card

WALLCOVERING / A gypsum-filled wallcovering that can be applied directly to any rigid surface, features a Class A fire rating. It will withstand wear and periodic recleaning demanded of commercial and industrial applications. It is available in 10 colors. A four-page brochure provides complete product information. ■ Marlite Div., Dover, Ohio.

Circle 429 on inquiry

RUBBER WALL BASE / Rubber wall base that can be readily wrapped around outside corners conforms to minor floor and wall irregularities, thus eliminating the need for preformed or molded corners. It also features a precision-designed top return that assures a tight fit to the wall; extra thickness at the cove for strength and support; and a ribbed back that forms a mechanical key for positive adhesion. It is described in a folder. ■ VPI, Sheboygan, Wis.

Circle 430 on inquiry card

INFORMATION RETRIEVAL / a 12-page brochure shows the requirements for an ideal information retrieval system. Colorful block diagrams show how the company's three main services—Visual Search Microfilm Files (VSMF), Library and Education Services, and Proprietary Information Management Services—aid industry, government and education. The diagrams provide an overview that shows how IHS gathers technical information, legal, literary and historical documents or company proprietary information, then computer indexes and formats the data for easy retrieval by a variety of users. ■ Information Handling Services, Englewood, Colo.

Circle 431 on inquiry card

FURNITURE SYSTEM / A four-page, full-color brochure introduces open-office systems. Called the "Time Line," these products are functionally engineered furniture components and acoustical panels that feature a patent-pending top connector which becomes part of the panel almost hidden from view. The main feature of this new line is that installation or reassembly requires no tools and can be done in much less time than usually required. ■ Pleion Corp., Santa Ana, Calif.

Circle 432 on inquiry card

CONTEMPORARY CLOCKS / Contemporary wall, desk and floor clocks for both institutional and residential use are shown in a 32-page four-color book; detailed instructions are given for ordering a number of new wall and ceiling bracket-mount models with options of movement (battery or electric), mounting, dial graphics and finish. Three pages are devoted to built-ins. ■ Howard Miller Clock Co., Zeeland, Mich.

Circle 433 on inquiry card

EXTERIOR STAINS / Two new ready-mixed colors, Bison, a deep neutral brown, and Sunstone, a golden yellow have been added to the exterior latex and oil satin lines. Addition of these hues and the 10 new colors now available by tinting means that 42 colors are offered in the "Ultra-Hide" exterior solid color oil stains, which are marketed to the architectural and maintenance coatings fields. A color card shows the oil stain colors, as well as the latex line. ■ Glidden Coatings & Resins, Cleveland, Ohio.

Circle 434 on inquiry card

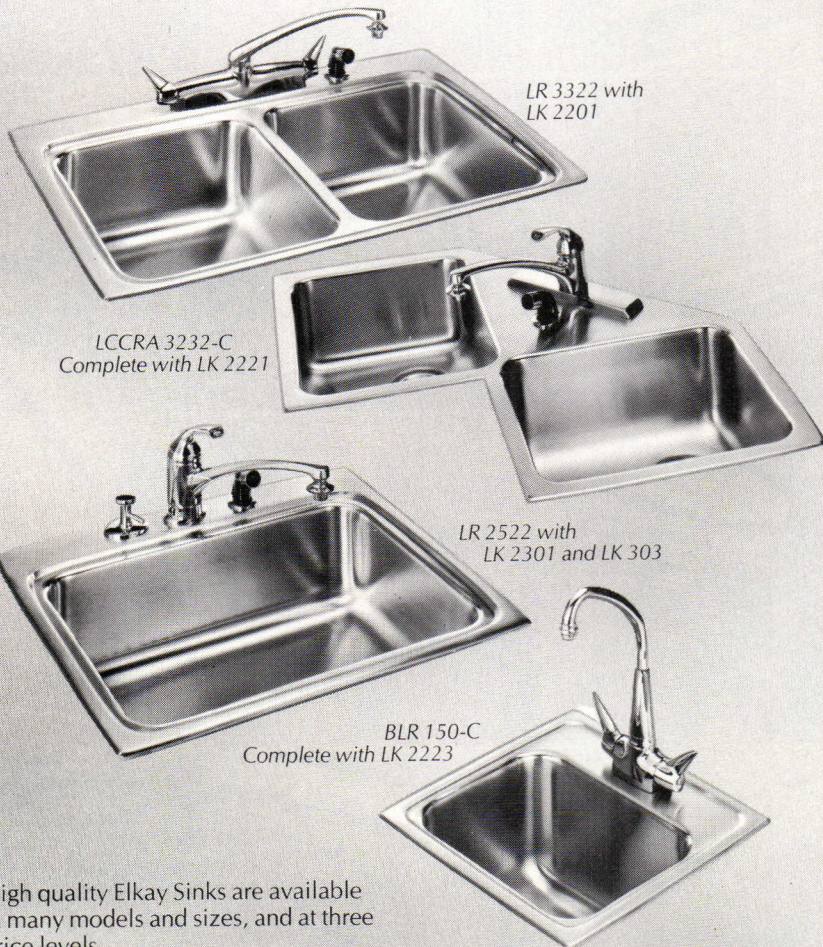
CERAMIC MOSAIC GUIDE / A 12-panel folder on in-stock ceramic mosaic patterns features 39 patterns. Featured in the folder are several color application photos ranging from residential to commercial applications. In-stock trim information is included. ■ United States Ceramic Tile Co., Canton, Ohio.

Circle 435 on inquiry card

BUILDING EXTERIOR COATING / A 16-page photo brochure showing organically coated metal building exteriors discusses KYNAR 500 polyvinylidene fluoride applications. Cases include Detroit's Renaissance Center. ■ Pennwalt Corp., Philadelphia, Pa.

Circle 436 on inquiry card

There's almost no function that
Elkay Sinks and Faucets can't accommodate.



High quality Elkay Sinks are available in many models and sizes, and at three price levels.

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she's never heard
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thinking about her
since 1906.

She never gives a thought to her hotel bathroom. She simply uses it and takes it for granted.

Which is the way we planned it. At Bobrick, we spend all our time designing and making equipment for guest baths and public washrooms in hotels. And we've been around since 1906.

We make a full line. Over 700 items—everything from soap dishes to lavatory countertops. So when you're designing a hotel, Bobrick is the only name you need to remember when you're specifying wash-room equipment.

We design for function. Beautiful function. We recess and combine as many units as possible, to eliminate wasted wall space and reduce installation costs.

We build for long wear. For easy maintenance. And as few problems as possible from vandalism and graffiti. That's why we use heavy gauge type 304 stainless steel. It won't corrode and it keeps its new look forever.

The lady in 731 never thinks about things like these. She doesn't need to. Because we do.



THE ONLY NAME YOU NEED TO KNOW IN WASHROOM EQUIPMENT

Let us send you our Planning Guides and Catalogs. Bobrick Architectural Service, 101 Park Ave., N.Y. 10017. Bobrick products are available internationally.



DOOR CLOSER / Trouble-free operation through 2 million open and close cycles is claimed for the "100/110" door closer. Designed for high-traffic use in schools, hospitals and commercial and industrial buildings, these closers meet ANSI Grade 1 requirements. Both the "100" and "110" series are available in regular, parallel arm, and top jamb mounting configurations. ■ Corbin, Hardware Div., Emhart Industries, Berlin, Conn.

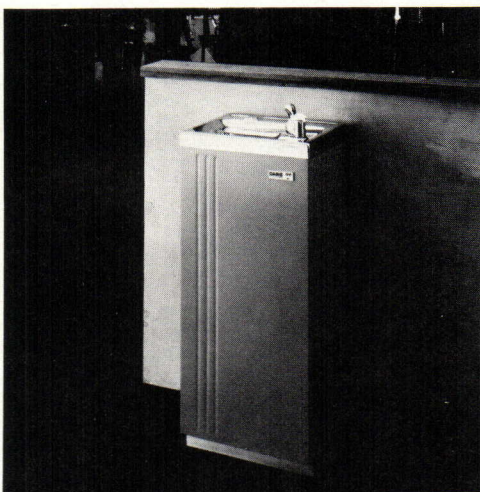
Circle 319 on inquiry card

PEDESTRIAN LIGHTING / The *Beacon-Light* provides a constant signal for pedestrian users of plazas, malls, etc. The graphite-colored pedestal stands either 15½- or 27½-in. tall; columns are 8-in. in diameter, and accommodate an incandescent lamp of up to 100 watts. Luminaires are UL-listed and completely weatherproof. ■ ITT Landmark Lighting, Southaven, Miss.

Circle 320 on inquiry card

EXTERIOR DOOR / This solid-core wood exterior door meets all thermal code requirements for insulation; door and frame construction are said to be extremely warp-resistant. The "WeatherBeater" door has a phenolic resin-impregnated overlaid surface fused to exterior hardwood plywood under heat and pressure. This surface may be stained or painted; accidental dents or scratches are easy to repair. ■ Columbia Door Div., Simpson Timber Co., Vancouver, Wash.

Circle 321 on inquiry card



WATER-COOLED COOLERS / Three special-purpose *Oasis* water coolers are designed to operate efficiently in industrial areas of high temperature and/or dust-laden air. The water-cooled units have an ARI performance rating of 15 gph; the *Dial-A-Drink* bubbler valve with an integral pressure regulator allows steady flow at line pressures ranging from 20 to 125 psi. ■ Ebco Mfg. Co., Columbus, Ohio.

Circle 322 on inquiry card

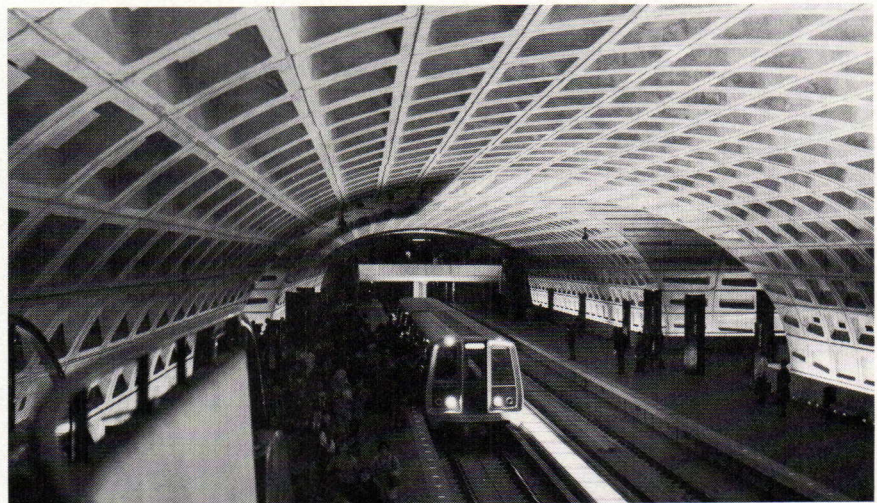
more data, circle 72 on inquiry card

EXTRAORDINARY QUESTION:

What is the best way to meet the construction challenges of mass transit?

DOWN-TO-EARTH ANSWER:

Utilize the adaptability of reinforced concrete.



The urgency of mass transit requires the use of the time-tested methods afforded by reinforced concrete. The adaptability of reinforced concrete is well-suited to meet the construction challenges posed by underground, on grade, and elevated structures.

A forerunner of the shape of things to come in mass transit is the 100-mile-long Metro System for Washington, D.C. For the underground stations, Metro's designers choose cast-in-place reinforced concrete with 35-foot-high coffered Roman arches that are both strong and esthetically pleasing. The result: a setting both monumental and spacious, with clean, open sightlines. Passenger access to the underground stations is achieved by reinforced concrete mezzanines. These free-standing mezzanines help to maintain the open look of the underground stations.


To build the arches, the contractors used an innovative application of the conventional slip-form. A 3-piece segmented retractable form is

rail-mounted on the station floor and extends to form the arch. Rectangular fiberglass pans are placed atop the form.

Reinforced concrete has also proved its adaptability for Metro's surface and aerial stations. Gull-winged, cast-in-place concrete canopies continue the unifying theme of the underground arches. The cast-in-place elevated railway tracks are mounted on a 28' wide trackbed carried by twin hollow box girders. In the underground portions, special reinforced concrete trackbeds on fiberglass pads reduce vibration and noise.

For the unique needs of mass transit and countless other applications, reinforced concrete has the answers that make practicality work together with imagination. Ask for Bulletin 7702.

Owner: Washington Metropolitan Area Transit Authority
 Architectural Consultant: Harry Weese & Assoc., Washington, D.C.
 Engineering: DeLeuw, Cather & Co., Inc., Washington, D.C.

CONCRETE REINFORCING STEEL INSTITUTE 
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 Chicago, Illinois 60601

THE ANSWER'S IN REINFORCED CONCRETE.

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It's us. LOF.

When Philip Johnson and John Burgee designed what many are calling "the year's most exciting new building," they had a variety of coated glasses to choose from.

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Available in a wide range of colors and shading coefficients, Vari-Tran is as practical as it is beautiful. It can cut down on heat gain significantly, keeping air-conditioning costs within reason.

To find out what LOF high performance glass can mean to a building you have in the works, contact an LOF architectural representative. He'll put our computers to work on a cost analysis to show how Vari-Tran products can result in savings in initial construction costs and annual energy consumption.

For more information, refer to our LOF Sweet's Catalog, "Glass for Construction," or write to Paul Corrad at Libbey-Owens-Ford Company, 811 Madison Ave., Toledo, Ohio 43695.



LOF

Developer: Gerald D. Hines Interests/General Contractor: Zapata Warrior Contractors—A Div. of Zapata Constructors, Inc.
Architect: Philip Johnson & John Burgee, New York and S.I. Morris Associates, Houston
Curtain Wall & Glazing Contractor: Cupples Products Div., H.H. Robertson Co., St. Louis, Mo.
Mechanical Engineers: I.A. Naman + Associates, Inc.

For more data, circle 74 on inquiry card

GYM DIVIDER / This flexible gym divider has vinyl-clad polyester self-extinguishing mesh in the upper section; the nylon-reinforced lower section comes in black, white, and seven colors. Dividers are suspended from the overhead structure; hanging weight is less than 1-lb per sq. ft. Units are custom-made to fit areas up to 120-ft wide and 30-ft high; screens operate manually or electrically to divide the area in minutes. ■ Oliver C. Steele, Inc., Spiceland, Ind.

Circle 323 on inquiry card

FIREPLACE / This 36-in. refractory brick-lined residential fireplace has been added to this manufacturer's line of "zero-clearance" fireplaces. The product line includes a 42-in. refractory brick fireplace; a porcelainized-steel lined 28-in. unit; installation accessories; and simulated brick chimneys. ■ Temtex Products, Inc., Nashville, Tenn.

Circle 324 on inquiry card

UPHOLSTERY FABRICS / This series of custom-woven fabrics of contract upholstery applications includes wool and wool-blends from France, West Germany and Iceland. Pictured is "Continental," 51-in.-wide, woven in West Germany of 60 per cent wool and 40 per cent cotton. The pattern of alternating horizontal stripes of plain and basket weaves is available in bisque, melba, putty, gris and Georgia clay. ■ Gretchen Bellinger Inc., New York City.

Circle 325 on inquiry card

CLOTHES PEG / Made of solid oak, the "#54526 Wall Costumer" is 1 3/8-in. in diameter, 3 1/4-in. deep. It is surface mounted at an angle, and can be used singly or placed in decorative arrangements to hold coats and hats. ■ Architectural Supplements, Inc., New York City.

Circle 326 on inquiry card

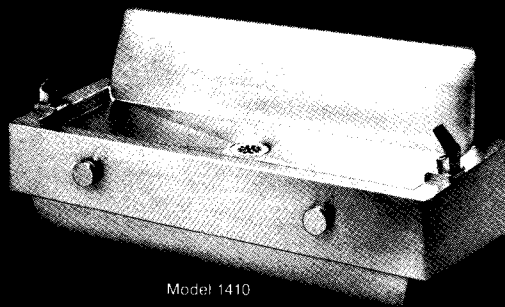
BOLLARD LIGHTS / Designed to provide low-level accent lighting or to serve as delineators for walkways, courtyards, etc., this low-glare bollard light comes with either a round or square housing, both 42-in.-high. Seamless extruded housings have no exposed hardware; bollard is fastened down by three hidden anchor bolts. Lamps are 50/100 W mercury vapor or 70/100 W HPS; one-piece lens is impact-resistant acrylic. Options include 1/4-in. polycarbonate lenses, and a top-mounted lens for added accent lighting. ■ Crouse-Hinds Co., Syracuse, N.Y.

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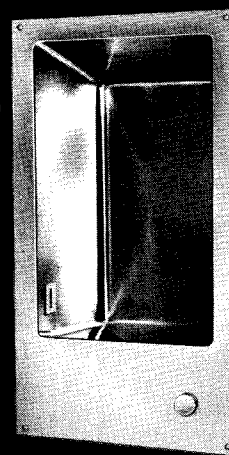


Model 1002

STAINLESS STEEL DRINKING FOUNTAINS BY HAWS



Model 1410



Model 2430

In this age of mediocre materials and short-cut craftsmanship, architects, contractors and building owners are ever more frequently specifying HAWS stainless steel drinking fountains. The reasons are self-evident. From the practical simplicity of a multiple-bubbler unit for schools and public buildings to the elegance of a polished piece of sculpture, there's a HAWS stainless steel model for your particular need.

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DRINKING FOUNTAINS

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The Stone Wall

Any carpet that withstands our stress/strain tests can hold its own for years on end.

How can we be so sure? Because at Dow Badische, we put contract carpet samples made of our fibers and yarns through a series of performance tests that are far rougher than any abuse they'll get in actual use.

Our Delamination Test machine, for instance, tugs and pulls at the carpet with tremendous force to measure the strength of the latex bond between the primary structure and secondary backing. Another torture machine measures the force required to pull a single, independent tuft out of a carpet.

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Whenever you specify contract carpet, look for the Performance Certification label. It's your assurance that the carpet can stonewall it on any floor. For further help with your carpet specifying problems, contact our Contract Carpet Consultants Service and ask for our Performance Certification Booklet.

Dow Badische Company, Create Center
Williamsburg, Virginia 23185
(804) 887-6573

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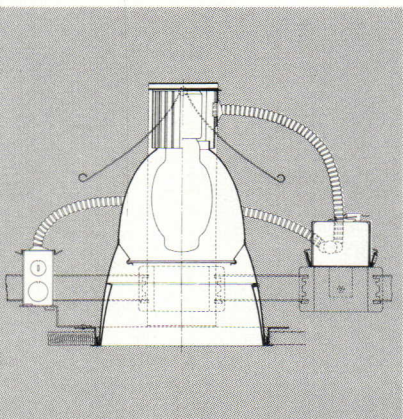
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H. I. D. Efficiency,
Incandescent
Compatibility



Now you can have the best of both: the long life, energy-saving benefits of H.I.D. lamping and the color compatibility with incandescent. The Gotham 3000 Open Reflector Downlight Series is an aesthetically pleasing, precision engineered answer for a variety of applications. For mercury vapor or metal halide lamping, each in the series offers low brightness; broad beam distribution; high efficiency; and the option of specially finished baffles to give the light its incandescent compatibility. Each benefits from the recognized quality of Gotham engineering.

For full details on the Gotham 3000 Series, contact your ITT Gotham representative; or write:

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INDOOR LIGHTING**
P. O. Box 195, Vermilion, Ohio 44089
Phone (216) 967-3131

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Offices Opened

Hansz/Stout Architects Incorporated, is a firm established by Thomas Hansz and Joseph M. Stout. Offices are at 237 N. Woodward Ave., Birmingham, Mich.

McMillan Associates Architects & Consultants is a new firm established by Michael McMillan, AIA. Offices are at Suite 502, First Federal Bldg., 301 College St., Greenville, S.C. 29601.

Medical Planning Consultants, USA/Health Facilities Planners & Hospital Consultants, is a new firm established by R. Wayne Burford, AIA, with offices at 3333 Eastside St., Suite 105, Houston, Texas 77098.

Nix, Mann and Associates, Inc., Architects is a new firm established by Henry A. Mann, AIA, I. Lewis Nix, AIA, P. Gary Swords, AIA, Stuart Aynsley, RIBA, and David C. Johnson, AIA. Offices are at 2305 Gas Light Tower, 235 Peachtree St., N.E., Atlanta, Ga.

G. V. Trieschmann, Assoc., Consulting Architect of 1420 Phillip St., New Orleans, La., will open offices in Dammam, Saudi Arabia.

Voelker Enterprises is a new private architectural practice established by William J. Voelker III, formerly of Phillips Swager Associates. Offices at 1614 Parkside Dr., Peoria, Ill. 61606.

Firm Changes

The Association of Collegiate Schools of Architecture has announced the resignation of David Clarke, AIA, as Executive Director. Replacing Mr. Clarke will be Professor Roger Schlutz of the University of Nebraska. The Association is located at 1735 New York Avenue, N.W., Washington, D.C. 20006.

Benham-Blair & Affiliates, Inc., an architectural, planning and engineering firm located in Oklahoma City announces the appointment of Buford W. Duke, Jr., AIA, as Corporate Vice President/Principal for Design, and Project Development.

Childs Bertman Tseckares Casendino Inc., architects have announced that Edward C. Hartranft has been made an associate in the firm at 306 Dartmouth St., Boston, Mass.

Daniel, Mann, Johnson & Mendenhall have announced that Richard G. Newman, former president of Genge, Inc., has joined the firm as vice president and manager of the envirosystems group.

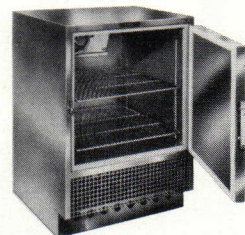
Caudill Rowlett Scott, architects-planners-engineers have appointed as senior vice presidents in the firm E. Bruce Appling, P.E. and Joe B. Thomas, P.E.; vice presidents in the firm Roylance R. Bird, Jr., AIA and Gerald S. Pfeffer, AIA; associates in the firm Conny R. Brown, Dennis G. Felix, Nathaniel Firestone, Louis E. Hood, Jim C. Kollaer, James W. McGibney, Charles F. Pock, Jane M. Stansfeld, Edward S. Werth and Howard P. Zweig. Offices are at 1111 West Loop South, Houston, Texas.

Emery Roth & Sons, P.C., announces that Mr. Vijay Kale, AIA, has been made an Associate of the firm and has been promoted to Assistant Director of Design. Offices are at 745 Fifth Ave., New York City.

continued on page 151

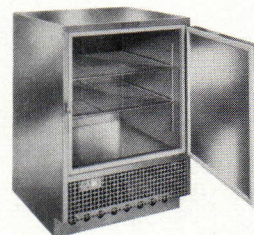
WE FIT IN

STAINLESS STEEL UNDER COUNTER LAB REFRIGERATORS AND FREEZERS



UC-5-BC refrigerator has a blower coil cooling system with automatic off-cycle defrosting and condensate evaporator in condensing unit compartment. Two adjustable stainless steel shelves are provided.

UC-5-F-BC freezer is equipped with automatic timer electric defrost. Capacity—5.4 cu. ft. (155 ltr.)

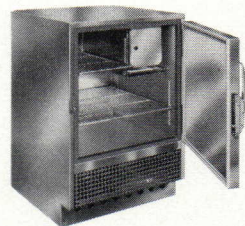


UC-5-CW* refrigerator with cold wall cooling system is equipped with push-button defrost, automatic reset and condensate evaporator. Capacity—5.4 cu. ft. (155 ltr.)

UC-5-F-CW* freezer is equipped with manual hot gas defrost. Capacity—4.6 cu. ft. (130 ltr.)

UC-5-CW-E refrigerator has the same interior features as the UC-5-CW but modified to make it *totally explosion-proof*. Capacity—4.9 cu. ft. (140 ltr.)

*With explosion proof interior only.



UC-5 features a two-tray ice cube cooling system with manual defrost and stainless steel defrost water tray. The cooler section has two adjustable stainless steel shelves. The entire UC-5 series features polyurethane insulated thin wall construction and air-tight neoprene thermo-break door seals. Capacity—5.4 cu. ft. (155 ltr.)

Jewett also manufactures a complete line of blood bank, biological, and pharmaceutical refrigerators and freezers as well as morgue refrigerators and autopsy equipment for world wide distribution through its sales and service organizations in over 100 countries.



For more data, circle 78 on inquiry card

“Otis performed miracles to finish their work on time...”



The \$337 million Renaissance Center in Detroit is one of the largest privately financed projects ever built in the U.S. The four, 39-story office towers contain 2.2 million square feet of rentable space, and the 73-story Western International Detroit Plaza Hotel has 1,400 rooms plus 100,000 square feet of meeting space.

“We set our opening date in 1973 and opened within two weeks of our original schedule,” said John L. Tishman, president of Tishman Construction Company, Construction Manager and General Contractor on the huge project.

“We ‘fast-tracked’ the project using sophisticated purchasing and on-job scheduling, all of which required tre-



mendous cooperation from an expert team of professionals and cooperative building trades,” Mr. Tishman added “Otis, in particular, performed absolute miracles—there are 118 elevators and escalators on this job and Otis met our deadlines on every installation.

“We used just about every type of elevator made, including glass-walled observation elevators. It took a great construction team to get them all installed and operating on schedule. The Otis team is exceptional.”

When you want the best, you want Otis.

**OTIS ELEVATOR
COMPANY**



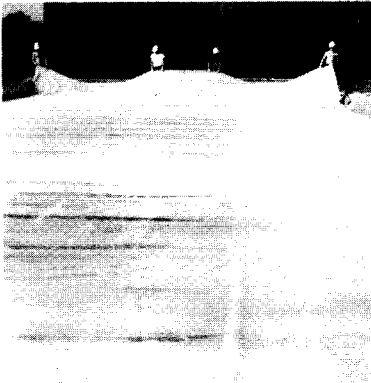
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42' x 196'.**

No field seams.

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**No special
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That's a Carlisle Sure-Seal® roof for you. A special job, of course. Standard Sure-Seal comes in 100-foot rolls in several widths but however it comes it's tough, stable, waterproof, and so simple and fast to apply that no special equipment is necessary and very little training is needed. It's also versatile: there's a Sure-Seal System for practically every size and shape roof in America, old or new.

One reliable American source delivers all Sure-Seal materials and accessories: resourceful Carlisle, who came up with Sure-Seal in the first place and has backed it for nearly three decades. Which is how long some Sure-Seal applications have been in continuous use. Write today for details and the name of your approved Sure-Seal applicator!

**Sure-Seal Systems, for almost
every roof in America!**

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Environmental Planning & Research, Inc., has announced the appointment of Peter B. Rooke-Ley, AIA. Offices are at 649 Front St., San Francisco, Ca.

Gruzen & Partners architectural/planning firm announces the appointment of David Miles Ziskind, AIA as a principal in the firm. Offices are at 888 Seventh Ave., New York City.

Hansen Lind Meyer, P.C., a firm based in Iowa City has opened an office in Chicago. Mr. Jerry Quebe, AIA, a Principal in HLM, will manage the new office.

Albert Kahn Associates, Inc., announces that John C. Haro, FAIA has rejoined the firm as a Vice President and Director of Planning and Architectural Design. Offices are at New Center Bldg., Detroit, Michigan.

Charles Kober Associates announces the promotion of Ronald A. Altoon, AIA, to senior vice president and member of the board of directors. Offices are in Los Angeles, Calif.

Kruger Lake Hutchinson Brown Inc., is the new name given to the firm known previously as Kruger, Lake, Pogue and Hutchinson. Mr. James T. Brown, AIA has joined the firm as a principal. Offices are at 601 San Pedro Dr., N.E., Albuquerque, N.M.

Peckham-Guyton, Inc., have announced that Joseph G. Weiss has been named a Vice-President of the firm. Offices are at The Equitable Bldg., 10 Broadway, St. Louis, Missouri.

Perkins & Will of Chicago announce the appointment of John A. Dziuba and Curt Zeiser to the Interior Design Group of the firm.

Dan L. Rowland and Associates, Inc., have named Gene A. Martin an Associate in the firm. Offices are in Anaheim, California.

Rowe Holmes Associates Architects, Inc., have named Richard R. Barnett, AIA, Thomas A. Hammer, AIA and John L. Tension, AIA as principals. Offices are at 100 Madison St., Tampa, Florida.

RTKL Associates Inc., have promoted Leo A. Ratterman, P.E., Thomas R. Witt and Bernard J. Wulff, AIA to Associate Principals of the firm. RTKL is located in Baltimore, Maryland.

Hugh Stubbins and Associates, Inc., have announced the appointment of Philip T. Seibert, Jr. as Associate and Director of Interior Design. Offices are at 1033 Massachusetts Ave., Cambridge, Mass.

The **White Budd Van Ness Partnership** has named William F. Nelson and J. Lynn Harden as principal partners in the firm. Offices are in Houston and Beaumont, Texas.

New Addresses

Professional Design Associates, Inc., 928 N. Charles St., Baltimore, Md.

Helm Roberts, AIA, AIP, Urban Design/Housing Consultant, 180 Market St., Lexington, Kentucky.

Herbert S. Saffir, Consulting Engineers, 255 University Dr., Suite 211, Coral Gables, Florida.

Team 70 Architects, IDS Tower, Minneapolis, Minnesota.

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SYSTEMS**

Reliable AHC systems are now in use throughout the United States, providing efficient space heating and domestic hot water.

Residential Space Heating System

Selected by HUD for installation in 25 single-family residences in one of its largest solar system demonstration grants. Features off-the-shelf hydronic components to enhance reliability and minimize costs.



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The AHC system is closed-loop to prevent corrosion and scaling, and to permit use of anti-freeze in freezing climates. Consists entirely of standard components to minimize cost and maintenance, assure reliability. Also selected by HUD for solar system demonstration projects.

AHC systems are based on the time-proven AHC Miromit flat plate collector, produced for more than 20 years and used in more than 100,000 installations in North America, the Middle East, Africa and Europe, including some of the largest solar heating projects in the U.S.

For additional information or the name of your AHC representative, contact:

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Phone: 303/778-0650

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THOUSANDS UP ROOF tops similar systems in fire resistance

...with the help of the Pyrofill® IRMA roof assembly. The Pyrofill brand insulation over the waterproofing membrane, upgrading insulation performance dramatically. A crushed stone topping shields insulation from the elements—protects roofing from freeze-thaw cycles, ultraviolet rays, oxidation and foot traffic. Back all this with the built-in economies and fire-resistance of a PYROFILL® Gypsum Concrete Deck. Besides energy-savings,

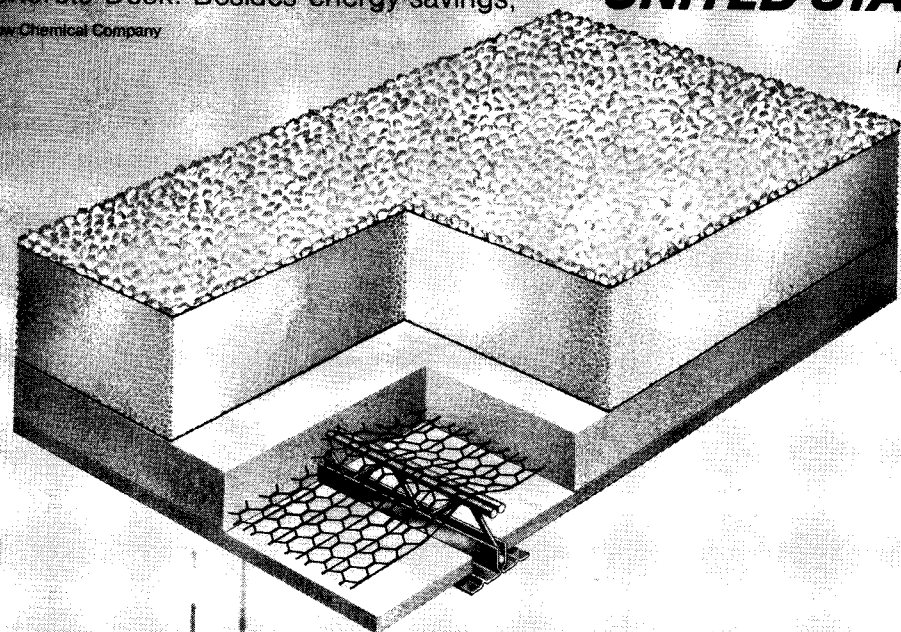
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you'll cut costs with daily "pours" of up to 30,000 sq. ft.—gain significant insurance reductions and Factory Mutual approval, too.

- Call your U.S.G. Representative for specifics. Or write to us at 101 S. Wacker Dr., Chicago, Ill. 60606, Dept. AR-107

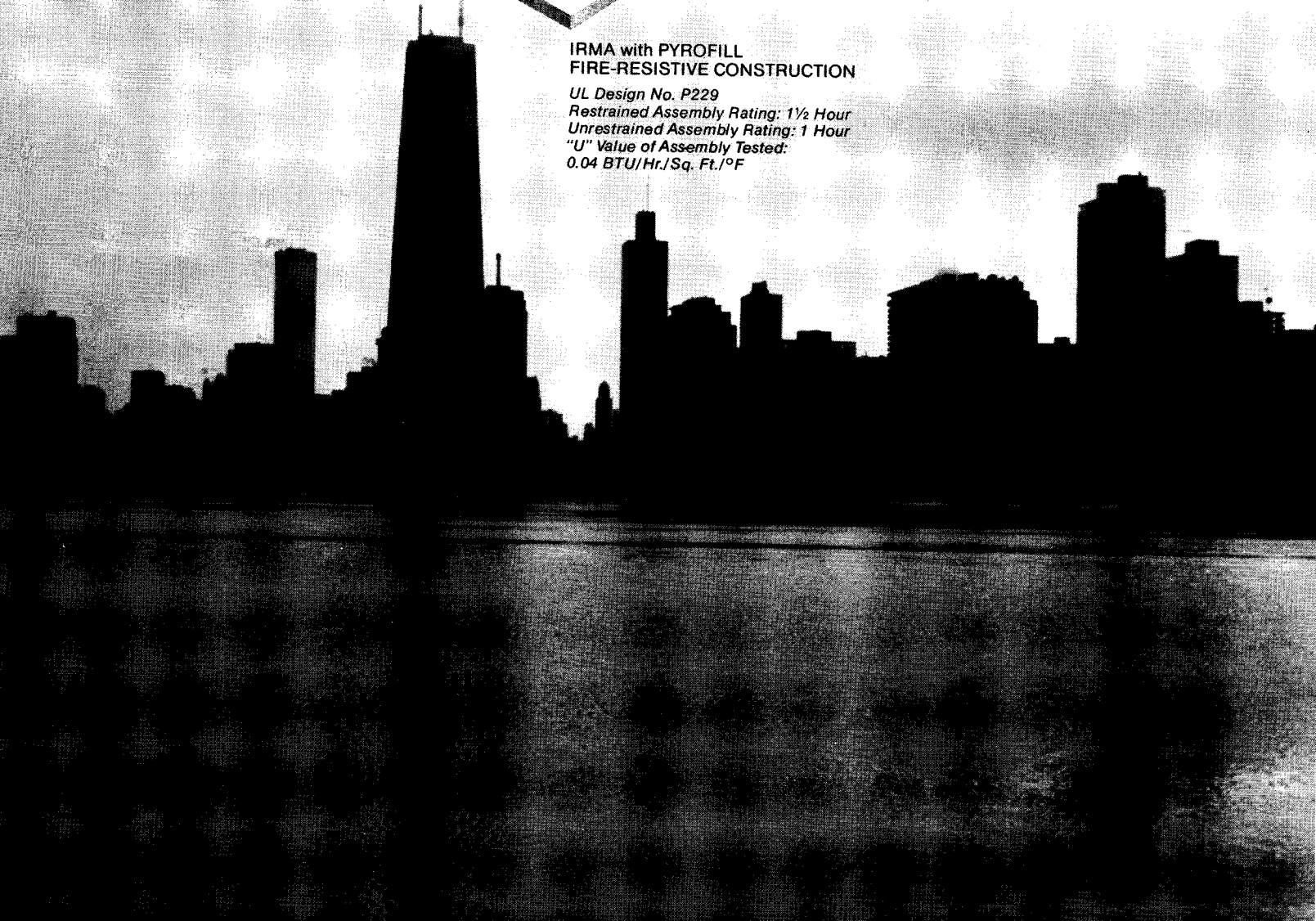
UNITED STATES GYPSUM
BUILDING AMERICA

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IRMA with PYROFILL FIRE-RESISTIVE CONSTRUCTION

*UL Design No. P229
Restrained Assembly Rating: 1½ Hour
Unrestrained Assembly Rating: 1 Hour
"U" Value of Assembly Tested:
0.04 BTU/Hr./Sq. Ft./°F*



THE FACTS ABOUT STAGGERED TRUSS — THE LOW-COST, HIGH-RISE, STEEL FRAMING SYSTEM.

Many high-rise residential buildings have been built with the Staggered Truss steel framing system. In fact, in recent years over fifty apartment and hotel type structures have taken advantage of the Staggered Truss.

This system for high-rise structures affords an efficient and economical use of structural steel, with far greater flexibility than is possible with other portal framing systems.

HOW THE STAGGERED TRUSS WORKS

The innovative Staggered Truss Steel Framing System consists of story-high trusses that span the full building width at alternate floors of each column line. The trusses are supported only on the two rows of exterior columns and are arranged in a staggered pattern on adjacent column lines.

ARCHITECTURAL FLEXIBILITY

Since columns are needed only at the exterior of the building, the full width of the building is column-free, providing the maximum useable floor space. And with trusses starting at the second floor level, large clear span areas are available at ground level. As a result, the ground level can be more efficiently utilized—for parking, promenades and playgrounds. Also, construction within air-rights over existing facilities is made more simple.

Complete architectural units can be placed between trusses, and by varying truss spacing the number of unit sizes within the spacing can be varied.

For example, in apartment house construction, one, two or three bedroom units can be arranged on a single floor by varying truss and column spacings. And the Staggered Truss system is not only applicable to the basic rectangular configuration: it can also be applied to curvilinear or circular building, or to combinations of offset rectangles.

Trusses can be constructed with any practical distance between chords, so any floor-to-floor height can be met—which might present difficulties with conventional framing methods.

WHY IS STAGGERED TRUSS ECONOMICAL?

To start with, foundations are only needed for the exterior column lines. This means savings in excavation, concrete costs, and the time spent for foundation construction.

High-strength steel can be used economically, because strength rather than deflection controls the truss design.

With minimum types of truss members, important savings can be made in shop fabrication—which in itself accommodates the maximum use of mass-production. And with fewer pieces to handle in the field, erection time and costs can be cut.

All this helps make Staggered Truss more economical than other systems. For example, in a typical twenty story apartment building, we might expect that the steel requirement for a staggered truss frame is only about 60% of

that required in a conventional framed structure. A possible saving of up to 40%!

Naturally, shorter erection time results in faster occupancy—and this means lower-cost construction loans and earlier rental income for owners.

THINK ABOUT IT

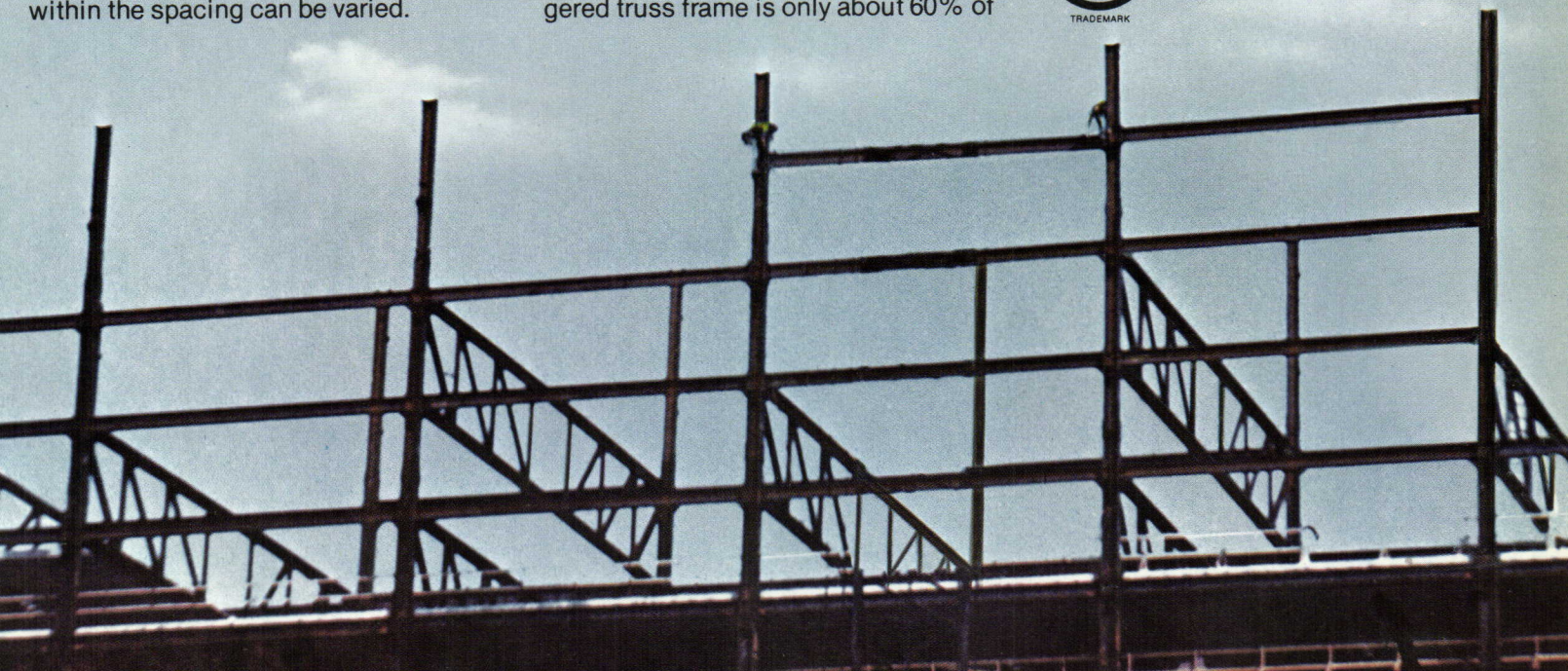
The benefits of the Staggered Truss system are many, but its biggest advantage is the ability to resist lateral loads. So the value of the system increases as the building becomes higher, and this is why it has been so successful for high-rise residential buildings such as apartments, condominiums and hotels.

Staggered Truss is worth thinking about. In many recent projects, when evaluated against other systems, it has proved to be the fastest, the most practical and the most economical. You'll be surprised how easy it is to work with.

For more information on the design of Staggered Truss structures, contact a USS Construction Representative through your nearest U.S. Steel Sales Office. Or write for our booklets, "Staggered Truss for High Rise Building" (ADUSS 27-5227-02), and "Staggered Truss Framing System-Design Considerations and Commentaries" (ADUSS 27-7165-01), to U.S. Steel, Box 86, (C737), Pittsburgh, Pa. 15230.



United States Steel



A beautiful way to make an exit and bar an entrance.



Russwin 900 Series labeled rim exit devices. Positive two-way protection styled to flow harmoniously in any decor. Oval-contoured cross bar provides sure grip . . . triggers instant release. Touch button deadlocks massive $\frac{3}{4}$ " latch against intruders.

Rugged stainless steel chassis. UL listed class "A". Available in a wide range of types and finishes.



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