Creative styling: an inherent quality of Azrock floors. An outstanding characteristic of Azrock vinyl asbestos floors is their ability to reflect any mood or decor ... to emphasize or understate as desired.

A recent example is Waltham, Massachusetts' 275 Wyman Street Building. Floors of Azrock Pebbled Terrazzo coordinate effectively with other interior colors and finishes ... add the unusual dimension of textured floor surfaces. Like all Azrock styles, Pebbled Terrazzo is a product of modern craftsmanship in durable Vinyl asbestos tile.

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PUBLISHER’S NOTE—THE FUTURE OF FORUM

As many of our readers have already learned, the September issue of FORUM is to be its last. It was a decision most reluctantly taken. Since announcing it, we have received a great many letters and telegrams deploring the news, asking questions, pleading for a reversal, and expressing a sense of loss.

We share the feeling of loss and regret. Our concern—Time Inc.’s concern—with the field of architecture and building is longstanding, and it will not diminish now. When we took over Architectural Forum in the midst of the depression, Henry R. Luce assigned it a challenging mission: “to bring together around the central art and science of architecture all the major influences which will build America in the decades ahead.” That mission was later extended to the city itself—to urban renewal, city planning, the public environment.

How well we have succeeded in our task is apparent in the appreciative letters we are now getting (a selection will be published in the next issue), in the awards we have won, and in the circulation we have reached—an all-time high of 64,000. But, alas, editorial performance and prestige have not brought financial good health.

As Mr. Luce put it in a letter last week to one of the nation’s leading architects: “FORUM has served an important purpose for more than three decades, and we have not required that it show a real profit. Unfortunately, despite the best efforts of many knowledgeable people, its losses have increased to the point where its continuance in its present form cannot be justified.”

In many years of seeking a formula for Forum to sustain itself, a great deal of thought has been given to its purpose and to its audience. (One formula we have not considered is to lower its standards.) Forum has sought to unite three groups of readers—the professional architects, engineers, and designers; the contractors; and the client-owner-finance groups. This concept of a three-way interplay within the building industry answered to logic and experience, but it required Forum to seek and maintain a volume of circulation which advertisers would not buy in sufficient amounts to give Forum a profit. In effect, Time Inc. has subsidized Forum for more than 30 years.

Perhaps one of Forum’s insuperable difficulties has been that the cost structure of a small magazine within a large publishing enterprise tends to move up to the standards set by the big, broad-audience magazines, so that the usual advantages of size become disadvantages to a small publication. This has been true for us.

In searching out and encouraging better architecture and
How Bertrand Goldberg used General Electric Zoneline Air Conditioning to design Marina City "for the varying needs of the individual tenant."

Bertrand Goldberg explains a step forward in apartment design: "Today we are designing as flexibly as possible for the varying needs of the individual tenant. In the past we've frequently forgotten that each tenant has needs and preferences which are different from his neighbor's."

This new approach to apartment design is exemplified in Mr. Goldberg's Marina City, a 60-story project in Chicago housing 896 families, recreation and shopping facilities and a 700-boat marina.

"At Marina City individual Zoneline air conditioning units for each room allow not only each tenant—but each room occupant—to enjoy exactly the temperature and air environment that he desires. The push of a button gives each room occupant his choice of hot or cold air, automatic or manually controlled and either re-circulated or filtered outdoor air."

Goldberg is also enthusiastic about Zoneline because it can be used so unobtrusively that "it doesn't compromise the integrity of the architectural design."

In addition to Zoneline room air conditioning, Marina City features 117 three-ton and 117 five-ton G-E central air conditioning units. Using both room and central air conditioning in the same building is just one more example of how Zoneline's flexibility and custom design can make it an integral part of any architectural design. For details, write Air Conditioning Department, General Electric, Appliance Park, Louisville 1, Kentucky.
better building, in vigorously condemning the shoddy and celebrating the good, Forum has played a vital educational role in the wider community, as many of our readers are now telling us. Within Time Inc., Forum has played a similar missionary role. No general magazine in the U.S., for example, offers so much reporting and criticism of architecture, or devotes as many color pages and cover stories to the subject, as Time. Life has a lively interest in the quality of housing and the character of the American community. Fortune has long paid considerable attention to architecture and building, and Time Inc. has now decided to entrust a major part of Forum's editorial mission to Fortune.

To this end, Fortune's editorial pages—including many in color—will be increased, beginning in October, to report more fully on architecture and building developments around the world. Several members of Forum's staff will be added to Fortune's to ensure that these pages will be as knowledgeably critical and sure-footed as Forum has been. It won't be quite the same, of course—there will be fewer technical features, for example—but in some respects Fortune will be able to go beyond what Forum has been able to do. Fortune's pages themselves will interest architects, but of even greater interest should be Fortune's efforts to stir the business community to a sophisticated awareness of the subject. Fortune's circulation is seven times bigger than Forum's and the concentration of its readers among business and industry leaders—men who run the corporations, institutions, and public bodies that are the sponsors of architecture and directors of the $27 billion building construction industry—ensures that Forum's editorial devotion to quality architecture and building will have a wider audience, and a vital one.

In view of Fortune's commitment to assume a large part of Forum's editorial franchise, we expect that many Forum subscribers will want to receive Fortune after September. They will soon be hearing from us how the unfilled portion of their Forum subscriptions may be converted to Fortune subscriptions. We hope thus to perpetuate Forum's influence on the American scene. And we appreciate how many of our readers are eager that this be done.

The next issue of Forum will be a combined August–September issue with double the usual editorial content. Featuring a review of three decades of architectural progress, a critical look at the present, and a speculative glance into the future, this double issue should be a fitting finale to Forum's 32-year run as a separate Time Inc. publication.—J.C.H., JR.
Does $1\frac{1}{2}$ cents per valve per year surprise you?

Such a low, low figure just has to be one of the smallest items in any building maintenance budget—one important reason why Sloan Flush Valves are found to be the overwhelming choice for the vast majority of the nation’s fine buildings.

In addition to low maintenance, Sloan Flush Valves are unequalled in over half a century for dependable operation, long life and water economy.

Your building, too, can have this same SLOAN quality. Merely specify Sloan Flush Valves with confidence—most people do.
High building cost causes high tax

ALBANY, N.Y.—A year ago last May, this magazine wondered whether the New York courts had ventured into the field of architectural criticism. The answer became apparent last month when New York State’s highest court ruled that Manhattan’s Seagram Building had to pay higher realty taxes per square foot than any other office building in New York — because Joseph E. Seagram & Sons, Inc. went out of its way to build an expensive, strikingly handsome structure.

In the 4-3 majority opinion, Chief Justice Charles S. Desmond of the Court of Appeals stated that the high tax “does not mean that a corporate sponsor of esthetics is being penalized for contributing to the metropolis a monumental and magnificent structure.” The tax, said Desmond, is a realty tax, directly attributable to the space that Seagram occupies in the building.

Since Seagram benefits from having its name associated with its world-famous tower (by Architects Mies van der Rohe and Philip Johnson), the court said, the building must be regarded more as a real estate investment in Seagram’s own business than as a commercial headquarters and rental building. This decision departs from an earlier ruling by the Appellate Division by assigning the excess tax to the seven Seagram-occupied floors instead of to the “prestige” value of the entire structure.

The crux of the whole Seagram affair, of course, is that the company spent a lot more money building the tower and plaza than it had to: $16 million total. Another $5 million went into buying the Park Avenue site. By the traditional method of assessing a commercial structure (i.e., by capitalizing its income, depreciation, and land), the Seagram Building’s worth has found to be about $17 million. The discrepancy between this figure and construction cost, said the courts, had to be explained by the building’s additional intangible value to its owners. So the courts created a special category for the tower (“specially built to suit the tenant”). To assess the building, they accepted the City Tax Commission’s new formula — using reconstruction cost less depreciation, vacancy factor, and tenant’s changes.

Three justices disagree

Though it supports the earlier ruling, the Court of Appeals’ close decision leaves some room for hope. In its dissenting opinion, Justice Adrian P. Burke (with Justices Van Voorhis and Scileppi concurring) criticized as “erroneous in law” the majority opinion that “the cost of construction is prima facie evidence of value in the case of a newly erected structure built for pres-
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STEELCASE INC
rental commanded by the building . . . [Higher rents are] fully reflected in the capitalization of earnings." The net result of the Seagram case, the Justice continued, was to displace "income capitalization as an acceptable measure of value."

Is Pepsi "special" too?

Burke also called attention to another court case which suggests that the courts have become architectural critics. It involves the Pepsi-Cola headquarters on 59th Street and Park Avenue in Manhattan, designed by Skidmore, Owings & Merrill. Like the Seagram Building, Pepsi's is widely considered an example of excellent urban architecture.

Also like Seagram & Sons, Inc., Pepsi-Cola Co. spent much more on its site, 11-story building, and L-shaped plaza than it had to: some $7.5 million. The City Tax Commission applied the construction cost method to its assessment of the property ($6.3 million), and Pepsi's experts used the capitalization method to value it at $2.2 million. The disagreement went before the courts, ending up in the Appellate Division.

Two months after the Division had upheld the high tax in the Seagram case, it decided that the Pepsi building was "not in the same category as the Seagram building," that is, not a "newly erected structure built especially for prestige and advertising value as well as headquarters use.

In coming to this conclusion, the Appellate Division did two significant things: 1) it tended to favor the capitalization method of determining the building's value, though as in the Seagram case, the city based its argument only on the construction cost; and 2) it seemed to bend over backward to get the Pepsi Building out of the "specially built" category. Anybody familiar with both the Seagram and Pepsi-Cola buildings, however, would think Pepsi's the more special: its lobby floor is not used for any commercial purpose; the elevators open directly into offices; its small size suits Pepsi-Cola Co.'s purposes. The Seagram Building, on the other hand, is designed for commercial purposes throughout.

These factors led Justice Burke to remark that the only difference between the two buildings in the Appellate Division's eyes seemed to be that Seagram received more benefits from having its name associated with its building than Pepsi received from its. If this is so, the Division ended up by making a value judgment—just as did the Court of Appeals in assigning a theoretically higher assessment figure to each square foot that Seagram occupies in its own building.

Seagram has little recourse. The company can either ask the Court of Appeals to reconsider the case, or petition the U.S. Supreme Court. Neither alternative is considered very hopeful.

The issues posed in the Seagram and Pepsi-Cola cases, however, might be cleared up in later cases. In them the courts might revert to the traditional thought that market value is the only appropriate way to assess a commercial structure. Or, they might come out and say what they have been hinting at all along: any builder willing to spend extra money on a building must also be willing to pay higher taxes for his extravagance. If this latter course is chosen, a blow to the urban landscape will have been struck. As Forum editorialized last year: "The power to tax architecture on its quality is the power to prevent it."

AIA LOOKS AT 'INVISIBLES'

ST. LOUIS—At the annual convention of the American Institute of Architects last month, the architect's difficult position as both esthetician and environmental specialist was highlighted. Theme of the convention was "The city—visible and invisible." Most of the "visible" problems of the city were familiar enough, and Architects Francis Lethbridge and Albert Mayer tried to set them in perspective. But the "invisible" problems were harder to pin down. In the end, architects were asked to understand government, sociology, law, and even religion as the broad new determinants of design.

Said St. Louis Mayor Raymond R. Tucker: "Good urban design cannot be served abstractly." It implies a knowledge of, and a planning effort to correct, the fragmentation of local government, where several almost independent authorities deal with such overlapping subjects as sewers, fire-fighting, and transportation.

Warned Tucker: "It can be truly said that no level of government in the United States is adequately prepared for the urban expansion of the future."

Kansas Governor John Anderson Jr. told the architects they would have to comprehend the direction in which city governments must move to handle the expected upsurge in cities' population, and what steps are being taken (or not being taken) at state and federal levels.

U.S. Surgeon General Luther L. Terry added a plea for architects to find out about new physical, chemical, technological, and sociological elements affecting the environment. Planning at a regional level, Terry pointed out, can be just as helpful in controlling disease as can proper hospital design, particularly in matters of air pollution.

AIA Gold Medalist Nervi

continued on page 8
Summed up keynote speaker Thomas H. Eliot, Chancellor of Washington University: American architects must take the lead "in defining the values that make urban life worth living, and in translating them into physical form." The architects did more than hear of their wide responsibilities. They enjoyed St. Louis and their host chapter's generosity. They enthusiastically endorsed the new plan for Pennsylvania Avenue (see pages 63-75) and came out for preservation of the old Victorian-style St. Louis Post Office (designed by Architect A. B. Mullet, whose newly refurbished Executive Office Building has received much praise in Washington, D.C.). At the Annual Dinner, Pier Luigi Nervi received the AIA's Gold Medal. New officers were elected, including Arthur Gould Odell as president, Morris Ketchum as first vice-president, Rex W. Allen, William W. Eshback, and Hugh Stubbins as vice presidents, and Oswald H. Thorson as secretary.

**TAXFREE SCENERY?**

McLEAN, VA.—Last year, when a high-rise apartment development threatened to spoil the forested Merrywood section of the Potomac Palisades, 22 land-owners granted "scenic easements" to the federal government (News, Jan. '64). By placing the scenic rights in U.S. custody, the land-owners agreed to property restrictions preventing high-rise construction and deforestation.

Last month, the Internal Revenue Service added an important new incentive, setting a precedent which could have wide national significance. IRS indicated that, by granting the scenic easement, the land-owners had in effect made a charitable contribution which was not deductible and that the amount of the deduction would be based on "the fair market value of the property at the time of the contribution."

The IRS stand, however, is "advisory" and lacks the full force of a normal tax ruling. IRS is now considering whether it should take this further step.

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**Midtown Plaza promotes a Rochester building boom**

ROCHESTER, N.Y.—For a long time, Xerox Corp. decision-makers mulled this problem: should the company build its new headquarters in downtown Rochester, or in the suburb of Webster where production facilities are located? Last month, Xerox unveiled final plans for a 30-story tower and smaller building by Architects Welton Becket & Associates. The site is central Rochester, and the major reason for the choice is the startling boom around Midtown Plaza.

The Plaza is a 7½-acre complex consisting of two department stores and a hotel, which were remodeled for the project, and a new hotel-office tower, garage, and shopping mall (Forum, June '62). Designed and planned by Victor Gruen & Associates, the Plaza represented Rochester's first major building project in 30 years—and its first major venture in urban revitalization. Since opening celebrations 26 months ago, Midtown Plaza has done a booming business, drawing shoppers from as far away as Toronto. It has also sparked over $35 million in new construction in the surrounding area.

Xerox's $20 million project is the most recent and the most striking; it will also comprise the city's tallest building (model photo, right). But it is only one of several new developments. Others include: the 11-story Security Trust building under construction; a branch building for the Central Trust Co. and another for Travelers' Insurance; a ten-story office building now being erected by Gordon Realty; and extensive refurbishing work by nearby hotels and stores.

Midtown Plaza may not be the only reason for all this activity. But its success undoubtedly accelerated some plans and caused others to be enlarged. It has done more for Rochester than even the city fathers and planners hoped. And it has set an example for other cities with deteriorating downtowns.

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**Webb & Knapp lays an egg—but Zeckendorf is still scrambling**

NEW YORK—William Zeckendorf has never avoided big risks. But his wheelings and dealings over the past few years seem to have made only his creditors rich. Last month, when Webb & Knapp, the company he controls, released its 1963 financial statement, it looked like the only thing that stood between Zeckendorf and bankruptcy was his creditors' faith in his real estate gambling ability. The awful facts are these:

- Webb & Knapp lost $32.3 million last year, one of the largest ventures into the red in recent U.S. corporate history. The company posted a $19.6 million deficit in 1962, making a staggering loss of $51.9 million for the two years.
- The $32.3 million figure included a write-down of subsidiary stocks to the tune of $20.5 million. Two companies, Webb & Knapp (Canada), Ltd. (original backers of Place Ville Marie) and International Recreation Corp. (which operates the long-ailing Freedomland amusement park) were completely written off—meaning that they are not marketable.
- The stock of Roosevelt Field, Inc., a Long Island shopping center complex, was written
ARCHITECTS PANEL SELCETS 16 BEST BUILDINGS OF 1964

ST. LOUIS—Last month, the AIA released its annual selection of award-winning buildings. Included were four First Honor Awards (three of which are shown in the photos above), and 12 Awards of Merit.

Two of the top awards went to Skidmore, Owings & Merrill, for the BMA Tower in Kansas City (see pages 86-91), and the Emhart Manufacturing Co. headquarters in Bloomfield, Conn. (Forum, July '63). Others receiving first honors were Paul Rudolph's Art & Architecture Building at Yale University (Forum, Feb. '64), and the Arts and Communication Center, Thomas H. Evans Science Building by The Architects Collaborative at Phillips Academy, Andover, Mass.

Awards of Merit went to the following buildings (date in parentheses refers to publication in Forum): Memphis Metropolitan Airport, Tenn., by Mann & Harrover (July '63); Temple Street Parking Garage in New Haven, Conn., by Paul Rudolph (Feb. '63); headquarters building for Westinghouse Electric Corp.'s Molecular Electronics Division in Ann Arbor, Mich., by Vincent Kling (Feb. '64); Horison House, Ft. Lee, N. J., by Kelly & Gruzen (Apr. '63); St. Francis Square, Western Reserve Redevelopment Area, San Francisco, by Marquis & Stoller; Constitution Plaza, Hartford, Conn., by Charles DuBose, with Emery Roth & Sons, Curtis & Davis, and by Fulmer and Bowers, Kahn & Jacobs, and Carson, Lundin & Shaw (Oct. '63); Carmel Valley Manor, Calif., by SOM; Assembly Hall, University of Illinois, Urbana, Ill., by Harrison & Abramovitz (Oct. '58); plant for Helen Whiting, Inc., Pleasantville, N.Y., by Ulrich Franzen (May '63); Central Plaza Development, Canton, Ohio, by Tarapata-MacMahon Assoc., Inc. (Jan. '64); Case Study House No. 25 for Arts and Architecture Magazine, Long Beach, Calif., by Killingsworth, Brady, Smith & Associate; and a residence in Dobbs Ferry, N.Y., by George Nemeny.

A jury chaired by Charles M. Nes and including Charles A. Blessing, Mark G. Hampton, Eliot F. Noyes, and Gyo Obata selected the prize winners from a total of 439 submissions. The only building types that did not receive awards were schools and churches. Reported the jury: "The sheer size of the buildings required for schools (results) in a lack of warmth, scale, and in a somewhat inhuman expression of their intended use. The examples of religious architecture seemed in too many cases to exhibit the architect's desire to express himself with a forced use of indifferent sculpture and glass and bizarre structural shapes. The real problem here may be an unclear idea of the role and place of religion in our present society. . . . No new architectural directions are indicated by the selections."

Saarinen quad gets Pevsner bronze
Eero Saarinen's five-year-old Law School Quadrangle at the University of Chicago has received its final touch with the installation of a monumental bronze sculpture by Antoine Pevsner. Last of the late French master's major works, the 10-foot-high sculpture sits on a 7-foot black granite base in a large fountain pool. Attending dedication ceremonies last month were l. to r. Law School Dean Phil C. Neel; Aline Saarinen; Donor and Alumnus Alex Hillman; President George Wells Beadle; Provost Edward Levi.

continued on page 10
**NEWS**

**Museum of Modern Art addition opens**

At a gala soiree presided over by First Lady Lady Bird Johnson, 5,000 distinguished guests put away 80 cases of champagne to mark the reopening last month of Manhattan's refurbished and greatly expanded Museum of Modern Art. The $51.5 million expansion, designed by Philip Johnson Associates, doubles the amount of exhibit space with the addition of two new wings, providing permanent display space for the Museum's departments of prints and drawings, architecture and design, and photography. The program also produced an enlarged sculpture garden and a remodeled main entrance. Next step: addition of two more galleries when the adjacent Whitney Museum of American Art moves to new quarters.

**HIGH COURT RULES ON LEGISLATURES**

WASHINGTON, D.C. — City dwellers and suburbanites who have complained that they are under-represented in their legislatures had cause to rejoice last month: the U.S. Supreme Court ruled that both houses of all state legislatures must be apportioned by population. "Legislatures represent people, not trees or acres," wrote Chief Justice Earl Warren in his 6-3 majority opinion.

The Court-enforced principle of equal representation for every voter will cause reapportionment in some 40 of the 50 states.

Together with the recent Supreme Court decision that each member of the U.S. House of Representatives must be elected from a congressional district roughly equal in population to other districts within the state, the new ruling will ensure that metropolitan issues like urban renewal, air and water pollution, housing, and mass transit get a fair hearing at both state and federal levels. It does not ensure, however, that cities will stop asking Washington for aid. Reason: even state treasuries cannot finance the kind of improvements needed without imposing higher taxes—which could easily drive industries out of the state.

**DEBATE ON PENNSYLVANIA AVE.**

WASHINGTON, D.C. — Last month the long-awaited plan for rebuilding Washington's Pennsylvania Avenue was released (see pages 65-75). The initial reaction was mixed: enthusiasm in the press, both praise and caution from citizen's groups, and guarded comment from high in government.

The New York Times called the plan, the work of a ten-man council created by President Kennedy, "a realistic and far-seeing redevelopment scheme that may be Washington's last chance to save its Avenue of Presidents from chaotic speculative rebuilding." Said the Washington Post: "The council points the way to the salvation of all American cities."

The tax-conscious Washington Board of Trade was more reserved, labeling the scheme "both exciting and expensive." The prestigious Federal City Council, however, endorsed it with "special enthusiasm" after a presentation by Architect Nathaniel A. Owings, chairman of the planning group. The Federal City Council, composed of Washington's top business and professional leaders, pledged "every encouragement" in seeing the plan through.

In Congress, Senator Frank J. Lausche, Ohio's maverick Democrat, attacked one of the plan's key provisions, the creation of a new National Square at the White House end of the Avenue. Lausche criticized the tearing down of "good and usable buildings" to clear the square, including the Willard and Washington Hotels and the National Press Building. "We are suffering from a mental aberration and delusions of grandeur," "amended the senator.

In the executive branch, Interior Secretary Stewart Udall endorsed the plan. From President Johnson came these words: "I hope this proposal will be very carefully examined . . . not only by Congress but by the appropriate agencies . . . and by the American people as well. . . . The commission's recommendations are worthy of our attention."

Johnson's wait-and-see attitude need not be taken as a negative comment on the plan. At the date of his statement, LBJ had not had time to digest the fiscal features of the scheme. The commission predicts a net public cost comparable to the Federal Triangle's $300 million (in 1964 dollars). The total cost (public plus indicated private investment) might triple that figure.

Pa. Ave. scheme: new National Square in foreground, Capitol in background
quote . . . unconque

"An architect, on the rare occasion when he is allowed to come in by the front door, still ranks between the accountant, who is, of course, vastly more important, and the Fuller Brush man, who is only slightly less." — Architect Philip C. Johnson.

"We now face the biggest building program in any nation's history. We can build to rival the luster of Greece and Rome or we can blunder into becoming the ugliest nation in the world. In some instances, we are already both." — AIA President J. Roy Carroll.

"It is wisest to preserve carefully the fine artifacts of other times and then surround ourselves with the misshapened and unsightly in our own day." — CBS President Dr. Frank Stanton.

"Resources are not the problem [of the city]. It is the shaping imagination, the liberating idea. With it, man's abundance can be used to make his urban life worth living. Without it, the city may be, in its slower way, as lethal as the bomb." — British Economist Barbara Ward.

"I'm not afraid of greater population densities. Greater density is purely a matter of design." — New York City Planning Commission Chairman William Ballard.

"The reluctant marriage of art and architecture is already going badly... Both artist and architects are growing increasingly restive, each blaming the other for the ungratifying results of their collaboration." — Critic Emily Genauer.

"Much modern furniture and much too much modern architecture offend by their dullness. In seeking simplicity, or to use the abused word, functionalism, they arrive too often at emptiness." — Columnist J. Donald Adams.

"Out of 20 per cent [of building in the world] that may be influenced by architects, it is only perhaps 2 per cent of the total architectural creation that is completely controlled by architects." — Architect-Planner C. Doxiadis.

jackie sees architects

Last month Mrs. Jacqueline Kennedy turned her radiant smile on Paul Rudolph, Dean of Yale's School of Architecture. He was not the only architect so favored. Mrs. Kennedy paid calls on I. M. Pei, Louis Kahn, John Carl Warnecke, (who is designing JFK's tomb in Washington, D.C.), Philip Johnson, and Mies van der Rohe. Her purpose: to acquaint herself with their work so that she could help choose one of them to design the John F. Kennedy Library at Harvard University. Soon after observers had begun to place their bets—with the odds favoring either Rudolph or Kahn—Attorney General Robert Kennedy hinted that there might be a seventh architect under consideration. Who was he? Not even the oddsmakers ventured to guess.

bob anshen dies at 54

Just a year ago at the AIA Convention in Miami, San Francisco Architect S. Robert Anshen said to his colleagues: "At a time in America of enormous wealth, of enormous technological invention, of new and sometimes wondrous materials, what proliferate along the avenues of our great cities but symbols of the architect's abdication of his responsibilities." It was a typical remark to come out of the small, intense man. He cared about his profession and did not mind piquing his fellows about it. Nor did he avoid setting an example in his own work of what he believed architecture was all about.

For 24 years, he and his partner, W. Stephen Allen, designed buildings ranging in size from garden sheds to skyscrapers. For Bay Area Developer Joseph P. Eschel, they designed tract houses; for other clients, custom residences, churches, schools—passing to gather architectural awards for such projects as the International Building (Forum, Mar. '62), and perhaps Anshen's favorite project, the Chapel of the Holy Cross at Sedona, Ariz. (Forum, Dec. '56).

Anshen was also absorbed in the firm's big current project: an $11 million building for the Bank of California in downtown San Francisco (Projects, April '64). On the night of May 24, he went to the offices to get an early start on the work. The next morning, his partner found him dead. He was 54 years old.
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8. OK. Now forget it. Styrofoam FR won’t absorb water, won’t let moisture pass, won’t need attention—ever! Any questions? See Sweet’s Arch. File 10a/Do.

The Dow Chemical Company, Midland, Michigan.
Widely fluctuating construction needs have resulted in many new rankings and unfamiliar faces among FORUM's 100 biggest building clients for 1963. As in the past, the pattern reflects special building programs, including several "one-shot" single structures which bring companies into the big brackets only once in a period of years.

For example, Deere & Co. has been high on the list for the past two years while completing its new headquarters in Moline, Ill. (see page 100), and predicts a 19 per cent decrease for 1964. Similarly, New York's Morgan Guaranty Trust spent its entire $21.8 million construction budget remodeling a 38-story office headquarters on Wall Street, and foresees a 79 per cent decline for this year.

Newcomers to the list (asterisks in tables) number 46 compared to 51 last year, and represent a cross-section of manufacturers, banks, utilities, insurance, and other companies, many of which forecast lower construction figures for 1964.

Among the corporate giants, American Telephone & Telegraph is still far at the head of the list with $206 million, compared to $193 million last year. Almost 88 per cent of its volume came from buildings housing switching and transmission facilities. (AT&T's manufacturing subsidiary, Western Electric, fell from third place to 13th, despite considerable outlay for factories and production facilities, and expects to do 17 per cent less this year.) General Motors maintained its runner-up position for 1963, followed by three who, with expanded building programs, ranked higher this year than in 1963: Sears, Roebuck; Montgomery-Ward; and Prudential Insurance. Montgomery-Ward, for example, opened 24 new stores in 1963, 18 of which were relocations of old ones. The company also opened 91 new catalog offices, 42 of them replacing obsolete units.

Others high on the list include: Alcoa with a $32 million investment in both plant improvement and participation in urban development in seven major cities; Ford, which spent close to $25 million last year on expansion and modernization of plant facilities, compared to $8.9 million in 1962; and Stop and Shop, which increased its construction expenditures by almost 50 per cent, adding 14 food stores and seven self-service department stores.

Overall, the 100 biggest clients accounted for $1.3 billion, or 7.6 per cent of the $17.1 billion in commercial, industrial, and utility buildings put in place in the U.S. in 1963. (Figures exclude power and oil lines, railroad beds, production machinery and process equipment.)

Remodeling on the rise

Continuing a trend of previous years, modernization showed a greater increase in 1963. Nine companies, of 87 reporting, spent 50 per cent or more of their total volume on remodeling of existing structures. Metropolitan Life, for instance, spent almost 64 per cent of a $13.3 million construction outlay renovating its landmark tower in Manhattan.

Although 44 of the 100 biggest put the largest share of their building money into industrial structures, 27 concentrated on offices, and 20 spread their investment among warehouses, retail stores, and miscellaneous building types. Such companies as Sears, Montgomery-Ward, R.H. Macy, and Safeway Stores spent up to 100 per cent of their building budgets on retail stores and warehouses. Three manufacturers—Penske Chemical, Interchemical, and Rohm & Haas—put their largest percentage into research facilities. Of all the industrial firms sponsoring exhibits at the New York World's Fair (among them IBM, General Motors, Ford, and AT&T), Chrysler was the only one to list its pavilion separately in the percentage breakdown (10 per cent).

Two insurance firms reported sizable investments in buildings not actually used by them. Prudential invested 20 per cent of its total in hotels, and Metropolitan Life over 20 per cent on additions to various company-owned housing projects around the U.S. As for this year, optimism runs high among those clients who predict more building. The top three firms look forward to increasing construction volume. In some cases, the expanded programs may have been spurred by the new tax cut law. One such firm which expects to use its tax savings on building, AT&T, plans a $287 million outlay for 1964, the largest program of expansion and modernization ever launched by any company in history. A smaller utility concern, American Electric Power, which operates subsidiaries in part of seven states from Michigan to Virginia, is putting its leftover tax dollars into a building plan which will aid the distressed Appalachian area.

Of the 92 firms venturing estimates for 1964, 42 foresee an increase; 50 expect to build less. Moreover, 10 companies of the 42 forecast increases of well over 100 per cent. Chrysler predicts the highest gain, 355 per cent, based on new and expanded manufacturing and assembly plants. In a similar move, the two other leaders of the automotive industry plan record facility expansion programs. GM, planning its largest expansion program to date forecasts a construction figure of $125 million for 1964, including a new assembly plant, while Ford's current outlay will be its second highest in history. (Ford which, did not break down its estimate into components, announced it was spending $510 million this year on expansion and modernization. This figure includes foreign expenditures as well as equipment costs.) The average net expected increase of all firms reporting is 11.6 per cent.

Because of insufficient data, FORUM has estimated the volumes of three companies (footnoted in the accompanying table): Eastman Kodak, Columbia Broadcasting, and Olin Mathieson Chemical. Companies which did not report 1963 construction figures, but which FORUM believes should be included in the list, are Litton Industries, National Dairy Products, and Proctor & Gamble. Gramman Aircraft Engineering Corp. was eligible for this year's listing, but reported too late for inclusion in the tabulations.
<table>
<thead>
<tr>
<th>Company (main office)</th>
<th>Value ($000)</th>
<th>Remodeling</th>
<th>Production</th>
<th>Research</th>
<th>Offices</th>
<th>Other</th>
<th>Forecast '64 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Telephone and Telegraph Co. (New York)</td>
<td>$206,000</td>
<td>10</td>
<td>—</td>
<td>—</td>
<td>8</td>
<td>92</td>
<td>+39</td>
</tr>
<tr>
<td>General Motors Corp. (New York)</td>
<td>79,000</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>+58</td>
</tr>
<tr>
<td>Sears, Roebuck and Co. (Chicago)</td>
<td>63,500</td>
<td>20</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>100</td>
<td>+26</td>
</tr>
<tr>
<td>Montgomery-Ward Co. (Chicago)</td>
<td>56,000</td>
<td>20</td>
<td>—</td>
<td>—</td>
<td>7</td>
<td>93</td>
<td>—4</td>
</tr>
<tr>
<td>Prudential Insurance Co. of America (Newark, N.J.)</td>
<td>35,360</td>
<td>3</td>
<td>—</td>
<td>—</td>
<td>79</td>
<td>21</td>
<td>—5</td>
</tr>
<tr>
<td>Eastman Kodak Co. (Rochester, N.Y.)*</td>
<td>35,000</td>
<td>—</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>+14</td>
</tr>
<tr>
<td>Aluminum Company of America (Pittsburgh)</td>
<td>32,000</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>+41</td>
</tr>
<tr>
<td>Safeway Stores, Inc. (Oakland, Calif.)</td>
<td>29,973</td>
<td>24</td>
<td>11</td>
<td>—</td>
<td>1</td>
<td>88</td>
<td>+16</td>
</tr>
<tr>
<td>IBM Corporation (New York)</td>
<td>28,564</td>
<td>3</td>
<td>33</td>
<td>17</td>
<td>50</td>
<td>—</td>
<td>+75</td>
</tr>
<tr>
<td>E. I. du Pont de Nemours &amp; Co. (Wilmington, Del.)*</td>
<td>28,000</td>
<td>—</td>
<td>90</td>
<td>5</td>
<td>—</td>
<td>5</td>
<td>+57</td>
</tr>
<tr>
<td>U.S. I. Chemicals Co. (New York)</td>
<td>25,000</td>
<td>10</td>
<td>75</td>
<td>10</td>
<td>5</td>
<td>10</td>
<td>—20</td>
</tr>
<tr>
<td>Ford Motor Company (Dearborn, Mich.)</td>
<td>24,900</td>
<td>na</td>
<td>100</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>na</td>
</tr>
<tr>
<td>Western Electric Company, Inc. (New York)</td>
<td>23,000</td>
<td>60</td>
<td>50</td>
<td>10</td>
<td>—</td>
<td>40</td>
<td>—17</td>
</tr>
<tr>
<td>Chrysler Corporation (Detroit)*</td>
<td>22,000</td>
<td>70</td>
<td>60</td>
<td>—</td>
<td>—</td>
<td>40</td>
<td>+355</td>
</tr>
<tr>
<td>Morgan Guaranty Trust Company of N.Y. (New York)*</td>
<td>21,800</td>
<td>100</td>
<td>—</td>
<td>—</td>
<td>100</td>
<td>—</td>
<td>—79</td>
</tr>
<tr>
<td>R. H. Macy &amp; Co., Inc. (New York)</td>
<td>20,000</td>
<td>14</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>100</td>
<td>—20</td>
</tr>
<tr>
<td>Minnesota Mining &amp; Mfg. Co. (St. Paul, Minn.)</td>
<td>16,300</td>
<td>2</td>
<td>65</td>
<td>15</td>
<td>15</td>
<td>5</td>
<td>+29</td>
</tr>
<tr>
<td>First National Bank in Dallas (Dallas)</td>
<td>15,778</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>100</td>
<td>+14</td>
</tr>
<tr>
<td>General Telephone &amp; Elec. Corp. (New York)</td>
<td>15,000</td>
<td>na</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>100</td>
<td>—13</td>
</tr>
<tr>
<td>McDonnell Aircraft Corp. (St. Louis, Mo.)*</td>
<td>14,072</td>
<td>3</td>
<td>70</td>
<td>24</td>
<td>6</td>
<td>—</td>
<td>—64</td>
</tr>
<tr>
<td>Stop &amp; Shop, Inc. (Boston)</td>
<td>13,659</td>
<td>11</td>
<td>4</td>
<td>—</td>
<td>3</td>
<td>93</td>
<td>—71</td>
</tr>
<tr>
<td>Metropolitan Life Insurance Co. (New York)</td>
<td>13,300</td>
<td>64</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>73</td>
<td>27</td>
</tr>
<tr>
<td>Douglas Aircraft Company, Inc. (Santa Monica, Calif.)*</td>
<td>13,000</td>
<td>—</td>
<td>19</td>
<td>9</td>
<td>66</td>
<td>6</td>
<td>—43</td>
</tr>
<tr>
<td>North American Aviation, Inc. (El Segundo, Calif.)</td>
<td>12,944</td>
<td>51</td>
<td>23</td>
<td>38</td>
<td>39</td>
<td>—</td>
<td>—31</td>
</tr>
<tr>
<td>S. K. Kresge Company (Detroit)</td>
<td>12,121</td>
<td>25</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>100</td>
<td>+16</td>
</tr>
<tr>
<td>Deere &amp; Company (Moline, Ill.)</td>
<td>12,000</td>
<td>10</td>
<td>40</td>
<td>10</td>
<td>40</td>
<td>10</td>
<td>—17</td>
</tr>
<tr>
<td>Campbell Soup Company (Camden, N.J.)</td>
<td>12,000</td>
<td>2</td>
<td>80</td>
<td>3</td>
<td>6</td>
<td>11</td>
<td>—67</td>
</tr>
<tr>
<td>Columbia Broadcasting System (New York)*</td>
<td>12,000</td>
<td>na</td>
<td>—</td>
<td>—</td>
<td>na</td>
<td>na</td>
<td>—</td>
</tr>
<tr>
<td>Motorola, Inc. (Franklin Park, Ill.)</td>
<td>11,961</td>
<td>10</td>
<td>93</td>
<td>—</td>
<td>1</td>
<td>6</td>
<td>—79</td>
</tr>
<tr>
<td>Commonwealth Edison Company (Chicago)</td>
<td>11,285</td>
<td>—</td>
<td>100</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—20</td>
</tr>
<tr>
<td>Boeing Company (Seattle)</td>
<td>11,000</td>
<td>50</td>
<td>58</td>
<td>26</td>
<td>5</td>
<td>11</td>
<td>—36</td>
</tr>
<tr>
<td>Phoenix Mutual Life Insurance Company (Hartford Conn.)*</td>
<td>11,000</td>
<td>5</td>
<td>—</td>
<td>—</td>
<td>95</td>
<td>5</td>
<td>—82</td>
</tr>
<tr>
<td>Bank of America NT &amp; SA (San Francisco)</td>
<td>10,500</td>
<td>90</td>
<td>—</td>
<td>—</td>
<td>100</td>
<td>—</td>
<td>—5</td>
</tr>
<tr>
<td>Virginia Electric and Power Co. (Richmond, Va.)</td>
<td>10,470</td>
<td>1</td>
<td>97</td>
<td>—</td>
<td>3</td>
<td>—</td>
<td>—61</td>
</tr>
<tr>
<td>American Can Company (New York)</td>
<td>9,438</td>
<td>75</td>
<td>86</td>
<td>3</td>
<td>10</td>
<td>1</td>
<td>+6</td>
</tr>
<tr>
<td>American Machine &amp; Foundry Company (New York)*</td>
<td>8,860</td>
<td>—</td>
<td>80</td>
<td>—</td>
<td>—</td>
<td>20</td>
<td>—75</td>
</tr>
<tr>
<td>Olin Mathieson Chemical Corp. (New York)*</td>
<td>8,700</td>
<td>na</td>
<td>—</td>
<td>—</td>
<td>na</td>
<td>na</td>
<td>—</td>
</tr>
<tr>
<td>Continental Can Company, Inc. (New York)*</td>
<td>8,521</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>—12</td>
</tr>
<tr>
<td>Swift &amp; Company (Chicago)</td>
<td>8,200</td>
<td>35</td>
<td>90</td>
<td>—</td>
<td>5</td>
<td>5</td>
<td>+2</td>
</tr>
<tr>
<td>Ideal Cement Company (Denver)</td>
<td>8,000</td>
<td>5</td>
<td>100</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—75</td>
</tr>
<tr>
<td>Pennsalt Chemicals Corp. (Philadelphia)</td>
<td>7,989</td>
<td>11</td>
<td>17</td>
<td>80</td>
<td>2</td>
<td>1</td>
<td>—31</td>
</tr>
<tr>
<td>Commerce Trust Company (Kansas City, Mo.)</td>
<td>7,890</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>100</td>
<td>—</td>
<td>+8</td>
</tr>
<tr>
<td>Wheeling Steel Corporation (Wheeling, W. Va.)</td>
<td>7,500</td>
<td>7</td>
<td>99</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>+100</td>
</tr>
<tr>
<td>Occidental Life Insurance Co. (Los Angeles)</td>
<td>7,500</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>100</td>
<td>—</td>
<td>+167</td>
</tr>
</tbody>
</table>

*Newcomers to list since 1963 survey
1 Estimate by company
2 Estimate by Forum based on available statistics
3 na—not available

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15
<table>
<thead>
<tr>
<th>Construction put in place</th>
<th>Value ($000)</th>
<th>Type of construction as a per cent of 1963 total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company (main office)</td>
<td>Remodeling</td>
<td>Production</td>
</tr>
<tr>
<td>*51 American Motors Corp. (Detroit)</td>
<td>7,449</td>
<td>38</td>
</tr>
<tr>
<td>52 United Air Lines, Inc. (Chicago)</td>
<td>7,285</td>
<td>20</td>
</tr>
<tr>
<td>*53 Kaiser Aluminum &amp; Chemical Corp. (Oakland, Calif.)</td>
<td>7,153</td>
<td>na</td>
</tr>
<tr>
<td>54 Standard Oil of Ohio (Cleveland)</td>
<td>6,956</td>
<td>10</td>
</tr>
<tr>
<td>55 Travelers Insurance Company (Hartford, Conn.)</td>
<td>6,900</td>
<td>36</td>
</tr>
<tr>
<td>56 Zenith Radio Corp. (Chicago)</td>
<td>6,700</td>
<td>-</td>
</tr>
<tr>
<td>*57 St. Regis Paper Co. (New York)</td>
<td>6,700</td>
<td>10</td>
</tr>
<tr>
<td>*58 Martin Marietta Corp. (New York)</td>
<td>6,540</td>
<td>30</td>
</tr>
<tr>
<td>*59 First Penna. Banking and Trust Co. (Philadelphia)</td>
<td>6,376</td>
<td>98</td>
</tr>
<tr>
<td>*60 Bank of Southwest (Houston)</td>
<td>6,250</td>
<td>8</td>
</tr>
</tbody>
</table>

| 61 Equitable Life Assurance Society (New York) | 6,100 | 16 | - | - | 100 | - | +282 |
| 62 Jones & Laughlin Steel Corp. (Pittsburgh) | 6,000 | 1 | 90 | 2 | - | 8 | -17 |
| 63 Potomac Electric Power Company (Washington, D.C.) | 6,000 | 1 | 75 | - | 25 | - | -67 |
| *64 Crocker-Citizens National Bank (San Francisco) | 5,818 | na | - | - | 100 | - | +7 |
| *65 Wells Fargo Bank (San Francisco) | 5,763 | 19 | - | - | 30 | 70 | +21 |

| 66 Addressograph-Multigraph Corp. (Cleveland) | 5,500 | - | 100 | - | - | - | na |
| 67 Weyerhaeuser Company (Tacoma, Wash.) | 5,400 | 5 | na | na | na | na | +122 |
| *68 The Penn. Mutual Life Insurance Co. (Philadelphia) | 5,360 | - | - | - | na | na | -90 |
| *69 Chemical Bank New York Trust Co. (New York) | 5,213 | 36 | - | - | 41 | 59 | +26 |
| *70 General Mills, Inc. (Minneapolis) | 5,140 | 23 | 51 | 47 | 2 | - | -20 |

| 71 The American Tobacco Co. (New York) | 5,100 | 21 | 99 | - | - | 1 | na |
| *72 Radio Corporation of America (Camden, N.J.) | 5,000 | 3 | 48 | 27 | 25 | - | +120 |
| *73 International Paper Company (New York) | 4,900 | na | 67 | - | 10 | 23 | +118 |
| 74 Kroger Co. (Cincinnati) | 4,800 | 7 | 18 | - | - | 82 | -17 |
| 75 Owens-Illinois Glass Company (Toledo, Ohio) | 4,688 | 5 | 74 | 10 | 15 | - | -68 |

| *76 Eastern Air Lines, Inc. (New York) | 4,570 | 30 | 35 | 5 | 35 | 25 | +9 |
| *77 Public Service Electric & Gas Co. (Newark, N.J.) | 4,500 | 27 | 82 | - | 18 | - | +2 |
| *78 Rohm & Haas Co. (Philadelphia) | 4,500 | - | 12 | 51 | 29 | 8 | +122 |
| *79 The Northwestern Mutual Life Ins. Co. (Milwaukee, Wis.) | 4,500 | 40 | - | - | 25 | 75 | +11 |
| *80 Northern Trust Company (Chicago) | 4,313 | - | - | - | 100 | - | +125 |

| *81 Interchemical Corporation (New York) | 4,300 | 10 | 25 | 50 | 25 | - | -30 |
| 82 Security First National Bank (Los Angeles) | 4,277 | na | - | - | 100 | - | +64 |
| 83 Bankers Trust Company (New York) | 4,122 | 45 | - | - | 100 | - | -52 |
| 84 Merck & Co., Inc. (Rahway, N.J.) | 4,100 | 10 | 40 | 40 | 10 | 10 | +46 |
| 85 Kennecott Copper Corporation (New York) | 4,023 | na | 99 | - | - | 1 | -49 |

| *86 United States Rubber Co. (New York) | 4,000 | - | 90 | - | 10 | - | -50 |
| 87 First National City Bank (New York) | 4,000 | na | - | - | - | 100 | +83 |
| *88 Pittsburgh Steel Co. (Pittsburgh) | 4,000 | 10 | 90 | 10 | - | - | -50 |
| *89 Borg-Warner Corporation (Chicago) | 3,939 | 9 | 56 | 16 | 11 | 17 | +5 |
| *90 Union Central Life Insurance Co. (Cincinnati) | 3,934 | - | - | - | 100 | - | -92 |

| *91 New York State Elec. & Gas Corp. (Ithaca, N.Y.) | 3,900 | 1 | - | - | 100 | - | -26 |
| *92 Republic Steel Corporation (Cleveland) | 3,900 | 25 | 99 | - | 1 | - | +21 |
| *93 Nippon Oil Corporation (Los Angeles) | 3,854 | - | - | - | 100 | na | - |
| 94 United States Gypsum Company (Chicago) | 3,700 | - | 20 | - | 60 | 20 | -46 |
| *95 Cummins Engine Company, Inc. (Columbus, Ind.) | 3,557 | - | 100 | - | - | - | +181 |

| *96 John Hancock Mutual Life Ins. Co. (Boston) | 3,538 | - | - | - | 100 | - | +25 |
| *97 U.S. Plywood Corp. (New York) | 3,500 | 25 | 30 | - | 5 | 65 | +43 |
| 98 Armco Steel Corporation (Middletown, Ohio) | 3,500 | 100 | - | - | - | - | +43 |
| 99 American Radiator & Standard Sanitary Corp. (New York) | 3,300 | 20 | 40 | 25 | 25 | 10 | -70 |
| 100 Oxford Paper Co. (New York) | 3,216 | 5 | 90 | 10 | - | - | -7 |

*Newcomers to list since 1963 survey
1 Estimate by company
2 Estimate by Forum based on available statistics
na = not available

NEWS

*Newcomers to list since 1963 survey
1 Estimate by company
2 Estimate by Forum based on available statistics
na = not available
This school cost less with ceramic tile

The new Waterloo, N.Y. High School contains 34,400 square feet of American Olean ceramic tile—including colorful tile murals on exterior and interior walls. Costly? Here are the facts: This school cost less—$1.65 per square foot less than the median cost of schools built in New York State during the same period. Proof that American Olean ceramic tile can save you money on school construction costs as well as insuring big savings on cleaning and maintenance year after year.

Write for informative Booklet 620, Ceramic Tile for Schools.

ABOVE—Main Entrance: exterior mural in ceramic mosaics, 1" sqs., Cerulean, Dove Gray, Citrin, Topaz with figures in Ebony, Plate 479.


BOTTOM RIGHT—Cafeteria Wall: ceramic mosaics 1" sqs., Beryl, Apricot, Petal Pink, Haze, Topaz. Plate 481.

ARCHITECT: John C. Ehrlich. Tile Contractor: Stearns & Bergstrom Inc.
It won't calm a client faced with premature paint failure. And costly repainting.

That's why the newest government specifications for masonry paint are worth your consideration. The government has set high standards of durability, to avoid frequent repainting.

The key to durability is the binder. Government Specification TT-P-0097 for exterior masonry paint states: "The nonvolatile matter of the vehicle shall contain at least 50% Styrene/Butadiene or Styrene/Acrylate."

Resins like PLIOLITE® qualify as binders for this application.

And — from Specification TT-P-91a for concrete floors — "Cement-Water Test: Two coats of paint on cement blocks shall not blister, crack, flake or discolor when blocks are soaked in water. Detergent Test: Blocks shall withstand scrubbing with trisodium phosphate solution."

You can obtain complete copies of these specifications from the General Service Administration or from Goodyear.

We'll also send more information on durable, proven, chemically inert PLIOLITE resins — plus names and addresses of paint manufacturers who use PLIOLITE.

Write us. You'll never be sorry.
This new shopping center designed with ALLSPANS® is off to a better start

As you can see, this shopping facility is not limited to any one architectural effect. ALLSPANS were used as floor and roof framing members and the results are attractive and practical. ALLSPANS, with cold rollformed chords and web systems, are engineered to function as you have a right to expect. ALLSPANS are versatile, permitting maximum design freedom.

ALLSPANS come in any length you need, from 8 feet to 152 feet. These are the quality joists in open-web framing. Production of ALLSPANS is carefully controlled through a stringent inspection program.

Before you go to the drawing board on your next shopping center, factory, school, hospital or office building, get the details on ALLSPANS. Write to us and ask for Catalog MA-64.
Pressure-relief ventilator with extruded aluminum tiers

LOREN COOK CO.

Made of rugged aluminum extrusions, the Model TRE provides a rectangular intake or exhaust unit with an integral curb cap to facilitate mounting. Cyclone-proof blade design keeps out driving rain or snow. Standard unit includes bird screen and insulated roof. Ask for Model TRE. Loren Cook Co., Berea, Ohio. (Sweets Architectural File, Section 20C.)

Reduce costs on commercial jobs!

Specify SANFORD® Truss Joists

Why step up costs with higher priced girders and joists? Enjoy the simplicity of wood construction in commercial jobs. Sanford Trusses exceed the most stringent requirements—and slash labor and materials costs. Call your Sanford dealer for full details or WRITE TODAY for new SANFORD TRUSS JOISTS BROCHURE.

SANFORD TRUSS, Inc.
WORLD'S LARGEST ROOF TRUSS SYSTEM
P.O. Box 1177-F, Pompano Beach, Florida 33060

This table flipped its top!

Vertical stacking makes it easy to nestle. Round, square, oblong tables—just flip the top down, maximum efficiency in multi-function space. Durable. And beautiful.

CHICAGO HARDWARE FOUNDRY CO. North Chicago, Illinois
This is the Open World of L·O·F glass

Chicago's tallest building will wear bronze-colored "sunglasses"

The Chicago Civic Center Building, scheduled for completion in 1965, will have Parallel-O-Bronze® Heavy-Duty Plate Glass in all of its thousands of windows—3/8" thick in the lower floors and ½" thick in the areas above where the wind loads are greater.

From the outside, the handsome shaft will have a rich, over-all bronze cast. Inside, the soft bronze tint provides a warm appearance yet permits building occupants to enjoy visual comfort.

3/8" Parallel-O-Bronze transmits about 34.4% (3/8" thickness, 24.8%) of average daylight (illuminant C) to soften sky brightness and reduce glare. And ½" Parallel-O-Bronze excludes approximately 54.6% (3/8" thickness, 60.7%) of solar heat.

L·O·F makes Heavy-Duty Plate Glass for greater strength and sound reduction. Clear Parallel-O-Plate®, Parallel-O-Grey®, and Parallel-O-Bronze in 3/8" and ½". Blue-green Heat Absorbing in ½".

L·O·F has conducted exhaustive strength tests on glass so you can specify thickness safely and with full confidence that you will meet code requirements. Pressure limits for each size and thickness were actually measured in a pressure chamber—not estimated mathematically. Over 1,000 lights of Heavy-Duty Plate were tested to destruction. It's all covered in our Heavy-Duty kit. Write for yours. 2074 Libbey-Owens-Ford Building, Toledo, Ohio 43624.
A Stainless Steel door is beautiful, strong, corrosion-resistant, durable, easy to maintain, competitively priced.

No other material combines all the characteristics of nickel stainless steel. Its outstanding strength permits the use of thin members where desired, as in these revolving doors. Stainless steel has a subtle sheen that stays attractive for the life of the building with occasional detergent and water cleaning. Under normal conditions, it won’t corrode, pit, tarnish or deteriorate. And since it’s solid right through, there’s no coating to scratch or discolor.

Why not specify the practical advantages and lifetime beauty of stainless steel for all your door and entrance designs. For helpful information and a list of door manufacturers, write for Inco’s set of four “Architectural Guide Specifications for Stainless Steel Doors” covering revolving, swinging, sliding and rolling doors.
avant garde. A new kind of lock opens the door of the World's Fair House. The Yale Push-Button Lock needs no key. It opens at the touch of your fingertip. You simply press each letter, Y-A-L-E, the number of times required by your particular combination (like a safe or bank vault, except you push buttons instead of turning dials). It is designed to be used with any Yale mortise lock, past or present, and the number of combinations is virtually unlimited. The Yale Push-Button Lock beautifully combines maximum security in the Yale tradition with tomorrow’s concept of lock engineering. It’s the latest example of what we mean by Yale integrity of design. For the avant garde look in locks, specify Yale.
Brings TOTAL ELEVATOR AUTOMATION to Philadelphia's Newest Prestige Apartment... HOPKINSON HOUSE

Total Elevator Automation at luxurious new Hopkinson House means that elevator availability is matched precisely to traffic demand 'round the clock.

A remarkable new automatic computer-control system, created by Haughton Elevonics, constantly monitors traffic demand... and relays calls for service instantly to the car-control system in the elevator machine room. Response is immediate. Thus, elevator service is never more than just a few seconds away on any of Hopkinson House's 34 floors. What's more, the ride is a revelation in velvety smoothness and quiet comfort.

Include Haughton Total Elevator Automation in your plans for building or modernization. Ask your Haughton Sales Office (listed in the Yellow Pages) to consult with you, or write to us.

HAUGHTON ELEVATOR COMPANY
Division of Toledo Scale Corporation
Toledo, Ohio 43609

Hopkinson House Apartments
Winner in 1963 of the AIA Philadelphia Chapter Award for finest design in residential structures, Philadelphia area
Builder: R. M. Shoemaker Company—Hopkinson House, Inc.
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*Haughton’s advanced program in systems research and engineering, with specific emphasis on the creative application of electronic devices and instrumentation for betterment of systems design and performance. Registered in U.S. Patent Office.
DO YOU HAVE THESE USEFUL NEW BOOKLETS?
To help you save time and money in designing and engineering structures, Bethlehem provides a variety of technical and product information. A few of our latest publications are described below. Write on your letterhead for the booklets you want; we'll mail them promptly.

No. 1997. Engineering data on new high-strength, low-cost vanadium-nitrogen steels (V Steels) available in structural shapes, plates, sheets, bars, and piling. Yield points 45,000 to 65,000 psi.

No. 1957-A. Properties of Bethlehem V Steels, including strength, notch toughness, weldability, aging, cold-forming, fatigue, and elevated temperature.

No. 1961. Values of allowable stresses for building design are shown for all five V Steels. Presentation follows that used in the Appendix to the AISC Specification.

No. 1944-A. Easy-to-read tables give recommended minimum preheat for arc-welding Bethlehem V Steels and recommended electrodes for manual arc-welding of V Steels.

No. 1996. Lists allowable axial loads for rolled column sections available in V Steels. Contains data on columns subjected to axial stresses or to combined axial and bending stresses.

No. 2004. Lists allowable uniformly distributed loads for rolled sections, available in V Steels, used as simply supported beams with adequate lateral supports.

Other New Booklets:

No. 2030. Hollow Structural Sections. Engineering data, plus dimensions and properties for all 146 sizes and gages of squares and rectangles.

No. 1902. Steel Strand Specifications and Standards. Enables engineers responsible for suspension systems to choose the correct wire rope or strand, and prepare specifications.
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Norton series 1900 overhead concealed door closer

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All Series 1900 closers, except those having the fusible link feature, are non-handed. A variety of arm styles suitable for all types of pivoting is available to meet almost every installation requirement.

CHOOSE FROM THREE BASIC STYLES

SERIES 1900 WITH CONCEALED ARM

SERIES 1940 CENTER PIVOTED

SERIES 1920 WITH EXPOSED ARM (requires 4½” header)

NORTON® DOOR CLOSERS 372 Meyer Road, Bensenville, Illinois
1. DALLAS SUPERBLOCK. Main Place, the massive private redevelopment in downtown Dallas, first took shape as a set of planning principles worked out by Charles R. Colbert, then dean of Columbia's School of Architecture, and his students (Forum, May '62). That first scheme has now blossomed into a firm $120 million plan by Skidmore, Owings & Merrill and Harwood K. Smith & Partners for the original sponsors, the Dallas, Texas Corp., owned by the Overton-Murchison interests. The SOM-Smith plan differs from the Columbia project in these respects: traffic will bisect Main Place instead of being kept underground and there is less variety in building types.

In the model photographs, One Main Place, the first phase to get underway, appears at the right in 1 and left in 2. The Texas Bank & Trust Co. will be the prime tenant in this 34-story tower, to cost $41 million and occupy, with its plazas and garage, roughly a third of the site. The other two parts of the complex, to follow One Main Place, are a department store-and-hotel (the hotel a square doughnut) and the biggest tower of all, 55 stories of offices straddling Main St. and bridging traffic. In effect it will be two buildings separated by a mechanical floor and served by different elevator systems from a pair of lobbies.

The plan at street level (3) shows this bridge building in separate blocks; the plan at plaza level (4), which is 15 feet below the street, shows the superblock lit by open wells, lined with shops, and accessible to pedestrians without crossing streets.

The master plan for Main Place keys into the traffic pattern set for Dallas' new ring roads, with direct access from freeways into a tunnel under Main St.

An interesting facet of Main Place is the way in which the developers and the city cooperated to bring it about. The service tunnel under Main St. will eventually be deeded to the city; for its part, the city passed a special ordinance to exchange rights above and below streets.

continued on page 35
"It takes an enlightened stubbornness to produce anything new and valuable"

"It requires us to live up to and a little beyond ourselves"—D. Armour Hillstrom, President, Corry Jamestown. This is the creative philosophy of the men and women of CORRY JAMESTOWN. It helps explain why Deere & Company, long a progressive, creative leader in quality farm and industrial equipment, turned to CORRY JAMESTOWN for the furniture you see here—designed especially for their striking new headquarters in Moline, Illinois, by their architects' interiors department. Here are combined design and craftsmanship and modern production at their best. Here is CORRY JAMESTOWN, offering you still another example of furniture that you design with, instead of around. For fine offices... by design... call or write:
5. MICHIGAN ART. Albion College in Albion, Mich. is building a new visual arts center that will provide much-needed exhibit space, studios, and lecture rooms for the college’s expanding art program. Smith & Smith Associates and the Perkins & Will Partnership designed a two-story brick-and-concrete building crowned by a circular skylight.

6. CAMBRIDGE WINNER. Architect James Stirling of London won the Faculty of History competition at Cambridge University with his design combining a library, staff and seminar rooms in a single expressive structure, whereas other designs in the competition separated the two functions. Stirling’s entry is a strong form that reflects the building’s purpose: it concentrates the heavy-traffic areas at the base, and diminishes at the top. The small upper rooms are in the shape of a half-pyramid.

7. CHICAGO LIBRARY. The hub of Northwestern University’s new campus on Lake Michigan will be a $10 million library designed by Skidmore, Owings & Merrill. What could have been a massive building—2 million books, 337,000 square feet—has been divided into three research pavilions facing a plaza and connected to the old Deering Library (left) by a formal entry. The crenelated floors, laid out on a radial plan, will mix partitions of bookshelves, study and conference rooms.

8. GUGGENHEIM ANNEX. Preliminary plans for an addition to Manhattan’s Guggenheim Museum, one of the last completed works of Frank Lloyd Wright, show a rectangular building on 13-foot pylons, the floors connecting with those of the museum. Architect: William Wesley Peters.

9. YESHIVA SCIENCE. Half of a $30 million fund that Yeshiva University in New York City is collecting will go to its Belfer Graduate School of Science for this new science building and for expanded teaching and research. In the 15-story tower will be a computer center, lecture halls, seminar rooms, and blocks of offices for theoreticians. Architect: Armand Bartos of Kiesler & Bartos. 

continued on page 37
Important unseen benefits for your designs

- An individual concrete block may look commonplace. But in an interesting wall pattern, it offers your client many important unseen benefits. - As you consider a new design, check with local block manufacturers for new ideas with standard units... also for the new shapes, sizes and textures available. - And remember, when you design in masonry you can approve Lehigh Mortar Cement with the assurance that it exceeds the most rigid A.S.T.M. and Federal specifications. - Lehigh Portland Cement Company, Allentown, Pa.
10. VIRGINIA BANK. After only a year in business, the Virginia National Bank in Norfolk feels secure enough to build a $9 million office tower and hire Skidmore, Owings & Merrill to design it, in association with Williams & Tazewell. The bank’s 19 stories will be a bold grid of concrete columns and floors.

11. MONTREAL DISPLAY. In downtown Montreal, Concordia Estates Ltd. plans to erect a six-acre, $75 million trade, exhibit, and convention center over Canadian National Railways’ air rights. Large floors at the bottom will provide one expansive exhibit space. Merchandising floors above the hall would be topped by a hotel. Architects: Affleck, Desbarats, Dimakopoulos, Lebensold & Sise of Montreal.

12. ARKANSAS CHAPEL. This small chapel will be dedicated to the Marylake Monastery in Little Rock, Ark. It has been detailed by Architect Clovis Heimsath to blend with the monastery, a remodeled Masonic country club. The roof is to be a space frame of wood carried on buttresses.

13. NEW YORK MUSEUM. Upstate New York is to have a new museum in Binghamton by Richard Neutra, the Roberson Memorial Center. A “tower of time” marks the entrance, its interior a cone with a suspended pendulum. Low wings are the present museum, a new art gallery, and a science building topped by a planetarium.

14. CALIFORNIA APARTMENTS. Unstintingly sculptural inside and out, these balconied apartments for Marcia Estates, Inc., will be built atop a hill in San Francisco. Precast concrete elements will project from the building, screening the balconies. The floor plans provide rectangular rooms, curved walls, and amoeba-shaped living rooms. Architects: N.D. Fierzacca Associates.

15. MICHIGAN CAPITAL. A long-range plan to spruce up the capital city of Lansing, add new offices for state agencies, and provide 4,000 parking spaces is under the aegis of Smith, Hinchman & Grylls Associates, Inc. The projected 1975 view shows twin ellipsoid towers, the supreme court, and low-rise offices. END
Just arrived...

THE NEW GF 40/4 CHAIR, designed by David Rowland, may change your whole concept of mass seating. So comfortable you have to try it to believe it. Imagine! 40 chairs will stack just 4 feet high. Gang and stack in rigid rows of 6. Set up a room in minutes. It's the chair that fits anywhere—dining and meeting rooms, hotels, motels, cafeterias, schools, institutions, lounges and lobbies. For descriptive literature, write The General Fireproofing Company, Youngstown, Ohio 44501.

GF 40/4 CHAIR
designed by david Rowland
Mr. Harry C. Dickelman, President of one of America's largest public merchandise warehousing companies, says his $8,000 skydome installation pays for itself every 2½ years.

And he estimates that lighting his 60,000-sq.-ft. warehouse with skydomes, rather than with artificial light, will cut his electric bill by $61,320 over the course of his 20-year lease.

That comes to about $1-a-foot savings. He's planning another warehouse — 100,000 sq. ft. — where he expects to save $250,000 over the 50-year life of the building.

This case history is typical of the way Acrylite skydomes are cutting costs in industrial, commercial and educational buildings all over the country. Acrylite skydomes are made of tough acrylic plastic and durable aluminum. They're weatherproof, water-tight, shatter-resistant and virtually maintenance-free.

"I wouldn't build a warehouse without your skylights," says Mr. Harry C. Dickelman, President of the General Warehouse & Transportation Co., Chicago, Illinois.

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"I wouldn't build a warehouse without your skylights," says Mr. Harry C. Dickelman, President of the General Warehouse & Transportation Co., Chicago, Illinois.
A leading architectural magazine calls this unique new building "an event." Embodying ideas likely to exert strong design influence on its generation, the structure has attracted an unusual amount of attention from critics, industry and press.

Walls of the building are either glass or striated concrete, except for smooth-finished structural members. A portion of the fenestration which complements the exterior walls was custom-designed by Hope's engineers to meet the architect's requirements. Hope's Heavy Intermediate horizontally pivoted and fixed windows were utilized.

Hope's takes a substantial measure of pride in contributing to a fascinating project which may well forecast new directions in American architecture.

HOPE'S WINDOWS, INC., Jamestown, N.Y.
HOPE'S WINDOWS ARE MADE IN AMERICA BY AMERICAN WORKMEN
The latest ideas in form and function are embodied in Art Metal's new 900 Line of office chairs. Nine models, designed by the Knoll Planning Unit, introduce many exclusive style and comfort features. Rectangular frames in varying widths produce crisp, clean lines and angles. Joint welds are invisible. Seats have wrinkle-resistant crowns and Comfort-Core cushioning. Arms may be reversed for extra wear. Available in a wide range of Knoll fabrics that let you add the right accents at the right places. Write for a free catalog.

ART METAL, INC.
Dept. F2, Jamestown, New York
1, 2, 3. OFFICE GROUP. For the handsome new Deere & Co. headquarters in Moline, Ill. (see pages 100 to 107), Eero Saarinen & Associates designed much of the furniture, including this group manufactured by Corry Jamestown of Corry, Pa. This group will be part of Corry Jamestown's standard line, but at present is offered on a special contract basis.

The leather-topped table (1) has a shallow drawer hidden in the table edge. The all-steel pieces made for John Deere (2 and 3) are light tan with cordovan brown trim, mounted on island bases rather than legs. The secretarial unit (2) consists of a 60- by 30-inch, single pedestal desk and a typing unit equipped with stationery shelves, a slideout wastebasket, and a purse hook. The modular unit (3) is a combination of cabinets, bookshelves, and drawers, all 24 inches deep, topped with plastic laminate.

4. SLIM STACKER. David Rowland's new chair for the General Fireproofing Co. in Youngstown, Ohio, is called the 40/4 because 40 nest into a pile only 4 feet high. The light, strong frame is of 7/16-inch steel rods slightly finned at the sides where they snap together in rows. The seat and back are formed metal pans, curved for comfort and coated with baked-on vinyl in eggshell, charcoal, brown, vermilion, or purple. List price: about $35.

5. CONFERENCE TABLE. The Cumberland Furniture Co.* and its chief designer, Jacob Epstein, offer several tops on their new conference table, which stands on a stainless steel X base. The table shown is 7 feet long, 36 inches wide, and 29 inches high, with a walnut top. Cost: $1,100.

6. SWIVEL CHAIR. Ward Bennett designed the original of this tilting swivel for Lehigh Furniture Corp., now available in a paneled version with an adjustable telescoping mechanism in the aluminum base. Cost: $270 in muslin.

7. FINNISH CHAIR. This neat side chair, imported from Finland by International Contract Furnishings, stands on runners of oval steel tubing. The designer is Antti Nurmesniemi. Net cost: $139 in leather; $87 in cane.

*Unless otherwise noted, all firms are in New York City.
Simple, low-cost Cleer-Vue easily fits any new or modernized construction. Cleer-Vue luminaires' simple design makes it easy to install. Back-up plate protects lampholders from breaking during installation and maintenance. Exclusive Westinghouse Opti-Kube prismatic lens gives a wide diffusion of soft light. Provided with or without metal trim. Just right for any kind of new construction.
by Westinghouse

or modernization because of the combination of low-cost and attractive design. Whether the installation is in a narrow hallway, an office area or a classroom, there's a Cleer-Vue size to fit. For more information on the low-cost, attractive Cleer-Vue luminaires, contact your Westinghouse Lighting Sales Engineer or write to Westinghouse Electric Corporation, Edgewater Park, Cleveland, Ohio.

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Like all Eljer fixtures the Brenda resists acid, too. Cut your costs, specify the Brenda, new from Eljer. See your Eljer representative, soon. The Murray Corporation of America, Eljer Plumbingware Division, Dept. AF—P. O. Box 836, Pittsburgh, Pennsylvania 15230.

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†Elwin G. Smith Co. registered trademark.

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And you'll have more to show for your investment. No other single material gives you all the qualities listed below.

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BOSTON AND MONTREAL

Forum: Congratulations on your superb coverage of renewal in Boston (June '64). As a Bostonian involved in the current vigorous renovation of Montreal, I found your account of Boston’s challenging personalities, accomplishments, and problems stimulating and meaningful.

The Ports of Boston and Montreal have a great deal in common, with histories reaching far back into colonial days, but with the old being quickly overwhelmed by the new. Present-day similarities are evident in their waterfronts crying for redevelopment, mass transportation and highway problems, expanding university space requirements in the central areas, much of the prime real estate held in tax-exempt hands, and the need for renewing obsolete portions of the vital urban core.

While Montreal has had little trouble finding private capital to invest in its rebirth, it could learn much from Boston’s impressive assembly of high-level professional talent and its attempts to establish close coordination between the business community, City Hall, and planners.

EUGENE N. REISMAN
Montreal
A.C.I. Property Corp.

PSFS REVISITED

Forum: Re the PSFS story (May '64), it came as an agreeable surprise to see this elegant old monster still holding its own among the new jobs.

If it is your notion to indulge in an occasional revival of this sort, I am all for it. I like these reminders of how old we are all getting to be.

GEORGE NELSON
New York City
Architect

Forum: ...an excellent choice. Others might include the Reliance Building, the Wainwright Building, and Unity Temple.

ESMOND SHAW
Dean
School of Art and Architecture
New York City
Cooper Union

Forum: It is timely and important to give the present thinking in architecture a point of reference with respect to the values of the past 25 years.

ERNEST J. KUMP
Palo Alto, Calif.
Architect

Forum: ...a splendid idea.

HENRY L. KAMPHEOEFNER
Raleigh
Dean
North Carolina State School of Design

Forum: A summing up of the work that has come of age would be helpful to all architects who are hoping to design a higher quality of timelessness in their work.

DANIEL SCHWARTZMAN
New York City
Architect

ARE CITIES THE ANSWER?

Forum: Philip M. Klutznick says that “everyone concedes that we are in the midst of the greatest trend toward urbanization since the beginning of time” (“Five Challenges to Our Cities,” May '64).

But wouldn't most families prefer to live in the country or in quiet suburbs with access to the city? If we inquired into the population's preferences, we might find the belief in the inevitable megalopolis could be replaced by a belief in preserving the small community, which is the heart of our country.

SCOTT J. BURNHAM
Yellow Springs, Ohio
Antioch College

CUBAN ARCHITECTURE TODAY

Forum: Congratulations to you and Diana Rowntree for the honest and intelligent account “The New Architecture of Castro’s Cuba” (April '64).

I feel the photos of the Cubanacán Arts Center in Havana did not show the beauty and functions of this vast complex. Enclosed are pictures taken this spring.
The Arts Center is Cuba's most daring step in cultural education, combining ballet, painting and sculpture, theatre, music, and modern dance. So far, 1,500 scholarship students, from eight to 18 years old, live and work there. The design provides room for 3,000, and workmen are still completing parts of the complex.

New York City TANA DE GÂMEZ

ARE BOOKS OBSOLETE?
Forum: I think “Buildings for Books—are They Obsolete?” (May ’64) puts the subject in good perspective. While much of the book stock which now fills libraries will eventually be reduced to film or tape, I feel fairly sure that libraries of the future will contain shelves and the shelves will carry books.

Books represent the results of a 3,000-year effort to develop a convenient vehicle for information, and their merits aren’t likely to be matched soon. Even were books ousted from their present pre-eminence they would still continue to occupy a position of some importance.

Washington, D.C. VERNER W. CLAPP
President Council on Library Resources, Inc.

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The air view of Washington, D.C., above, shows America’s most famous street. It is Pennsylvania Avenue, which leads from the national Capitol (at the bottom of the view) to the White House (at the top, slightly to the right among its trees). This is the “Avenue of the Presidents” and their inaugural parades, and the symbolic linkage between two lofty centers of the Nation’s separated powers. But where the Avenue leaves the great Mall it shows also as a business street; and, more than that, a business street flanked conspicuously by a pocket of low-lying business slums. At the heart of the national establishment the Avenue is more than touched by a national disgrace.

To a virile young president named John F. Kennedy this was shockingly apparent even amid the music of bands and the cheers of inaugural crowds. He discussed it with Arthur J. Goldberg (now a Supreme Court justice), his observant friend. The ultimate outcome was the creation, in June 1962, of a President’s Council for Pennsylvania Avenue on which ten of the country’s respected architects, planners, landscapists, and social observers were asked to serve, with the National Capital Planning Commission as their base.

Superficially, the assignment was to report with proposals of how to bring the Avenue’s glory back. But, as the New York Times observed, this required more than a “veneer of monumentality”—it required a plan in depth.

The view shows clearly what the central problem was. For, if the monumental Federal Triangle area which shows on the Avenue’s left were to be flopped over, it would cover almost exactly the grubby triangle of business decay on the Avenue’s right. Thus, on an Avenue which is intrinsically one of business and government both, it had been a disaster to treat each as separate.

Uniquely, the Council’s study was an inquiry how government and business could collaborate: government creating a framework in which business could thrive, business accepting rules through which government could regain its dignity. The outcome involves the future of all of Washington’s downtown.

The introduction and conclusion to this report are by Douglas Haskell, a member of the President’s Council, and the description and evaluation in between are by Donald Canty. In addition to Haskell and Chairman Nathaniel A. Owings, members of the Council were Frederick Gutheim, Frederick L. Holborn, Dan Kilgore, Daniel Patrick Moynihan, Chloethiel Woodard Smith, Paul Thiry, Ralph Walker, and William Walton.
The Avenue would become a clear shaft of space between
the White House and the Capitol

This is the plan: to allow the green-banded breadth of Pennsylvania Avenue to proceed ceremoniously, without interruption or hesitation, from the White House to the Capitol; to give new emphasis and expression to the Avenue as the link between these two symbolic structures, and to them as the Avenue’s points of destination; to create a triangular zone north of the Avenue which will provide, for the first time, a place of transition between monumental and commercial Washington; to use the earth beneath this zone to relieve the Avenue and surrounding streets of the problems of the automobile, and the space above it for pedestrian concourses and promenades.

It is thus more than a plan, just as it is more than a façade-deep design for the buildings that wall the Avenue. It is a work of architecture in the three physical dimensions, cognizant of the fourth dimension of time—of history, past and future—as well. It gives new meaning to this city as a world capital, and unprecedented attention to this city as a city; it gives the kind of example to other American urban centers which Washington has steadfastly refused to give.

It begins with detail as fine as the pavement of the eight-lane Avenue, recommending that it be “rich but subdued,” perhaps hard brick laid over concrete with a wide and permanent granite median. Sidewalks would become graduated shelves, shallow three-level “grandstands” for the watching of parades and processions. To achieve this effect, the new buildings on the north side would be held back 75 to 80 feet from the curb, and five feet of the Avenue’s south side would be taken from autos and given to pedestrians. Ample use would be made of that favorite means of visual salvation in Washington, the planting of trees: two rows would stand along the south sidewalk, three along the north, and all would be formally and elegantly trimmed. Additional shade, and additional elegance, would be drawn from the elevation of the northerly buildings’ first two stories to create an almost continuous arcade along much of the way.

The Avenue now moves in fits and starts, stuttering as it cuts across the basic gridiron of streets or meets other diagonals. The result is a series of confused and leaky intersections, in which small, meaningless bits of land are left as useless islands. The plan proposes that the Avenue cut a sharper, cleaner swath; that its intersections be greatly simplified; that the open spaces it encounters be clearly defined and carefully related to views of squares and concourses on either side. The plan takes pains to see that, in the process, it does not create more problems than it solves. The simplification and clarification of the Avenue’s course is tied to broad-scale proposals for a thoroughgoing reorganization of the circulation patterns at the city’s core.

It is this constant attention to the relationship between the Avenue and its urban context, in fact, which gives the plan its singular sweep and significance. Through a series of cross axes and public-private superblocks, described in detail on pages 72-73, it builds new bridges between the capital and the city. And even in its most ceremonial gesture—the proposal of a National Square at the Avenue’s western end (overleaf)—the plan takes cognizance of how Washington’s commercial and cultural life might be enhanced.
two sub-level decks near each residential block. At Sixth Street, a platform placed over Constitution Avenue would give the National Gallery a forecourt opening onto Pennsylvania. At Fourth Street, Constitution would underpass Pennsylvania, with another cross-axis leading north to John Marshall Place and the center of District government. The depression of Constitution Avenue would rid Pennsylvania of a jumbled six-way intersection which interrupts its approach to its eastern terminus below the Capitol. Just south of this terminus would be a large reflecting pool surrounded by a paved plaza. The only other major change at this end would be completion of Louisiana Avenue, Pennsylvania's last intersection, in its arc through the Mall to Union Station. Beyond that, the grounds of the Capitol were considered to be outside of the plan's purview.
The White House: The natural terminal point of the Avenue, yet too small for this role and partly blocked by the Treasury (double hollow square to its right), it would be given a forecourt linking its grounds to an immense new Architectural Forum.

July 1964

National Square. West of the square’s patterned pavement would be a massive White House gate, and to the north a densely treed belvedere joining it to the city’s retail core. The square’s eastern edge would mark the beginning of the Northern Triangle, where most new federal construction would occur, balancing the existing Federal Triangle across the Avenue. In the Northern Triangle, however, public and private buildings would be planned together in multilevel superblocks, typically with surface parking levels, concourses, and an upper story of pedestrians, crossing a central Fingers of space, including Archives cross axis, would...
The White House terminus would be a great National Square, as urbane as it would be ceremonial.

The boldest architectural proposal in the plan concerns the Avenue's western terminus, which is, at present, symbolic only of confusion. A jumble of offices and shops on the north side faces the District Building and the Federal Triangle, and in between is a multiple intersection that has been chopped to bits with particular thoroughness. The commercial buildings stand in the way of the stately Treasury at the Avenue's tip, and it, in turn, all but screens the White House from view.

The plan envisions this as the site of a great National Square, measuring 800 by 900 feet. This grand space would be created by completing a process of demolishing old, non-air-conditioned buildings that has already spontaneously begun. Two major streets which now complicate the intersection, 14th and F, would tunnel underneath the square, at the same subsurface level as a parking garage for 600 cars.

The northern edge of the square would be pushed back far enough to display more of the Treasury colonnade but its principal focal point—and the principal terminal point of Pennsylvania Avenue—would be a new White House gate. The gate, say the authors of the plan, "would be large enough to be seen from far down the Avenue, would be designed by a master, would be strong enough to command respect, and would be enhanced by being sturdily flanked." Behind the gate would be a smaller square, Treasury Place, intended as a White House forecourt.

Thus linked to the President's house, the National Square becomes a place of national celebration, of national mourning, of greeting for the nation's guests. The plan, however, has in mind that it should serve urbanity as well as ceremony. Except for a large fountain, the square would be empty of permanent obstructions, but its radiating pavement would be bordered south and east by shade trees and enlivened by "seats, tables, vending accommodations, and umbrella-shaped shelters, all removable easily in advance of parades."

The north side would retain its commercial nature; it is, as the plan points out, the natural western anchor of the retail core which Washington's Downtown Progress organization hopes to revitalize. But commerce here would be raised to a dignity unprecedented for Washington. Along the square's north edge would be a belvedere, 20 feet above the level of the square and 200 feet in depth, covered with "tree planters, tables for outdoor restaurants, and convenient seats." The belvedere would be reached by broad stone steps leading to a glass-roofed shopping arcade that would serve as a dramatic gateway to the shopping district.

The east side, the plan suggests, would be an ideal location for a new press and broadcasting center; the present National Press Building would be the square's most prominent displacee. And the south could be given over to culture and entertainment. The open well of the District Building, the plan points out, would make an ideal auditorium "for ceremonies, symphony, or theater."

The new National Square: From left to right in foldout are the White House gate, the neo-classic Treasury, and the glass-roofed shopping arcade leading to the city's retail core. In front of the arcade is a broad belvedere, reached by monumental stone steps. Photos at right show the Avenue's western end as it is (top) and as it would be. Note that the automobiles have been removed from the Grand Plaza of the Federal Triangle (right in both photos).
The Archives cross axis would be a multilevel link between the city's public and private lives

Roughly halfway along the Avenue's course from the White House to the Capitol, at the site of the National Archives, the plan makes its most ambitious attempt at cross linkage between the public and private uses of Washington's core. It proposes creation of a major north-south axis along what is now Eighth Street, reaching from the Mall to the National Portrait Gallery three blocks above the Avenue. Across from the Archives would be a generous square called Market Place (the name has historic overtones), north of which Eighth Street would become a pedestrian way through a quadrangle of new private office buildings and hotels.

This Archives cross axis demonstrates the plan's determination to re-knit the city's central area, not just architecturally, but in terms of its very life. Market Place, for example, would be used by tourists and visitors to the Archives and the adjacent National Gallery; by federal employees from the projected new government office buildings on either side of the square; by occupants of the hotels and private office buildings in the quadrangle to the north; by shoppers from the major department stores nearby. The axis would, in effect, at once upgrade the commercial life of downtown Washington, nourish it, and draw it toward the Avenue and monuments of the Mall.

The Archives axis also demonstrates the principles which would be used in development of the entire Northern Triangle, through which it passes. The plan gives a significant form of recognition to the fact that the circulation problems of the Avenue and of downtown Washington—problems which could be intensified by the amount of new construction it envisions—are not susceptible to surface treatment. It proposes to go both above and below the surface, making the whole of the Northern Triangle a multilevel mechanism for the movement and storage of vehicles—and for the free and convenient passage of pedestrians.

The Northern Triangle would be built in superblocks reminiscent of New York's Rockefeller Center, groups of buildings carefully organized around a series of urban spaces. Beneath the entire great wedge would be two levels of parking, worked in around the vertical service cores of major buildings. E Street, the important commercial artery which meets the Avenue at its western end, would become a parking distributor whose ramps would provide the principal access to the underground garages. Within the superblocks, at ground level, would be a network of shopping concourses. Unifying the superblocks, a level above ground, would be a continuous, elevated pedestrian platform.

The impact of this concept would be widely felt. It would relieve the Avenue of congesting traffic (and of the curb-breaking driveways which mar its continuity). It would relieve the people who come here to work, to shop, to tour, of the worry of their cars. And it would give the nation its first large-scale example of the stratified city core, in which people and vehicles are separated to their mutual relief.

Three views of the Archives cross axis, looking toward the National Portrait Gallery; vantage point of the rendering at left is Market Place; the flanking buildings in the foreground are projected new hotels. The photo above, taken from the Avenue, shows the section of Eighth Street to become a pedestrian way. At right, the entire axis, beginning with the proposed sculpture garden on the Mall to the south of the Archives building.
How can the shining vision be made reality? The authors propose a single agency to see it through.

The question how so ramifying a concept could be implemented has many people confused.

To begin with, the Avenue would not be at all an “urban renewal” undertaking in the usual sense, either as to procedures or results. The basis of national action here is that the Avenue of the Presidents and its ancillary area are of national interest and public concern. In order that the buildings of the national commonwealth may stand with dignity instead of chaos alongside business buildings, there must be controls.

Moreover, such controls cannot be façade regulations alone, but must embrace such things as handling of transportation and parking, fitting buildings over arcades, distribution of buildings on superblocks. The architecture and the transportation, the government and private land use, must all mesh.

For this reason the Council asks for the plans to be put in the hands of a single administrator, agency, or authority, and phased carefully over the years. Above all, such a project must not become a political football for dozens of agencies to kick around and confuse. Architecture is not an art that can stay noble in a grand chaos of conflicting decisions. The agency would take charge of the plans as a whole and would deal with all others having jurisdictions and concern but not as an administrative “assembly” of them all.

Public costs and appropriations necessary have been vastly exaggerated in some quarters which can contemplate billions for utility or highway construction and never wince. From a total cost that might approximate half a billion, one must subtract much and take many factors into account. Thus, first of all, at least one half of total construction would be by private investment for very secure conditions of return. Among the public buildings and utility improvements, a number are either already appropriated for or independently necessary in any case.

Much could be self-liquidating enterprise which could bring the government a return. And finally, the economic effect of the plan is to increase employment, commerce, and tax revenues out of fresh activity which its provisions would generate.

Even supposing that the total public cost, self-liquidating features and all, were to approximate what would be the present dollar cost of the Federal Triangle—around $300 million—this, spread over 15 years, would be half as much annually as the reported estimate for a private office development, “Main Place” in Dallas (see page 33), whose underlying features so resemble those of the plan.

Moreover, even if the price tag should reach into billions—which it most definitely would not—this would be a cheap price for starting rescue of a national capital from the decline with which it is faced. The Pennsylvania traffic proposals alone are prototype ones that could be of great value to many large U.S. towns. And then as to scale: the older members of the Council have witnessed an increase of U.S. population by one-half within their own adult lives. What next?

The Capitol shimmers in the reflecting pool flanking the Avenue’s eastern end. The pool and its surrounding plaza would bring the Avenue to a graceful terminus, but they would be of even more benefit to the Capitol and to the stately Mall (see photo right). Above, a final summary of the plan. Gray areas are those to be developed on more than a single level. New private buildings are shown in white, and new public buildings cross-hatched.
Looking out over a pair of man-made lakes, near Moline, Illinois stands this strangely beautiful building—a building that is also beautifully contradictory.

The headquarters for Deere & Co. is as modern in construction technique as any building within the span of several states, but at first glance it looks like a wooden Japanese temple a millennium old. It is of surpassing elegance in all its aspects, but it houses the staff of a tractor manufacturer of determined push and power. It is exquisitely furnished and maintained (no less than 15 acres of sod were trucked in and planted before the dedication last month) but its dominant character is the rusty redness of its steel frame—which was never primed and painted, and never will be.

Perhaps Deere proves again that some of the world’s best architecture, simple as it may appear, harbors paradox—and may even be built upon a paradox. The late Eero Saarinen, who designed Deere, was a master of that quality: his first sketches for Deere’s administrative headquarters (including offices, a grand showroom for the company’s farm and industrial machinery, and a marvelous theater which is modestly labeled the auditorium) showed a building of rugged concrete; but when this elicited little enthusiasm from the client, Saarinen and his partners went back to their drawing boards and conceived this elegant seven-story block with its connected wings. The architect later explained that he came to share the client’s hunch that “an iron building . . . would recognize the special character of Deere & Co.” And the iron he selected is of very special character. It is Cor-ten, a high-tension, corrosion resistant alloy developed in 1933 for railroad use. Unpainted, it oxidizes for a couple of years, and then in effect bakes itself into a tight, dense protective exterior coating which has the richness in finish of an old Etruscan coin.

Then it stops rusting. The Deere frame is rust red today only because it is still quite new. A test section of the steel erected at the edge of the building’s parking space some seven years ago is a prediction of the rich patina yet to come—a close match in color to the trunks of the oak trees carefully preserved on the site.

Cor-ten was used for all it is worth, including banks of sun breakers suspended outside the office windows. (All of the steel could legally be exposed, rather than encased in concrete, because the building stands on a 680-acre site out in the countryside far from the limitations of the usual fire codes.) Most of the rest of the building exterior is glass: on the upper five floors of the administration building it is a mirror type, solar-reflecting, which bounces off 52.3 per cent of sun heat and 62 per cent of light; on the two lower floors—which are set back under wide overhangs—the glass is clear. The big display room, 90 feet by 210 feet, 35 feet high, where the machinery stands inspection, also wears clear glass—and rusty steel eyebrows.

The building clearly is one of Saarinen’s masterpieces. It is not just the death of the architect, four days after the letting of the construction contract in 1961, that gives it its air of melancholy. There is a depth of feeling in Deere which makes it much less transitory than most modern architecture. Its fineness and quality probably surpasses anything by Saarinen completed to date; and this applies to the siting too—which also partakes of the paradox: Deere’s bulk (gross square footage, 350,000) is masked by its careful insertion into the rounded landscape. But in concept, in character, in intellectuality, it stands aloof—a symbol of industrialism, enriching rather than destroying the landscape by contrast.—w. mc q.
Deere is inserted in a small valley, and thus disguises its bulk

Only in the broad head-on view of the office wing (above) from one of the walkways around the ponds, does the Deere & Co. structure impress by bulk. And this view is a very uncommon one, not even seen completely from the approach road (see partial plot plan, left). The building is neatly nestled into the landscape. The visitor approaches by car, enters its narrow end across the bridge in the right of the photograph above, and arrives on the fourth floor. Reversing the usual status situation he goes downstairs to the executive floor, dining rooms, etc. These lower floors (of more elevated usage) differ from the ones above in being walled with clear glass, rather than reflecting glass, and in being set in from the periphery of the building. The executive dining room is under the terrace, several feet below the level of the pool, with the water at window level (in the center of the photograph above). A second hillside wing will be added to the office building, also connected to the larger central structure by a bridge (see section).
Interiors: the spirit is spare; the space and finish sumptuous

Above (1) is the long, wide central corridor and secretarial area on the executive floor at Deere & Co., and it is a true sample of the interiors as a whole, although the more general office space on other floors has less teak to it (photographs 2 and 3 on the page opposite show, in turn, a more typical office floor and its hallway). The qualities which do prevail throughout the structure include a pleasant largesse in the matter of space allocation — especially as compared with the usual cramped, sharp-edged new city skyscraper—and what may be the most carefully controlled interior detail of any of the Saarinen designs so far. The architect’s office was responsible for furnishings as well as the rooms the furnishings went into, and several of the items developed will be appearing on the market soon (see page 43). Secretarial desks (1) are not included in those to be mass-produced because they are so firmly built into the building, set on posts into the floor rather than held up by legs. Photograph 4: the office of Board Chairman William A. Hewitt.
Display building: a great glass-walled room for the product

The part of the group which the visitor comes to first is the glass-walled bulk shown above (1) notched into the hillside with its rust-rouged eyebrows suspended out from the steel skeleton of the long-stemmed frame. This is entered on the high side (3) and is itself flanked by the blank brick walls of the adjoining auditorium wing. Ground level on the exterior is mezzanine level indoors. Photograph 5 shows the big exhibition room's contents from this main floor level, and also gives a glimpse of one of the building's rarest features, against the back wall under the mezzanine. This is a "mural" executed by Alexander Girard, who mounted some 2,000 items from the history of this old company and from general American farming history against a backdrop of old barn boards. The entire montage is 180 feet long and 8 feet high, and is enclosed in a glass case. Photograph 4 was shot from the stage of the Deere & Co. auditorium. At left is a photograph (2) taken down the center of the glass-walled connecting bridge.
FACTS AND FIGURES

Deere & Co. Administrative Center, Moline, Illinois.


Size: Administrative building, 297,132 square feet; lecture hall and display building, 53,311 square feet. No cost figures available.
The technology of the wall: glass, plastic, and steel

The exterior walls of the John Deere buildings combine two technical innovations nurtured to maturity for previous Saarinen projects—structural neoprene glazing gaskets and laminated “mirror” glass for windows—with still another one, architectural use of exposed, unpainted steel. Largely responsible for all three has been partner John Dinkeloo, technology specialist in the firm. The three components comprise almost the entire façade at Deere, and they mesh with an elegant simplicity. The Frame: The obvious corrosion-resistant materials—stainless steel and aluminum—were investigated but both were rejected as too costly. However, the firm turned up a plain carbon steel known by its ASTM specification number as A-242 steel or Cor-ten. This steel corrodes fairly rapidly when first exposed to the atmosphere. After the first two years, however, corrosion slows to a negligible rate. The diminishing corrosion rate occurs because the rust film that forms on A-242 steel in the early years, unlike the rust on plain carbon steel, is both hard and tightly adherent, forming a coating that protects the underlying steel from further exposure.

Windows: At the plane of the windows the structural members are aligned to form openings without any added framing materials. The flanges of a structural upright form the sides of the windows; 3/4-inch-thick steel plates welded between the flanges form the top and bottom. The result is a window opening surrounded by a 3/4-inch-thick flange over which the structural glazing gasket slips. Because all the building framing is welded into a rigid unit without expansion joints of any sort, each window opening is subject to changes in size due to thermal expansion and contraction. The neoprene gasket, besides joining the glass to the structure with uncommon ease, also provides the elasticity needed to isolate the glass from dimensional changes in the window openings. Heat Loss: The mass of exposed steelwork, which is directly connected to the interior framing, appears at first glance to create a thermal short circuit, likely to leak heat into and out of the building. But, this is not the case. The greatest area of exposed steel is in the sunshades. Compared to the amount of heat gained or lost through the large glass areas, heat conducted through the frame is insignificant, says Dinkeloo.
Kansas City's new BMA office building makes a striking landmark in white marble and high strength steel (see overleaf)
The blue-skied prairie on the outskirts of Kansas City, Mo. has been punctuated by a powerful new pattern in white: the stark, long-span framework of the 19-story Business Men's Assurance Co. of America headquarters, designed by the Chicago office of Skidmore, Owings & Merrill. The marble-clad tower sits atop the highest hill outside the city, on the edge of a park; the view from the top is equivalent to that from a 60-story skyscraper downtown.

Before arriving at this striking design—which bears a definite family resemblance to SOM's Hartford Insurance Co. building in Chicago—Partner-in-charge Bruce Graham considered two alternate designs. One, for a lower tower, was rejected because it wasn't commanding enough. Another, for a one- or two-story structure covering most of the 7-acre site, was abandoned because it would have meant using too much of the site for multilevel parking, and not enough for open space to provide a setting.

Inside its gleaming marble sheath, BMA's strong frame is of steel, continuously welded. This proved 20 per cent cheaper than the more conventional riveted system. High-strength steel was used where it counted most—particularly in the 36 foot long girders. The structure is wind-braced for a maximum sway of about 5 inches at the top—adequate flexibility for the tornado-ridden Kansas City area. Graham is a strong advocate of steel for buildings such as BMA; compared to the concrete construction for offices now in vogue, he points out, high-strength steels now permit savings that make steel at least equally practical.

The BMA building is developed on a 6-foot module, arranged in trim but strong-looking 36-foot bays. The gray glass window wall is set back 6 feet from the outer edge of the frame, emphasizing the whiteness of the frame and providing considerable shade from the sun. Air and water piping is carried up behind every other window mullion to induction units on typical floors, so low sill diffusers on executive floors (overleaf).
Floor-to-ceiling windows in offices are screened with full vertical blinds. "Column" between stacked blinds at center is air conditioning riser behind window mullion.

Typical floor plan (7th through 17th) shows the compact core and large, column-free office spaces.

The 19th floor board room has an unparalleled view of Kansas City. The 16-foot ceiling carries through to adjacent dining rooms.

Employees’ lounge looks out from under the plaza to a handsomely landscaped terrace. Just off the lounge is a large cafeteria.

FACTS AND FIGURES
Business Men's Assurance Co. of America, Kansas City, Mo.
Construction cost: about $25 per square foot, including movable partitions, for 427,160 square feet of net usable floor space.
Hon. Robert Moses, Pres.
New York World’s Fair
Flushing Meadows, N.Y.

Dear Mr. Moses:

Knowing of your keen interest in fairs, I enclose herewith some snapshots of the Swiss National Exposition, now going on in Lausanne. You really should come over and look at it before they tear it all down on October 26th. I think you’d learn a lot.

Of course, it’s quite different from your fair: much smaller, only about 140 acres instead of 646, with a budget of $50 million, maybe one tenth as much as yours. And it doesn’t pretend to be international—just national (the Swiss have these fairs every 25 years, in a different city, to kind of take stock of themselves).

The whole thing is laid out in a park with big trees on Lake Geneva. Along the water, where there’s a lot of sailing, they’ve put up some colored canvas tents that look very much like sailboats, each covering a restaurant from a different region (picture above—the tower in the background, incidentally, has a two-story elevator that turns around as it goes up, giving you a panorama of the grounds). And there are other clever structures such as the upended plastic umbrellas of the commerce-banking pavilion (left).

In fact, the whole approach to designing a fair is quite unusual, although I’m not sure you’d approve. Three years ago some teams of researchers went around to find out all about Switzerland today—and what the Swiss really knew about it (the Swiss are very methodical). Then the commissioners wrote up a program and hired a three-man directorship to put all the ideas together and run the show. One of them was an architect (of all things!) : Alberto Camenzind, a pleasant fellow from Lugano. He actually was allowed to choose his architects for...
Framework for a fair: structures are light, handsome, salvageable

each of the seven major sectors, and they in turn chose their own teams of architects and graphic designers to work with the fair and the exhibitors, right from the start. (I guess they think more of architects in Europe than we do.)

As you can see from the map, they've grouped related exhibits carefully in different "multicellular" pavilions, instead of separate, unrelated ones, to try to tell a coherent story. The major sectors are linked by walks, and by "monorails," little canopied electric trains that go around in the air out of people's way, and through many of the buildings to give you a quick look at things you might want to come back and see on foot. (They aren't as big as your monorail, of course, but they do take people places instead of just around in a circle.)

Well, you do want to come back and see things, because it's all housed so charmingly, as you might gather from the pictures on this page (the Swiss don't just build Swiss chalets — as someone did for our benefit at the New York fair). Of course they only had to build the fair to last through the summer, not two years like yours, but they haven't missed a trick. Each pavilion is of inexpensive materials, and you have to admit they are handsomely used. Each building is modular, and prefabricated to one degree or another, so it can be taken down and reused after the fair is over. For example, the industrial pavilions (big picture opposite) are being considered for exhibit halls, reassembled somewhere, and the precast units of another pavilion may be used for a factory. (Makes you wonder if we've really been so smart.)

The organizational structure of the fair is pretty different too. Like New York, it is run by a private, nonprofit corporation; but it got subsidies and a guarantee against deficits from the Swiss government, the City of Lausanne, and each of the 22 cantons or states. Exhibitors, concessionaires, and restaurants pay rental by the square meter; visitors pay about $1.40 at the gate (note: the only charge except for meals and rides). Advertising is strictly con-
The fun: the Swiss fill their playground with shapes, color, and the human touch

trolled; with very few exceptions, trade names are taboo. This is supposed to be an educational effort, not a hard sell. (In fact the architects had to go around and take down a few commercial plaques and posters that crept in; the exhibitors howled, but everyone else was playing the game and they made it stick.)

Well, as you should know, a lot of the fun of a fair is in the details, and that is where the Swiss have thought things out—with a sense of design and a sense of humor too. (In Lausanne, even the wastebaskets look good.)

For example, Swiss people, like other people, like to take their children to a fair, and they often don’t know what to do with them (sound familiar?). The kids here have been provided for in a big way—and not by accident, either. Coming down from the main gate, practically the first thing you see is this big “children’s garden.” You walk over and through it on a concrete foot bridge (top photo). The kids can stay there all day, if they want to, under the supervision of some nice young babysitters, for less than $1.25 a day, hot lunch included. (You get a claim check; Junior gets a colored smock, and a slicker and boots in case of rain.) The facilities are practically endless: sandpiles, caves, wigwams, flying saucers, climbing ropes and bridges, goats, birds, ponies, pedal-cars, miniature highways, and a big puppet theater under a concrete shell roof.

Whether you have children to leave there or not, it’s a wonderful way to enter a fair, and by the look on a lot of people’s faces it puts them in just the mood to enjoy the main exhibits (and maybe even think about the country they are going to leave to the next generation, which seems to be one of the points of the fair).

The whole garden-playground was put up by the Nestlé company, with the help of the fair corporation and the Swiss cement industry. It is one of the few things that will remain as part of the permanent park that the fairgrounds will revert to this fall.

For the older folks, there are
The purpose: a nation asks itself some questions about the quality of life

no less than 48 restaurants spread around the fair, seating nearly 20,000 people; none are exorbitant, many are quite good, and no matter where you find yourself there's a place to sit down for a glass of wine or a meal. There's even a picnic grounds and beach on the lake, for the box-lunch crowd. (I wonder where they go in New York?)

Well, aside from the human touches—and the fact that they haven't been ashamed to use their best modern artists and sculptors everywhere—perhaps the most interesting thing is that there really is a purpose behind this fair. Camenzind, the architect, calls it a "prise de conscience." This may sound a little dramatic, but it means that every 25 years the Swiss think it's time to show the current generation their nation as it is, so they can understand its problems, and act and vote intelligently on them. The theme may not be quite as cosmic as your "Peace Through Understanding," Mr. Moses, but you get the feeling they really mean it. The Swiss still think of themselves as an alliance of 3,000 communes, speaking four different languages, and living somewhat uneasily at the center of Europe. They're very proud of their democracy, but they always seem a little worried about making it work.

You get the message in the "Swiss Way," a range of mountain-like tents that forms the spine of the fair (pictures, this page). Inside, they show the country's land and heritage, its current problems, and its hopes for the future. (Sometimes it gets a little too moralistic, but the Swiss do have problems like bad planning, and air and water pollution—and boredom.) But at the end the designers have put up pictures of a lot of babies born around Switzerland on January 1, 1964, row on row of them right up to the roof. Somehow you get the idea that the fair-makers here are really looking to the future, and not just to sell more convertibles or fly to the moon. And, it's funny, but the "people" seem to like it, too.

Sincerely,

OGDEN TANNER

Giovanni Michelucci's new Church of St. John the Baptist is an extraordinary building for which there was no real need, no concrete program, no budget—actually, no client, only a faceless patron. It is an architecture authentically dreamlike and irrational and it sits in a landscape of nightmare. Placed in the vortex of a huge American-style cloverleaf, where the new Autostrada del Sole leaps over the older Florence-Pisa highway, its immediate neighbors are a curtain-walled multistory motel and a smaller administration building, a garage-cum-gas station, and a forlorn little huddle of Tuscan farm buildings which have escaped the bulldozer.

From the center of this vortex, the gentle farmlands of the Arno valley are invisible. Only the profile of the Apennines rises above the ramps and fills. And the church is only partly visible or accessible from the farms themselves. One or two local roads do somehow manage to penetrate the snarling concrete tangle, though it is hard to imagine the contadini daring to use them.

As in all such intersections, it is difficult for the tourist to know which exit to take to reach the church or—having overshot the mark—to know how to rectify his error. And it is altogether impossible to imagine any of those mad Milanese motorists, roaring down out of the mountains on their way to a late lunch in Rome, pausing even for a Hail Mary at Michelucci's lovely altars.

Why the church was built—except to satisfy the vanity of the Autostrada administration which in its imperial power and faceless arrogance resembles our own Port and Bridge Authorities, on which it is closely modeled—is anyone's guess. Officially, it memorializes the workmen who died in building the new highway that now runs most of the length of the Italian Peninsula. Why it should have been built just here, when so many other more suitable sites were available, no one to whom I talked could say. And by what miraculous good fortune they seized upon Michelucci to design it, or agreed to give him complete freedom in design and budget and time, is even harder to fathom. Nonetheless, these unlikely circumstances have conspired to produce one of the most significant buildings of the century.

Like Ronchamp, with which it will be inevitably compared, this church has the stunning originality of a dream. When one crosses the gentle berm with which the architect has surrounded it like a magic circle, the church takes complete possession of the spectator. The broken and heaving forms are strange and certainly not, in any conventional sense, either ingratiating or pretty. Yet neither are they self-conscious nor bombastic. On the contrary, the more one sees of the church, the more one is reminded of a great dancer on an empty stage in an empty theater, dancing not for applause but to explicate the meaning of his life, the inner logic of his own career. The church is at once a rehearsal and a summation, as though the artist were trying to formulate, in some final performance, the essence of what he had learned about form and motion in a lifetime of studying them. For this reason, perhaps, the building is wonderfully innocent of cliché or histrionics.

Mr. Fitch is a noted architectural historian, writer, and professor of architecture at Columbia University.
We know that this corresponds, in a certain sense, to objective fact. Michelucci does regard it as the capstone of his career—his unique opportunity to state in almost purely abstract terms his conclusions about his own mestiere. The very artificiality of the occasion permitted this: neither priest nor parish encumbered him with programs or prejudices. And his first sketches show that the church assumed from the beginning a plastic configuration. In his hands, traditional liturgical dicta have been manipulated like the sculptor's clay.

The very freedom permitted him here might have undone a weaker man. With neither deadline nor budgetary limitation (nor even a general contract!) he was limited only by gravity, and the way he has mastered that is often astonishing. He says that originally, he visualized the church as a tent, and from start to finish it has been a tented form. This is sufficiently unorthodox to be disturbing. We are accustomed by now to all manner of thin-shell forms; the same curves reversed in draped catenaries are less familiar. But it would be hard to argue that one is more appropriate to reinforced concrete than the other, and the tented form yields interior voids that are more significant than the exterior suggests.

Some Italian critics have called it heretical, but this new church seems to stand in the truest Tuscan tradition. It is strong, wiry, masculine and slightly sardonic; economic of means—pietra dura from the mountains, sand and gravel from the torrente, marble from the ubiquitous quarries—and wary of ornament and polychromy. It is illumined by Tuscan sanity, and disciplined always by the bitter tang of scarcity.

This last factor has always protected the Tuscan architect from the self-indulgent lushness of Rome or Naples, and it protects Michelucci now. The great draped curves of the roof are saved from mere sweetness by their crisp intersections with each other and with the ashlar walls, by the way they are punched aloft by the bony forked columns inside. Indeed, the translation from canvas and tent pole into concrete membrane and ossature is almost literal. All this is easy enough to comprehend, now that it is finished. What is more difficult to understand is how, once conceived, it was ever executed.

Four engineers assisted Michelucci in the structural calculations and there were many more studies, models and drawings than usual. Even so, many decisions must have been made on the site, as the building went up, for there are too many examples of sheer intuition, too many incandescent
details which would never have survived exposure on a drafting board. The building has that assuredness which is the mark of the chef d'oeuvre; it could only have developed in a culture whose intimate knowledge of masonry and concrete is 2,500 years old.

Michelucci had at his disposal a group of artisans whose understanding of the properties of stone and concrete was quite as profound as his (he is the first to point this out). He held daily conferences with the stone masons, the carpenters of the form work, the concrete handlers. The results of their common virtuosity are everywhere apparent, yielding an almost endless succession of ravishing details. Ashlar walls meet concrete members in intersections as elegant as a goldsmith's (It is surprising to note that, for all their lyrical movement in plan, they are everywhere severely vertical. Nowhere is there a stone arch, vault or voussoir. All tasks of spanning are assigned to the concrete.) Copper roofing, windows, bronze doors are handled with immaculate taste.

But this virtuosity reaches dazzling heights in the concrete formwork. Not Perret at LeRaincy nor LeCorbusier at La Tourette have surpassed the effects at San Giovanni's. When Michelucci says he has given years of his life to this structure, he means to be taken literally. One has only to look at the textured surfaces of his concrete elements—let alone absorb the logic of the forms themselves—to realize that he must have been there each morning when the carpenters began. No plywood was used anywhere: the forms were sheathed with rough-sawn boards 4 to 5 inches wide. The technique, of course, is not new. What is notable here is the way it is employed, to yield a texture as important to the structural elements as are the brush strokes of Van Gogh's starry nights or William Lehbruch's knife marks on his clay.

The formwork of the great catenaries, for example, has been handled in such uncanny fashion as to give them the weightlessness of draped silk or wind-filled sails. The same plain boards, rough and ineloquent as they seem individually, are assembled in another way to dramatize the flow of stress, to mark the hinge and joint, the articulated boniness of the extraordinary "columns." Note carefully, for instance, the slightly irregular chamfers along many of the exterior corners of the skeletal members. They are as deft, as spontaneous, as the last contemplative stroke of the sculptor's knife on the wet clay model. How on earth the carpenter could trim that bit
of wood which gave the concrete that configuration—even with Michelucci standing alongside—is hard to imagine. Never has the sheer liquid plasticity of concrete been more poetically expressed.

The man who designed this church is a mild-mannered, 73-year-old Florentine whose home and studio is in a Renaissance villa on the gardened slopes of Fiesole. He was born in nearby Pistoia, into a family of craftsmen (his brother, a bronze founder, cast all the bronzes of the new church). Four years younger than Corbusier, van de Rohe, and Sant’ Elia, Michelucci has never achieved a reputation comparable to theirs outside Italy. His prestige inside Italy, on the other hand, is very high, and this derives not only from a lifetime of good buildings and devoted university teaching but especially from the way he was able to avoid the bombastic vulgarity of Mussolinian architecture. His railway station in Florence (1936), an “official” building, is commonly regarded as the first great modern building in Italy and, as such, the first architectural victory over Fascism.

But nothing in this record prepares us for the incandescent originality of San Giovanni del Autostrada. Paolo Portoghesi, the critic, sees two conflicting tendencies in Michelucci: “lucidity and abandon, humility and a full knowledge of his own worth.” Such contradictions are nowhere apparent in his earlier buildings, which are reserved, rational, quietly elegant. These contradictions explode now, very much as happened at Ronchamps a decade ago, and probably for the same reasons. It is a sensitive but socially responsible architect’s reaction to the tragic contradictions inherent in his very craft: the social priority of the practical over the poetic in most building types; the seldom completely resolvable conflict between the esthetic imperatives of the container and the human requirements of the contained; the sheer intractability of social process as a medium of artistic expression.

Perhaps these two churches, placed in the middle of nowhere, created by fiat for a congregation not yet existent, became what they are because they offered LeCorbusier and Michelucci alike an opportunity to create great architecture unhampered by any requirement that it simultaneously be good. Certainly, Ronchamp permitted an explosive release of poetic imagery, but it surprised no one who had followed Corbu’s “other” life as painter and sculptor. For, as his great retrospective show of art in Florence (1963) made poignantly
clear, any new motif which appears in his architecture has first been subjected to a process of distillation in his painting. We have no record of such a parallel process in Michelucci, but it must exist. His church alone establishes the fact.

Here, however, similarity ends. Now that it has become familiar to us all, Ronchamp appears lyrical, almost Mozartean, in its airy voids and weightless solids, deliberately purified of any structural connotations. The non-load-bearing nature of the embossed walls is dramatized by their pebble-dash stucco, their failure to touch the convex ceiling. And this ceiling is itself handled in such a way as to discourage speculation as to how it is built or held in place. The resulting interiors seem as calm and pleasant as a farmhouse kitchen.

Things are quite otherwise at San Giovanni. Here there are enormous tensions in play. Sometimes they are wonderfully resolved; sometimes, they clash almost audibly. On the north façade the heaving roof lines reach a crucifix-topped apex over the window of the great altar, in front of which an A-frame appears as a flying buttress. But, as you move around to the east, this frame becomes increasingly ambiguous: is it carrying the crucifix or leaning against it? Such passages are extremely uncomfortable.

San Giovanni seems certain to have repercussions as profound as those of Ronchamp. Toward it, certainly, no one can remain neutral and all who visit it will be richer for the experience. It announces new potentialities in form and technique which ought to be understood. But it will be a pity if anyone tries to copy it, for a more authentically unique work of art—one less amenable to duplication by anybody—would be hard to imagine. In this sense, the Church of the Autostrada cannot have any immediately “practical” application, any more than could a play or a concert or a painting. It can only serve to illuminate our comprehension of the inexhaustible possibilities of architecture.

This, of course, is the cultural function of all great architecture. But Michelucci’s intention here seems much closer to that of Antonio Gaudi than to those of Pier Luigi Nervi. Like Gaudi, he has chosen to use highly rational methods of calculation and design to achieve a building that is extremely personal in conception and somnambulistic in effect. This cannot fail to arouse ambivalent responses in us. But it remains our task, not his, to distinguish between the generally true and the specifically exotic in this extraordinary building.
costs only $4.73 per square foot
graphs, is carefully laid out in a logical sequence of study, from contrast through texture, rhythm, and expressive and subjective forms. The latter section is an engaging analysis of the relationship between work performance and student personality types, and Mr. Itten displays his intuitive ability to release from each student a genuine statement of his creative temperament. The subject matter of the photos, over 40 years old, contains the seeds of many a gallery harvest, and “White Cups, Black Plates, and a White Egg” (page 24) would wear a respectable blue ribbon in a ‘pop’ art exhibition today.

There is a dichotomy of purpose to be reckoned with here. The publishers suggest the book as one “which can be used by all art teachers as a foundation for their own basic courses,” while Johannes Itten warns that “teachers who have studied only the methods of imparting fixed curricula to students are like pill sellers filling prescriptions.” To repeat a passage from Laotse which Itten used in opening his first students exhibition in 1918, “the material contains utility, the immaterial contains essence.” It was indeed the essence which haunted Itten drive to teach.—EDWARD J. ZAGORSKI.

(Mr. Zagorski is Professor in charge of Industrial Design at the University of Illinois and president of the Industrial Design Education Association.—Ed.)

THE CHALLENGE OF MEGALOPOLIS. A graphic presentation of the urbanized northeastern seaboard of the United States. By Wolf Von Eckardt. Based on the original study, Megalopolis, by Jean Gottmann. Published by The Macmillan Co., 60 Fifth Ave., New York 11, N.Y. 126 pp. 7 3/4” x 10 1/4”. Illus. $3.95 hardbound. $1.95 paperback.

The main details and statistics found in Gottmann’s 800-page book have been reduced to their essentials in a highly readable form by Wolf Von Eckardt who wrote the text (with Gottmann’s checking), planned the graphics, and did the page layouts. The graphics are unsophisticated and diagrammatic, but they do show just how big and how important Megalopolis is.

Megalopolis, of course, is the area which stretches from north of Boston to south of Washington, D.C. It is only one-thousandth of the country’s land, but it has one fifth (37 million) of the country’s population. Its importance is not only that it leads the country in finance, publishing, insurance, entertainment, etc., but that it “is the laboratory of a new urban way of life which is sweeping the civilized world.”

So, the present problems of Megalopolis are the future problems of most of the rest of the world. How and why it grew are important. Finding solutions to the problems is compounded not only by vast numbers of people but by the thousands of independent political entities in the area. Before solutions can be found, the problems must be thoroughly understood, by the layman as well as by the specialists. This book should make their nature clear and comprehensible for almost any interested layman.—J.R.


The expected influx of visitors to New York for the Fair has brought a spate of books on the city. Of special interest is “New York: People and Places” which has sensitive photographs (excellently printed) of architectural ornaments, street scenes, and people at work and at leisure. But the text, except for one fascinating chapter which tells about the lives of a printer on West 46th Street and some of his friends, dwells at undue

continued from page 135

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length on how wonderful the "good old days" in New York were and how bad today is in comparison.

The first edition of "The Face of New York" was published in 1954, and the revised edition has only a few new pictures showing the changing street- and sky-scape. The text gives a short history of New York City, documented by the best part of the book: the reproduction of old prints and photographs.

NEW FURNITURE. Edited by Gerd Hatle. Published by Frederick A. Praeger Inc., 64 University Place, New York 3, N.Y. 162 pp. 8¼" x 12". Illus. $12.50.

Seventh in a continuing review of furniture, this volume, like its predecessors, is international in approach and sophisticated in content. Brief captions in English, German, French, and Spanish accompany the handsome photographs. Many will be familiar to Americans; others, such as the work of the Yugoslavian designer Niko Kralj, will probably be new.

The biggest section covers chairs of every conceivable kind, followed by another 20 pages of sofas, seating arrangements, and beds. A section on children's furniture shows some of the cheerful Scandinavian designs and a less familiar group of school furniture designed by Hubert Bennett for the London County Council.

RUINS IN JUNGLES. By Stella Snead. Published by London House & Maxwell, 122 E. 55th St., New York 22, N.Y. unpaged. 10" x 11 11/16". Illus. $12.95.

Ruins of temples and cities in India, Southeast Asia, and Central America are shown in large, “picturesque” photographs that concentrate almost as much on the encroaching jungle as on the receding architecture. The text gives brief histories and explains many of the symbolic details.


A 32-page history of Argentinian architecture precedes pictures of 40 buildings and projects done between 1950 and 1963. It is all in Spanish, and most of the pictures are quite badly printed.

A HISTORY OF DANISH ARCHITECTURE. By Tobias Faber. Translated from the Danish by Frederic R. Stevenson. Published by The American-Scandinavian Foundation, 127 E. 73d St., New York 21, N.Y. 256 pp. 5¼" x 9". Illus. $5.

This is a pleasant book, written by a Dane who is proud of his country and the good craftsmanship of almost all its buildings. The text begins with prehistoric dolmens (similar to Stonehenge), proceeds briskly through past history, and devotes almost half its pages to architecture since 1900. Through-
The character of a building not only must reflect in line, space, contour and plane the role it is to play, but also in materials, finishes, colors and textures. Architects have found that one of the most expressive components they have to work with is lighting. Beyond its intrinsic value as illumination, lighting can do much toward establishing and sustaining the mood of a building. Its potential is far beyond anything suspected at this moment. We can look for some rather startling breakthroughs in illumination, within the next decade or so."

Day-Brite is dedicated to the philosophy that there is much more to lighting than mere fixtures. It is our endeavor to provide architects and engineers with materials and methods which can make a vital contribution both to improved seeing conditions and the creative concept of imaginative and functional building design.
Yes, if they’re planned for early enough.

For any commercial building, provide for public telephones while you’re still in the planning stage. They’re a welcome public service that produces income for the building’s owner.

A Bell System Public Telephone Consultant can help you plan for a finished installation that will be an attractive design asset.

In addition to design, careful early planning is also the practical thing to do, for it eliminates the possibility of expensive, troublesome afterthoughts.

The easiest, surest way to do your public telephone planning is to call your local Bell Telephone Business Office and ask to have a Public Telephone Consultant contact you.

For general information on telephone planning, see Sweet’s Architectural File, 33a/Be.
NEW WALL SYSTEMS

Stran-Steel has added two new packages to its line of steel buildings, one of them a deep-ribbed wall (1, 2), the other a complete one-story building (3, 4) primarily for schools but adaptable to offices and stores.

Stran-Wall panels may be used alone as exterior walls for factories and warehouses or combined with any of several interior materials to make a finished double wall (1). This double wall may be insulated if desired, and gypsum boards added to the basic wall qualify it for one- and two-hour fire ratings. Depending on use, exterior panels are made of steel or aluminum in 16-inch widths (2). Interlocking joints conceal the fasteners. Stran-Steel stocks 10 vinyl colors for exterior and interior panels. A complete insulated wall, both panels in color, costs $1.25 to $2 per square foot installed.

Stran-Westwall goes several steps further in prefabrication: it is a complete building package (3) which includes the roof, supporting frame, and box columns; modular exterior walls, windows, and doors; and movable partitions. The steel structure is offered in spans of 24 feet 8 inches and 30 feet 8 inches. Components are bolted together on the site by Stran-Steel’s franchised contractors, then the flat wall panels are hung on the frame inside the columns and locked into place. Vinyl strips seal the joints between panels, without mechanical fasteners. The panels, mounted in an aluminum frame, are sandwiches filled with polystyrene; a variety of facing materials may be specified (4). Standard size is 43 inches. Interior partitions are also sandwiches, 23⁄8 inches thick, 4 feet wide, and 8, 9, and 10 feet high. Costs run about $8.50 to $11.50 per square foot for a complete school building, including plumbing, heating, and lighting but excluding air conditioning.

Manufacturer: Stran-Steel Corp., 1202 Fannin Bank Bldg., Houston 77025.

MERCURY LAMP

A sharp increase in the light output of mercury lamps—up two-thirds over current products—leads Westinghouse to predict a rosy future for its new lamp (see photo) in industrial and street lighting applications.

The Super-Hi Output Mercury Lamp operates comfortably with present ballasts and fixtures, so significantly higher lighting levels can be achieved by simply relamping.

The new lamps blend thallium, sodium, and iodine vapors with mercury to form an efficient transducer in the process of converting electrical energy into light. The light emitted is yellowish-white rather than the blue-green of previous mercury lamps. Currently, Westinghouse makes the new lamp in only one size, 400 watts, which produces 36,000 lumens (900 per watt and sells for $31.50.

Manufacturer: Lamp Division, Westinghouse Electric Corp., Bloomfield, N. J.

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Narrow Stile 190 Entrance Package
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or write for BULLETIN RF

SCHOOL PARTITION

A new folding partition specifically designed for classrooms has been added to Brunswick's line of gymnasium and auditorium folding walls. The new 700 Series Acoustic Room Divider blocks sound with soft gaskets at floor, ceiling, and panel edges (see drawings), achieving a 38 decibel class rating.

The new walls are custom made to fit particular wall openings, yet seals along the bottom edge allow some leeway for uneven floors, adjusting up and down automatically. The system has no floor track; instead, the wall is suspended from the ceiling, and the seals compress to the floor. Panels are insulated with rock wool, framed in hardwood, with steel rails; their hinges are butt welded in the factory. Panel sizes go up to 12 feet high, 4 feet wide, and have a uniform thickness of 2 3/4 inches. Average costs run about $5 to $12 per square foot.


DOUBLE-DUTY TABLE

Art Metal's Planfile Drafting Table is, as its name suggests, a double-purpose piece of drafting-room equipment, combining an adjustable drafting board top with a spacious file underneath. The file holds the equivalent of 16 flat file drawers, but drawings are held vertically in large, indexed folders. The unit is made of steel; measures 33 3/4 inches in height, 43 inches in width, and 31 inches in depth; and comes in gray, beige, or black. List price: $685.

Manufacturer: Art Metal, Inc., Jamestown, N. Y.
BIG COPIER
This imposing machine from Xerox does an imposing job: it copies engineering drawings at a reduced scale and produces hard copies in seconds. The new machine, called the 1860 (the largest copy it makes is on 18 by 60-inch paper), seems simplicity itself to operate. The user inserts the large drawing at left, dials the percentage of reduction wanted (four choices, from 95 down to 45 per cent), inserts the copy paper at the right, and waits a few seconds while the image is made. Very large drawings can be reduced twice to fit 8½ by 11 paper; the second time, the Xerox copy is the original.
Renting arrangements are similar to those for other Xerox copying machines, based on a meter which registers use. The minimum charge is $550 per month, including 5,000 feet of copy.
Manufacturer: Xerox Corp., Rochester, N.Y. 14603.

INSTANT SYMBOLS
Quick symbols for architects and draftsmen are offered in a new series of 17 dry transfer sheets from England. Among them, in addition to lettering, are scaled reproductions of people (some with bowlers), cars, buses, trees, furniture, and electrical symbols. The

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drawings are mounted on 15 by 10-inch sheets of clear film backed by a protective blue paper. A soft pencil or a ballpoint pen rubbed gently over the sheet transfers the symbol to the drawing underneath. Each sheet costs $1.50.


**INSULATED WALL**

*Section 66,* R. C. Mahon's new insulated curtain wall, conceals the joints between panels, the fasteners turned inside and clamped to C-shaped horizontal members. The wall's profile alternates flat and raised 6-inch strips.

Mahon produces the new wall in steel and aluminum in several gauges and a wide choice of finishes. Sections can be rolled in any length up to 60 feet. Insulated and erected, the wall costs from $1.25 to $3.50 per square foot, depending on finishes.

*Manufacturer:* The R. C. Mahon Co., Building Products Division, 6565 E. Eight Mile Rd., Detroit 34.

**PREVIEWS**

Prospects for a super structural material, a compound of boron fibers and epoxy resins, are being examined by the U.S. Air Force, which is reportedly enthusiastic about its possibilities for air frames, missiles, and spacecraft. Cause of the excitement is that the compound shows greater strength and stiffness per unit of weight than any other structural material.

The trouble with porcelain enamel coatings on aluminum extrusions has been a weak bond between the two, resulting in patchy finishes and, in extreme cases, spots of delamination. But a new heat-treatable aluminum alloy, compounded with zinc and magnesium, overcomes this particular problem, according to the developer, Aluminium Ltd. The new alloy, Alcan C74S, was developed especially for porcelain enameling, which may be done either before or after extruding. In addition to a better bond and a better surface finish, the new alloy has a higher strength, says Herbert E. Schwenger, Alcan's new ingot product development manager in the United States, permitting architects to design slightly lighter sections than they could safely do with previous alloys.

A reaction triggered by a match transforms plastic sheets into rigid, thickly insulated shelters which could be carried in pack rolls or dropped from planes to remote bivouacs. This development results from a contract given to the Ontario Research Foundation in Toronto by the Canadian Department of Defence Production. ORF developed a plastic sandwich with a center of epoxy resin. Heat generated by lighting a fuse causes the resin to foam. *END*
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