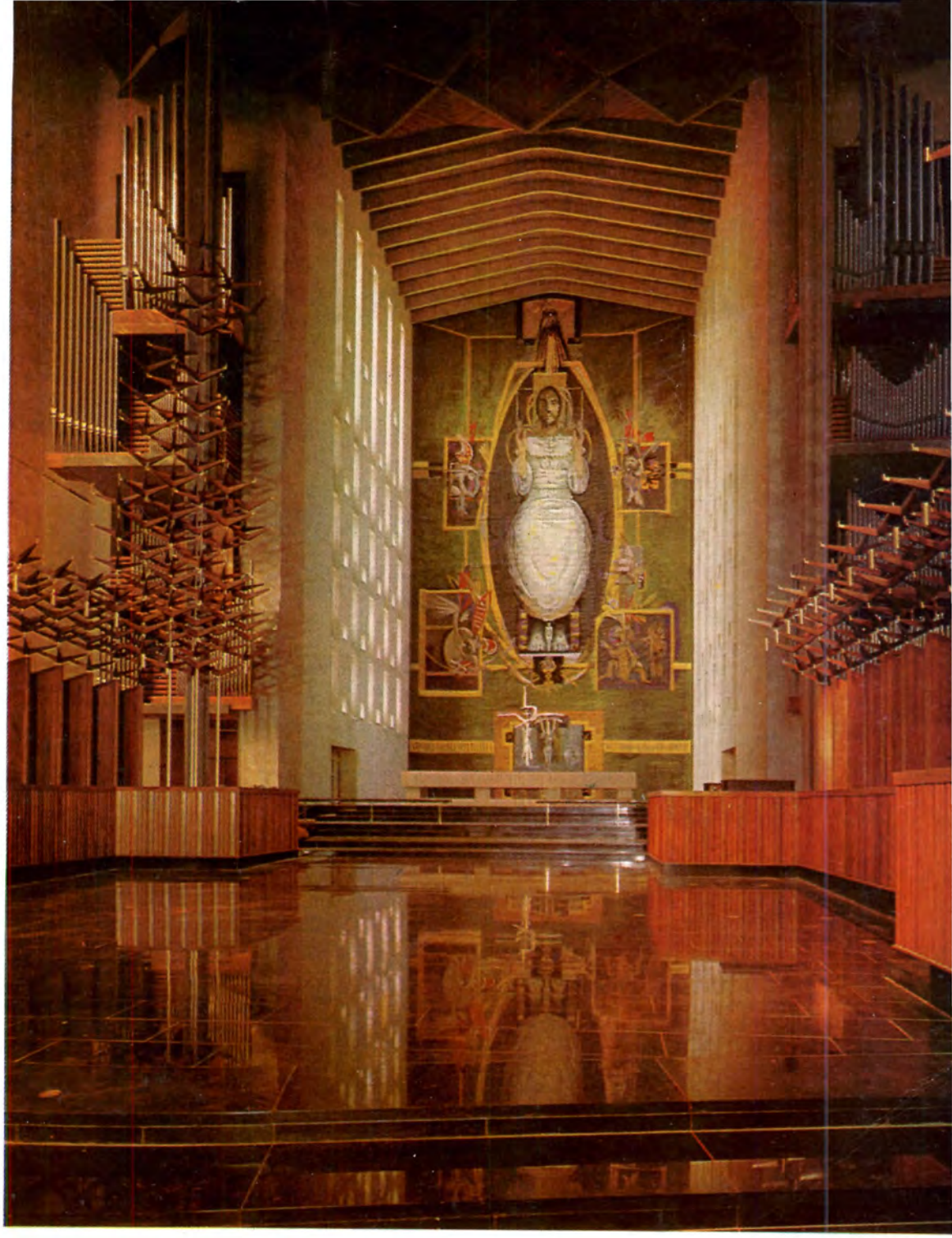

RCHITECTURAL RECORD

8 AUGUST 1962

BUILDING TYPES STUDY: HOTELS-MOTELS

THE NEW COVENTRY CATHEDRAL

STEEL THAT WEATHERS NATURALLY

FULL CONTENTS ON PAGES 4 & 5

The best designs are more exciting in concrete

Design winner in modern concrete features "upside down" living

National Design Award Winner, 1961 Horizon Homes Program, was this home built in South Plainfield, New Jersey. Architects. Kuhn & Drake.

The living rooms, expanded by a balcony and dining porch, are upstairs. Bedrooms are downstairs . . . and the entry is at mid-level. This compact plan leaves room for pleasant outdoor living, even on a small suburban lot.

Ideally suited to the basic cube design is the smart simplicity of the concrete masonry used for the house and screening garden walls. Outdoor features can be easily varied to achieve interesting individuality in a grouping of identical houses.

Modern concrete, today, gives architects new opportunity to win approval from both homeowners and builders for distinctive home design. **Plan to enter the Concrete Industries Horizon Homes Program.**

Light and airy bedrooms open to the concrete patio and pool. Interior concrete masonry walls are painted to match color schemes of individual rooms.

PORTLAND CEMENT ASSOCIATION *A national organization to improve and extend the uses of concrete*

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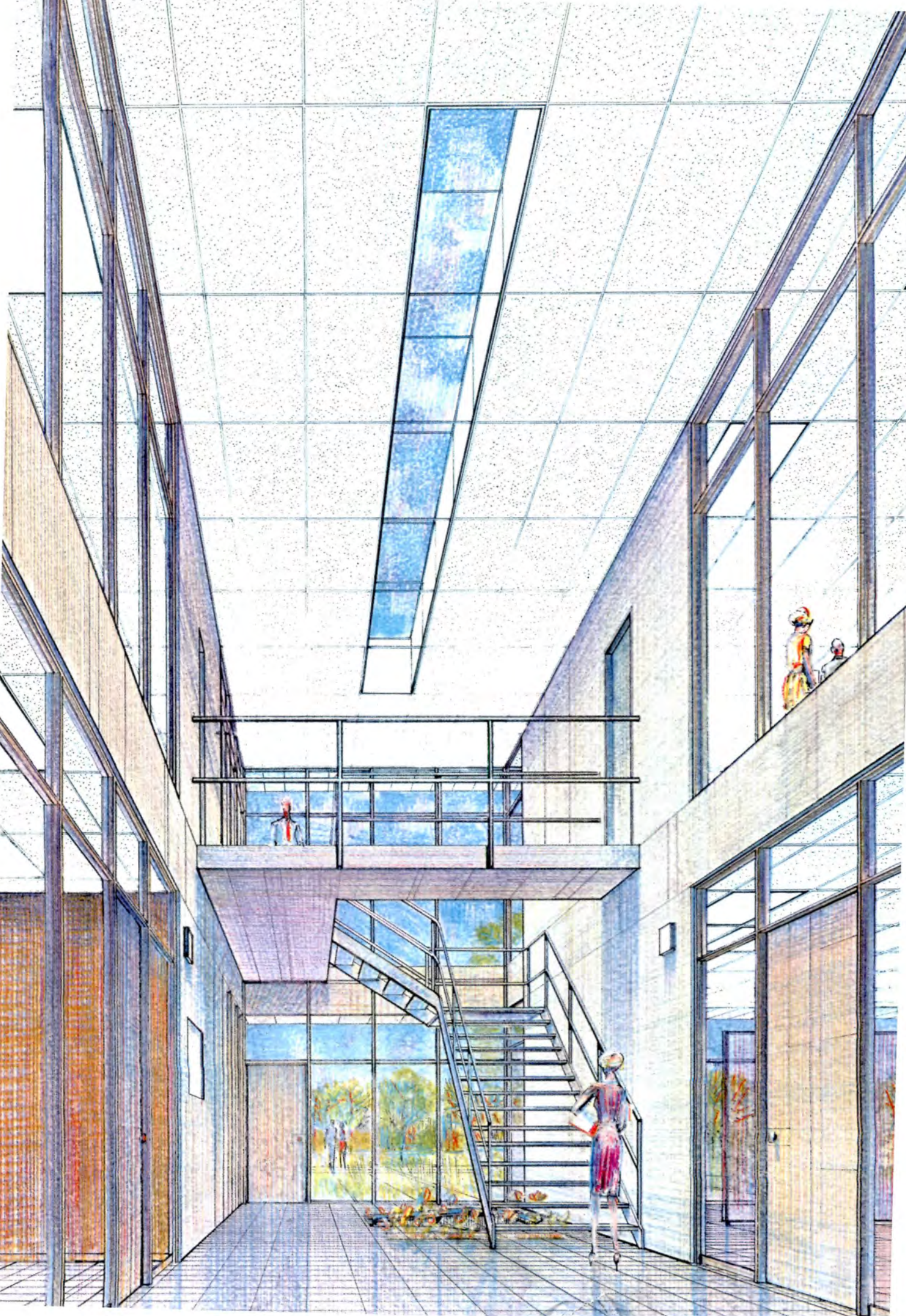
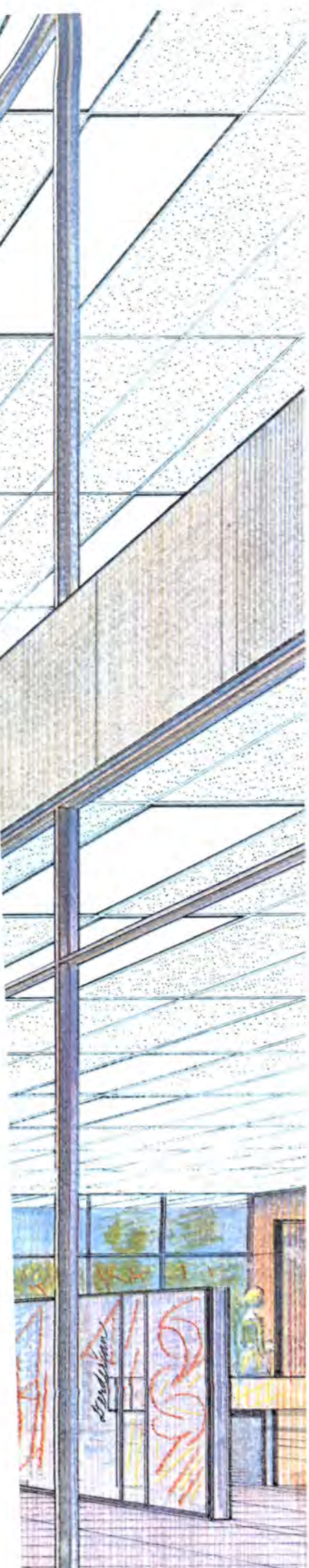
SACRAMENTO, CALIFORNIA

A NEW AND VERSATILE CEILING FOR TODAY'S AIR-CONDITIONED, FLEXIBLE-LAYOUT OFFICES





SACRAMENTO: ARMSTRONG VENTILATING FIRE GUARD CEILINGS DIFFUSE AIR, BLOCK FIRE, ABSORB SOUND -WITH LAY-IN UNIT FLEXIBILITY

These ceilings give this California office building complete flexibility of room layout—and do three other important jobs. Ventilating Fire Guard has eliminated almost all supply ductwork by using the plenum to feed conditioned air to the perforated ceiling, which diffuses it to the room below. And scientific plenum-engineering, based on Armstrong's exclusive calculations for Ventilating Ceilings, solved all problems of proper air distribution before the ceiling went up. The Ventilating Fire Guard Ceiling easily meets local fire code requirements for one-hour fire protection of steel joists. The ceiling provides excellent acoustical control, too. And because these Ventilating Fire Guard Ceilings are of large, movable lay-in units, arrangement of office spaces to suit tenants is highly flexible: lighting fixtures are easily rearranged; partitions go anywhere; the Ventilating and Fire Guard functions are unaffected. Moreover, these Ventilating Fire Guard Ceilings cost about $8,000 less than the combination of a duct-and-diffuser system and intermediate fire protection of steel joists.

Driver and Hunt Office Building, Sacramento, Calif. ARCHITECTS: Rickey & Brooks, Sacramento, under the direction of Benedict Adams, Architect, Associate. MECHANICAL ENGINEER: Leonard Stecher, Sacramento. GENERAL CONTRACTOR: Guth & Schmidt, Sacramento. ACOUSTICAL CONTRACTOR: L. D. Reeder Company, Sacramento.

TECHNICAL INFORMATION: Armstrong Ventilating Ceilings have been thoroughly lab- and job-tested to assure proper performance; are available in five materials (both tile and lay-in units), including Fire Guard, with three different patterns; and are compatible with all conventional supply-air systems. They offer considerable savings by cutting supply ductwork and eliminating conventional diffusers. Ventilating Fire Guard offers up to four-hour-rated fire protection; saves up to 30¢ per sq. ft. by eliminating intermediate fire protection, up to two months' construction time through dry installation; often earns lower insurance rates. Special plenum-engineering data is available, giving all factors and formulae for the correct design of this ventilating system, ensuring that it delivers the required cfm of conditioned air in the manner and quantity designated by the ventilating engineer; contact your Armstrong Acoustical Contractor or Armstrong District Office. For general information, write Armstrong, 4208 Rock St., Lancaster, Pa.

Arm ·or ACOUSTICAL CEILINGS

First in fire-retardant acoustical ceilings

RENDERINGS BY ARA DERDERIAN

Architectural Engineering

Cover:

The Cathedral Church of Saint Michael, Coventry, England. Architect, Sir Basil Spence. Photograph, *The Builder*

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(Western Edition, including *Western Architect and Engineer*)

ARCHITECTURAL

Record Reports

Architects and Buildings

Authors and Articles

Features

RECORD CONTENTS
August 1962

Building Types Study 310: Hotels-Motels

Coming in the Record

MONUMENTAL DESIGN FOR THE PERFORMING ARTS

One of the great architectural challenges of our time—like the program or not—surely is New York's Lincoln Center for the Performing Arts. On this project six of the nation's most respected architects have been working for three years, and the first of the six buildings to be completed, Max Abramovitz' Philharmonic Hall, will open late next month. To mark this event, the RECORD *will feature in its September issue the first comprehensive presentation of the design for Lincoln Center, from the over-all design concept to the designs of the individual buildings, with special attention, of course, to Philharmonic Hall. The issue will include an article by Dr. Leo Beranek on the intensive acoustical studies which played such an important part in the design of the hall.*

NEW DESIGN GUIDE ON PATIENT CARE UNITS

Next month's Building Types Study on Hospitals will lead off with a new design guide in the famous U. S. Public Health Service series: this one a review of current practices and developments in the design of patient care units. Hospital projects to be shown include a major renovation of a very large general hospital.

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CONSTRUCTION SAVINGS are implicit where precast, prestressed concrete is employed—as in the framing for this auditorium of St. Andrew the Apostle Church in Algiers, La. Work goes fast, erection costs are low. The precaster further reduced costs by using 'Incor' 24-hour portland cement for the arches and roof joists. Incor's fast-curing properties permit speedier production, earlier release of forms.

OPERATIONAL SAVINGS go on and on. By specifically choosing precast concrete over the alternate material originally considered, St. Andrew's obtained significantly lower fire and wind insurance rates. ¶ The auditorium is framed by seven precast concrete three-hinged arches, placed on 14-ft. centers. They span 79 ft. 8 in., and provide 24-ft. eaves with 30-ft. ridge height. The arches were precast in four elements and prestressed in place by post-tensioning. Roof framing was completed with precast single "T" joists at 8-ft. centers. ¶ Lone Star Portland Cement was used for all other concrete requirements and Lone Star Masonry Cement for masonry work.

SAINT ANDREW THE APOSTLE CHURCH AUDITORIUM, Algiers, La. **GENERAL CONTRACTOR:** Perilliat-Rickey Construction Co., Inc. **'INCOR' PRESTRESSED ELEMENTS:** Belden Concrete Products, Inc. **ARCHITECTS:** Jules K. Delavergne & Associates and John M. Lachin, Jr. **LONE STAR READY-MIX SUPPLIER:** Jahncke Service, Inc. (All of New Orleans)

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Better Federal Architecture?

Having taken some vigorous swings at governmental attitudes about architecture, this hardened observer feels constrained to comment more hopefully about the prospects for a change. In a manner of speaking the change has already come about, for the President has given directive status to a statement of principles about Federal architecture which calls for a swing away from what might be called a policy of studied mediocrity. The statement calls for "designs that embody the finest contemporary American architectural thought." That would be cause for cheering even if the realization never came.

What realization will be achieved depends, of course, on a great many individual decisions, many of which will be matters subject to Congressional control. The statement makes it clear that economy in building will be one of the requirements, but does suggest that government should be willing to pay some additional cost to avoid excessive uniformity. In any case there is no suggestion that free spending is in order, or that the finest contemporary American architectural thought will not be held to functional necessities.

At the moment, however, it is the principles that are important. They have been previously reported in these pages, but they are worth repeating exactly as stated:

"1. The policy shall be to provide requisite and adequate facilities in an architectural style and form which is distinguished and which will reflect the dignity, enterprise, vigor, and stability of the American National Government. Major emphasis should be placed on the choice of designs that embody the finest contemporary American architectural thought. Specific attention should be paid to the possibilities of incorporating into such designs qualities which reflect the regional architectural traditions of that part of the Nation in which buildings are located. Where appropriate, fine art should be incorporated in the designs, with emphasis on the work of living American artists. Designs shall adhere to sound construction practice and utilize materials, methods and equipment of proven dependability. Buildings shall be economical to build, operate and maintain, and should be accessible to the handicapped.

"2. The development of an official style must be avoided. Design must flow from the architectural profession to the Government, and not vice versa. The Government should be willing to pay some additional cost to avoid excessive uniformity in design of Federal buildings. Competitions for the design of Federal buildings may be held where appropriate. The advice of distinguished architects ought to, as a rule, be sought prior to the award of important design contracts.

"3. The choice and development of the building site should be considered the first step of the design process. This choice should be made in cooperation with local agencies. Special attention should be paid to the general ensemble of streets and public places of which Federal buildings will form a part. Where possible, buildings should be located so as to permit a generous development of landscape."

I can comment here on only two quotations from the recommendations—"Competitions for the design of Federal buildings may be held where appropriate" and "The advice of distinguished architects ought to, as a rule, be sought prior to the award of important design contracts."

Competitions need no comments, except maybe Hurrah.

The second quotation refers, of course, to the use of the architectural advisory panel in the State Department's foreign buildings program, which seemed to be one of the most effective devices yet seen for making productive the bringing together of top flight architects and governmental assignments.

—Emerson Goble

PRESIDENT NAMES ADVISORY COMMITTEE ON PENNSYLVANIA AVENUE REDEVELOPMENT

Nathaniel A. Owings of San Francisco, one of the founding partners of the architectural firm of Skidmore, Owings and Merrill, heads a ten-member advisory committee appointed last month by President Kennedy to consult with the National Capital Planning Commission on the proposed redevelopment of Pennsylvania Avenue (July, pages 25 *et seq.*)

Four other architects were named to the committee. They are: Charles Eames of Venice, Calif.; Paul Thiry of Seattle; Minoru Yamasaki of Detroit; and Ralph Walker of New York.

Other members of the committee are: Frederick Gutheim of Washington, D.C., architectural critic, author and planning consultant; Douglas Haskell of New York, editor of *Architectural Forum;* Dan Kiley of Charlotte, Vt., landscape architect; Daniel P. Moynihan Jr., special assistant to Secretary of Labor Arthur J. Goldberg; and William Walton, painter and adviser to the President.

The committee met for the first time on July 16 with Mrs. James H. Rowe, chairman of the National Capital Planning Commission, and other Commission members and staff officials. The meeting, which began in the White House, developed into a tour of Pennsylvania Avenue conducted by Mr. Walton and included a visit to the Capitol and lunch with Senator Allen Bible of Nevada, chairman of the Senate Committee on the District of Columbia. Scheduled conferences with President Kennedy and Vice President Lyndon B. Johnson had to be eliminated when bad flying weather delayed the return to Washington of both the President and the Vice President and forced readjustment of their schedules for the day.

The July 16 meeting was intended to be exploratory, a basis for future working sessions of the committee on ways and means to implement the proposal of the President's Ad Hoc Committee on Federal Office Space for a major redevelopment of Pennsylvania Avenue to make it a beautiful and spirited "grand axis" of the nation's capital and of the nation.

Next meeting of the committee was set for October 15-16, also in Washington; and to that meeting committee members have been asked to come with conceptual ideas for redevelopment of the Avenue: "everybody was to go home and draw," as one non-architect member of the committee put it.

The idea is not that this committee will design a new Pennsylvania Avenue but that it will produce some basic guidelines for the designers: develop the broad outlines of a program for the redevelopment.

The committee will also advise on selection of architects and their associates for the development of the ultimate design. Even before the advisory committee was appointed, there had been discussion in high Administration circles of a national or international competition to encourage the most creative and appropriate design; and the committee will be free to suggest this approach if it sees fit.

SPECIAL STUDY URGES ESTABLISHMENT OF NATIONAL INSTITUTE OF BUILDING RESEARCH

An ad hoc committee of the Building Research Advisory Board appointed at the request of the National Bureau of Standards to advise on the nation's building research needs has recommended the establishment of a National Institute of Building Research to be organized as a unit of the National Bureau of Standards.

The new unit, to incorporate the present building research activities of the Bureau, would undertake the kind of correlated building research which the report says is not done by existing agencies either government or private. A budget of $2 million is suggested for the first year, and expansion to $10 million after five years is envisaged.

The report was transmitted in May to the National Bureau of Standards but made public only last month. The Bureau presented the report to the Secretary of Commerce, who has asked for a staff review headed by Dr. J. Herbert Hollomon, Assistant Secretary for Science and Technology, to be followed by recommendations for Department action. No deadline has been announced, but it is assumed any action would be timed for 1964 budgeting and fiscal 1964 appropriations.

Richard G. Folsom, president of Rensselaer Polytechnic Institute, Troy, N. Y., was chairman of BRAB's Special Committee on a National Program for Building Research, whose members were: A. Allan Bates, director of New York University's University Valley Campus, Sterling Forest, N.Y.; Peter B. Gordon, vice president of Wolff and Munier, Inc., engineers and contractors, New York; Harold B. Gores, president of Educational Facilities Laboratories Inc., New York; Harry G. Hanson, associate chief for environmental health, U.S. Public Health Service, Washington, D.C.; Haldon A. Leedy, director of Armour Research Foundation, Chicago; Robert F. Leggett, director of the Division of Building Research, National Research Council of Canada, Ottawa; John S. Parkinson, director of general company research, Johns-Manville Corporation, Manville, N.J.; and William H. Scheick, executive director of the American Institute of Architects.

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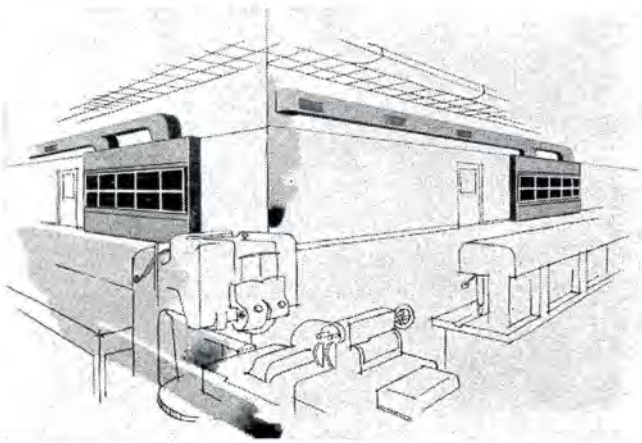

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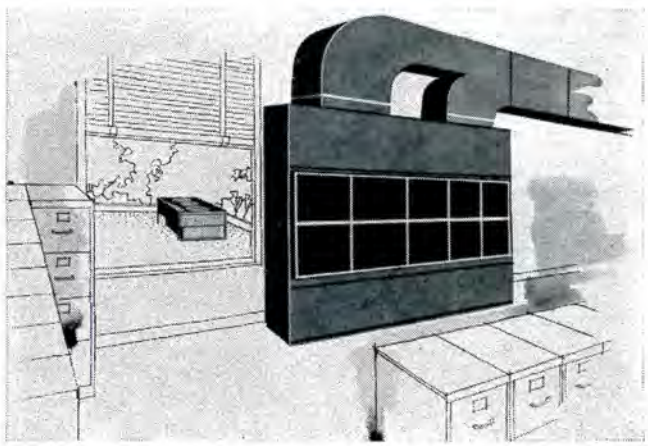
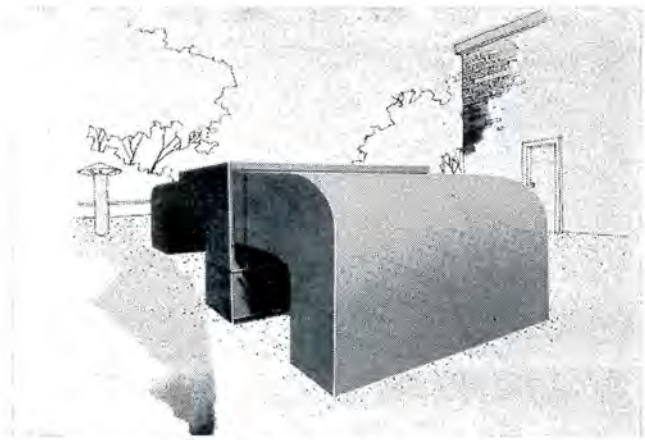


2. Where water is scarce or costly, there are Weathermakers that use no water at all. The air-cooled condensers can be located outside—on a roof or on the ground—in a horizontal or vertical position.



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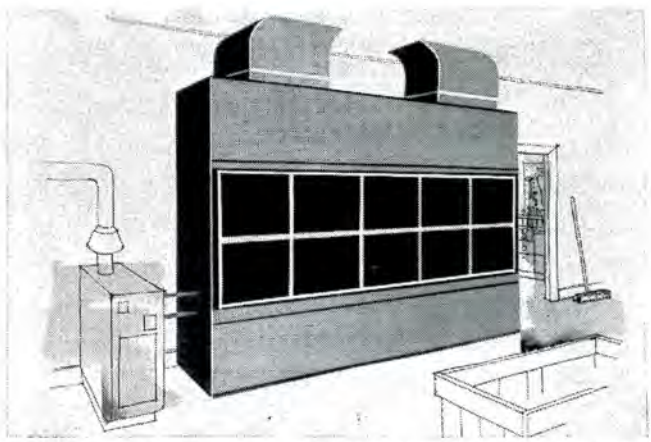

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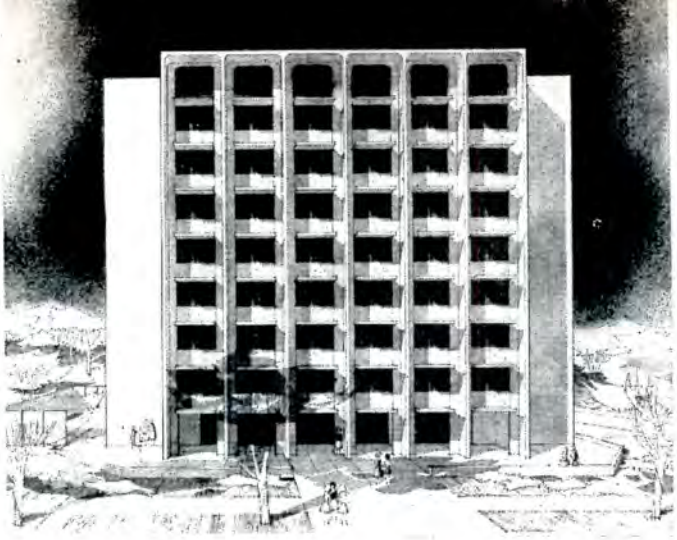
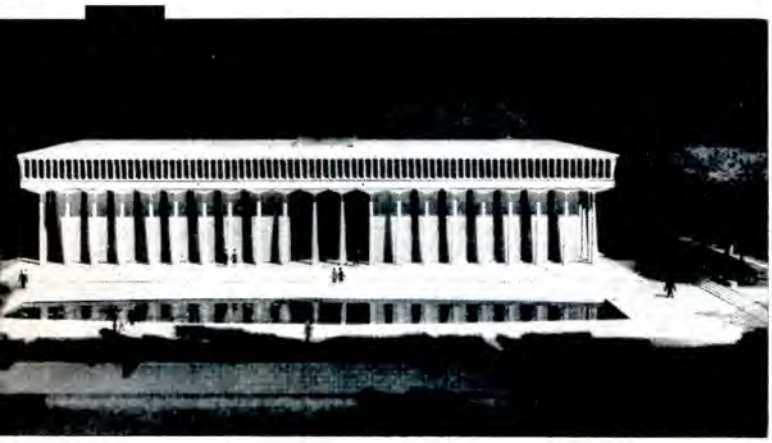


Two College Dormitories

Women's Dormitory at Tulane University (Sophie Newcomb College), New Orleans, La., is now under construction. The $1,000,000 reinforced concrete building was designed by Burk Le Breton and Lamantia, Architects, Inc. It will have eight levels—seven containing 134 double rooms, three apartment suites and a "common" room on each floor. The ground level accommodates lounge and recreation areas

Brandeis University Dormitory, Waltham, Mass., will provide housing for 320 freshmen men and women in separate wings, sharing common dining room and social spaces. The $2,065,000 building, to be ready for occupancy by September 1963, was designed by The Architects Collaborative. Partner-in-charge, Benjamin Thompson; job captain, Richard White. Materials are brick-bearing walls with brick and concrete slabs and for interior finishes, exposed brick walls



Princeton's Woodrow Wilson School

Minoru Yamasaki designed this building to house the expanded Woodrow Wilson School of Public and International Affairs at Princeton University. Main elements of the 210-ft-long building's exterior façade are 70 functional 27-ft-long columns of quartz-aggregate prestressed concrete. The second story, of rigid structural sandwich-type construction in which certain bearing walls permit the entire structure to be supported by the columns below, has a perimeter façade of precast concrete. The first floor contains a 250-capacity bowl-type auditorium and library; the second, faculty offices. Below ground are four additional bowl rooms, each seating 60. A central lobby passing through the building extends from floor to roof

Washington Plaza Apartments Under Construction in Pittsburgh

To occupy less than one-quarter of a site approximately 10 acres in Pittsburgh's Lower Hill urban redevelopment project, three 23-story towers of reinforced concrete with aluminum and glass exteriors comprise Washington Plaza Apartments. Architects are I. M. Pei & Associates, New York, and Deeter & Ritchey, Pittsburgh. The buildings, the first of which is now under construction and the entire development scheduled for 1966 completion, are being erected by the Zeckendorf Property Corporation, urban redevelopment affiliate of Webb & Knapp, Inc. The project will cost approximately $20 million. In addition to the towers which will contain a total of about 925 apartments, the development will include three-level underground garage for an approximate 800 cars

Four-Purpose Building in New York

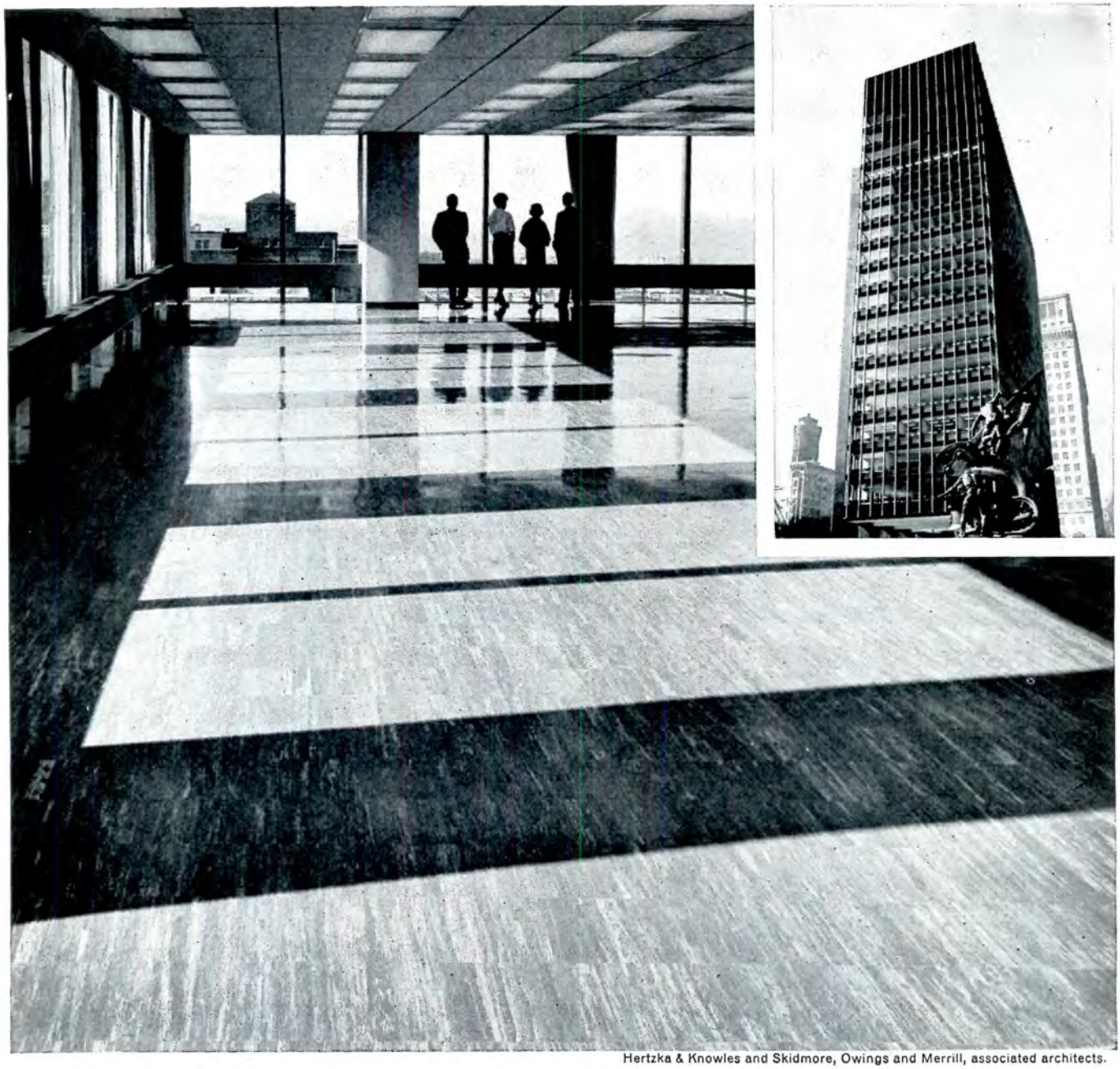
Construction will start next spring on a $1,800,000 structure which will house a private school, medical center, 12-story apartment house and garage to be built by the progressive City and Country School on an 18,000-sq-ft site. Architects are Stephen Shilowitz and his father Charles Shilowitz who have offices in New York and Japan. They are being assisted by their associate in Tokyo, Koichi Nagasawa. To help cover the cost of developing this unconventional multi-purpose building, the Ford Foundation's Educational Facilities Laboratories made a $15,000 grant to the school. The lowest level—two and one-half stories below the street—will contain a parking garage and school gymnasium. Above the garage will be a two-level medical center, the lower level below ground, the upper rising a half-story above the street. Roof of the medical center will form a plaza above which the three-story school will be built on exposed posts. Apartment units will occupy a 12-story tower above the school whose roof will be a terrace garden for residents. All four units will have separate entrances

New Theater in Central Park

Delacorte Theater in Central Park, New York, a coordinated effort by the New York Shakespeare Festival, stage designer Eldon Elder and the Department of Parks, was opened in mid-June. The stage, constructed of wood on a concrete base with storage space beneath, has a frontage, in a modified octagon form, of 48 ft and a depth of 45 ft at the center. Wings, each 25 by 16 ft, extend from each side toward the center of the stage. An upper or balcony level, if desired, is transported in and out through wings on wagons. A steel grandstand with wood flooring contains 2,200 seats. Two aluminum light towers connected by a bridge provide illumination for the grandstand and exits. At lower left is the metal building housing dressing rooms. Cost was $375,000—$225,000 appropriated by the City, and $150,000 a gift from the George and Margarita Delacorte Foundation. General contractor was the Bristol Construction Company

NASA's "Shoot-for-Moon" Base

The $90 million Manned Spacecraft Center, located on a 1,600-acre site for the National Aeronautic and Space Administration near Houston, Tex., will accommodate environmental test facilities for astronauts, test laboratories for the moon capsule, and the world's first simulated lunar landing and departure range for the Apollo moon-shot. Master planned and designed by Charles Luckman Associates, Los Angeles, the project will use Texas architects: Books and Barr; MacKie & Kamrath; Wirtz, Calhoun, Tungate & Jackson; and Harvin C. Moore. Prime management contractor is Brown and Root, Inc. Astronauts will be trained for the mooncraft program in the 12-story, 200,000-sq-ft Flight Project Center



Hertzka & Knowles and Skidmore, Owings and Merrill, associated architects.

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FLOORING PRODUCTS

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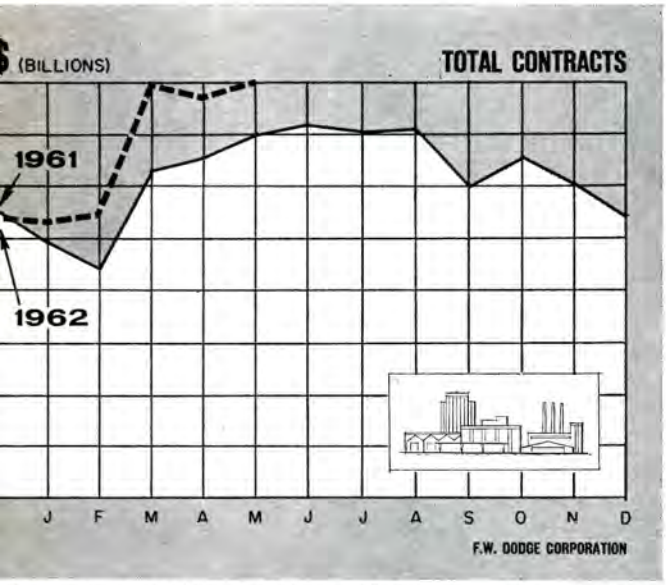
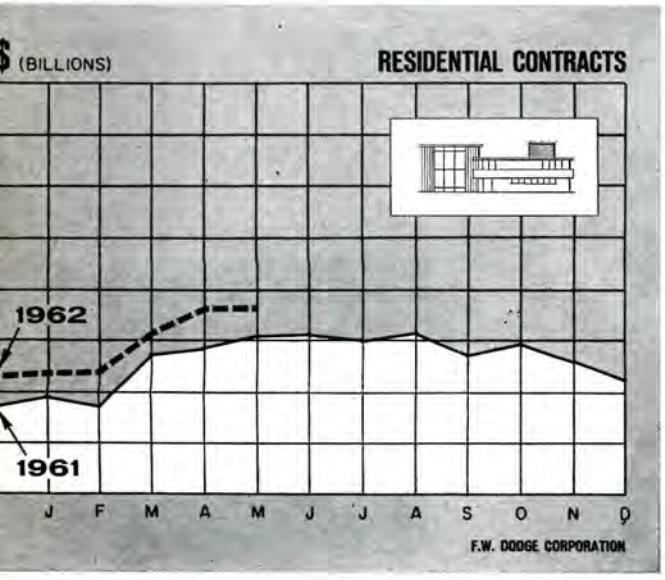


Total contracts include residential, nonresidential, heavy engineering contracts



CONTRACTS BOOM!

WHILE THE ECONOMY as a whole has shown less verve than expected earlier, it's hard to fault the pace of construction contracts thus far this year. In fact, performance has been nothing short of phenomenal, with all major sectors of new construction contributing to a widespread advance over the comparable months of 1961. Through May 1962, total awards amounted to a record $17.2 billion, up 17 per cent from last year and 13 per cent above the previous five-month high back in 1959.

ON A SEASONALLY ADJUSTED BASIS, this year's contract activity has assumed a pinnacle formation. The Dodge Index (1957-1959 = 100) rose very sharply from January's 115 to an all-time peak of 131 in March, then slipped back to 117 in May. However, the March Index figure was affected by a bunching of some very large projects. If these had been spread out more over the surrounding months, we would have seen a smoother uptrend. As it was, May's 117 reading still represented a nine per cent gain over the annual average for last year. And the actual dollar figure for total contracts in May climbed over the $4 billion mark for the first time in history.

THE UPWARD TREND in 1962 contracts stemmed from both private and public construction. But the former contributed more "oomph" to that trend. Specifically, contracts for all privately-owned projects in the January through May period jumped 18 per cent over last year and accounted for 67 per cent of total contract valuation. This is explained mainly by the very strong showing of residential building, commercial building, and industrial plant construction, all predominantly privately-owned, while contracts for school buildings and public buildings were barely above a year ago. Buoying the public sector, however, was a fairly sharp increase in contracts for public works.

OTHER HIGHLIGHTS of the 1962 contract performance to date were as follows:

- The rampage of apartment building, evident throughout 1961, has accelerated this year. Contracts for multi-family housing soared 68 per cent over last year, which represented the biggest dollar increase and the sharpest percentage increase of any individual construction category.

- Making up for weak years from 1958 through 1960, hospital building also advanced smartly this spring (by 36 per cent) on top of a good gain for 1961 as a whole.

- The subject of the month's Building Types Study, hotel and motel building, staged a boom of its own. Contracts for the first five months were valued at almost $300 million, up 40 per cent from last year.

- The only major construction type to slip badly was "other utility construction" (mainly pipelines, gas plants, and railroad construction) which fell 40 per cent from a year ago.

IT IS PARTICULARLY ENCOURAGING to see this widespread advance in construction contracts when some other business barometers are not faring so well. Whatever is in store for the general economy during the second half, actual construction activity should be a strong point.

EDWARD A. SPRAGUE, *Economist*
F. W. Dodge Corporation
A McGraw-Hill Company

Tests prove this easier way to tie composite walls IS BETTER TOO—MUCH BETTER!

Impartial tests, we mean, conducted at a university-affiliated research laboratory. Test techniques were adaptions of standard masonry construction. Conclusions: In comparison with header-tied walls, the Dur-o-wal tie not only makes for easier construction and lower cost—but also provides increased compressive strength, marked improvement in resistance to moisture penetration, comparable transverse strength, comparable mortar bond. Write to nearest address below for new comprehensive Dur-o-wal data file and research reports.

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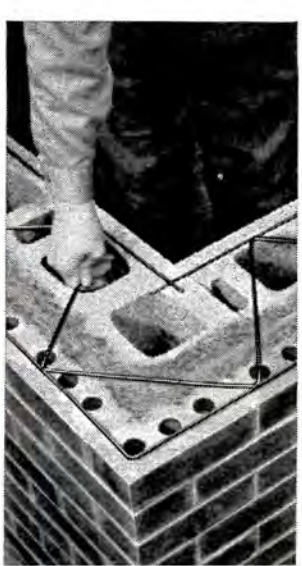


Strength with flexibility—the two basic factors for a repair-free composite wall are assured by Dur-o-wal. Around corners, that is, as well as in the straight stretches. Positive, continuous reinforcement of corners is easy when formed on the job —even easier with prefabricated Dur-o-wal corners such as shown in this picture.

Construction Cost Indexes

Presented by Clyde Shute, Director of Statistical Policy, Construction News Div., F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assoc. Inc.

Labor and Materials: U.S. average 1926-1929=100

NEW YORK

PERIOD	RESIDENTIAL Brick	RESIDENTIAL Frame	APTS., HOTELS, OFFICE BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Steel
1935	93.8	91.3	104.7	108.5	105.5
1939	123.5	122.4	130.7	133.4	130.1
1949	243.7	240.8	242.8	246.6	240.0
1950	256.2	254.5	249.5	251.5	248.0
1951	273.2	271.3	263.7	274.9	271.8
1952	278.2	274.8	271.9	265.2	262.2
1953	281.3	277.2	281.0	286.0	282.0
1954	285.0	278.2	293.0	300.6	295.4
1955	293.1	286.0	300.0	308.3	302.4
1956	310.8	302.2	320.1	328.6	324.5
1957	318.5	308.3	333.1	345.2	339.8
1958	328.0	315.1	348.6	365.4	357.3
1959	342.7	329.0	367.7	386.8	374.1
1960	351.6	337.2	377.7	395.8	380.6
1961	362.5	343.0	398.2	422.4	397.0
March 1962	367.1	344.6	410.2	436.9	409.2
April 1962	369.0	346.8	411.0	437.5	410.0
May 1962	369.0	346.8	411.0	437.5	410.0
	% increase over 1939				
May 1962	198.8	183.3	214.5	228.0	215.1

ATLANTA

PERIOD	RESIDENTIAL Brick	RESIDENTIAL Frame	APTS., HOTELS OFFICE BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Steel
1935	72.3	67.9	84.0	87.1	85.1
1939	86.3	83.1	95.1	97.4	94.7
1949	189.3	189.9	180.6	180.8	177.5
1950	194.3	196.2	185.4	183.7	185.0
1951	212.8	214.6	204.2	202.8	205.0
1952	218.8	221.0	212.8	210.1	214.3
1953	223.0	224.6	221.3	221.8	223.0
1954	219.6	219.1	233.5	225.2	225.4
1955	225.3	225.1	229.0	231.5	231.8
1956	237.2	235.7	241.7	244.4	246.4
1957	241.2	239.0	248.7	252.1	254.7
1958	243.9	239.8	255.7	261.9	262.0
1959	252.2	247.7	266.1	272.7	273.1
1960	259.2	253.3	274.7	282.5	278.8
1961	256.7	249.7	275.8	284.5	275.8
March 1962	259.9	252.9	279.7	288.9	278.0
April 1962	261.3	254.7	280.0	289.1	278.4
May 1962	261.3	254.7	280.0	289.1	278.4
	% increase over 1939				
May 1962	202.8	206.5	194.4	196.8	194.0

ST. LOUIS

1935	95.1	90.1	104.1	108.3	105.4
1939	110.2	107.0	118.7	119.8	119.0
1949	221.4	220.7	212.8	215.7	213.6
1950	232.8	230.7	221.9	225.3	222.8
1951	252.0	248.3	238.5	240.9	239.0
1952	259.1	253.2	249.7	255.0	249.6
1953	263.4	256.4	259.0	267.0	259.2
1954	266.6	260.2	263.7	273.3	266.2
1955	273.3	266.5	272.2	281.3	276.5
1956	288.7	280.3	287.9	299.2	293.3
1957	292.0	283.4	295.2	307.1	302.9
1958	297.0	278.9	304.9	318.4	313.8
1959	305.4	296.4	315.0	329.8	323.9
1960	311.4	301.0	322.2	337.2	329.2
1961	315.1	302.0	329.0	346.8	332.2
March 1962	319.6	305.1	337.2	356.5	338.3
April 1962	320.8	306.3	338.7	357.7	339.5
May 1962	323.6	308.9	342.4	361.9	343.3
	% increase over 1939				
May 1962	193.6	188.7	188.4	202.1	188.5

SAN FRANCISCO

1935	89.5	84.5	96.4	103.7	99.7
1939	105.6	99.3	117.4	121.9	116.5
1949	213.0	207.1	214.0	219.8	216.1
1950	227.0	223.1	222.4	224.5	222.6
1951	245.2	240.4	239.6	243.1	243.1
1952	250.2	245.0	245.6	248.7	249.6
1953	255.2	257.2	256.6	261.0	259.7
1954	257.4	249.2	264.1	272.5	267.2
1955	268.0	259.0	275.0	284.4	279.6
1956	279.0	270.0	288.9	298.6	295.8
1957	286.3	274.4	302.9	315.2	310.7
1958	289.8	274.9	311.5	326.7	320.8
1959	299.2	284.4	322.7	338.1	330.1
1960	305.5	288.9	335.3	352.2	342.3
1961	308.7	290.2	345.1	362.9	350.2
March 1962	310.8	291.4	350.4	368.2	354.0
April 1962	313.2	294.2	352.0	369.4	355.4
May 1962	313.7	294.4	352.7	370.7	356.1
	% increase over 1939				
May 1962	197.1	196.5	200.4	204.1	205.7

Cost comparisons, as percentage differences, for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110
index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

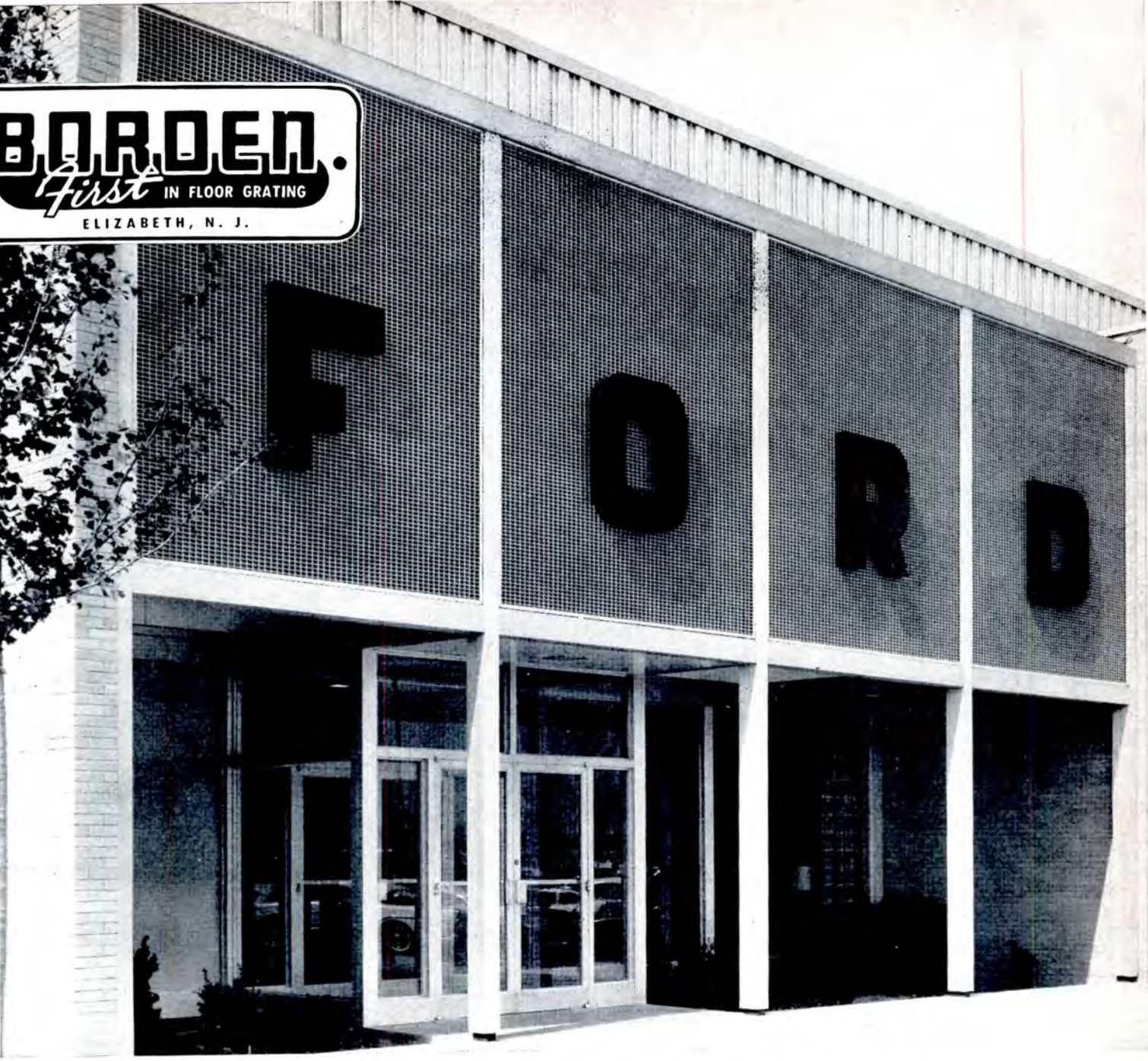
$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926-29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.



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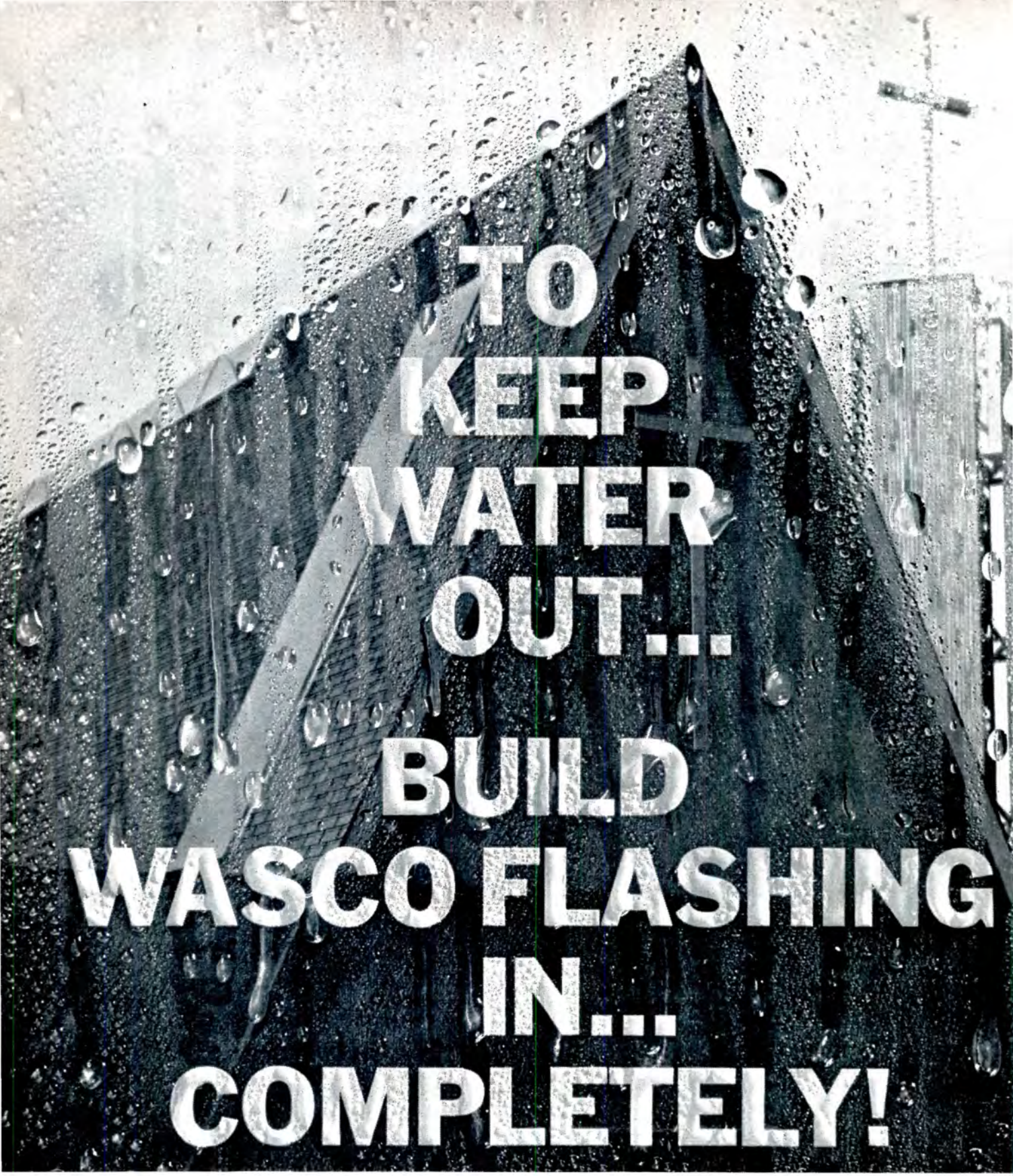

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—*Drawn for the* RECORD *by Alan Dunn*

"*Six-fifty* for dinner, but the darn thing revolves!"

DESIGN CHARTER FOR URBAN RENEWAL: SLAYTON URGES NEW EMPHASIS ON DESIGN AND OUTLINES IDEAS FOR ACHIEVING IT

The administrator as client has the responsibility for encouraging or discouraging good urban design and the decisions he makes will shape our cities for decades to come, Commissioner William L. Slayton told last month's annual Conference on Urban Renewal of the National Association of Housing and Redevelopment Officials. The conference was held at the School of Architecture and Allied Arts of the University of Oregon, Eugene, Ore.

In a speech which amounted to a charter for design in the urban renewal program, Mr. Slayton discussed five aspects of the administrator's role in encouraging good urban design. They were: (1) design guidance in plan preparation; (2) design emphasis in renewal plans; (3) design-oriented disposition; (4) design guidance in redeveloper selection and review of plans; and (5) experimental design approach.

Designing the Program

Mr. Slayton believes that too little attention has been paid to urban design in preparing of renewal plans:

"We have all too frequently approached the plan from a zoning ordinance concept and created two-dimensional rather than three-dimensional concepts. We have been so concerned with designating particular land uses, being sure that we had the proper width and alignment of streets, and with showing the proper percentage of open space, etc., that we have failed to look at the renewal plan as a three-dimensional design."

Even at the point of the earliest public decisions relating to a project, Mr. Slayton emphasized, design guidance should be sought: "The designer can see new potentials, new possibilities, and may well be able to propose some new developmental concepts that can enrich the initial basic determinants of the city. Here is the opportunity for early client-designer relationship in establishing a program. As client you should feel it is essential to obtain this kind of design guidance at the outset rather than presenting the urban designer with a *fait accompli*—a plan already prepared—within which framework the urban designer must create."

Designing the Plan

In the redevelopment plan itself, more emphasis on design is urgently needed, Mr. Slayton declared. "Most of our renewal plans have been created on the false foundation of the zoning approach. . . . Urban renewal starts with a clean slate—with the removal of the restrictive elements of present city structure—and we tend to re-introduce through zoning and other standard restrictions a set of limitations intended for and presuming rebuilding to the same basic standard. The result is a reproduction of the kind of urban development to which we have all become much too accustomed, and the creation of the "sameness" that is now criticized so vigorously.

"I have long hoped that we could jettison the zoning-type controls that

continued on page 26

Model of Constitution Plaza, Hartford, Conn. Hartford Gas Company Heating and Cooling Plant. Architect: Charles Dubose. Consulting Engineers: Seelye, Stevenson, Value & Knecht. Construction Engineers: F. H. McGraw Company.

America's first gas utility central cooling and heating plant—with Carrier gas air conditioning. *For Hartford's new Constitution Plaza. This 12-acre complex includes three office buildings, a broadcast center, a retail shopping area, a 315-room hotel, an 1800-car underground garage. Chilled water for air conditioning will be supplied by steam-powered Carrier Refrigeration equipment with a cooling capacity of 6500 tons, with future expansion planned to meet growing needs of other downtown Hartford businesses. For more exciting new developments in gas cooling call your Gas Company. Or write Carrier Air Conditioning Company, Syracuse 1, New York.* ***For heating & cooling . . . Gas is good business***

AMERICAN GAS ASSOCIATION

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Design Charter for Urban Renewal

continued from page 23

were so exciting in the Twenties and which, if not modified, produce sterility for urban renewal. I would like to substitute what I call *design objectives*. I must admit that I cannot be too specific in defining the controls or approaches that such design objectives would establish. Naturally, they would differ from area to area and from designer to designer. I would hope, however, that these design objectives would establish a certain character such as the relationship between buildings, the organization of the area and the character of the structures. These would somehow be set forth in the renewal plan. For instance, a design objective might be a street with a particular façade or a common cornice line. Or another design objective could be the sprinkling of a neighborhood with small neighborhood convenience shops. The plan need not designate specific uses but could indicate the amount and character of commercial uses to be intermixed with the residential area."

Disposition and Design Quality

Although URA policy permits various disposition methods, Mr. Slayton said he feels "we should emphasize disposition arrangements that look to the quality of the design rather than to the highest reuse value." Mr. Slayton saw evidence of increasing interest in design as the criterion in the selection of redevelopers, both in negotiated procedures and in the recent series of design competitions, a device "handled most successfully, I believe, in recent Southwest Washington dispositions."

For proper design guidance in redeveloper selection and plan review, Mr. Slayton emphasized that it is important for the city to have a designer as consultant, or on its staff, to assist it in the preparation of design criteria for disposition documents, to assist the redevelopment agency in reviewing plans submitted and in dealing with the redeveloper's architect.

Plea for Experiment

Mr. Slayton's most urgent criticism of the design of urban areas is "the unwillingness to experiment."

"Those who would insist that we build only that which has been market-tested," he said, "would put us into the position of continuing the present environment and not offering the urban inhabitant any alternative to what he now has. Our grea opportunity in urban renewal is t produce a different kind of urba living, a new kind of urban patter new kinds of urban associations, ne ways of living."

—And a Call for Beauty

Finally, Mr. Slayton urged adminis trators not to overlook "what is a essential element of urban design– namely, beauty."

"Design itself should be beautiful, Mr. Slayton said, "but we should n ignore the amenities, the art, th street furniture, all of the individu elements of the design, and we shoul make sure that they are beautiful a well as functional. We should loo for graceful light standards, or pe haps a new form of fire hydrant, fo a pleasingly designed iron fence, fo a texture in our walks, or thos touches that can bring richness an pleasure to the urban scene.

"What we build," Mr. Slayton co cluded, "will last for a long, lon time. We should be sure not only tha we build it well, but that we creat in the process both beauty and fun tion—beauty to raise one's spir and function to provide a delightfu urban environment."

R.A.I.C. STUDIES ARCHITECT'S EDUCATION

Architectural education was the theme of the 55th Annual Royal Architectural Institute of Canada Assembly, held in Vancouver, May 30 to June 2.

In the keynote address, Sir William Holford, R.I.B.A. president, said today's architectural practice having reached the stage of full professional responsibility meant the need for a more professional attitude to architectural education.

On the subject of expanded services from the architect, both by training and practice, he said, "We are inclining more and more to the view that we should make two parallel moves in the same direction . . . expose all design professions during their training to the techniques and aims and disciplines of work of the associated arts and social sciences, not so much as specialisms but as methods of thought and approach . . ." and ". . . to shape a form of training for the general architectural student at postgraduate level which will equip him to work collaboratively in the field of town design, but will leave his major training discipline as architectural design."

Dean G. Holmes Perkins, F.A.I.A., School of Fine Arts, University of Pennsylvania, addressing seminar members, said, "The change in architectural education which we anticipate lies not in any change in the basic creative orientation of the profession but in the expanded areas of service where he will be expected to exercise design leadership. . . . All contributing to the design of the urban environment should be educated by a single faculty embracing all the needed skills. Under such a design-oriented faculty the planner, the architect, the landscape architect, the artist, and those structural and mechanical engineers concerned with buildings can receive a sounder and more mutually rewarding education."

New Officers and Fellows

Members of the Executive Com mittee are: John L. Davies, pres dent; Dr. F. Bruce Brown, vice-pres ident; R. C. Betts, hon. secretary C. A. E. Fowler, hon. treasurer Harland Steele, past president James Searle; F. J. Nobbs; G. E Wilson; James Strutt; Gerar Venne; and Gordon Arnott.

New R.A.I.C. Fellows are: M. F Allen; P. T. M. Barott; C. D. Camp bell; L. V. Gallaher; Professor W Gerson, University of B.C.; F. M Polson; and J. W. Strutt. Sir Wil liam Holford and Professor H. Ing ham Ashworth, president, Roya Australian Institute of Architects were awarded honorary fellowships Prof. G. Holmes Perkins and Tora Saito, Tokyo architect, director o *This Is Japan*, were granted hono rary corresponding membership Earl Morgan, Ontario Association o Architects president, is dean of th College of Fellows.

ARCHITECTURAL RECORD

Western Section©

including *Western Architect and Engineer*

WESTERN SECTION EDITOR: *Elisabeth Kendall Thompson, A.I.A.*

2877 Shasta Road, Berkeley 8, California

For Shell-Conscious Architects and Engineers

World conferences on specialized subjects of as much interest to architects as to engineers—and vice versa—don't happen every day. But one such will take place in San Francisco at the end of September.

This is the World Conference on Shell Structures, a gathering together of all persons and groups interested in the design, construction and theory of shells. Presented by the University of California's University Extension, the Building Research Advisory Board of the National Academy of Sciences-National Research Council, and the International Association for Shell Structures, the conference has already attracted the attention of architects and engineers in 53 countries, and pre-registration indicates an unprecedented degree of interest even before announcement of the full program.

The conference might well be dedicated—for more than one reason—to the memory of the late Eduardo Torroja, Spanish engineer who was a pioneer in designing and using shell structures and one of the world's great engineers. One of the last errands he undertook was to lay the groundwork for this conference. And one of the last things he did was to lend his support, after assaying possible locations for the conference, to the invitation of a group of engineers (and architects) to hold it in San Francisco.

To Torroja, this conference had special meaning—as it should to all in the field of building who are concerned with the effect as well as the process of using their professional abilities. Architects who heard Torroja speak at the California Council, A.I.A., convention in 1960 will remember his comment on the increasing use of shell structures and his concern for the effect of these plastic forms on the cities where men live. Will they be strange, esoteric, unwilling parts of the environment for living, he asked, or will they be responsive to that environment, in outward form, in interior spaces, in technological convenience?

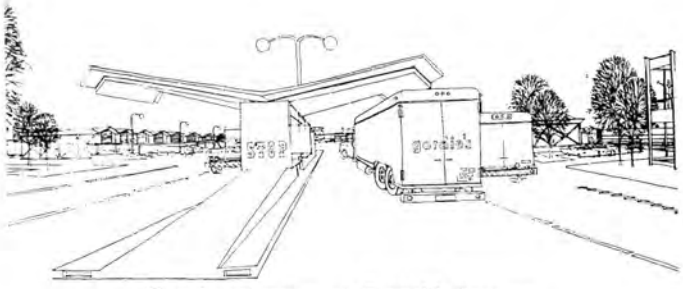
This is the problem of the designer, whether architect or engineer. In the realm of shells, neither can do without the other. It was this that Torroja recognized; it was this that he sought to bring into focus. And it is this that has underlain all the thinking and planning and programming of this World Conference on Shell Structures.

It would have pleased Torroja to know that the program begins with discussion of the architectural concerns of shells—the problems and the philosophy of their use, and that this interest in the form of shells is a continuing thread through the many facets developed in the succeeding sessions.

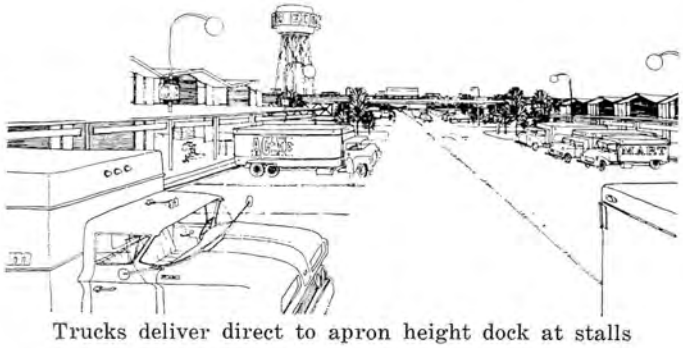
Here is that rare thing, a chance for architects and engineers to consider *objectively* a subject of great mutual interest and concern, without the subjective problems they encounter when professionally involved on a job.

California architects have another opportunity: to attend both the Shell Conference and the annual C.C.A.I.A. convention at Monterey. The programs will be completely different in content, but in over-all effect, they will be unusually complementary. Like architecture and engineering, they are mutually important.

E.K.T.



Truck entrance at Jerrold Avenue



Trucks deliver direct to apron height dock at stalls

Uniform design for stalls

S.F. PRODUCE MARKET MOVE HASTENED BY REDEVELOPMENT START

For 35 years San Franciscans have dreamed of a clean new produce market to replace the rundown, unsanitary—but highly picturesque—market in the downtown area. But until the Golden Gateway redevelopment project gained momentum there was little real hope of relocating the market. With Gateway construction scheduled to start the end of August, time has finally run out for the old market, especially for the three blocks of the project's first phase which merchants have vacated for temporary quarters in nearby blocks. Meantime, two proposals for new markets are in the news: one is the city's proposal for a site at Islais Creek in the southeastern part of the city which it bought two years ago and to which all the merchants agreed to move; the other is the "rebel" proposal of several large firms for a site outside city limits, in South San Francisco. The city's original scheme, shown here, for Islais provided for all the merchants. A new, smaller version, retaining the original character, is now under consideration. *Architects and engineers for proposed design; Welton Becket & Associates; urban design consultant, Lawrence Lackey; structural and civil engineers, Chin and Hensolt; mechanical engineering, Eagleson Engineers; soils and foundations, Dames and Moore*

FRENCH ARTIST WINS GATEWAY ART CONTEST

A bronze and granite "water garden" is the winning submission in the international competition for a major work of art to be placed in Sidney Walton Park, the block-sized park in San Francisco's Golden Gateway redevelopment project. The sculptor for the fountain is François Stahly, well-known in his native France and other parts of Europe, in the Pacific Northwest where a fountain of his design adorns the Seattle Fair, and in Fontana, Calif., where the civic fountain he designed was recently completed. Chosen over four other semi-finalists' entries (by Robert Howard, San Francisco; Jeremy Anderson, Mill Valley; Theodore Roszak and Seymour Lipton, New York City), Stahly's fountain was conceived, he says, as something "to be viewed from above—as from the platform in the park, or the apartment buildings—and in perspective, especially along the important north-south orientation." A phase time-switch will provide changing effects: in the high phase, the sculptured bronze elements will be completely veiled and will seem to "soar through the jets of water, and the labyrinth of stones will be submerged; in the low phrase, "water will trickle down the sculptured shapes, creating an impression of movement, and the stones will be progressively revealed as water drains from them." The $50,000 fountain is part of Gateway developers Perini-San Francisco Associates' program for beautifying the project, slated to start construction late this month.

Moulin Studios

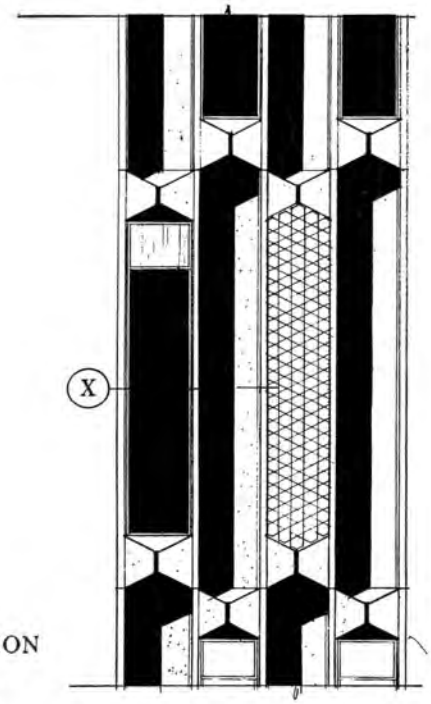
Stahly's fountain will be placed in open area at foot of north stairway (left, in model photo) leading, via intermediate platform, from elevated plazas to park

THE A.I.A. HOSPITALITY AND INFORMATION CENTER at the Seattle World's Fair is a project of the Seattle chapter, A.I.A.; designed, staffed and financed by the chapter. The pavilion's purpose—to tell the public about architecture and architects, with emphasis on regional aspects, through tours and information about the Fair and free leaflets on A.I.A. standards and program, and to offer visiting architects hospitality and a chance to meet local architects—benefits all architects throughout the country. Proposed in March of this year, the pavilion was an actuality by May 25 when it was opened. On June 3, Architects' Day at the Fair, it was focal point for visiting presidents of architectural organizations of the U.S., Britain, Australia and Canada. The yellow and white canvas roofs of the pole structure, located in a court on the north side of the Coliseum, inevitably attract attention. Victor Steinbrueck was architect, and worked with a chapter building committee of which A. O. Bumgardner was chairman, and Aaron Freed, Ibsen Nelson and David McKinley were members. S. Ivarsson was structural engineer. John Sellen Construction Company was the contractor.

TWO SMALL PAVILIONS ARE SEATTLE FAIR HITS

THE ALL-WOOD STATE OF OREGON INFORMATION CENTER at the Seattle World's Fair is one of the fair's unexpected pleasures. Designed for the Oregon State Highway Association by Armin Richter & Associates (with Robert Bosworth, designer; Eugene Bennett, sculptor; and Marcel Le Piniec, landscape designer, of Medford; and George Schenk, landscape designer, of Seattle), the pavilion is a peaceful retreat from the Fair's hurly-burly, providing not only respite from noise and crowds but a place to rest weary feet and to enjoy an unusually soft "sell" on Oregon's attractions—especially the natural scenic beauty of its forests and seacoasts. Exterior siding is rough-sawn redwood; interior paneling is redwood.

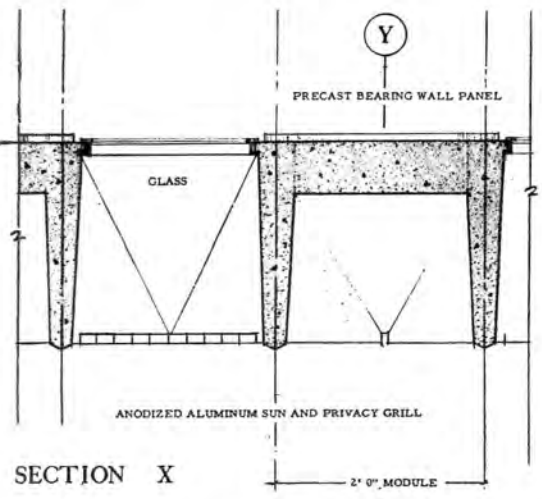
Simpson Timber Co. photos by John Bickel



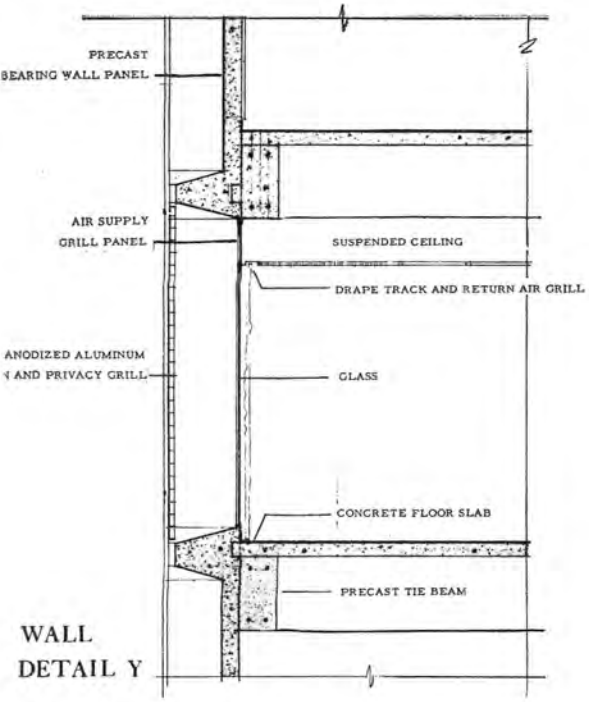
WALL
ELEVATION
DETAIL

CHANNEL-SHAPED PANELS ACT STRUCTURALLY AND DECORATIVELY

The handsome modeling on the four identical façades of this medical building in the Hillcrest district of San Diego is achieved through the use of channel-shaped precast concrete panels which alternate with story-height window openings glazed at the wall line and screened with anodized aluminum grilles at the outer edge of the channel legs. The channels, welded to perimeter beams at each floor, are also an integral part of the building's structural system, carrying lateral loads to the prestressed floor beams which transmit them to the centrally-located service core where they are picked up by columns. All interior rental space is column-free. The flexibility which this allows is facilitated by the "quadrant" layout of services giving each quadrant of each floor its own service hookup. Entrance to the building is by bridge over a moat. Offstreet parking is provided at the rear of the building. *Deems-Martin Associates, Ward W. Deems, architect; Blaylock and Deardorff, structural engineers; Randolph, Johnson & Miller, mechanical and electrical engineers; Wimmer and Yamada, landscape architects*



SECTION X



WALL
DETAIL Y

WESTERN SECTION

EXPANDING FACILITIES: Three new buildings are under construction at Stanford Industrial Park, Palo Alto, Calif., to increase the administration and research facilities at Vidya, Inc., and Palo Alto Itek, two divisions of the Itek Corporation. Scheduled for completion this summer, the buildings will cost over $1 million. *Architects: Janssen-Dazeking & Keller*

STANDS FOR HONOLULU'S LEI SELLERS: Long a sight on Kalakaua Avenue in Honolulu, lei sellers and bead vendors displayed their wares on card tables on the sidewalk or open doors of jalopies until the City Council ordered them to relocate on other than city property. Bead vendors were less fortunate than lei sellers. A committee of business men in the vicinity arranged for design and construction of these thatch-roofed stands, wired for electricity and with space for a refrigerator, at four off-street locations on the avenue where the lei sellers are now happily settled at a $1 annual rental. *Architects: Wimberly and Cook*

Western Buildings in the News

BOWLING CENTER: This 24-lane bowling center at Newhall, Calif., north of Los Angeles, is the second unit in a million-dollar project that will eventually include a number of stores and a service station. Bar, lounge, coffee shop and banquet room are adjuncts of the bowling center. *Architect: David Jacobson Jr.; general contractor: Ernest W. Hahn, Inc.*

Studio One

OFFICE TOWER AND FINANCIAL CENTER: Irvine Tower, designed as a center of business, professional and financial activity in the coastal area south of Los Angeles, will be a focal point in the 550-acre Newport Center development on the Irvine Ranch property. The building's first two stories will be open on all sides, forming a covered plaza. Wide steps leading up to the plaza, a paved promenade between the tower and the Avenida, and reflection pools and orange groves will form a handsome setting for the building. *Architects: William L. Pereira and Associates*

BRANCH LIBRARY: Clerestories to admit natural light in the main reading room and outdoor reading terraces are features of the new $125,800 branch library for West Hollywood Park, Calif. Exterior walls are brick; wood slat screens on either side of the entrance shield reading room from street. *Architect: Edward H. Fickett*

Noise Like This

is hardly a whisper thanks to Quiet-Zone Pabcowall

Listen — — — What's going on in the next room? It's almost impossible to tell when the space is divided by Quiet-Zone Pabcowall. ● Quiet-Zone 51, fire-rated for two hours, reduces sound transmission by as much as 51 decibels. Ideal for medical consultation rooms, corridor walls, music practice rooms, conference rooms and other areas requiring strict privacy. ● Quiet-Zone 47 reduces sound transmission by as much as 47 decibels. It's designed for use in apartments, offices and the like. Fire-rated for one hour. ● Quiet-Zone has all the practical features of regular Pabcowall; it's strong, economical and easily erected. Pabcowall requires no studs — stocking and handling are easier and less costly. ● For further technical information, write Department B Pabco Gypsum Division, Fibreboard Paper Products Corp., 475 Brannan St., San Francisco, Calif.

QUIET-ZONE

PABCOWALL

PATENT PENDING

For more data, circle 200 on Inquiry Card

Up Fast! Spandrels Of New Panelized Ceramic Veneer

A new, faster type of spandrel construction, by Gladding, McBean & Co., was employed by architects J. N. MacCammon & Theodore H. Damm, A.I.A., for Seattle's recently completed Municipal Office Building. By using the new technique, both construction time and weight were substantially reduced, while obtaining the advantages of GMcB *Ceramic* Veneer facing: freedom from staining and efflorescence, minimum maintenance, wide choice of colors and many available textures.

Lightweight Panels, CV-Faced Spandrel panels were formed off the job. Gray-blue triple spot GMcB Ceramic Veneer, with a pronounced vertically ribbed design, was laid face down in special molds, then backed with reinforced concrete in which were cast angle irons and stud bolts for attaching panels to bearing surfaces.

Panels were designed to provide adequate strength while minimizing weight. (The depressed areas seen in the picture were filled with expanded polystyrene.) This in turn permitted a reduction in the size of bearing wall members. Also seen in the picture are the angle irons (near panel center) to which stud bolts in the sill's upper side were fastened.

Quickly Bolted In Place Installation required merely hoisting a panel into position and bolting it in place. The angle irons previously mentioned secured panel centers to sill tops. With other angle

irons—here pictured—stud bolts near the bottom of the panels were secured to stud bolts in sill bottoms. Installation thus was fast, firm, and effective.

Facing Finished Faster Over 28,000 sq. ft. of facing was installed in record time with a minimum crew. Mr. R. B. Miles, superintendent for general contractors Patti-MacDonald-Mybur, Inc., reports that "this 'panel construction' was an important factor in enabling us to close in the building much faster than normally is possible."

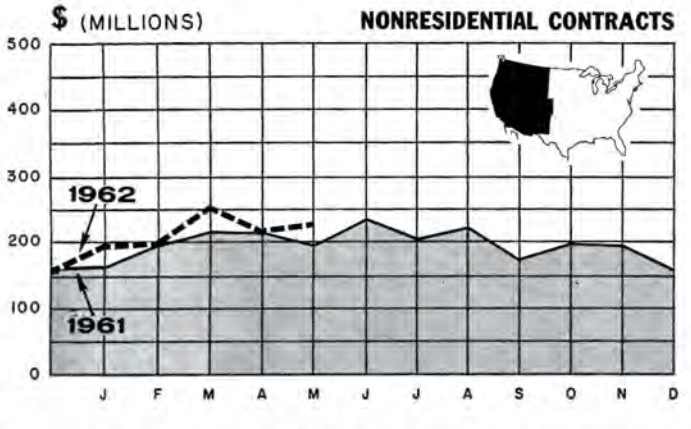
For engineering and other data regarding this new construction method, see your GMcB Architectural Products representative. Or write Architectural Products Division; Gladding, McBean & Co., Los Angeles 39, Calif.

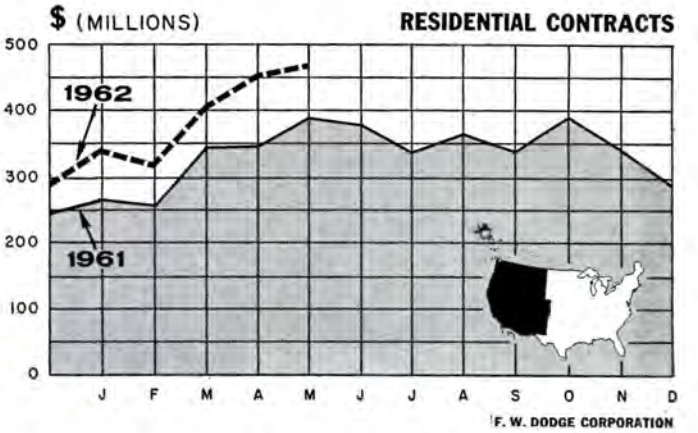
GMcB

Ceramic Veneer

Gladding, McBean & Co. LOS ANGELES • SAN FRANCISCO
SEATTLE • PORTLAND • SPOKANE • PHOENIX • SALT LAKE CITY

For more data, circle 201 on Inquiry Card





WESTERN CONSTRUCTION TRENDS

(For analysis of construction trends nationwide, see page 18).

Construction in the West by the near midyear mark has roughly paralleled the national experience (reported on page 18). The one major difference has been a decline in Western heavy engineering contracts in contrast to a fairly sharp gain in this sector for the country as a whole.

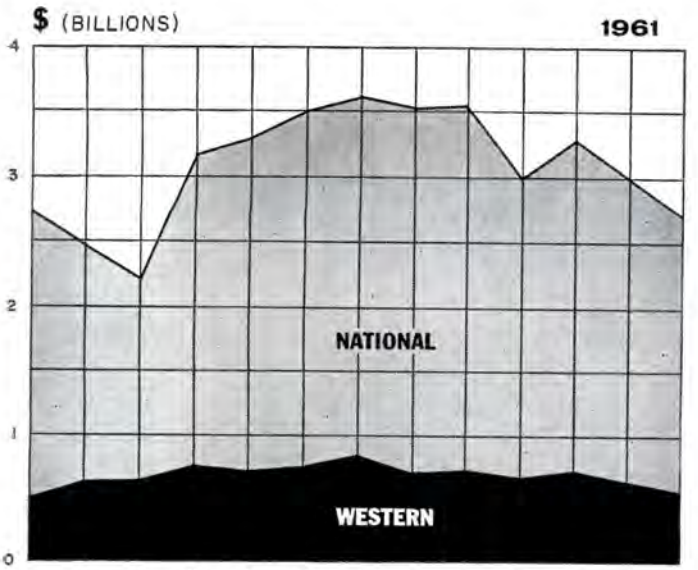
Total contracts awarded during the first five months of 1962 in the 11 Western states amounted to $3,920,054,000, up 10 per cent from the like 1961 period. This was a particularly good performance because it occurred on top of substantial gains in early 1961 over 1960.

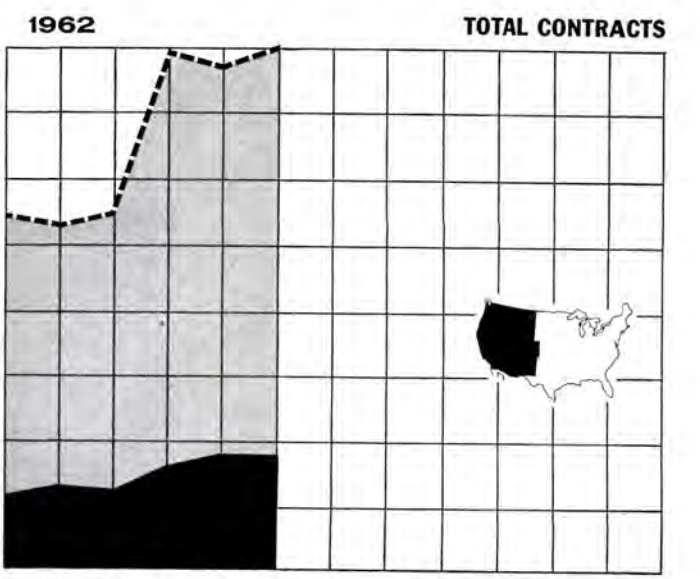
As in the national summary, the building classifications contributed heavily to the over-all increase in the West this year. Residential building contracts jumped 23 per cent over year-earlier levels to a record $1,987,818,000, while nonresidential building contracts were valued at $1,081,918,000, up nine per cent. Heavy engineering contracts, at $850,318,000, dropped 12 per cent, mainly because of some very large pipeline projects contracted for in early 1961.

Some highlights of individual category performances in the West for the January through May period were as follows:

- Apartment building contracts soared over the half billion dollar mark, 63 per cent above a year ago. The specific figure of $505,346,000 made this category the second largest individual construction type in the West. Multi-family housing is still far below single-family housing in dollar volume of contracts, but the former accounted for a remarkable 39 per cent of all new dwelling units contracted for in the first five months.
- Although its gains have not been nearly as spectacular as apartment building, single-family housing is staging a comeback this year with a 12 per cent increase in dollar commitments to $1,340,712,000.
- Manufacturing building also reversed a weak start last year. Contracts for new plant construction amounted to $149,239,000, up 20 per cent from 1961.
- The sharpest percentage gain of any major building type was registered by hospital construction, up 122 per cent to $101,002,000. Some large projects in California and Colorado helped boost hospital contracts to this high level.

EDWARD A. SPRAGUE,
Economist
F. W. Dodge Corporation
A McGraw-Hill Company





Total contracts include residential, nonresidential, heavy engineering contracts

Estimator's Guide: SEATTLE AND THE NORTHWEST

The Estimator's Guide alternates monthly among four Western areas. The prices below are compiled from average quotations received by LeRoy Construction Services for commercial work of approximately $100,000-$250,000 total value. Except as otherwise noted, prices are for work installed including all labor, material, taxes, overhead and subcontractors' profit. Material prices include local delivery except as noted, but no state or local taxes.

EXCAVATION

MACHINE WORK IN COMMON GROUND
Large basement ..... CY .80-1.10
Small pits ..... CY 1.40-1.90
Trenches ..... CY 1.60-2.40
HAND WORK IN COMMON GROUND
Large pits & trenches ..... CY 7.00-11.00
Small pits & trimming ..... CY 10.00-14.00
Hard clay or shale, 2 times above rates
Shoring, bracing & disposal of water not included

SEWER PIPE MATERIALS

VITRIFIED
Standard 4" ..... LF .31
Standard 6" ..... LF .58
Standard 8" ..... LF .81
Standard 12" ..... LF 1.76
Standard 24" ..... LF 6.95
CLAY DRAIN PIPE
Standard 6" ..... LF .34
Standard 8" ..... LF .59
Rate for 100 LF FOB Warehouse

CONCRETE & AGGREGATES

GRAVEL, all sizes ..... TON 3.75
TOP SAND ..... TON 4.00
CONCRETE MIX ..... TON 4.10
CRUSHED ROCK
¼" to ¾" ..... TON 4.00
¾" to 1½" ..... TON 4.00
ROOFING GRAVEL ..... TON 4.10
SAND (#1 & 2) ..... TON 5.00
CEMENT
Common, all brands (paper sacks)
Small quantities ..... per sack 1.40
Large quantities ..... per bll 4.45
Atlas White ..... per sack 3.70
Concrete Mix
6 sacks in 5-yd loads ..... per yd 15.50
CURING COMPOUND
Clear, 5-gal drums ..... per gal 1.45

STEEL MATERIALS

SHEETS
Hot rolled ..... LB .11
Cold rolled ..... LB .12
Galvanized ..... LB .12
PLATE ..... LB .11
STRIPS ..... LB .13
STRUCTURAL SHAPES ..... LB .115
BARS
Hot rolled ..... LB .11
Cold finished ..... LB .15
Reinforcing ..... LB .105
REINFORCING MESH
6 x 6 #10 x #10 ..... SF .04
6 x 6 #6 x #10 ..... SF .07
2000# FOB Warehouse

STRUCTURAL STEEL

$350.00 and up per ton erected when out of mill.
$380.00 and up per ton erected when out of stock.

BRICK AND TILE

All Prices—FOB Plant
COMMON BRICK
Common 2½ x 3¾ x 8¼" ..... M 49.00
Select 2½ x 3¾ x 8¼" ..... M 63.00
FACE BRICK
Standard ..... M 78.00
Roman ..... M 84.00
Norman ..... M 127.00
HOLLOW TILE
12 x 12 x 3" ..... M 160.00
12 x 12 x 4" ..... M 176.00
12 x 12 x 6" ..... M 240.00
MANTEL FIRE BRICK
2½ x 9½ x 4½" ..... M 145.00
GLAZED STRUCTURAL UNITS
2 x 6 x 12" furring ..... SF .60
4 x 6 x 12"—1 side ..... SF .91
6 x 6 x 12"—1 side ..... SF 1.32
4 x 6 x 12"—2 sides ..... SF 1.00
Add for color ..... SF .02
CONCRETE BLOCKS
4 x 8 x 16" ..... EA .23
6 x 8 x 16" ..... EA .29
8 x 8 x 16" ..... EA .34
12 x 8 x 16" ..... EA .51
Add for color ..... EA .02
AGGREGATE
Idealite ..... CY 6.50
Clalite ..... CY 5.75

BRICKWORK & MASONRY

COMMON BRICKWORK, REINFORCED
8" walls ..... SF 2.70
12" walls ..... SF 3.85
SELECT COMMON, REINFORCED
8" walls ..... SF 2.80
12" walls ..... SF 4.00
CONCRETE BLOCK, REINFORCED
6" walls ..... SF 1.40
8" walls ..... SF 1.55
12" walls ..... SF 1.80
BRICK VENEER
4" Select Common ..... SF 1.55
4" Roman ..... SF 1.70
4" Norman ..... SF 1.50

BUILDING PAPERS & FELTS

BUILDING PAPER
1 ply per 1,000-ft roll 4.20
2 ply per 1,000-ft roll 6.40
3 ply per 1,000-ft roll 8.75
Sisalkraft, reinforced, 500-ft roll 9.50
SHEATHING PAPERS
Asphalt sheathing, 15-lb roll 3.35
30-lb roll 3.80
Dampcourse, 216-ft roll 3.30
FELT PAPERS
Deadening felt, ¾-lb, 50-ft roll 1.95
Deadening felt, 1-lb, 50-ft roll 2.45
Asphalt roofing, 15-lb 300 SF 2.10
30-lb 216 SF 2.45
ROOFING PAPERS
Standard Grade, smooth surface
108-ft roll, Light, 45-lb 2.20
Medium, 55-lb 2.50
Heavy, 65-lb 2.90
Mineral surfaced 3.50

LUMBER

DOUGLAS FIR
Construction 2x4—2x10 ..... MBM 94.00-102.00
Standard 2x4—2x10 ..... MBM 90.00- 96.00
Utility 2x4—2x10 ..... MBM 75.00- 82.00
Economy 2x4—2x10 ..... MBM 57.00- 68.00
Clear, air dried ..... MBM 198.00-231.00
Clear, kiln dried ..... MBM 231.00-264.00
REDWOOD
Foundation grade ..... MBM 130.00
Construction Heart ..... MBM 120.00
A Grade ..... MBM 200.00
Clear Heart ..... MBM 260.00
DF PLYWOOD
¼" AB ..... MSF 90.00
¼" AD ..... MSF 70.00
¼" Ext. waterproof ..... MSF 77.00
⅜" AB ..... MSF 105.00
⅜" AD ..... MSF 95.00
⅜" CD ..... MSF 70.00
½" AB ..... MSF 140.00
½" AD ..... MSF 120.00
½" CD ..... MSF 91.00
⅝" AB ..... MSF 156.00
⅝" AD ..... MSF 136.00
⅝" CD ..... MSF 102.00
¾" AB ..... MSF 178.00
¾" AD ..... MSF 158.00
¾" CD ..... MSF 135.00
⅝" Plyform ..... MSF 170.00
SHINGLES
Cedar #1 ..... Square 17.00-19.00
Cedar #2 ..... Square 14.00-17.00
SHAKES—CEDAR
½" to ¾" butt ..... Square 19.00-22.00
¾" to 1¼" butt ..... Square 21.00-24.00
SHAKES—REDWOOD
¾" to 1¼" butt ..... Square 21.00-24.00

INSULATION & WALL BOARD

	FOB Warehouse Per M SF
FIBER GLASS INSULATION—FOIL BACKED	
1½" thick	44.00
2¼" thick	48.00
3⅝" full thick	58.00
SOFTBOARDS—WOOD FIBER	
⅜" thick	60.00
½" thick	72.00
ALUMINUM INSULATION	
35# Kraft paper with alum. foil	
1 side only	24.00
2 sides	30.00
GYPSUM WALLBOARD	
⅜" thick	57.00
½" thick	64.00
⅝" thick	87.00
HARDBOARDS—WOOD FIBER	
⅛" thick, sheathing	80.00
3/16" thick, sheathing	90.00
¼" thick, sheathing	100.00
⅛" thick, tempered	98.00
3/16" thick, tempered	140.00
¼" thick, tempered	155.00
CEMENT ASBESTOS BOARD	
⅛" flat sheets	138.00
3/16" flat sheets	187.00
¼" flat sheets	245.00

ROUGH CARPENTRY

FRAMING
Floors ..... BM .25-.30
Walls ..... BM .30-.35
Ceilings ..... BM .28-.33
Roofs ..... BM .27-.32
Furring & blocking ..... BM .32-.52
Bolted framing, Add 50%
SHEATHING
1 x 8" straight ..... BM .22-.28
1 x 8" diagonal ..... BM .25-.30
5/16" plyscord ..... SF .17-.22
⅝" plywood CC ..... SF .26-.31
SIDING
1 x 8" bevel ..... BM .40-.48
1 x 4" V-rustic ..... BM .45-.52

MILLWORK

All Prices FOB Mill

	MBM
DF CLEAR, AIR DRIED	
S4S	220.00-250.00
DF CLEAR, KILN DRIED	
S4S	225.00-275.00
DOOR FRAMES & TRIM	
Residential entrance	17.00 & up
Interior room entrance	9.00 & up
DOORS	
1⅜" DF slab, hollow core	8.00 & up
1¾" DF slab, solid core	19.00 & up
1⅜" birch slab, hollow core	10.00 & up
1¾" birch slab, solid core	22.00 & up
WINDOW FRAMES	
D/H singles	SF .90
Casement singles	SF .90
WOOD SASH	
D/H in pairs (2 lites)	SF .55
Casement (1 lite)	SF .65
WOOD CABINETS	
¾" DF plywood with ¼" ply backs:	
Wall hung	LF 10.00-15.00
Counter	LF 12.00-17.00
EXTERIOR TRIM	
Fascia and molds	BM .48-.55
Birch or Maple, Add 25%	

FINISH CARPENTRY

EXTERIOR TRIM
Fascia and molds ..... BM .47-.52
Bolted Framing—Add 50%
ENTRANCE DOORS & FRAMES
Singles ..... 60.00 & up
Doubles ..... 100.00 & up
INTERIOR DOORS & FRAMES
Singles ..... 36.00 & up
Pocket sliding ..... 45.00 & up
Closet sliding (Pr.) ..... 55.00 & up
WINDOWS
D/H sash & frames ..... SF 2.00 & up
Casement sash & frames ..... SF 2.25 & up
SHELVING
1 x 12 S4S ..... BM .40-.60
¾" plywood ..... SF .45-.65
STAIRS
Oak steps DF risers
Under 36" wide ..... Riser 14.00
Under 60" wide ..... Riser 19.00
Newel posts and rail extra
WOOD CASES & CABINETS
DF wall hung ..... LF 18.00-24.00
DF counters ..... LF 21.00-30.00

DAMPPROOFING & WATERPROOFING

MEMBRANE

1 layer 50# felt	SQ	10.00
4 layers Dampcourse	SQ	15.00
Hot coat walls	SQ	9.00
Tricosal added to concrete	CY	1.00
Anti-Hydro added to concrete	CY	1.50

ROOFING

STANDARD TAR & GRAVEL	**Per Sq**
4 ply	14.00-18.00
5 ply	17.00-20.00
White Gravel Finish—Add	2.00- 4.00
ASPH. COMPO. SHINGLES	16.00-20.00
CEDAR SHINGLES	22.00-26.00
CEDAR SHAKES	28.00-32.00
REDWOOD SHAKES	29.00-35.00
CONCRETE TILES	35.00-45.00
CLAY TILES	40.00-50.00

SHEET METAL

ROOF FLASHINGS

18 ga galv steel	SF	.60-1.00
22 ga galv steel	SF	.50- .90
26 ga galv steel	SF	.40- .80
18 ga aluminum	SF	1.00-1.50
22 ga aluminum	SF	.80-1.30
26 ga aluminum	SF	.60-1.10
24 oz copper	SF	1.90-2.40
20 oz copper	SF	1.70-2.20
16 oz copper	SF	1.50-2.00
26 ga galv steel		
4" OG gutter	LF	.90-1.30
Mitres and Drops	EA	2.00-4.00
22 ga galv louvers	SF	2.50-3.50
20 oz copper louvers	SF	3.00-4.50

CHIMNEYS, PATENT

FOB Warehouse

6"	LF	1.45
8"	LF	2.05
10"	LF	2.85
12"	LF	3.50

Rates for 10-50 LF

HARDWOOD FLOORING MATERIALS

OAK 5/16" x 2" STRIP		
Clear	M	205.00
Select	M	195.00
#1 Common	M	185.00
OAK 5/16" RANDOM PLANK		
Select & Btr	M	270.00
#1 Common	M	235.00
OAK 25/32" x 2¼" T&G		
Select	M	200.00
#1 Common	M	190.00
MAPLE 25/32" x 2¼" T&G		
#1 Grade	M	305.00
#2 Grade	M	280.00
#3 Grade	M	230.00
NAILS—1" FLOOR BRADS	KEG	18.00

HARDWOOD FLOORS

SELECT OAK

Filled, sanded, stained and varnished:

5/16" x 2¼" strip	SF	.50-.55
5/16" random plank	SF	.55-.60
25/32" x 2¼" T&G	SF	.80-.90

MAPLE

2nd grade & better, filled, sanded, stained & varnished 25/32" x 2½" T&G	SF	.85-.95

Wax finish, add SF .10

RESILIENT FLOORING MATERIALS

Linoleum, Standard Gage	SY	2.80-3.00
Battleship	SY	2.95-3.40
⅛" Asphalt tile, dark	SF	.10- .12
light	SF	.14- .19
.080 Vinyl tile	SF	.67- .70
.080 Vinyl asb. tile	SF	.22- .30
⅛" Vinyl asb. tile	SF	.32- .39
⅛" Vinyl tile	SF	.78- .82
4" Base, black	LF	.15- .16
colored	LF	.26- .30
Rubber treads	LF	1.60-2.30
Lino. paste	GAL	.75- .90

RESILIENT FLOORING

⅛" Asphalt tile, dark	SF	.25- .30
light	SF	.30- .35
⅛" Rubber tile	SF	.60- .70
.080 Vinyl asbestos tile	SF	.40- .45
⅛" Vinyl asbestos tile	SF	.45- .55
.080 Vinyl tile	SF	.80- .95
⅛" Vinyl tile	SF	.90-1.10
Lino, standard gage	SY	3.75-4.25
Lino, battleship	SY	5.25-5.75
Rubber base 4" black	LF	.30- .35
Rubber stair treads	LF	2.25-2.75

LATH & PLASTER MATERIALS

METAL LATH

Diamond 3.4# copper-bearing	SY	.57
Ribbed 3.4# copper-bearing	SY	.62
ROCK LATH		
⅜" thick	SY	.36
METAL		
¾" standard channel	LF	.047
1½" standard channel	LF	.065
3¼" steel studs	LF	.112
4" steel studs	LF	.122
Stud shoes	EA	.03
PLASTER		
Browning, hardwall	Sack	1.58
Finish, hardwall	Sack	1.75
Stucco	Sack	2.60

LATH & PLASTER WORK

CHANNEL FURRING		
Suspended ceilings	SY	2.80-3.10
Walls	SY	2.90-3.30
METAL STUD PARTITIONS		
3¼" studs	SY	3.10-3.50
4" studs	SY	3.20-3.60
Over 10-0 high, add	SY	.25- .35
3.4# METAL LATH & PLASTER		
Ceilings	SY	4.25-5.00
Walls	SY	4.40-5.15
Keene's cement finish, add	SY	.45- .65
ROCK LATH & PLASTER		
Ceilings	SY	3.25-4.00
Walls	SY	3.35-4.10
WIRE MESH & ⅞" STUCCO		
Walls	SY	4.80-5.50
STUCCO ON CONCRETE		
Walls	SY	3.50-4.00
METAL ACCESSORIES	LF	.25- .55

TILE MATERIALS

FOB Warehouse

CERAMIC TILE		
4¼" x 4¼" glazed	SF	.72
4¼" x 4¼" hard glazed	SF	.74
Random, unglazed	SF	.72
6" x 2" cap	EA	.19
6" cove base	EA	.31
¼" round bead	LF	.18
QUARRY TILE		
6 x 6 x ½" red	SF	.51
6 x 6 x ¾" red	SF	.53
9 x 9 x ¾" red	SF	.65
6 x 6" cove base	EA	.23

TILE & TERRAZZO WORK

CERAMIC TILE, STOCK COLORS		
Floors	SF	1.85-2.25
Walls	SF	1.90-2.40
Coved base	LF	1.00-1.25
QUARRY TILE		
6" x 6" x ½" floors	SF	1.70-2.10
9" x 9" x ¾" floors	SF	1.85-2.25
TERRAZZO		
Terrazzo floors	SF	2.15-2.65
Cond. Terrazzo floors	SF	2.30-2.80
Precast treads & risers	LF	3.60-4.60
Precast landing slabs	SF	3.00-4.10

WINDOWS

STEEL SASH		
Under 10 SF	SF	2.50 & up
Under 15 SF	SF	2.00 & up
Under 20 SF	SF	1.50 & up
Under 30 SF	SF	1.00 & up
ALUMINUM SASH		
Under 10 SF	SF	2.75 & up
Under 15 SF	SF	2.25 & up
Under 20 SF	SF	1.75 & up
Under 30 SF	SF	1.25 & up

Above rates are for standard sections and stock sizes FOB Warehouse

GLASS—CUT TO SIZE

FOB Warehouse

SSB clear, av 4 SF	SF	.17
DSB clear, av 7 SF	SF	.28
Crystal, av 16 SF	SF	.35
¼" Polished plate, av 50 SF	SF	.90
⅛" Obscure, av 7 SF	SF	.35
⅛" Ribbed, av 7 SF	SF	.45
⅛" Rough, av 7 SF	SF	.45
¼" Wire plate, clear, av 40 SF	SF	1.90
¼" Wire plate, rough, av 40 SF	SF	.90
⅛" Heat absorbing, av 7 SF	SF	.90
¼" Tempered plate, av 40 SF	SF	3.60
½" Tempered plate, av 40 SF	SF	6.40
GLASS BLOCKS		
6"		.70
8"		1.15
12"		3.10

GLASS & GLAZING

SSB Clear	SF	.55
DSB Clear	SF	.75
Crystal	SF	.95
¼" Plate	SF	1.95
⅛" Obscure	SF	.75
⅛" Heat absorbing	SF	1.25
¼" Tempered plate	SF	4.50
½" Tempered plate	SF	8.00
¼" Wire plate, clear	SF	2.80
¼" Wire plate, rough	SF	1.40

PAINT MATERIALS

All prices FOB Warehouse

Thinners 5-100 gal	Gal	.63
Turpentine 5-100 gal	Gal	1.59
Linseed oil, raw	Gal	2.36
boiled	Gal	2.43
Primer-sealer	Gal	3.12
Enamel undercoaters	Gal	5.54
Enamel	Gal	5.58
White lead in oil	LB	.36
Red lead in oil	LB	.36
Litherage	LB	.32

PAINTING

EXTERIOR		
Stucco wash, 1 coat	SY	.45
2 coats	SY	.72
Lead & Oil, 2 coats	SY	.96
3 coats	SY	1.35
INTERIOR		
Primer-sealer	SY	.42
Wall paint, 1 coat	SY	.54
2 coats	SY	.98
Enamel, 1 coat	SY	.62
2 coats	SY	1.14
Doors & trim	EA	13.00
Sash & trim	EA	15.00
Base & molds	LF	.15

Old work, add 15-30%

VENETIAN BLINDS

RESIDENTIAL	SF	.45 & up
COMMERCIAL	SF	.55 & up
VERTICAL	SF	1.25 & up

PLUMBING

LAVATORIES	EA	150.00-200.00
TOILETS	EA	200.00-300.00
BATH TUBS	EA	250.00-350.00
STALL SHOWERS	EA	125.00-175.00
SINKS	EA	150.00-200.00
LAUNDRY TRAYS	EA	100.00-150.00
WATER HEATERS	EA	100.00-300.00

Prices based on average residential and commercial work. Special fixtures and excessive piping not included.

HEATING

Furnaces—Gas Fired—Av Job

FLOOR FURNACE	
25,000 Btu	110.00-125.00
35,000 Btu	117.00-135.00
45,000 Btu	115.00-150.00
Automatic control, add	25.00- 35.00
DUAL WALL FURNACE	
25,000 Btu	110.00-125.00
35,000 Btu	125.00-145.00
50,000 Btu	150.00-180.00
Automatic control, add	25.00- 35.00
GRAVITY FURNACE	
75,000 Btu	375.00-450.00
85,000 Btu	425.00-525.00
95,000 Btu	475.00-600.00
Forced air furnace, add	75.00-125.00
Automatic control, add	15.00- 25.00
HEAT REGISTERS	
Outlet	7.50- 15.00

ELECTRIC WIRING

Per Outlet

KNOB & TUBE	EA	10.00
ARMOR	EA	17.00
CONDUIT	EA	21.00
110-V CIRCUIT	EA	26.00
220-V CIRCUIT	EA	98.00

ELEVATORS & ESCALATORS

Prices vary according to capacity, speed and type.
Consult elevator companies.
Slow speed apartment house elevator including doors and trim about $4,000 per floor.

Western Cost Construction Indexes

Presented by Clyde Shute, Director of Statistical Policy, Construction News Div., F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assoc. Inc.

Labor and Materials: U.S. average 1926-1929=100

DENVER

PERIOD	RESIDENTIAL Brick	RESIDENTIAL Frame	APTS., HOTELS OFFICE BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Steel
1948	217.8	218.1	202.7	207.0	206.7
1949	215.8	212.9	211.0	215.3	214.6
1950	230.0	228.2	218.8	221.3	221.2
1951	249.7	246.6	236.5	237.2	238.9
1952	253.6	249.4	243.4	245.1	245.6
1953	259.6	254.0	255.0	260.9	258.1
1954	258.9	252.0	259.1	266.2	263.4
1955	266.6	260.9	266.3	273.2	271.7
1956	274.9	269.3	275.8	282.3	285.1
1957	281.3	272.2	285.4	293.1	296.4
1958	282.2	272.0	288.1	295.9	298.8
1959	288.7	278.9	295.2	302.9	304.8
1960	292.2	282.7	301.3	309.0	310.0
1961	294.4	285.0	307.7	316.1	311.9
March 1962	294.8	284.2	311.3	320.7	314.0
April 1962	298.0	286.3	316.0	326.9	318.4
May 1962	298.5	286.6	317.0	327.6	319.5
	% Increase over 1939				
May 1962	166.5	155.7	173.0	178.1	173.1

LOS ANGELES

PERIOD	RESIDENTIAL Brick	RESIDENTIAL Frame	APTS., HOTELS OFFICE BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Steel
1948	215.9	216.5	205.8	210.0	209.8
1949	207.0	203.2	209.9	212.4	210.2
1950	224.1	222.8	217.4	219.0	217.5
1951	241.0	239.5	235.1	236.9	236.6
1952	243.8	241.7	239.8	242.6	241.5
1953	250.5	246.5	252.3	258.2	255.3
1954	251.0	245.3	257.7	265.7	261.8
1955	262.1	256.6	269.3	278.0	273.9
1956	272.6	266.7	282.9	292.9	289.3
1957	275.4	267.9	292.8	303.3	303.7
1958	277.9	286.6	302.6	314.5	316.4
1959	288.7	279.1	314.9	326.9	327.6
1960	299.8	287.7	329.1	342.7	339.6
1961	303.4	288.5	339.4	355.1	347.6
March 1962	305.7	289.9	343.7	358.9	352.4
April 1962	309.0	294.3	345.8	360.1	354.3
May 1962	310.2	294.9	347.4	362.7	355.2
	% Increase over 1939				
May 1962	219.1	215.1	219.6	245.7	234.5

SAN FRANCISCO

PERIOD	RESIDENTIAL Brick	RESIDENTIAL Frame	APTS., HOTELS OFFICE BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Steel
1948	218.9	216.6	208.3	214.7	211.1
1949	213.0	207.1	214.0	219.8	216.1
1950	227.0	223.1	222.4	224.5	222.6
1951	245.2	240.4	239.6	243.1	243.1
1952	250.2	245.0	245.6	248.7	249.6
1953	255.2	257.2	256.6	261.0	259.7
1954	257.4	249.2	264.1	272.5	267.2
1955	268.0	259.0	275.0	284.4	279.6
1956	279.0	270.0	288.9	298.6	295.8
1957	286.3	274.4	302.9	315.2	310.7
1958	289.8	274.9	311.5	326.7	320.8
1959	299.2	284.4	322.7	338.1	330.1
1960	305.5	288.9	335.3	352.2	342.3
1961	308.7	290.2	345.1	362.9	350.2
March 1962	310.8	291.4	350.4	368.2	354.0
April 1962	313.2	294.2	352.0	369.4	355.4
May 1962	313.7	294.4	352.7	370.7	356.1
	% Increase over 1939				
May 1962	197.1	196.5	200.4	204.1	205.7

SEATTLE

PERIOD	RESIDENTIAL Brick	RESIDENTIAL Frame	APTS., HOTELS OFFICE BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Steel
1948	216.3	211.4	211.5	216.6	216.9
1949	214.2	203.9	220.7	228.5	225.3
1950	224.1	213.6	227.1	234.5	230.3
1951	245.1	232.7	247.7	255.8	251.0
1952	254.3	239.8	258.8	267.7	263.8
1953	254.8	239.0	262.7	273.6	269.5
1954	253.3	236.1	266.6	279.1	274.0
1955	260.6	243.3	273.7	287.3	282.4
1956	273.5	254.0	288.5	303.4	299.0
1957	275.6	254.0	298.2	313.1	311.2
1958	279.9	256.4	306.0	324.0	320.8
1959	291.5	267.8	318.8	336.9	331.8
1960	298.9	272.4	330.5	351.2	342.9
1961	296.5	268.2	335.3	357.6	345.6
March 1962	303.5	275.2	344.3	366.7	352.6
April 1962	305.5	277.6	345.2	367.4	353.5
May 1962	306.1	278.2	346.0	368.0	354.1
	% Increase over 1939				
May 1962	193.2	187.7	190.3	193.7	198.3

Cost comparisons, as percentage differences, for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110
index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926-29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

FOLLANSBEE STEEL CORPORATION
Follansbee, West Virginia

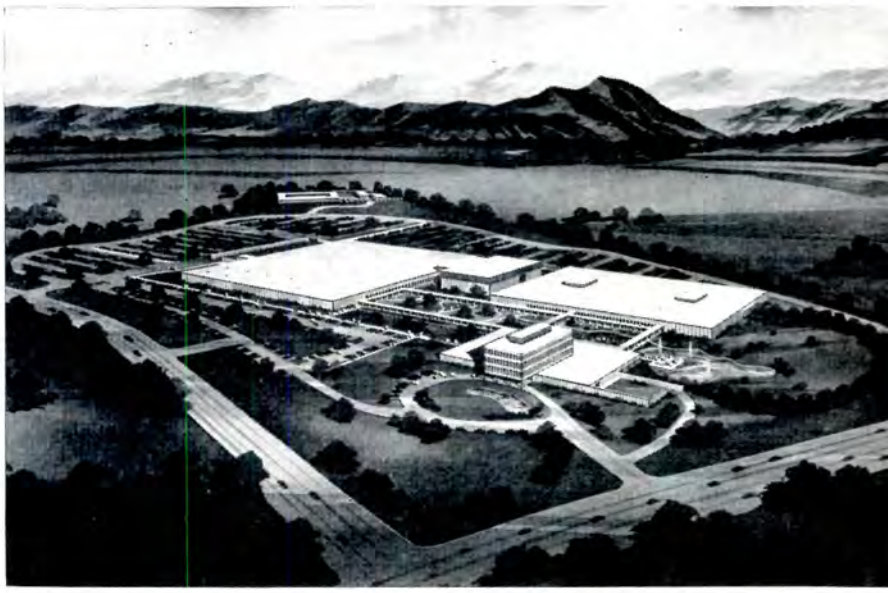
TERNE ROOFING IS UNCONDITIONALLY FIREPROOF

FIREPROOF

ever fire is a major hazard, architects are increasingly aware that ***Follansbee Terne*** roofing is unconditionally fireproof

Follansbee is the world's pioneer producer of seamless terne roofing

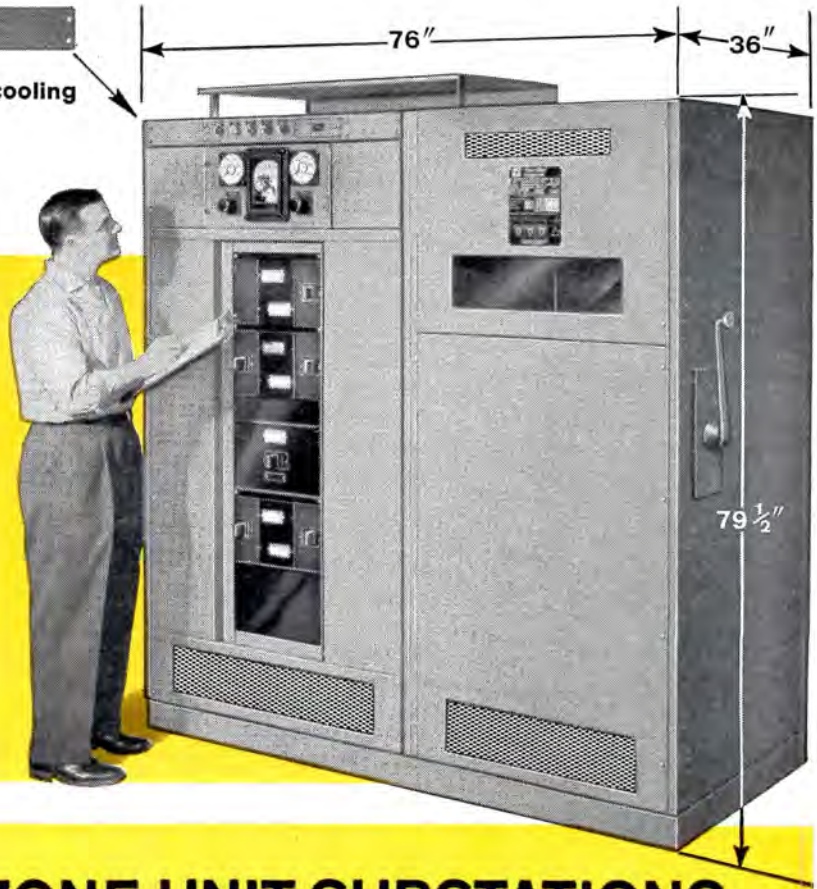
Western Buildings in the News



ASTRONAUTICS RESEARCH AND DEVELOPMENT CENTER: When these buildings, no under construction at Rancho Conejo, Ventura County, Calif. are complete Northrop Corporation's Radioplane Division, which makes a variety of equi ment used in U.S. space projects, will move to them from Van Nuys. A lan scaped mall, a large decorative pool with water jets, and covered walkwa between buildings will provide a pleasant atmosphere for work. A four-sto central building will house administrative offices; other buildings inclu manufacturing, engineering, and a high-bay testing building. *Architects a engineers: Albert C. Martin & Associates; Allen L. McGill, project architec Robert Reed, project designer. Landscape architect: Phil Shipley. General co tractor: Simpson Construction Company*

SPACE MODULES FOR SPACE ENGINEERS: Astropower, Inc., a subsidiary of Dougl Aircraft Company, plans to build a new engineering and research cent in the Irvine Industrial Park near Upper Newport, half a mile from t University of California's future Irvine campus. Although the center may ul mately cover 50 acres with 19 buildings, the first unit will consist of tw buildings, one for research, the other for administration. Later buildings w be developed in 20-ft square units ("space modules") which can be group in a variety of patterns around a taller building to house administrati offices. *Architects: William L. Pereira & Associates*

CONTROL PANEL for forced-air cooling and temperature alarm



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• Square D's new design provides every feature you want in a packaged unit substation. Feature for feature, these really compact substations are the best you can buy.

Increased capacity • Available in 3-phase capacities from 75 to 500 KVA self-cooled, and now with new forced-air cooling and temperature controls up to 667 KVA capacity. Forced-air cooling system economically adds 33⅓% increase in KVA and an alarm provides continuous transformer over-temperature protection. Primaries up to 4800V; secondaries up to 600V.

Quiet-operating • Ideal for areas where transformer hum is disturbing. Guaranteed maximums of 50 db for 300 KVA, and 53 db for 400 and 500 KVA for self-cooled transformers — 8 and 7 db, respectively, below latest NEMA standards.

Extra safety • High voltage compartment door interlocked—switch must be open when door is open. Safety-glass window in door lets you inspect switch, fuses and compartment without opening door. Steel barriers isolate high voltage, low voltage and transformer sections.

Easy installation • Substation delivered completely assembled and wired. No need to remove fuses or other equipment to install power wiring. Greatly reduced weight helps handling. 10-inch gutters in low voltage section give ample wiring space. Strong continuous base makes moving on rollers easy, eliminates substation floor to simplify bottom conduit entrance.

Easy to use • Rotary tap changers assure correct contact pressures, prevent loose connections or stripped terminal threads. Expanded metal grille in top allows easiest transformer inspection — just lift the protective hood. Grille can be removed for normal transformer cleaning. Efficient ventilation system gives cool operation, long transformer life. Requires only 19 sq. ft. floor space. No rear or end aisles necessary —all components front-accessible.

Wide versatility • Power-Zone unit substations can contain a high-voltage air interrupter switch, fused or unfused, or oil-filled cutouts. Low-voltage molded case breakers — metering equipment — QMB fusible switches, circuit breakers, motor starters — all can be supplied. Special components or metering available in extra sections on both high and low voltage ends.

Get the complete story • Write Square D Company, 4335 Valley Boulevard; Los Angeles 32, California

SQUARE D COMPANY

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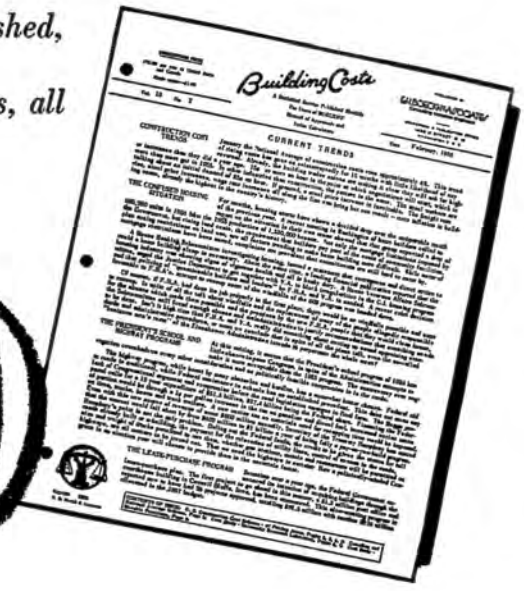

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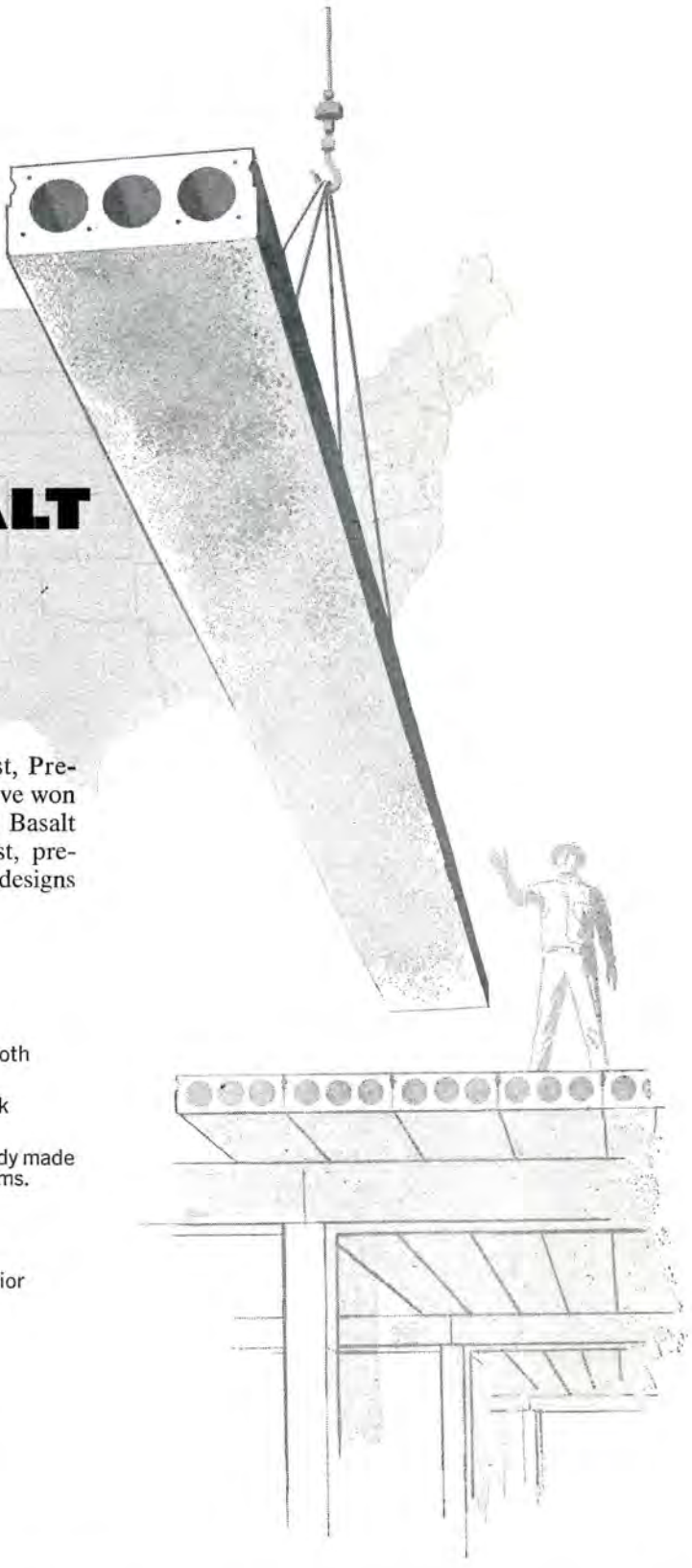

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- Factory-formed slabs installed rapidly, creating a smooth flat ceiling surface ready for paint.
- Quick roof and floor erection lets other trades get to work on a fast-paced schedule.
- Hollow cores give wiring and plumbing flexibility and ready made ducts for a variety of heating and air conditioning systems.
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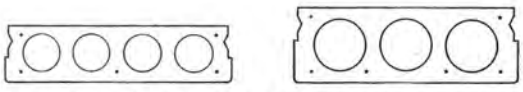
- Covered, or painted, Flexicore provides permanent interior or exterior beauty for all construction—plus effective sound insulation.



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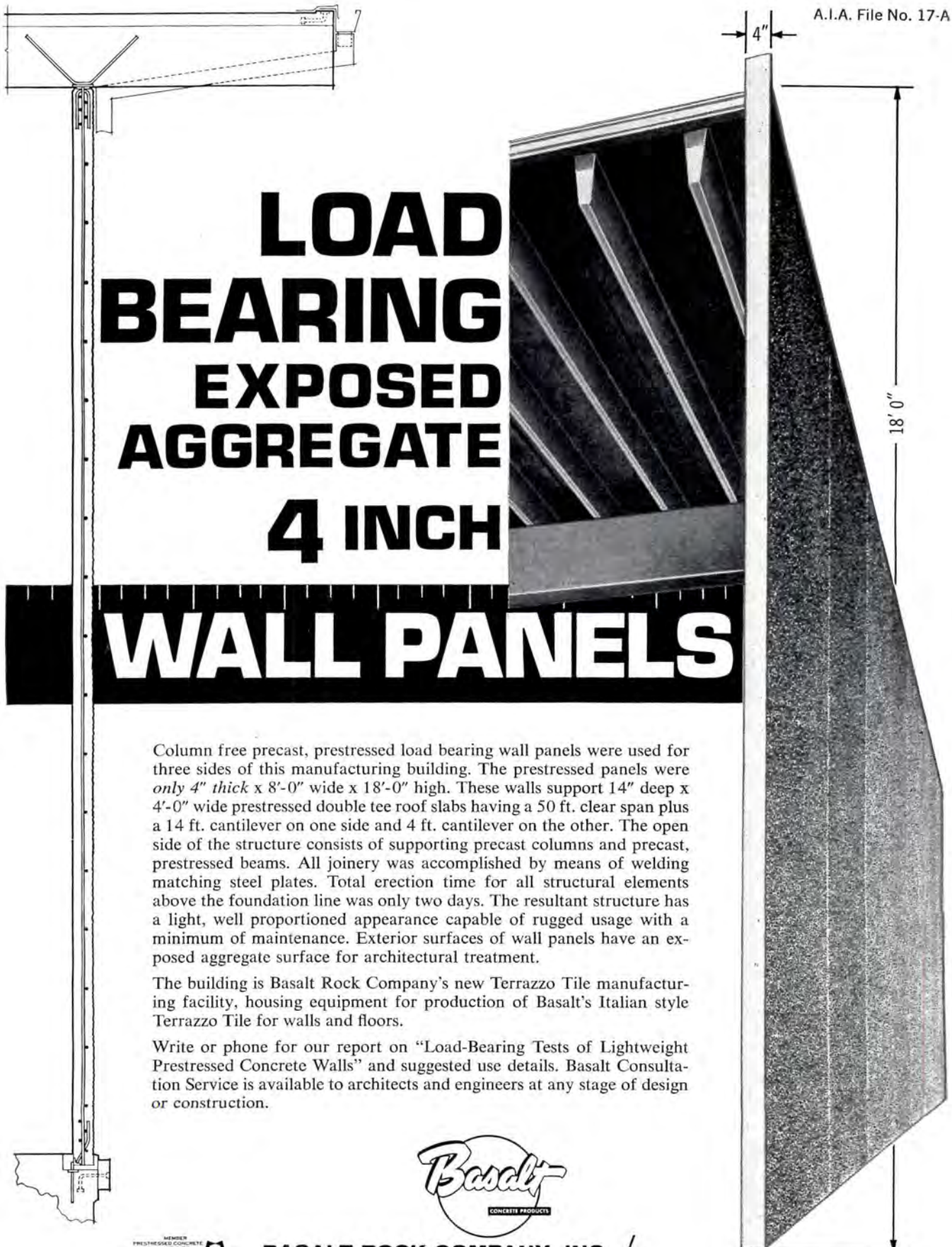

LOAD BEARING EXPOSED AGGREGATE 4 INCH WALL PANELS

Column free precast, prestressed load bearing wall panels were used for three sides of this manufacturing building. The prestressed panels were *only 4" thick* x 8'-0" wide x 18'-0" high. These walls support 14" deep x 4'-0" wide prestressed double tee roof slabs having a 50 ft. clear span plus a 14 ft. cantilever on one side and 4 ft. cantilever on the other. The open side of the structure consists of supporting precast columns and precast, prestressed beams. All joinery was accomplished by means of welding matching steel plates. Total erection time for all structural elements above the foundation line was only two days. The resultant structure has a light, well proportioned appearance capable of rugged usage with a minimum of maintenance. Exterior surfaces of wall panels have an exposed aggregate surface for architectural treatment.

The building is Basalt Rock Company's new Terrazzo Tile manufacturing facility, housing equipment for production of Basalt's Italian style Terrazzo Tile for walls and floors.

Write or phone for our report on "Load-Bearing Tests of Lightweight Prestressed Concrete Walls" and suggested use details. Basalt Consultation Service is available to architects and engineers at any stage of design or construction.

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PARIS PRIZE TO CALPOLY PROFESSOR

Thomas A. Briner, a member of the faculty of the department of architectural engineering at California State Polytechnic College, has won the 49th Paris Prize, and will spend next year studying at the Ecole des Beaux Arts. The prize is a $5,000 fellowship for study at the famous Paris school.

Briner's design for a 1,000-room hotel on Blackstone Island in New York City's East River won the award over 42 other entries. In the first stage of the competition the design problem was the site plan for a park in which the hotel would be placed.

A native of Ohio, Briner graduated in architecture in 1958 from Carnegie Tech. After a tour of military service, he studied at M.I.T. and received a master's degree in 1961. He joined the staff at CalPoly last fall.

APARTMENT BUILDINGS APPROVED IN DIAMOND HEAD AREA

Honolulu's City Council voted late in June to allow construction of apartment buildings in the Diamond Head area despite strong opposition from the residents of the city who had voiced concern for the effect these buildings would have on the much-treasured view of the landmark and had demanded a comprehensive general plan for the area.

At the time of the Council decision, there existed no regulation governing height limits for new construction, although Councilmen acted in the belief that present zoning ordinances would restrict heights to three stories.

L.A. TO PRESERVE HISTORIC BUILDINGS

A 12-man committee has been formed by the Los Angeles City Council to study the city's historic buildings and suggest ways and means of preserving them. Among the appointees is William Woollett, architect, who is the Southern California chapter's A.I.A. Preservation Officer and was instrumental in the drafting of an ordinance to set up a Cultural Heritage Board. The recently appointed committee is the result of the proposed ordinance.

The committee will catalogue buildings, sites, monuments and other features of historic and cultural significance to the city.

Calendar of Western Events

• SEPTEMBER 5-7: "Education in Engineering Design," national conference presented by Department of Engineering, U.C.L.A., on campus of the University, Los Angeles

• SEPTEMBER 27-29: Western Mountain Region, A.I.A., annual conference, Sun Valley, Idaho

• SEPTEMBER 28-29: American Concrete Institute, fall meeting, Little Theater, Seattle World's Fair

• SEPTEMBER 30-October 4: World Conference on Shell Structures, Sheraton-Palace, San Francisco

• OCTOBER 3-7: California Council, A.I.A., annual convention, Mark Thomas Inn and Casa Munras, Monterey, Calif.

• OCTOBER 4-6: Third annual conference, Photo-Vision '62, co-sponsored American Society of Magazine Photographers, Department of Journalism, U.C.L.A., and Department of Arts and Humanities, University Extension, University of California, at Hotel Miramar, Santa Barbara, Calif.

• OCTOBER 5-7: Structural Engineers Association of California, annual convention, Hotel del Coronado, Coronado, Calif.

• OCTOBER 6: Japan Architects' Tour leaves from San Francisco and Los Angeles

• OCTOBER 11-14: Northwest Region, A.I.A., tenth annual conference, Surftides Resort, Ocean Lake, Oregon

Professional News

Firm Changes

The partnership of *Blunk-Hoskins*, architects, has been dissolved. *Robert M. Blunk* continues his practice at 1290 Bayshore Highway, Burlingame, Calif., and *Gilman G. Hoskins* has joined the firm of Wilsey, Hamm & Blair, engineers and planners, Millbrae, Calif.

Architects *Willis R. Hanes Jr.* and *Robert W. Essig* have formed a partnership with offices at 10738 South Paramount Blvd., Downey, Calif.

Kenneth E. Bates has joined the Seattle engineering, architectural, and planning firm of Harstad Associates as senior architect and a partner of the firm. *Ronald Thompson*, planning consultant, has been named principal planner for the firm.

Jack C. Hupfer Jr. and *Donald Hutchison*, architects, and *Sidney Flook*, structural engineer, have formed the firm of *Hupfer, Hutchison & Flook* with offices at 2785 N. Speer Blvd., and 1327 Speer Blvd., Denver.

The architectural firm of *Wimberly, Whisenand, Allison & Tong* succeeds the former firm of Wimberly & Cook, Honolulu. Associated with George J. Wimberly are George V. Whisenand, Gerald L. Allison and Gregory M. B. Tong.

there's something to be said for—

"tailor-made"

In suits it's often the fit that makes the big difference—just so in built-up roofing the Asphalt specified should fit the combination of slope and climate.

Asphalt and gravel built-up roofs may be specified for any climate and for any roof slope from "dead-level" to 3" per foot. Maximum service life may be expected if the Asphalt used is of the lowest possible Softening Point (i.e., the softest), consistent with roof deck slope and climate. Simply stated, this means that the Asphalt should be soft enough so that any tiny cracks which may develop through thermal expansion and contraction in the deck, or through building settlement, will tend to flow together, or "heal," during warm weather; but should not be so soft that it will flow down the roof during a hot spell.

Since considerable local variation in climate is typical of many Western areas, selection of Asphalt Softening Point may often be done on the basis of local experience. Where such experience records are meager, the following table will serve as a guide for your selection and specification of roofing Asphalt type:

DECK SLOPE	NORMAL[1] CLIMATE	HOT[2] CLIMATE
0"—½"	dead-level	dead-level
½"—1"	flat	flat
1"—1½"	flat	steep
1½"—2"	flat	steep
2"—2½"	steep	special steep
2½"—3"	steep	special steep

1 Not more than an occasional day with air temperature over 95°F.

2 Extended periods with day-time air temperatures over 95°F, with clear sky, bright sun.

Note: Typical Softening Points are:

dead-level.....140°F
flat.....170°F
steep.....190°F
special steep.....210°F

Assure your next building of trouble-free, low-cost protection by specifying the proper Asphalt roofing materials. Want more information? Fill out and send coupon.

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810 University Avenue, Berkeley 10, California

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Rain Bird Rotor Pop-Ups do a thorough scientific watering job, then quietly disappear—as if by magic—into the ground so they offer no obstruction to the beauty or usability of the turf area. They are unsurpassed for use with automatically or manually controlled underground systems in athletic fields, parks, golf courses, cemeteries, estates and other large turf areas.

Adjustable for local conditions. Also, used successfully on hill slopes. Rubber covered for athletic fields and playgrounds.

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Specify RAIN BIRD, your assurance of quality and dependability.

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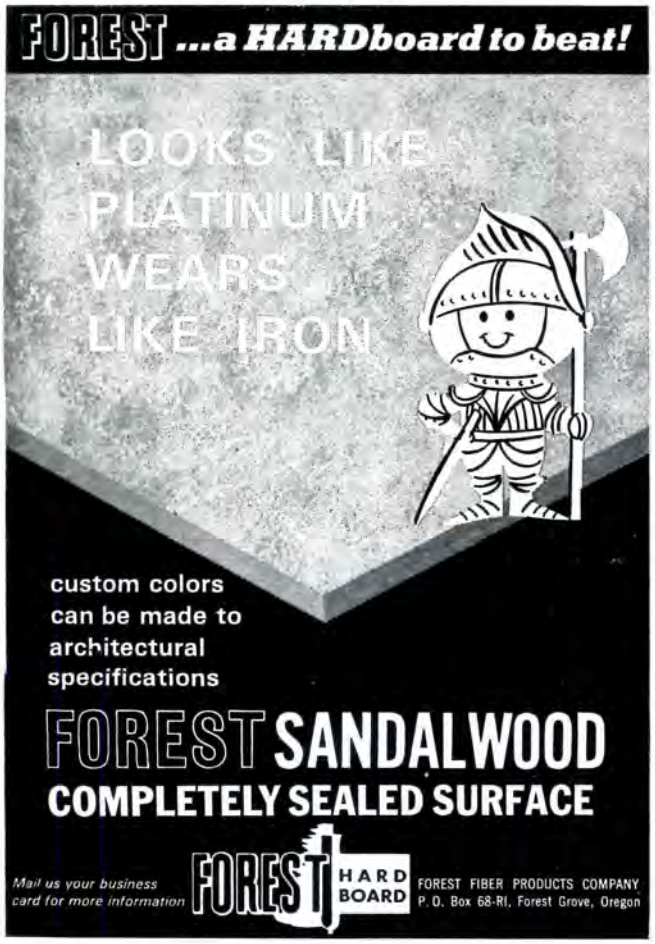

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Johnson's Radio
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Lier Sound Company
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San Diego Sound Company
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San Diego 11, California

Pacific Recording Company, Ltd.
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Las Vegas, Nevada

Tingey Company
847 Divisadero Street
Fresno, California

C & S Television & Sound
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Greeley, Colorado

Lectro-Com
3009 Grand View
Colorado Springs, Colorado

Northern School Supply
422 Second Street South
Great Falls, Montana

Audio Communications Company
1607 West Third
Amarillo, Texas

Carter Supply Company
259—31st Street
Ogden, Utah

Northwest Electronics, Inc.
East 730 First Avenue
Spokane 3, Washington

Joachim Radio Supply, Inc.
1913 Broadway
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Communications, Inc.
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W. D. Lasater Company
427 Westlake North
Seattle 9, Washington

See page 59 for more important information about STROMBERG-CARLSON Communication Products.

GENERAL DYNAMICS | ELECTRONICS
ROCHESTER

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DISNEYLAND HOTEL

. . . working drawings to partial occupancy in 12 months!

LIFT-SLAB CONSTRUCTION, POST-TENSIONED BY THE PRESCON SYSTEM SAVES 6-8 WEEKS

The stressing hardware can be seen at the ends of the slabs which are being lifted into position by the Vagtborg Lift-Slab Corp.

One requirement called for the practically impossible — partial occupancy in June, 1962, and working drawings could begin in July, 1961! The first two floors were ready for guests late in June, 1962. The remaining nine floors required two additional months.

Weber and Nicholson, Architect, and Albert A. Erkel & Associates, Engineer, concluded that only lift-slab construction could accomplish the requirements and meet the deadline. The lightweight post-tensioned flat plate floor system allowed flexible spacing of columns for room and floor planning. Floor to floor height reduction resulted in many material and labor savings; this structural design concept produced savings in shear wall and foundations as a by-product.

Statistics include: Approximately 100,000 square feet; 11 stories with a height of 125 feet; maximum column spacing, 31′ x 31′; slab thickness, 9″; 150 units plus penthouse apartment and cocktail lounge on top floor, and eight conference rooms on the ground floor.

The Prescon System of post-tensioning prestressed concrete offers advantages to owners, architects, engineers, and contractors. Write us for information on uses in lift-slab, poured-in-place, precast structures, or your specific application.

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WESTERN SECTION

Index To Advertising

Manufacturers' Pre-Filed Catalogs of the firms listed below are available in the 1962 Sweet's Catalog Files as follows:

a Architectural File (green)
ic Industrial Construction (blue)
lc Light Construction File (yellow)

Page numbers of manufacturers' advertising elsewhere in this issue shown in italics

Western advertising offices: LOS ANGELES, Wettstein, Nowell & Johnson, Inc., 2801 West Sixth Street; PORTLAND, Wettstein, Nowell & Johnson, Inc., 921 S. W. Washington St.; SAN FRANCISCO, Wettstein, Nowell & Johnson, Inc., 417 Market St.

OZALID NEWSLETTER

NEW IDEAS TO HELP YOU WITH ENGINEERING REPRODUCTION AND DRAWING

Ozalid® Anhydrous Ammonia System consists of control box mounted on machine and tubing to connect equipment with anhydrous ammonia cylinder, which may be remotely located. Developer handling becomes simply, "valve on, valve off."

New anhydrous ammonia gas system provides ultimate convenience, cuts developer costs up to 50%, gives from 2 to 6 months developing from a single cylinder!

A simplified, completely safe Ozalid Anhydrous Ammonia Kit brings the convenience of pressurized ammonia gas development to your dry-developing diazo whiteprinter. Depending on machine use intensity and model, the unit saves enough on ammonia costs to pay for its initial expense in as short a time as a year.

A low price tag is *only* the first of several reasons you should consider using Ozalid Anhydrous Ammonia in your diazo installation. Contents of a single cylinder give up to six months of developing, reducing developer handling to a minimum.

Heater rods, sealing sleeves, and other vital parts in the developer section have longer life because corrosive action is lessened. Machine warm-up time is shorter. Improved employee morale results in increased production. What's more, chances are you'll see an improvement in print quality.

The Ozalid Anhydrous Ammonia Kit is specifically engineered to meter anhydrous ammonia in the simplest, most efficient method for use with diazo machines. Units have been proved in the field, and are already giving a high degree of customer satisfaction.

Conversion Kits fit all Ozalid dry diazo machines and can be easily installed on practically all others regardless of make. Price of the kit is $235.00. For information ask your Ozalid man, or write Ozalid, Johnson City, N. Y., Dept. 234.

New fast reprinting, erasable sepia intermediate

Here's a highly transparent intermediate with a specially prepared paper base that makes reprints faster, yet is easily erasable. Ozalid 402 IZE is its name, has a dark sepia image (but you can rub it out with an ordinary abrasive eraser), has an ideal matte surface for pencil and ink additions, picks up fine line detail beautifully, has excellent covering power, yet is surprisingly low priced. Drafting room comments include, "like see-through"..."excited about erasable feature"..."excellent for overlay work." Ask your Ozalid man for samples and demonstration.

Crease and crumple this tracing paper. Then, make a print! Surprise!

New Ozaclear isn't called "clear" for nothing. This tracing paper permits only a hint of fracturing from creases and crumpling ever showing up on a print. Ozaclear is 100% rag, with an excellent surface for pencil and ink. But it's that "no bruising" quality that makes it stand out. Its exclusive Ozalid-perfected transparentizer holds its own against heavy pencil pressure, leaving no trace of ghosting when these lines are erased. Want more details about permanent, non-yellowing, high strength Ozaclear? Ask your Ozalid representative or write Ozalid, Johnson City, N. Y., Dept. 234.

Lennox gives branches up-to-the-minute changes on reproducible masters!

With eight scattered branches and factories, Lennox Industries (Marshalltown, Iowa) uses Ozalid diazo intermediates to get out new product drawings and drawing changes quickly and maintain perfect standardization among plants.

Single duplicate originals are sent to each plant, the plant, in turn, making as many clear, sharp prints as needed. Simple, fast, error-proof!

Ozalid, *A Division of General Aniline & Film Corporation. In Canada: The Hughes-Owens Co. Ltd., Montreal*

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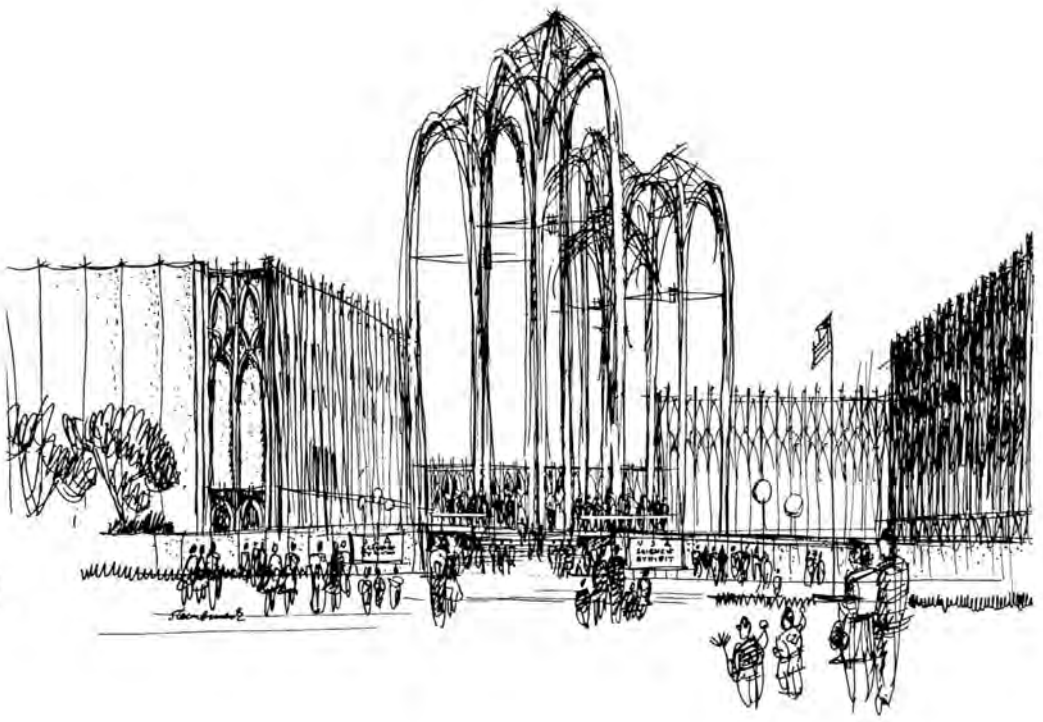

Drawing by Victor Steinbrueck
—from *Seattle Cityscape*

The Modern Movement

GATEWAY TO THE 20TH CENTURY: *Art and Culture in a Changing World. By Jean Cassou, Emil Langui and Nikolaus Pevsner. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York 36. 362 pp., illus. $25.*

In his introduction to this book, Jean Cassou writes, "The years of the last quarter of the 19th century and the beginning of the 20th . . . were assuredly some of the richest and most fruitful in the whole history of the human spirit." At the end of the book, Nikolaus Pevsner writes, ". . . what is most disastrous in the visual arts of the 20th century and what is most hopeful was fully in existence by the time of the Age of the World Wars." In between these statements, Mr. Cassou, Mr. Pevsner and Emil Langui describe in detail the richness, disaster and hope of the early Modern Movement. Mr. Cassou fills in the years 1884-1914 broadly and *inclusively*, moving rapidly (and sometimes confusingly) between architecture, painting, technology, poetry, philosophy and politics. Mr. Langui contributes a relatively brief and admirably comprehensible guide to the many streams of modern art. Mr. Pevsner does the same for the architecture and design of the period —and leaves the reader convinced that, as far as humanity is concerned, the modern fine arts may be "disastrous," but "hope" is the province of the applied arts: ". . . architects and designers once more accepted social responsibilities . . . architecture and design consequently became a service."

The book's bulk, in terms both of content and of poundage—is staggering. It is probably a mistake to combine text and illustrations in a book of this size. It is, unfortunately but almost certainly, a waste to put three such distinguished and able writers to work in such a format and in such competition. The format of this giant-sized volume calls for small type set at an eight-inch width —wide enough to discourage even the most determined reader. The competition is provided by an enormous number of well chosen and well reproduced illustrations of the painting, sculpture, architecture, graphic arts, industrial design and decoration of the period.

Perhaps, on the other hand, these illustrations make the text unnecessary. The careful reader of pictures should be able, by the sheer weight of the evidence shown here, to grasp the patterns and significances of the visual arts in the modern age.

The book is based on material shown at the Council of Europe's exhibition, "The Sources of the 20th Century," held at the Musee d'Art Moderne in Paris in 1961.

An Architect's Seattle

SEATTLE CITYSCAPE. *By Victor Steinbrueck. University of Washington Press, Seattle 5, Wash. 192 pp., illus. $4.75; paperbound, $3.95.*

In honor partly of the Fair, but mostly of his home town, Victor Steinbrueck has completed a collection of drawings of and comments on Seattle. He has recorded the town's buildings, and the surroundings nature has given them, to indicate the shape of Seattle's "cityscape" and the qualities which ought to be preserved as the city "improves" itself. One suspects, however, that Mr. Steinbrueck's efforts are really a labor of love, and that, like all Seattleites (as they call themselves), he wanted to pay tribute to a city known for its architecture and its superb scenery.

British Annual

ARCHITECTS' YEARBOOK 10. *Edited by Trevor Dannatt. Elek Books Limited, 14 Great James Street, London, W.C. 1, England. 262 pp., plus 86 pp. technical section, illus. 57s. 6d.*

This tenth edition of Trevor Dannatt's *Architectural Yearbook* resembles, in the variety of its contents, an annual magazine rather than a book.

continued on page 44

Supermarket floor in new Kentile® Architectural Marbles Vinyl Asbestos Tile with Green Feature Strips. Alternating Milano (Green) and Rheims (Beige) colors aid traffic flow. Black Wall Base and Counter Base are Vinyl KenCove®. Décor, courtesy Food Fair Stores, Inc.

Ground-down tile shows how random design goes all the way through.

Here's a vinyl tile floor perfect for heavy traffic!

Reason? The marble design of new Kentile Architectural Marbles Vinyl Asbestos Tile goes through and through each tile. It can't wear off! Greaseproof and easy to clean…8 versatile colors. You get all these extras—at no extra cost!

VINYL KENTILE FLOORS

Smart styling where you least expect it!

Russwin 59 Door Closer—Easy on the eye ...easy on the budget! Full rack and pinion door closer. Russwin quality throughout. See your Russwin Distributor.

RUSSWIN ...*the doorware that lives up to your reputation*

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THE IMPORTANT COST IS "IN-PLACE" COST

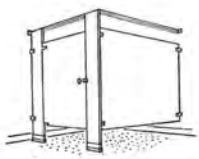
How can Sanymetal provide the finest quality and the most advanced engineering at lowest in-place cost?

The answer is in the question . . . engineering.

Engineering that provides fewer, far fewer parts for easier, faster assembly.

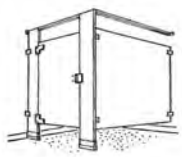
Integral hinge brackets eliminate drilling; snap-in-place concealed latch eliminates on-site assembly, pilaster shoe snaps in place . . . again no drilling.

This is how progressive engineering provides the finest quality and faster, more economical installation. At the same time, Sanymetal provides longer trouble-free life, easier low-cost maintenance, higher sanitation and uncluttered beauty. Write for full story.



Sanymetal®

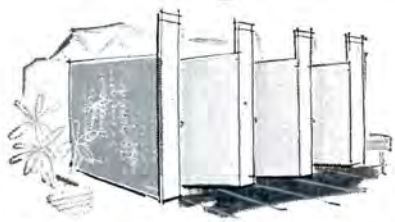
TO MOUNT DOOR	NO. OF PIECES
Set Door in Place	1
Drop in Top Pin	1
Place Stop & Keeper	1
Thru Bolt	2
Pop on Latch Handle	2
TOTAL	7
SECURE DOWN SHOE	
Snaps in Place	1
TOTAL	1
SANYMETAL GRAND TOTAL	8



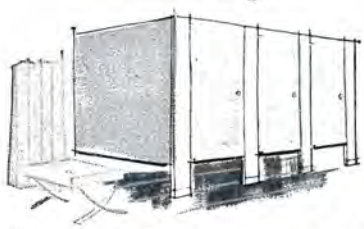
Others

TO MOUNT DOOR	NO. OF PIECES
Mount Hinge Brackets	2
Apply Thru Bolts (3 pcs. each set)	12
Set Door in Place	1
Drop in Top Pin	1
Mount Stop & Keeper	2
Apply Thru Bolts (3 pcs. each set)	6
Mount Latch	1
Apply Thru Bolts (2 pcs. each set)	6
TOTAL	31
SECURE DOWN SHOE	
Pull Down Shoe (some use 4 pc. shoe)	1
Drill 2 Holes	
Drive 2 Metal Screws	2
TOTAL	3
OTHERS GRAND TOTAL	34

Century



Normandy



Academy

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61 Stories Over Manhattan

Part of the first major test of stainless steel in American architecture, this gleaming gargoyle took its place on the New York skyline in 1929.

Architect William Van Alen specified stainless steel for the dome, cornices, entrances, street floor shop windows, and gargoyles of the beautiful new Chrysler Building.

Would stainless steel resist the combined attack of rain, ice, snow, soot, smoke, and grime?

Continued next page . . .

. . . *from preceding page*

Stainless Steel passes the difficult test of t

The Chrysler Building's stainless steel dom (seen at left) and eight stainless gargoyle were cleaned for the first time in 1961.

Despite 32 years of exposure to corrosiv smoke and moisture, the beauty of th original installation was quickly and easil restored. Gotham Building Cleaning Co. Inc., reports: "*No evidence of corrosion or dete rioration of any kind.*"

The use of stainless steel in architectur began with the Chrysler Building (1929) an has increased steadily through the years. Th metal offers stubborn resistance to corrosion abrasion, scratches, and dents. It is easil fabricated and erected, blends with othe materials, and is available in many standard types and forms.

Stainless steel is seen on exteriors in curtain wall panels, mullions, spandrels, windows, railings, sunshades, doors, and entrances. Inside, plain and textured stainless steels are observed in walls, ceilings, column panels, stairways, elevator cabs, and countless decorative effects.

Republic ENDURO® Stainless Steels are produced in all popular types, in widths to 72 inches, and in finishes ranging from soft matte to mirror-bright. Republic offers expert metallurgical assistance. Call your nearest Republic representative for information or check Sweet's Architectural Catalog File, Section 6c/Re.

REPUBLIC STEEL®

REPUBLIC ST L

Cleveland 1, Ohio

Shedding 32 years of dirt and grime: Stainless steel dome of New York's Chrysler Building was cleaned for the first time in 1961. Original bright finish was quickly and easily restored.

Architect: William Van Alen, New York.
General Contractor: Fred T. Ley & Co., New York.
Stainless Steel Sub-Contractor: Ben Leisner, Inc., New York.

Rockefeller Center: In the lobby of the new Time-Life Building, Republic ENDURO Stainless Steel was used for wall and column panels and in a variety of other applications to assure beauty with durability and ease of maintenance.

Architects: Harrison & Abramovitz and Harris, New York.
General Contractor: George A. Fuller Company, New York.
Stainless Steel Fabricator: General Bronze Corporation, New York.
Elevator doors fabricated by W. S. Tyler Co., Cleveland, Ohio.

Beautiful Socony-Mobil Building: First skyscraper to be sheathed entirely with stainless steel. Prefabricated stainless curtain wall panels and standardized stainless windows simplified assembly of the building's outer skin.

Architects: Harrison & Abramovitz and John B. Peterkin, New York.
General Contractor: Turner Construction Company, New York.
Stainless Steel Fabricator: Truscon Division, Republic Steel Corporation.

Strong, Modern, Dependable

Stainless Steel

HELPFUL INFORMATION: Send the coupon for these booklets, *How to Select and Order Stainless; Republic High Strength Reinforcing Bars;* and ELECTRUNITE® *Steel Tubing for Structural Use.* Third booklet details the recently announced increase in the yield strength of Republic Structural Steel Tubing Shapes.

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REPUBLIC STEEL CORPORATION
DEPT. AR-4287-B
1441 REPUBLIC BUILDING • CLEVELAND 1, OHIO

Please send the following booklets:
- ☐ Adv. 1266—How to Select and Order Stainless Steel
- ☐ Adv. 1284—Republic High Strength Reinforcing Bars
- ☐ SA-Str-62—ELECTRUNITE® Steel Tubing for Structural Use

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City_____ Zone_____ State_____

Toledo Model TDA27 complete with stainless steel front enclosure panel. (Door lock not shown.)

The Custom-27... by TOLEDO

Here's a real achievement in compact, economical efficiency. The Custom-27 is the industry's most advanced dishwasher, customized and priced for individual needs. Look at these exclusive standard equipment features . . .

- **Stainless steel inside and out, including the manifold.**
- **Complete manifold assembly locks into vertical position for easy cleaning.**
- **New Quik-Flip device on spray tubes permits one-hand removal and replacement.**
- **Toledo's exclusive 3-way door, now with 4-way suspension, raises and lowers with pressure of one finger.**
- **Converts easily and quickly for corner installation.**

The Custom-27 is designed for the utmost in adaptability, to suit specific needs and financial conditions. Optional features include boosters and thermostats for electric, gas and steam heat, door safety switches and locks, a timed fill, automatic self-starting switches and many others. In addition, stainless steel front enclosure panels, round stainless steel feet and other accessories are available.

For complete information, write for folder describing Toledo Model TDA27.

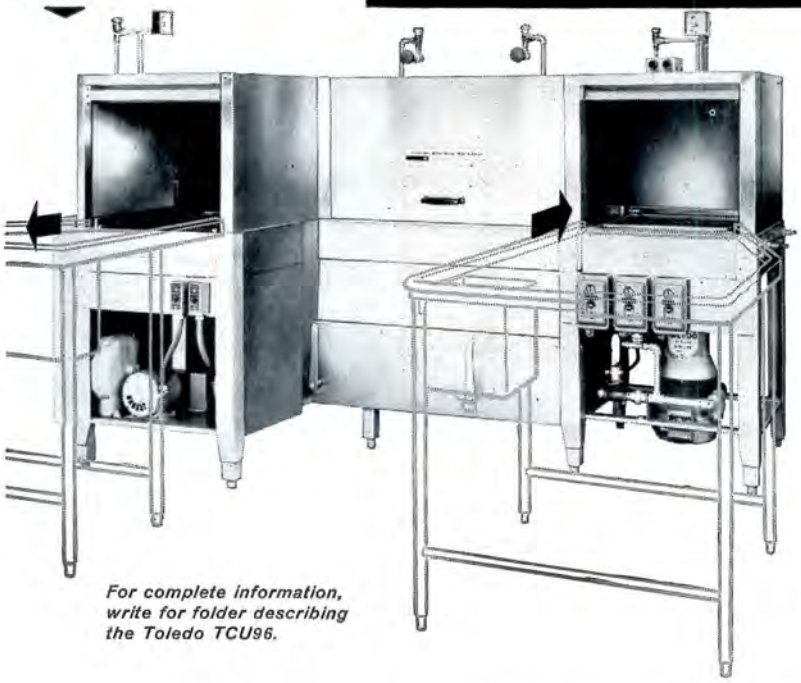
so new today, they'll still be new in 1967!

These new dishwashers, by Toledo, give you design features years ahead of the industry, years ahead of their time. Ask your Toledo dealer about them today!

Toledo Kitchen Machines

A DIVISION OF TOLEDO SCALE CORPORATION • 245 HOLLENBECK ST., ROCHESTER, NEW YORK

Soiled tableware enters TCU96 at right, emerges onto clean dish table at left. Disposer is under prescrap compartment at right.

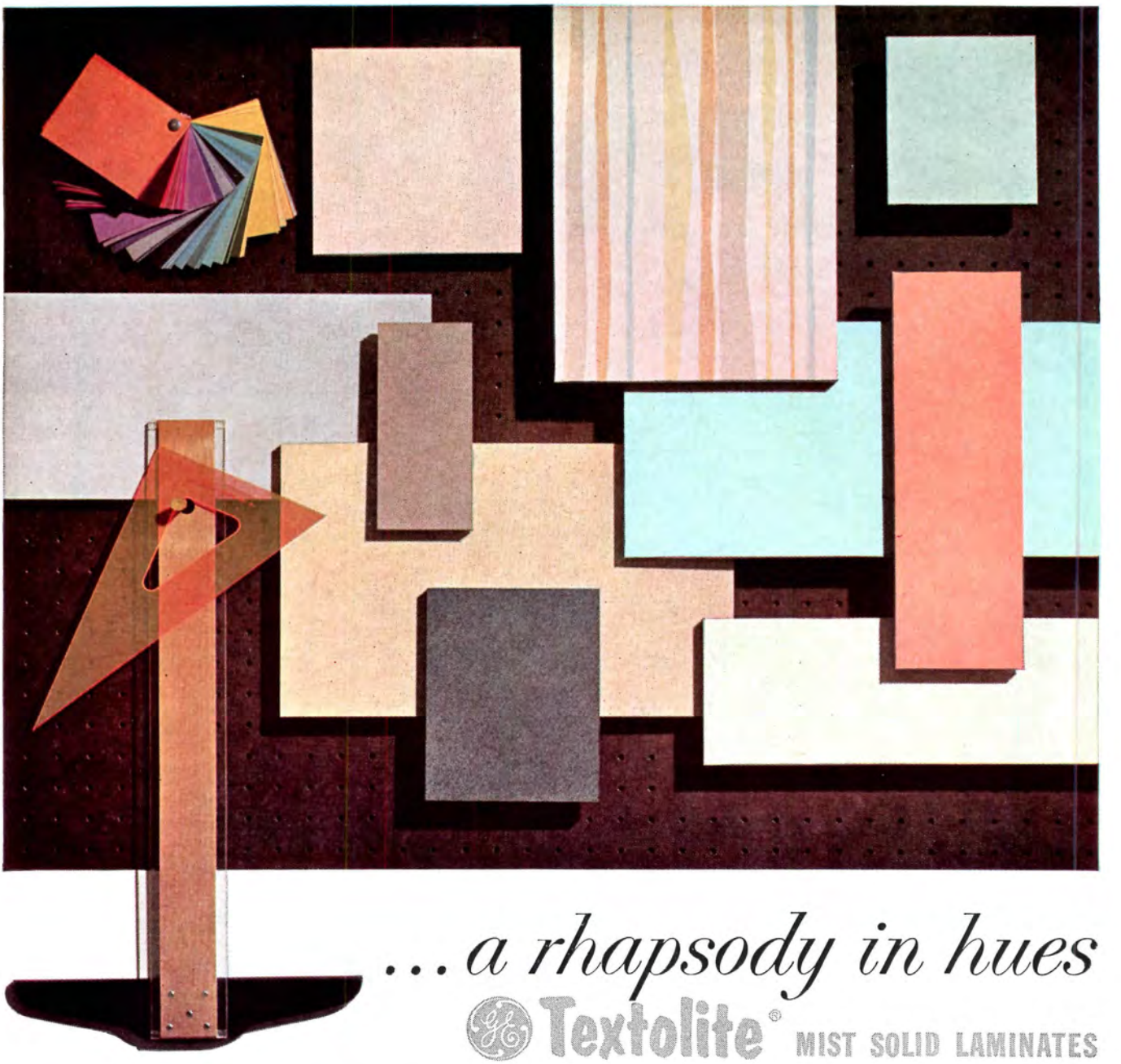


For complete information, write for folder describing the Toledo TCU96.

The Contin-U-matic ... by TOLEDO

The Contin-U-matic is a complete dishwashing system, designed for one-man operation and economical use of space. This new conveyor machine, including all the outstanding features for which Toledo is known, is built to combine with soiled dish and clean dish tables so that a single attendant, standing in front of the machine and between the two tables, can handle the complete operation without moving. The Contin-U-matic as an optional feature, includes a built-in disposer for automatic disposal of grease and table scraps. Because of its "U" shape and its front feed and unload features, the Contin-U-matic requires far less kitchen space than conventional conveyor dishwashers.

For more data, circle 22 on Inquiry Card



...a rhapsody in hues

Textolite® MIST SOLID LAMINATES

The G-E Textolite Mist Solid "rhapsody in hues" includes: Gray, Cocoa, Beige, Yellow, Charcoal, Green, Pumpkin, Aqua, White, and the five-color, ribbon-like Ruban Mist.

This compatible collection of soft, delicate, misty hues enables you to achieve a solid color effect with a less costly pattern. Ribbon-like Ruban Mist, a five-color pattern, is the focal point of the G-E Textolite Mist Solid family. Ruban strikes a note of perfect harmony with many of the Mist Solid colors . . . making it ideal for accent. Specify conventional or the new glare-reducing textured finish. Samples are yours for the asking.

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COSHOCTON, OHIO
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( ) Please send samples of the G-E Textolite Mist Solid colors.

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GENERAL ELECTRIC

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Required Reading

continued from page 34

The quality of the articles is as var ous as their contents.

At the top of the list in terms interest and presentation are the a ticles on Danish and Italian arch tecture since 1950—the latter, Geno Pampaloni, including straightforward and informative a count of the lively architectural di logue currently taking place in Ita —and a report by Theo Crosby Cumbernauld, Scotland, Britain newest New Town.

On the other hand, the yearboo includes an altogether too brief an too hasty piece by Jane Drew on th last decade of British architectur and planning, a potentially interes ing but drearily presented article o ancient Greek town planning, an an embarrassingly, and unfortunat ly, gushing tribute to the work Max Bill.

Building for Business

OFFICE BUILDINGS. *By Leonard Manseh and Roger Cunliffe. Reinhold Publishing Corporation, 430 Park Ave., New York 22. 208 pp., illus. $12.75.*

This book, written by two Britis architects, is divided into two sec tions. The first covers, in a series chapters, most of the factors of con cern in office building design, fro the people who design, commissio and work in them, through site plan ning and cost control, through ligh ing, heating and acoustics, to th larger matters of structure and in terior finishing.

The second section comprises number of examples of recent offic buildings from England, the Nether lands, the United States, Germany Canada and Denmark. Each of th buildings is illustrated by photo graphs and by selected plans, sec tions and details. The texts accom panying the examples minimize es thetic chit-chat (even in the case Wright's Price Tower) in favor plain facts about program, site structure, and so on. The authors brief summaries, while considerin matters of architectural taste, ar chiefly concerned with the building functional success.

continued on page 6

new "Wall-Guard" design eliminates cracked plaster . . . chipped paint . . . streaked walls . . . peeled wallpaper!

AIRTHERM Cabinetaires

WRITE FOR CATALOG!

Airtherm cabinet unit heaters—with *new* "Wall-Guard" design—keep walls neat and clean around seal *permanently!* For access to unit, front panel can be removed from "Wall-Guard" frame fast and easy—*without* marring or disturbing walls. Eliminates painting and wall repair around seal. For flush installations "Wall-Guard" frame can be used as a plaster stop.

Airtherm Cabinetaires have been installed in a wide range of installations throughout the United States—schools, churches, hospitals, public buildings, auditoriums, showrooms and offices. Eight handsomely designed models . . . wide choice of stunning colors (or prime coat for later field painting) . . . capacities from 375 to 1900 CFM and 25,100 to 160,000 BTU/HR at standard steam ratings.

Airtherm representatives in all principal cities will be happy to furnish you with more information and quote prices.

AIRTHERM MANUFACTURING COMPANY

P. O. Box 7039 • St. Louis 77, Mo.

Heating equipment for steam & hot water; air conditioning equipment for chilled water or direct expansion

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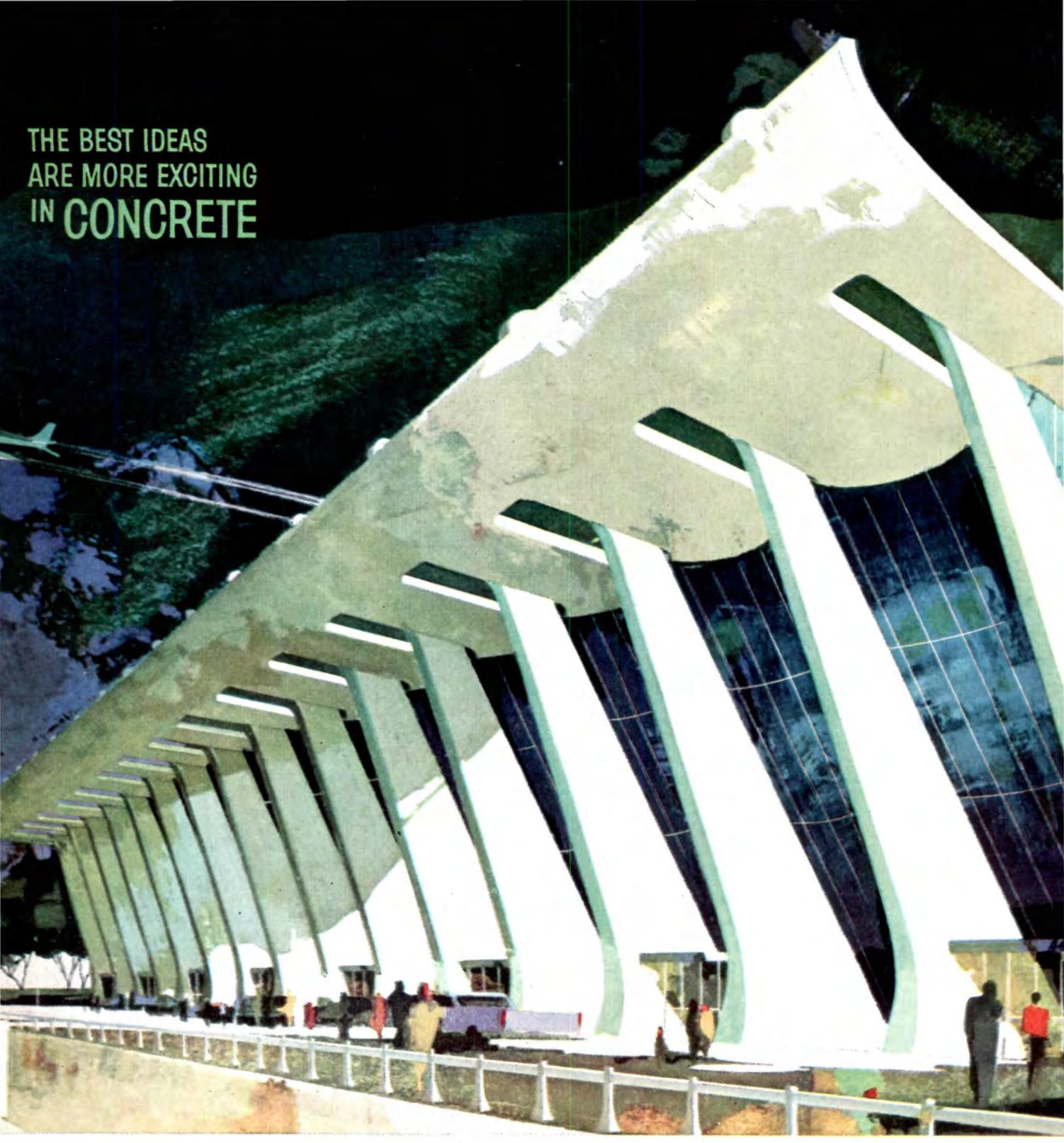
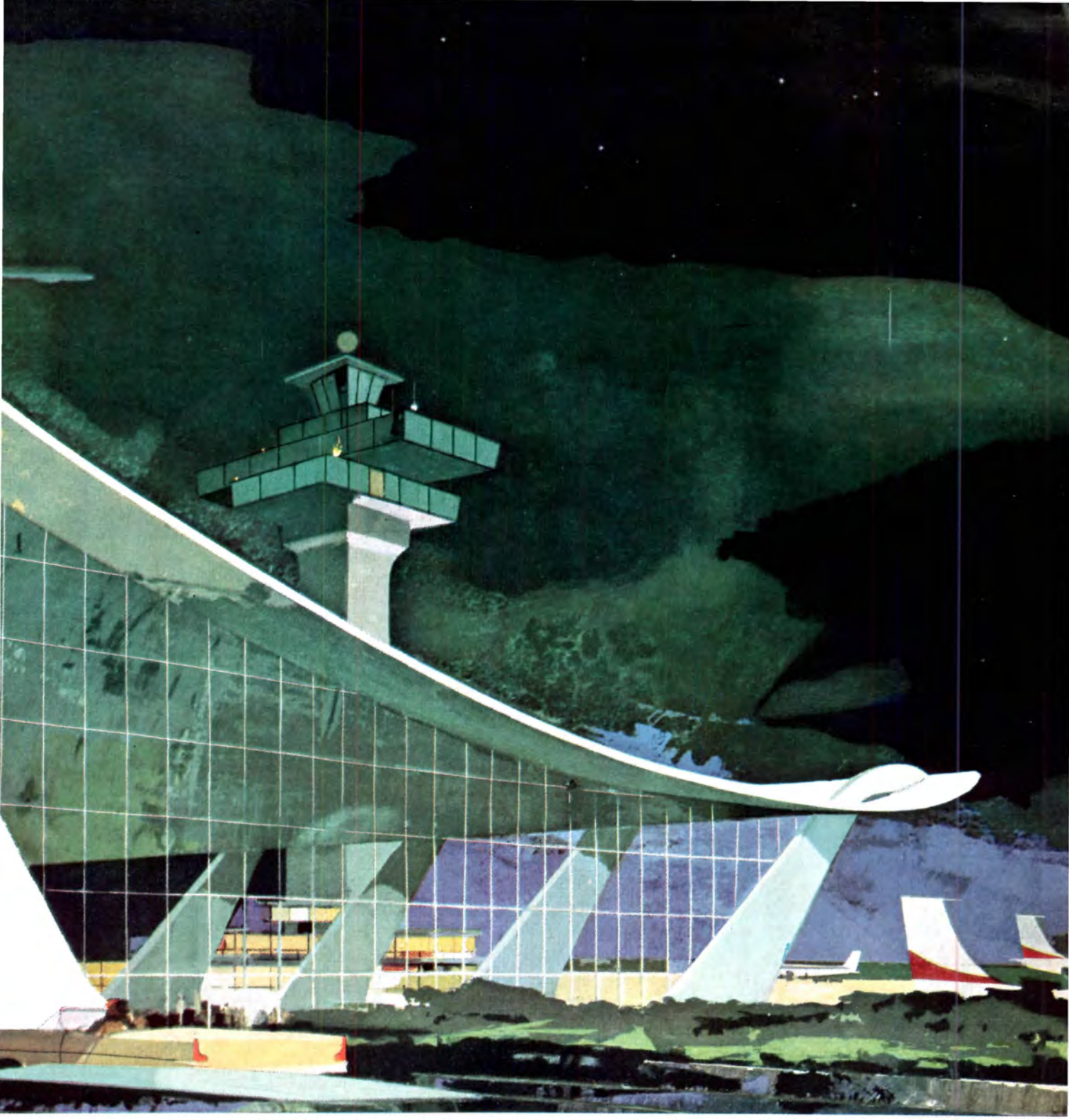


SOARING ROOF AND PYLONS OF CONCRETE EXPRESS THE SPIRIT OF JET-AGE FLIGHT



Dulles International Airport Terminal. For the Federal Aviation Agency: N. E. Halaby, Administrator; G. W. Hobbs, Director of Bureau of National Capital Airports; R. F. Date, Chief Engineer. Architects and Engineers: Ammann & Whitney, Eero Saarinen & Associates, Burns & McDonnell, and Ellery Husted. Architect for Terminal Building: Eero Saarinen & Associates.

ulles International Airport, new port of entry to the ation's capital, is being built from the ground up for jets. rom the 2-mile-long runways to the magnificent termi- al building, concrete has been given a leading role.

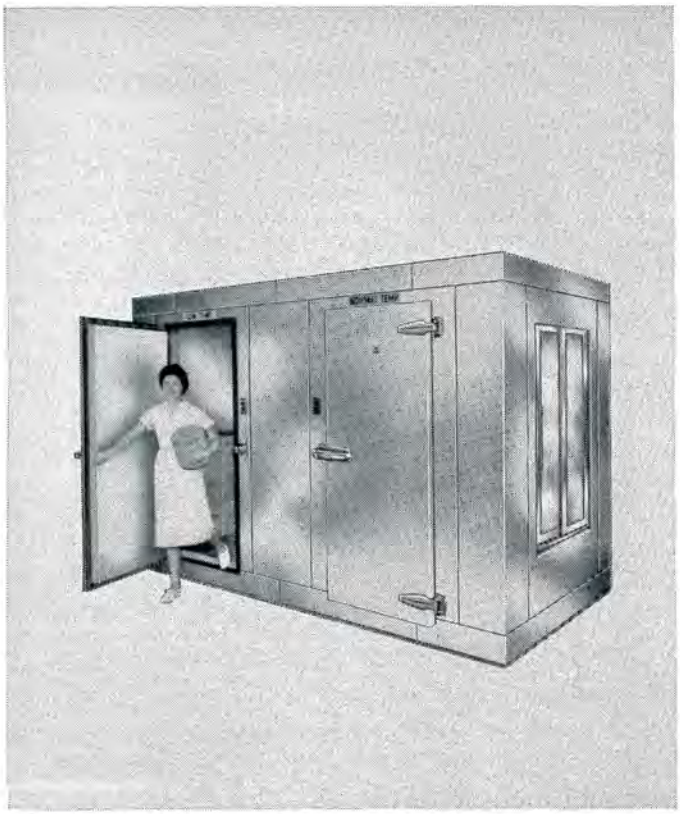
The architect's bold concept for the terminal could only ave been executed in concrete. No other material has ne versatility to accommodate such striking departures om traditional design.

The concrete roof, slung from pylons with cables, makes ne terminal a vast, single room, 150 feet wide by 600 feet long. The upswept design, that gives such drama to the exterior, provides improved acoustics for the interior. The elegance and classic simplicity of the towering pylon colonnades are accentuated by their textured surface that exposes the special white aggregates.

For freedom of expression in structures of all types, more and more architects are turning to modern concrete.

PORTLAND CEMENT ASSOCIATION

A national organization to improve and extend the uses of concrete



This was the world's most advanced design.

Until we made this one.

Bally Walk-in Coolers and Freezers are now made with science's new wonder insulation . . . Rigid Urethane "foamed-in-place"

The tremendous advantages of this new insulation represent a major design advancement . . . one that obsoletes all conventional insulated Walk-Ins, both prefabricated and built-ins. ◆ With 97% closed cells it cannot absorb moisture . . . maintains forever peak efficiency, indoors or outdoors ◆ Has double the insulating value . . . Bally 4" urethane equals 8½" of conventional insulation. Standard models ideal for use as minus 30° freezers ◆ Urethane, poured as a liquid, foams in place and while rigidizing binds tenaciously to the metal for great strength. Eliminates need for structural members. Replaces that space with highly efficient insulation ◆ Lightweight urethane and new construction reduce weight to one-third for tremendous freight savings . . . make erection fast and easy ◆ Foamed door is extremely lightweight, to open and close with little effort. Unique magnetic gasket provides positive continuous seal ◆Thinner walls increase usable inside space ◆ Fire-retardant.

Your choice of Aluminum or Galvanized as standard finishes. Sections have Bally's patented Speed-Lok for quick and accurate assembly. Easy to add sections to increase size . . . equally easy to disassemble for relocation. Hermetically sealed refrigeration systems eliminate installation problems . . . drastically reduce service costs.

Write for Free Architect's Fact File, complete with new Specification Guide, descriptive literature and technical booklet.

Bally Case and Cooler, Inc. Bally, Pennsylvania

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Herman Nelson Unit Ventilators can deliver up to 100% outdoor air ... and save fuel with exclusive wind-proof damper

STUDENTS needn't go outdoors for fresh air—a Herman Nelson Unit Ventilator system provides it in the classroom. Every classroom needs 6 to 9 air changes per hour. Herman Nelson Unit Ventilators meet these needs efficiently and economically with outdoor-air ventilation cooling. The Herman Nelson back draft damper responds *instantly* to classroom cooling needs with up to *100% outdoor air* — yet never lets gusts of cold air in to run up the fuel bill. These unit ventilators, unlike remote systems, provide *economical* room-by-room control capable of diffusing "new" air to all corners of a classroom in just *60 seconds*. REMINDER: See page 4 of this report for 11 facts you should know about school thermal control.

"We air conditioned bo h

MODERN, MULTI-FUNCTION BUILDINGS. Superintendent Richard Van Hoose (right) and Consulting Engineer E. R. Ronald, on the campus of the new Western school. It contains 26 general-purpose classrooms, home economics suite, art room, bookstore, mechanical drawing room, visual aids room, library, TV assembly for 250 students, language laboratory and other special-purpose rooms. The adjoining physical education building houses a 2500-seat gymnasium, stage, boys' and girls' dressing rooms, showers, varsity and junior varsity rooms, concession stands, public toilets and general storage rooms. Facilities at the Westport Road school are similar. *Architect: Hartstern, Louis & Henry, Louisville; Consulting Engineer: E. R. Ronald & Associates, Louisville.*

ur new schools"...

Richard Van Hoose
Superintendent of Schools
Jefferson County, Kentucky

Kentucky junior-senior high schools, designed for air conditioning, provide low-cost, year-round comfort

Western High School and Westport Road High School are in different sections of Jefferson County; the design of each is distinctive and individual. Yet the schools have two important things in common: (1) they are both air conditioned, and (2) total construction on each was less than $11.50 per square foot.

These beautiful, functional buildings demonstrate again an important fact: if schools are *designed* for air conditioning, they can be constructed for only slightly more than conventional schools.

Herman Nelson unit ventilators provide the year-round thermal environment — air conditioning, ventilation, heating. They offer full refrigeration cooling during the hot months, automatically switch to use of "free" outdoor air when outside temperatures drop.

Herman Nelson developed the *first* air conditioning unit ventilator, has equipped far more classrooms than any other manufacturer. Take full advantage of this experience when planning your new school. Your Herman Nelson representative will welcome the opportunity of helping you.

Herman Nelson AAF
SCHOOL AIR SYSTEMS DIVISION

WESTPORT ROAD HIGH SCHOOL

WESTERN HIGH SCHOOL

NO SACRIFICE OF QUALITY. Air conditioning of these schools was achieved without cutting corners on quality. Superstructure of both buildings is of reinforced concrete in floors, columns and beams. Interior classroom and lab walls are of masonry block; cafeterias, kitchens and restrooms have glazed tile walls. Floors are of asphalt tile in the classrooms, vinyl in the labs, ceramic tile in the cafeteria and restrooms and quarry tile in the kitchens. All rooms have acoustical tile ceilings.

FACT KIT AIDS PLANNING. The Herman Nelson Fact Kit on school air conditioning contains all the latest data on (1) design of air conditioned schools, (2) comparative cost studies, and (3) equipment for school air conditioning. For a free copy, write: School Air Systems Division, American Air Filter Company, Inc., 215 Central Avenue, Louisville, Kentucky.

Now—784 schools with Herman Nelson "now or later" air conditioning

Your new school's thermal system should provide as many of these important benefits as possible

HERMAN NELSON UNIT VENTILATORS OFFER THEM ALL —AT A COST YOU CAN AFFORD

It's a fact that cooling, *not heating,* is a school's main thermal problem. Extreme overheating is caused by excess heat from students, artificial lighting, and the sun. As a result, school thermal problems are unlike those of any other building. Here are 11 benefits you *need* in a school heating, ventilating, and air conditioning system:

1. **INDIVIDUAL ROOM THERMAL CONTROL**—Classroom thermal requirements change as education activity varies. Each classroom needs individual thermal "attention" to keep temperatures comfortable at all times. Only a unit ventilator system—such as Herman Nelson offers—can *economically* provide this room-by-room flexibility.
2. **VENTILATION COOLING** — Occupied classrooms can overheat when outdoor temperatures are as low as 8°F. They often need up to 100% outdoor air for cooling. Herman Nelson Unit Ventilators meet this requirement completely and economically.
3. **GOOD AIR DISTRIBUTION**—Herman Nelson Unit Ventilators adjust to required classroom temperatures in a matter of seconds. Fresh, new air is diffused to all areas of a classroom in less than 60 seconds.
4. **VENTILATION FOR AIR FRESHNESS AND ODOR CONTROL**—Unit ventilators provide controlled mechanical ventilation using varying mixtures of recirculated room air and outdoor air for maximum air freshness all the time a classroom is occupied. Again, only unit ventilation can meet this need, accurately, on a room-by-room basis.
5. **RAPID MORNING WARM-UP** — Substantial fuel savings can be realized by controlling temperatures at a reduced level during the long periods when schools are unoccupied. Herman Nelson Unit Ventilators respond rapidly to needs for heat. The result: shorter morning warm-up time, greater fuel savings.
6. **COLD WINDOW DOWNDRAFT CONTROL**—Every classroom needs an efficient system for controlling cold window downdrafts. The patented Herman Nelson DRAFT|STOP system is the lowest cost, simplest, easiest to install, and the *only* draft control system completely compatible with year-round thermal control.
7. **QUICK RESPONSE TO TEMPERATURE CHANGES**—Complete changes in the level of classroom occupancy, artificial lighting, and exposure to the sun can take place in a matter of seconds. A school thermal system *must* be designed to adjust to these changes instantly. Remote and central systems cannot meet this need economically.
8. **QUIET OPERATION**—Herman Nelson Unit Ventilators solve classroom thermal problems quietly. A new flared fan housing design together with a one-piece, extruded aluminum discharge grille and "modular" fan construction make these units 50% quieter.
9. **AIR FILTRATION**—Any system which filters only primary air and recirculates unfiltered room air could endanger student health. Herman Nelson's single filter system efficiently cleans *both* primary and recirculated air. These filters can be quickly and easily serviced by any school custodian.
10. **FLEXIBILITY FOR BUILDING ADDITIONS**—School expansion can be conveniently anticipated with a Herman Nelson Unit Ventilator system by merely sizing piping mains and boiler room equipment to handle the future plans. Many systems require an entirely new equipment room with each expansion.
11. **LOW-COST OPERATION** — Herman Nelson motors have *lowest* operating current of any unit ventilator. Save hundreds of dollars yearly in electric bills. Exclusive back draft damper gives up to 50% fuel savings. Result: substantially lower operating costs.

FOLLOW THE LEADER IN SCHOOL THERMAL SYSTEMS

Herman Nelson
SCHOOL AIR SYSTEMS DIVISION

American Air Filter Company, Inc., 215 Central Ave. Louisville, Ky.

DID HE SAY ONE...OR NONE?

How well people hear each other in a building depends upon how clearly they speak...how closely they listen...and quite frequently—how good is the sound and communications equipment. The best sound and communications systems bear the name STROMBERG-CARLSON.® ■ All of the components that will be used in any STROMBERG-CARLSON system you specify are custom-matched...designed right from the beginning to work together to minimize engineering and installation time. ■ You can pick from the widest line of components—or systems—because STROMBERG-CARLSON is the most complete line of communication products for business, industry and institutions. ■ Field and factory technical assistance will be readily available...anytime...any place. ■ A system with the name STROMBERG-CARLSON is backed by more than 60 years of unsurpassed competence in sound engineering. ■ Want more details or data sheets? Or do you have specific questions? Write to General Dynamics/Electronics-Rochester, Box A, 1408 N. Goodman Street, Rochester 1, N.Y.

GD

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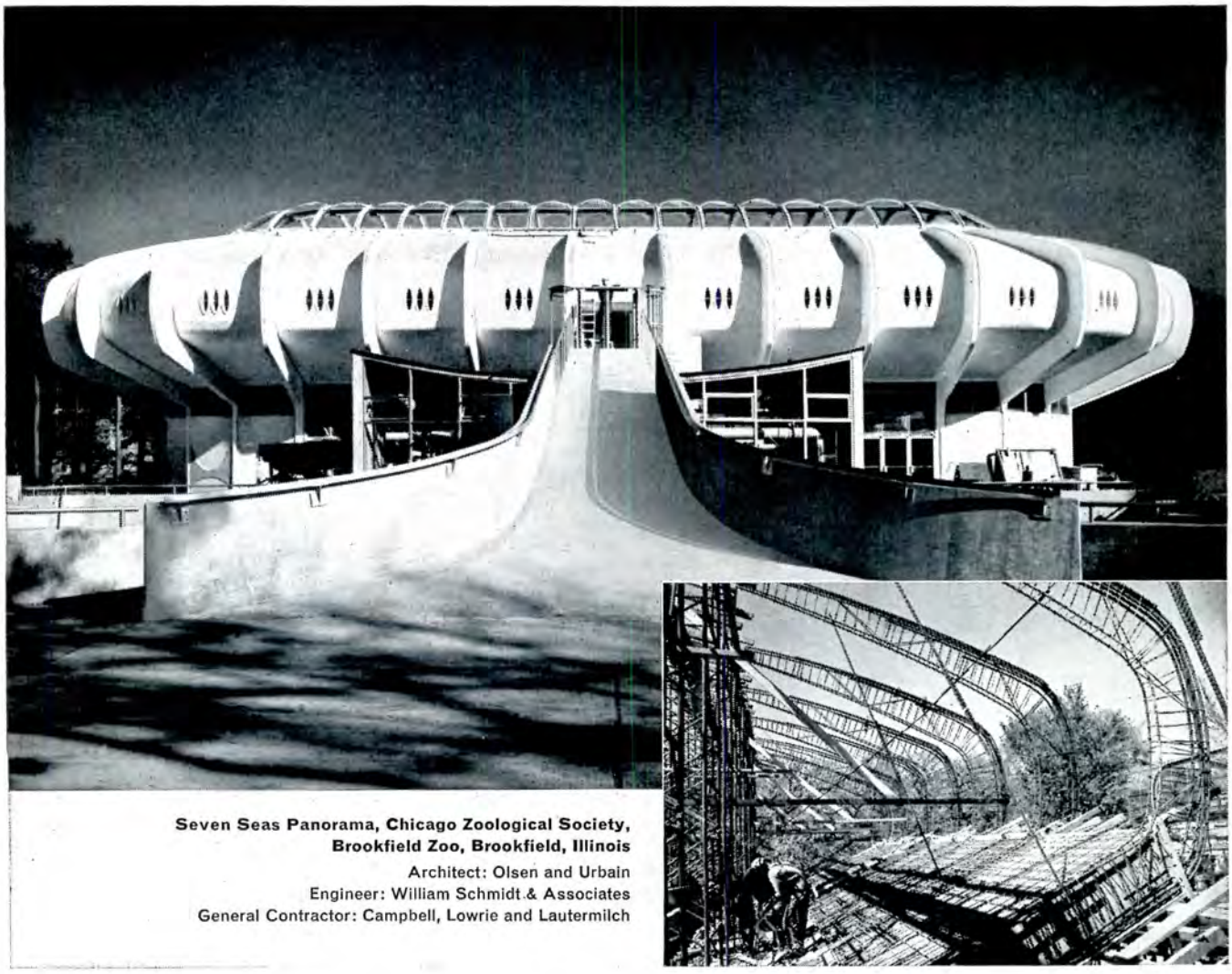
ıly th ɔnolithic ..EIN . ..CE_ C_..C..ET

Can You Be This Creative

The formative limitations of many construction materials make *this* type of structure practically impossible except with monolithic reinforced concrete. Monolithic reinforced concrete has no limitations in creative application. That's why architects utilize the superior advantages of this versatile construction material for contemporary buildings as well as more conventional structures.

On your next project, design with greater freedom—design for monolithic reinforced concrete.



Seven Seas Panorama, Chicago Zoological Society, Brookfield Zoo, Brookfield, Illinois
Architect: Olsen and Urbain
Engineer: William Schmidt & Associates
General Contractor: Campbell, Lowrie and Lautermilch

CONCRETE REINFORCING STEEL INSTITUTE
CRSI
FOUNDED 1924

Concrete Reinforcing Steel Institute
38 South Dearborn Street
Chicago 3, Illinois

2-62

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"The Gizmo", Students' Snack Room, Knox College. Architects: Perkins & Will. Plate 451.

What to use for a "Gizmo" Floor?

Murray Quarry Tile was selected for this student eating area because of its warm earthy colors and its well-known durability. These new Ember Flash tiles give a pleasing mottled effect, and the 8″x 3⅞″ size was used to achieve a subdued feeling of pattern. Quarry tile was preferred, too, in this heavy traffic area, because it is rugged, yet so easy to keep clean. Write for Murray Quarry Tile catalog 861.

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Division of American Olean Tile Company

MURRAY TILE COMPANY, INC. • 145 MELANIE DRIVE • LEWISPORT, KENTUCKY

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Required Reading

continued from page 44

Giedion Reprinted

SPACE, TIME AND ARCHITECTURE. *By Siegfried Giedion. Harvard University Press, Cambridge 38, Mass. 778 pp., illus. $12.50.*

In the 20 years since its first publication, Giedion's *Time, Space and Architecture* has retained its unique position in the literature of modern architecture. It remains—in its fourth edition, thirteenth printing—perhaps the most instructive, and readable, book on the Modern Movement and all its antecedents.

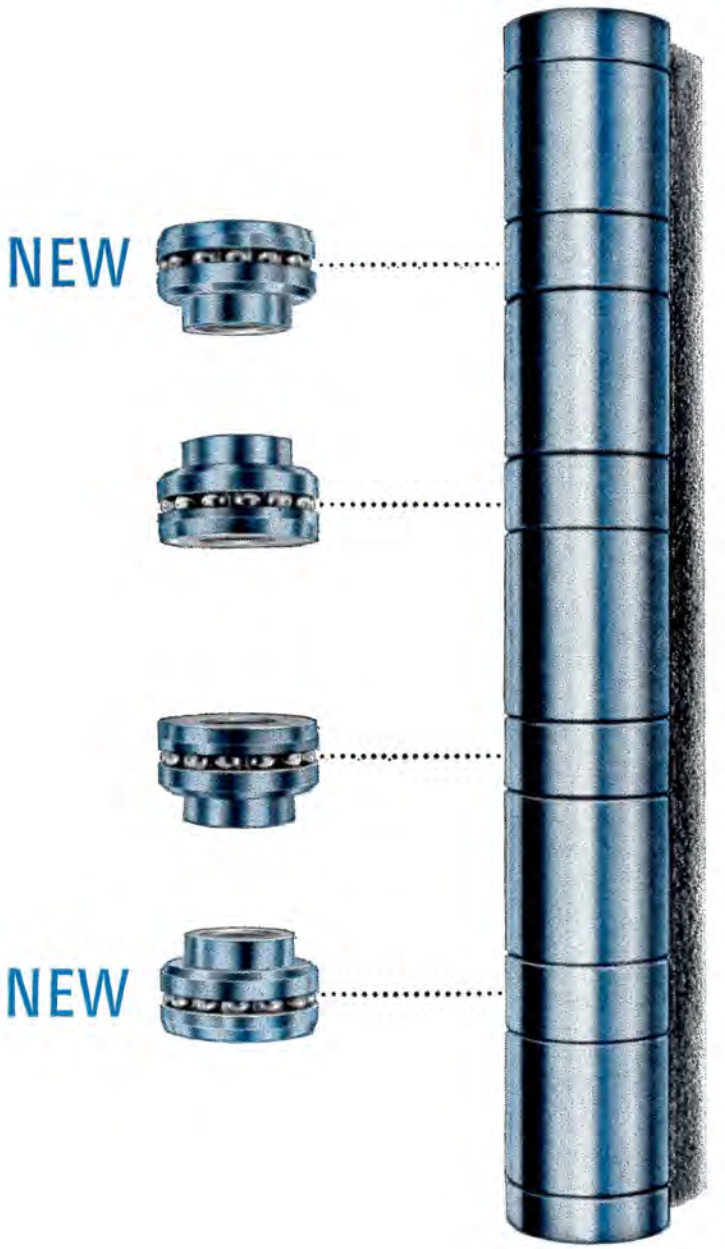
For this edition, Giedion has written a new introductory chapter, "Architecture in the 1960's: Hopes and Fears," bringing his views up to date. These views have not greatly changed, fundamentally, and he expresses his hope, or certainty, that the "playboy architecture now *en vogue*" will shortly disappear, as fads are wont to do. Giedion has not revised the book itself, feeling that "it is an entity in itself which . . . should not be disturbed." Chapters on Mies and Gropius were added to the third edition.

Now that city planning has finally received public attention as a matter of great urgency, both socially and architecturally, it might be observed that Giedion's comments on town planning—those in the first edition as well as those added to the third—bear re-reading, particularly for architects who have been long away from the book.

Ruskin Reprinted

THE SEVEN LAMPS OF ARCHITECTURE. *By John Ruskin. The Noonday Press, 80 E. 11th St., New York 3. 210 pp., illus. $1.95, paperbound.*

Architectural theory has changed considerably since Ruskin wrote that only the addition of the "useless" and "unnecessary" made a building architecture. Despite his wrong-headedness, however, he was not always wrong, and his dedication and rolling Victorian prose qualify him for America's currently fashionable literary honor: reproduction in paperback.



conversation piece...

NEW SLIMLINE 5

WITH 4 BALL BEARINGS

When talk turns to quality and design, architects and builders find this new hinge makes for good conversation. It's the *only* slimline with five knuckles, the *only* slimline with four ball bearings . . . and it's still the slimest of them all. How the four intricate but rugged ball-bearing units integrate without increasing knuckle size is a tribute to hinge craftsmen at Hager.

The five knuckles mean 10% to 20% more strength on lateral pull and twice the bearing surface to support vertical weight. The pin, approximately one-third larger than other slimlines, naturally maintains a much greater protective margin in shear and tensile strength.

Medium and heavy doors move ever so quietly, ever so smoothly, ever so true, on the new four-ball-bearing Slimline 5. Write Hager, or contact your Hager representative for information. C. Hager & Sons Hinge Mfg. Co., St. Louis 4, Mo. Hager Hinge Canada, Limited, Kitchener, Ontario.

Everything hinges on Hager®

Hager

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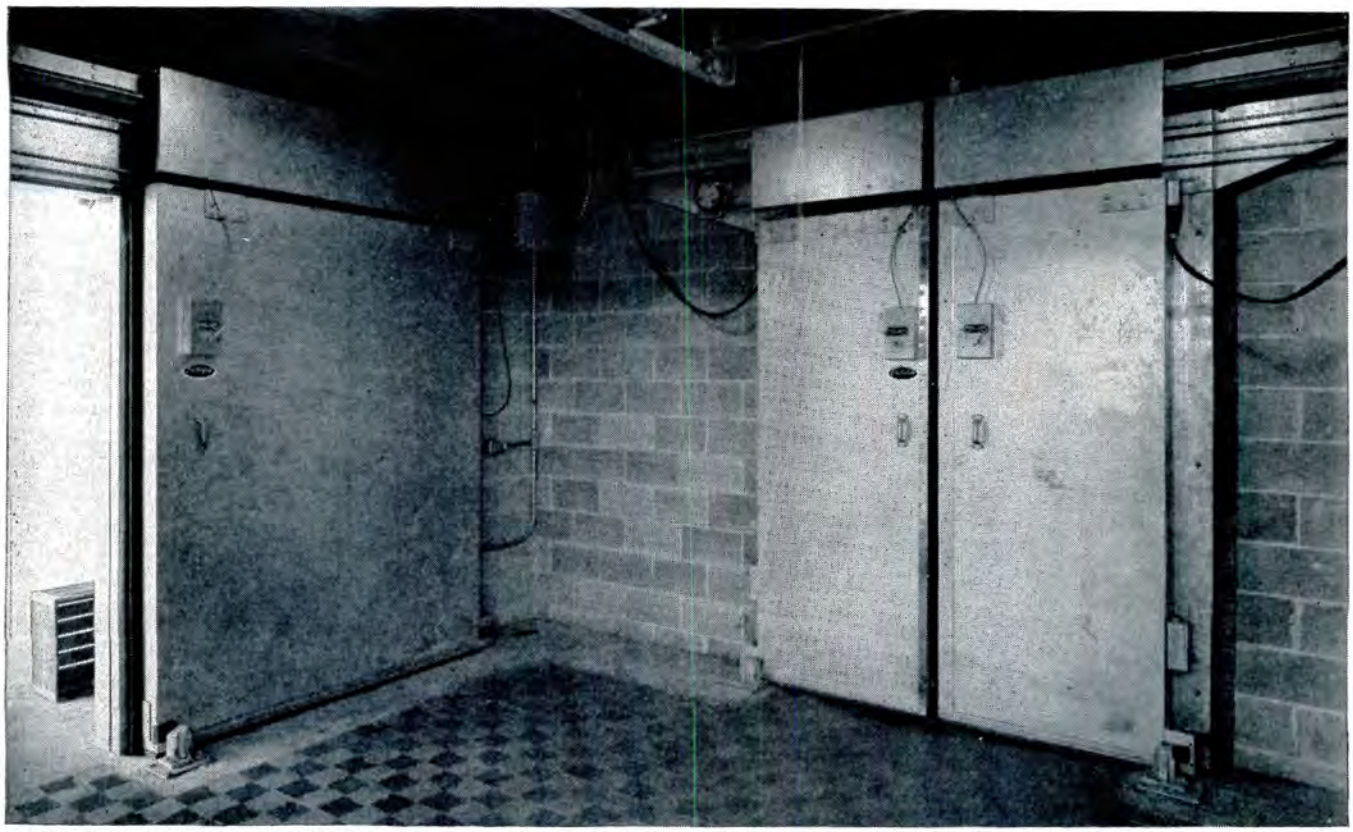
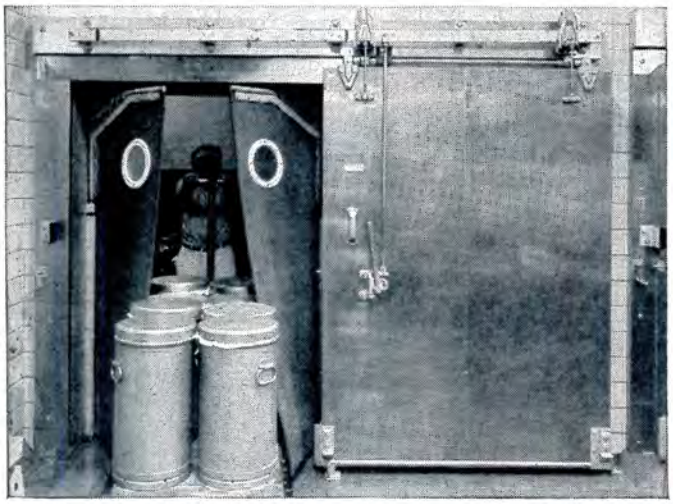


FAST OPENING AND CLOSING. Jamison Electroglide® Power Doors speed traffic to loading dock—single leaf cooler door, left, and bi-parting freezer door, right.

New $3,000,000 automated plant features Jamison Horizontal Sliding Doors



SAVES REFRIGERATION. Jamison Manual Horizontal Sliding Door in combination with self-closing Flexidor®.

RAPID, CONVENIENT LOADING. Jamison Manual Horizontal Sliding doors facilitate loading of dairy products.

• In a dramatic advance toward automated processing of fluid milk and ice cream products, the Borden Company recently completed a new $3,000,000 plant at Milwaukee, Wisconsin. An important feature of this modern plant is a number of Jamison Horizontal Sliding Cold Storage Doors.

More and more, in the design of new, modern facilities like this one, Jamison Doors are specified to save space, minimize refrigeration loss, speed traffic and facilitate handling of products and materials. Get the story of the cost-saving benefits of Jamison Doors from your architect, or write to Jamison Cold Storage Door Co., Hagerstown, Md.

JAMISON
COLD STORAGE DOORS

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: V-423 Autumn Haze, V-427 Romany Beige

Vina-Lux® PREMIERE *Series*

elegant floor beauty that won't "walk off"

. . . because the travertine patterning is distributed through the full thickness of the tile. Premiere Series in Vina-Lux vinyl asbestos tile is a unique combination of subtle styling and rugged resistance to maximum traffic loads . . . delivers so much more value and performance than surface patterns . . . yet costs no more. Specify Vina-Lux Premiere Series, for installation over concrete — above, on or below grade, or over wood or plywood subfloors. Consult Sweet's Catalog — or let us send you samples, color charts and detailed architectural specifications. Azrock Floor Products Division, Uvalde Rock Asphalt Company, 515A Frost Building, San Antonio, Texas.

Magnified view shows pattern distribution through **full** thickness of tile. Available in 1/8", 3/32", 1/16" gauges.

Visit us at
ARA Convention
Exhibit No. 21

another fine floor by AZROCK

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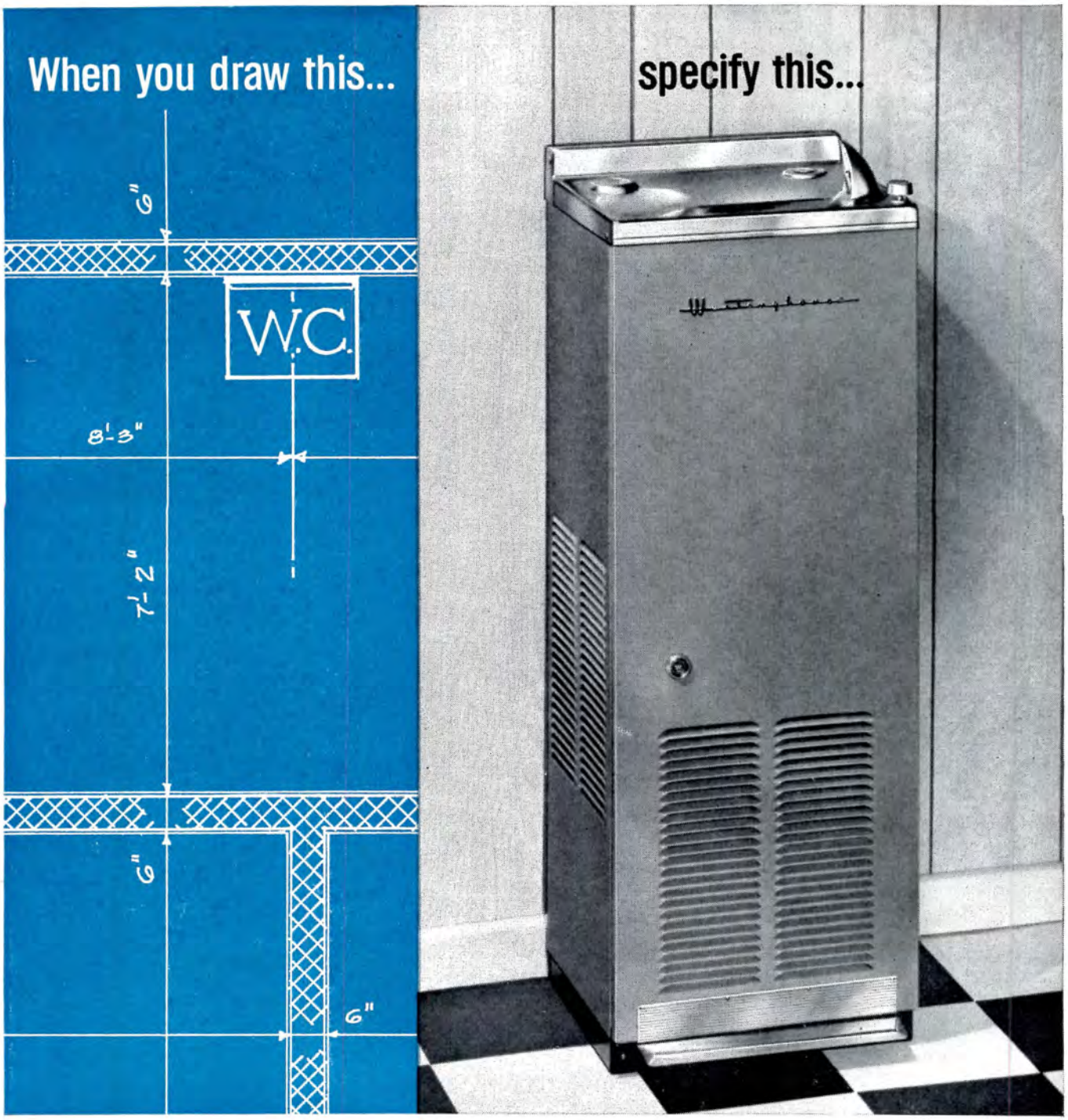
Let us help with the laundry... because American has helped more architects plan more laundries than anybody. We know how architects work and what information they need to design an efficient, space-saving laundry department. We know how laundries work and what type and size equipment is needed in every case. So, when your building project includes a laundry department . . . it's a job for American. Call one of our nearby offices or representatives (see the yellow pages), or write for complete information.

You get more from **American**

American Laundry Machinery Industries, Cincinnati 12, Ohio

See our catalog in Sweet's



Westinghouse Wall Line™ Water Coolers take 26% less space... install flush to wall... anywhere

New Westinghouse WALL LINE water coolers are as clean and functional as today's modern architectural lines. Compact design projects only 12″ from wall, takes 26% less space! No more exposed plumbing or "dirt catching" space behind the cooler. Easier and less expensive to install too, because slip fittings eliminate pipe threading and soldering. Free-standing WALL LINE water coolers available in 6, 8, 11, 15, and 20-gallon capacities... plus "on-the-wall" models, in 7 and 11-gallon capacities, can be mounted at any height to provide the preferred drinking level in schools, offices, institutions. Full 5-year warranty on all functional parts as well as refrigeration system, backed by factory-authorized service everywhere. For more information, call your Westinghouse Water Cooler distributor listed in the Yellow Pages. Westinghouse Electric Corp., Columbus, Ohio. *You can be sure . . . if it's*

Westinghouse

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MOVABLE PARTITION, J-M HIGHWALLS CONFERENCE TABLE, J-M COLORLITH

ACOUSTI-SHELL – new J-M acoustical product-

Acoustical ceilings can now be more than just a plane surface! New J-M Acousti-Shell is a molded unit that rises gently to a 2″ vaulted center.

This third-dimensional effect adds both *height and* interest to virtually any ceiling, as the above photograph demonstrates. The panels also offer excellent sound absorption across the entire audible range.

And because each Acousti-Shell unit is made entirely of fiber glass, it has a flame-spread rating of zero. The base material is sound-absorbing glass fibers . . . the sur-

FLOORING, J-M TERRAFLEX

rings a true 3rd dimension to sound control!

acing material is a woven fiber glass fabric. These are nolded into units 24" x 24" x 2" high, which are of a shell-ke thickness about one-third that of flat sound-control anels. Yet they are strong, rigid and easily installed in a imple suspended grid system.

Standard Acousti-Shell fabric colors are white, blue nd green. On special order, however, the surface fabric nay be dyed in a wide variety of colors or can be printed vith custom designs.

The new Acousti-Shell line also includes flat panels for borders, for areas around columns and beams, for spot-light cut-outs and similar uses.

For more information and a look at this unique new ceiling panel, call your J-M Representative. Or write Johns-Manville, Dept. AR-8, Box 158, New York 16, N. Y. In Canada: Port Credit, Ont. Cable: Johnmanvil.

JOHNS-MANVILLE

ARCHITECTS IN THE NEWS: A.I.D. HONORS YAMASAKI, THIRY; AWARDS TO WALKER, JOHNSON

Forde Photographers

Minoru Yamasaki, A.I.A., has re ceived an honorary membership i the American Institute of Interic Designers for his outstanding serv ice to design both national and ir ternational and for the architectura beauty and structural integrity c his works. A.I.D. President Milto Glaser made the honor known du ing the A.I.D. 31st annual nationa conference held in Seattle.

Mr. Yamasaki was one of three nc in the practice of interior design an decoration to be so honored for serv ices to art and industry. Honorar memberships were also given to **Pau Thiry,** F.A.I.A., primary architec for the "Century 21" exposition, an **Dr. Richard Eugene Fuller,** hono ary A.I.A. member and presider and director of the Seattle Art Mu seum.

Ralph Walker, "architect, urba planner, public servant, scholar an humanist," has been presented th new Founders' Medal by New York New School for Social Research. A the First Founders' Award Dinne held in his honor in May, Mr. Walke was cited for his "contributions t education during a decade as mem ber of the board of trustees and a its chairman from 1956 to 1961."

Philip C. Johnson was awarded a Honorary Doctor of Fine Arts De gree by Pratt Institute, Brooklyn N.Y., at the Institute's 73rd com mencement ceremonies on June 1 The degree recognizes Mr. Johnson "profound contributions to conten porary architecture, his outstand ing buildings, his literature and th ory and his interest in education- all an inspiration to students, facu ties and architects."

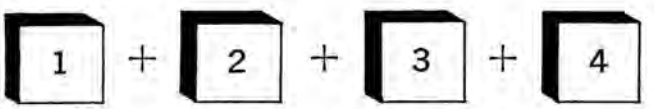
Andrew H. Hepburn, Boston, Mass and **William Wilson Wurster,** Sa Francisco, Calif., both architect were elected to Academicianship the National Academy of Desig New York.

Edgar I. Williams, past president the New York Chapter, A.I.A. and the Architectural League of Ne York, has been elected president the National Academy of Design.

BREAKTHROUGH IN OFFICE COMFORT CONTROL

New Inland Integrated Air Floor System provides COMPLETE CONTROL of indoor climate . . . . . and at LOWER COST than conventional systems.

A new concept in the control of indoor comfort has been developed by Inland engineers. It is a practical, economical system which controls environment *completely*, at costs considerably less than those of conventional heating and air conditioning systems.



The new Inland Integrated Air Floor System combines the functions of four time-tested components to provide simultaneous control of: (1) temperature of air and room surfaces, (2) relative humidity, (3) air motion, (4) bacteria content. What this means to employers and employees alike is clear: better working conditions, increased effectiveness, less absenteeism.

Because it is designed as part of the building, the Inland IAF System delivers all of its benefits at significant savings, both in first and operating costs. Furthermore, it offers the designer new freedom in the creation of healthful, efficient, comfortable interior spaces.

How is this possible? Three years of Inland research have combined (1) a Burgess-Manning radiant ceiling system*, (2) a Kathabar chemical air conditioner†, (3) a standard refrigeration plant and (4) Inland Hi-Bond Celluflor, into an integrated system. The functions of all four harmonize to increase the efficiency of each and to reduce total costs considerably.

Use of radiant ceiling panels and a chemical air conditioner cuts the need for outside air to a fraction of that required by ordinary systems. As a result, all of the circulated air can easily be carried in the cells of Inland Celluflor, with ample room left over for power and signal lines. Building design can be more compact — less space wasted between floors and smaller areas devoted to mechanical equipment. Savings in construction and building materials are significant.

Space is too limited here to explain how the Inland IAF System works, but a sound-slide program has been prepared which tells the story quickly and meaningfully. If you would like your organization to see this program, please write the Milwaukee address listed below or call your local Inland office.

*Burgess-Manning Company, Libertyville, Illinois.
†Surface Combustion Div., Midland-Ross Corp., Toledo, Ohio.

EP-25

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For more data, circle 45 on Inquiry Card

HOW MUCH AUTOMATION IS PRACTICAL FOR YOUR BUILDINGS?

Latest advances mean that today, even in buildings of modest size, the right degree of automated control of temperature, fire, security and other systems may pay off for your clients in as little as 3 to 5 years.

This report from Honeywell shows why and how.

Today's building more and more a machine

The next 6 minutes could be worth thousands of dollars to every client trying to hold down running expenses of a building in the face of the relentless cost-price squeeze.

Whether a public or private building —office, store, factory, school, college, hospital or hotel—it's a machine almost as much as a structure, with mechanical and electrical systems representing up to 50% of its cost.

As a machine, it can now be automated far more, and far more profitably, than most people realize—especially those who have to pay the bills for its operation and maintenance.

New: Automation for optimum results

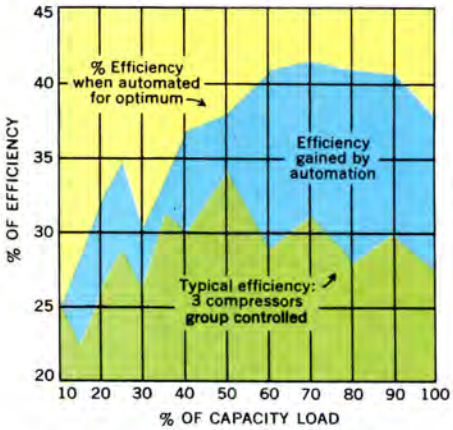
Today your clients can have the benefit of automation concepts that a few years ago were too costly or unavailable.

Chief of these is automating a building for *optimum* results—wringing *maximum* efficiency from equipment to cut a surprising waste in manhours, plug needless leaks in other costs including power and fuel, and assure the utmost in comfort, safety, and efficient working conditions.

Here's what we mean by automating a building

A simple central control panel is, of course, a big step forward in automating a building. You can centralize control of any or all systems such as air conditioning; fire detection and alarm; security against intrusion and theft; clock systems; equipment surveillance; similar functions. And you can coordinate and integrate them for vastly higher efficiency.

Today you can also start power-consuming equipment such as compressors in just the right sequence and loading combinations for optimum efficiency at any demand. The following graph suggests the savings this can make for a client. It shows the efficiency increase estimated for an actual building by automating control of 3 compressors for the most efficient performance under any load.



Imagine what such a boost in efficiency would do for a client's building. Even if it's much smaller and less complex than this one, automation could well offer extraordinary savings.

The only question today is how *much* automation is *most* profitable. And today's decision may differ sharply from that of a few years ago.

Simpler systems for small buildings, robots for big ones

Five years have seen great advances—new techniques, new equipment, new miniaturization and new knowledge gained in hundreds of installations across the nation.

For smaller buildings, there are new *and simpler* central-control systems; for large buildings, computer-guided robots.

Such a robot can analyze scores of variables including weather, internal load, fuel costs—and instantly allocate the load to equipment for the desired cooling at least expense. So new developments make *more* automation practical for buildings of *all* sizes—new or being modernized.

Often pays for itself in as little as 3 to 5 years

By cutting costs and boosting efficiency, automated central control often pays for itself so swiftly, in as little as 3 to 5 years, that it's almost unbelievable.

Yet many reports to Honeywell confirm it and show why. For one thing, it's now simpler to automate only the systems your client needs, in any combination. Some of the functions you can automate include:

Temperature, humidity: Monitored constantly. Remote adjustment possible for hundreds of points or just a few.

Equipment surveillance: Automatic pinpointing of off-normal conditions eliminates human error. Includes monitoring of steam and water pressures, etc.

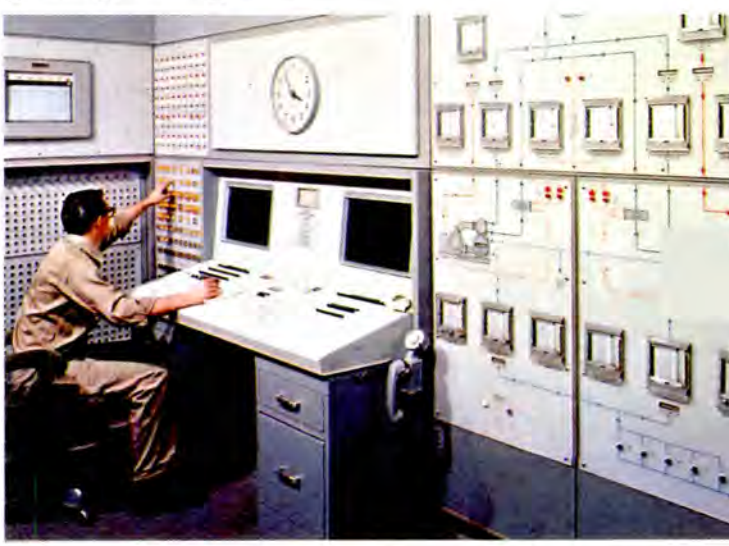
Building security, fire alarm systems: New electronic, sonic and other detectors that see and hear in the dark or far away; spot even a wisp of the smoke that portends a fire; or feel the presence of an intruder even approaching a security zone.

Clock systems and programming: Start-stop of equipment at the proper time, in the proper sequence. Built-in memories to do the right thing after power failure.

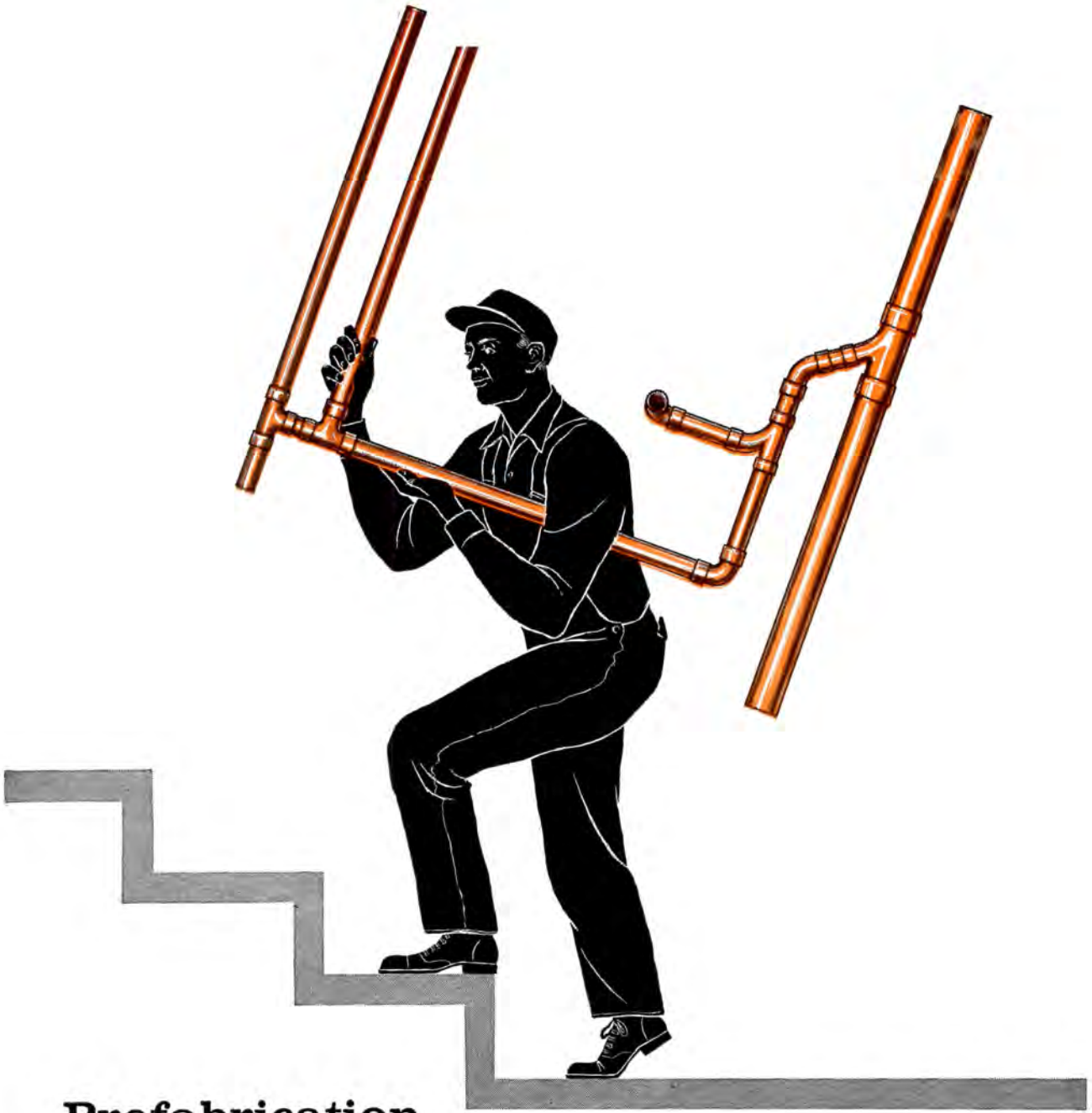
System analysis: Instrumentation to enable operation of systems at optimum.

Automatic data logging: Typed records for system analysis, for costing-billing.

For towering skyscrapers



In Chase Manhattan bank, New York, two Honeywell Selectographic DataCenters supervise air conditioning, many another function. An 11th floor center handles lower part of building, a 31st floor center the rest of the 64 stories. One man in 11th floor center can view any of 17 floor plans, 37 systems; stop any of 71 fans, 16 pumps; check temperatures in 400 areas, raise or lower them in 200; make a continuous record of any 20 of 732 key temperatures. A conventional panel for the same duties would be 70 ft. long. This Honeywell setup is less than 17 ft., including 732-station recorder and other panels. In many smaller buildings, Honeywell's Supervisory DataCenter panels of more conventional design are a practical choice for automation.



Prefabrication

... another big advantage—when you install Streamline® copper tube and fittings for drainage plumbing

When you use Streamline tube and fittings on a job, even complex plumbing trees can be easily handled by one man. A 20′ length of corrosion-resistant type DWV tube weighs only 34 lbs., 1/5th the weight of old-fashioned rustable material. Pre-assembling copper is easy in the shop or at the site—and requires only a few on-the-job connections to complete the installation.

Joints aren't affected by vibration in transit, either. Work is easier, too, because there's no caulking, threading or heavy wrench work to do when you use Streamline solder-type fittings and tube that fit together perfectly because they're *made for each other.*

Next time—install Streamline copper tube and fittings—the modern material for both supply and drainage.

Write today for new Catalog S-361

MUELLER BRASS CO. PORT HURON 8, MICHIGAN

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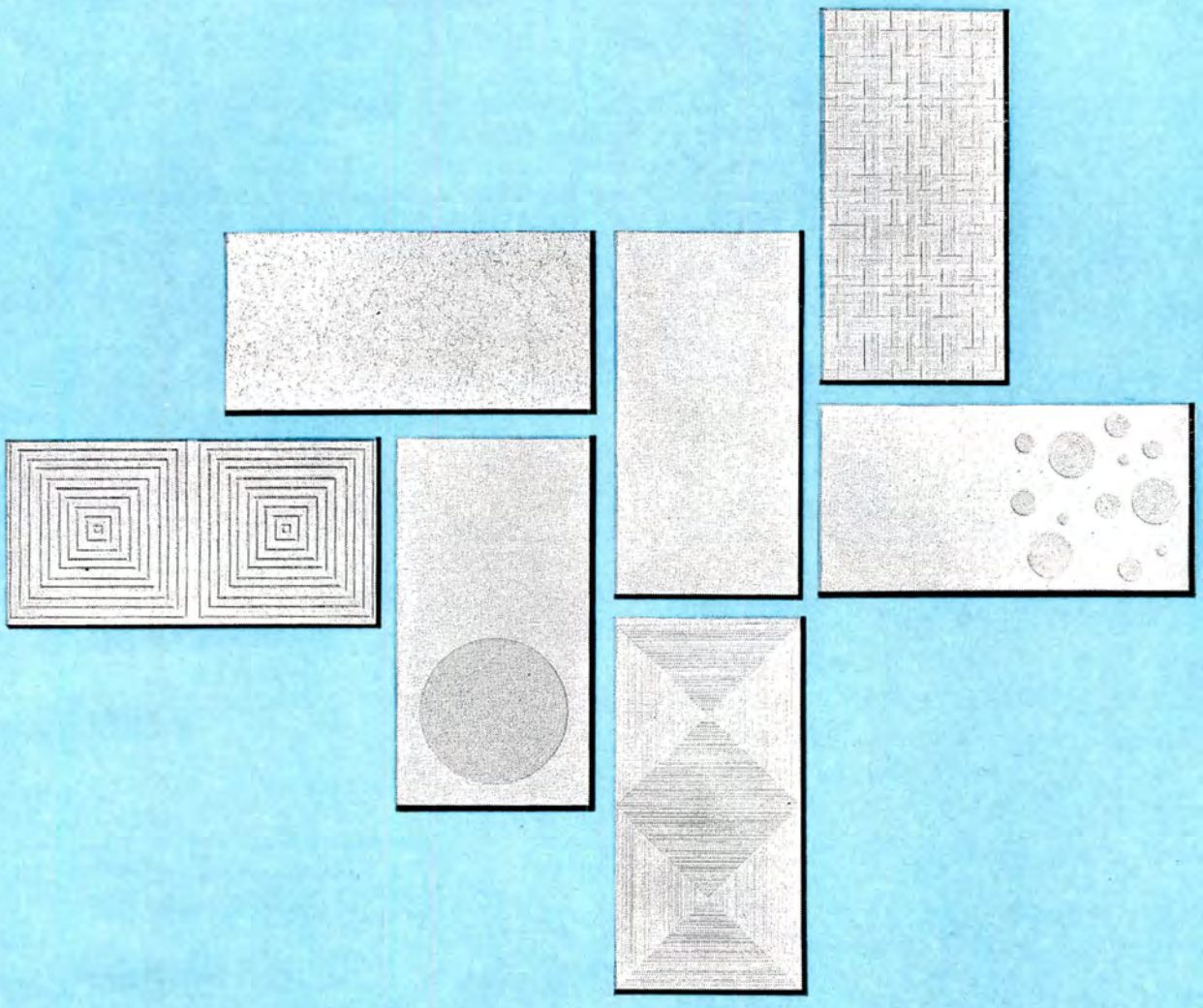
NEW *Stran-Tex* **PATTERN**

provides sophisticated beauty for large ceiling areas . . . one of the new patterns in the 1962 line of G-B ULTRACOUSTIC Ceiling Boards.



G-B ULTRACOUSTIC®
Fiber Glass Ceiling Boards

Six Sculptured, Three-Dimensional Patterns

The new G-B ULTRACOUSTIC Ceiling Board line offers unlimited design possibilities for suspended acoustical ceilings. Each pattern is excitingly new, original in style, designed to harmonize with a variety of interior decors. Through the interplay of lighting on the richly-sculptured surfaces, you can achieve many new and unusual ceiling design effects.

G-B ULTRACOUSTIC Ceiling Boards, made entirely of bonded fiber glass, provide maximum acoustical efficiency (.80 - .90 NRC). They are rated incombustible when tested in accordance with procedures established by the Underwriters' Laboratories and Federal Specification SS-A-118b. The pleasing, off-white finish has a light reflection rating exceeding 75%. The panels are available in either 24" x 24" or 24" x 48" modules. Write today for a new, fully-illustrated G-B ULTRACOUSTIC Ceiling Board brochure.

GUSTIN-BACON *Manufacturing Company* GUSTIN gb® BACON

224 W. 10th St., Kansas City, Mo.

EDUCATION NEWS: DIETZ NAMED DEAN AT WASHINGTON U.; BUSH-BROWN IS R.I.S.D. PRESIDENT

Robert H. Dietz, professor of architecture and urban planning at the University of Washington, will become dean of the college next fall. A member of the faculty since 1948, Professor Dietz succeeds Dr. Arthur P. Herrman, who asked to be relieved of his administrative duties as dean to devote his time to teaching and research.

Since 1960, Professor Dietz has been chairman of the graduate program in the College of Architecture and Urban Planning and chairman of the design program committee. He is a director of the Association of Collegiate Schools of Architecture and a member of the National Architectural Accrediting Board.

Dr. Albert Bush-Brown, author, editor, architectural historian and critic, was to become on June 30 the third president of the Rhode Island School of Design, upon the retirement of Dr. John R. Frazier.

Paone

Presently associate professor of architectural history and executive officer of the Department of Architecture at Massachusetts Institute of Technology, Dr. Bush-Brown says of his plans as R.I.S.D. president, "I intend to develop R.I.S.D.'s unique personality, a four-year college dedicated to immersing imaginative students daily in the adventures of design, so that they all understand the new scale of artists' responsibility: the urban community, whatever part they contribute."

Bernd Foerster, Morton C. Gassman and **Robert F. Winne** of the faculty in the School of Architecture at Rensselaer Polytechnic Institute, Troy, N.Y., were slated to become associate professors of architecture on July 1.

Thomas A. Briner, San Luis Obispo, Calif., has been awarded the $5,000 Lloyd Warren Fellowship, 49th Paris Prize in Architecture, in the annual national competition of the National Institute for Architectural Education.

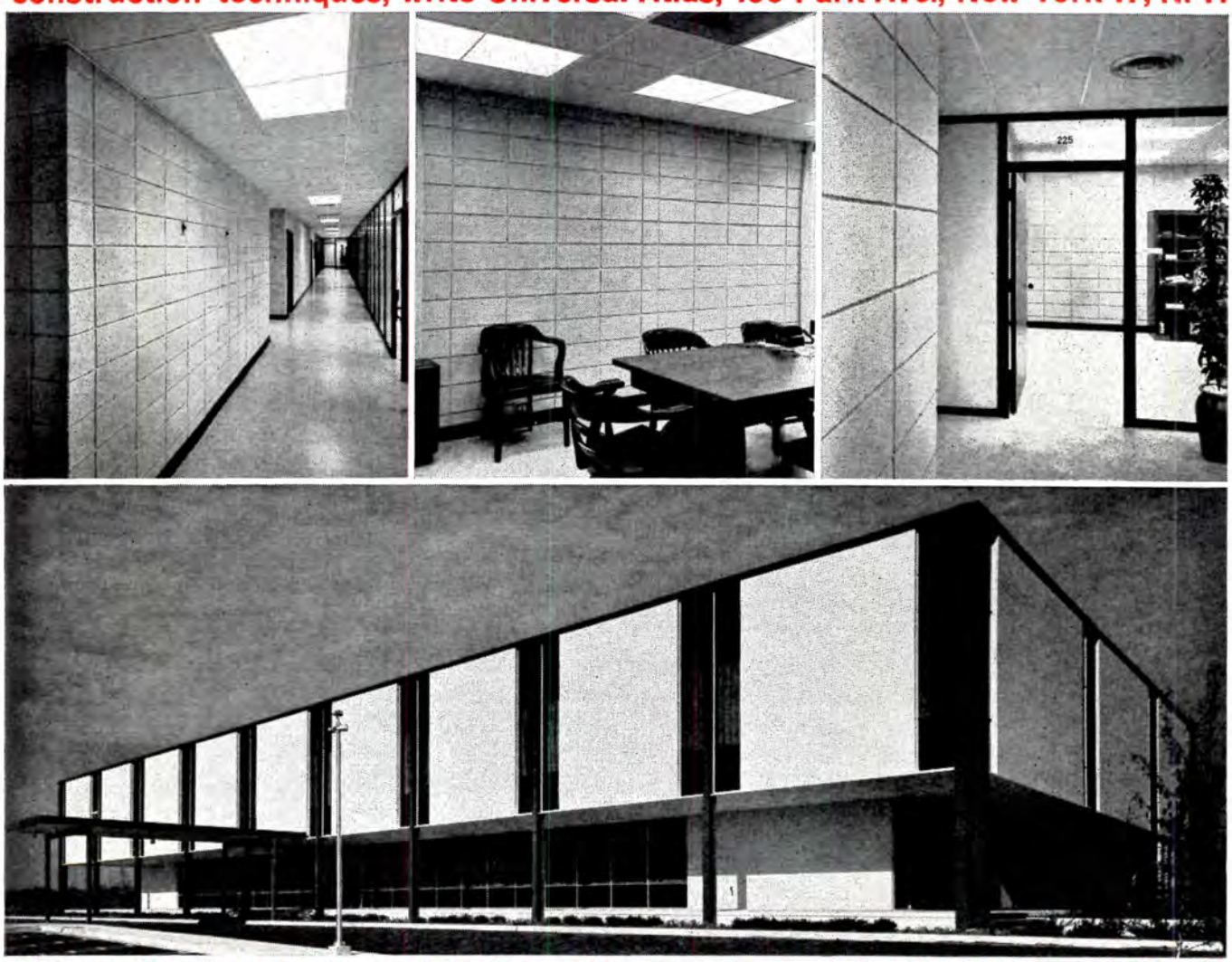
Mr. Briner, instructor in the Department of Architectural Engineering at California State Polytechnic College, is interested in making objective studies and analyses of urban public spaces, leading to a criteria or standard for *"Urban Design."*

Subject for the three-day N.I.A.E. competition was the redevelopment of New York's Welfare Island as a recreational area. The final competition, in which 33 participants represented 19 schools, involved a hotel design.

The First Alternate, who will receive $1,000 for three months study abroad, was James Byron Bell Jr.

← For more data, circle 54 on Inquiry Card

ı architect's office is his showcase. This modern office building planned for its own use by J. E. Sirrine Company, Greenville, South Carolina architects and engineers, exemplifies the organization's imaginative and economical use of concrete. For example, exposed concrete block was left in its natural finish to provide a practical, yet attractive, interior wall treatment. And prestressed concrete double T's were utilized as floor slabs to help speed construction. Today, architects are designing more beautiful structures at lower costs with concrete masonry, precast concrete panels and facings, prestressed concrete units and reinforced structural concrete. For information about cements and concrete construction techniques, write Universal Atlas, 100 Park Ave., New York 17, N. Y.



Universal Atlas Cements were used for all concrete and mortar in constructing this office building in Greenville, S. C. General Contractor: Yeargin Construction Co. Concrete Supplier: Greenville Concrete Co.

USS Universal Atlas Cement
Division of
United States Steel

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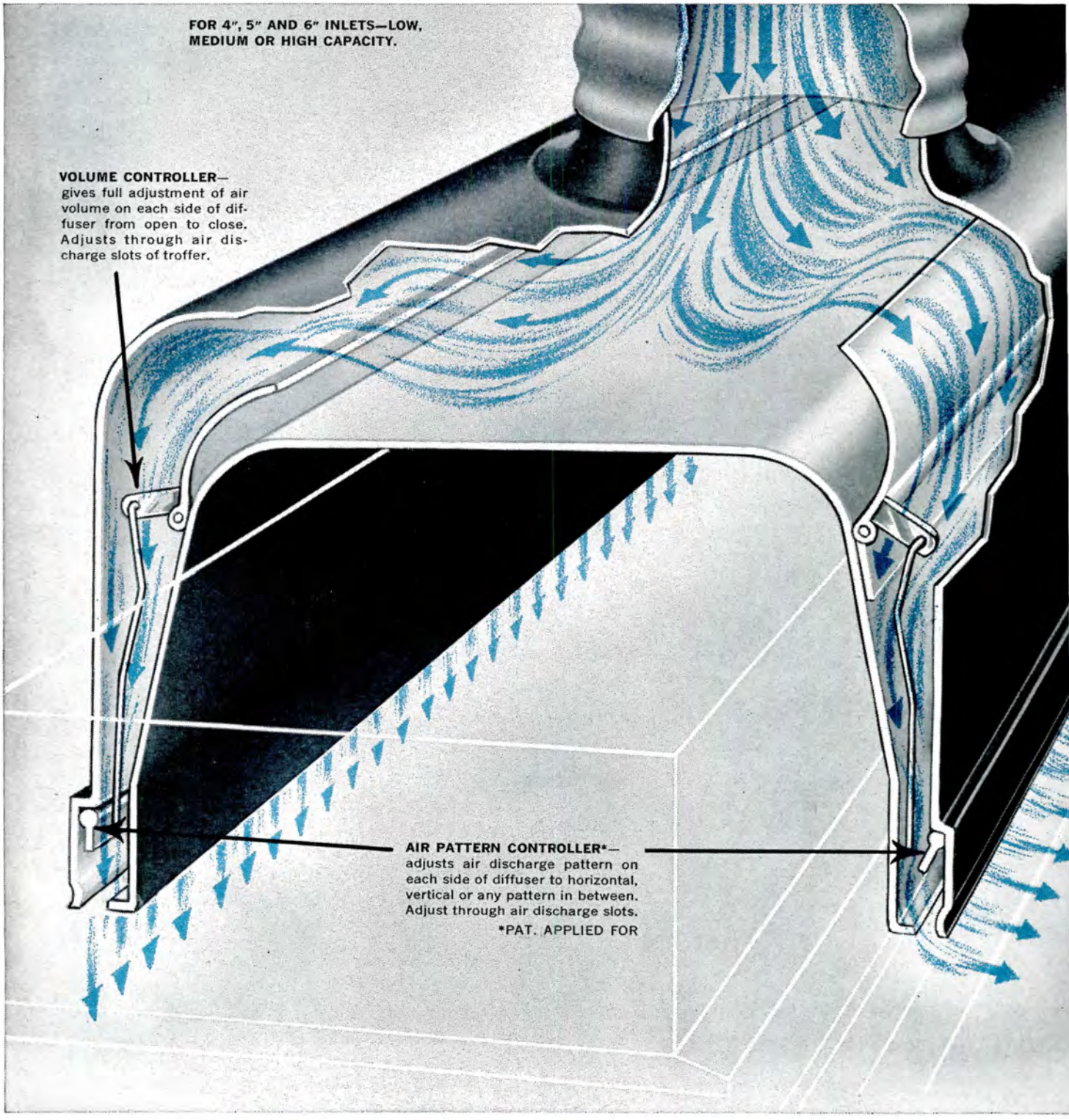

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NEW *complete line of* CEILING DIFFUSERS

Today's first for unrestricted use with modified light troffers; superior air distribution on any application

Here, for the first time, is a line of air diffusers that can be specified *entirely independent* of the light troffer* selected! This means architects, engineers and contractors can now be sure of the finest air distribution . . . *regardless of modified troffer used . . . regardless of ceiling application.* *(Contact Titus reps for names of qualified light troffer manufacturers.)

LOOK AT THESE BENEFITS YOU GET ONLY WITH THE NEW TITUS AIR DIFFUSING UNITS:

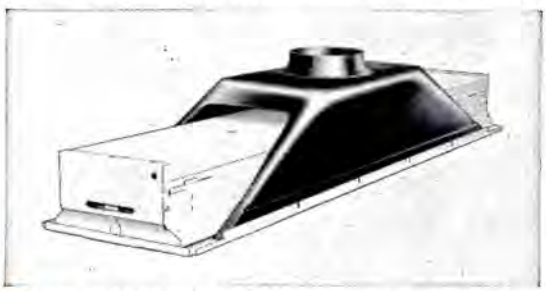
1. Completely adjustable air pattern. The air pattern on each side of each Titus unit can be quickly, easily adjusted to a horizontal discharge, a vertical discharge, or to any pattern in between, to exactly suit the space requirements. Simply adjust pattern controller through troffer air discharge slot for pattern desired.

2. Complete air volume control . . . from open to closed position. Adjusts through air discharge slot of troffer. Both air pattern controller and volume controller can be adjusted anytime before, during, or after diffuser installation.

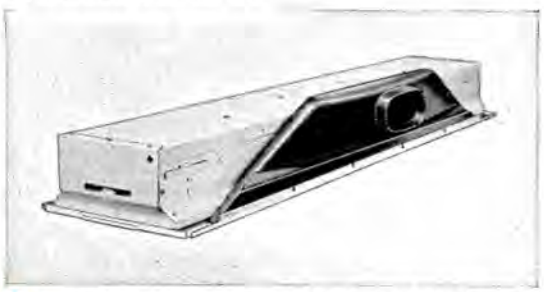
3. Diffusers are of one-piece, air-tight construction. This means faster, easier, lower-cost installation—*maximum isolation of air diffuser from light troffer.* Because diffuser is independent of troffer, heat from troffer is dissipated uniformly to ceiling space—no supply or return air can enter troffer. This assures maximum light output and color stabilization.

4. Today's only complete line. One-piece models to fit every need. Furnished in units that feed air from top, or in single and double units that feed air from side. Models to fit 1 x 4 and 2 x 4 light troffers.

Don't settle for "second best" air distribution . . . SPECIFY TITUS DIFFUSERS AND BE SURE OF *THE* BEST . . . regardless of modified light troffer you select.



● **MODELS LT-14 and LT-24.** For 1 x 4 and 2 x 4 troffers. Feed from top. 4″, 5″ or 6″ inlet . . . low, medium or high capacity. Each side has individual, fully adjustable air pattern and air volume control. Use as supply or return units.



● **MODEL LT-10.** For use as single unit or double side unit. Individual feed, individual air pattern and volume control. Can be used with both sides supply or return . . . or with one side supply and other return. Snaps into troffer.

MAIL COUPON FOR NEW CATALOG

TITUS MFG. CORP., WATERLOO, IOWA
Branch Mfg. Plants — Hialeah, Fla., Terrell, Texas

( ) Rush new Catalog on Titus Ceiling Diffusers for *unrestricted* use with light troffers.

( ) Have representative call.

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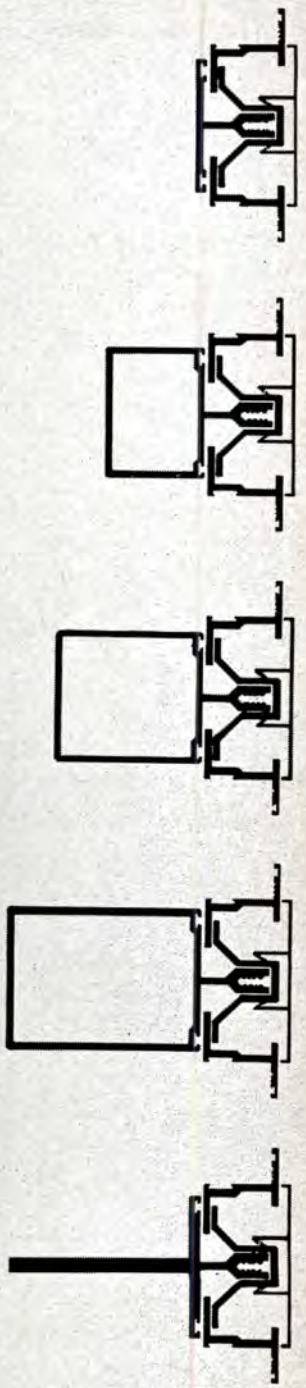
CUSTOM FACE EFFECTS

for the design man with standard MARMET AP's

Highland Hospital
Beacon, New York
Architect:
Cannon, Thiele, Betz & Cannon
Niagara Falls, N. Y.



choice of mullions and cross members

Even on tightly budgeted jobs, MARMET architectural projected series gives you full freedom of design on face effects with a standard window system. A whole array of mullion and cross member shapes, varying in depth of section (as shown at right) offer a choice of final effect for varying shadow patterns on the building face.

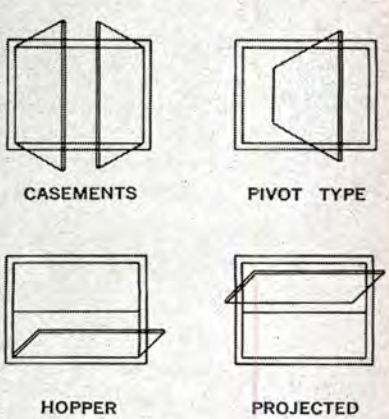
Selection of operating sash includes all of the basic types illustrated at right, in two series. Windows are 1½″ in depth in the 5142 series and 2⅛″ in depth in the 5212 series. Tubular sash is available in either series for ventilating lites where window design requires a large expanse of glass. In AP's or in Curtain Wall, the flexibility of MARMET window systems gives you monumental treatment at standard engineered system's cost. For full freedom of design on a tight budget . . . plan to specify MARMET for your next job.

For additional information on the complete line of MARMET products — consult Sweet's Catalog File No. 17a and 16a or write to MARMET Mar Mar

MARMET CORPORATION

300-H Bellis St., Wausau, Wis.

CHOICE OF OPERATING LITES

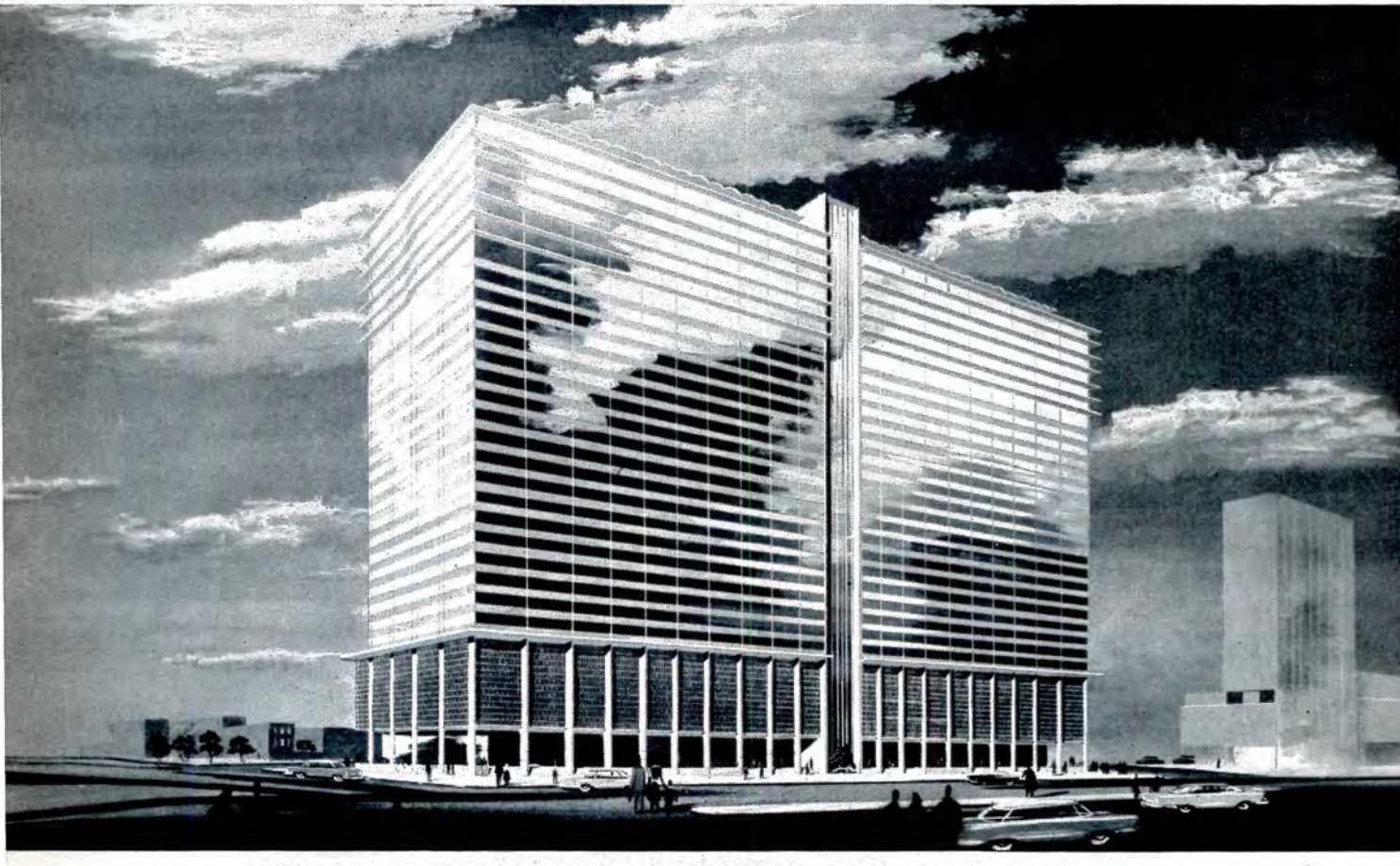


SERIES 1000 DOORS AND ENTRANCES

Designed for the ultimate in appearance and function, MARMET monumental, wide stile doors are custom engineered to fit any entrance requirement. Fabricated from ⅛″ extruded aluminum alloy, all doors and frames have MARMET's full weld construction, leaving no unsightly halos, only a neat hairline joint. Frame members are available with special reinforcing if desired. Snap in door stops are weatherstripped as specified.

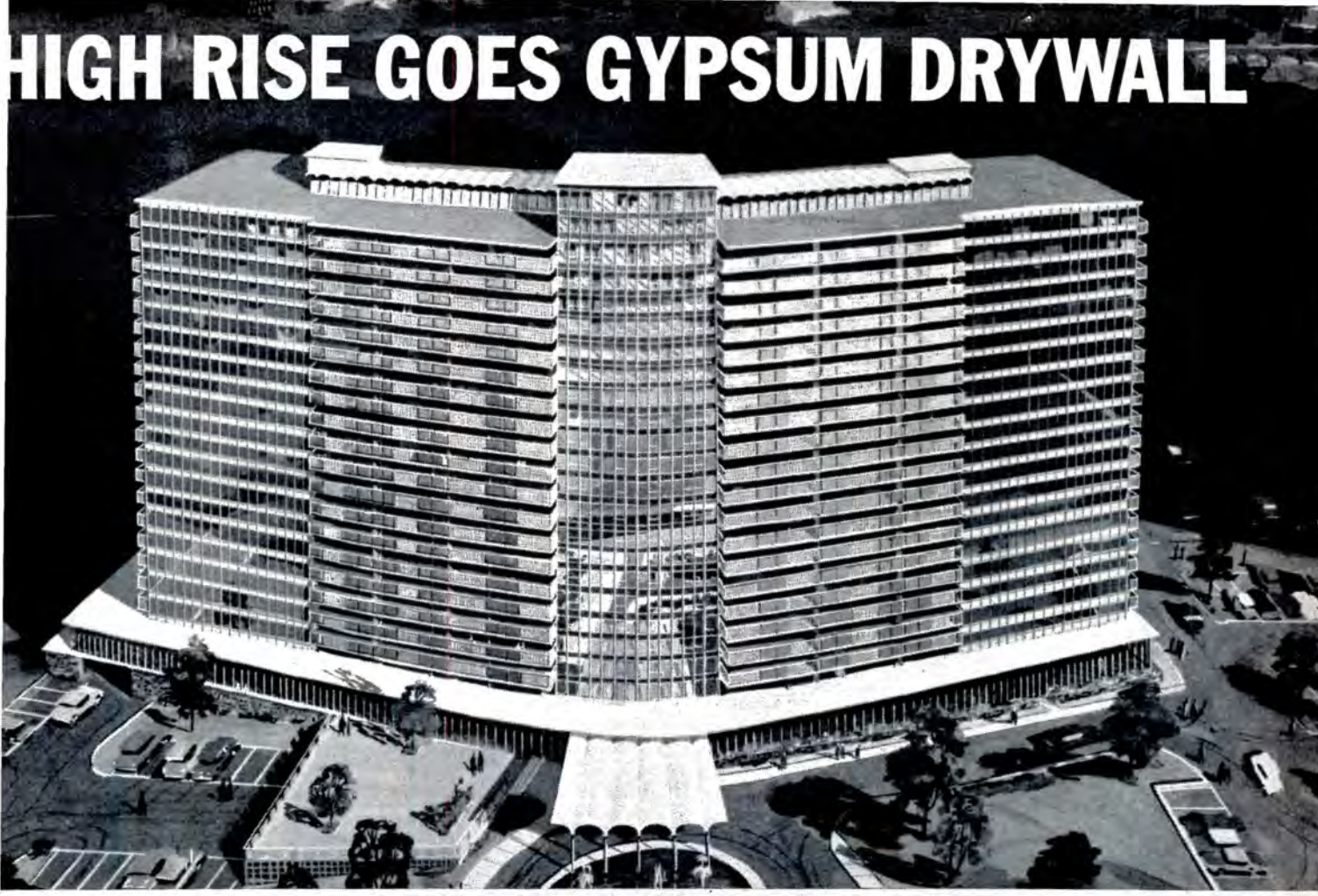
The Philadelphia Story..

THE PHILADELPHIAN—20 stories, 776 units—400 car garage



PENN TOWERS—30 stories—518 units—4 floors for commercial use—135 car garage

HIGH RISE GOES GYPSUM DRYWALL



PARK CITY WEST—21 stories—350 terraced units—200 car garage

The face and skyline of historical Philadelphia are being changed by new, magnificent commercial and residential buildings. Impressive and beautiful structures of glass and metal, incorporating original designs for comfort, convenience, pleasurable living are rising rapidly — among them the works of imaginative and pioneering architect, Samuel I. Oshiver of Samuel I. Oshiver and Associates.

In these luxurious yet unusually functional high-rise apartments, Bestwall Gypsum Wallboard, reinforced with glass fibers, is being used for construction of the most advanced systems of walls, ceilings and partitions.

Bestwall Gypsum Wallboard in various assemblies meets the requirements of the Owner, Architect, General Contractor, Drywall Contractor, City Building Codes, FHA, Loaning Agencies by providing substantial, long-lasting constructions erected at low cost with speed and minimum waste, reducing sound transmission, and achieving 1, 2 or 3 hour fire ratings.

Bestwall provides qualified Systems Engineers to assist in all Gypsum Wallboard Partition Systems whether single layer, multi-layer laminated, metal stud screw-on application, or metal framing movable. Call our nearest office or Bestwall Gypsum Company, Ardmore, Pa.

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BESTWALL
BUILDING PRODUCTS

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TWO COMPETITIONS UNDERWAY: SCHOOL FALLOUT SHELTER AND "SYMBOLON" FOR CINCINNATI

The Department of Defense is sponsoring a National School Fallout Shelter Design Competition whose objectives are "to serve the national interest by encouraging the creation of shelter designs which will: conserve materials, manpower and money; create fallout protection in the maximum area of the school; incorporate attractive features; and produce structures of esthetic appeal."

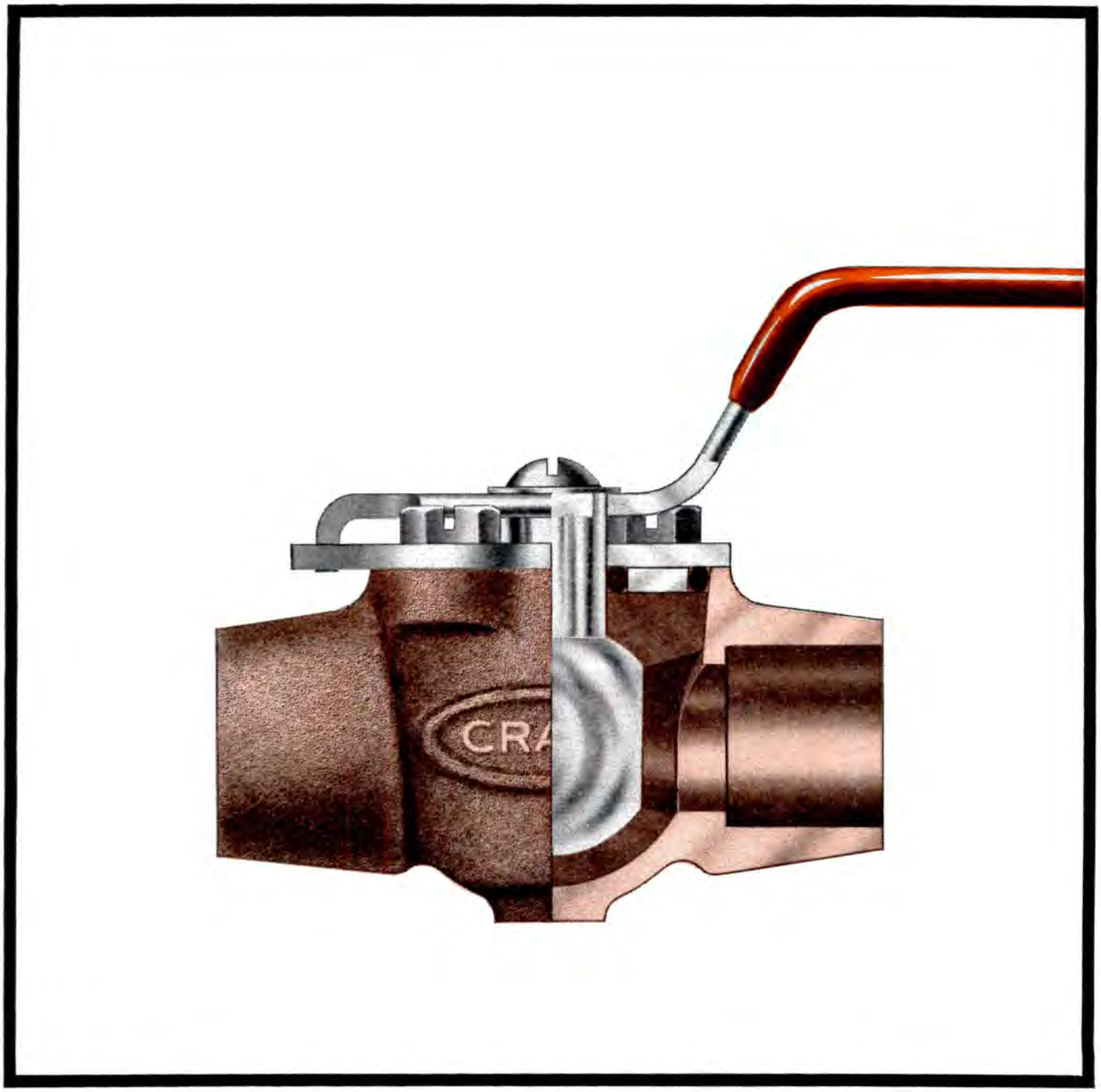
Awards, to be announced on December 1, 1962, will be: Grand Prize of $15,000; seven Regional Fir Prizes of $4,000 each; eight Regio al Second Prizes of $1,000 each; ar eight Regional Third Prizes of $5(each.

Serving on the jury are Willia H. Byrne, president, American S ciety of Mechanical Engineers, Ne York; William W. Caudill, F.A.I.A chairman, Department of Archite ture, Rice University, Housto Tex.; Harold D. Hauf, A.I.A., vi president, Charles Luckman Assoc ates, Los Angeles; Paul S. Vishe Deputy Assistant Secretary of D fense for Civil Defense, Departmer of Defense, Washington, D.C. an Linn Smith, F.A.I.A., president, Lin Smith Associates, Birmingham, Mic Professional adviser is A. Stanley M Gaughan, A.I.A., Washington, D.(

Three hundred and eighty four re istrants from 40 states have entere the Cincinnati competition for th design of a symbolic structure i the Riverfront Historical Park o that city. Sponsored by the Cincin natus Association, a private nonprof it organization established in 192(the "Symbolon" competition asks th creation of a permanent symboli structure which will "symbolize i architectural form, with possible bu not mandatory inclusion of land scape features, sculpture and othe art media, the history, the characte of the present city and its future.

Jury members are Gordon Bun shaft, F.A.I.A., Skidmore, Owings Merrill, New York; Grady Clay, au thor, journalist, *Louisville Courier Journal*, Louisville, Ky.; Thoma Creighton, F.A.I.A., editor, *Progres sive Architecture;* Cornelius J Hauck, president, Board of Par Commissioners, City of Cincinnati Douglas W. Orr, F.A.I.A., New Ha ven, Conn.; Ernest F. Pickering F.A.I.A., dean, College of Design Architecture & Art, University o Cincinnati; Paul Rudolph, A.I.A chairman, Department of Architec ture, Yale University.

The winning competitor will b given the commission to design an provide the architect's services an be paid an advance fee of $6,50(Awards to the competitors placin second and third will be $2,500 an $1,000 respectively. Announcement of the awards will be made in mid October.



ere's the ball valve you've been waiting for!

Low initial cost. Many economies. Countless uses. These are what the newly developed Crane "Gem" Bronze Ball Valves offer you.

The "Gem"* has innumerable service applications. In addition to its industrial uses, it is ideally suited to a wide range of domestic applications, such as water, non-flammable liquids and gases, air, steam, etc.

Note the ball. It's enclosed in Buna-N for long wear and positive protection.

You can replace the entire capsule almost as easily as a light bulb. Simply remove the two bonnet screws and lift up on the handle. No wrench needed. And the valve body stays in the line.

Just give the lever handle a ¼ turn to open or close the valve. The fluid flows straight through (no pockets!). The valve has only ten parts, and the only part that moves is the ball itself.

The soldered-joint end valve pictured above is No. 2182. Also available with screwed ends—No. 2180. Both come in ½" and ¾" sizes.

Pressure and temperature ratings for these valves are 200 p.s.i., cold water (non-shock); 150 p.s.i., water (non-shock) at 200°F max.; 15 p.s.i., saturated steam.

For specific rating and application details, contact your Crane distributor. Or write to Crane Co., Dept. AR, Industrial Products Group, 4100 So. Kedzie Ave., Chicago 32, Illinois. *Pat. Pend.

CRANE

VALVES • PIPING • PUMPS • ELECTRONIC CONTROLS • FITTINGS
PLUMBING • HEATING • AIR CONDITIONING • WATER TREATMENT

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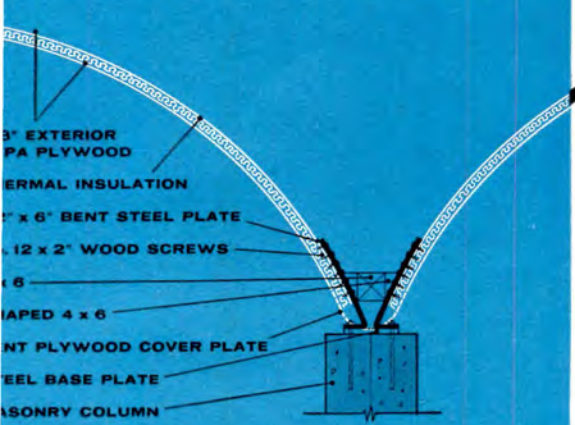
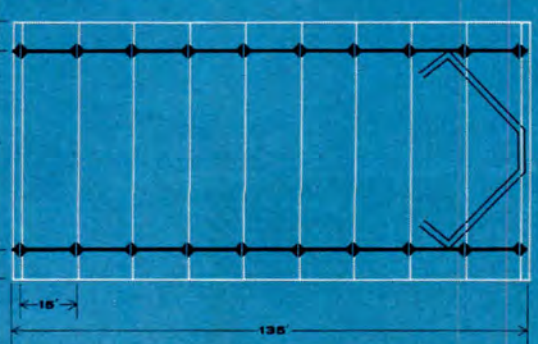
the most exciting ideas take shape in fir plywc

PICAL VAULT CONNECTION AT SUPPORTS



ROOF FRAMING PLAN



ST. PAUL'S LUTHERAN CHURCH

LOCATION:	MONROVIA, CALIFORNIA
ARCHITECTS:	SMITH AND WILLIAMS SOUTH PASADENA, CALIFORNIA
FABRICATOR:	BERKELEY PLYWOOD COMPANY SAN LEANDRO, CALIFORNIA

NINE PLYWOOD VAULTS, seeming to float on panels of light, give this church its simple grace and elegance. They provide the additional, practical advantages of construction economy and a 51x135 ft. support-free interior.

Each vault rises to an apex of 27 feet and spans an area 15x51 ft.—longest span on record for an unsupported plywood vaulted roof system. The roof components were prefabricated, and were so carefully engineered that installation took only seven hours.

This church is one more example of the striking new architectural forms that are becoming a practical possibility with plywood: high in structural strength and integrity, economical of labor and materials, and offering superior design flexibility. For more information on plywood structural systems, write (USA only) Douglas Fir Plywood Association, Tacoma 2, Washington.

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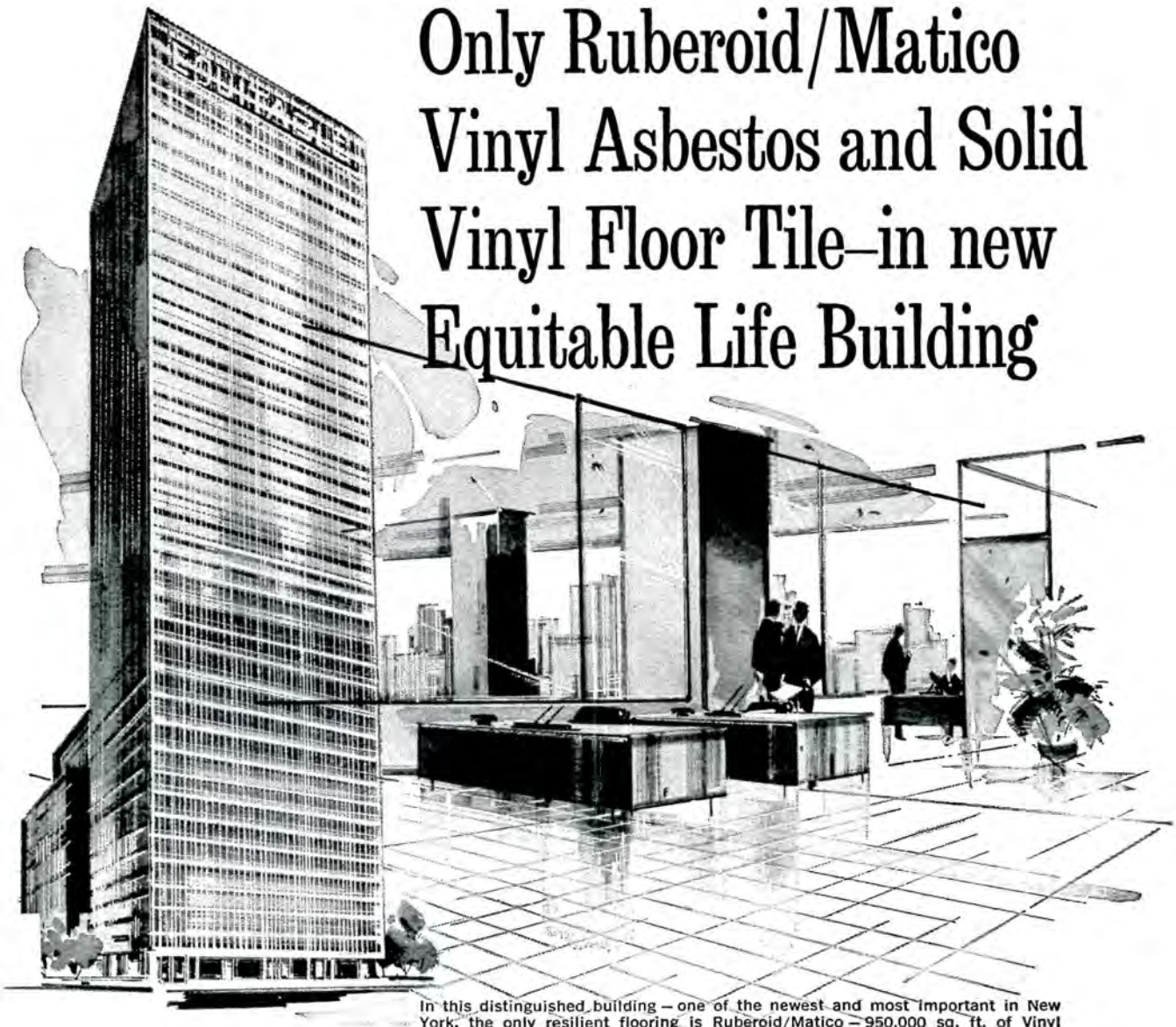
Only Ruberoid/Matico Vinyl Asbestos and Solid Vinyl Floor Tile–in new Equitable Life Building



In this distinguished building – one of the newest and most important in New York, the only resilient flooring is Ruberoid/Matico – 950,000 sq. ft. of Vinyl Asbestos and 60,000 sq. ft. of Solid Vinyl. Opened in October 1961–The Equitable Life Building is located at 51st & 6th Ave. Architects: Skidmore, Owings & Merrill. Builders: Turner Construction Co. Flooring Contractor: Circle Floor Co., Inc.

Now–57 colors and styles in Vinyl Asbestos... A complete new color line meeting every specification

The new Ruberoid/Matico line is the result of Ruberoid's continuing research to present the finest styling and performance in Vinyl Asbestos. All popular styles are included: Marbleized, Confetti, Tweed, Maticork, Wood hues and Lode o' gold patterns. Ruberoid/Matico's improved Vinyl Asbestos gives you smooth, tight surface, ease of cleaning, long wear, increased flexibility. It resists grease and acids – has greater resistance to indentation, too! True dimension, sharp, clean corners, assure flawless installation. Ask your Ruberoid/Matico distributor or representative for further information.

RUBEROID MATICO

Vinyl Asbestos Floor Tile

A quality product of The RUBEROID Co.
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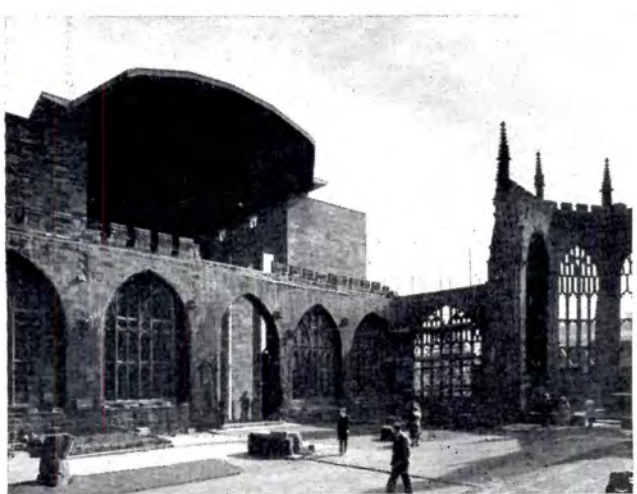
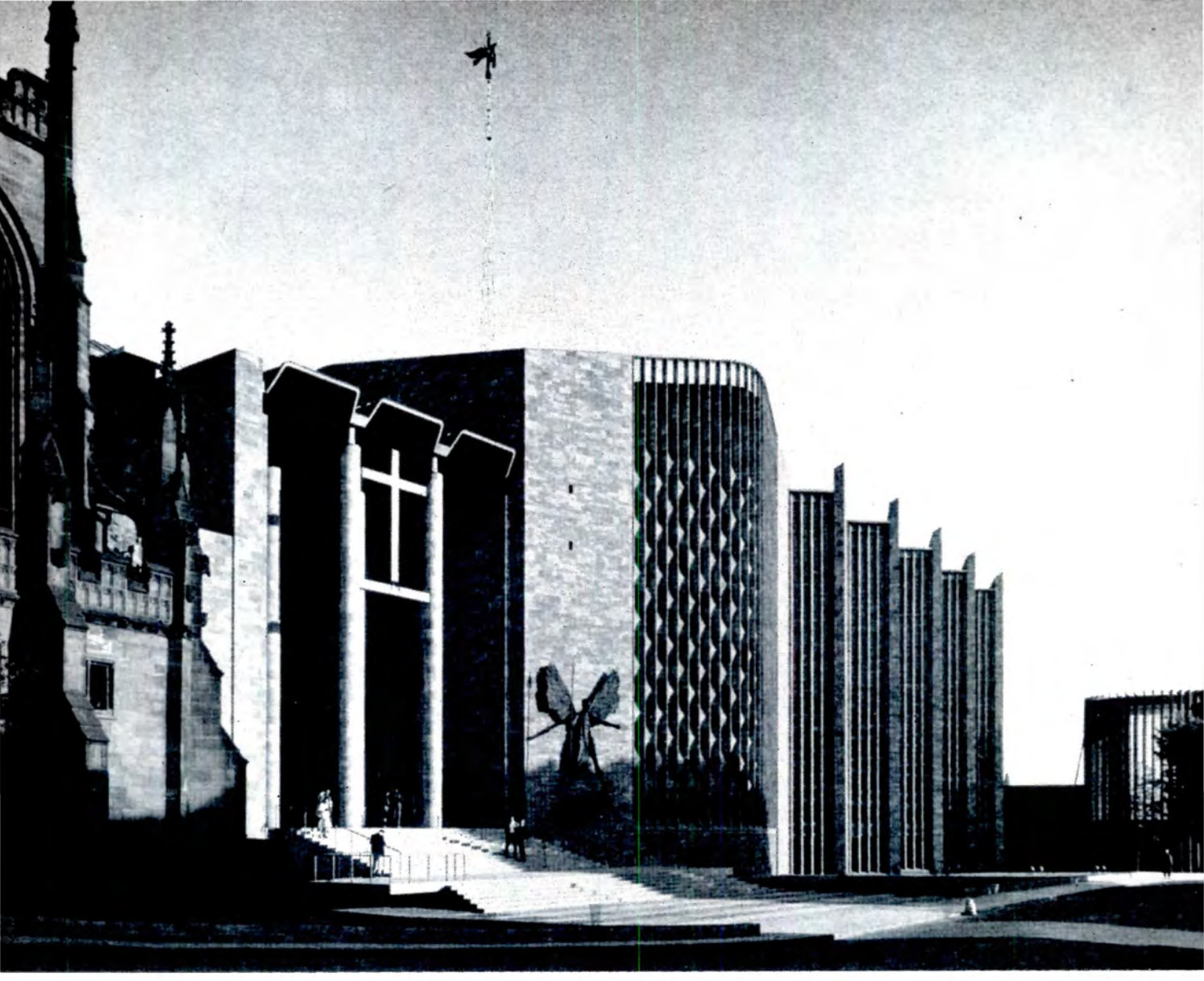
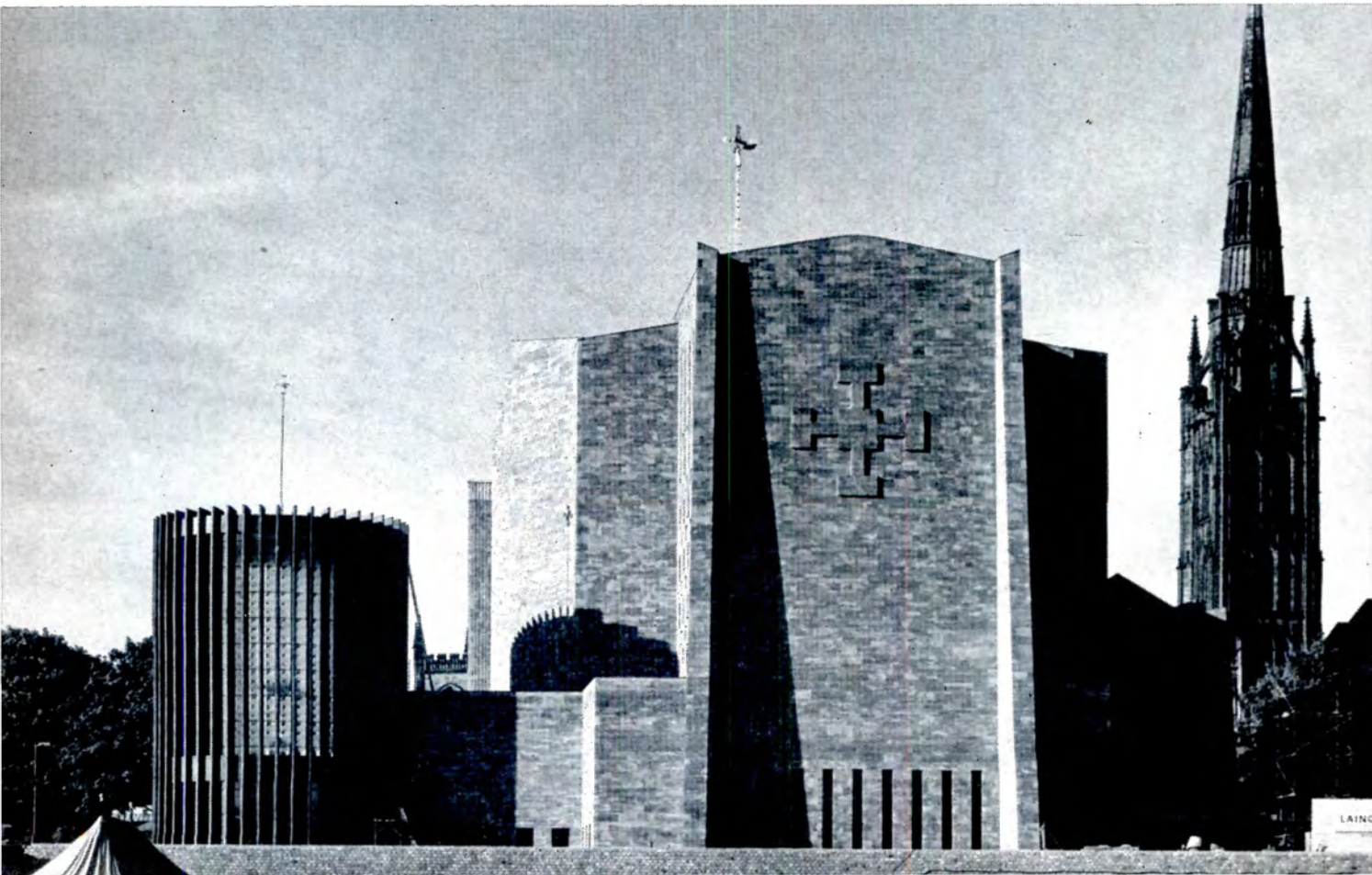
THE CATHEDRAL CHURCH OF SAINT MICHAEL

COVENTRY







At left, top: view of east façade on the principal street, showing the late Sir Jacob Epstein's bronze sculpture of St. Michael and the devil; the ruins are at the left. *At left, bottom:* the north, or apsidal end of the church. *Above:* the porch connecting church and ruins

THE CATHEDRAL CHURCH OF SAINT MICHAEL, COVENTRY

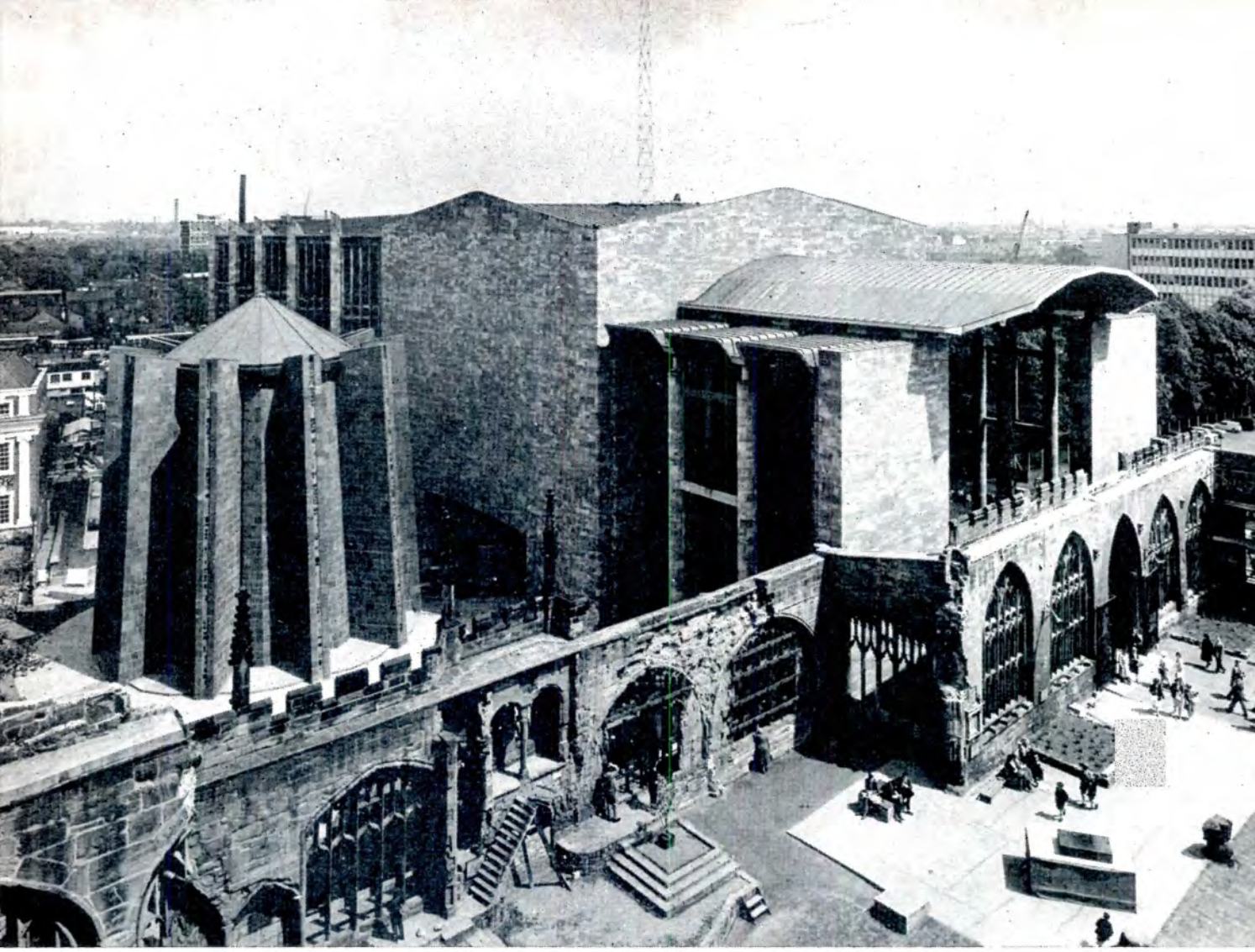
By Sir Basil Spence, R.A., R.D.I., P.P.R.I.B.A.

The old Cathedral of St. Michael in Coventry, England (c. 1375–1500) was badly damaged during a German air raid in 1940. A competition for the design of a new St. Michael's in 1951 drew 219 entries and was won by Sir Basil Spence. The new cathedral, constructed according to his design, was dedicated May 25, 1962 with Queen Elizabeth II in attendance

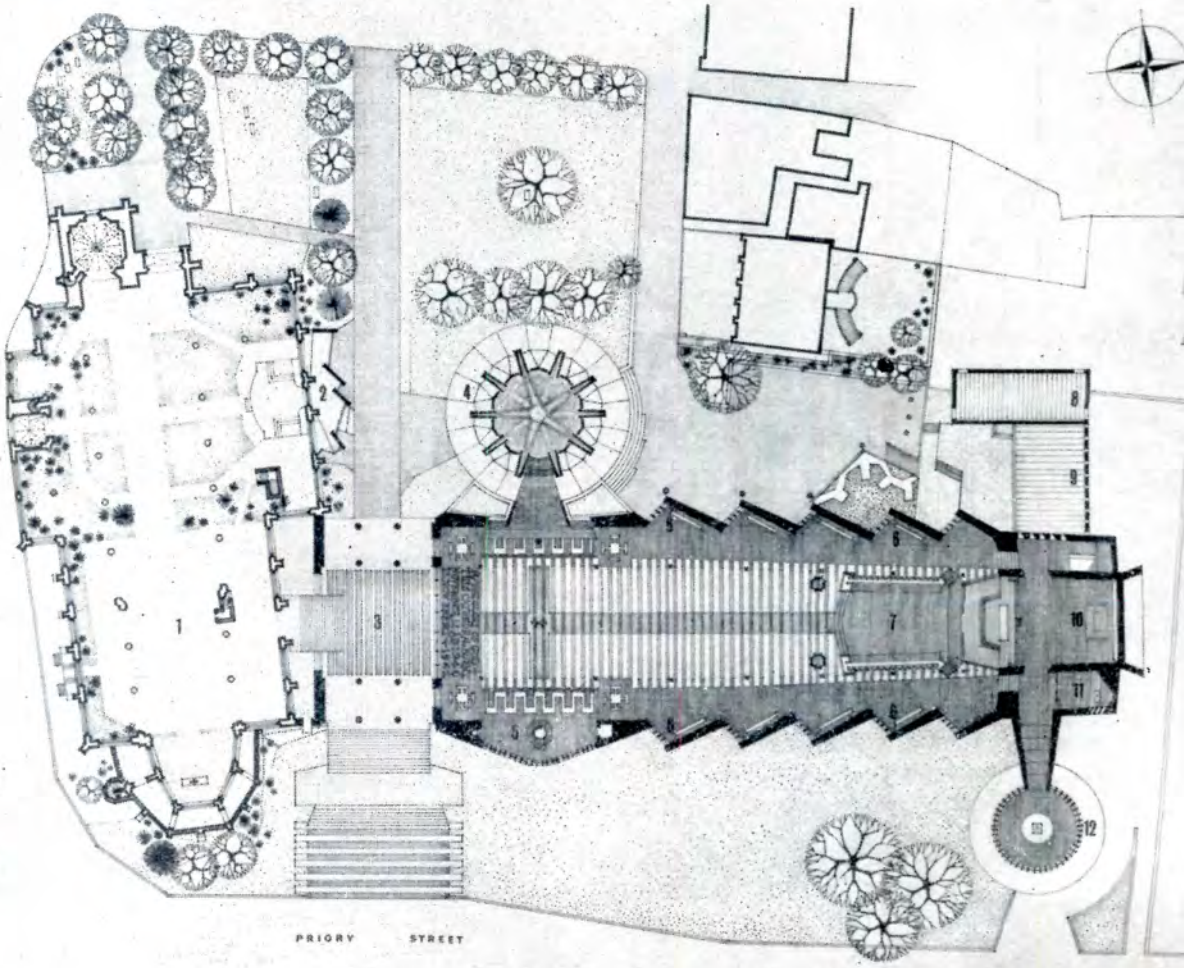
The design for the new Coventry Cathedral was chosen from an open competition, controlled by conditions clearly stating what competitors could do, what was forbidden, accommodations to be provided, and the cost. For instance, the tower and spire of the old cathedral had to be preserved, but the remainder, apart from the apse and capper's room, could be demolished—and nearly all competitors did.

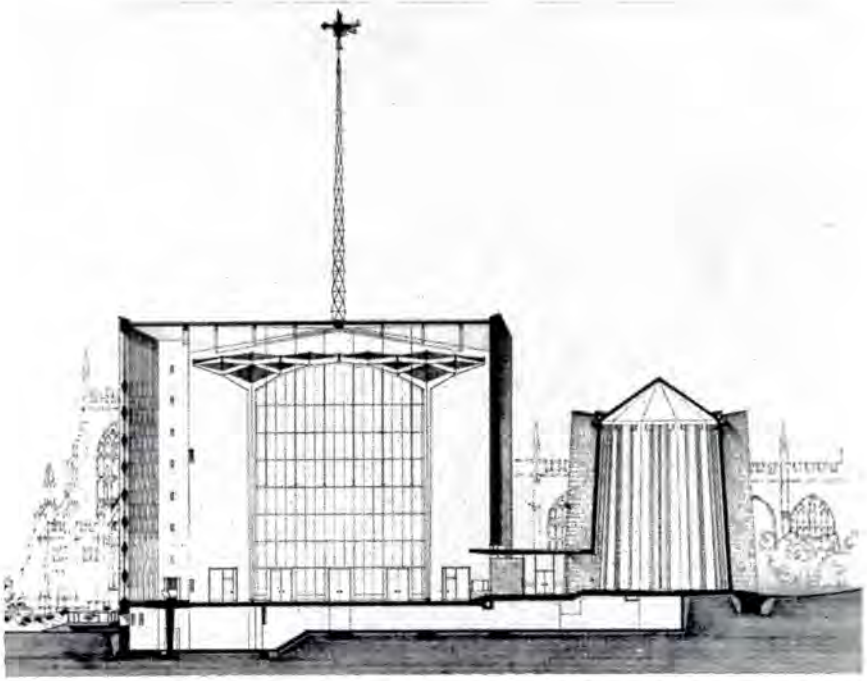
I remember the summer day in 1950 when I first walked into the old building. I found the ruins inspiring, beautiful; and the serene enclosure of the bombed shell—tragic but eloquent—spoke of the sacrifice. I felt the prayers of centuries of worship radiating from the old walls.

The charred cross in the old apse with the words "Father Forgive" carved in the stone stirred me deeply. The charred cross was erected in 1940 by Provost Howard when we were fighting alone and the war was going badly. The whole enclosure was still a cathedral, it was history, it stood for one side of the Christian faith, the Sacrifice. I determined to keep, if possible, the whole, and build a new cathedral that stood for the triumph of the Resurrection.



1 Cathedral Ruins
2 Bookshop
3 Entrance Porch
4 Chapel of Unity
5 Baptistry
6 Tablets of The Word
7 Chancel
8 Verger's Flat
9 Refectory
10 Lady Chapel
11 Chapel of Christ in Gethsemane
12 Chapel of Christ The Servant





The photo at left was taken from the old tower and shows the juxtaposition of ruins, porch, and cathedral. The circular, vertical-finned Chapel of Unity can be seen in the foreground at left center as well as in the cross-section above

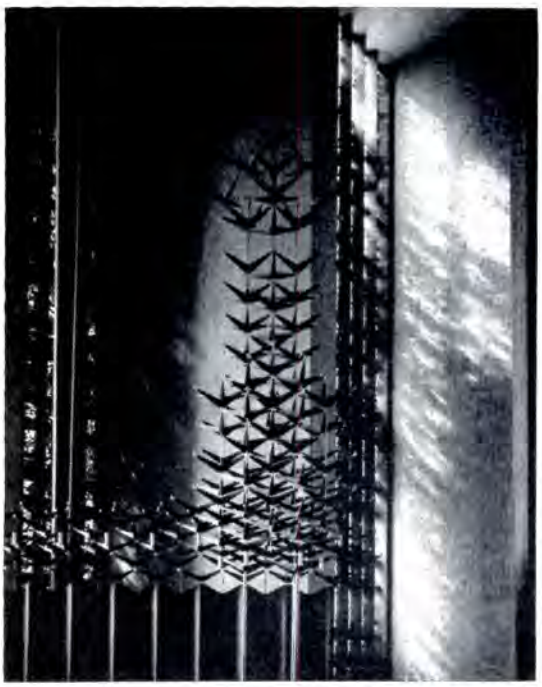
SIR BASIL SPENCE,
"I found the ruins inspiring, beautiful; and the serene enclosure of the bombed shell—tragic but eloquent—spoke of sacrifice. I felt the prayers of centuries of worship radiating from the old walls."

LEWIS MUMFORD,
in THE NEW YORKER of March 10, 1962,
"The fusion of continuity and creativity that Sir Basil Spence has accomplished here strikes a note that vibrates longer and with deeper resonance than many other works of modern architecture. In the structure itself, in its siting, in its chaste omissions and generous permissions, it has a completeness and an organic richness that are more vital than formal perfection."

I imagined the new building growing out of the side of the old cathedral to the north. Not an imitation of the perpendicular architecture but a conception from our own age somehow a unity with the old. The new altar backed by a huge tapestry would be the climax, and would be clearly seen from the ruins, drawing people to it. I imagined huge glass doors 20-ft high making the new cathedral one with the old; and I would build in stone, like the original, but would have a concrete vault.

I imagined progress through the old building with its lace-like walls to the old chancel and inscription, and turning through a right angle to the north, the new building. The ground to the north is lower, allowing a flight of steps down to a porch which spans St. Michael's Avenue, an ancient right-of-way. I welcomed this as it could act as buffer and link between the new and the old. People using the right-of-way would pass between the two buildings but within sight of the new altar through the glass wall. Perhaps the non-religious would one day go in—for the interior would seem familiar. This lower floor level allowed me a greater height for the new building without crushing the old, which would certainly have been the case if the ground were entirely level.

Progressing through the great glass doors, the baptistry window with the font is to the right. This window is as large as the great east window of Gloucester, which I love. And



The great tapestry of Christ in Majesty, 74 by 40 ft, was executed in France to the design of Graham Sutherland. *Above left:* the "avenues of thorns," which form canopies over the choir stalls. *Above right:* the Chapel of Christ in Gethsemane, executed in mosaic by Steven Sykes

SIR BASIL SPENCE,
"The object of this cathedral is to turn the visitor—who may go alone into the sanctuary for a half hour's peace—from a visitor into a worshipper . . ."

KENNETH J. ROBINSON, in THE SPECTATOR of May 25, 1962,
"This is a great and humbling building—a building in which trivial criticisms merely make the critic himself feel trivial."

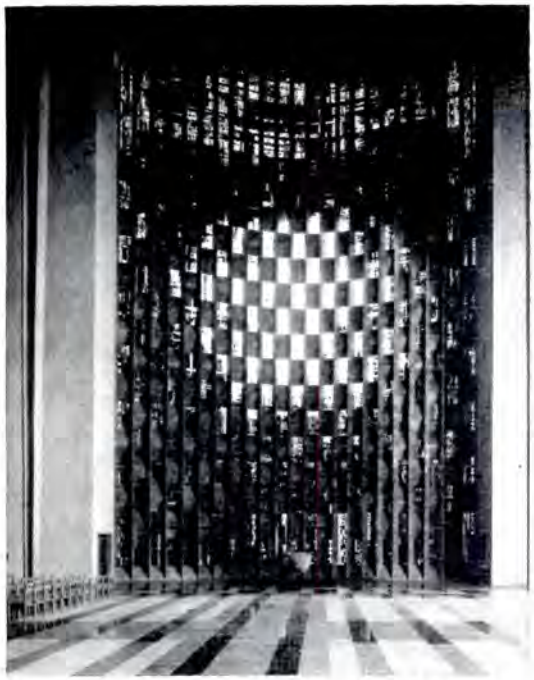
LEWIS MUMFORD, in THE NEW YORKER of March 10, 1962,
"Its originality consists in its indifference to originality, and in its respect not for the letter of modernism but for the spirit that giveth life."

opposite lies the entrance to the Chapel of Unity, which stands for the unification of all churches. I felt it should have its own identity and character. I took a star shape on plan which grew up naturally into a tent form. In my excitement at the idea I identified the star as the Star of Bethlehem and the tent as a crusader's. These ideas embarrass me now as being too sentimental, but at the time they gave the design purpose and impetus. I like the chapel's final form, but not its symbolism.

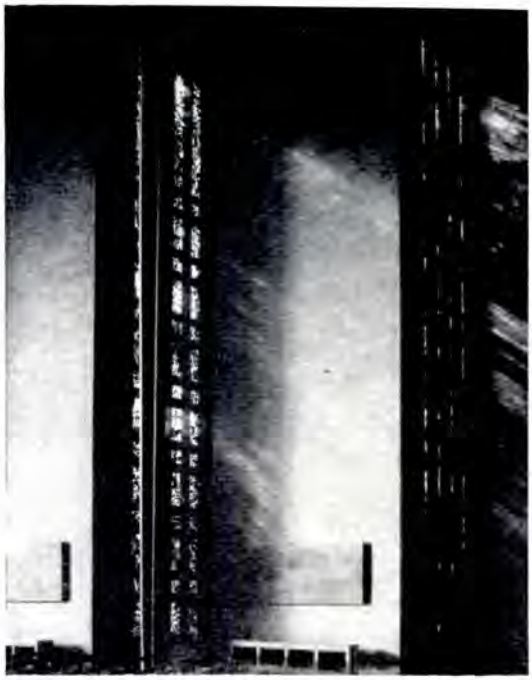
After glances to the right and left, the eye is drawn by the altar and the great tapestry. The competition sketch showed the Crucifixion below and the Resurrection above, with the figure of Christ high in the center. The altar cross was the charred cross, which I thought at that time should be carried in and preserved as a relic. I had planned an inner glow of light around the altar, and apart from the baptistry window and a blink of light from the Chapel of Unity, no glass can be seen from the entrance. However, as one progresses toward the altar, the five pairs of 70-ft-high windows are revealed. The walls are saw-tooth in plan to avoid showing everything at once, and to eliminate any competition with the altar.

The glass tells a story. The baptistry window stands for the gift of life, and was planned to glow with simple primary colors. As one moves towards the altar, the first pair of windows represent youth, and are in greens. The next

The engraved glass screen at the south end—giving to the porch and ruins—was designed and executed by John Hutton. The pattern consists of figures of angels and saints



The baptistry window is the work of John Piper, measures 80 by 40 ft, and is carried out in bold primary colors to signify youth



The series of five pairs of nave windows were designed by Lawrence Lee, Keith New, and Geoffrey Clarke, of the Royal College of Art

SIR BASIL SPENCE,

"It has always been my intent that the ruins and the new building should be directly related . . . physically divided only by a glazed screen as broad and as high as the nave itself. I saw in my mind's eye a sparkling and beautiful altar at the end of a long vista . . . but I did not see it clearly because in front of my eyes floated the bodies of the saints."

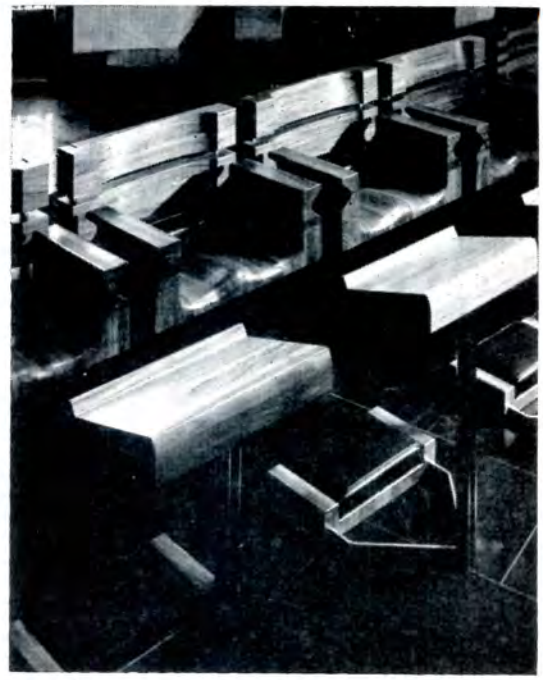
LEWIS MUMFORD, in THE NEW YORKER of March 10, 1962,

"The purpose and meaning of the structure itself dominate its constructive expression and transcend the personalities of the architect and his collaborators. In this sense, and only in this sense, it is a thoroughly medieval building."

pair are done in predominately red glass as they stand for the age of passion and strength. The next, for middle life, are multicolored; and then old age and wisdom are represented by deep purple and blue, with flecks of silver and gold. Finally, the altar windows are of much lighter glass, predominately gold. They symbolize the afterlife, and create the golden glow surrounding the altar.

At that time, I felt that as the communicants moved to the altar, they would progress through this changing light to the radiant climax of the sanctuary. Then, as they walked back, the glory of the glass would be seen. Now, I feel this idea overplayed and unimportant, but it did help me to get the depth and richness of color that this great building truly required.

Although committees commission, encourage, and give backing, it is the craftsmen and artists who build the cathedral; who give of their talents to make it beautiful. Right from the beginning I went for the best artists in the country, and they have worked beautifully together; inspired, I think, by an urge to record a blast of praise in this materialistic age. A chord of music unified in strength and purpose, but sincerely made and coming—as with the old craftsmen—from their own time. But all we can do is provide the frame; the picture itself is the faith and Christian life of the community. It is the people of Coventry who will make this picture.

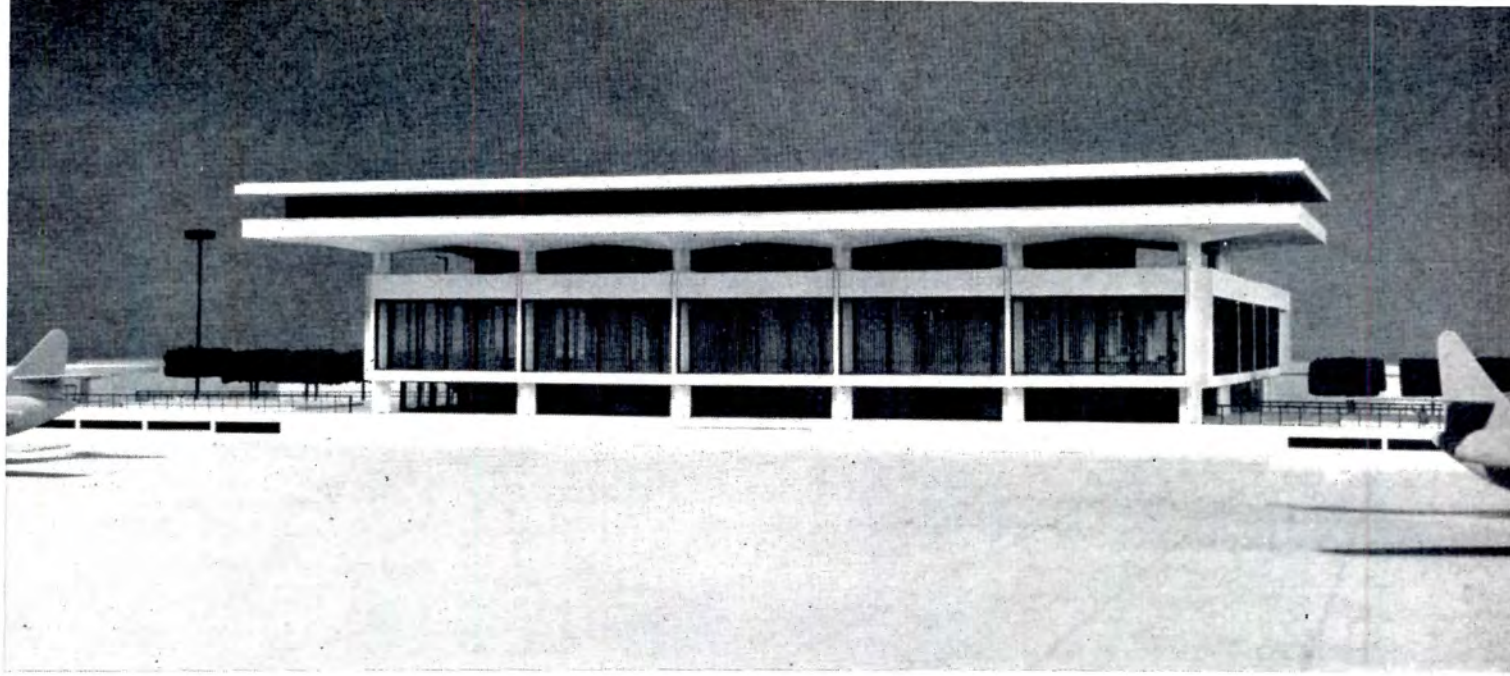


The circular Chapel of Christ the Servant is 40 ft in diameter and overlooks the workaday world it serves. The interior focuses visually upon a suspended crown of thorns by Geoffrey Clarke, executed in aluminum, which is visible to passers-by. *Above:* the carved wooden stalls for choir and clergy are notable for their elegance

PHOTO CREDITS: All pictures in this article by Henk Snoek, except the following five, by Rondal Partridge—page 101, bottom; page 102, both; pages 103 and 104

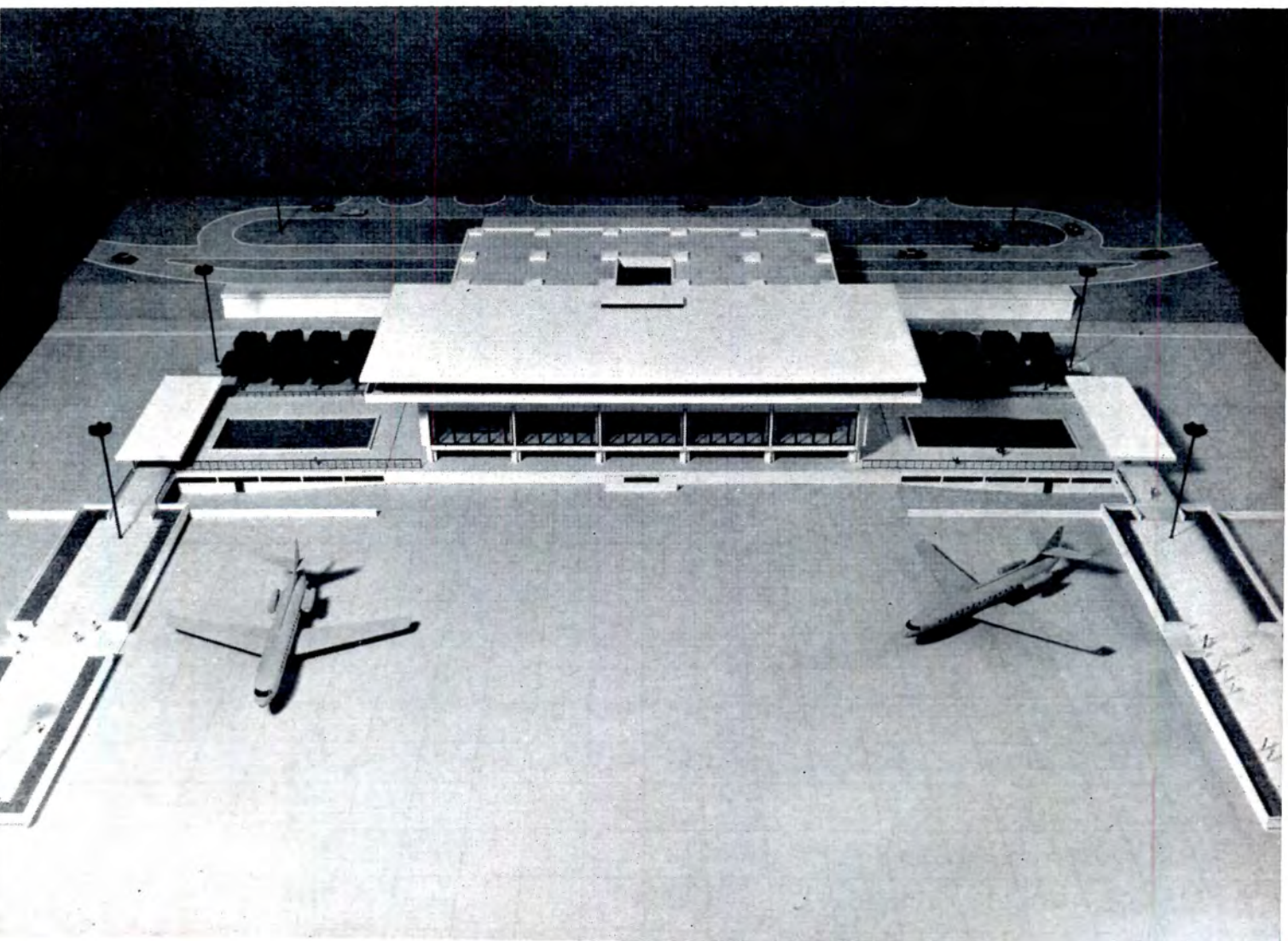
The Cathedral Church of Saint Michael
Coventry, England

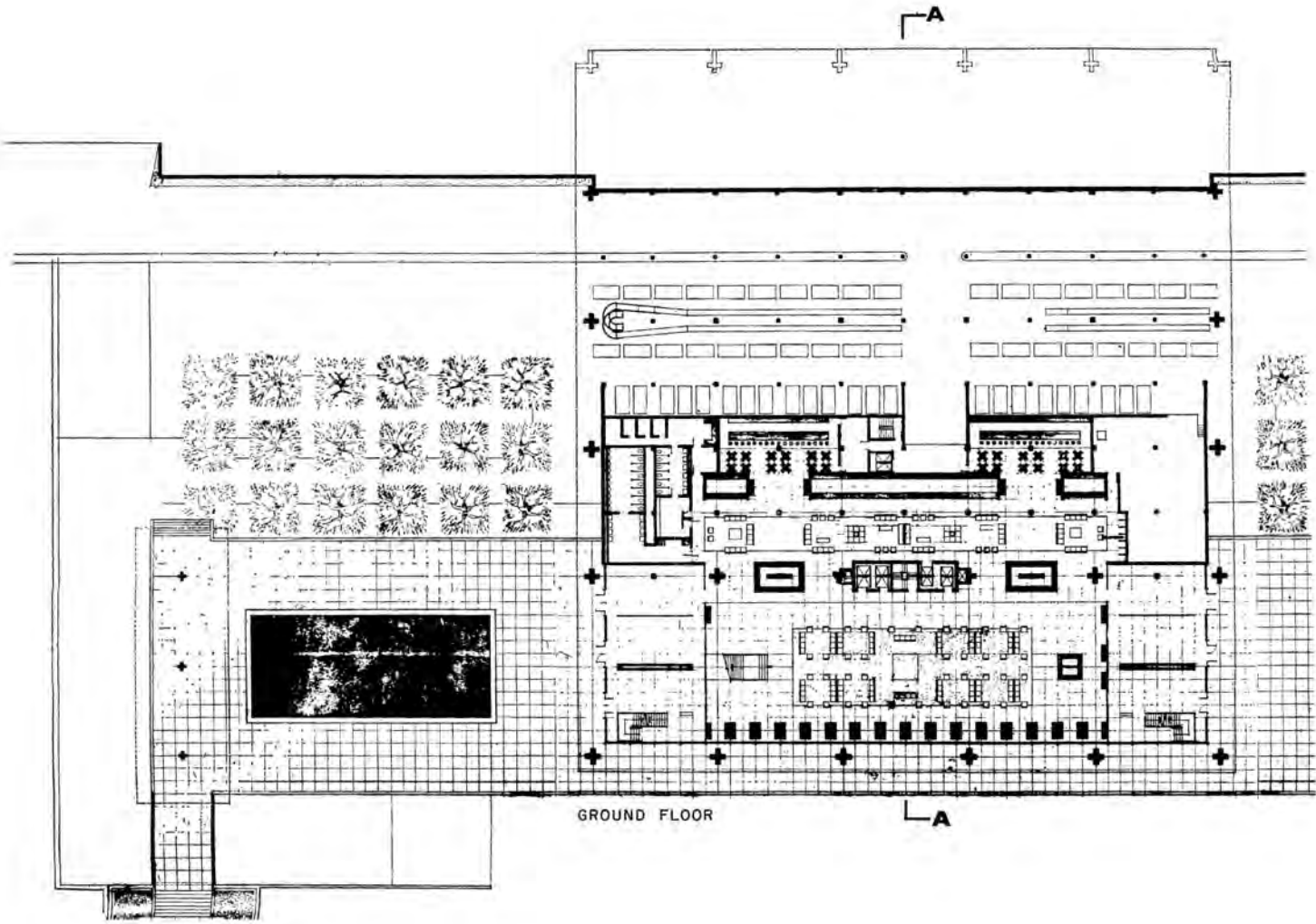
ARCHITECT: *Sir Basil Spence*
STRUCTURAL ENGINEERS: *Ove Arup & Partners*
QUANTITY SURVEYORS: *Reynolds & Young*
LIGHTING CONSULTANTS: *John & Sylvia Reid*
ACOUSTIC ADVISERS: *The Building Research Station*
LANDSCAPE CONSULTANT: *G. P. Youngman*
TIMBER CONSULTANT: *E. H. B. Boulton*
GENERAL CONTRACTOR: *John Laing Construction, Ltd.*
ARTISTS *responsible for the sculpture, stained glass, engraved glass, tapestries, mosaics, furnishings, lettering, and liturgical artifacts: Sir Jacob Epstein, John Hutton, John Piper, Patrick Reyntiens, Graham Sutherland, Steven Sykes, Einar Forseth, Margaret Traherne, Lawrence Lee, Keith New, Geoffrey Clarke, Professor R. D. Russell, Ralph Beyer, Hans Coper, Elizabeth Frink, Tony Laws, Ron Stevens, Gerald Benney*



SAARINEN'S ATHENS AIR TERMINAL

A building designed, as the entrance gateway to Athens and to Greece,
"to belong proudly to the twentieth century" and
"simultaneously respect and reflect the glorious tradition of Greek architecture"





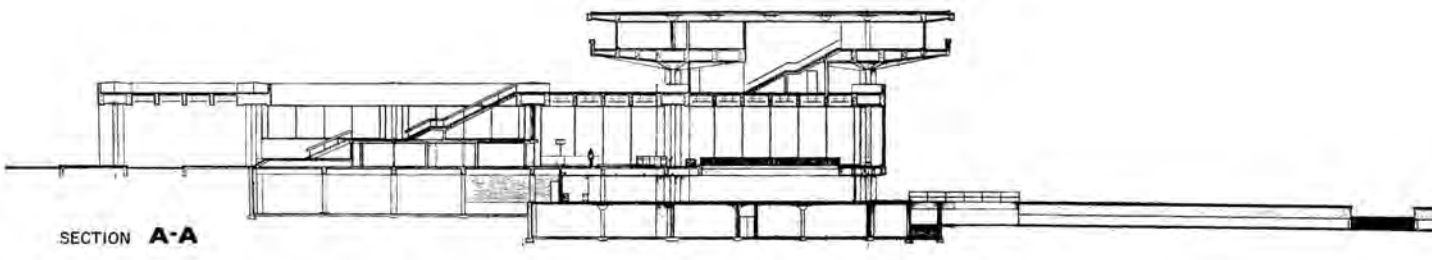
Saarinen's Athens Air Terminal

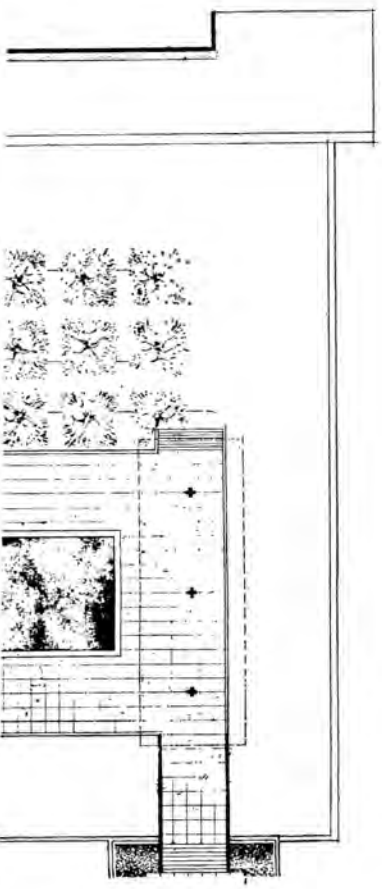
The final design for the terminal building for Athens Airport was presented to the Greek Government by Eero Saarinen in May 1961, less than four months before his death on September 1, and was accepted. Contracts will be signed this fall, and completion of this stage is expected in late 1964.

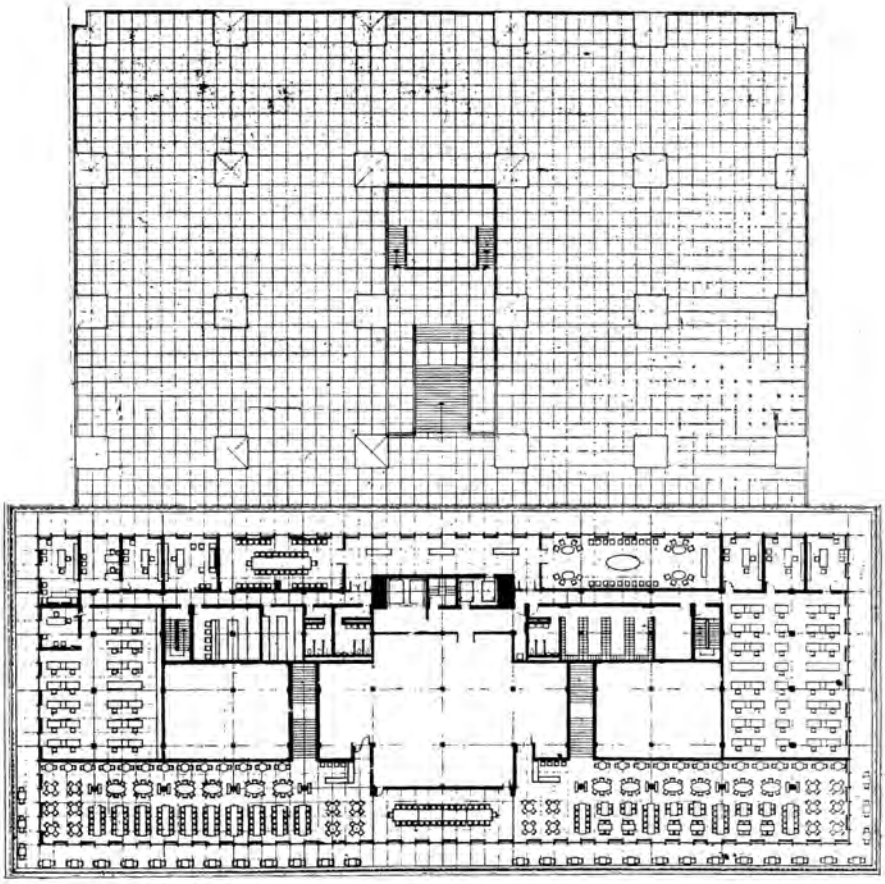
In form, the terminal building is essentially two boxes, directly expressing the interior volumes; the lower one (260 ft long by 240 ft wide by 20 ft high) contains all functions concerned with arrivals and departures and passenger handling; the upper one (250 ft long by 120 ft wide by 10 ft high) cantilevers out above the main block 22 ft in three directions and contains public and transit passenger restaurants and airline and government offices.

"In contrast to many airports in which the high façade and monumental entrance face the city," Eero Saarinen wrote of his design, "this building faces the field. The majority of arriving visitors will approach it along beautifully landscaped terraces, instead of in enclosed fingers—an advantage due to the special, virtually rainless climate of Greece.

"The form of the building grows out of its site. Whereas the site slopes grandly down from Mount

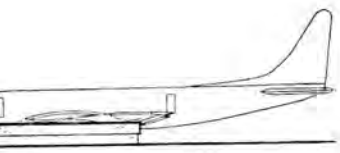


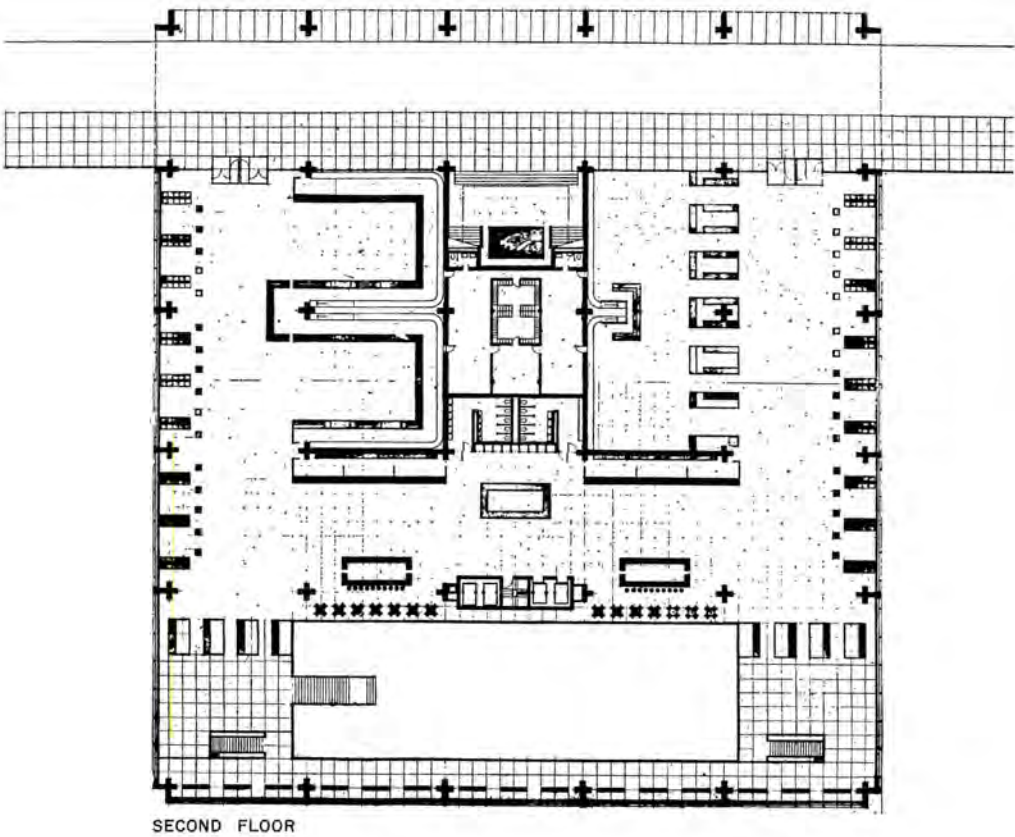




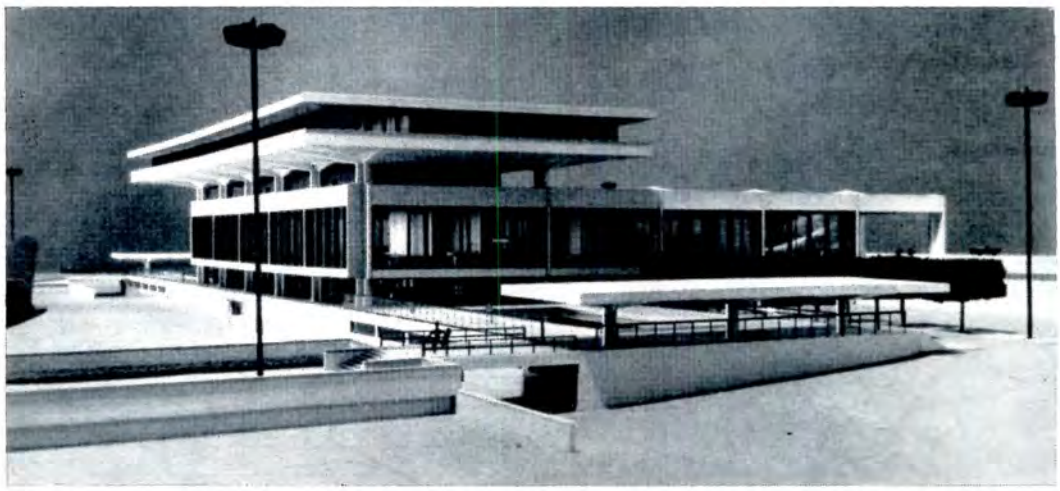
FOURTH FLOOR

Terminal Building, Athens Airport
Athens, Greece
ENGINEERS:
Ammann & Whitney
ARCHITECTS:
Eero Saarinen & Associates
AIRPORT CONSULTANT:
Charles Landrum

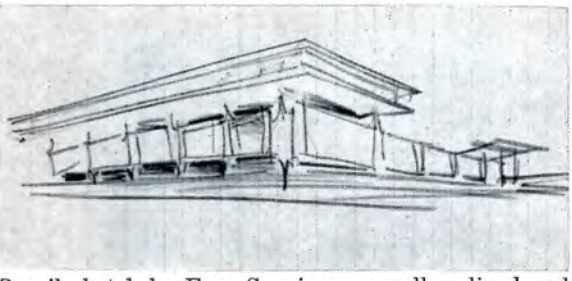




SECOND FLOOR



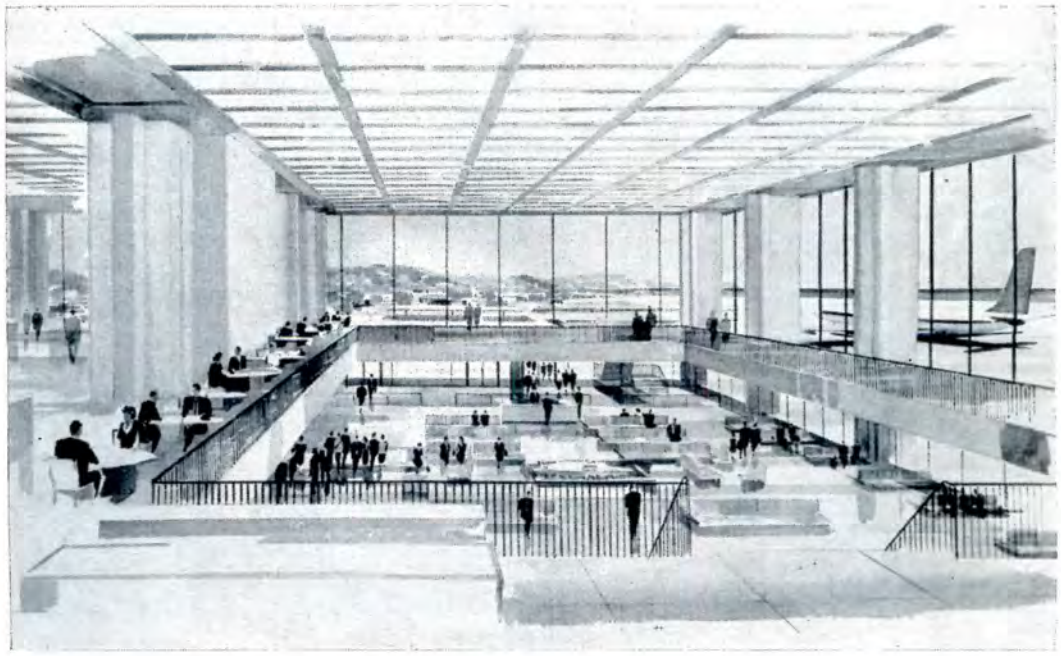
Saarinen's Athens Air Terminal



Pencil sketch by Eero Saarinen on yellow lined pad

Hymettus to the Bay of Saronikos, the dominant form of the building is a dramatic counter-thrust upward. Thus, the deep cantilevers over the sheer walls on the field side (cantilevers which, incidentally, will also make a huge shadow to help protect the windows of the field façade from the afternoon sun).

"Post and lintel construction is characteristic of ancient marble buildings of Greece; this post and beam construction developed into long spans with daring cantilevers is natural to concrete and to our time. Built of concrete with Pentelic marble aggregate, which becomes a very beautiful material, the building will have the shimmering white texture which looks so magnificent in the Greek landscape."



Frank Lotz Miller photos

REVITALIZING DOWNTOWN BEAUMONT

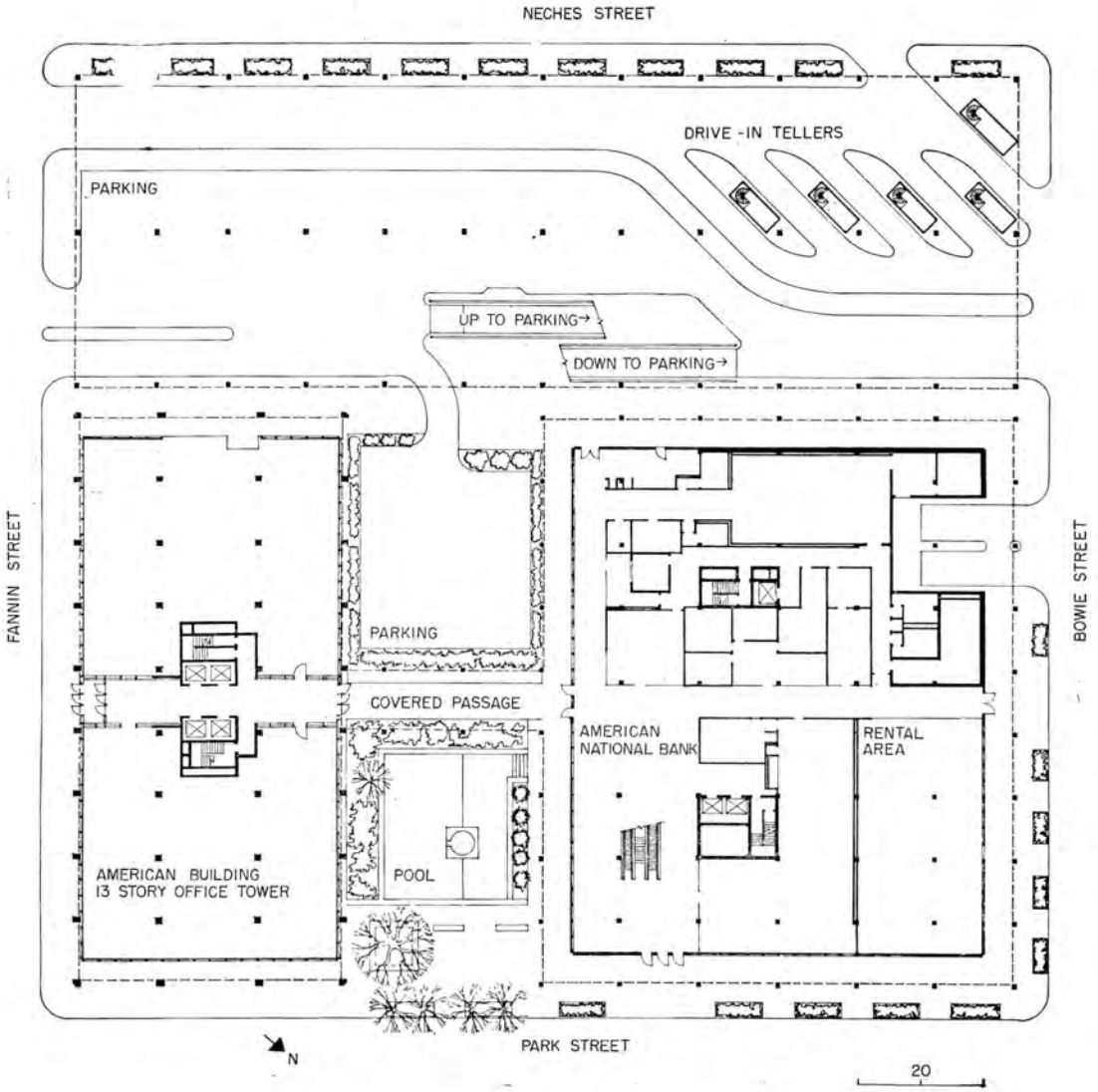
The new American Center takes the lead in rehabilitation of downtown Beaumont which has had no major construction for thirty years

The American Center, Beaumont, Texas
American National Bank, Parking Building and Petroleum Building
ARCHITECTS: *Harrell & Hamilton*
ASSOCIATE ARCHITECTS: *Wallace B. & Tom B. Livesay*
STRUCTURAL ENGINEERS:
Hunt & Joiner (Bank and Parking Building)
W. L. Zeigler & Assoc. (Petroleum Building)
MECHANICAL ENGINEERS: *William K. Hall & Co.*
LANDSCAPE ARCHITECTS: *Sasaki, Walker & Assoc.*
CONTRACTOR:
Thad Dederich Construction Co. (Bank, Parking Building)
Centex Construction Co., Inc. (Petroleum Building)

But for a considerable amount of study and soul-searching by the officers of the American National Bank and their architects, this bank might have moved to the suburbs and the office building might never have been built. In all probability, the petrochemical center of Beaumont would then have lost to outlying areas the big offices of Sun Oil Company and possibly others. The rehabilitation of downtown Beaumont might have remained stagnant, continuing its record of no major business district construction in thirty years.

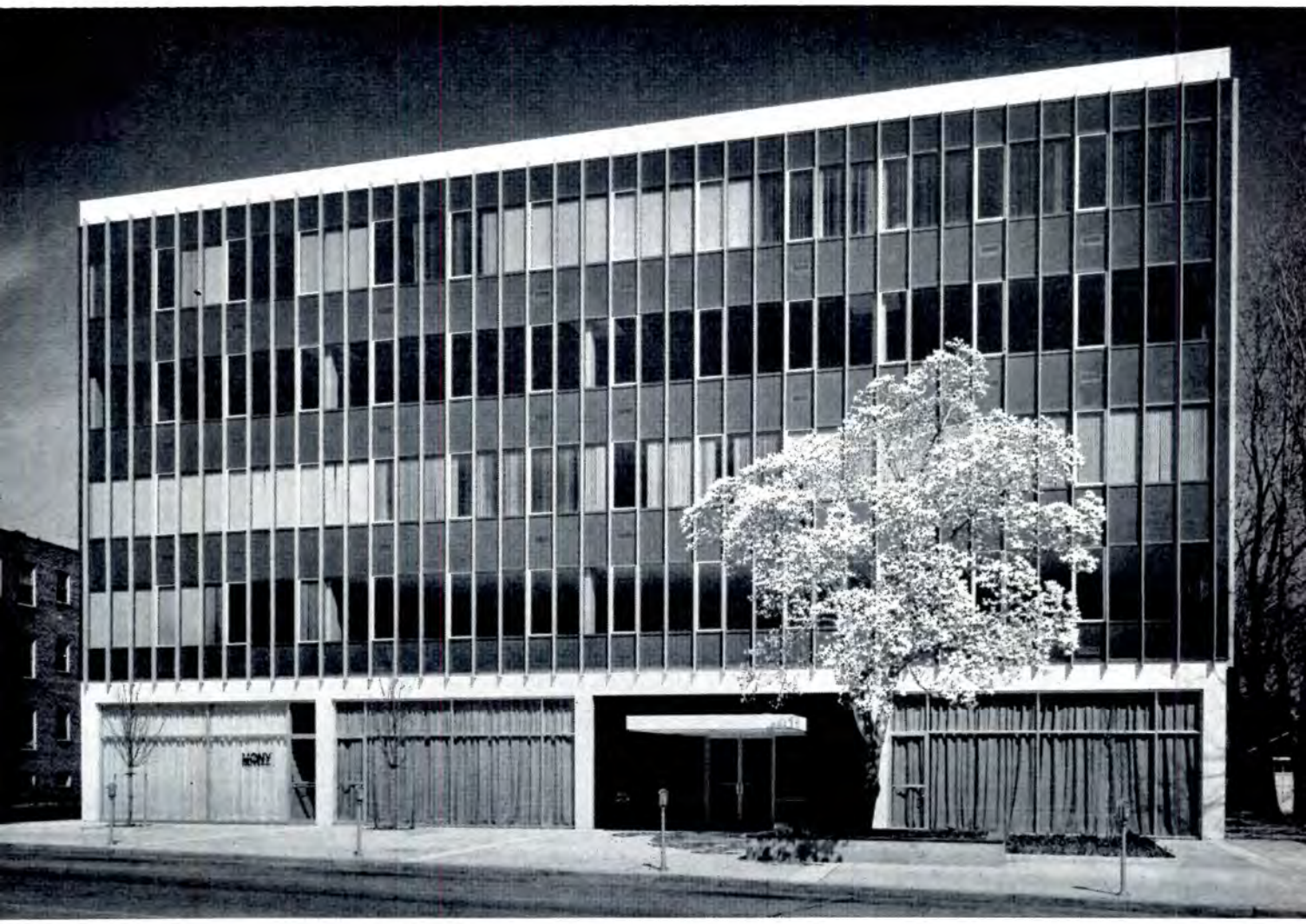
As it happened, the officers of the bank did call in the architectural firm to direct an analysis of the bank's needs. When it became known that Sun Oil was contemplating a move out of town, the architects worked with the bank owners to develop not only the bank building itself, but a parking structure and a 13-story office building. Since the bank did not wish to undertake the office portion of the project, the architects introduced the bank officials to a real estate development company. This group was successful in the negotiation of a lease with Sun Oil. The architects then proceeded with the master plan of the center and the development of the individual buildings.

The most striking exterior design element of the bank is the aluminum-framed marble sun screen that projects beyond the aluminum and glass curtain walls. The ¾-in. marble screen panels are translucent, and while shading the walls of the building, allow soft filtered light to enter the interior. Other major design elements of the bank are its surrounding arcades and the landscaped court separating it from the office building



The three main elements of American Center—bank, parking structure, and office building—are located on a full city block in downtown Beaumont as shown in the plan above. Between the office building and bank are a landscaped court and a limited amount of ground-level parking separated by an arcade. A similar arcade extends completely around the bank. The parking structure is available for use by both the bank and the office building tenants. The parking structure has end walls of marble matching that on the bank. Five ground-level, drive-in tellers' booths are included and provisions were made for additional booths when required

In order to obtain the most effective arrangement of banking departments, the architects placed the main banking floor on the second level, reached by elevators and the moving stair shown above. The ground floor is devoted to pedestrian arcades and the lobby, exhibit areas, bank offices such as personal loans that require direct access, and the auditorium, shown below. Safe deposit, the vault, storage and mechanical areas are in the basement; employes' lunchroom, the personnel department, and expansion space are located on the third floor; fourth and fifth are to be leased until needed; the fifth houses mechanical equipment



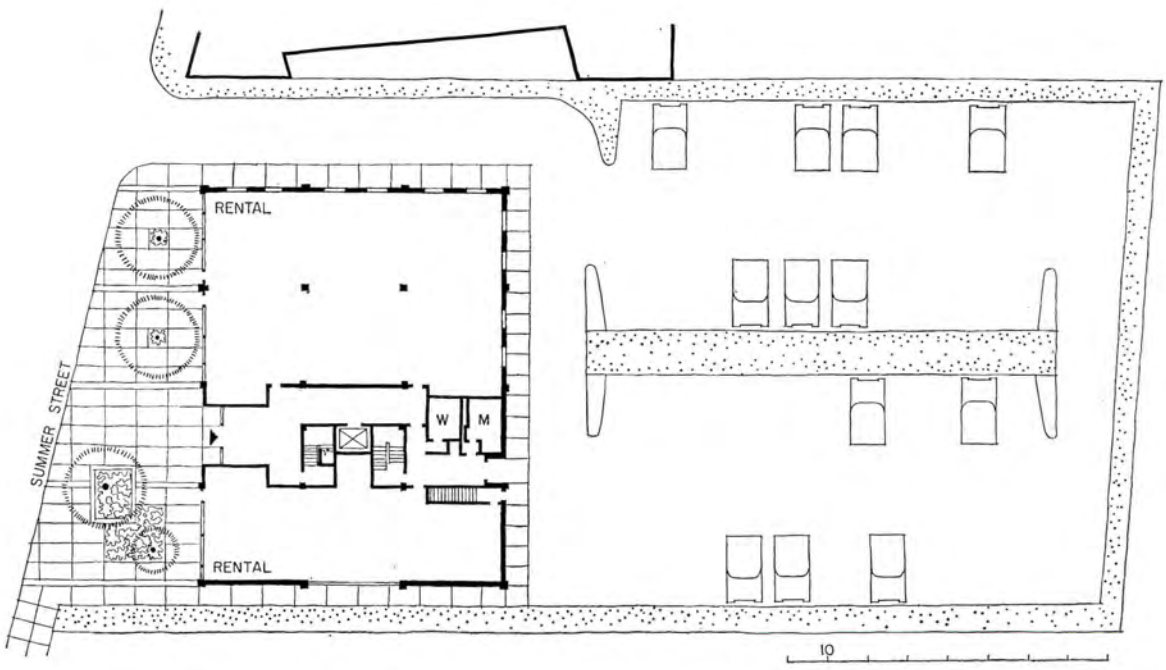
oseph W. Molitor photos

PLAN FOR RENTAL AND OFFICES OF ARCHITECTS

777 Summer Street Building, Stamford, Connecticut
ARCHITECTS: *Sherwood, Mills and Smith*
STRUCTURAL ENGINEERS: *Werner Jensen & Korst*
MECHANICAL ENGINEER: *Bernard F. Greene*
CONTRACTOR: *F. D. Rich*

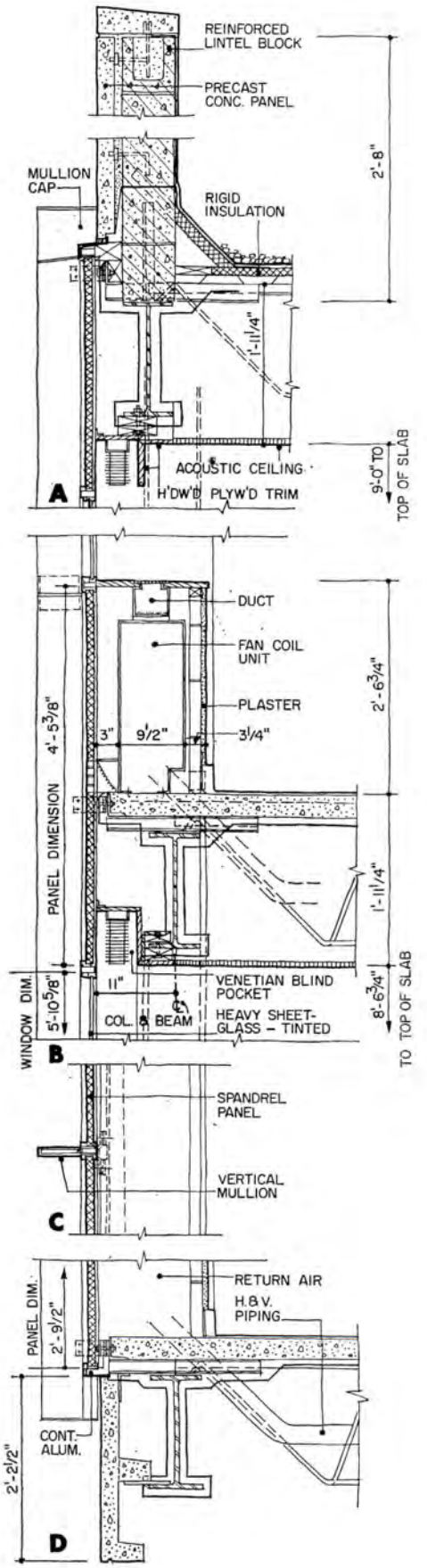
The architects of this five-story and partial basement office building not only designed the building itself but also designed the interior of the top floor for their own offices. Located in the center of the downtown Stamford business area, the new office building contains 37,000 sq ft of rental area, of which the architects occupy 6,800. Housed in this space are the seven partners of the firm and its staff of about fifty. The area occupied by the firm has been subdivided into eight private offices, a reception area, two conference rooms, and a large open area for draftsmen and supervisors. The firm is engaged in the general practice of architecture and performs services for a variety of building types.

Other office floors of the building are rented for various commercial uses. The basement is approximately one-third the area of an upper floor, the remainder being unexcavated. Contained in the basement are janitor's room, telephone equipment, and storage. The service core of the building is located slightly off-center and is surrounded by office areas. In the service core are located toilets, stairs and an elevator.


RENTAL
SUMMER STREET
W
M
RENTAL
10

The structure of the 777 Summer Street building is steel frame with bar joist floor and roof construction. Floor and roof slabs are poured concrete on metal decking. Interior partitions are plastered concrete block, solid gypsum board or metal stud and gypsum board, painted or with vinyl wall covering. Flooring is terrazzo on the ground floor, asphalt tile on the stories above. Exposed grid, mineral acoustical tile is used throughout the building.

The exterior of the building consists, on the ground floor, of an aluminum and plate glass store front on the street side, brick cavity walls on the other three. Above the first floor, the building is enclosed with an aluminum curtain wall with precast concrete panels at head and sill, gray-anodized aluminum spandrels elsewhere. The aluminum frame of the wall is painted with gold epoxy resin paint. Sash are aluminum, fixed or awning-type, glazed with gray sheet glass. The curtain wall extends completely around the building on the second through fifth floors



A. Vertical Section Head
B. Vertical Section—3rd Floor Spandrel
C. Horizontal Section—Mullion
D. Vertical Section—2nd Floor Spandrel

The views on this page show th
offices of the architects and giv
some indication of the handlin
of their space in the building. A
the top, left is one of the tw
conference rooms; in the middl
a private office; and at the bo
tom, the large open draftin
room area.

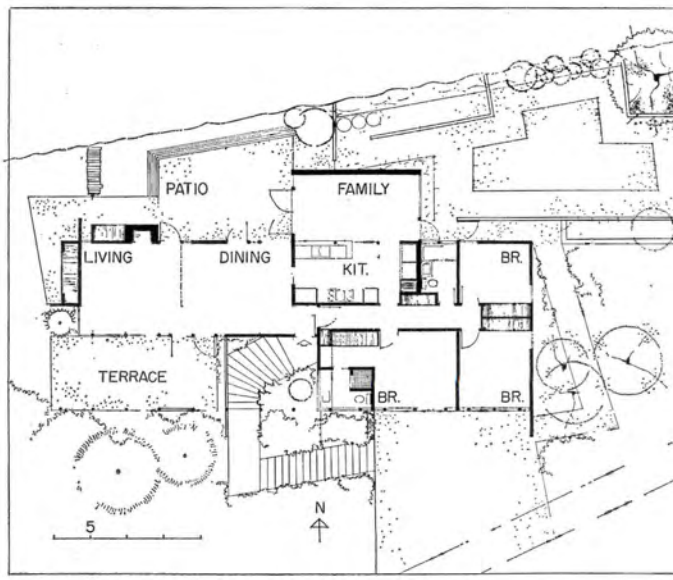
It will be noted that the draf
ing area is subdivided by custo
designed partitions to creat
within the larger space, a nun
ber of lesser areas which allo
grouping of personnel by job
function and prevent the ope
area from giving its occupants
feeling of being quartered in
great, impersonal bull-pen

Julius Shulman photos

A PROBLEM LOT — A GRATIFYING HOUS

Henry Hester creates a warm, livable house on a tight budget

ARCHITECT AND OWNER: *Henry H. Hester*
LOCATION: *La Jolla, California*
HEATING ENGINEER: *Glen Terrel*
CONTRACTOR: *R. E. Hazard, Inc.*
LANDSCAPE ARCHITECT: *Harriet Wimer*



A Spacious House for $21,500

In designing this house for his own family, Henry Hester picked a lot that had many advantages, many problems, and a low cost for the area—$2,500. The lot boasted an ocean view, but had an irregular hillside condition with a 50-ft rise from street to top of lot, as well as a restriction not to block the views of neighboring houses.

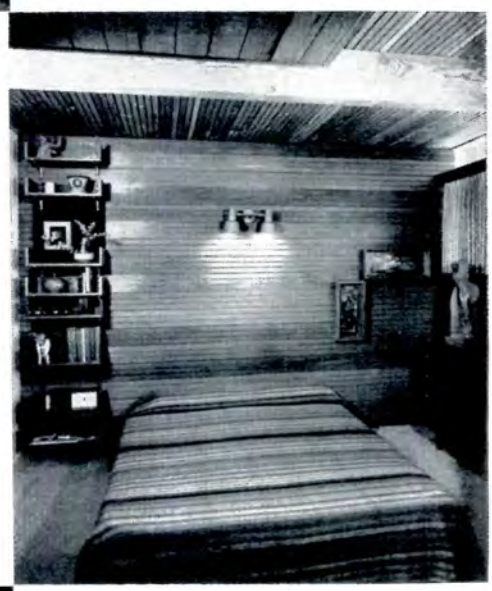
A building spot near the street at the lower edge of the site was selected in order to build into the bank, thus providing ground area for terraces and play yards at both levels of the house. These outdoor areas add much to the sense of space in the house, which had to be kept small for cost purposes (1430 sq ft). To further add a sense of space, the living-dining areas were made as large as possible, with other areas minimum sized.

In organizing the plan, supervision from the kitchen of children's play areas, indoors and out, was considered disirable. Thus the kitchen-utility area became a hub between the bedrooms, the "all-purpose" play room, the outside play yard, and the living areas.

A flat roof was used to preserve the ocean views of the neighboring houses, as well as provide more economical construction and a low scale compatible with the small rooms. The structural roof beams were projected outside to help integrate the areas visually.

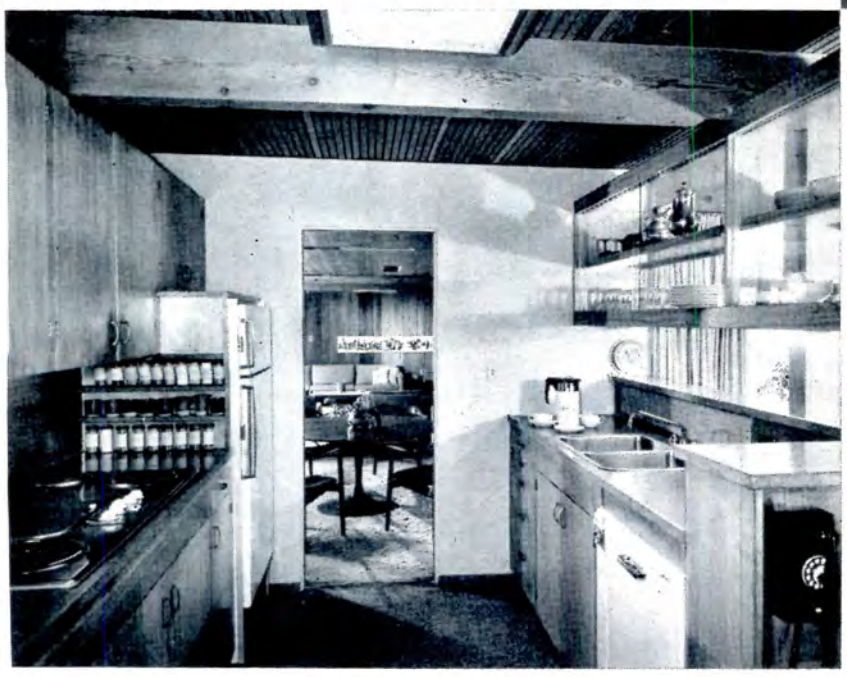
The frame is of Douglas fir on concrete and concrete block foundations. Exterior walls are resawn redwood and concrete block; interiors are redwood and plaster, plus tile in baths, and plastic laminates in the kitchen.

Fixed glass is used in most areas, with stainless steel louvers for ventilation. Built-up plastic skylights, used to daylight interior areas, have incandescent bulbs for night use.



The Hester House

Natural wood finishes are used throughout the house, with ceilings of carefully detailed Douglas fir sheathing to match interior clear-heart redwood paneling. Floors in the living areas are carpeted; the kitchen and baths have floors of vinyl-covered cork. Floors below grade are surfaced with vinyl asbestos. Heating is by a radiant system, with boiler off the carport. The coils are placed on a wood deck over the carport area, and on the lower slab of a two-pour floor at areas on grade. The terrace off the living room is also heated for use in cooler weather



HOTEL ARCHITECTURE: A MANAGEMENT VIEW

By Roger P. Sonnabend,
President, Hotel and Motor Hotel Divisions, Hotel Corporation of America

As a top executive of H.C.A., Roger P. Sonnabend speaks for an organization which is responsible for the operation of twelve leading hotels and fifteen motor hotels. It has four major facilities under construction, and building has just begun on a fifth project, a 1,000 room hotel for Boston's Prudential Center. H.C.A. management hires good architects and uses them well because it considers a high level of design essential to successful hotel or motel operation. Here Sonnabend tells why. —EDITORS

There is a trend, these days, to look for trends in every phase of business and industry. After all, finding and riding a trend is sometimes the easiest way to achieve success.

In the hotel and motel business, we hear a great deal about trends. There has been and continues to be a trend to motor hotels because it is pointed out that the public is motel conscious and desires the informality, convenience and easy parking provided by motels. This motel trend is led by Holiday Inns, Howard Johnsons and Travelodges, and is reportedly followed by virtually every major hotel company.

There is another trend towards large downtown hotels because it is said that new hotel facilities are required downtown to replace older properties that are becoming outdated and unable to cater well to ever larger and more important convention groups. This is typified by the new hotels built or being built by Hilton in Pittsburgh, Denver, Montreal, San Francisco, New York and Washington; by Sheraton in Philadelphia, Dallas, Houston, Portland, (Oregon) and Minneapolis; and by H.C.A. in New Orleans, Hartford, Houston and Boston.

We hear of the trend toward downtown motor hotels, induced, it is said, because downtown is where most people want to be, including motorists who heretofore have stayed in the suburbs. This trend is emphasized in New York City, for example, by Loew's under the Tisches, by Sheraton, and by Howard Johnsons and Holiday Inns.

There is a trend to rehabilitate older downtown hotels because it is argued that they have economic advantages with their depreciated costs over newer properties. The Plaza and Waldorf Astoria Hotels in New York, the Sheraton Cleveland, the Fairmont in San Francisco are just a few of the grand downtown hotels that are undergoing extensive rehabilitation.

There are also reported trends toward resort hotels and motels and toward properties overseas.

What is the meaning of all these trends, and are they actually trends or merely manifestations of an industry that is expanding helter-skelter and in every way? And if there is not a trend to follow, where does success lie in the hotel-motel industry?

First, we must recognize that there are profits to be made in many phases of the hotel industry, or at least many people believe this to be so. Perhaps this is true for those select hotels or motels that are well located, well designed and truly meet the lodging and food and beverage needs of our citizens. But it is not true for properties badly or unwisely planned, or under-financed or unable to rise above competition. Alas, overexpansion and excessive competition potentially threaten all hotels; but most certainly the typical hotel or motel we find today in America that is not outstanding, not truly unique, not eminent, is most threatened of all.

This overexpansion threatening the hotel-motel industry has important meaning for hotel and motel developers, owners and architects. It means, first, that caution must be exercised in considering new projects. Perhaps more importantly, it means that there is a greater premium today than ever before—both in designing new hotels and in rehabilitating old hotels—on good architecture and design. To be

successful in the future, a hotel must not only be well located but must be superb in the way it functions and in its operation, and outstanding in its esthetics.

Each hotel operator, of course, has his own point of view as to how best to create or improve a hotel. We in H.C.A. feel that success rests first on the basic soundness of the project in terms of location and financing, but then equally on the program that is developed for the hotel and on the architect selected to execute the program.

The program for a hotel and the selection of the architect are in their way as closely interrelated as the chicken and the egg. The type of hotel we desire, its location, and other aspects of the program dictate in many ways our choice of an architect. The architect in turn greatly influences the program.

For H.C.A. hotels we prefer to use an experienced architect, one who can bring to our projects a basic knowledge of the hotel business and who knows how best to incorporate operational and service factors into a structure. A hotel is a complex building because it is a many-purpose building. The fact that it includes guest rooms, restaurants, shops, meeting space, ballrooms, parking facilities, office space and often recreational facilities such as a swimming pool, makes for an architectural challenge equal to, or perhaps greater than, the challenge made by any other type of building.

Then, too, we want to select an architect who, in contributing his knowledge and experience, has the ability to create a building that is not only practical and easy to operate, but which is outstanding in appearance and esthetics.

From the very earliest stages we want to share *with* the architect, and we want the architect to share with us, the development of the project. We want to work together on the character and nature of the guest rooms and baths, for these represent most what we have to sell. This is where our most profitable dollars lie.

We want to work together on the restaurants of our hotels, for the day of the nondescript hotel restaurant is past. We need restaurant facilities that are truly distinctive, equal to or better than the other restaurants in the cities in which we are located. We want to lead the way with new restaurant concepts —specialty restaurants, for example, such as a roast beef specialty room in the Vieux Carre in New Orleans or in London.

We want to work together on the banqueting and meeting spaces of our hotel because these can perhaps enable us to become the social center of the community, the meeting place for important civic and business groups, and can help us supplement our regular transient business with conventions and groups.

We must work together on the public spaces of the hotel, for they display our personality and our character, while they also must breathe the charm and comfort that will make a guest feel welcom

We are concerned with the exterior architecture our hotels for this is in a sense our trademark, a important advertising and promotional tool.

These are just a few of the concerns we share wit the architect in the development of our hotel pro ects. They apply equally to large downtown hotel to downtown, suburban and highway motor hote and to resort hotels.

In developing a program for the hotel with the a chitect, we ask a lot of questions of ourselves ar others. Of what should the hotel consist? What kir of guests do we want to attract? What kind of bus ness do we want to serve? Should we cater t businessmen or tourists? If businessmen, are we mo interested in top executives, middle management c traveling salesmen? If tourists, are we looking fc families, tour groups, honeymooners? Do we wai conventions and if so what sort?

We must study the nature of business generator around our hotel. We will be concerned with cultura and entertainment facilities of the city, with trans portation terminals—airports, stations, bus-stops– with shopping facilities, hospitals, tourist attrac tions, with civic affairs and festivals, with highways

We will analyze the customs of visitors to the cit and of the city's residents in terms of entertainmen and dining out, of social events such as wedding and celebrations, of conventions and group meetings and of weekend, summertime and holiday activities

We will determine price levels in the city and care fully study and shop our competition.

Sometimes much of this has been done in advanc of the selection of an architect. If this is the case w carefully go over with him all the information de veloped, for it is important that we have a mutua understanding of all these factors.

With the architect we can thus develop a final pro gram for the hotel. It will represent a shared effor between the architect and ourselves. But then it i the architect upon whom we rely to create for us truly eminent hotel from the program; a hotel or mo tor hotel that will be successful in tomorrow's ex cessively competitive hotel world. We seek a hotel o motor hotel with the distinctive character and per sonality of a Royal Orleans (New Orleans), a Bev erly Hilton, a Marriott Motor Hotel, a Motel on th Mountain, a Rickey's, a Fairmont (San Francisco) an Atlanta Cabana, a Holiday Inn, the Plaza in Ne York.

True eminence in a hotel requires a service-minde and hospitable hotel staff. It requires a superb a well as efficient operation, but it also require warmth, charm and a fine architectural character i the building itself. It is the architect who can pro vide this for us, if he is a planner capable of desig ing a hotel that will work well, and if he is, at th same time, a creative artist who can design a build ing which is architecturally distinguished.

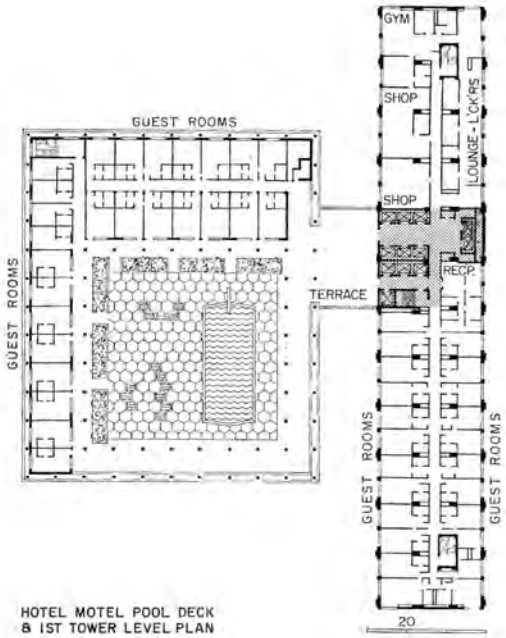
Three-in-One Hotel for Boston

Hotel America, Prudential Center, Boston
OWNER: *Prudential Insurance Company of America*
OPERATOR: *Hotel Corporation of America*
ARCHITECTS: *Charles Luckman Associates*
FOUNDATION ENGINEERS: *Metcalf and Eddy*
STRUCTURAL ENGINEERS: *Seelye Stevenson Value and Knecht*
MECHANICAL AND ELECTRICAL ENGINEERS: *Krey and Hunt*

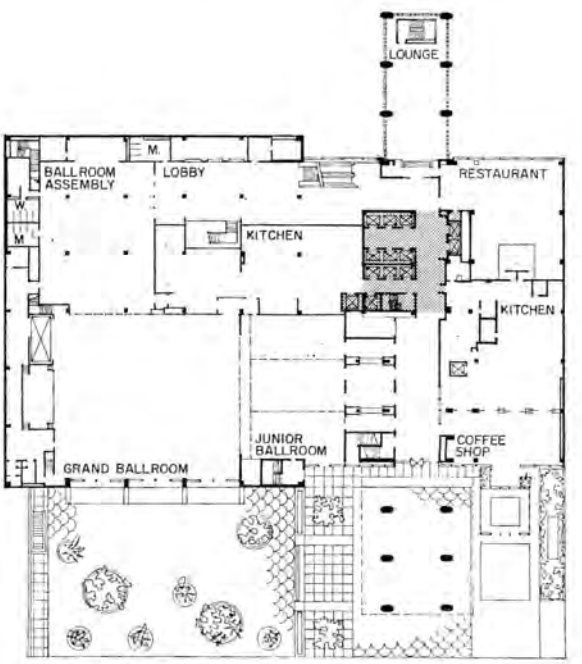
Representing a planning solution as complex as that required by a three-class passenger liner, this $26 million hotel being erected by the Prudential Insurance Company as part of the $100 million Prudential Center will be three hotels in one. It will combine the facilities of a luxury residence tower, a commercial metropolitan hotel and a drive-in resort motor hotel. The 1,000 room, 27-story structure, with separate entrances, individual staffs, and complete facilities for each division, will also serve the Boston area as a center for dining, convention facilities, shopping and entertainment. Planned for completion in early 1965, it will enable Boston to attract large convention groups which previously could not be accommodated because of the city's lack of adequate meeting and dining facilities.

Its five-story base will house dining and ballroom facilities and several restaurants. The residence tower will be located on top of the hotel with its own private street entrance and its own bank of high speed elevators.

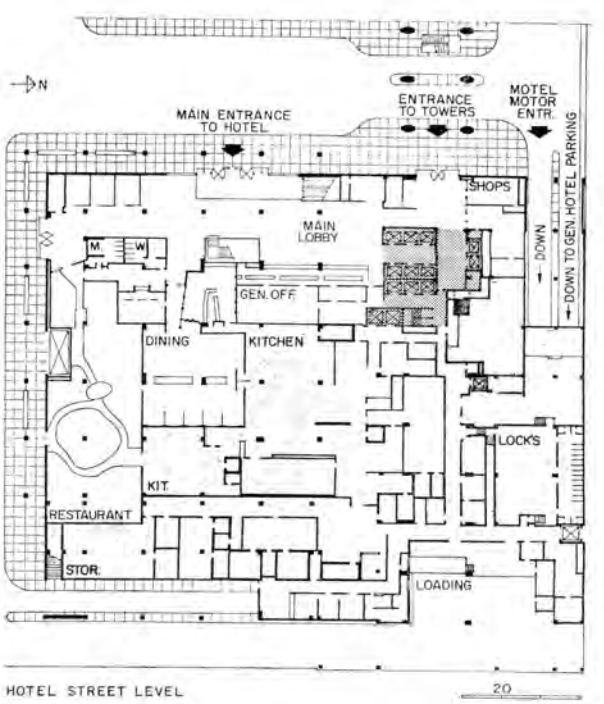
The first three stories of the hotel have been designed to include the drive-in motor hotel accommodations for vacationing families. A separate garage entrance, with its own elevators, will provide immediate access to the automobiles of motor hotel guests. Many rooms of the motor hotel section overlook the swimming pool terrace.



HOTEL MOTEL POOL DECK & 1ST TOWER LEVEL PLAN



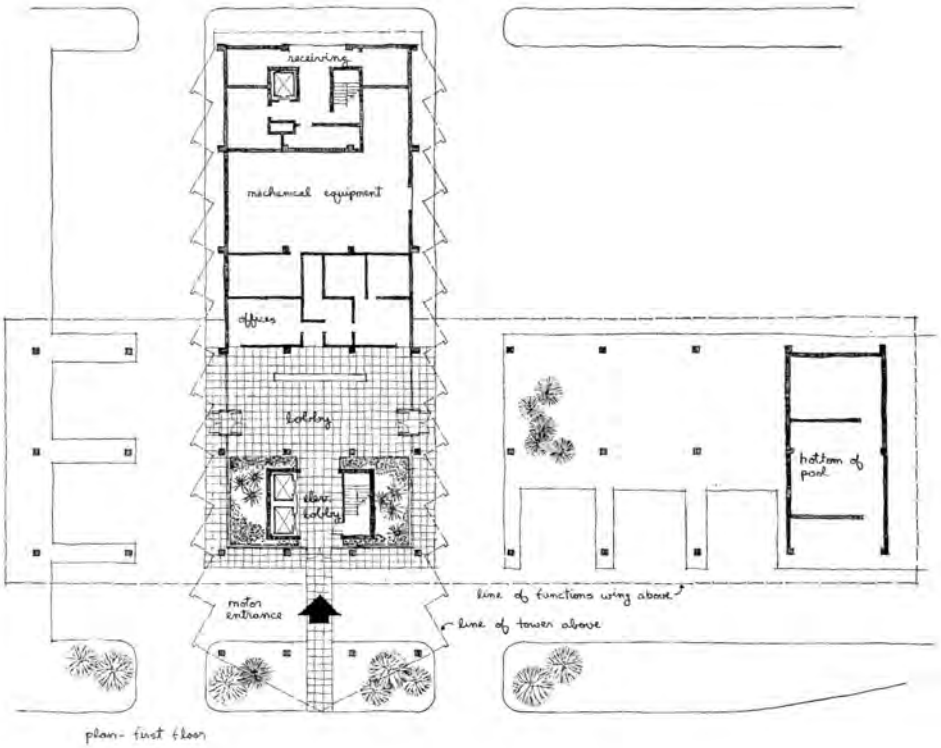
HOTEL PLAZA LEVEL PLAN



HOTEL STREET LEVEL

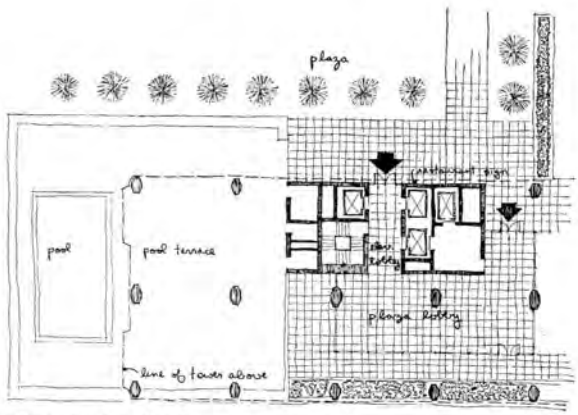
Robert D. Harvey

1. Identification by night. Manager's record reveal that as many as 80 per cent of th guests arrive at a hotel after dark, especiall in a highway unit. The appearance by night therefore as important as by day. Without cre ating a garish façade or a billboard effect, it necessary to utilize proper illumination, mas ing and color to make the unit attractive an inviting after dark. In the H.C.A.'s Charte house Motor Hotel in Lynn, Massachusett shown by day and evening in the photograph above, silhouetting an open wood grille wit back lighting achieves the desired effect

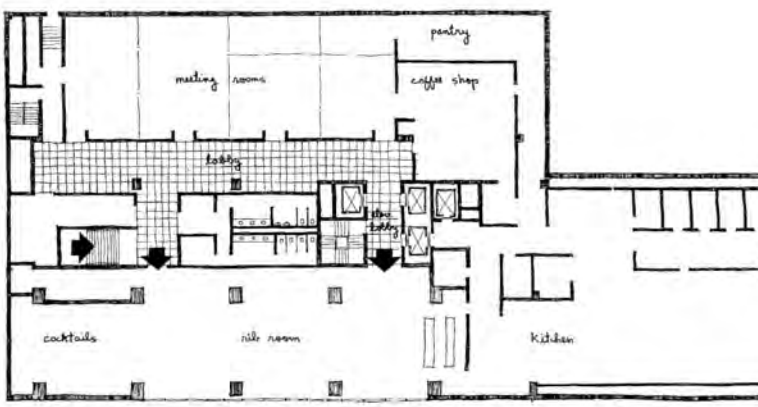


plan - first floor

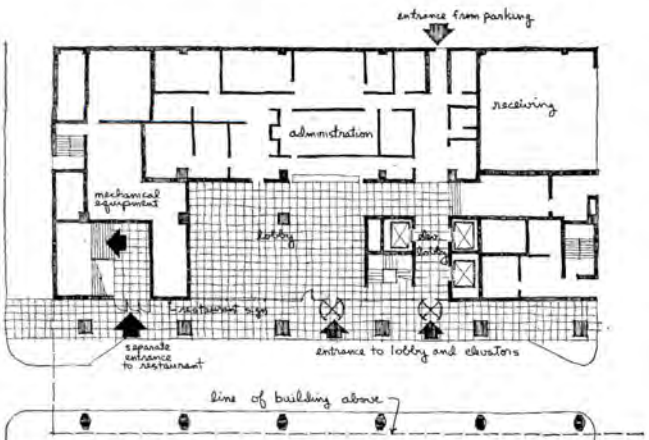
2. Direct access from the automobile to th room, without passing through formal publi spaces. This original motel concept is still highly desirable feature in downtown location as well as in highway units. This can b achieved even in a tower building by providing an entrance directly into the elevator lobby a in the Charterhouse Hotel in Cambridge, Mas sachusetts, now under construction. See plan at left. Here no one is forced to walk *through* the main lobby



plan - plaza floor (third)



plan - second floor



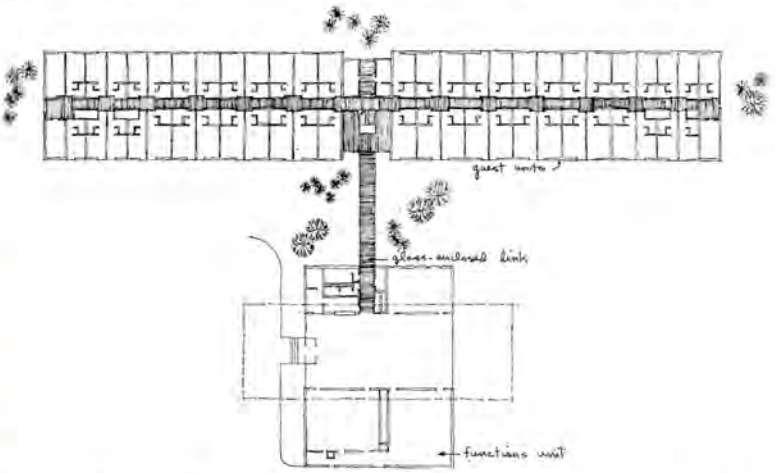
plan - first floor

3. Strong identification and easy accessibility of hotel bars and res taurants to general public as well as hotel guests. The wining an dining spaces in a hotel cannot exist on hotel guests alone. They mus be located where they can generate outside traffic and be furnishe with a direct entrance from the street. As site limitations generall preclude the location of these spaces on the street level, direct acces to elevator and stair towers combined with exterior identification, suc as is provided for the new H.C.A. Hotel America in Hartford, provid a means of creating this separate identity. See the plan above an the two plans at left

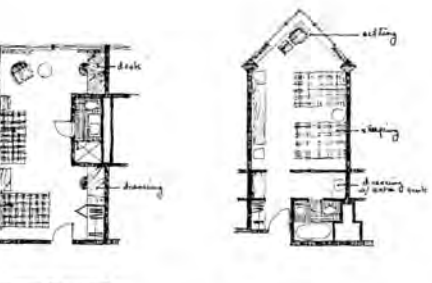
A Punch List for Good Hotel Planning

By Walter Rooney, A.I.A., of Curtis and Davis, Architects

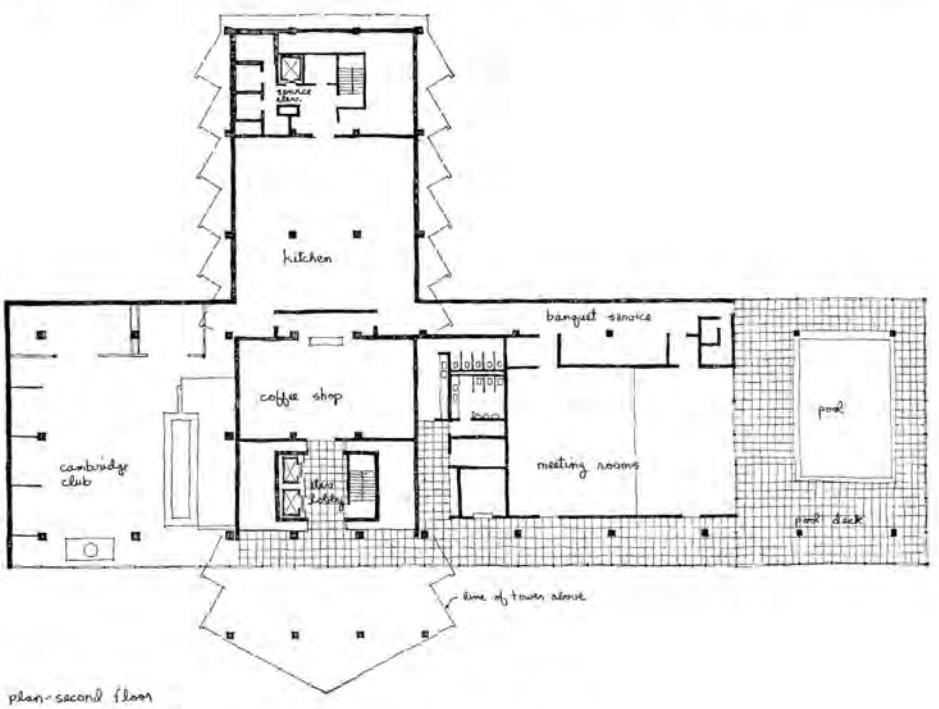
The multitude of ugly hotels and motels which mar our cities and blight the highways indicates a need for strong architectural control of the design process. Most hotels and motels are either merely mediocre or are flamboyant stage settings draped over a structural frame. "It's what the public wants," say the defenders of bad hotel design. The complete fallacy of this thinking is evidenced by public reaction to hotels which are notably bad and the hasty renovation of recently completed facilities in a futile attempt to change the setting into a more palatable one. The public, in increasing numbers, recognizes and wants good design, tasteful surroundings, an inviting atmosphere, and privacy in a hotel. In brief, the public wants good architecture and enlightened hotel management knows that only good design can provide any hope of maintaining a high occupancy over an extended period of years in the face of ever increasing competition. The sketches and photographs from our work illustrate what we consider some key requirements of good hotel or motel design.



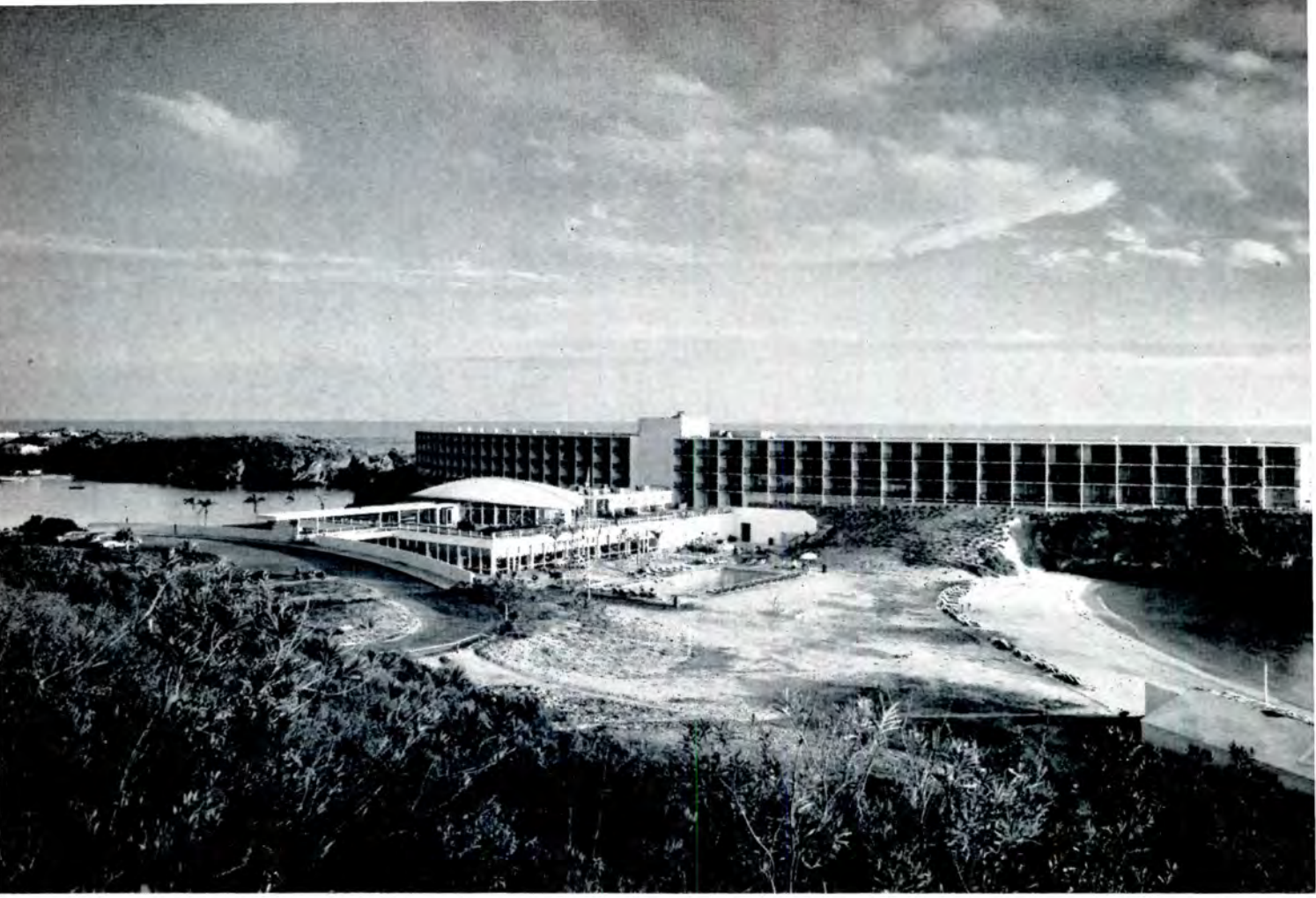
4. Interrupted corridor lengths. Double loaded corridors usually provide the most economical solution for guest room wings, but hotel guests are not delighted with long walks down dull, dimly lit areas. By offsetting room entrances, and introducing bright light and strong color at these wider areas such as in the recently opened Braintree Charterhouse, the walk becomes interesting and pleasant and the view of trees and sunlight through the glazed end walls makes the trip from the lobby to the far distant rooms a pleasant experience. The glass enclosed link connecting the public spaces to the guest room wing adds delight to this part of the walk as well



5. Careful planning to gain maximum advantage from limited bedroom space. The bedroom must be more than a place to sleep, especially if guests are to be encouraged to stay for an extended period of time. A definite feeling of separation between the sleeping and living areas can be achieved by relocating the bath, as in the Lynn Charterhouse, shown above left. In this type of plan the sofa can be converted to a double bed making the room ideal for family use. The Civic Center Hotel for Detroit, now in working drawing stage, has the advantage of providing views in three directions from each guest room by the introduction of an angled "sitting room"



6. Minimum cross traffic and maximum control in kitchen areas. Wherever possible it is desirable to have the kitchen (including all kitchen storage areas) on one level with a direct connection from the receiving area and immediate access to all areas to be serviced, including the guest room area for prompt and efficient response to a call for room service. The kitchen in the Cambridge Charterhouse shown in the drawing at right provides a very functional operation



Approach bridge leads to lobby under boat shaped roof. Dining room on lower level faces pool. Service unit is below guest room wi

Design for Luxury on the Rocks

Carlton Beach Hotel, Southampton, Bermuda
OWNER: *Southampton Hotel Company Limited*
OPERATOR: *Hotel Corporation of America*
ARCHITECT: *William B. Tabler*
Raymond C. Giedraitis, associate in charge
STRUCTURAL ENGINEER: *Wayman C. Wing*
MECHANICAL ENGINEERS: *Cosentini Associates*
LANDSCAPE ARCHITECTS: *Zion & Breen*
LIGHTING CONSULTANT: *William Richardson*
CONTRACTOR: *Aberthaw Construction Company*

The basic design of the Carlton Beach Hotel was controlled by its splendid site. Perched on a rocky headland, one side of the hotel faces the open sea, the other is oriented toward a light house on a distant rise. Two quiet bays, one forming a harbor for small boats and the other a protected swimming beach, lie on either side of the promontory. The design solution keeps the dining area and the other public spaces low so as not to impede the view of the guest rooms on the land side. These public areas overlook one or the other of the two bays.

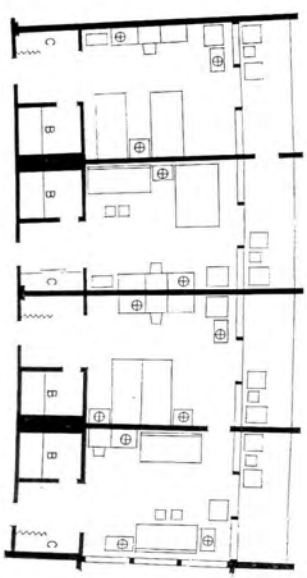
The guest room wing has been limited to three stories on the land side and two stories on the sea side to save elevator costs, but also to give the guests a sense of being physically close to the site. The hotel shares the same character as the local structures which are low. The long double loaded corridors are feasible in a luxury hotel well staffed with bellboys to carry luggage. The total cost of the hotel, including equipment and furnishings, was about $5 million.

View from entrance bridge toward lobby, guest wing and ba

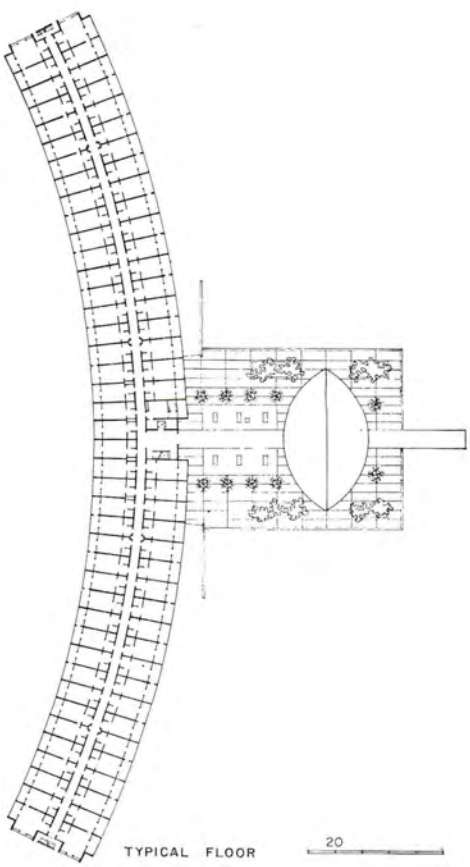
© Ezra Stoller

Each guest room has terrace and view

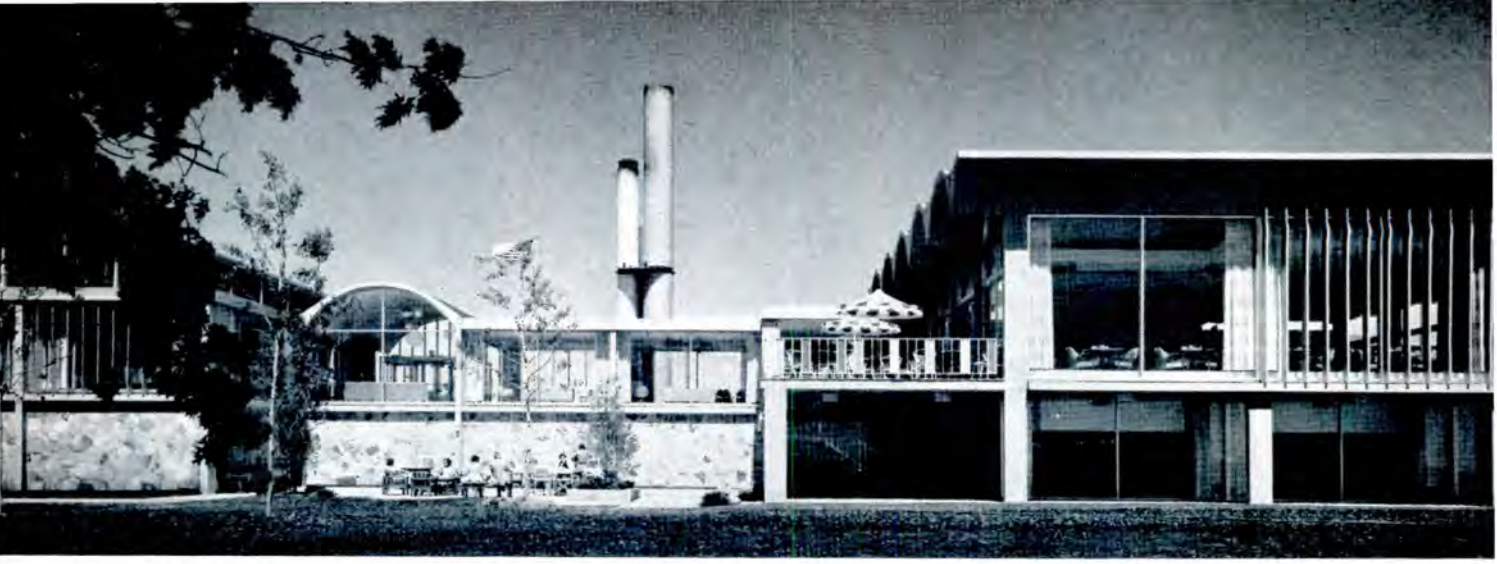
Building Types Study: Hotels-Motels



DINING FLOOR 20



TYPICAL FLOOR 20

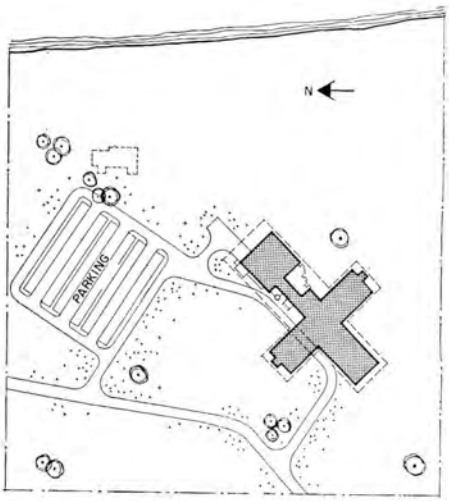


Southeast façade facing water

Building Types Study: Hotels-Motels

Motel and Lodge on State Park Beach

Lodge Building, Illinois Beach State Park, Zion, Illinois
OWNER: *State of Illinois*
ARCHITECTS: *Barancik, Conte and Associates*
STRUCTURAL ENGINEER: *David B. Cheskin*
LANDSCAPE ARCHITECT: *Paul Novak*

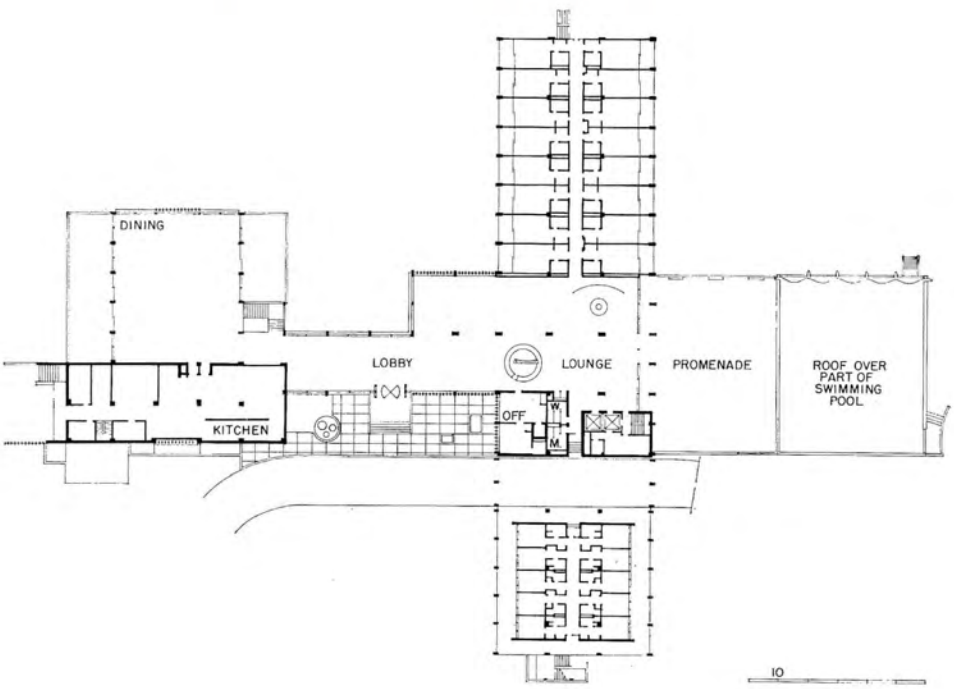


PLOT PLAN 50

A public recreation facility such as this motel owned and built by the State of Illinois does not have to be competitive in terms of its architecture. It is there for the public to use at reasonable prices. It occupies a choice site. It doesn't have to fight to get customers from motels on nearby highways. Motels of this type offer an opportunity to design without gimmicks. The architect, if he is good, can achieve simplicity and serenity and a bit of gaiety because these can be universal attributes of well-studied park buildings.

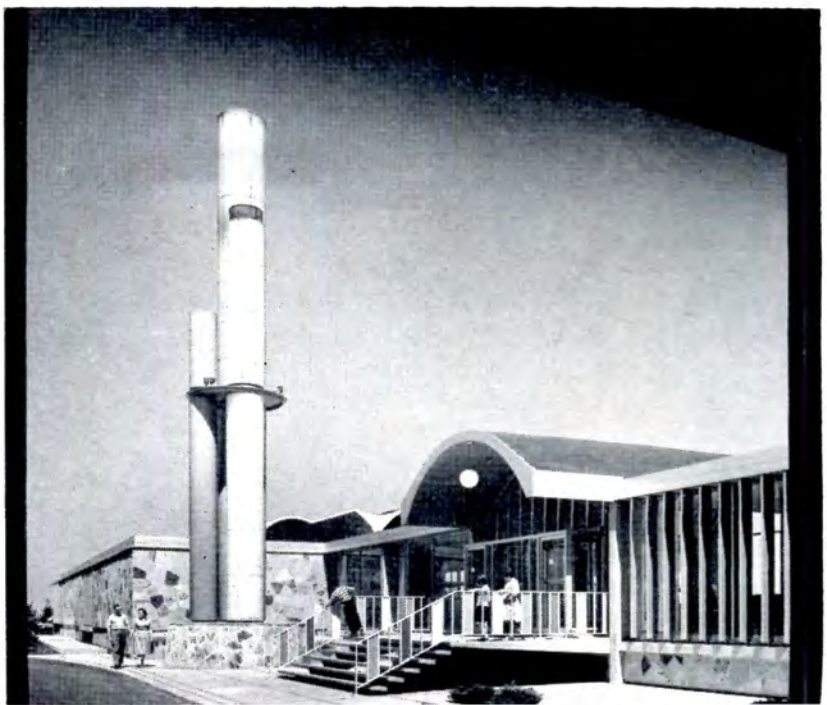
This building is an excellent example of the genre, from its playful roof silhouettes to the brightly painted heating plant stacks at the entrance. The structural frame is reinforced concrete, exterior walls are precast concrete and stone.

Looking southwest toward dining wing. Guest room wing beyond



View from lobby toward dining wing

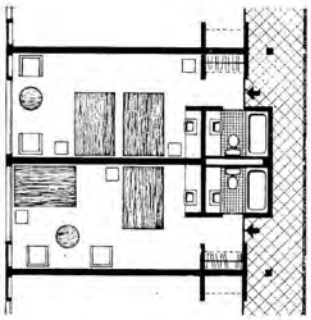
Main entrance

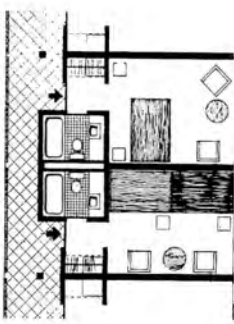


Hedrich-Blessing

Motel Designed for Industrial Park

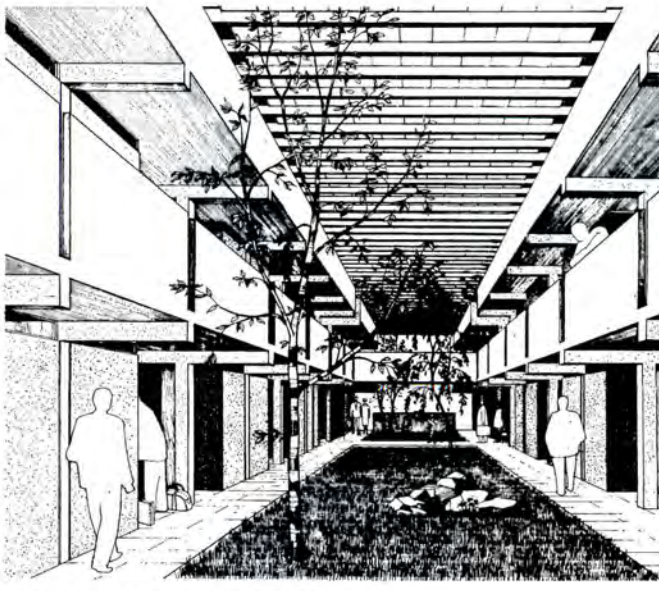
ARCHITECTS: *F. A. Stahl & Associates Inc.*



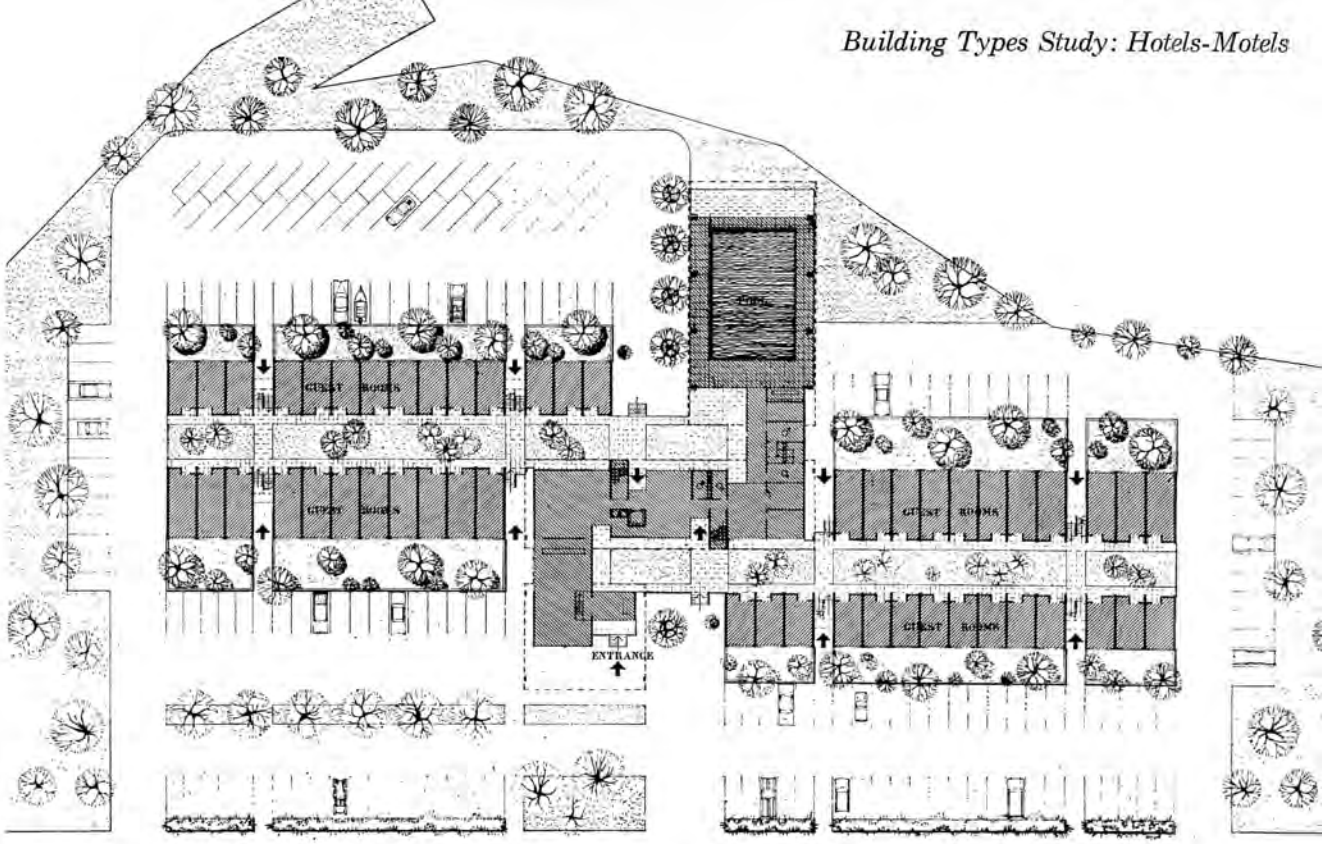


Analysis of the requirements of the area surrounding the site of this projected motel has led the architect and developers to include a private club and rental office space in this unusual scheme. It is described by architect Stahl as follows: "The site is in Burlington, Massachusetts, at the junction of two limited access multi-lane expressways. It is a corner of an existing development called 'Northwest Industrial Park' which consists of a series of research and development plants (mainly electronics) covering a considerable area.

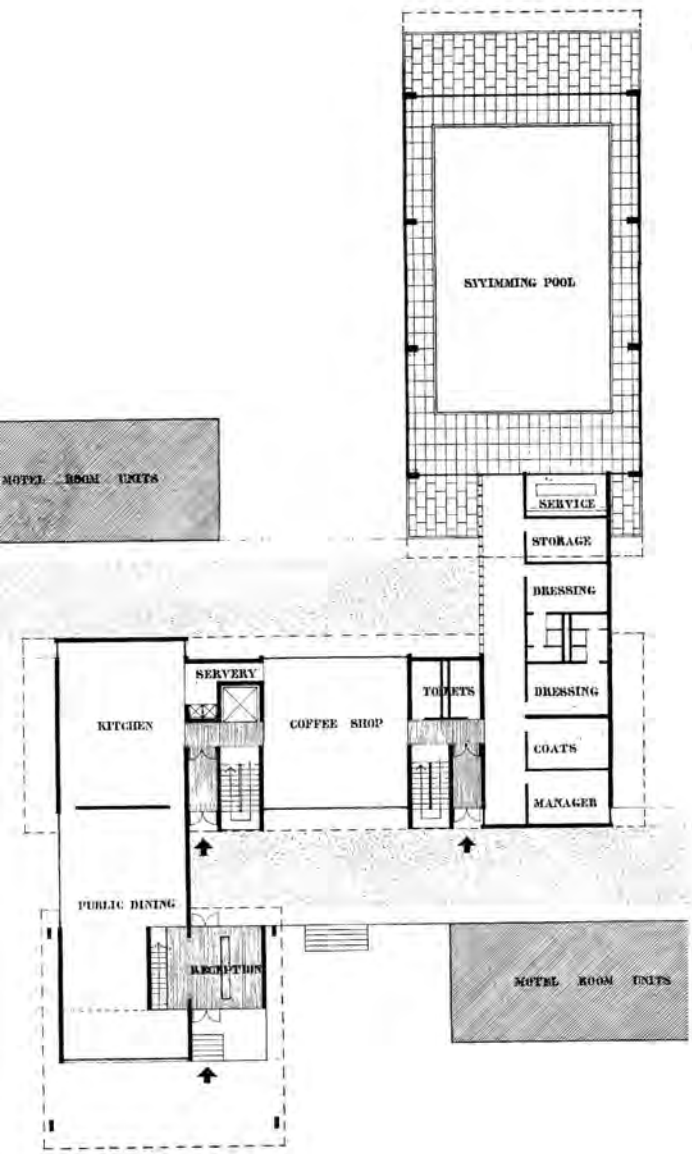
"The private club aspect of this building has been found valuable in securing support from the executive levels of the industries in the area. The flexible office space will have food service facilities to encourage trade and press functions for the surrounding industries and offices, and also will provide a facility which I believe is unique at present in motels; that is to encourage new industries which will be building in this or adjacent areas to set up office facilities in this building and maintain a temporary headquarters with staff living accommodations."



Malls are glass enclosed at the roof, and will be partly heated by radiant panels in the soffit of the walkways during the winter months



The level of the motel itself is raised above the parking level by one half level, and entrances to the motel units are through the half landings of the staircases leading to the galleries



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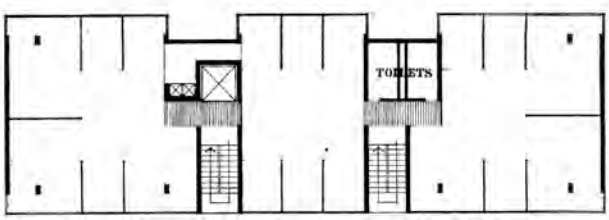
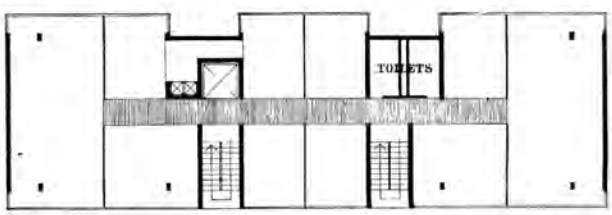
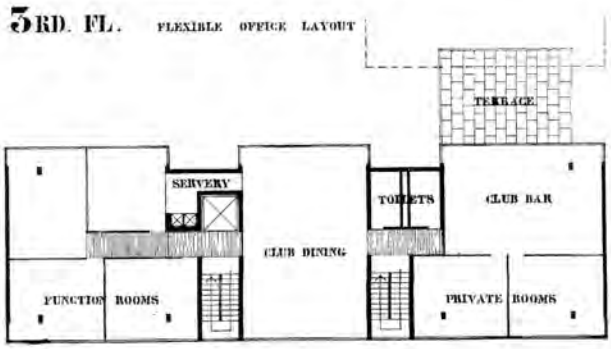


4 TH. FL. FLEXIBLE OFFICE LAYOUT



3 RD. FL. FLEXIBLE OFFICE LAYOUT



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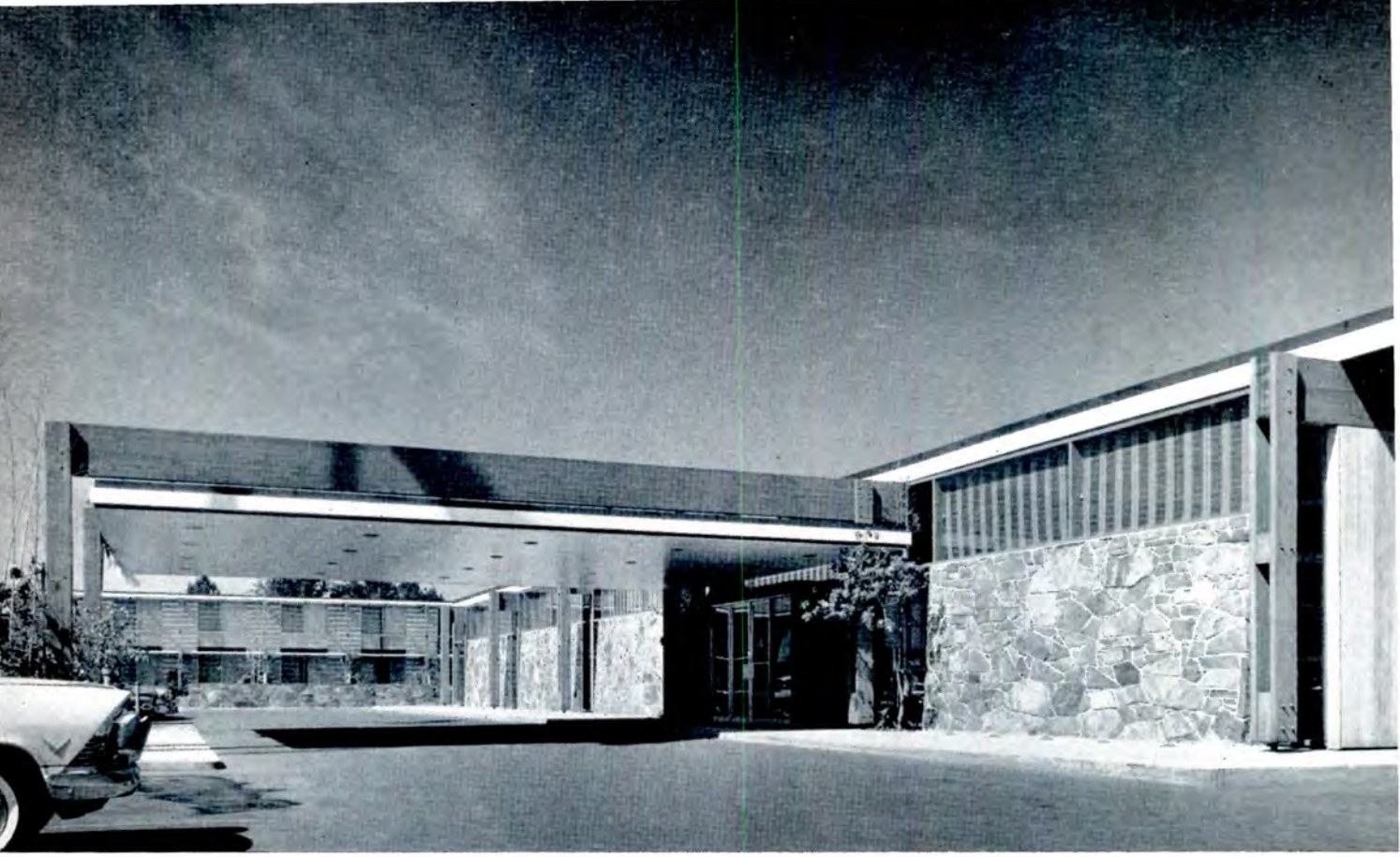


Main entrance

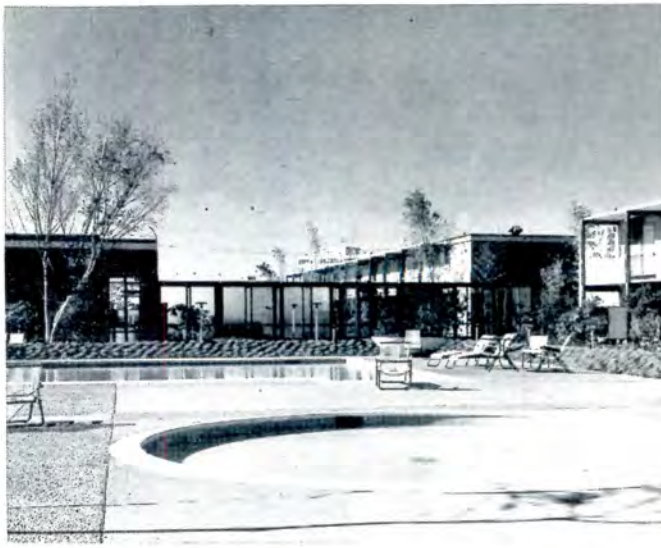
Charles R. Pearson

Jetport Motel

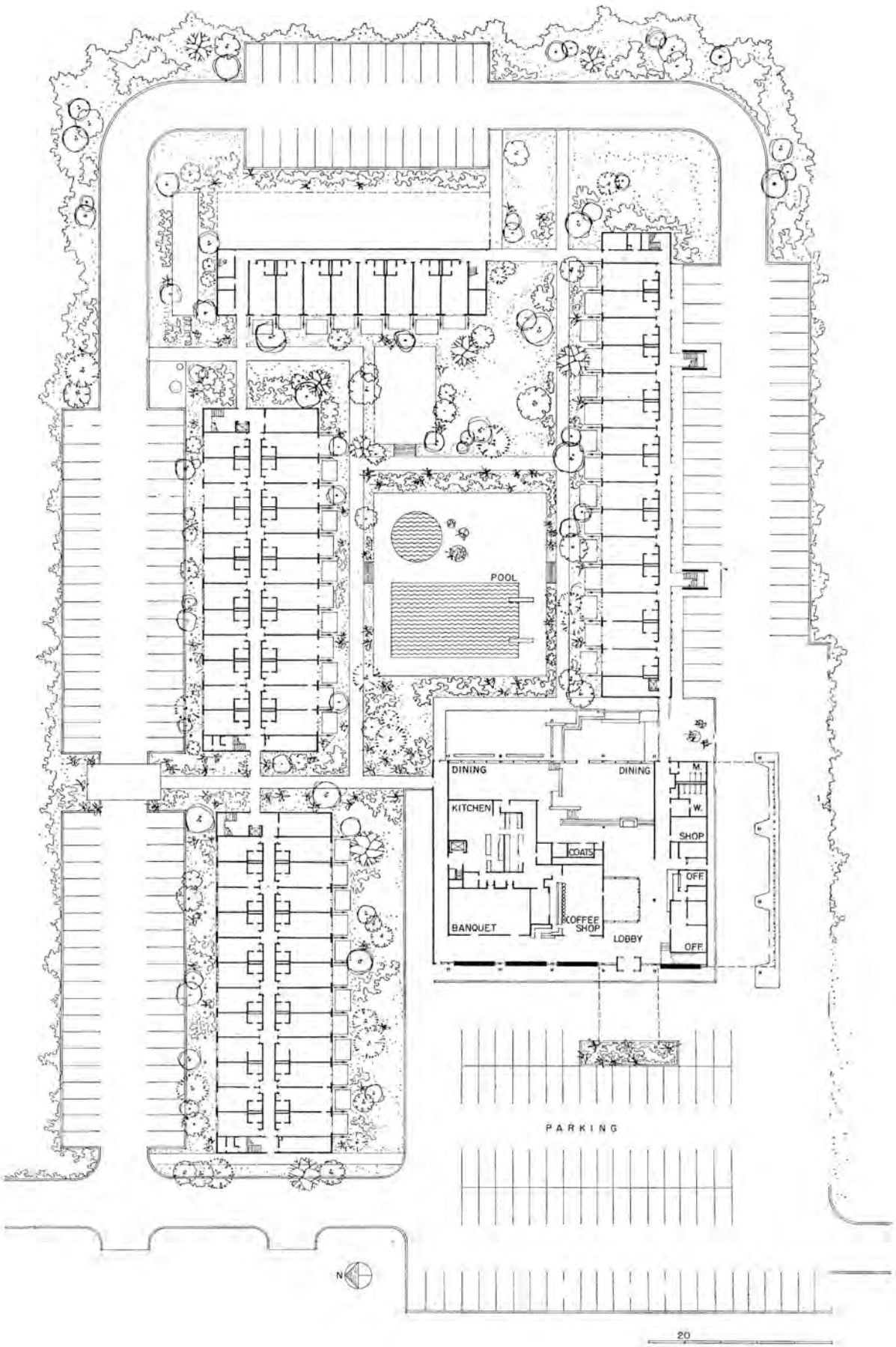
Hilton Inn, Seattle-Tacoma Airport, Washington
OWNER: *Hilton Inns, Incorporated*
ARCHITECTS: *Skidmore, Owings & Merrill*
INTERIOR ARCHITECT, PUBLIC SPACES: *Roland Terry*
INTERIOR ARCHITECT, GUEST ROOMS: *David T. Williams*
LANDSCAPE ARCHITECT: *William Teufel*
KITCHEN CONSULTANTS: *Dohrmann Hotel Service*
CONTRACTOR: *John H. Sellen Construction Co.*

Located directly east from the Seattle-Tacoma International Airport, this motel is planned as a facility for air travellers who need to catch a few hours of rest to adjust to the time difference, and for those who are taking a few days of rest to recover from the intercontinental flight. It has no special characteristics as a jetport motel to distinguish it from well planned pool and terrace focused motels in suburban or highway locations. The wood frame exterior walls and the wood panel and gypsum board interior partitions, as well, as the floors and roof, are sound insulated, for example; but against motel noises, not jetport noises. Since the new motel does not attempt to solve such special problems as this, the main interest lies in its simplicity of plan and in the directness and handsome expression of its wood frame. Note the ease of access to the guest rooms and central building from all the parking areas, combined with the complete privacy of the interior court and pool. All guest rooms look out on landscaped areas. Of the 150 guest rooms, 93 face the large landscaped central court. Ground floor rooms open to private patios and all south and west rooms are shielded from the sun by a projecting wood sun screen.

Art Hup



View toward west


POOL
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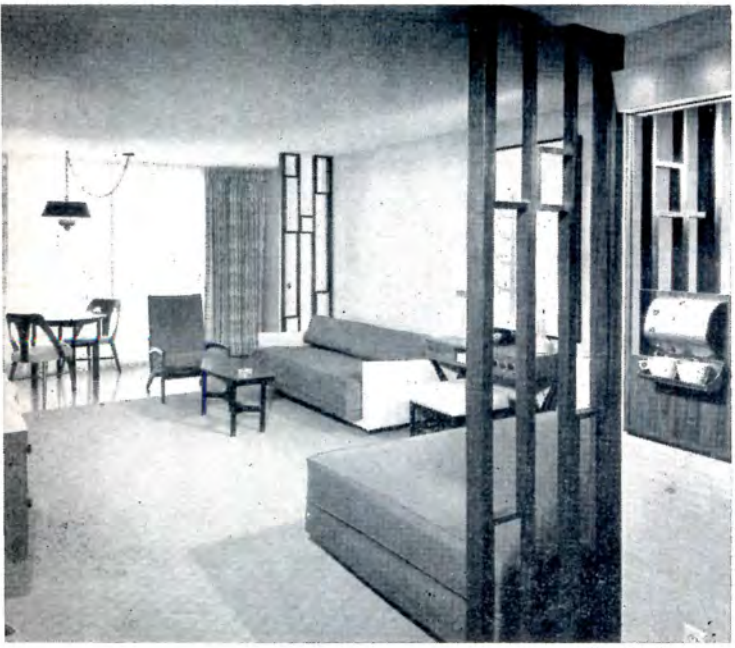
Art Hupy



Charles Pearson

Charles Pearson

Charles Pearson

Building Types Study: Hotels-Motels
Jetport Motel

A comparison of the exteriors and interiors of the motel indicate that the public spaces and guest rooms are executed in a somewhat different spirit than the exteriors might lead one to expect. The general design concept was to plan an interior expressive of the way of life in the Pacific Northwest and to develop a style using native woods, stone, art and plantings indigenous to this area. Among the most important items displayed are works of art commissioned of local artists, who were requested to suggest by means of design, material, color or subject matter some form or idea related to the Northwest country.

Dearborn-Massar

Dearborn-Massar

cerned, because it has a peak solar load between 6 and 8 A.M. when most people are still sleeping or just getting up. The noon solar peak on the south and 4 to 6 P.M. peak on the west are usually not as critical, even though the outside temperature is higher, because the bedroom occupancy is considerably lower. Whether or not the refrigeration plan can take advantage of these conditions is a function of system design and overall air conditioning loads. However, it is recommended that at least two separate air conditioning zones be established for the bedroom areas (usually east and north on one zone) so that economies in design and operation may be effected. If a three pipe system is used, then the need for zoning is reduced.

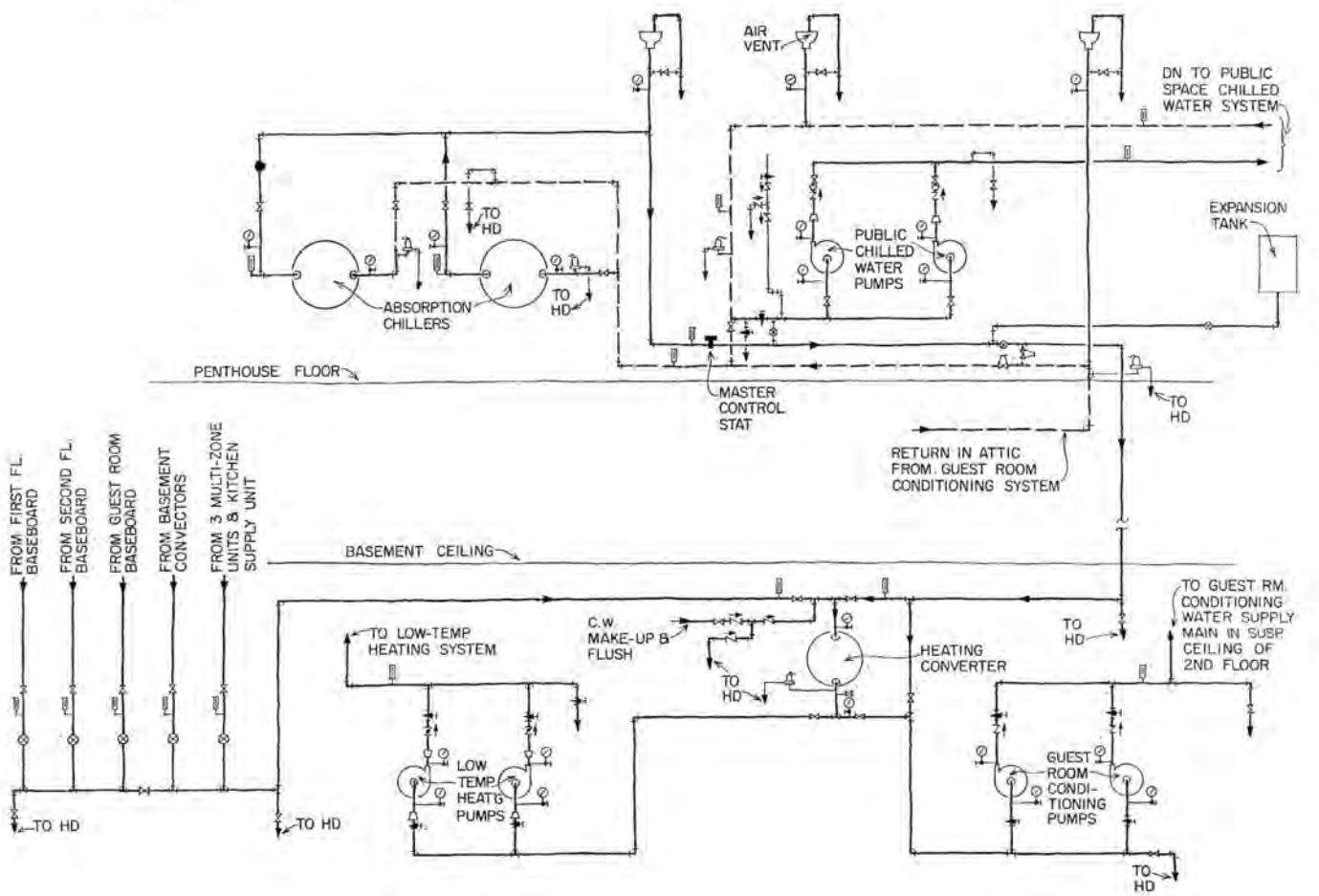
The dining, meeting and entertainment areas should be served by separate systems based upon the time when these rooms will be used and the conditions to be encountered. If dual duct systems are furnished, then fewer air handling units will be required, thereby cutting down mechanical room requirements but increasing operating costs unless special means are provided for shutting off the air to areas not in use.

In sizing the refrigeration machines, a diversity factor of from 40 to 60 per cent may be used on the bedroom area peak design loads. Part of this is due to the cooling storage capacity available because of the 24-hour building operation. Since motels are generally one- or two-story structures built of comparatively light structural materials, they will not be able to take as much credit for storage capacity.

Very little diversity factor can be anticipated for the other areas since they may and probably will be used more or less simultaneously. Therefore, the refrigeration machines can be selected so that one serves the entire hotel or motel or one unit may serve the bedrooms and a second unit can serve the other areas. The latter's first cost is somewhat higher but operating costs may be lower because the bedroom areas generally can operate on a higher refrigerant temperature than the dining and meeting areas. Higher refrigerant temperatures usually mean lower fuel cost requirements. The ratio of bedroom to dining and meeting areas will generally determine whether it is feasible to consider separate refrigeration machines.

Most communities have code requirements with regard to ventilation and air conditioning of hotels and motels. Sometimes these codes are adequate, sometimes not. In many cases, the client will not want to furnish more than the code requires. If the code requirement is inadequate in the opinion of the engineer, the client should be shown that the code does not serve his best interests or those of his patrons.

Current Application



Piping diagram for heating and cooling water circuits in basement and penthouse at Water Tower Inn, Chicago (Hausner and Macsai, architects, William Goodman, consulting engineer; see Building Types Study, this issue) shows how a fairly simple system for fan coil cooling with baseboard heating and separate mechanical ventilation in guest rooms of a 15-story hotel-motel can be neatly integrated with other systems for public spaces

STEEL PLATE EXTERIOR SERVES AS COVER FOR FIREPROOFING

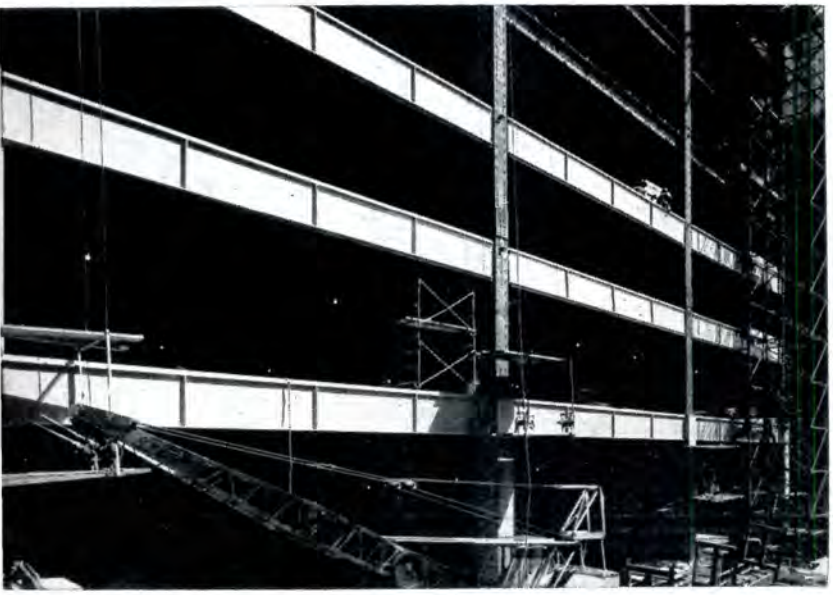
Continental Center in Chicago by Naess and Murphy has columns and spandrel beams faced with welded steel plate

Columns and spandrel beams of the new Continental Center in Chicago, designed by Naess & Murphy, Architects & Engineers, will be sheathed in a curtain wall of ⅜-in.-thick carbon steel plate, welded and painted. This will be accented by fixed tinted glass framed by a stainless steel sash.

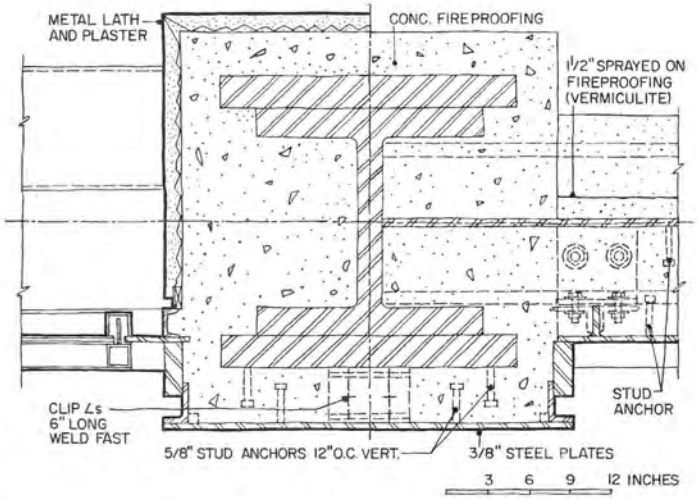
The covering plates are equipped for double duty. Besides exterior frame design, they serve as a backup to concrete for fireproofing. Studs are welded to the outside of the columns and spandrel beams and to the back of the facing plates. These serve as reinforcement of the concrete which is poured and vibrated into the space between the plates and the columns and beams, once the plates are in place.

All of the columns in the lower portion of the building were fabricated from A440 steel.

Although cover plates were required in the lower floors for strength, they could be smaller in size because the A440 columns are more slender due to their greater strength.



Welded carbon-steel plate covers have been applied over the spandrel beams. They will be protected from corrosion by paint



Covers are tied to the concrete fireproofing by means of stud anchors. Structural steel is A440 alloy. Stud anchors are welded to both plate and structural steel

ARCHITECT:
Berla & Abel, Architects
Jesse Weinstein, Associate
CONTRACTOR:
Standard Construction Co., Inc.
AMELCO DISTRIBUTOR:
James A. Cassidy Co.
Washington, D.C.

Amelco Windows Assure Year 'round Climate Control

in new Farragut Building, Washington, D. C.

- DUAL GLAZING
- BUILT-IN VENETIAN BLIND
- TRUE THERMAL BREAK IN VENT AND FRAME
- HORIZONTALLY PIVOTED

● Occupant comfort and lower operating costs are assured in the new Farragut Building because it is ingeniously designed to control Washington's capricious climate.

● The Amelco Window System is an integral part of this climate control. Amelco's dual glazing with venetian blind between the panes of glass effectively reduces solar heat gain in summer... true thermal breaks in vent and frame, along with insulating air space between panes, reduces heat loss in winter.

● The horizontally pivoted Amelco Window permits cleaning of all glass surfaces from inside the building. Amelco Windows are air and water tight, control outside noise, low in cost, versatile and equally adaptable to all types of construction.

Check the complete story in Sweet's 1962 Architectural File or Write Direct

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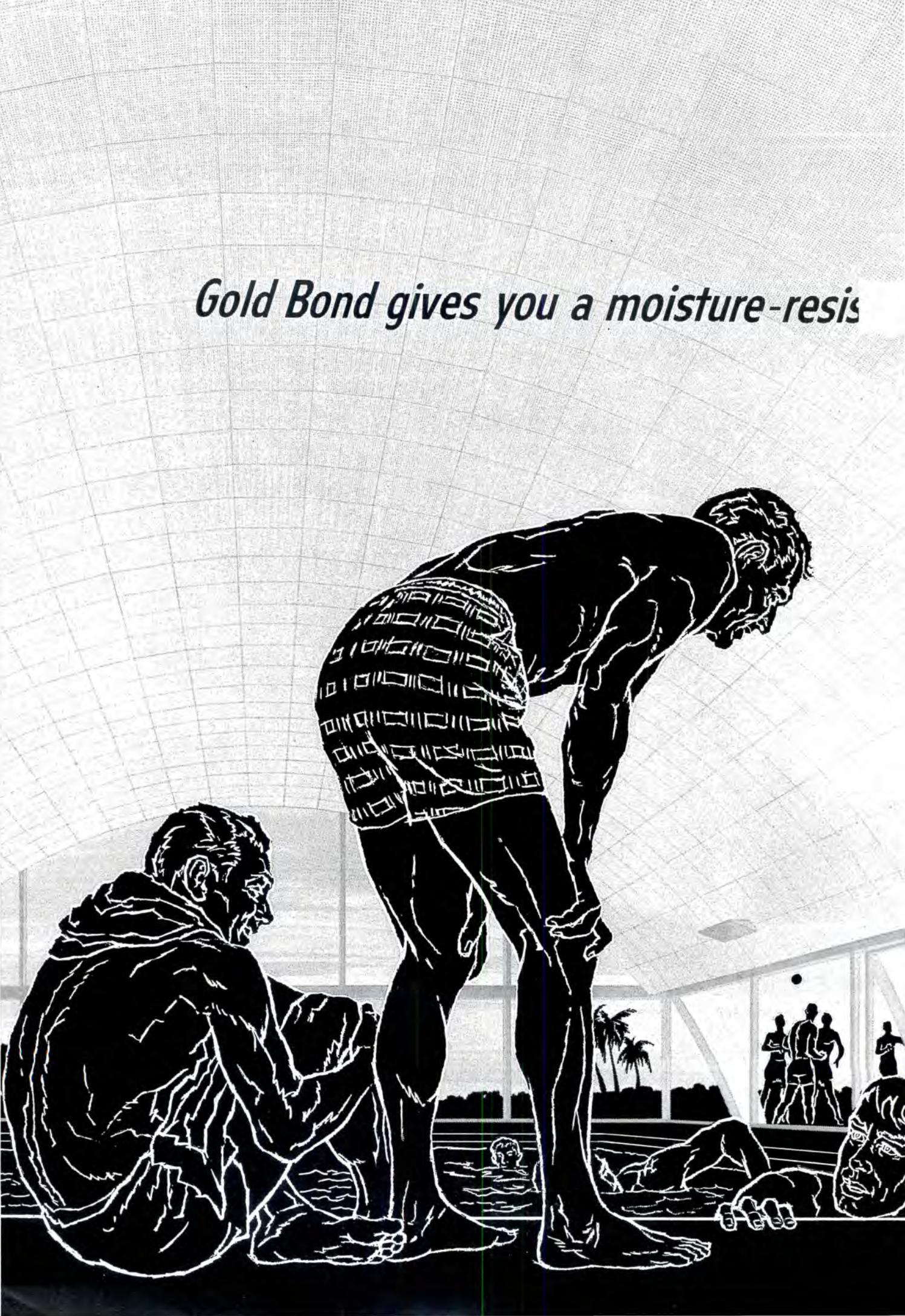
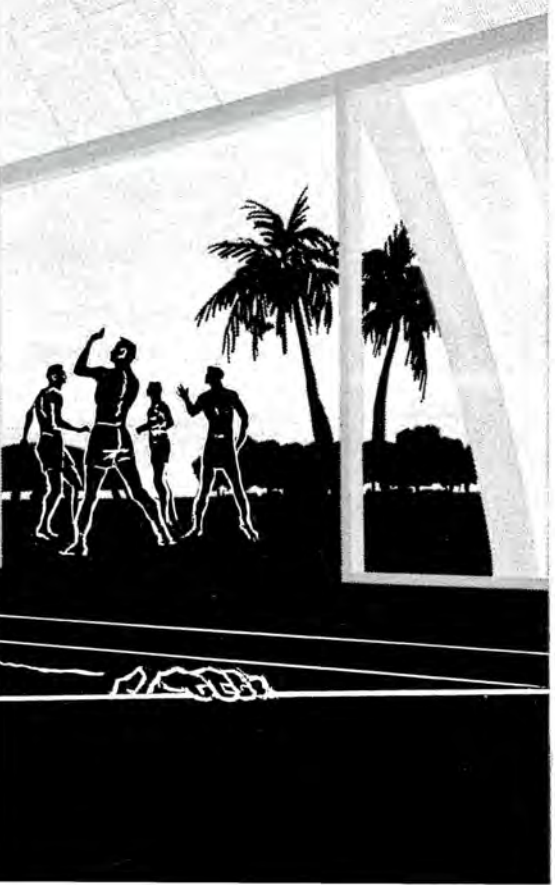
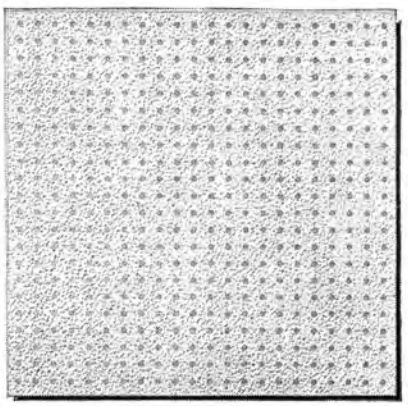
For more data, circle 67 on Inquiry Card

Gold Bond gives you a moisture-resis

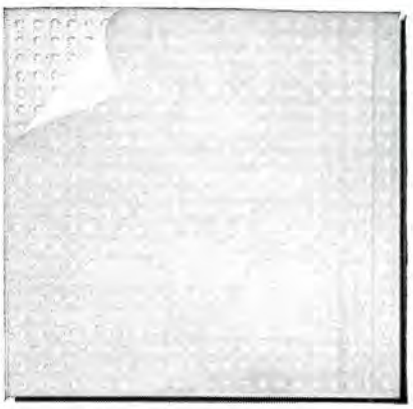


ay with ceilings...





New special coating for protection plus new "rippletone" texture



New membrane backing reduces sound by diaphragmatic action

Asbestibel Perforated Asbestos—a way to design moisture out, beauty in. Guaranteed not to shrink, warp or sag, even in above-average humidity areas. And when the panels are backed with mineral wool pads (in various thicknesses), you get a wide range of sound-absorbing coefficiencies. New features have been added: 1. Perforated Asbestos Panels with a low-cost membrane backing that reduces sound by diaphragmatic action. 2. New special coating for surface protection makes cleaning easier and faster. 3. A new "rippletone" texture for heightened visual interest. For even more ways with ceilings, call your Gold Bond® Representative. National Gypsum Company, Buffalo 13, N. Y.

Gold Bond®
ACOUSTICAL PRODUCTS

For more data, circle 68 on Inquiry Card

This carpet doesn't sunburn. So why the suntan lotion?

Any carpet looks great when it's new. But the Diamond Head Tower (of Hilton Hawaiian Village) needed carpets that would stay looking great in spite of strong tropical sunlight, tracked-in sand and spilled suntan lotion. So they chose carpeting made with Acrilan® acrylic fiber in the pile.

Acrilan's clear colors resist fading. Oils, lotions, ar tracked-in sand are no problem. They clean right up.

Carpets made with Acrilan start out looking beautiful, st looking beautiful and are economical to maintain. It's simple as this: You can trust *the big red* Acrilan "A."

CARPET: HIDALGO BY CABIN CRA

THIS CARPET PILE IS MADE WITH • ACRILAN ACRYLIC FIBER •

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FINISHES FOR CABINET WORK

Specifications Recommended by the National Association of Store Fixture Manufacturers

TERMINOLOGY FOR FINISHING

Woods

1. *Fine textured woods*—Woods such as maple, beech, birch, gum, basswood, yellow poplar and sycamore, having small pores.
2. *Coarse textured woods*—Woods such as oak, walnut, Honduras mahogany, African mahogany, Philippine mahogany, ash, and elm having large, visible, open pores.

Stains

1. *Oil stain*—A transparent solution of a dye powder soluble in aromatic hydrocarbons. Normally dry to recoat in 2-4 hours. Need sealers over them which do not dissolve the stain and create bleeding. Shellac is normally used.
2. *Water stain*—A transparent solution of water soluble dye powders. Causes raised grain in most woods and requires long air drying before recoating.
3. *N.G.R. (non-grain-raising stain)*—A transparent solution of water stain powders, in solvents other than water, which does not swell the wood fibers and create raised grain.
4. *Pigmented wiping stain*—A thin oleo-resinous varnish with added specially ground color pigments, either earth or chemical. Must be kept agitated or settling occurs. Dries in 4 hours or more at moderate room temperature.
5. *Washcoat*—A thin solution of a sealer. A lacquer washcoat is normally a 4-6 per cent solids solution of a lacquer sealer. A shellac washcoat is normally the equivalent of a ½ lb cut of shellac. (See definition.) Primary purposes of the washcoats are: (1) to stiffen raised grain fibers and allow clean sanding, (2) to form a sealing layer between stain and succeeding color coats of finish, and (3) to allow cleaner, easier filler wiping.
6. *Lacquer sealer*—A quick drying lacquer, so formulated as to provide quick dry, good holdout of succeeding coats, and containing sanding agents such as zinc stearate to allow dry sanding of sealer. Requires constant stirring to avoid separation of ingredients. Usually contains 15-20 per cent solids at spray consistency. One full wet coat (see the definition) deposits approximately 1 mil of dry film thickness.

Lacquers

1. *Water-white lacquer*—A transparent lacquer having no apparent color, normally used over light colored surfaces. Usually contains approximately 1 mil of dry film thickness.
2. *Clear lacquer*—A transparent lacquer, unpigmented, but having some natural color, usually a light amber. Normally used over surfaces where slight darkening by topcoats is allowable. Usually contains approximately 20 per cent solids at spray consistency. One full wet coat deposits approximately 1 mil of dry film thickness.
3. *Flat lacquer*—A clear or water-white lacquer to which clear pigments have been added to diffuse light reflection from the surface of the dried film and simulate a rubbed surface. Usually contains approximately 20 per cent solids at spray consistency. One full wet coat deposits approximately 1 mil of dry film thickness.
4. *Hot lacquer*—A lacquer formulate for spraying at elevated temperatures, usually 160 F. Normally contains 30 per cent or greater solids content. Produces in two sprayed coats the equivalent of three coats of normal cold sprayed lacquer. Normally produces 1½ mils or greater dry film thickness in one sprayed coat.
5. *Lacquer enamel*—A clear lacquer to which has been added coloring pigments, bulking pigments and others. Forms an opaque film. Requires constant agitation to prevent color changes due to settling out of pigments. Usually contains 35 per cent or greater solids content at spray consistency. One full wet coat deposits approximately 2 mils or greater dry film thickness.

Other Finishing Materials

1. *Full wet coat*—A coat of finishing material applied in such manner as to exhibit an all over wet appearance (as contrasted to a dry or sandy spray). Usually considered to be near the maximum amount that can be applied on a vertical surface without sags or runs.
2. *Cut (of shellac)*—Number of pounds of resin added to each gallon of solvent. Liquid shellac is often supplied as a "4-lb cut." Equal parts of a "4-lb cut" of shellac and alcohol produce the accepted equivalent of a "2-lb cut." One part of a "4-lb cut" of shellac to seven parts of alcohol produces the accepted equivalent of a "½-lb cut".
3. *Uniforming*—Application of colored finishing materials to wood surfaces, finished or unfinished, to minimize variations in color or intensity of color. Usually performed where different woods are used in the same construction or to even up the color of all units in a group. Major use is on transparent and toned finishes.
4. *Lacquer undercoater*—A heavily pigmented lacquer enamel. Formulated to provide filling sealing and coloring. Can normally be sanded without lubricant. Air dries in 1 hour or more.
5. *Toner*—A thin lacquer enamel containing specially ground chemical and earth pigments. Thin applications have high hiding power. Dries

This material was prepared by GLENN P. BRUNEAU of the Department of Wood Products Laboratory, University of Michigan and appeared in "Specifications for the Manufacture of Stone Fixtures," a publication prepared under the supervision of Dr. STEPHEN B. PRESTON and under the direction of the Specifications Committee of the National Association of Store Fixture Manufacturers

rapidly, in 15 minutes or longer.

6. *Paste wood filler*—A mixture of oleo-resinous varnish, coloring pigments, bulking pigments (silex, others) and other ingredients. Usually reduced for application with VM&P naphtha at following rates: For walnut, Honduras mahogany and similar woods, 8-10 lb filler/gallon reducer. For oak, Philippine mahogany, ash and similar woods, 10-12 lb filler/gallon VM&P naphtha. Primary purpose is to fill and color vessels or pores of the wood and provide a level surface for succeeding coats. Formulated to air dry in 4 hours or more.

7. *Orange peel*—Roughness of a sprayed surface, resembling the surface of an orange peel, caused by lack of flow of sprayed finish droplets.

FINISH PROCEDURES FOR EXPOSED HARDWOOD SURFACES

1. Natural finish for exposed hardwood surfaces:

A. *Natural finish for coarse textured woods*

(1) Apply washcoat of lacquer sealer. Dry and sand lightly with 6/0 opencoat abrasive paper.

(2) Apply paste wood filler over all open grained wood. Filler should be allowed to "flash off" until a flat or dull appearance is noted. At this point, surfaces are padded by machine or by hand, with downward pressure across the grain, pushing excess filler into the pores. This initial padding is followed with a clean wipe across the grain to remove excess filler. After this operation, lightly wipe parallel to the grain with a clean cloth to remove all cross wipe marks. Excess filler in corners, carving or similar depressions should be brushed out or picked out cleanly. Dry filler thoroughly before sealing.

(3) Apply full wet coat of lacquer sealer. Dry.

(4) Sand out all roughness with 6/0 opencoat abrasive paper. Dust off thoroughly with air jet.

(5) Apply full wet coat water white lacquer. Dry.

(6) Scuff with 6/0 opencoat abrasive paper to remove any roughness present. Dust off with air jet.

*(7) Apply second full wet coat water white lacquer. Dry.

B. *Natural finish for fine textured woods*

(1) Follow exact procedure for "Natural finish for coarse textured woods," 1.A., except for elimination of steps (1) and (3). (Eliminate initial washcoating and filling operations.)

2. Stained finish for exposed hardwood surfaces:

A. *Stained finish for coarse textured woods*

(1) Apply one coat of stain (water, N.G.R., oil or pigmented wiping stain).

(a) If water stain is used: Dry thoroughly after staining and apply even washcoat of lacquer sealer (4-6 per cent solids). Scuffs sand when dry with 6/0 abrasive paper to remove raised fibers.

(b) If N.G.R. stain is used: Dry thoroughly, apply even washcoat of lacquer sealer (4-6 per cent solids). Scuff lightly when dry with 6/0 opencoat abrasive paper.

(c) If oil stain is used: Dry thoroughly according to manufacturer's directions. Apply even washcoat of white shellac (½-lb cut). Dry completely and scuff sand lightly with 6/0 opencoat abrasive paper.

(d) If pigmented wiping stain is used: Wipe evenly and cleanly, removing accumulations in crevices, inside corners, etc. by dry brush or wiping. Dry according to manufacturer's directions and follow with a washcoat of lacquer sealer (4-6 per cent solids). Sand washcoat lightly with 6/0 opencoat. Avoid cutting through stain.

(2) Apply paste wood filler (following procedure shown under 1.A. step (2). Dry thoroughly.

(3) Apply one full wet coat lacquer sealer (15-20 per cent solids). Dry thoroughly.

(4) Sand sealer to remove all roughness and dust off with air jet.

(5) Apply one full wet coat clear lacquer (water white may be specified but is not essential for dark stained finishes). Dry completely.

(6) Apply second full wet coat clear lacquer (or water white if specified). Dry completely

B. *Stained finish for fine textured woods*

(1) Follow exact procedure under 2.A. except eliminate the filling operation, step (2).

3. Bleached finish for exposed hard wood surfaces:

A. *Bleach all exposed surfaces.* For bleaches requiring a neutralizing wash, neutralize according to manufacturer's directions. Since any free alkali left on the bleached surface may have a serious effect on subsequence coats, each bleached surface should be tested for alkalinity, after neutralizing, as follows:

(1) A test solution containing the following ingredients should be formulated:

1 part phenolpthalein
50 parts ethyl alcohol
50 parts water

(2) Several drops of this test solution should be placed at different points on the neutralized surface. If the spots turn red or pink, even momentarily, the surface is still alkaline.

(3) If the above test indicates alkalinity, the surface should be reneutralized with a 5-15 per cent solution of acetic acid and then sponged with clear water to remove bleaching residues.

Certain bleaches do not require a neutralizer. If not, eliminate neutralizing wash. All bleached surfaces should be dried thoroughly before recoating.

B. *Sand bleach surfaces* to remove all roughness with 6/0 abrasive paper. Any sandthrough of bleached surface to unbleached wood should be spot bleached to uniform surface color.

C. At this point, staining is to be done according to specification.

4. Toner finish for exposed hardwood surfaces:

A. *Toner finish for coarse textured woods*

(1) Spray uniform coat of toner over all surfaces. Avoid excessive buildup of coating at overlaps of spray pattern to avoid streaks. Natural pattern of the wood should not be obscured by toner application. Dry completely.

(2) Apply water white lacquer washcoat evenly over all exposed surfaces. Dry completely. Scuff sand lightly to remove roughness with 6/0 opencoat abrasive paper. Dust off thoroughly with air jet.

(3) Apply paste wood filler of correct color and consistency and complete schedule outlined under 1.A. starting with step (2), the filling operation.

To be concluded in September

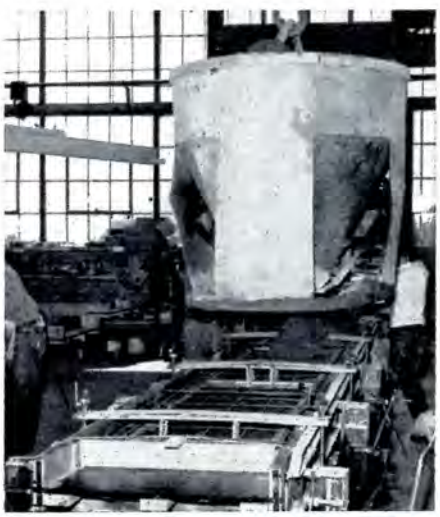
*In any finish schedule, if hot lacquers (at 30-35 per cent solids) are used as the topcoats, two hot sprayed coats shall be considered sufficient to replace three coats of normal cold spray lacquer (20 per cent solids)

For more information circle selected item number on Reader Service Inquiry Card, pages 215-216

ACOUSTICAL CEILING BUILT INTO CONCRETE ROOF PLANKS

Acoustical ceiling boards are integral parts of precast concrete roof deck planks used in the women's physical education building now under construction at Northern Illinois University, DeKalb, Ill.

Almost 5,000 exposed white acoustical panels are being used for the roof which covers 55,000 sq ft and is supported by prestressed concrete girders up to 126 ft in length.



The acoustic panels are one-inch thick *Diminitone* ceiling boards made of long glass fibers. They were selected for their fire resistant properties and dimensional stability. Low moisture absorption rate was also important since one area houses a heated indoor swimming pool.

The roof planks are prefabricated about 17 miles from the job site. Each 24- by 48-in. panel is laid on a sheet of polyethylene. In the concrete form a welded wire mesh is tied in behind the three panels which fit in each plank. The form is placed on a vibrating table, with the acoustical panels face down. Mixed concrete is poured from a bucket (see picture, left). When concrete has cured, interior face of the plank is brushed and sanded to remove all loose particles and dirt.

At the job site a crane hoists the planks to the roof which is 30 ft above ground level. The plastic film will remain in place during construction and while spray paint is applied. *Forty-Eight Insulations, Inc., North Aurora, Ill.*

CIRCLE 300 ON INQUIRY CARD

THREE-FOOT-WIDE TAPE IS PACKAGED ROOFING

A new idea in built-up roofing consists of a 3-ft-wide mastic tape which is applied cold to flat or sloping surfaces. Under development at Koppers laboratories for more than four years, commercial production is expected later this year.

Called *Bitumagic*, the tape is a waterproof membrane system of asbestos or glass mat, impregnated and covered with a mastic tar formulation in a uniform thickness. A disposable release paper prevents the material from adhering to itself and facilitates application. Tape will adhere to vertical surfaces permanently without sag or flow.

The new roofing material can be applied by two men and eliminates heating kettles and multi-ply applications. It bonds firmly and permanently to concrete, brick, wood, steel or insulation and can be used as a continuous roofing-flashing system. It also is suited to damp-proofing of vertical surfaces such as below-ground walls or foundations. A specially formulated, cold-applied emulsion top coating, applied with a soft brush, completes the system. *Koppers Company, Inc., Tar Products Div., Koppers Bldg., Pittsburgh 19, Pa.*

CIRCLE 301 ON INQUIRY CARD

more products on page 168

Office Literature

For more information circle selected item numbers on Reader Service Inquiry Card, pages 215-216

COOLING TOWER NOISE

Practical procedures for evaluating noise of cooling towers, establishing noise criteria, measuring equipment sound levels and determining noise reduction needs are covered in a 28-page engineering manual, Bulletin 250. Tables supplement text, and a sample problem is worked out step-by-step. The manual was prepared jointly with Bolt, Beranek & Newman, Inc., acoustical consultants. *Baltimore Aircoil Co., Inc., P.O. Box 7322, Baltimore 27, Maryland*

CIRCLE 400 ON INQUIRY CARD

HARDWOOD DIRECTORY

Manufacturers of Appalachian hardwood are listed in a directory, which gives plant equipment and capacity, kinds of woods, and other products and services offered. *Appalachian Hardwood Manufacturers, Inc., 414 Walnut St., Cincinnati 2, Ohio**

CIRCLE 401 ON INQUIRY CARD

METAL COMPONENTS

Four booklets from Bayley deal with metal building components. A-62 (A.I.A. 16-E) has 20 pages on aluminum windows—projected, casement, top-hinged and others. C-26 (A.I.A. 17-A) describes aluminum and steel curtain-wall systems and insulated panels. I-62 (A.I.A. 16-L) gives details on correctional and mental institution window systems. S-62 (A.I.A. 16-E) has 32 pages on steel windows and doors. *The William Bayley Co., 1200 Warder St., Springfield, Ohio**

CIRCLE 402 ON INQUIRY CARD

AIR DIFFUSERS

Perforated air diffusers for ceiling mounting are described in Bulletin K-50 (A.I.A. 30-C-45). Linear slot air diffusers for sill or floor mounting are discussed in Bulletin K-55. *Connor Engineering Corp., Danbury, Connecticut*

CIRCLE 403 ON INQUIRY CARD

PLASTIC BUILDING PANELS

Photographs show how lighting and privacy problems of schools were solved using *Alsynite* translucent plastic building panels which now carry a written 20-year guarantee. Booklet S 358. *Reichhold Chemicals, Inc., 4654 DeSoto St., San Diego 7, California**

CIRCLE 404 ON INQUIRY CARD

ROLLING DOORS

(A.I.A. 16-D) Rolling doors of steel and aluminum are described in a 36-page catalog. Included are details on fire doors, rolling counter shutters, rolling grills, rol-top doors and bi-fold doors. *The Kinnear Mfg. Co., 820-870 Fields Ave., Columbus 16, Ohio **

CIRCLE 405 ON INQUIRY CARD

AIR/LIGHT TROFFERS

Integrated air outlet and lighting fixtures are the products of combined work by Smithcraft and Carnes. Catalog SC-20D gives details and specifications for *Troff-Aire* fixtures. *Carnes Corp., Verona, Wis. and Smithcraft Corp., Chelsea, Mass.*

CIRCLE 406 ON INQUIRY CARD

PARTITIONS

(A.I.A. 35-H-6) *Contempo-Wall* demountable partition system has steel framing with gypsum panels and anodized aluminum trim. Wall surfaces are vinyl covered. *National Gypsum Co., Buffalo 2, N. Y.**

CIRCLE 407 ON INQUIRY CARD

STEEL DESIGN MANUAL

Design procedure, stresses and tests are given in the 1962 edition of the "Light Gage Cold-Formed Steel Design Manual" which includes charts and tables of structural properties. Also included are recently revised specifications. Single copies of the 128-page, hard-bound book are free, with additional copies $1 each. *American Iron and Steel Institute, 150 E. 42nd St., New York 17, N.Y.*

CIRCLE 408 ON INQUIRY CARD

PLASTER AGGREGATE

(A.I.A. 21-A-5) *Permalite* plaster aggregate reduces dead weight and increases fire safety. Also available is an interior finish which is sound-absorbent as well as fire-retardant. Specifications are included in an 8-page booklet. *Great Lakes Carbon Corp., 612 S. Flower St., Los Angeles 17, Calif.**

CIRCLE 409 ON INQUIRY CARD

AIR CURTAIN FAN

Keeping cold air in and warm air out of refrigerated areas can be done with an air curtain fan which provides a thin wall of high velocity air. No structural change is needed. Bulletin DB1-205. *Ilg Electrical Ventilating Co., 2850 N. Pulaski Rd., Chicago 41, Ill.*

CIRCLE 410 ON INQUIRY CARD

WEATHERPROOF COATINGS

Elastomer plastics in fluid form provide weatherproof coatings for insulation, roofs, floors and metals. Technical data is given in 18-page booklet. *Permalume Plastics Corp., 2000 E. Columbia Way, Vancouver, Wash.*

CIRCLE 411 ON INQUIRY CARD

CLASSROOM VENTILATOR

A classroom unit ventilator is designed to be suspended from the ceiling and provides 7 to 12 air changes an hour. Bulletin 690-E1A has 24 pages. *American Air Filter Co., Inc., 215 Central Ave., Louisville 8, Ky.*

CIRCLE 412 ON INQUIRY CARD

FASCIA AND GRAVEL STOP

Lexsuglas glass fiber reinforced plastic fascia and gravel stop is available in 16 colors. Specifications and colors are shown in folder. *Lexsuco Inc., 33095 Bainbridge Road, Solon, Ohio **

CIRCLE 413 ON INQUIRY CARD

**Additional product information in Sweet's Architectural File*

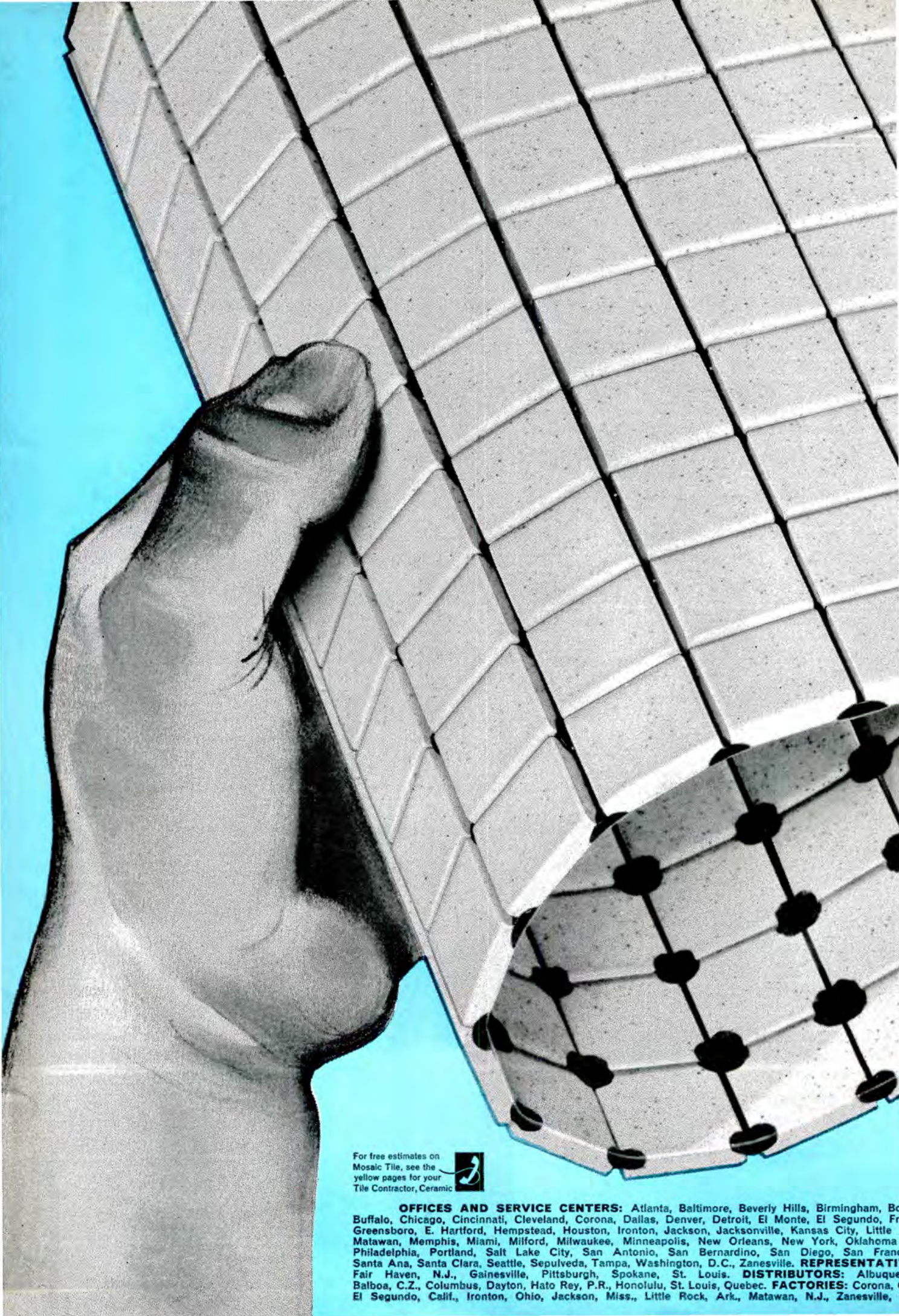
more literature on page 190

TEXTURE SO DISTINCT YOU ARE TEMPTED TO REACH OUT AND FEEL IT. New, Jumbo Woodtex 300 asphalt shingles now give architects greater latitude in creative designs for homes, apartments, schools and churches. Vivid shadow line and color styling further accent the distinct texture of this heavy, rugged shingle backed by 25 year bond against wind, rain, sun and fire. Jumbo Woodtex 300 is available in most areas. For further details write Certain-teed Products Corporation, Ardmore/Pa.

Certain-teed
BUILDING PRODUCTS
Superior Products through Creative Research

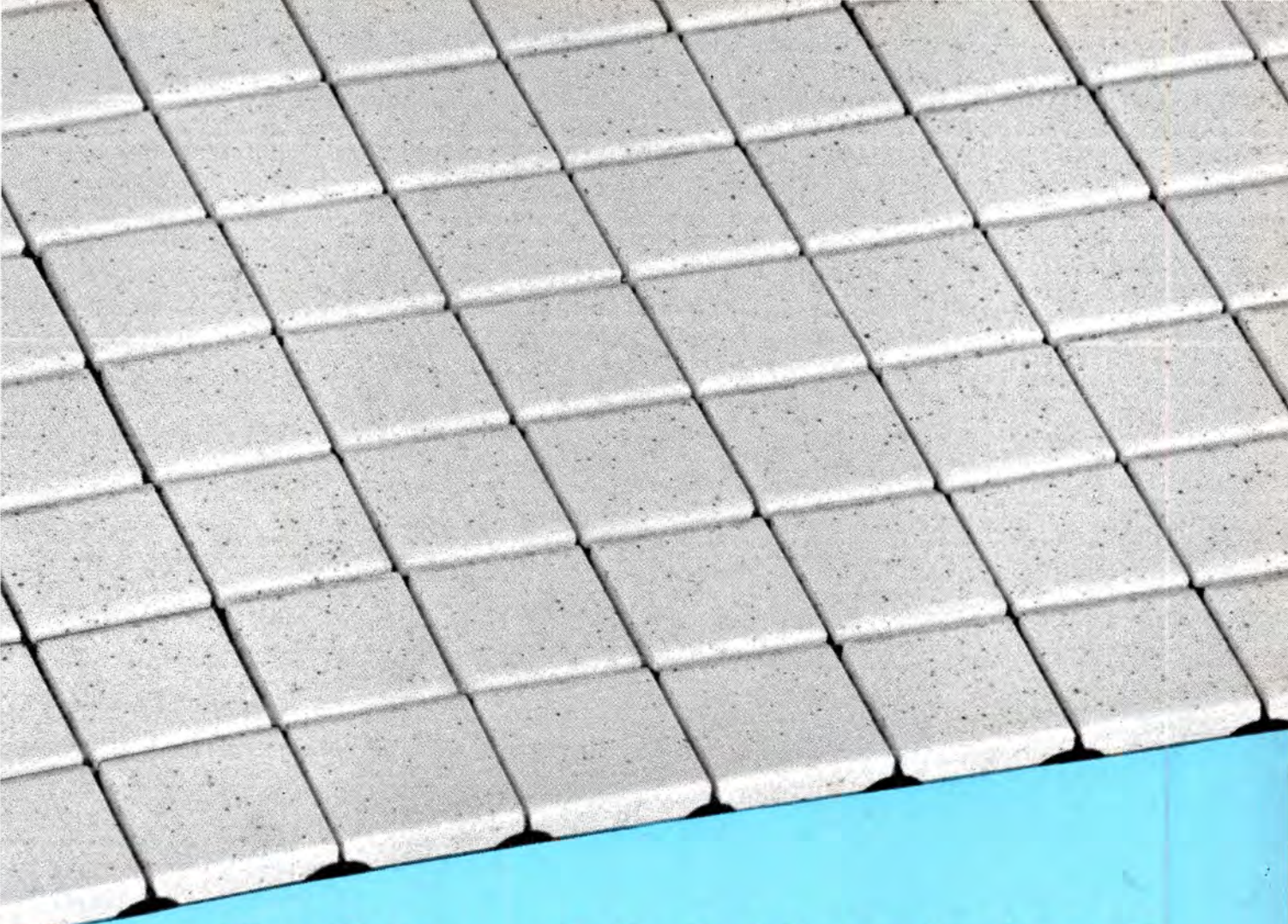
Plants and offices throughout the United States

For more data, circle 70 on Inquiry Card



For free estimates on Mosaic Tile, see the yellow pages for your Tile Contractor, Ceramic

OFFICES AND SERVICE CENTERS: Atlanta, Baltimore, Beverly Hills, Birmingham, Bo
Buffalo, Chicago, Cincinnati, Cleveland, Corona, Dallas, Denver, Detroit, El Monte, El Segundo, Fr
Greensboro, E. Hartford, Hempstead, Houston, Ironton, Jackson, Jacksonville, Kansas City, Little
Matawan, Memphis, Miami, Milford, Milwaukee, Minneapolis, New Orleans, New York, Oklahoma
Philadelphia, Portland, Salt Lake City, San Antonio, San Bernardino, San Diego, San Franc
Santa Ana, Santa Clara, Seattle, Sepulveda, Tampa, Washington, D.C., Zanesville. **REPRESENTATI**
Fair Haven, N.J., Gainesville, Pittsburgh, Spokane, St. Louis. **DISTRIBUTORS:** Albuque
Balboa, C.Z., Columbus, Dayton, Hato Rey, P.R., Honolulu, St. Louis, Quebec. **FACTORIES:** Corona,
El Segundo, Calif., Ironton, Ohio, Jackson, Miss., Little Rock, Ark., Matawan, N.J., Zanesville,



flexible . . . yet rigid and strong

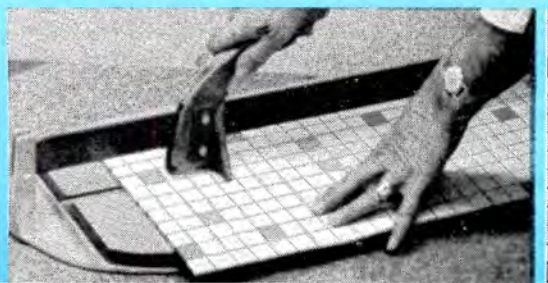
Years of Mosaic research have developed a component mounting material and a method which increase efficiency in ceramic tile installation and make possible the lowest installation cost of 1″ x 1″ ceramic mosaic tile.

DOT TILE by MOSAIC

MOSAIC® THE MOSAIC TILE COMPANY • General Offices: Zanesville, Ohio

Member: Tile Council of America, Inc. and The Producer's Council, Inc.

Easy to cut with knife or trowel . . . shears clean and straight . . . handles surely and easily . . . stays firmly aligned.



Product Reports

continued from page 163

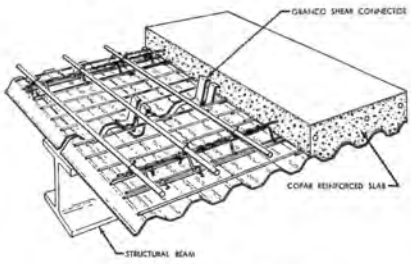
ROOF AIR CONDITIONER USES GAS ENGINE

A heavy-duty gas engine is used for a new Atmos-Pak prefabricated, roof-mounted heating and cooling unit. The engine uses natural, L.P., or mixed gas and is expected to effect savings in operating costs of up to 50 per cent in some areas. Units range in size from 15 through 35 tons. *Atmos-Pak, Inc., 188 N. Highland Ave., Ossining, N.Y.*

CIRCLE 302 ON INQUIRY CARD

SHEAR CONNECTOR FOR COMPOSITE CONSTRUCTION

Shear connectors capable of resisting both horizontal and vertical forces are designed for use with *Cofar*, a



COMPOSITE SECTION

corrugated steel sheet that is welded to a structural frame and acts as both form and reinforcement for poured concrete floors. *Granco Steel Products Co., 6506 N. Broadway, St. Louis 15, Mo.*

CIRCLE 303 ON INQUIRY CARD

HOME STEAM BATH

A home bathtub or shower stall can become a complete steam room with Thermasol steam bath, which has a steam generator concealed in a false ceiling of stainless steel installed above the tub or shower. A total enclosure (which prevents steam escaping into the rest of the bathroom) is completed with sliding glass door attached to the tub on tracks. Temperature in the unit rises from 70 to 130 F in 20 minutes. *Thermasol, Ltd., 702 E. 12th St., New York N.Y.*

CIRCLE 304 ON INQUIRY CARD

HARDWOOD PANELING

Craftwall prefinished hardwood paneling is $\frac{7}{16}$-in. thick and can be applied directly to wall studs without backing or furring strips. *Weyhaeuser Co., Tacoma, Wash.*

CIRCLE 305 ON INQUIRY CARD

FLUORESCENT FIXTURES

Sabre 12 and *Sabre 16* fluorescent lighting fixtures are designed to provide high lighting efficiency with good brightness control for stores, schools and offices. The fixtures vary in width and number of lamps used, and are available in 4 and 8 ft lengths. *The Miller Co., Meriden, Conn.*

CIRCLE 306 ON INQUIRY CARD

more products on page 172

Modern Door Control by *LCN* · Closers Concealed in Head Frame

LAKE MEADOWS CLUB BUILDING, CHICAGO, ILLINOIS

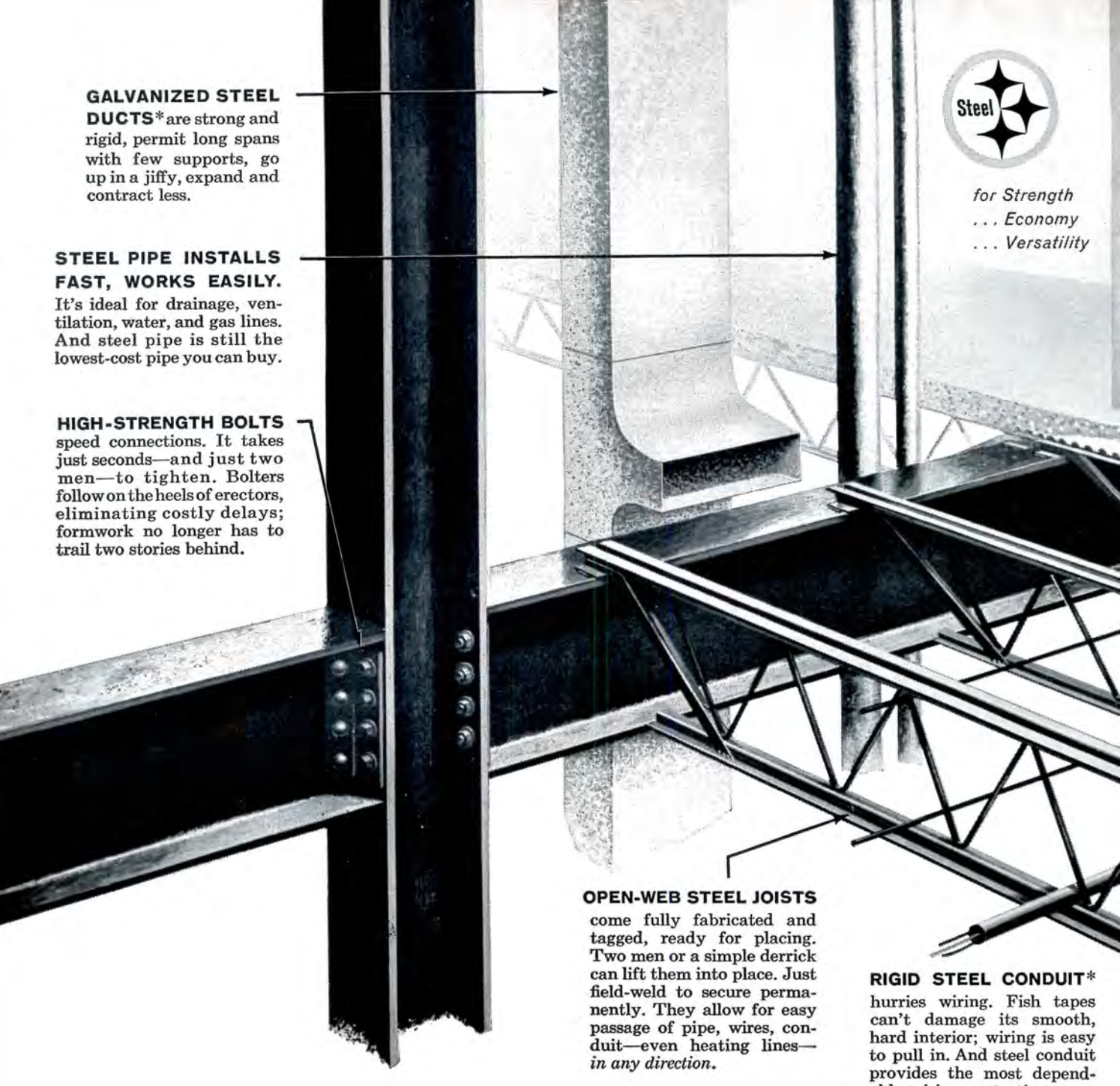
•

LCN CLOSERS, PRINCETON, ILLINOIS

Construction Details on Opposite Page

Skidmore, Owings & Merrill — Chicago

Architects and Engineers



GALVANIZED STEEL DUCTS* are strong and rigid, permit long spans with few supports, go up in a jiffy, expand and contract less.

STEEL PIPE INSTALLS FAST, WORKS EASILY. It's ideal for drainage, ventilation, water, and gas lines. And steel pipe is still the lowest-cost pipe you can buy.

HIGH-STRENGTH BOLTS speed connections. It takes just seconds—and just two men—to tighten. Bolters follow on the heels of erectors, eliminating costly delays; formwork no longer has to trail two stories behind.

Steel

for Strength
. . . Economy
. . . Versatility

OPEN-WEB STEEL JOISTS come fully fabricated and tagged, ready for placing. Two men or a simple derrick can lift them into place. Just field-weld to secure permanently. They allow for easy passage of pipe, wires, conduit—even heating lines—*in any direction.*

RIGID STEEL CONDUIT* hurries wiring. Fish tapes can't damage its smooth, hard interior; wiring is easy to pull in. And steel conduit provides the most dependable wiring protection.

Steel Saves Time

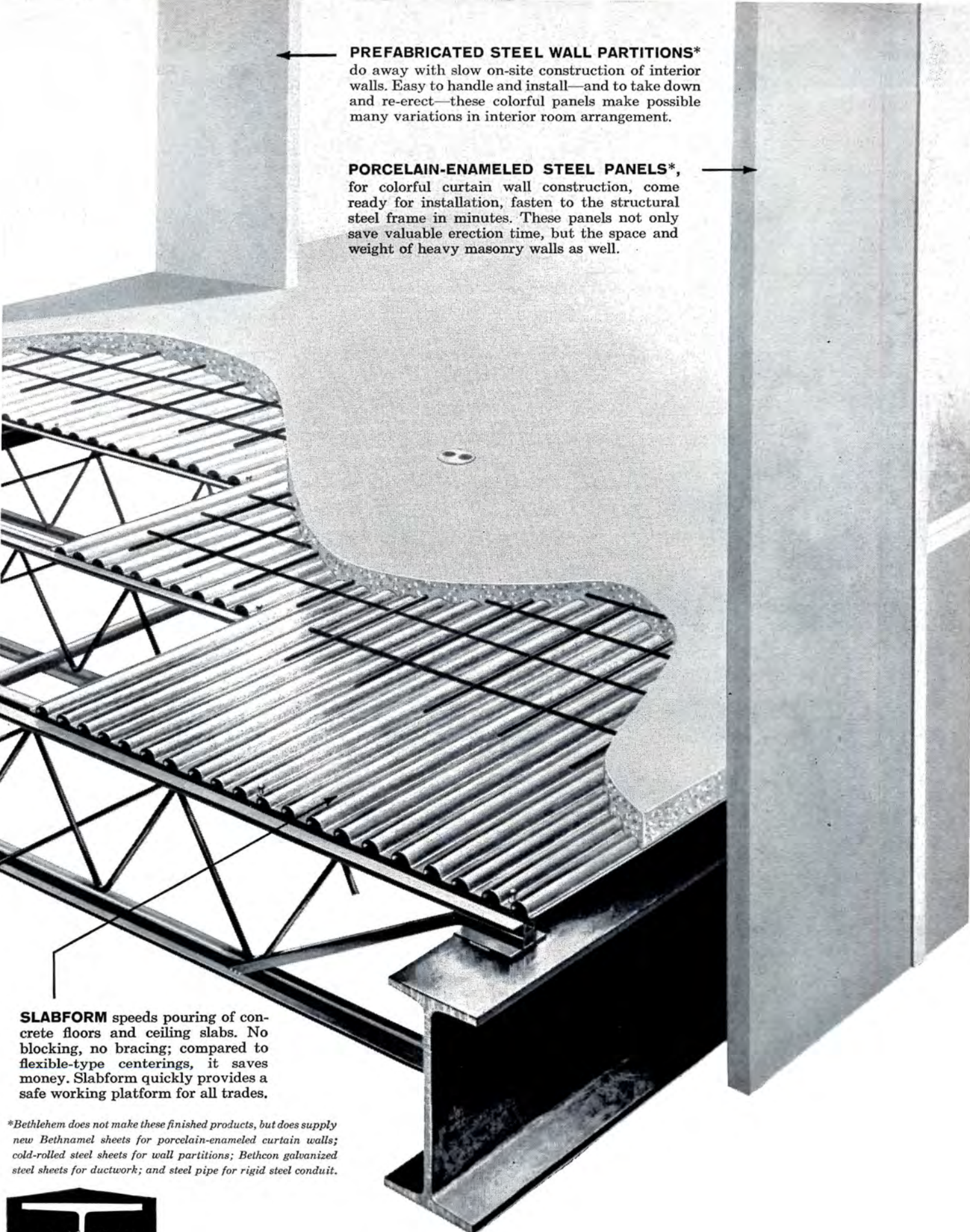
Shop-fabricated structurals and Bethlehem steel joists arrive ready to go up. No falsework, no delays because of weather. Long before the frame is completed, other trades can move in and get started. You can make—and keep—a completion promise when you build with steel.

eel Saves Money

A steel framework goes up fast—two stories or twenty. No extra, wasteful operations. Steel products like Bethlehem's Slabform (our solid centering) save you both time and materials compared to flexible-type centerings.

'eel Is So Dependable

Deliveries are fast. Steel has strength to spare. Non-warp, non-sag construction holds down maintenance costs. Fire-safety is up. We'd be glad to discuss your next building with you. Perhaps we can show you ways you can save time and money with today's steels for construction.



PREFABRICATED STEEL WALL PARTITIONS* do away with slow on-site construction of interior walls. Easy to handle and install—and to take down and re-erect—these colorful panels make possible many variations in interior room arrangement.

PORCELAIN-ENAMELED STEEL PANELS*, for colorful curtain wall construction, come ready for installation, fasten to the structural steel frame in minutes. These panels not only save valuable erection time, but the space and weight of heavy masonry walls as well.

SLABFORM speeds pouring of concrete floors and ceiling slabs. No blocking, no bracing; compared to flexible-type centerings, it saves money. Slabform quickly provides a safe working platform for all trades.

**Bethlehem does not make these finished products, but does supply new Bethnamel sheets for porcelain-enameled curtain walls; cold-rolled steel sheets for wall partitions; Bethcon galvanized steel sheets for ductwork; and steel pipe for rigid steel conduit.*

BETHLEHEM STEEL

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA. *Export Sales:* Bethlehem Steel Export Corporation

BETHLEHEM STEEL

For more data, circle 73 on Inquiry Card

Product Reports

continued from page 168

UNIT VENTILATOR

A system known as air spin control, as applied to the Schemenauer *60 Series* unit ventilator, maintains a constant volume of air through the unit

even though filters become progressively dirty. Maintenance costs are lowered, claims the manufacturer, because full filter use is obtained. *Schemenauer Mfg. Co., Holland, Ohio*

CIRCLE 307 ON INQUIRY CARD

ELECTRIC SNOW MELTER

Melt-O-Mat electric snow melter is a heating cable mounted on glass fiber mat for embedment in concrete and asphalt driveways, sidewalks and steps. Output is about 42 watts per sq ft. *Cox & Co., Inc., 115 E. 23rd St., New York 10, N.Y.*

CIRCLE 308 ON INQUIRY CARD

HOTEL PRIVACY LOCK

A privacy lockset for hotels and motels has an inside button which shuts out all keys except emergency key and projects an occupancy indicator

pin in outside knob. The pin is easily seen during daytime and felt at night. Turning inside knob releases the lockout. *P & F Corbin Div., American Hardware Corp., New Britain, Conn.*

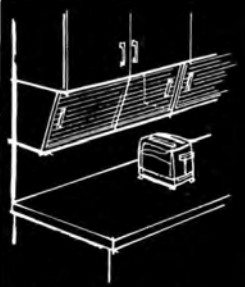
CIRCLE 309 ON INQUIRY CARD

more products on page 176

ideas
FOR
OUR GENEVA
KITCHEN

Double utility peninsula

To divide a large kitchen



Spacemaker units

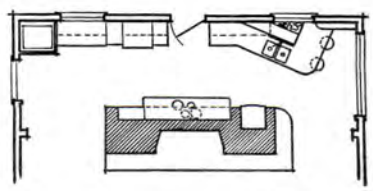
Planning desk

Sewing machine cabinet

The warmth and elegance of a GENEVA kitchen starts with the NEW Impasto® finish!

There are many wonderful reasons why Geneva Impasto cabinets bring a carefree dignity to kitchen living. The natural, superbly fashioned texture is etched into the cabinet itself...providing a non-gloss *and* sound deadened surface. Impasto will not show finger prints...is stain resistant, will not chip or warp. Add to this Geneva's self closing drawers...plastisol protected and adjustable shelves ...wide standard cabinet selection, *plus* special cabinets to order. It all adds up to the personalized, efficient kitchen you have always wanted. See the *warmth* and *charm* of a Geneva Impasto kitchen before you decide (you'll be happy you did).

Geneva Impasto—"the kitchen that whispers . . . that never grows old."



Geneva Modern Kitchens
Dept. AR8-62
Geneva, Illinois

Please send cabinet specifications and attractive 20-page full-color broch on Geneva Impasto Kitche

NAME

ADDRESS

CITY STATE

G-141

Geneva KITCHENS

GENEVA MODERN KITCHENS
Division of Acme Steel Company, Geneva, Illinois

e's your responsibility too

When a patient sinks into the deep sleep of the anesthetized, his future rests in the skilled hands of the surgical team. But what if power should fail? The responsibility of the operation's success takes a sharp turn . . . to the men who designed the hospital . . . to the men who built it . . . to the men who specified the emergency power.

Hospitals today take the concept of some kind of standby electric power pretty much for granted. But are even the basic needs, such as surgery, delivery rooms, emergency rooms and call systems, really protected at the levels of complete safety for patients? In addition, more equipment and facilities than ever before depend entirely upon electricity. Services such as iron lungs, pediatrics, neuro-psychiatry, heating, air conditioning, elevators, corridor lighting, kitchens, refrigeration, laboratories . . . all must go on, emergency or no. And the needs will increase as modern medicine progresses.

Thus, the questions every responsible person should ask are: can the emergency power specified really do the jobs required today? Will the unit be able to meet the expansion of needs probable in 1972? In 1982? Will parts and service be available during the many years ahead?

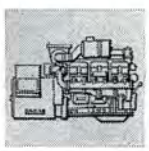
To meet the ever-increasing kilowatt requirements for emergency units, Cat Diesel and Natural Gas Electric Sets provide more power than previous models. Whether an emergency lasts for 24 seconds or 24 hours, the dependability of Cat Electric Sets helps make it routine.

And, as a result of Caterpillar's continuing program of research, this power is delivered from a package that's more compact, easier to install than ever before. Service may be quickly obtained from one of the more than 320 dealer outlets in the U.S.

Caterpillar has shouldered part of the responsibility for keeping modern hospitals alive. For further information, contact your local Caterpillar Dealer, or write direct.

CATERPILLAR

ENGINE POWER

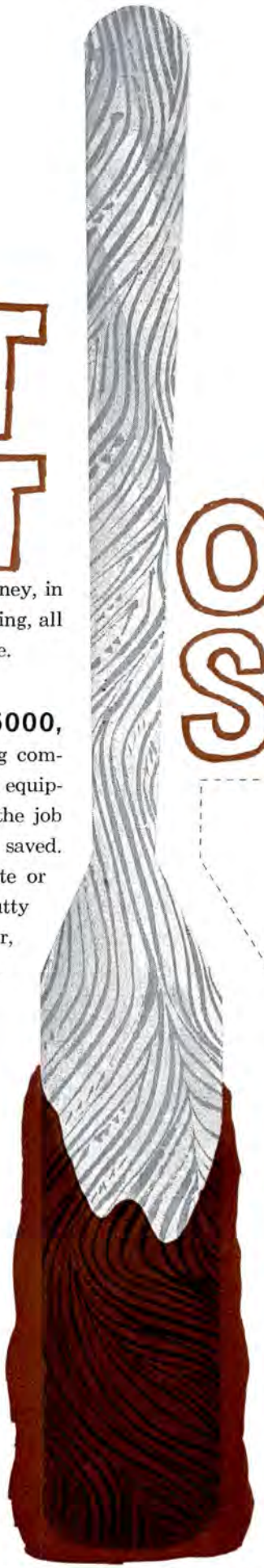


Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

Engine Division, Caterpillar Tractor Co., General Offices, Peoria, Illinois • Caterpillar Americas Co., Peoria, Illinois • Caterpillar Overseas S.A., Geneva • Caterpillar of Australia Pty. Ltd., Melbourne • Caterpillar Brasil S.A., São Paulo • Caterpillar Tractor Co. Ltd., Glasgow • Caterpillar of Canada Ltd., Toronto • Caterpillar France S.A., Grenoble

For more data, circle 76 on Inquiry Card

GET OUT OF STIR



Mixing calking materials on the job costs money, in extra equipment and wages. And careless mixing, all too frequently, can mean inferior performance.

Available Now

ONE-PART PRC RUBBER CALK 5000, a new polysulfide-based (Thiokol*) calking compound ready for use as packaged. No mixing equipment is needed. Uncertainties of mixing on the job are eliminated. Man-hours and job time are saved. PRC Rubber Calk 5000 is available in white or gray, and is applied easily by calking gun, putty knife or spatula. It cures to firm, flexible rubber, which *retains* adhesion and elasticity in all weather to provide years of trouble-free service.

*TM Thiokol Corp.

SUGGESTED APPLICATIONS

- In place of mortar between materials with different coefficients of expansion.
- Calking section joints in tilt-up construction.
- Sealing pre-cast facings.
- Sealing concrete conduit.
- Glazing.

PRC PRODUCTS RESEARCH COMPANY®

CORPORATE OFFICES
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SEND FOR TECHNICAL DATA

PRODUCTS RESEARCH COMPANY
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Please send me complete information regarding PRC Rubber Calk 5000.

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FIRM NAME_____
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CITY_____
ZONE_____ STATE_____

DEALER INQUIRIES INVITED

For more data, circle 77 on Inquiry Card

Product Reports

continued from page 172

SILICONE METAL COATING

UCAR-101 silicone metal coating is highly resistant to atmospheres containing oxides, sulphides and salt. The film is about 0.1 mil thick, virtually colorless and does not affect the appearance of the metal. Brass hardware on the left, treated with *UCAR-101*, is shown after a standard salt

spray test. Pieces at right were treated with ordinary acrylic. *Silicones Div., Union Carbide Corp., 270 Park Ave., New York 17, N.Y.*

CIRCLE 310 ON INQUIRY CARD

ELECTRONIC AIR FILTER

A low-cost electronic air filter is designed to remove 90 per cent of dust and dirt particles circulating in the home. The unit is 22-in. high and can be added to any central forced air heating or cooling system. It can be adapted to up-flow, down-flow or horizontal furnaces. *American Furnace Co., 1300 Hampton Ave., St. Louis 10, Mo.*

CIRCLE 311 ON INQUIRY CARD

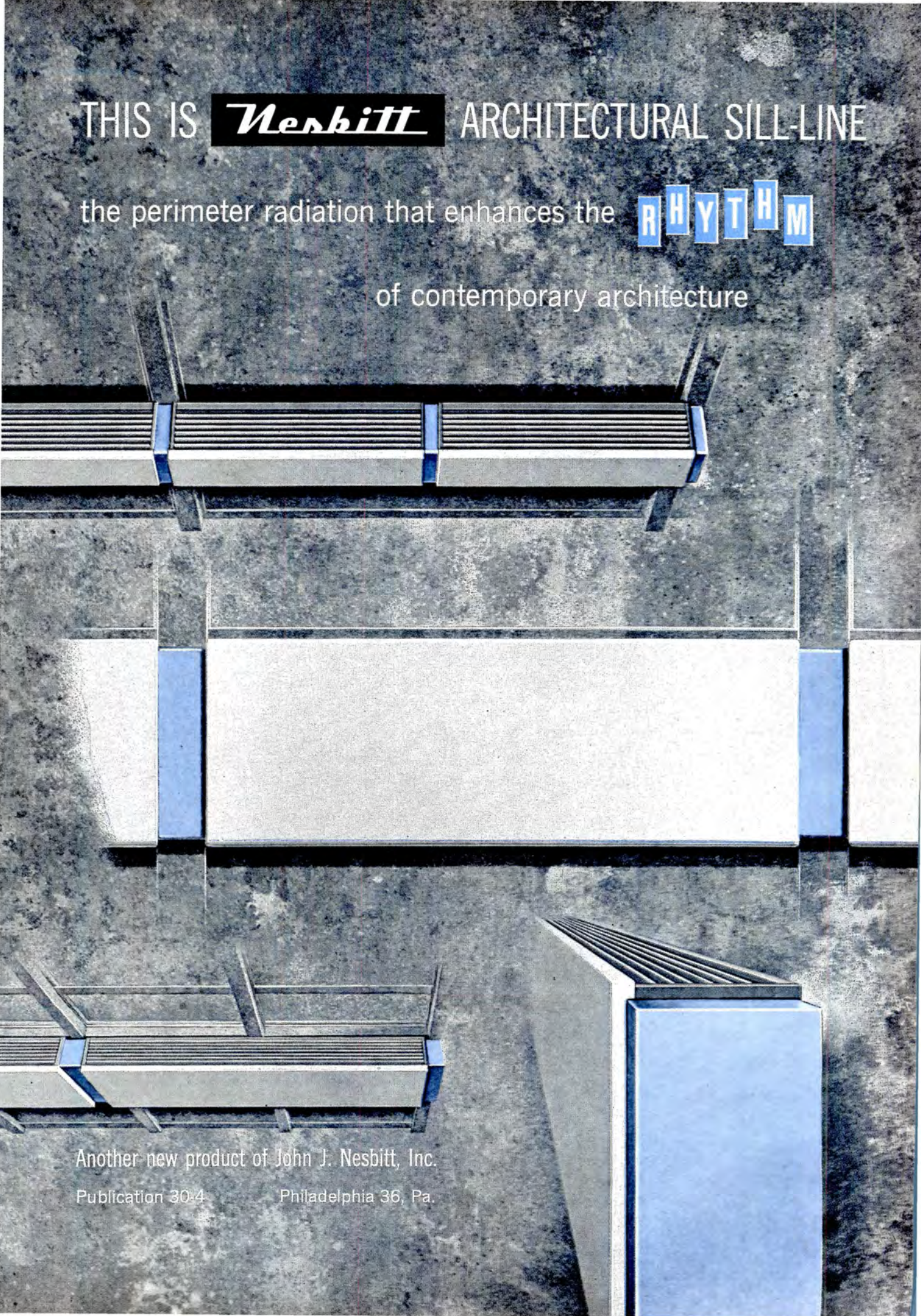
MOVABLE WALL

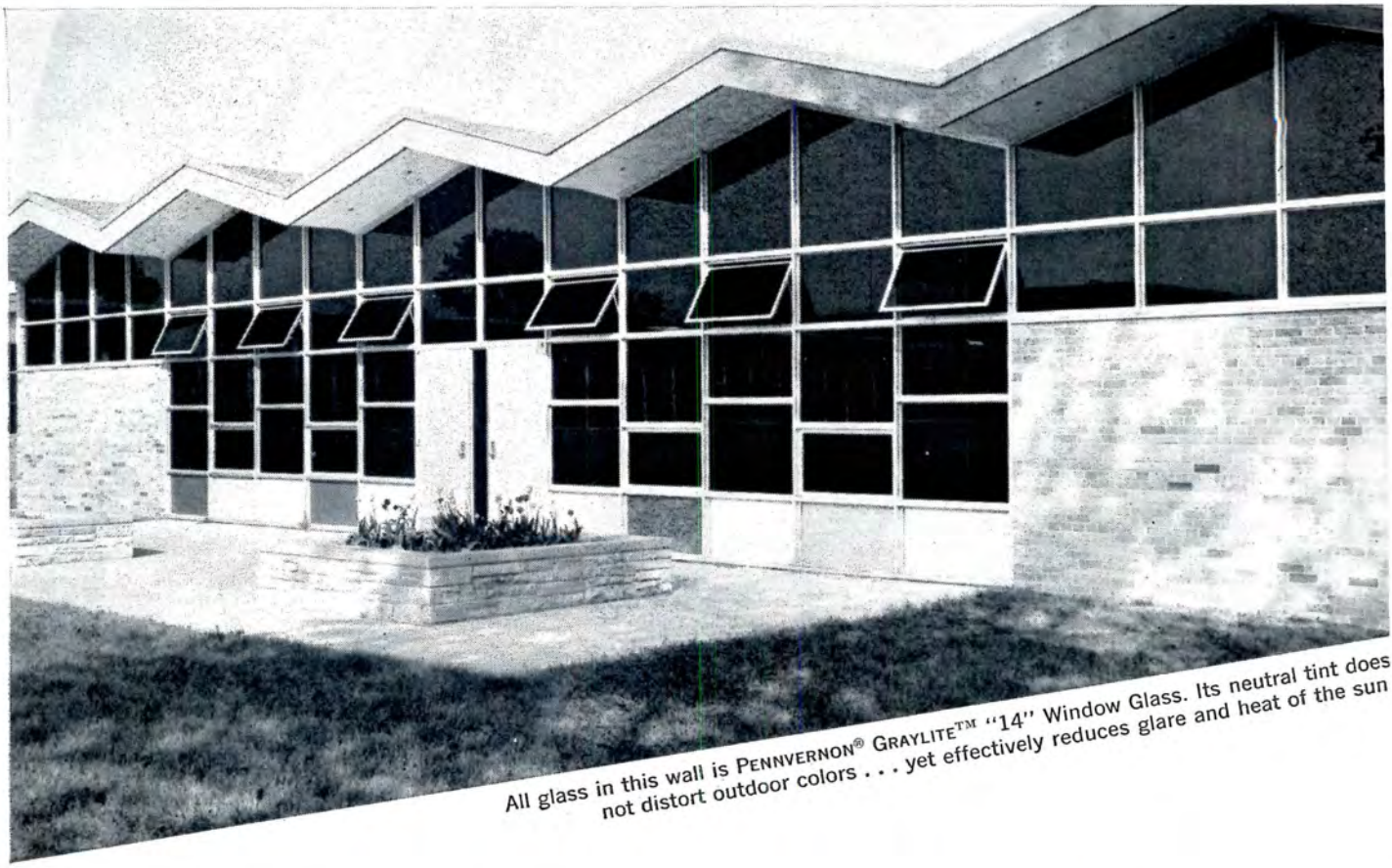
Natural pre-finished wood surfaces are used for movable walls available in sections 48-in. wide and up to 12-ft high. Rubber gaskets are used at all

contact points to retard sound and protect ceiling, walls, and floors. *Kwikwall Co., Springfield, Ill.*

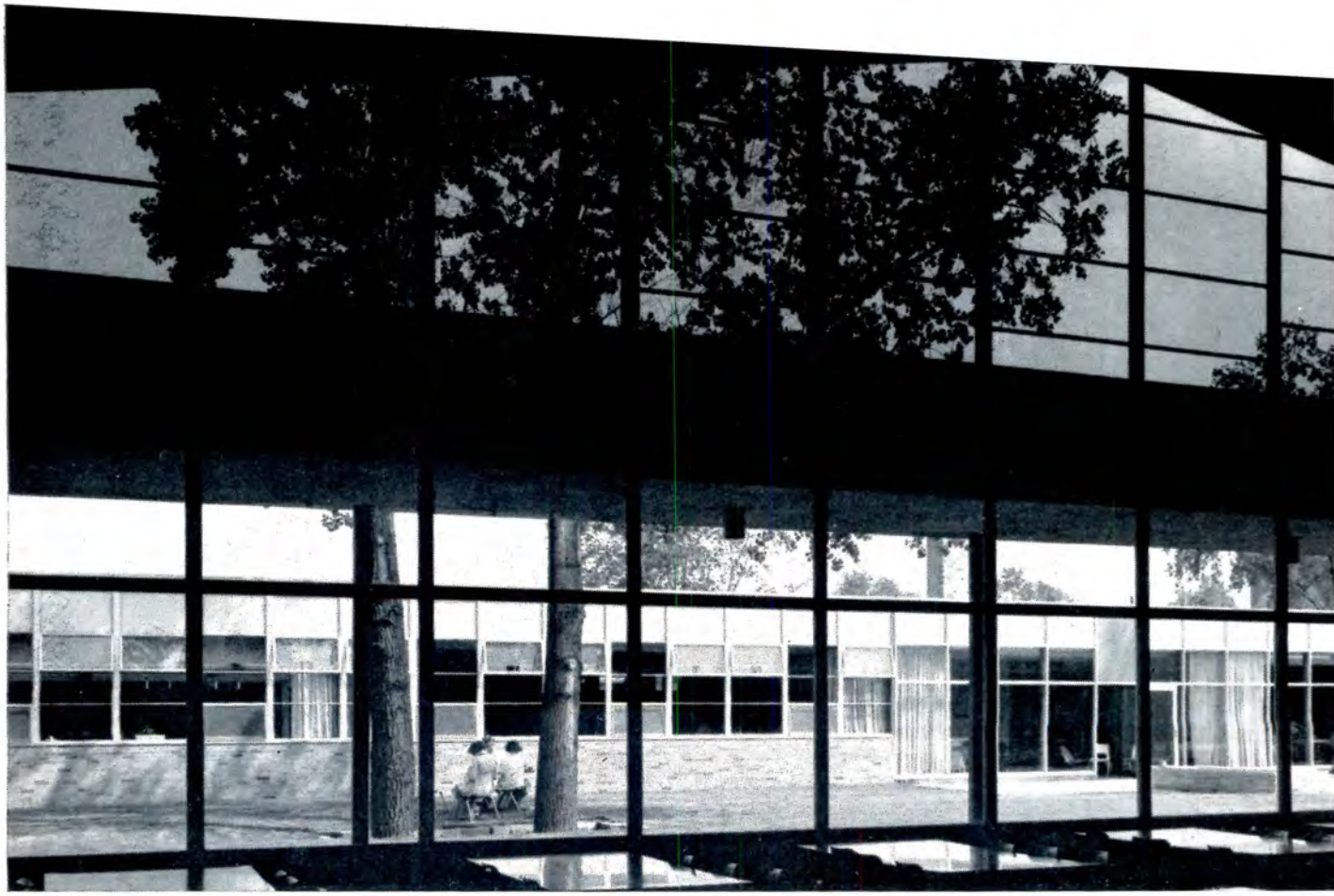
CIRCLE 312 ON INQUIRY CARD

more products on page 180


THIS IS Nesbitt ARCHITECTURAL SILL-LINE
the perimeter radiation that enhances the RHYTHM
of contemporary architecture
Another new product of John J. Nesbitt, Inc.
Publication 30-4 Philadelphia 36, Pa.



All glass in this wall is PENNVERNON® GRAYLITE™ "14" Window Glass. Its neutral tint does not distort outdoor colors . . . yet effectively reduces glare and heat of the sun



Cafeteria has GRAYLITE above to cut glare . . . clear PPG Plate Glass below. Pictures were taken at William B. Stout Junior Hig School, Dearborn, Mich. Architects: Bennett & Straight, Inc., Dearborn, Mich. Contractor: F. W. Fordon Company, Detroit, Mich

In arts and crafts room, GRAYLITE keeps out glare and heat. Floor-to-ceiling walls of PPG glass bring outdoors inside.

Here a shading overhang permits use of clear glass for maximum daylight. Outside walls of glass make rooms seem more spacious.

For your new school, choose the efficient beauty of ***GLASS***

Before your next school design reaches the drawing board stage, consider these facts about glass:

- It is the **lightest** of architectural materials, requiring proportionally less structural support.
- It is available in the **largest size** components of any comparable material.
- It is available **in any shape,** to fit any opening.
- Glass curtain walls are thinner, give more usable floor space.
- Glass **insulates**—PPG TWINDOW® Insulating glass, for example.
- Heat-absorbing glass **reduces air-conditioning costs** (PPG SOLEX®, SOLARGRAY® Plate Glass, GRAYLITE™ "14" Window Glass).
- Glass provides a rainbow of enduring **color** for your designs—PPG SPANDRELITE® glass with integrated color, for example.
- Glass **saves tax dollars,** requires minimal maintenance because it does not deteriorate with age.

In addition to glass, PPG can supply doors, door openers, and complete curtain wall systems. We will gladly accept full responsibility for the installation of our complete curtain wall system. Your PPG Architectural Representative will supply specific data. Or, check your PPG General Glass Catalog in Sweet's.

Pittsburgh Plate Glass Company

Paints • Glass • Chemicals • Fiber Glass
In Canada: Canadian Pittsburgh Industries Limited

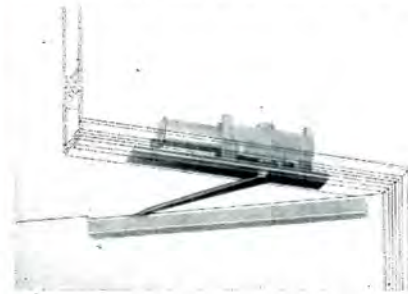
For more data, circle 80 on Inquiry Card

Product Reports

continued from page 176

SMALLER, LOWER COST CONCEALED DOOR CLOSERS

Series 2000 door closers are concealed in the head frame with track hidden in the top of door. Similar to Series 200, the four models in the



new line are smaller and lower in cost. All are $3\frac{5}{8}$-in. high by $2\frac{1}{16}$-in. wide. *LCN Closers, Princeton, Ill.*

CIRCLE 313 ON INQUIRY CARD

SPRAYED-ON WALL SURFACES

Faserit synthetic fibrous coatings are said to replace both plaster and paint for interior walls and ceilings. Used in Europe for 16 years, the spray compounds have integral color, zero flame spread and high dimensional stability. *Faserit of America, Inc., 6675 Biscayne Blvd., Miami 38, Fla.*

CIRCLE 314 ON INQUIRY CARD

LAMINATED PINE ARCHES INSTALLED BY HELICOPTER

Helicopters were used to erect glued laminated southern pine arches for the roof of a chemical storage building. All arches were placed in one

day. The roof, 150 ft above ground, has a 2- by 6-in. tongue and groove southern pine decking furnished by the Forest Products Div. of Olin Mathieson. Arches and purlins were pressure treated. *Unit Structures, Inc., Pestigo, Wis.*

CIRCLE 315 ON INQUIRY CARD

more products on page 186

Research and technical improvements have increased the yield and efficiency of McLouth's blast furnaces.

McLOUTH STEEL

progress through pioneering

In the last seven years McLouth's ingot capacity expanded 161%. Our progress has been built on pioneering new and better methods of steelmaking and maintaining rigid controls and the highest product quality. Located for fast service and delivery, McLouth is your dependable source for the finest carbon and stainless steels.

• Tapping molten iron from a blast furnace

McLOUTH STEEL

McLOUTH STEEL CORPORATION/DETROIT 17, MICHIGAN

Steel

6224

Create beautiful kitchen and bathroom interiors with versatile wash-and-wear Marlite paneling

Marlite is the ideal wall and ceiling material for kitchens and bathrooms—new or remodeled. With Marlite, you can give your clients durability, beauty, easy maintenance. The soilproof baked finish of this practical "wear without care" paneling resists heat, moisture, stains, dents. The impervious surface quickly washes clean; stays like new for years. And Marlite means more satisfied clients, yet it saves you time and finishing costs.

What's more, the Marlite line of beautiful colors, patterns, and authentic Trendwood reproductions fits any color scheme or decor. And Marlite panels are quickly installed over old walls or new framing to complete your projects sooner. Get full details from your building materials dealer, consult Sweet's File, or write Marlite Division of Masonite Corporation, Dept. 805, Dover, Ohio.

Marlite®
plastic-finished paneling

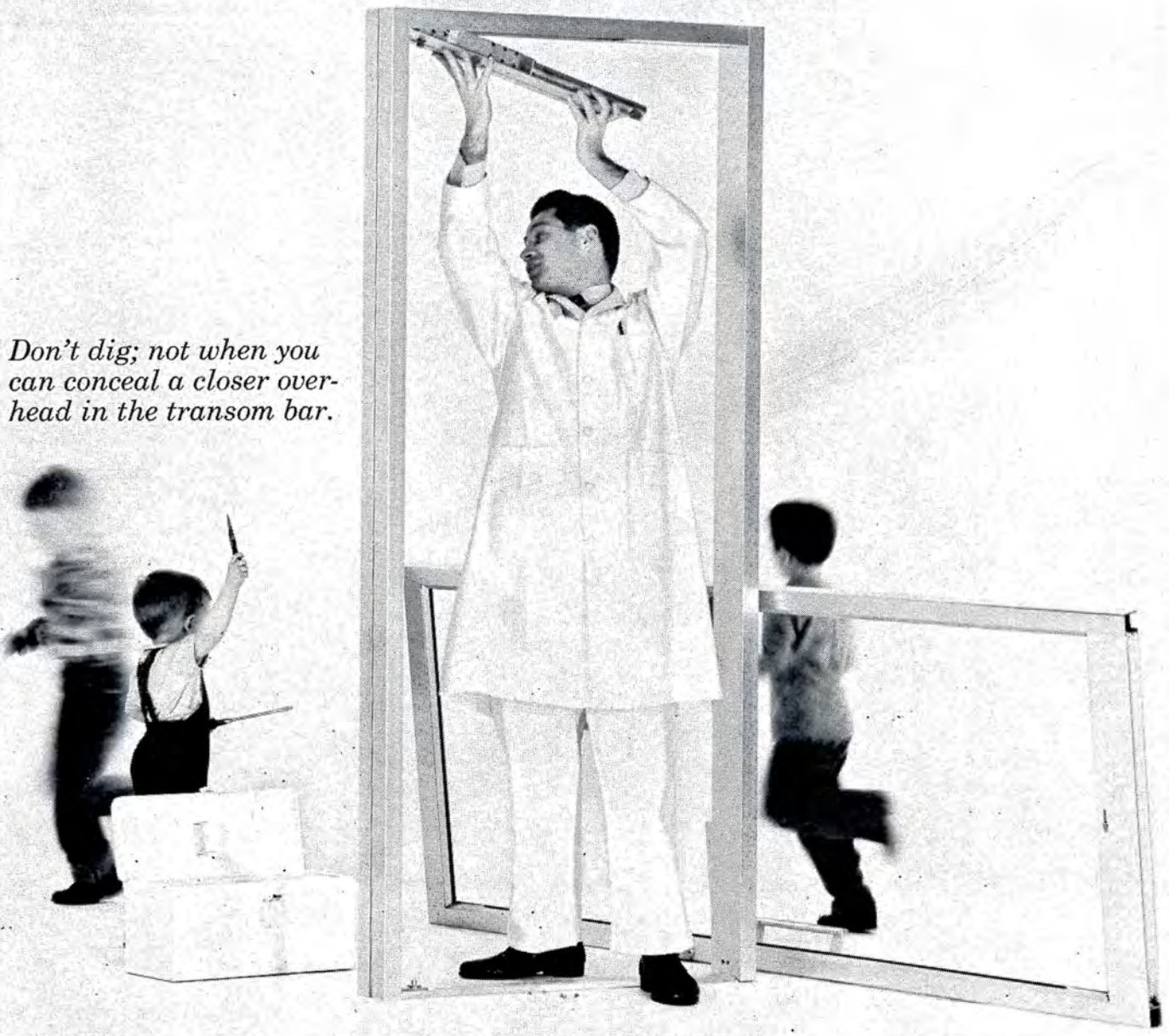
ANOTHER QUALITY PRODUCT OF MASONITE® RESEARCH

MARLITE BRANCH OFFICES AND WAREHOUSES: 204 Permalume Place N.W., Atlanta 18, Georgia • 18 Moulton Street, Cambridge 38, Mass. • 4545 James Place, Melrose Park, Illinois (Chicago) • 8908 Chancellor Row, Dallas 7, Texas • 1657 Powell Street, Emeryville, California (Oakland) • 3050 Leonis Blvd., Los Angeles 58, California • 39 Windsor Avenue, Mineola, L. I. (New York) • 2440 Sixth Avenue So., Seattle 4, Washington

For more data, circle 82 on Inquiry Card

For more data, circle 83 on Inquiry Card

Don't dig; not when you can conceal a closer overhead in the transom bar.

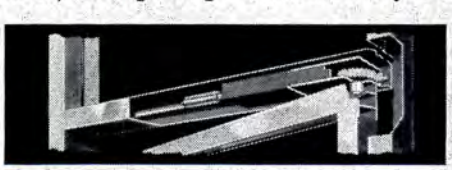


Kawneer's ECONOMICAL way to conceal a clos

☐ It costs time and money to locate a cement case for a floor closer in exactly the right spot. And it costs even more when, in spite of all precautions, the cement case ends up located in the wrong spot. Not to mention the fact that ripping into the cement with a jackhammer in an effort to correct the mistake can be dangerous . . . broken reinforcement or ruptured waterproofing. ☐ Kawneer provides a simple, easy solution; a closer concealed overhead in the transom bar. ☐ Consider the advantages. The architect gets a clean looking entrance—same as with a floor closer, but doesn't have to allow for the reinforcement and waterproofing being placed deep into the slab. ☐ Contractors can pour floors faster, without waiting for cement case forms to be built and located. ☐ The sub-contractor saves because his installation costs are much lower than with floor closers. ☐ Yet, even though it offers all these advantages, The Kawneer Concealed Overhead Closer sells for the same or less than floor closers. ☐ The Kawneer Concealed Overhead Closer comes complete with door and frame. ☐ Specify a Kawneer Concealed Overhead Closer entrance package; it's the economical way to conceal a closer.

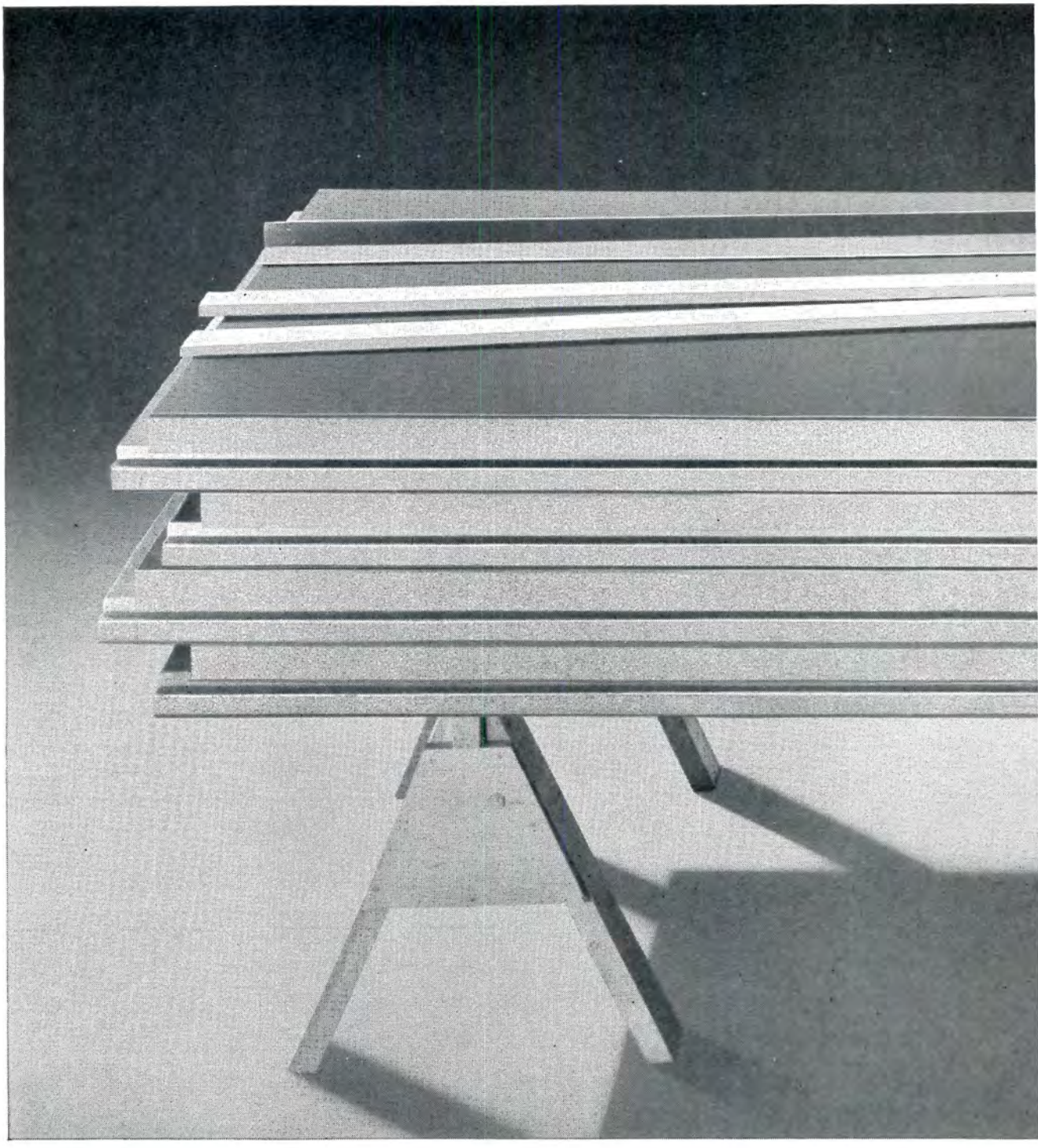
Kawneer

KAWNEER CO., Niles, Mich., Richmond, Calif.
KAWNEER CO. CANADA, LTD., Toronto, Ontario.

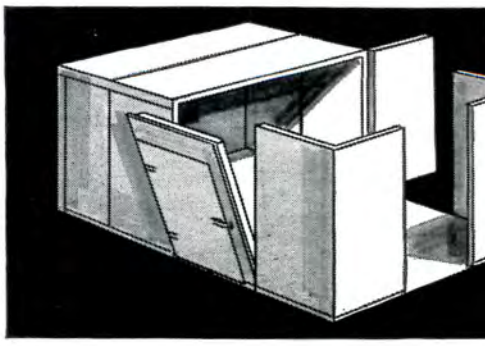


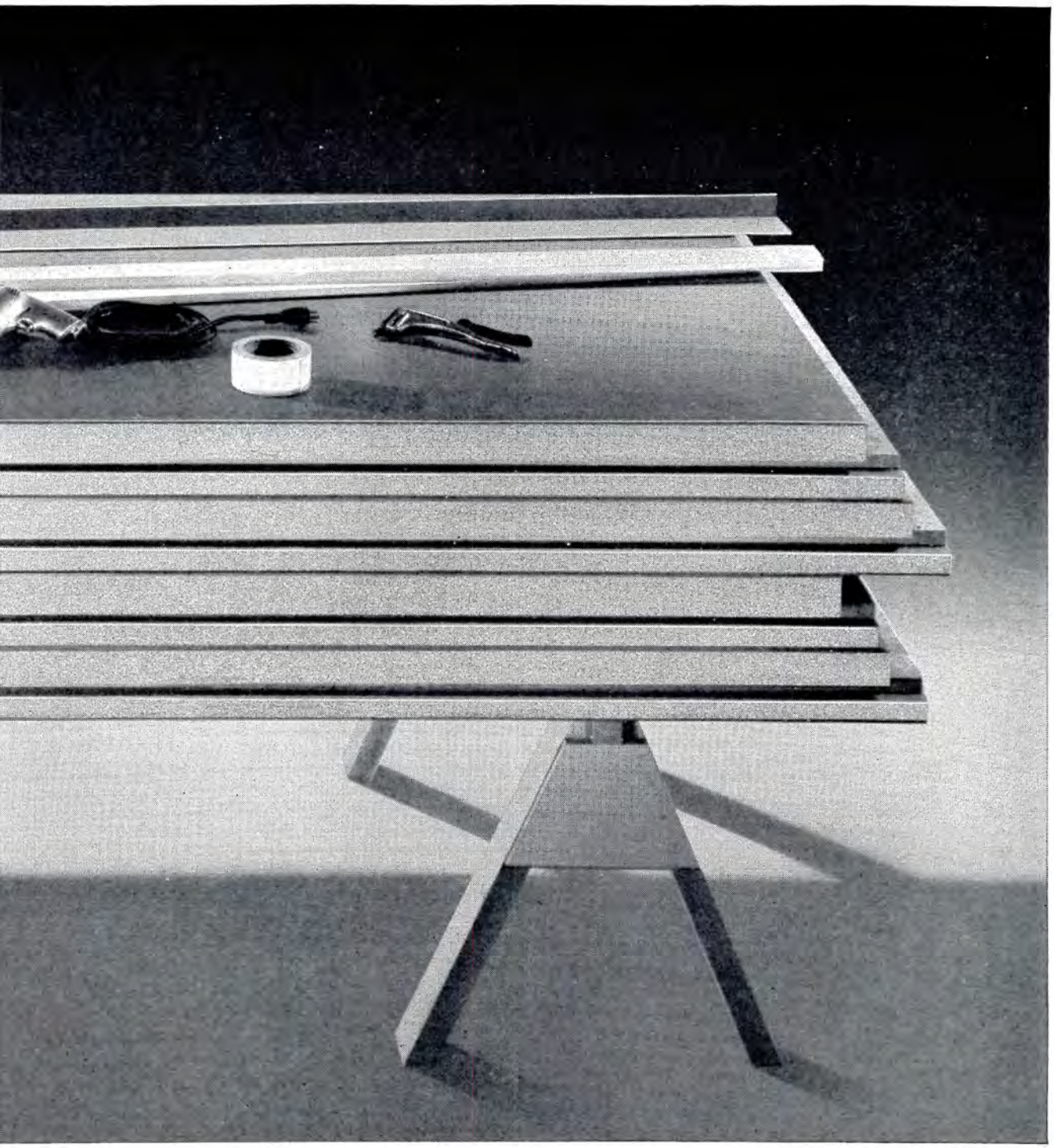
The Kawneer Concealed Overhead Closer fits neatly into the 1¾" x 4½" transom bar. It is the only concealed overhead closer that has been time and work-proved for over four years.

For more data, circle 84 on Inquiry Card



Dow shows you everything you nee





o build a cold room, now!

's simpler than designing a brick wall, making cold ooms out of Dow Insulating Panels. In this new ystem, each "sandwich" of tempered hardboard and *tyrofoam*® brand insulation is structurally integral. ecause they come in standard modules *only*, Dow nsulating Panels save on material costs and simplify installation. Styrofoam expanded polystyrene makes them suitable for coolers at 40°F. or sharp freezers down to −40°F. Always dry inside, closed-cell Styrofoam insulation *keeps* its low "K" factor. Permanently. For specifications on Dow Insulating Panels, write us in Midland, c/o Plastics Sales Dept. 1304N8.

THE DOW CHEMICAL COMPANY DOW Midland, Michigan

For more data, circle 85 on Inquiry Card

Product Reports

continued from page 180

ACOUSTIC CEILING PANEL

Strength and durability are features of *Hansocore* acoustical ceiling panel which has a face of perforated steel and an unperforated steel back with a center core of kraft honeycomb and glass fiber. Panels are one-in. thick and in various sizes. The face has a baked enamel finish. The panel permits freedom of partition placement. *Elof Hansson, Inc., 711 Third Ave., New York 17, N.Y.*

CIRCLC 316 ON INQUIRY CARD

TROFFER-ATTACHED AIR DIFFUSERS

A line of air diffusers can be used with the lighting troffers of a number of manufacturers. The diffusers

feature: (1) adjustable air pattern controller; (2) air volume controller that can be adjusted without removal of any part of the light troffer; (3) one-piece, air-tight construction. *Titus Mfg. Co., Waterloo, Iowa*

CIRCLE 317 ON INQUIRY CARD

PRODUCT BRIEFS

Transistor intercom-sound systems provide complete intercom and AM/FM radio service, with a wide choice of accessories and prices. *Emerson Electric Co., 8100 Florissant, St. Louis 36, Mo.*

CIRCLE 318 ON INQUIRY CARD

Structural building panels have a granite aggregate finish for both interiors and exteriors bonded on ½ in. plywood, studded on 16-in. centers. *Century Brick Corp. of America, Century Brick Bldg., Erie, Pa.*

CIRCLE 319 ON INQUIRY CARD

T-beam insulation is molded of glass fiber for snap-on fit, eliminating hand cutting and material waste. *Pall Corp., 30 Sea Cliff Ave., Glen Cove, N. Y.*

CIRCLE 320 ON INQUIRY CARD

Mineral fiber ceiling panels have glass-mat laminate surfaces painted white for highlight reflectance, textured pattern, and easy cleaning. *The Celotex Corp., 120 S. LaSalle St., Chicago 3, Ill.*

CIRCLE 321 ON INQUIRY CARD

Epoxy coating for concrete resists chemicals, weathering and effects of wide temperature ranges. It features a non-skid surface. *Philadelphia Resins Co., 7637 Queen St., Philadelphia 18, Pa.*

CIRCLE 322 ON INQUIRY CARD

Architectural and display letters of cork, wood, plastic, plaster, aluminum and bronze are available at *The Letter Center, 208 Fifth Ave., New York 10, N.Y.*

CIRCLE 323 ON INQUIRY CARD

The Connecticut Bank & Trust Company, Hartford, Conn.
Architects: Robert Allan Jacobs—Carson, Lundin & Shaw
General Contractor: F. H. McGraw & Company

General Bronze was awarded single responsibility for engineering, fabricating, glazing and erecting this distinctive curtain wall.

Alumilite-finished natural aluminum is used for mullions, fascia and copings . . . dark gray aluminum for mullion inserts, louvers and most horizontal members. Spandrels are gray porcelainized insulated panels, faced with gray plate glass.

The design and fabrication of the window system were especially critical—because of the weight and wind loading of the large-area glazing . . . the advanced gasketing . . . the inclusion of such features as window cleaning guides . . . and the importance of the mullion detailing to the over-all aesthetic effect.

Close coordination between General Bronze and the architects was essential to the success of this installation. Sample sections of the curtain wall, for both the base and tower systems, were subjected by GB to rigorous wind and weather tests.

Another of today's finest curtain walls— by GENERAL BRONZE

General Bronze offers you today's most advanced engineering services in the design of aluminum, bronze or stainless steel curtain walls. With close to a half-century's experience in architectural metalwork and fenestration, GB is uniquely equipped to help you realize the benefits and avoid the pitfalls of this highly specialized field.

For additional information, consult your Sweet's files . . . call in the General Bronze representative nearest you . . . or write to: General Bronze Corporation, Garden City, N. Y. • Sales Office: 100 Park Avenue, New York, N. Y.

PERMATITE DIVISION—Custom-built Windows, Curtain Walls, Architectural Metal Work and Revolving Doors. ALWINTITE DIVISION—Stock-size Aluminum Windows and Doors. BRACH MFG. CO. DIVISION—Radio, Television and Electronic Equipment. STEEL WELDMENTS, INC. DIVISION—Custom Fabrication in Steel and Iron.

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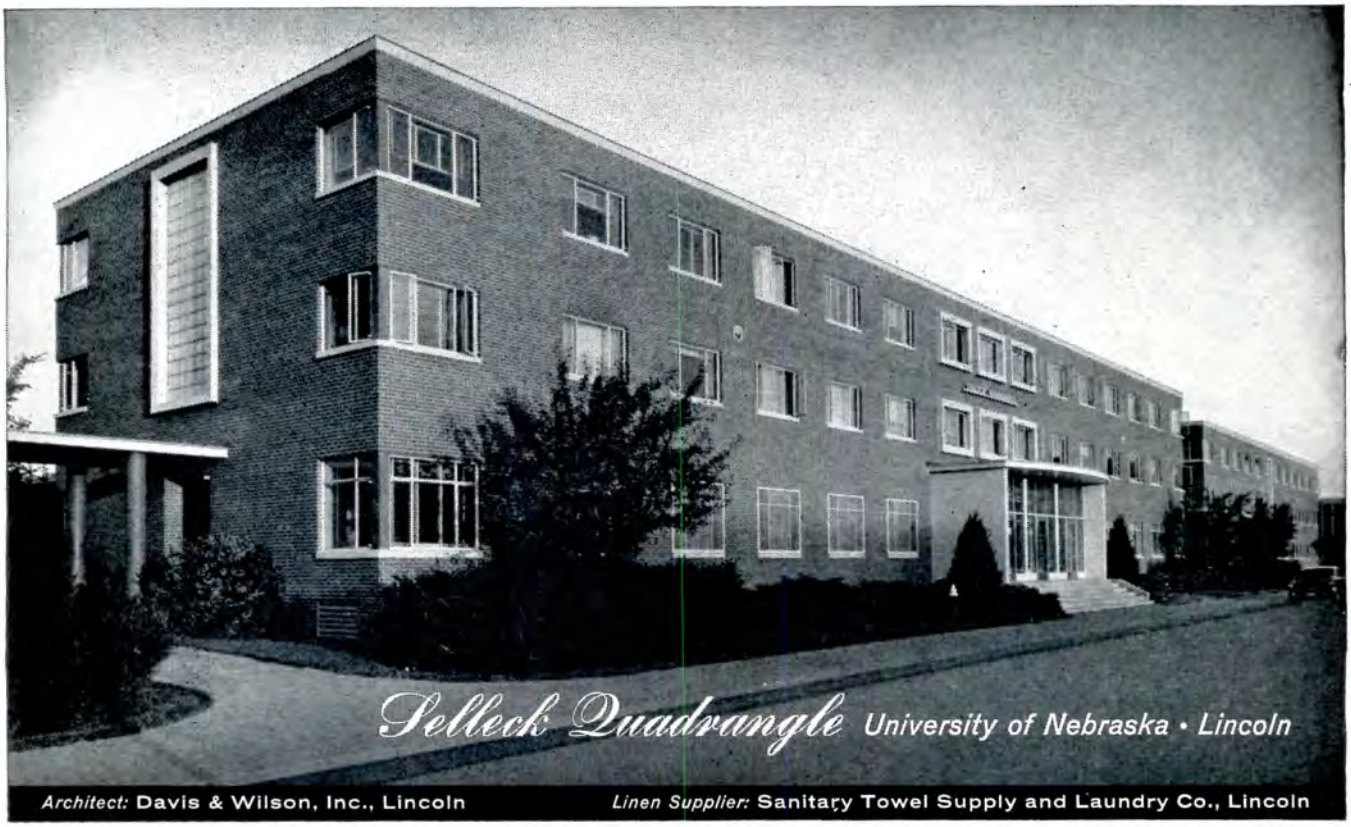

Architect: Davis & Wilson, Inc., Lincoln

Linen Supplier: Sanitary Towel Supply and Laundry Co., Lincoln

Linen supplier provides key space-and-cost-saving service for University of Nebraska

Linen Exchange Center

In designing this 1,000 student dormitory, the architect provided convenient space and location for a linen exchange. This was an important consideration for the University of Nebraska because money spent to establish a laundry, equip, stock and operate it could be better used for other needed construction. And the problems of supplying bed linens, towels, staff uniforms, etc., were more efficiently solved by local linen supply rental.

Architects perform a valuable service in discussing linen provision details before completing building designs . . . because nearly every structure will require linen service! Your local linen supplier will be pleased to help by offering expert counsel on the economics of linen service, traffic, storage and related needs. Call on him for assistance. He is listed in the Yellow Pages under "Linen Supply" or "Towel Supply."

FREE DESIGN GUIDES . . .
give case histories and suggestions for providing more efficient linen supply service in motels, schools, restaurants and hospitals. Write today.

Linen Supply Association of America
and National Cotton Council • 22 West Monroe Street, Chicago 3

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For more data, circle 88 on Inquiry Card

The rich mosaic design of this handsome Bigelow Carpet is in perfect harmony with the lavish Victorian decor of the Plaza's corridors.

enry End is the first ecorator to receive citation from the merican Institute f Architects. He has eceived more dec- rating awards than nyone in the U. S.

Henry End chooses **Bigelow Carpet** for New York's famous **Plaza Hotel**

Famed interior designer, Henry End, A.I.D., I.D.I., in charge of the Plaza Hotel's program of restoration has refurbished this historic establishment in the elegance and style suited to such distinguished premises. The Bigelow Carpets chosen for all corridors, dining areas, lounges, private rooms and suites were specially planned to carry out Mr. End's individual design.

Bigelow Carpet is selected by leading designers for the most important architectural jobs. Reasonable price, long economical service, and top performance under traffic — as well as beauty — are prime considerations in every Bigelow Carpet designed for use in public areas. Special designs, colors and textures available. If you plan an installation, consult Bigelow's Carpet specialists about colors, patterns, weaves, at prices you can afford. No charge for this service. Contact Bigelow through the nearest sales office or by writing to Bigelow Contract Department, 140 Madison Avenue, New York 16, N. Y.

PEOPLE WHO KNOW...BUY **Bigelow**

Carpets & Rugs since 1825

gelow sales offices are located in the following cities: Atlanta, Ga.; Boston, Mass.; Buffalo, N. Y.; Chicago, Ill.; Cincinnati, Ohio; Cleveland, Ohio; Dallas, Texas; Denver, Colo.; Detroit, Mich. artford, Conn.; High Point, N. C.; Kansas City, Mo.; Los Angeles, Calif.; Minneapolis, Minn.; New York, N. Y.; Philadelphia, Pa.; Pittsburgh, Pa.; St. Louis, Mo.; San Francisco, Calif.; Seattle, Wash.

For more data, circle 89 on Inquiry Card

Office Literature

continued from page 164

GLAZED CERAMIC TILE

Glazed ceramic mosaic tiles with 1⅜-in. squares are available in two surface textures and 26 colors. *Stylon Corp., Milford, Mass.**

CIRCLE 414 ON INQUIRY CARD

VENTILATION

A "Comparative Study of the Effectiveness of Fixed Ventilating Louvers" is given in a 24-page report based on data from a research residence. *Home Comfort Products Co., Box 68, Princeville, Ill.*

CIRCLE 415 ON INQUIRY CARD

LAMINATED BEAMS

(A.I.A. 19-B-3) Glue laminated wood beams and arches permit wide open areas with small structural member. *Wood Fabricators, Inc., 400 Portland St., Cambridge, Mass.*

CIRCLE 416 ON INQUIRY CARD

HARDWOOD PLYWOODS

Hardwood plywoods in the *Evanite Lustre-Sheen* smooth furniture and cabinet plywood line are displayed in full color. Seven woods in a choice of four thicknesses are available. *Evans Products Co., Bldg. Materials Div., 1029 S.W. Alder St., Portland 5, Ore.**

CIRCLE 417 ON INQUIRY CARD

DRAFTING MACHINE

A track-type drafting machine is said to allow 80 per cent reduction in time needed for some drafting operations. Bulletin 71 gives details. *Glideline Corp., Waynesboro, Pa.*

CIRCLE 418 ON INQUIRY CARD

TEAK FLOOR PANELS

Parquet panels of Rhodesian teak have an asphalt saturated felt backing for resiliency and moisture resistance. *Plywood International Corp., 160 Centre St., Brooklyn 31, N.Y.*

CIRCLE 419 ON INQUIRY CARD

COLORED ASPHALT

Green, gray and red coatings for asphalt protect the pavement while providing decorative variety. *Vynatex 23* bulletin. *Maintenance Inc., Wooster, Ohio**

CIRCLE 420 ON INQUIRY CARD

DECORATIVE CONCRETE

(A.I.A. 4-K-1) Precast decorative concrete units in a variety of patterns are illustrated with pictures of recent buildings. *Medusa Portland Cement Co., P.O. Box 5668, Cleveland 1, Ohio*

CIRCLE 421 ON INQUIRY CARD

CARPETS IN SCHOOL

"Excellence and Economy" is a report on the advantages of carpeting in schools, based on histories of three public schools in Ithaca, N.Y. and Andrews, Tex. The 32-page booklet has pictures of interiors, floor plans and maintenance cost comparisons with other flooring. *American Carpet Institute, 350 Fifth Ave., New York 1, N.Y.*

CIRCLE 422 ON INQUIRY CARD

** Additional product information in Sweet's Architectural File*

more literature on page 194

YOU SPECIFY THE FLOORING!

He'll make sure it lives up to your reputation

People will be walking on your reputation, beginning the day this building goes into use.

They'll be digging into it with their shoes. Dragging abrasive dirt and dust across it. Tracking moisture. For your reputation will rest on the flooring you specify as well as on the overall architectural design.

Yet, the flooring you specify can be drawing raves years from now with proper care and maintenance. Without any headaches or effort on your part. Just turn its maintenance over to our representative . . . the Man Behind the Huntington Drum.

Flooring care has been his province for an average of 19 years. Give him the green light—and he'll come up with a floor maintenance program covering every area and every flooring material.

Call in the Man Behind the Huntington Drum. Put the burden of floor maintenance on his shoulders right now.

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. . . where research leads to better products

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Huntington Laboratories, Inc.
P. O. Box 710, Huntington, Indiana

Gentlemen: I would like a Man Behind the Huntington Drum to call on me to discuss floor maintenance.

(☐ Ask him to leave his drum outside.)

NAME _____ TITLE _____

FIRM _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

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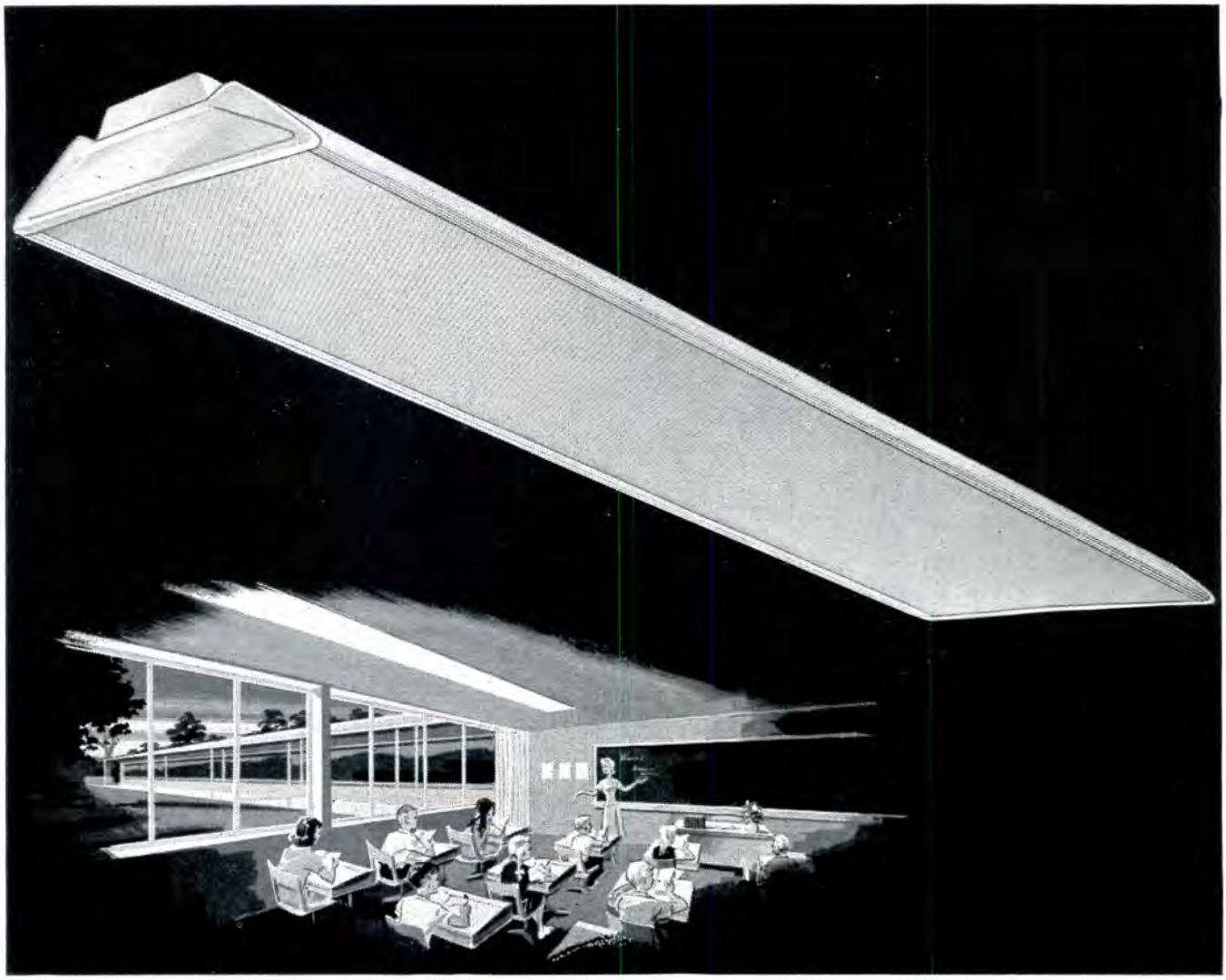

Litecontrol's New, Modern Design
"Jamaica"
Gives High Efficiency – Good Brightness Control

The new Litecontrol "Jamaica" — series 5000 — fixture is designed to give you rugged construction and flexibility in use, whether in schools or in commercial applications.

Put these important advantages to work for you:

"JAMAICA" FLEXIBILITY

— Features the Holophane #6150 acrylic Controlens® as an integral part of its plastic enclosure. Also available with Litecontrol's Stylux panel, made either of polystyrene or acrylic plastic, in place of the lens

— Available in 3 lamp or 2 lamp models — either 4′ or 8′ long. Areas can be designed with great accuracy for almost any footcandle requirements

"JAMAICA" CONSTRUCTION

— A plastic enclosed fixture with contemporary styling

— Lens is fitted in the extruded acrylic side panels to make a one-piece enclosure that can be installed to hinge from either side

— Two spring catches easily release enclosure for cleaning and relamping, hold it securely so it can't be knocked off accidentally

— Prismatic side panels are designed to illuminate the ceiling and combine with the lens to provide high efficiency, excellent brightness control, and widespread distribution, thus requiring fewer rows of fixtures

— Fixtures are die-formed and welded of zinc-coated steel for rust prevention and long life. The finish is 90% reflectance baked white enamel

— Can be pendant or surface mounted, singly or in rows

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LITECONTROL CORPORATION,
36 Pleasant Street, Watertown 72, Massachusetts

DESIGNERS, ENGINEERS AND MANUFACTURERS OF FLUORESCENT LIGHTING EQUIPMENT DISTRIBUTED ONLY THROUGH ACCREDITED WHOLESALERS

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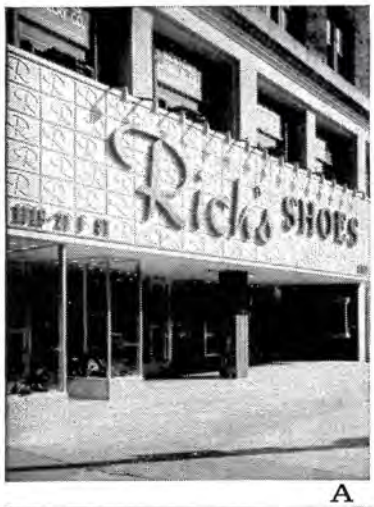

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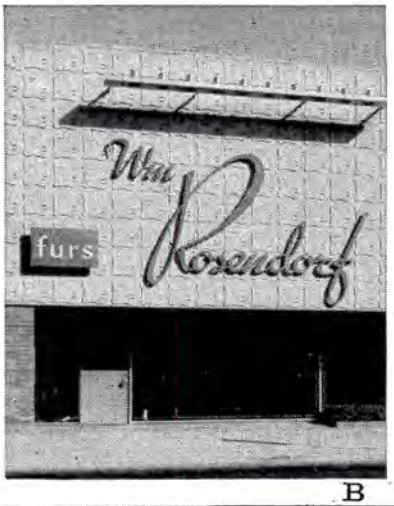

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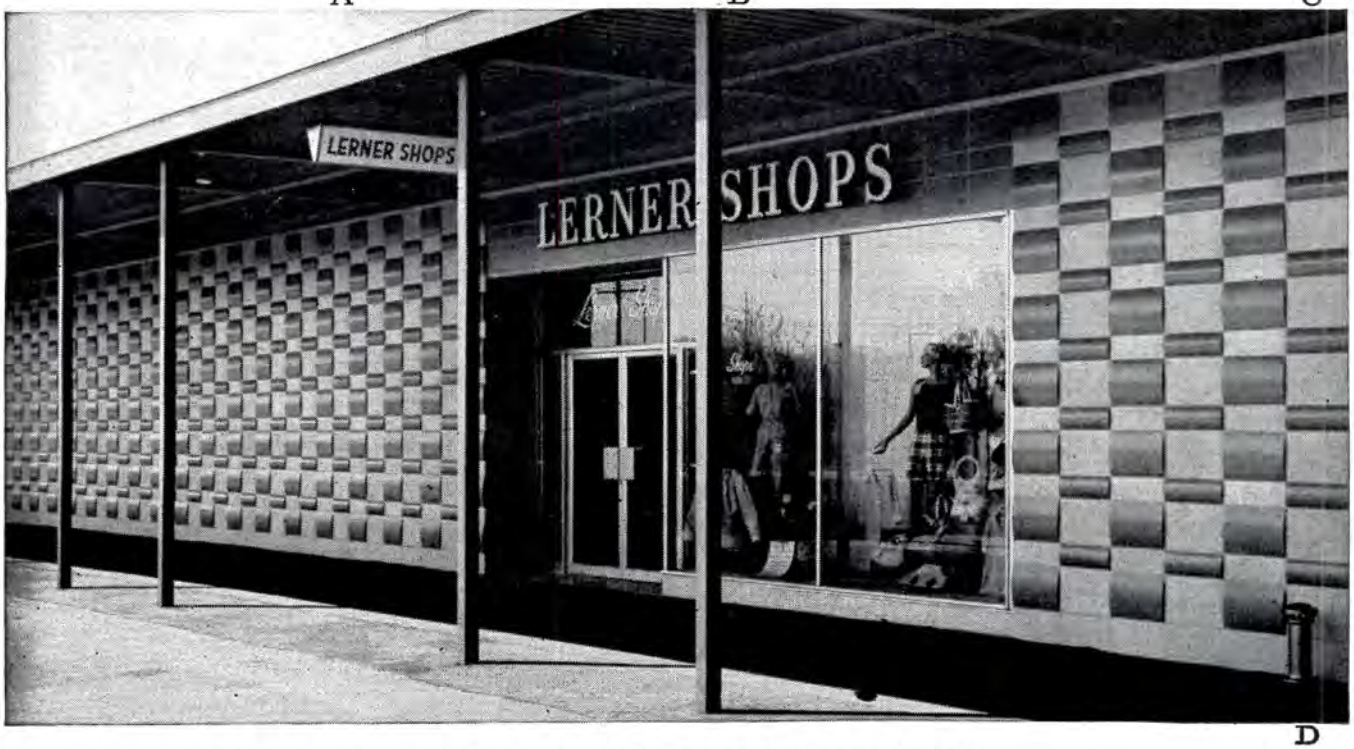

D

Here in CERAMIC VENEER is store front originality!

A RICH'S STORE, Washington, D.C. Berla & Abel—Architects; M. Cladny Construction Co., Inc.—Builder. Colorful individuality is created by sculptured Ceramic Veneer units $14\frac{11}{16}$" x $23\frac{13}{16}$" in matte gray glaze.

B WM. ROSENDORF STORE, Washington, D.C. Berla & Abel—Architects; Tuckman and Rinis—Builders. Decorative facade is sculptured Ceramic Veneer in an attractive light gray.

C STEINBERG'S STORE No. 95, St. Martin, Quebec, Canada. F. A. Dawson—Architect. Ceramic Veneer grille design FS-G, $11\frac{3}{4}$" x $11\frac{3}{4}$" is set in a random pattern to create this distinctive solar screen.

D LERNER SHOP, Monmouth Shopping Center, Eatontown, N. J. Kahn & Jacobs—Architects; Jos. L. Muscarelle, Inc.—Builder. Ceramic Veneer in medium solid blue curved units and light mottled blue flat surfaces make an interesting, harmonious combination.

Colorful, individual, sales-wise . . . and these attractive store fronts will never look drab or dirty. Big city grit and grime are resisted by the fire-hardened surface of Ceramic Veneer. When fully exposed to the elements, it is self-washing; otherwise it requires only soap and water washings for retention of its original color and beauty. Besides minimum maintenance, Ceramic Veneer provides the advantages of quality at low cost, permanence and unrivaled versatility. You can specify virtually any color under the sun, choose any desired texture, and specify units large or small—plain surfaces, grilles or sculpture. Whatever your plans — for store fronts or entire shopping centers, Federal Seaboard craftsmen will custom-make Ceramic Veneer to your precise specifications. Detailed information on Ceramic Veneer will be sent on request; also data on $\frac{3}{8}$" CV Durathin and CV Durathin Sandwich Panel. Write today.

F S T C

FEDERAL SEABOARD TERRA COTTA CORPORATION
10 East 40th Street, New York 16, N. Y. • Plant at Perth Amboy, N. J.

For more data, circle 93 on Inquiry Card

Office Literature

continued from page 190

FOLDING PARTITIONS

Fourteen sound barriers including 24-gage steel panels are used in *Super-Soundguard* folding partitions. Brochure has design details. *Holcomb & Hoke Mfg. Co., Inc., 1545 Calhoun St., Indianapolis 7, Ind.**

CIRCLE 423 ON INQUIRY CARD

FLOOR TOPPING

Thiopoxy 60 floor topping and patching compound is a one-application compound which cures overnight. Bulletin 85 gives technical data on this product specially designed to withstand severe corrosive and abrasive conditions. *Sun Chemical Corp., A. C. Horn Div., 2133 85th St., North Bergen, N.J.**

CIRCLE 424 ON INQUIRY CARD

RADIANT HEATING

(A.I.A. 30-C-43/30-B-1) Gas fired infra-red heaters for industrial uses are described in Bulletin IR-100. *Reznor Mfg. Co., Mercer, Pa.**

CIRCLE 425 ON INQUIRY CARD

LIGHTING DESIGN

The lumen method of lighting design is explained in detail in a 16-page booklet, No. TP-101. *Inquiry Bureau, General Electric Co., Nela Park, Cleveland 12, Ohio*

CIRCLE 426 ON INQUIRY CARD

PLASTIC PANELS

Reinforced plastic panels of standard or custom design are available with a variety of cores and in several thicknesses. *Window Modes Inc., 16 E. 52nd St., New York 22, N.Y.*

CIRCLE 427 ON INQUIRY CARD

ROOF DRAINAGE

A commercial standard for roof drainage products has been prepared by the Commodity Standards Div. of the U.S. Dept. of Commerce at the request of the Roof Drainage Manufacturers Institute. CS244-62, 10¢. *Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.*

POLE BUILDINGS

Design data for wooden pole-supported buildings are given in a 66-page book which includes cost figures, standards for preservative treatment, correct embedment and photographs of actual buildings. $1.50. *American Wood Preservers Institute, 111 W. Washington St., Chicago 2, Ill.*

CALCULATING HEAT LOADS

A method for calculating heating and cooling loads for residences has been prepared by the National Warm Air Heating & Air Conditioning Association, the Institute of Boiler & Radiator Manufacturers, and the Air Conditioning & Refrigeration Institute. Manual J, which was summarized in an article on load calculations in RECORD HOUSES OF 1962, is available for $2.50. *National Warm Air Heating & Air Conditioning Assoc., 640 Engineers Bldg., Cleveland 14, Ohio*

** Additional product information in Sweet's Architectural File*

ɔw the ɔdge ɘporter helped erect Harvard's Holyoke Health Center

Freedom in fenestration has been carried forward a giant step by Architects Sert, Jackson and Gourley in Holyoke Center. The triple function of providing light, ventilation and view has been re-examined and applied room by room to serve human needs. The result is better use of light within and unusual exterior interest.

To fulfill the special requirements of this project Mr. Jose Luis Sert said he depended upon the Dodge Reporter to alert contractors and suppliers and make the needs of the project known. The Reporter, who calls on Sert, Jackson and Gourley regularly, was kept informed from the time they were named as architects. Plans and specifications on this project were filed in the Dodge Plan Room in Boston.

To Mr. Sert, this has meant that the suppliers and trades who called were already aware of what was needed, a great help in minimizing bidding-period traffic and making more productive use of valuable time. Suppliers came prepared to make helpful suggestions concerning materials and products, often with accurate, on-the-spot estimates.

Practical architects have had long and profitable experience with Dodge Reporters and Dodge Plan Rooms. They make Dodge Reporters welcome in their offices, as a service to themselves and their clients.

Holyoke Center, Harvard University, Cambridge, Massachusetts.

Architects: Sert, Jackson and Gourley.

Joseph Zalewski and John E. Nickols, Associates.

Holyoke Center, adjacent to Harvard Yard, is an H-shaped building with a covered arcade running through the cross bar. Half the project, containing the health center, is completed. The second portion will contain offices. Translucent glass sandwich panels admit soft light, and clear glass is used where needed, the varying sizes of which establish human scale. Filter-wall modules project between fenestration elements to form shadow patterns and provide animation.

Now the M fi D will w tw h i s vi gy

Now the Man from Devoe has doubled the scope of his services to architects with an important expansion in his responsibilities. For he has also become the representative for Truscon Industrial Maintenance Products, offering special assistance to architects in the many and complex *industrial* areas involving building materials specialties.

These fields range from hundreds of interior and exterior paints, finishes and coatings for specialized applications to new concepts in industrial paint systems. Thus, your next industrial plant may have wood, masonry or metal surfaces which need protection from acids, solvents, fumes, gases or other damaging conditions. The Man from Devoe will gladly supply data on formulae, performance and recommended applications for such Truscon Industrial Maintenance Products as Chemfast Coatings, Speed-Rex, Re New Coat, or Super Por-Seal with silicone, to name a few.

Or you may need help on problems involving industrial maintenance coatings and plant safety, materials handling, or morale-building color systems. Or for protection of machinery or equipment. Now—*ask the Man from Devoe !*

Naturally—he will continue to be at your service as the man who represents the resources behind Devoe paints and the famous Devoe Library of Colors® system. Call him for any information on any type of Devoe paint for any interior or exterior application in your next institutional, commercial or residential project!

To contact the Man from Devoe, phone or write the Devoe Architect's Service at your nearest Devoe Office. There is no obligation. For an introduction to the broad line of Truscon products, send the coupon below.

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Architect: GEORGE M. EWING COMPANY, Washington, D.C. • *General Contractor:* BALTIMORE CONTRACTORS, INC., Baltimore, Md. • *Architectural Bronze:* GENERAL BRONZE CORPORATION, Garden City, L.I., N. Y. • *Sheet Metal Cont.:* J. EDWARD LINCK SHEET METAL WORKS, INC., Phila., Pa. and Washington, D.C. • *Duct Work:* KOOLAIR COMPANY, Washington, D.C. • *Textured Sheets for Panels:* ARDMORE PRODUCTS, INC., Roselle, N.J.

new wings for NAVAL ACADEMY

Revere has been doing business with the U.S. Navy since 1801. In fact, the first copper rolling mill in America was founded by Paul Revere in that same year on the strength of an order from the fledgling fleet of the new country.

In 1955 . . . 100,000 lbs. of Revere Sheet Copper were used to roof Macdonough and Dahlgren Halls at the Naval Academy.

More recently Revere furnished metals to the U.S. Navy for the first atomic-powered submarine the Nautilus, her sister ship the Sea Wolf, and the nuclear-powered N.S. Savannah.

Now, for the two new wings at Bancroft Hall Revere supplied 40,500 lbs. of Muntz Metal (Bronze) for the embossed panels in the ceilings of the entrance lobbies, for "bridges" between the existing wings and the new wings and for the entrance doors. 168,901 lbs. of Revere Sheet Copper (some lead coated) were used for the roofs, flashings, gutters, dormers, vents, and penthouse. An additional 35,000 lbs. of 16 oz. and 20 oz. Revere Sheet Copper were used for the shower ventilating system.

Design with copper and its alloys in mind . . . for its proved qualities of endurance and the beautiful effects which can be obtained with man's oldest metal.

And if you have any technical problems involving the best way to use Revere Copper, let us know and we'll put Revere's Technical Advisory Service in touch with you. No obligation.

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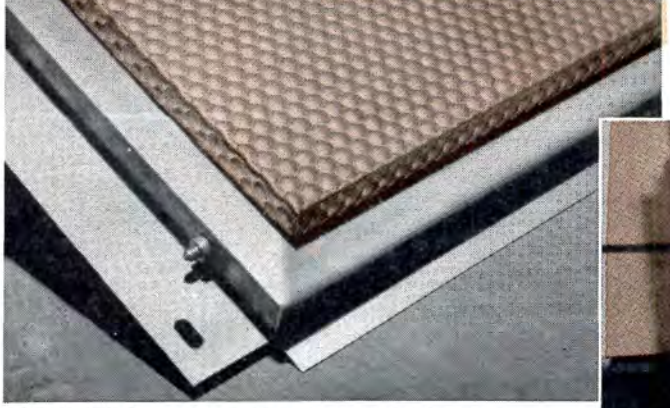
Distributors Everywhere

SECTION OF DUCT WORK, made of Revere Copper Sheet, which was used to vent the individual Midshipmen's room showers and the large basement shower rooms.



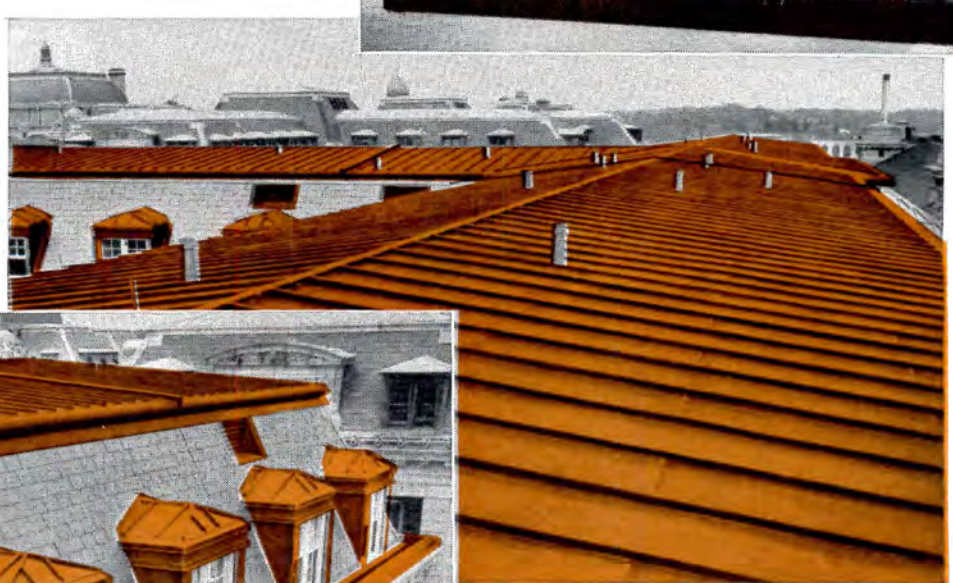
CLOSE-UP of one of the embossed panels showing brass strip braces to which panels are silver soldered.

EMBOSSED REVERE MUNTZ METAL PANELS prior to assembly. 10,971 lbs. of metal were used to fabricate these panels.

122 tons of Revere Copper and Bronze combine to give Beauty and Permanence to ings #7 and #8 of Ba roft Hall

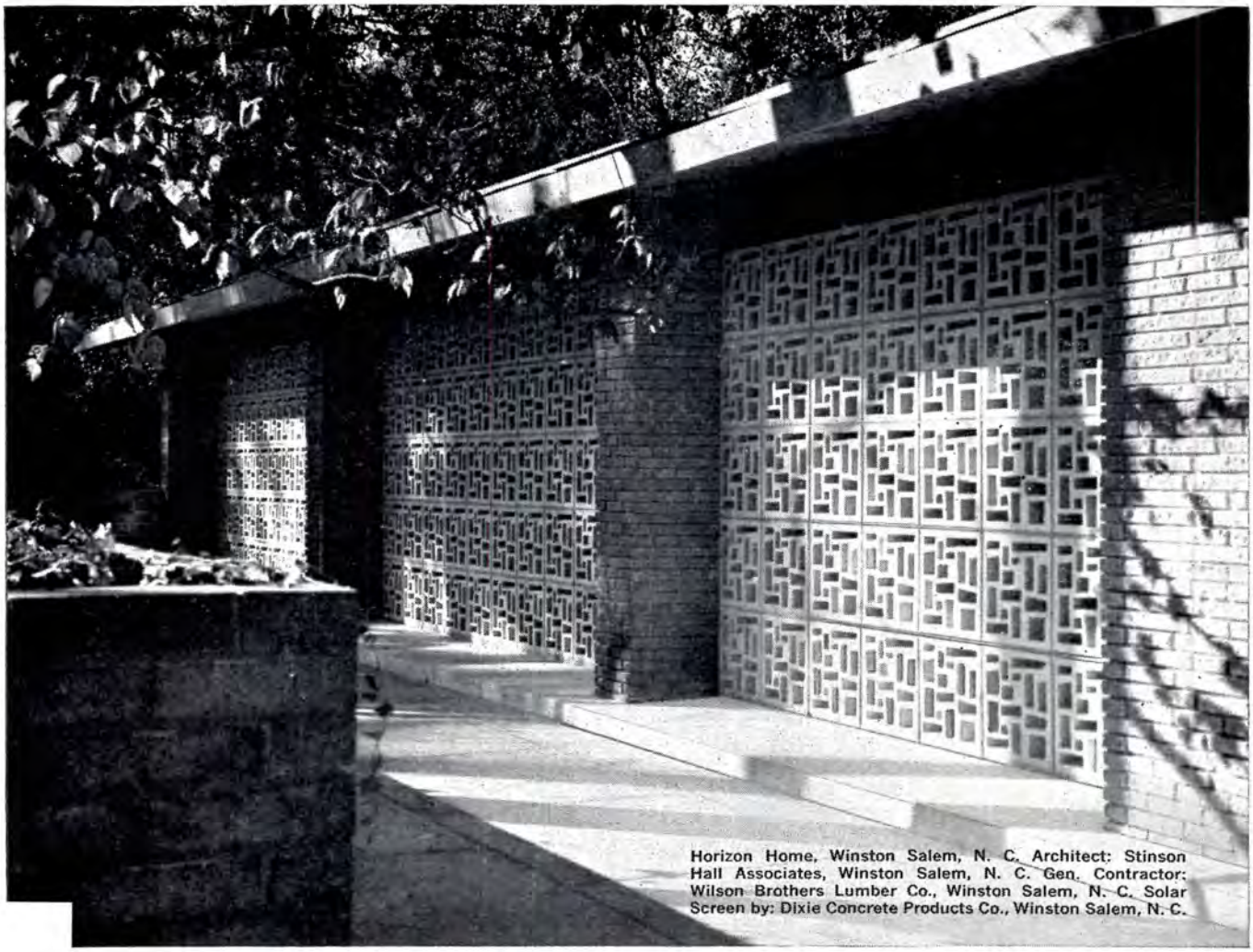
ONE OF THE "BRIDGES" connecting the new wings #7 and #8, an addition to the existing wings of Bancroft Hall. There are 1200 panels of 30 types.

MAIN ENTRANCE LOBBY showing doors of Revere Muntz Metal and section of ceiling with square embossed panels.



BATTEN SEAM ROOF and dormers of Revere Sheet Copper. There will be no need for worry about corrosion here.

CLOSE-UP of dormers, deck molding, vents and gutter of Revere Sheet Copper. Outside section of gutter is lead coated copper.



Horizon Home, Winston Salem, N. C. Architect: Stinson Hall Associates, Winston Salem, N. C. Gen. Contractor: Wilson Brothers Lumber Co., Winston Salem, N. C. Solar Screen by: Dixie Concrete Products Co., Winston Salem, N. C.

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Today there's a growing preference for Medusa (the original) White Portland Cement in making precast concrete panels and decorative screen block to satisfy a fast growing market. Architects and concrete product manufacturers believe that Medusa White best meets their need for a dependable white cement with a *true white color* that can be relied upon to make beautiful white or tinted products true to color specifications. They also appreciate the dependability of Medusa White Cement, whose strength and use properties have been proved by more than half a century of use.

For setting decorative block the most popular mortar choice is Medusa StoneseT White Masonry Cement. A card or letter brings details and specifications on any or all of the eleven Medusa Portland Cements for all types of precast concrete units.

General James White Auditorium & Coliseum, Knoxville, Tenn. Architect: Painter, Weeks, McCarty A.I.A. and Morton & Sweetser A.I.A., Knoxville, Tenn. Gen. Contractor: Johnson & Galyon, Knoxville, Tenn. Panels by: Southern Cast Stone Co., Knoxville, Tenn.

MEDUSA PORTLAND CEMENT COMPANY

P.O. BOX 5668 • CLEVELAND 1, OHIO

For more data, circle 101 on Inquiry Card

SHELL CONFERENCE FEATURES EXPERTS IN RELATED FIELDS

Architects, engineers, researchers and builders from many countries will share ideas and experience at the World Conference on Shell Structures, to be held October 1-4 at the Sheraton-Palace Hotel in San Francisco. Papers and discussions will feature both theoretical and practical considerations.

Among the session chairmen will be: Lawrence Anderson, head, Department of Architecture, Massachusetts Institute of Technology; M. Salvadori, professor, civil engineering, Columbia University; H. L. Donnell, professor, mechanics, Illinois Institute of Technology; A. Tedesko, vice president, Roberts and Schaefer Company, New York; W. Flugge, professor, engineering mechanics, Stanford University; A. M. Haas, president, International Association for Shell Structures and professor, civil engineering, Technological University, Delft, Netherlands; G. S. Ramaswamy, deputy director, Central Building Research Institute, Roorkee, India; A. Aas Jakobsen, consulting structural engineer, Oslo, Norway; A. L. Parme, vice president, International Association for Shell Structures, Portland Cement Association, Chicago; S. J. Medwadowski, consulting structural engineer, San Francisco; and N. M. Newmark, professor, civil engineering, University of Illinois.

HOSPITAL MEETING INCLUDES EXHIBIT OF NURSING HOMES

An architectural exhibit of nursing homes and long-term, nonpsychiatric units adjunctive to general hospitals will be featured at the 64th annual meeting of the American Hospital Association, scheduled for September 17-20 at McCormick Place in Chicago. Projects on display will be those by registered architects from the United States and Canada built since January 1, 1957 or under construction before July 1, 1962.

DESIGN INSPIRATIONS No. 5

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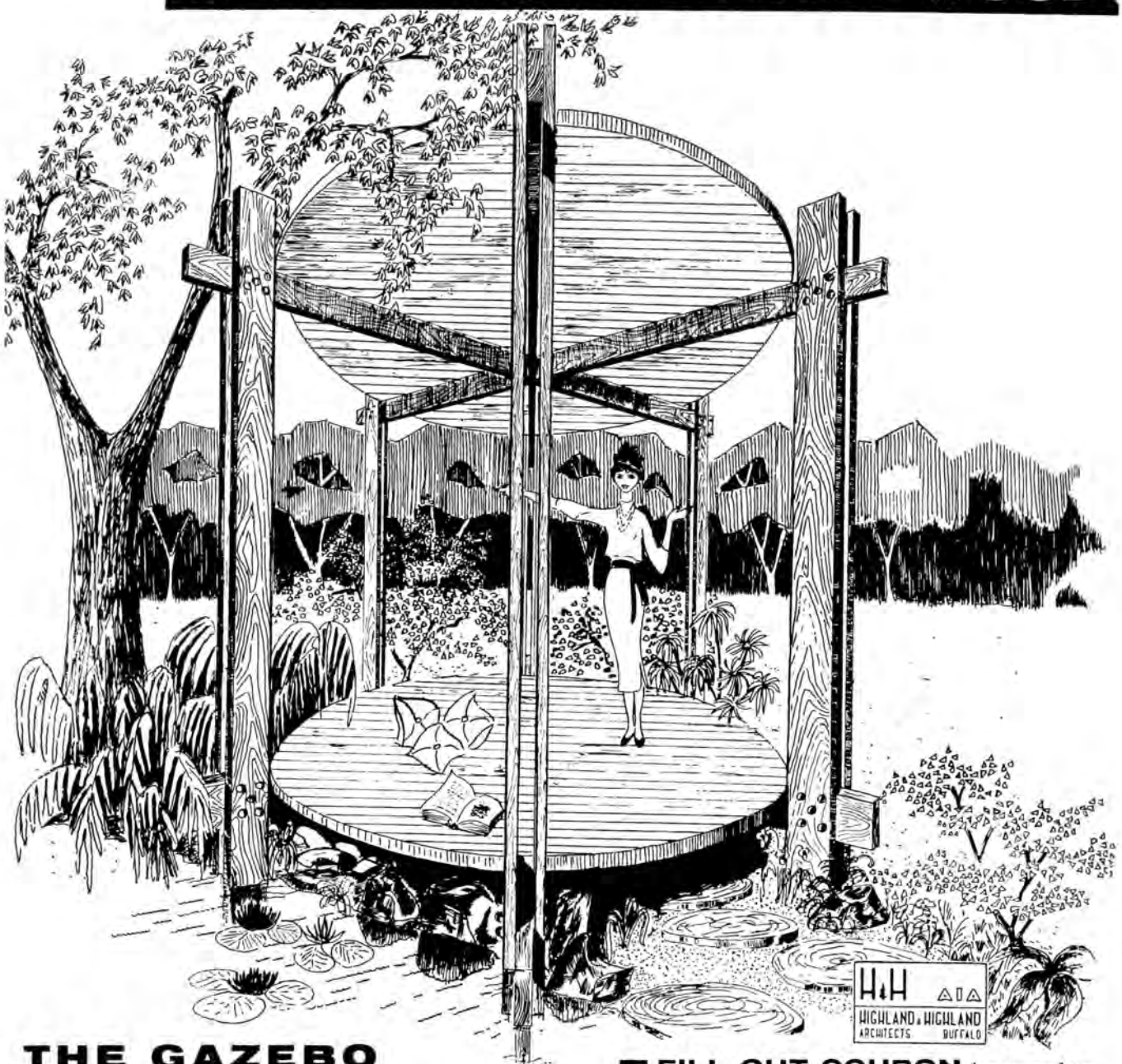

THE GAZEBO

The modern version of the Gazebo, above, is a far cry in appearance and technique from its forerunner so popular in the Gay Nineties, but preserves all its sheltered privacy. The Gazebo is just one of many structures which follow today's trend to outdoor living areas. Terraces, patios, sun-decks, courtyards, etc., require windbreaks, trellises, arbors, overhangs, walls, fences and enclosures of all types . . . many of which are designed to take advantage of the natural beauty of wood. Weather-wise architects know how fast unprotected exposure to the elements and foundations can hasten decay and insect attack in wood members. That's why they specify low-cost OSMOSE Pressure Treated Wood for long-lasting indestructability. It's just "good business" to insure client satisfaction for many years to come.

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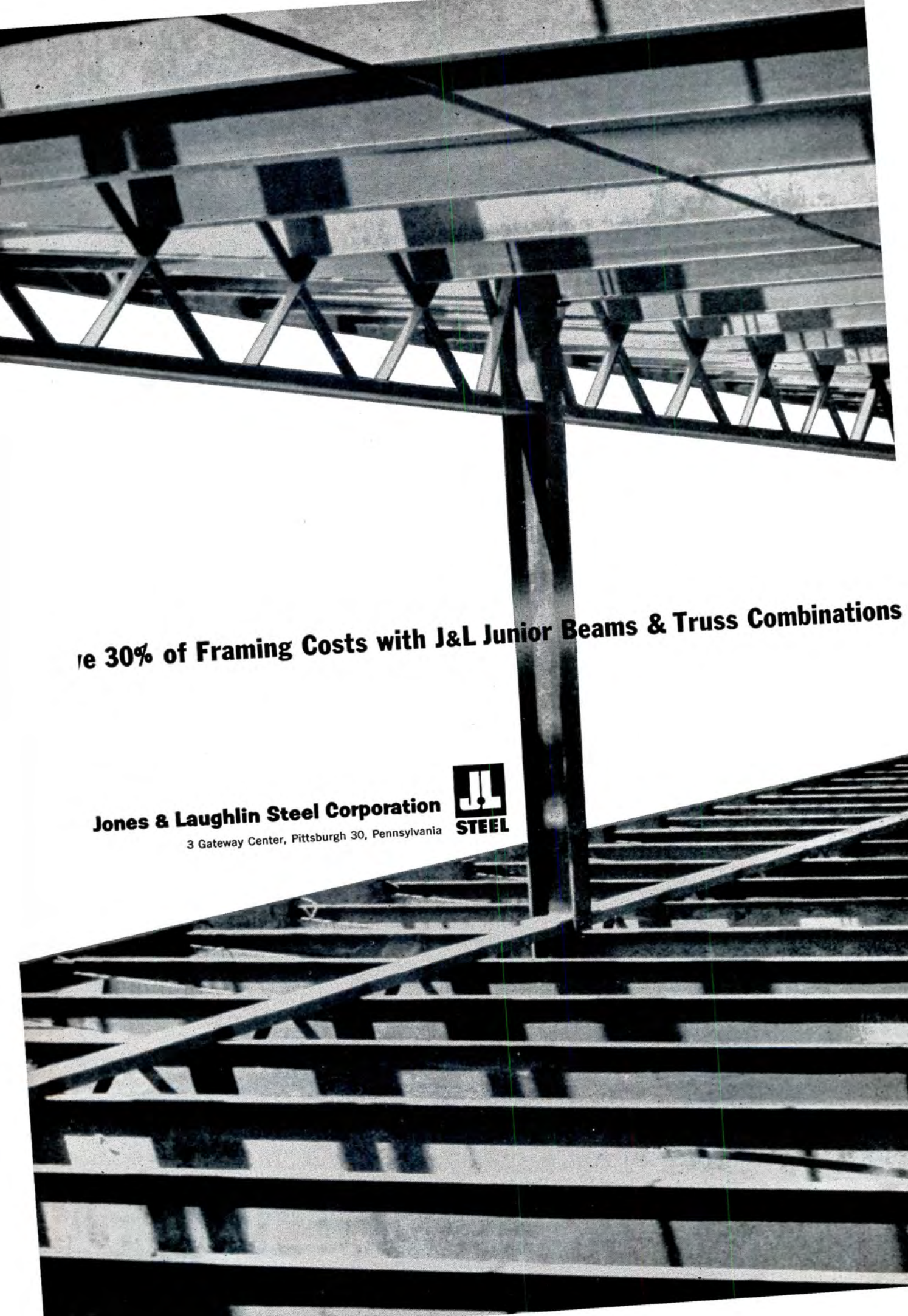
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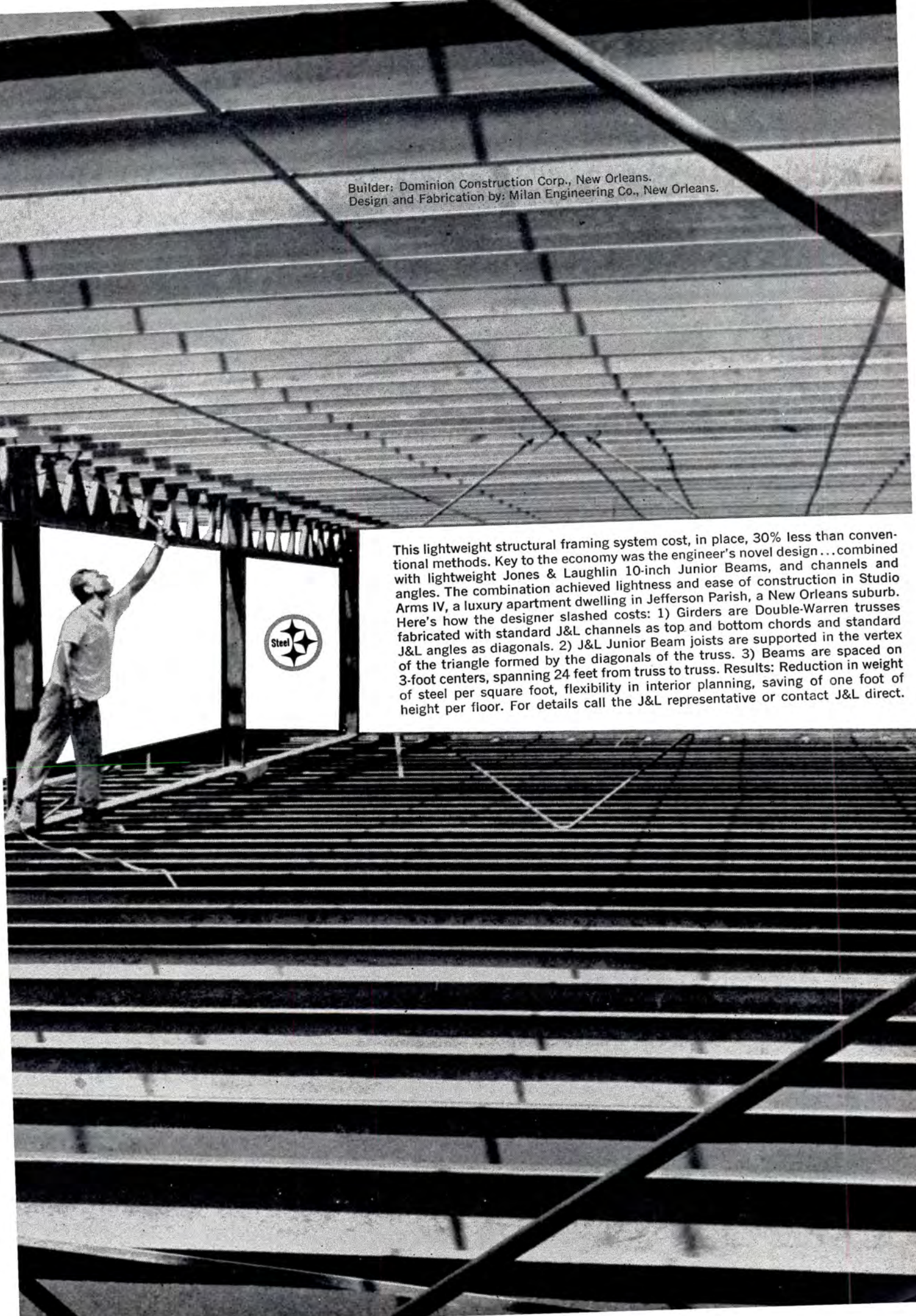

Builder: Dominion Construction Corp., New Orleans.
Design and Fabrication by: Milan Engineering Co., New Orleans.

This lightweight structural framing system cost, in place, 30% less than conventional methods. Key to the economy was the engineer's novel design . . . combined with lightweight Jones & Laughlin 10-inch Junior Beams, and channels and angles. The combination achieved lightness and ease of construction in Studio Arms IV, a luxury apartment dwelling in Jefferson Parish, a New Orleans suburb. Here's how the designer slashed costs: 1) Girders are Double-Warren trusses fabricated with standard J&L channels as top and bottom chords and standard J&L angles as diagonals. 2) J&L Junior Beam joists are supported in the vertex of the triangle formed by the diagonals of the truss. 3) Beams are spaced on 3-foot centers, spanning 24 feet from truss to truss. Results: Reduction in weight of steel per square foot, flexibility in interior planning, saving of one foot of height per floor. For details call the J&L representative or contact J&L direct.

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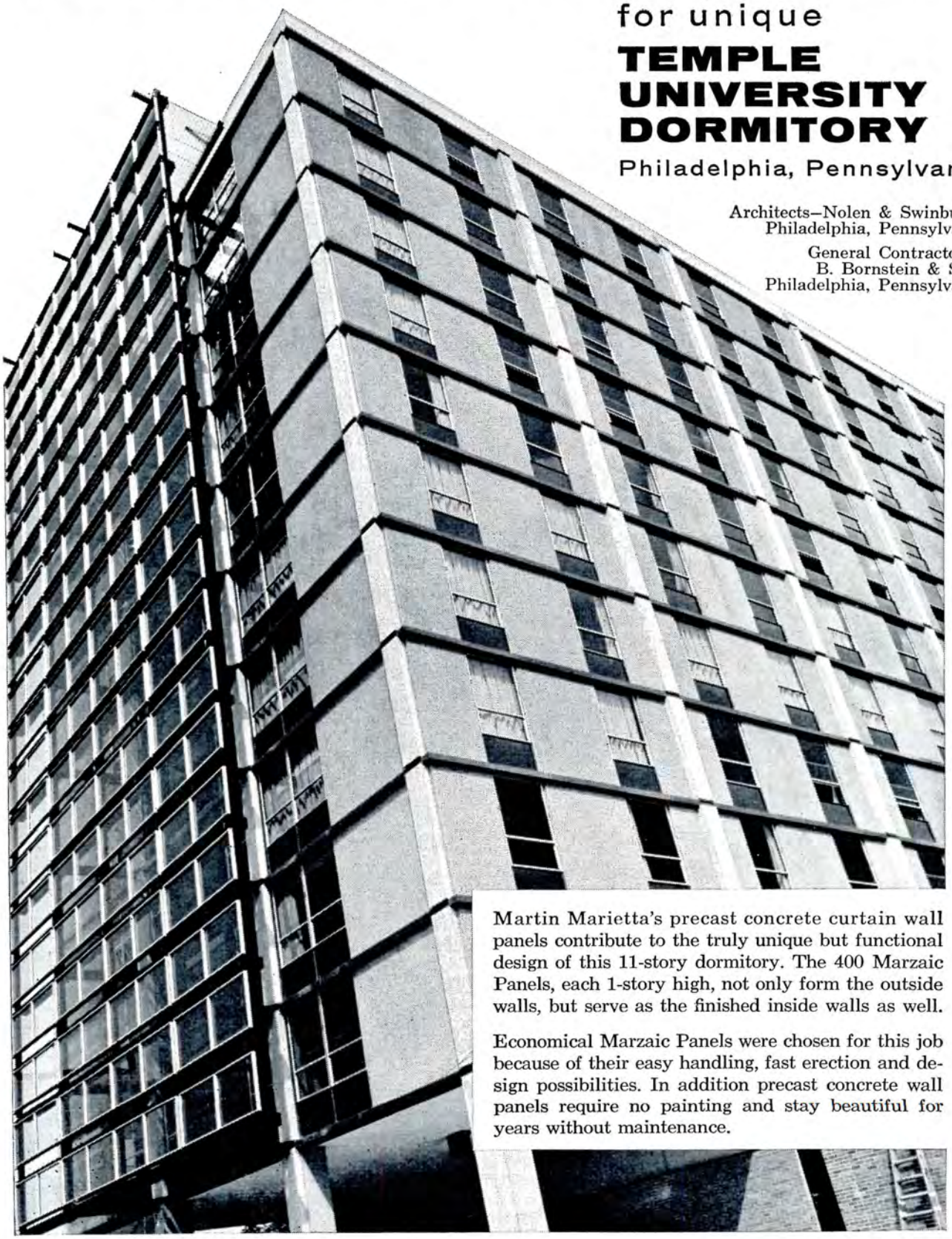

Martin Marietta's precast concrete curtain wall panels contribute to the truly unique but functional design of this 11-story dormitory. The 400 Marzaic Panels, each 1-story high, not only form the outside walls, but serve as the finished inside walls as well.

Economical Marzaic Panels were chosen for this job because of their easy handling, fast erection and design possibilities. In addition precast concrete wall panels require no painting and stay beautiful for years without maintenance.

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Lengthy laminated beams, dual-post supports, and a multi-toned planked ceiling create spa
cious luxury in the club's high clerestory-lighted room for dining and dancing. Wood
natural resiliency adds to dance floor pleasures, too. Interior Decoration: R. F. Associate

N.A.A.B. LISTS 52 ACCREDITED SCHOOLS

The National Architectural Accrediting Board has issued the 1962-1963 List of Accredited Schools of Architecture, which reveals a major change from last year. Kent State University, Kent, Ohio, and Louisiana State University, Baton Rouge, have both achieved provisional accreditation. The list follows:

Arizona State University—B. Arch. (Provisional); *University of Arkansas*—B. Arch.; *Auburn University*—B. Arch.; *University of California*—B. Arch.; *Carnegie Institute of Technology*—B. Arch.; *Catholic University*—B. Arch.; *University of Cincinnati*—B.S. in Arch.; *Clemson A.&M. College*—B. Arch.; *Columbia University*—B. Arch.; *Cornell University*—B. Arch.; *University of Florida*—B. Arch.; *Georgia Institute of Technology*—B. Arch.; *Harvard University*—B. Arch.; *University of Houston*—B. Arch.; *Howard University*—B. Arch.; *Illinois Institute of Technology*—B. Arch.; *University of Illinois*—B. Arch.; *Iowa State University*—B. Arch.; *Kansas State University*—B. Arch.; *University of Kansas*—B. Arch.; *Kent State University*—B. Arch. (Provisional); *Louisiana State University*—B. Arch. (Provisional); *Massachusetts Institute of Technology*—B. Arch.; *Miami University*—B. Arch.; *University of Michigan*—B. Arch.; *University of Minnesota*—B. Arch.; *Montana State College*—B. Arch.; *University of Nebraska*—B. Arch.; *North Carolina State College*—B. Arch.; *University of Notre Dame*—B. Arch.; *Ohio State University*—B. Arch.; *Oklahoma State University*—B. Arch.; *University of Oklahoma*—B. Arch.; *University of Oregon*—B. Arch.; *University of Pennsylvania*—B. Arch.; *Pratt Institute*—B. Arch.; *Princeton University*—M.F.A. in Arch.; *Rensselaer Polytechnic Institute*—B. Arch.; *Rhode Island School of Design*—B.S. in Arch.; *University of Southern California*—B. Arch.; *Syracuse University*—B. Arch.; *Texas A. & M. College*—B. Arch.; *Texas Technological College*—B. Arch.; *University of Texas*—B. Arch.; *Tulane University*—B. Arch.; *University of Utah*—B. Arch.; *Virginia Polytechnic Institute*—B. Arch.; *University of Virginia*—B. Arch.; *Washington University*—B. Arch.; *University of Washington*—B. Arch.; *Western Reserve University*—B. Arch. (Provisional); *Yale University*—B. Arch.

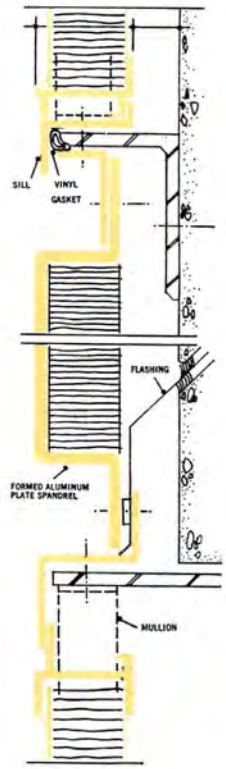
ERWIN WOLFSON DEAD AT 60

Erwin S. Wolfson, 60, noted New York investment builder and chairman of the board of Diesel Construction Company, died on June 26 at his home in Purchase, Westchester County, after two months' illness.

Twice "Realty Man of the Year," recipient of the Hearst Gold Medal for "improvement of 'Old New York' in lower Manhattan" and in 1961 of the "Manhattan Medal," Mr. Wolfson was owner-builder of a dozen post-war Manhattan office buildings, among his current projects, the $100 million Pan Am Building.

Lake Forest College, Lake Forest, Illinois
Architect: Perkins & Will, AIA
General Contractor: Hansen & Werhane, Inc.
Curtain wall fabricator and Kalcolor licensee:
Modu-Wall, Inc., Parchment, Michigan

Kalcolor components: Aluminum curtain wall mullions, framing, doors, windows, trim of Kalcolor No. 6345 Amber extrusions; spandrel panels of Kalcolor No. 5245 Amber sheet.



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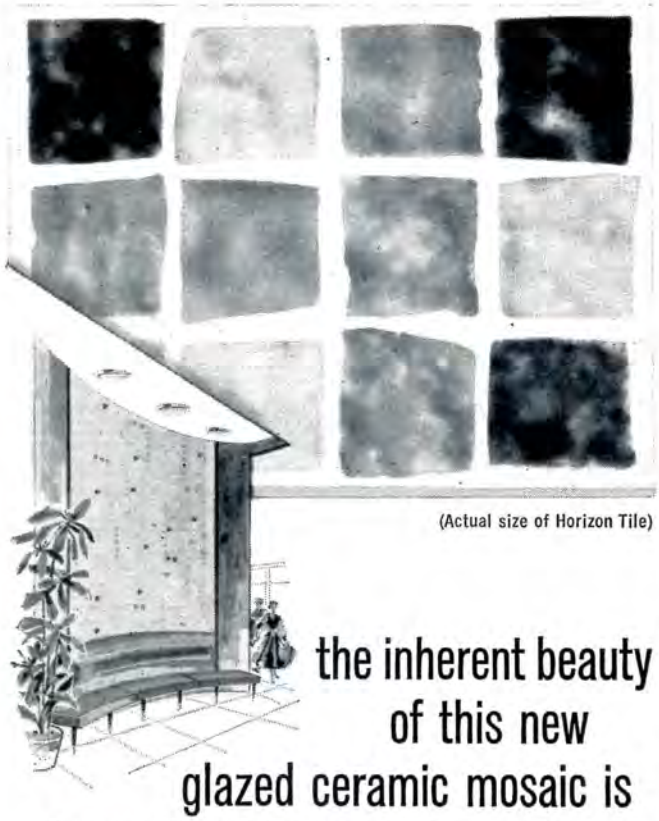

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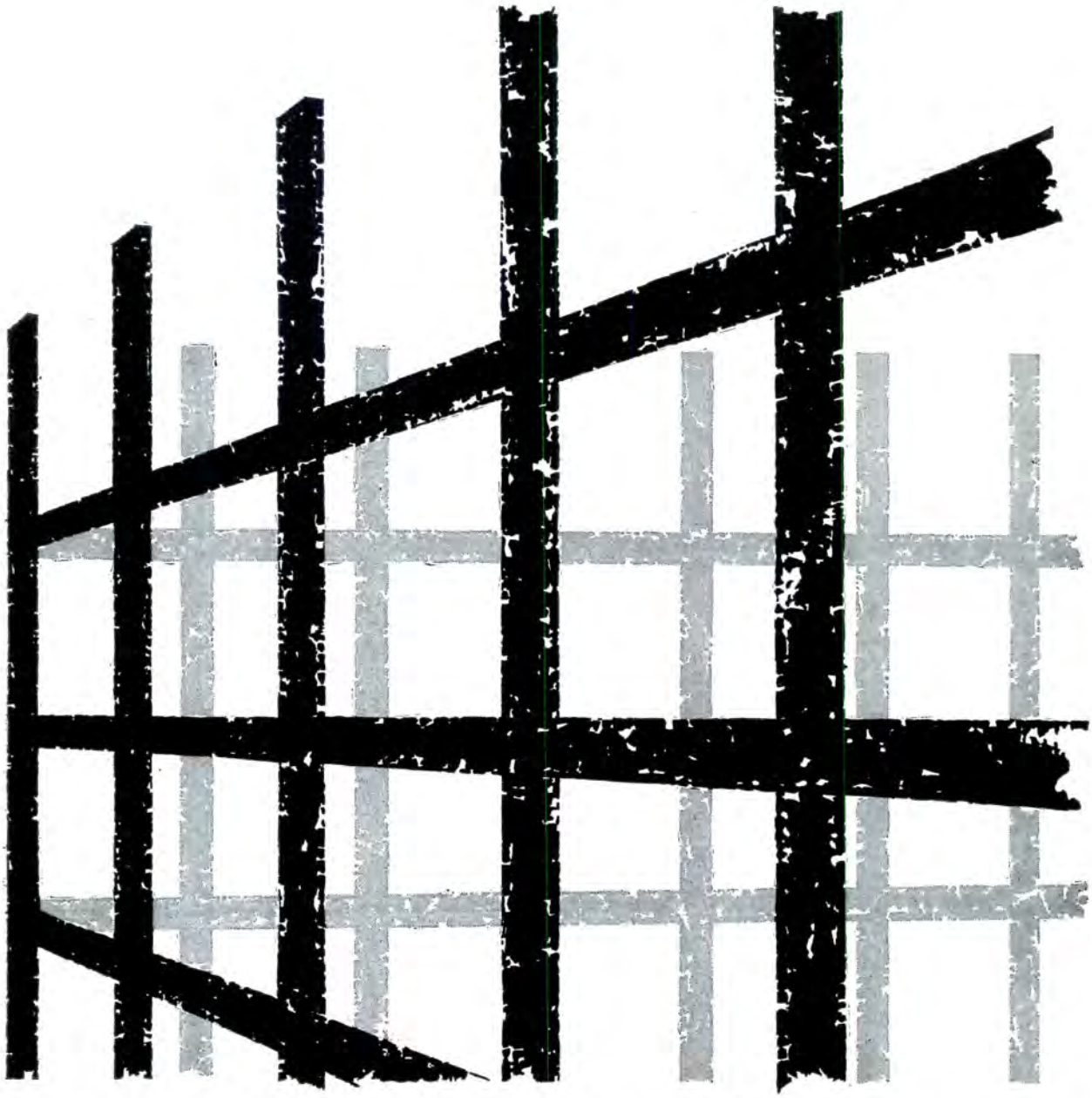

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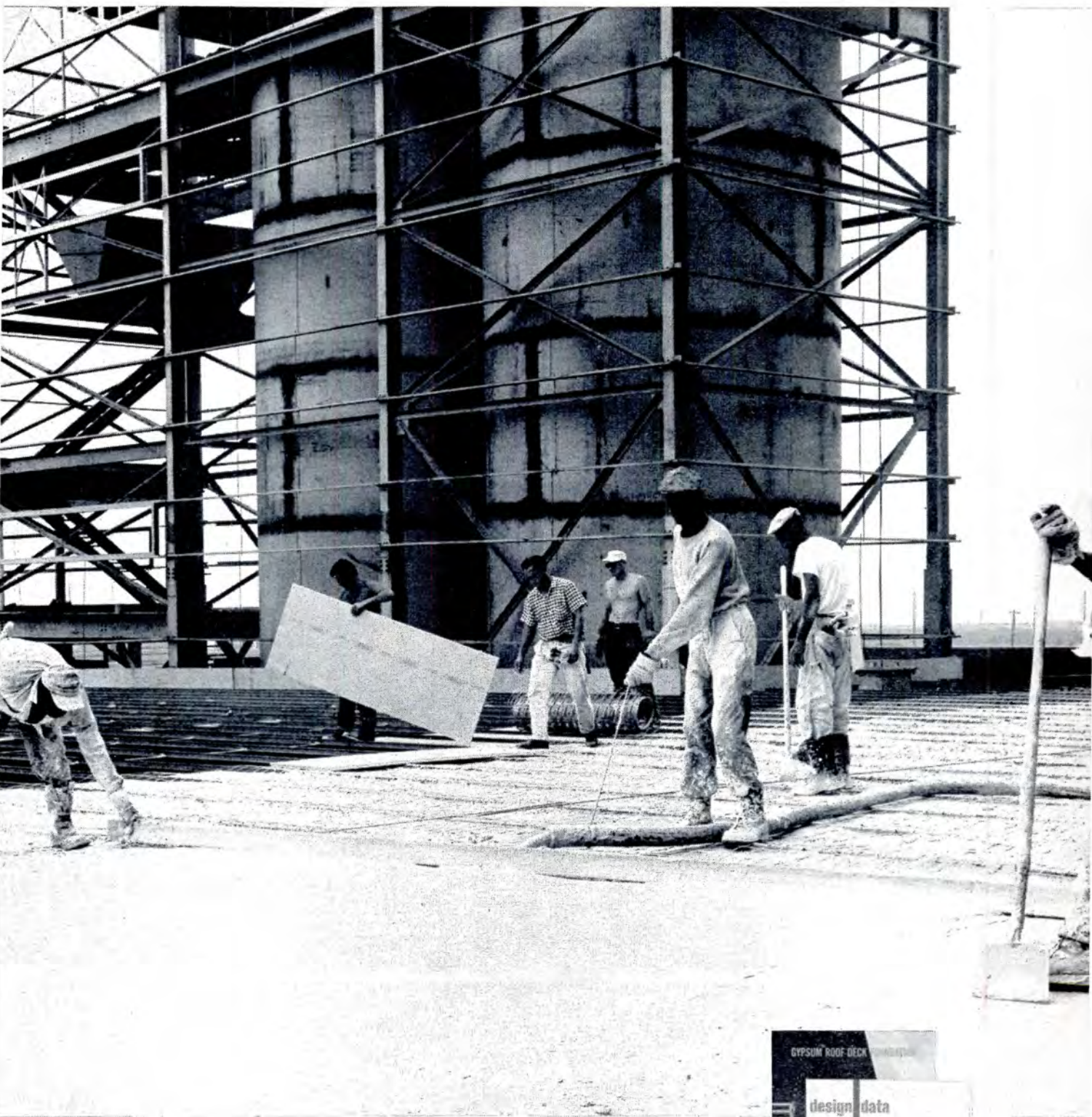

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- Design Data for Poured Gypsum Roof Deck
- Recommendations for Installation of Gypsum Concrete Roof Decks
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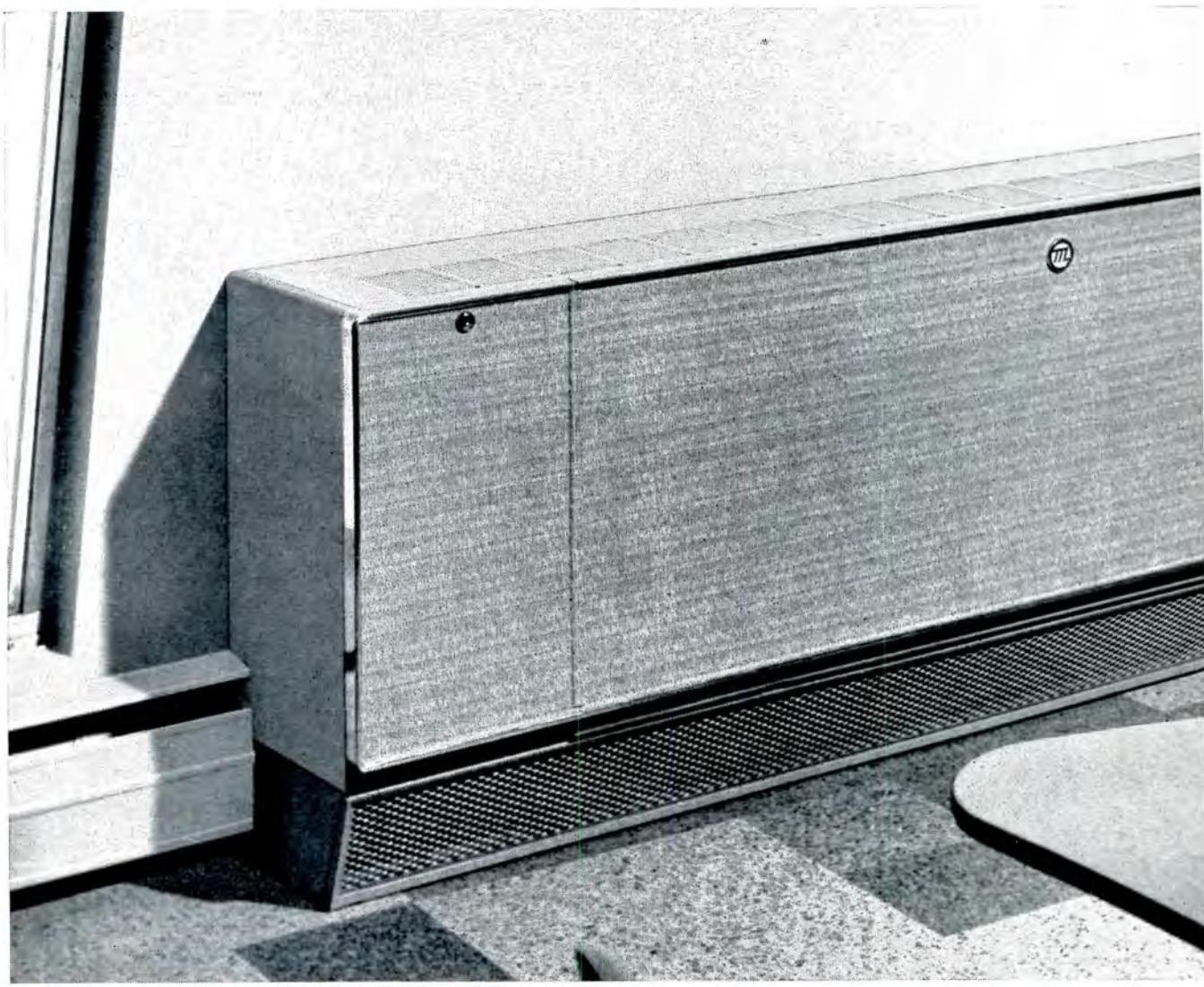

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- Carthage College, Kenosha, Wis.
- A. O. Marshall School, Joliet, Ill.
- Triton Central High School, Shelby County, Ind.
- Goodland School, Racine, Wis.
- Ringwood Elementary, Ringwood, Ill.
- Anderson College, Anderson, Ind.
- Marquette Jr. High School, Madison, Wis.
- Waterloo Township School, Indianapolis, Ind.
- Beth Israel School, Milwaukee, Wis.
- Middletown High School, Middletown, Ind.
- Harlem Jr. High School, Rockford, Ill.
- No. Shore County Bay School, Skokie, Ill.
- Plum Grove School, Palatine, Ill.
- Pachelle High School, Columbus, Ga.
- Marion College, Fond du Lac, Wis.
- New Cass Township School, Dugger, Ind.
- Geo. C. Marshall School, Vancouver, Wash.
- Grand Rapids School, Grand Rapids, Minn.
- Lake Shore Elementary, Vancouver, Wash.
- Glendale Jr. High School, Salt Lake City, Utah
- Lakeview Elementary, Lakeside, Cal.
- Washington Township School, Westwood, N.J.
- San Jacinto College, Houston, Texas
- Brooklyn School, Portland, Ore.
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- Mirror Lake School, Federal Way, Wash.
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- Horlick High School, Racine, Wis.
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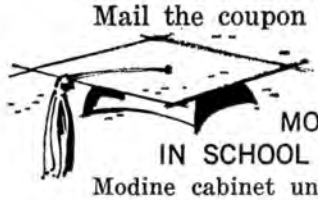
Modern schools coast-to-coast are choosing Modine SCHOOL-VENT unit ventilators. And for good reason! These units are the result of more than five years of research, engineering and testing . . . are *specifically designed* to meet specifications of architects, engineers and school officials.

SCHOOL-VENT units have a unique *air-control* system that automatically adjusts to temperature and fresh air requirements. An ideal "educational climate" is *quietly* maintained . . . summer, winter, spring and fall. Operation is economical. So is maintenance, thanks to such user benefits as pushbutton lubrication and slide-out filters.

Important too, of course, is SCHOOL-VENT's modern, attractive styling . . . together with design simplicity and installation flexibility. Units are thinner and lower than most other equipment of this type . . . 13″ x 28″ compared to the normal 18″ x 32″.

Seven handsome colors to choose from! And SCHOOL-VENT beauty is virtually student-proof. Heavily-reinforced, welded-steel cabinets defy abuse. Front panels have scuff-resistant vinyl inserts.

Modine SCHOOL-VENT unit ventilators heat with steam or hot water . . . cool with central-source chilled water. Five sizes: 500 to 1500 cfm. Bulletin 1261 has full data. Mail the coupon today!



MODINE HAS EARNED "HIGHEST GRADES" IN SCHOOL COMFORT FOR MORE THAN 30 YEARS!

Modine cabinet unit heaters, convectors and conventional unit heaters have served schools — large and small — for more than three decades. Thousands of schools throughout the country are currently enjoying the economical comfort provided by these units.

- Endicott College, Beverly Farms, Mass.
- Rehabilitation Center Ellis School, Ellisville, Miss.
- Frank White Elementary School, Park Rapids, Minn.
- Wauseon Elementary School, Wauseon, Ohio
- Union High School District #2, Franklin, Wis.
- Hebrew Teachers College, Brookline, Mass.
- Maplewood Academy, Hutchinson, Minn.
- Glenns Valley Elementary School, Marion County, Ind.
- Kempton Elementary School, Saginaw, Mich.
- Vose Elementary School, Beaverton, Ore.
- East Gate School, Ft. Rucker, Ala.
- Happy Camp School, Happy Camp, Cal.
- Perry Elementary School, Southport, Ind.
- Johnson Elementary School, London, Ky.
- Camp Ground Elementary School, London, Ky.
- Oscoda Elementary School, Oscoda, Mich.
- Walterville Grade School, Walterville, Ore.

HEAT TRANSFER CREATIVE CENTER

V-1470

MODINE MANUFACTURING COMPANY
1510 DeKoven Avenue, Racine, Wisconsin

Please send SCHOOL-VENT Bulletin 1261 ☐; also data on Modine's other school comfort equipment ☐.

Name .....

Address .....

City ..... State .....

In Canada: Sarco Canada, Ltd., Toronto 8, Ontario

For more data, circle 117 on Inquiry Card

On the Calendar

August

5-8 Fifth National Heat Transfer Conference, Exhibit, American Institute of Chemical Engineers and American Society of Mechanical Engineers—Shamrock Hilton Hotel, Houston

22-25 Fourth annual convention, Society of American Registered Architects—Edgewater Beach Hotel, Chicago

23-28 Eighth annual convention, Prestressed Concrete Institute—Roosevelt Hotel, New Orleans

September

2-9 Biennial Congress of the International Federation for Housing and Town Planning; theme: "Habitat et Civilisation"—Paris

6-11 1962 World Congress, International Council for Building Research Studies and Documentation—Cambridge, England

Office Notes

Offices Opened

William W. Dodge III, A.I.A., has opened an office at 103 Yancey Building, 611 Tucker St., Raleigh, N. C.

Bruce Wendell Beebe, Architect, has opened an office at 458 Broadway, San Francisco.

New Firms, Firm Changes

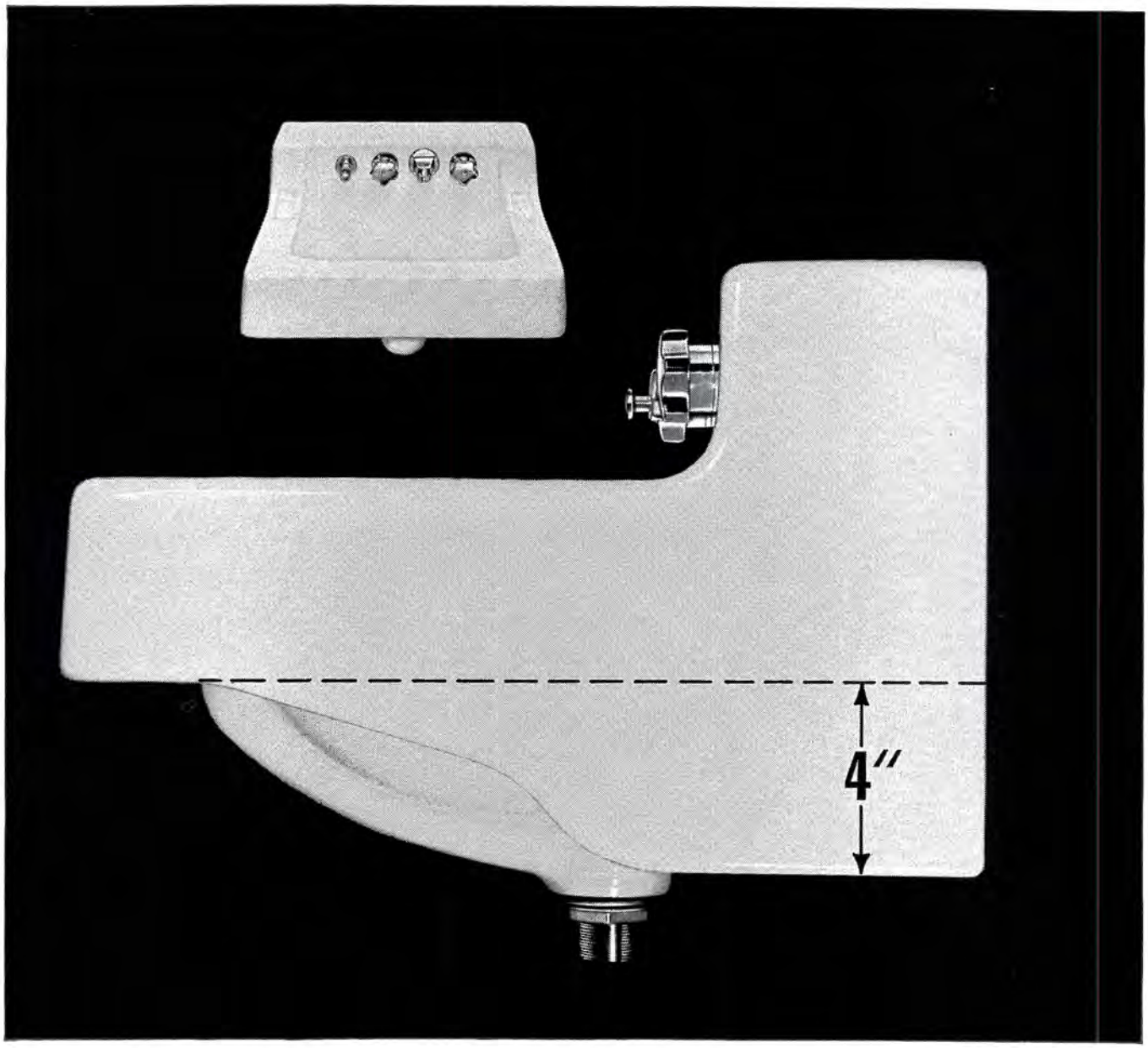
Alfred Malkin, consulting electrical engineer, and John Hosking, consulting mechanical engineer, have formed the partnership of **Malkin and Hosking, Consulting Mechanical and Electrical Engineers.** The address is 1500 Stanley St., Montreal, P.Q.

Thomas E. Greacen II and Richard S. Evans announce the formation of a partnership under the name of **Graecen and Evans—Architects.** Offices are at 500 Stuart St., Houston, Texas.

Oliver J. Foster Jr. and Frank J. Ridout have become partners in the West Hartford, Conn. firm of **Moore & Salsbury, Architects.** New associates are Robert B. Kaemmerlen and Welles A. Standish II.

The firm name of Nolen & Swin-

continued on page 228



Why the 4 inch extension in the back ?

Not for appearance. Most people never notice. But those extra four inches of wall bearing surface (plus two anchor screws) give rock-like solidity to the Kohler Juneau Lavatory.

The extra four inches eliminates the need for an expensive carrier installation (saves time and money) and keeps the Juneau straight and true for the life of the building. That kind of installation is mighty complimentary to an architect's (or builder's) good name and reputation.

Just another sensible feature of the vitreous china Juneau lavatory...and a reflection of the Kohler habit of putting time and effort into designing plumbing that makes good sense (that includes a superb line of All-Brass fittings).

The Kohler Juneau is vitreous china, available in white and Kohler colors. For more information, write Kohler Co., Kohler, Wisconsin.

KOHLER OF KOHLER

Kohler Co., Established 1873 • Kohler, Wis.

ENAMELED IRON AND VITREOUS CHINA PLUMBING FIXTURES • ALL-BRASS FITTINGS • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS

For more data, circle 120 on Inquiry Card


CASEY'S

Sheffield's new open web steel joists are adaptable to virtually any building design

These SJI-approved high-strength steel joists are the answer to fast, economical construction of schools, factories and commercial structures of all kinds. Whether you're designing or building a traditional or contemporary structure, Sheffield Open Web Steel Joists can simplify floor and roof handling.

These new joists have virtually unlimited adaptability for imaginative design. They are ideal for either pitched or flat roofs. They can be placed fast. They are the perfect answer where deadlines and weather are to be considered.

Today Sheffield's new high-strength Open Web Steel Joists are available in three standardized series — approved by The Steel Joist Institute.

J-SERIES (replacing the old S-Series), based on a stress in tension of 22,000 psi and made from 36,000 psi minimum yield strength steel. Spans up to 48′.

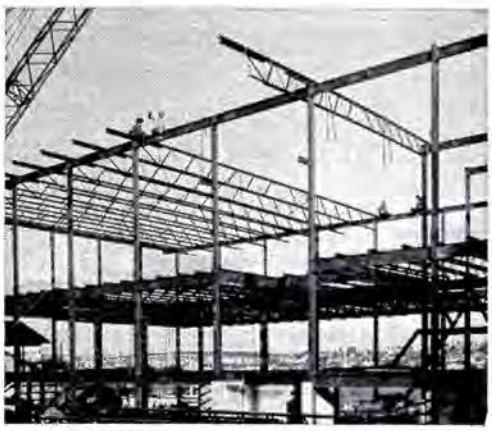
H-SERIES (completely new), high-strength joists based on a stress in tension of 30,000 psi, and made from 50,000 psi minimum yield strength steel. Spans up to 48′.

LA-SERIES (replacing the old LS-Series), based on stress in tension of 22,000 psi, and made from 36,000 psi minimum yield strength steel. Spans up to 96′.

(LS-SERIES. These joists extend beyond the span range of SJI Standard joists, but are designed in accordance with their specifications. Based on stress in tension of 22,000 psi and made from 36,000 psi minimum yield strength steel. Spans up to 144′.)

It pays to consider these advantages of new high-strength Sheffield Open Web Steel Joist construction

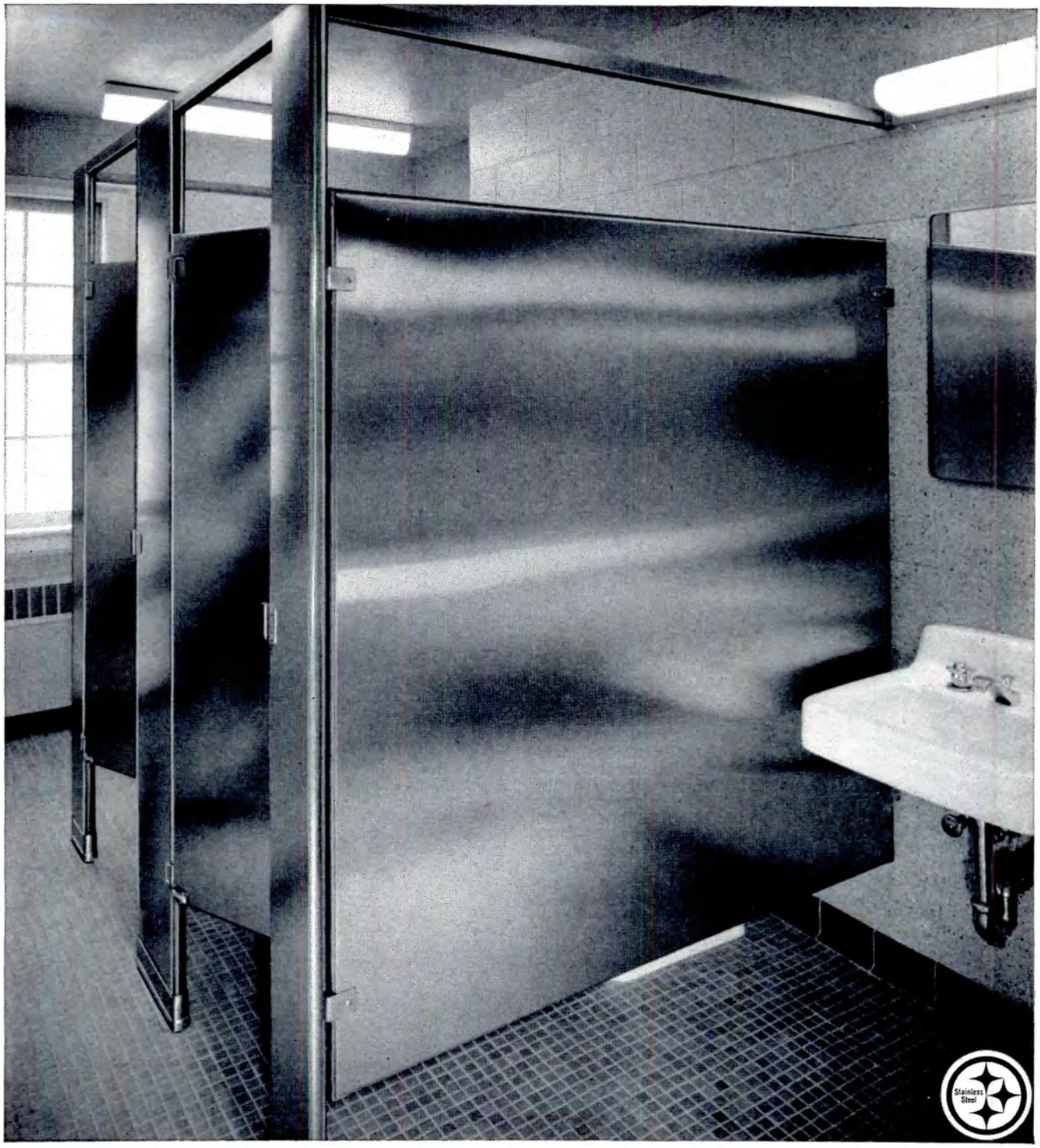
- They are lightweight – reduce deadload.
- Savings are substantial in both construction and maintenance.
- Prefabricated and ready to place.
- Fast, easy erection is possible in any weather.
- They allow plenty of freeway for pipe and conduit.
- Excellent for radiant heating systems.
- No form work or curing time is required.
- Dimensions and carrying capacity are standardized.
- Permanent and non-shrinking.
- Termite-proof and rot-proof.



Bring your files up to date with this useful reference book. Sixty pages of specifications and load tables on J-Series and H-Series Sheffield Open Web Steel Joists. (LA-Series and LS-Series information available on request.) Write **Sheffield Division, Armco Steel Corporation, Sheffield Station, Kansas City 25, Missouri.**

ARMCO Sheffield Division

For more data, circle 121 on Inquiry Card



Installation: Ventura School for Girls, R. B. Bradford, Director, Department of Public Works, State of California. State Architect: Anson Boyd. General Contractors: C. K.-F-M, San Diego, California.

ickel Stainless Steel never stops showing c

How come? Because it's so easy to keep clean. These toilet partitions – made by the Ferrometal Division of Milwaukee Stamping Co.–are a good example. They're made of nickel stainless steel and will keep this washroom bright and pleasant looking for the life of the building with just a minimum of maintenance.

In addition to being easy to take care of, nickel stainless steel also takes good care of itself. It doesn't chip. It fights off corrosion, and it doesn't stain adjacent materials. In short, nickel stainless steel is the ideal metal for interiors that need good looks, strength and durability. Try it. And for more information, write to The International Nickel Company, Inc., 67 Wall Street, New York 5, N. Y.

INCO NICKEL MAKES STAINLESS STEEL PERFORM BETTER LONGER INCO

For more data, circle 124 on Inquiry Card

YOU CAN BE SURE WITH LACLEDE

. . insist on SJI Approved "J" & "H" Series high strength steel joists

In January 1962 the Steel Joist Institute issued new specifications and load tables to provide architects, engineers and owners with a means to check full section, full weight, standard types of high strength open web steel joists: "J" series based on a design stress in tension of 22,000 psi; and "H" series based on yield strength of 50,000 psi.

To qualify under these requirements, extensive testing and engineering studies must be made by the Institute before approval is granted.

Laclede, as one of the first SJI-qualified producers, offers delivery on both of these great new structural members. They are in production and available now in all standard sizes.

There is no need to accept any non-qualifying substitute.

LACLEDE STEEL COMPANY

Quality Steel for Construction and Industry

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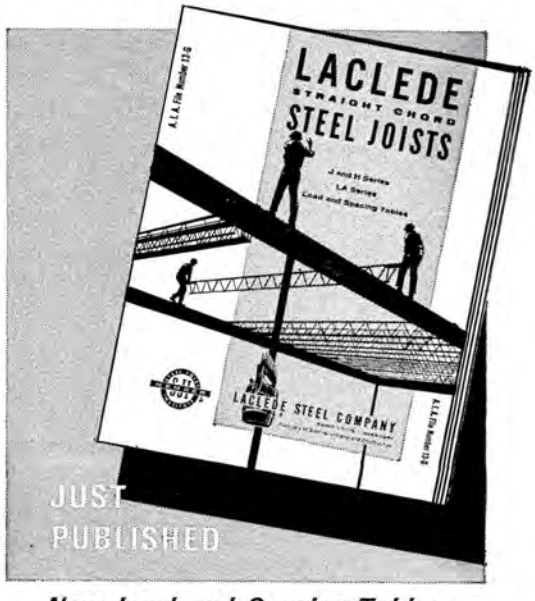

New Load and Spacing Tables on J-Series and H-Series Joists

64 pages cover load and spacing figures on both joist series in all standard sizes. Write for your copy today.

6208

For more data, circle 127 on Inquiry Card

Office Notes

continued from page 220

burne, Architects had been changed to **Nolen-Swinburne and Associates, Architects-Planners.** The associates are Victor H. Kusch, Chard F. Webb and John H. Welsh.

Jan C. Rowan and Norval White have formed a partnership to offer services in architecture, planning and interior design under the name of **Rowan & White, Architects.** Offices are at 33 E. 61st St., New York.

Three changes have been announced in the executive staff of the American Institute of Steel Construction, New York: **Mace H. Bell** has been promoted to coordinator-research & development; **Samuel H. Clark** has been promoted to chief engineer; and **Robert O. Disque,** formerly regional engineer in Pittsburgh, has moved to New York as assistant chief engineer.

Donald A. Winkelmann has been named an associate in the Seattle architectural firm of Naramore, Bain, Brady & Johanson.

Howard Hakken has been appointed an associate of Smith, Hinchman and Grylls Associates, Inc., Detroit.

Ronald H. Leaman, professional engineer, has joined architects Edward D. Lenker and Donald P. Lenker Jr. as a partner. The new firm name is **Lenker, Lenker & Leaman,** Harrisburg, Pa.

William G. Parr and Dudley Watkins have formed a partnership for the practice of architecture under the firm name of **Parr and Watkins,** with offices at 513 N. Broadway, Oklahoma City, Okla.

New Addresses

Marie Antoinette Bacle, Architect, 1117 College St., Shreveport, La.

Edward Larrabee Barnes, Architect, A.I.A., 303 E. 65th St., N. Y.

William C. Young, Registered Architect, 115 Locust Lane, Pittsburgh.

Addendum

Community Research and Development, Inc., of Baltimore should have been credited as owners and developers of the Cherry Hill Shopping Center, Delaware Township, N.J., published in the June issue, pages 174-179. The RECORD regrets the unintentional omission of the credit.

new PRESTRESSED CONCRETE junior high school at Laconia, N. H., gets high marks for economy, safety, attractiveness

The advantages which make prestressed concrete outstanding for any kind of building made it top-of-the-class selection for construction of Laconia's fine new Junior High School. Prestressed earned highest rating in the following important subjects: fireproofness, durability, economy and ease of construction, spaciousness, pleasing architectural design, and lowest possible maintenance costs.

Where building a school is concerned, there is naturally a particular insistence on safety. That this should be met without "loss of marks" in the other subjects shown is indeed an achievement. For any kind of building you may now be planning—school, plant or warehouse, office building, bridge, aircraft hangar, motel or apartment, to name just a few—it will pay you to give first consideration to prestressed concrete.

Roebling, first and foremost in the continuing development of prestressed concrete in this country, can put at your disposal a wealth of practical experience and design data as well as the names of fabricators nearest you. Roebling also supplies a full range of the finest prestressing wire and strand available. To get *all* the advantages of prestressed concrete construction, be sure to call or write Roebling's Construction Materials Division, Trenton 2, New Jersey.

ROEBLING
Branch Offices in Principal Cities
John A. Roebling's Sons Division
The Colorado Fuel and Iron Corporation

New, attractive Junior High School at Laconia, N. H., has entirely fireproof prestressed concrete framing, including double tee section roof construction. Superintendent of Schools: Kenneth L. Sherman. Architects and Engineers: Alfred T. Granger Associates, Hanover, N. H. General Contractor: Harvey Construction Company, Manchester. **Prestressed Concrete Fabricator: Structural Concrete Corporation, Laconia, N. H.**

The prestressed concrete girders in the gymnasium section are 95 feet in length and weigh 35 tons each, allowing a large, column-free activity area. The school is also the first in the New England area to be constructed with an all precast, prestressed concrete frame.

For more data, circle 129 on Inquiry Card

L–I–S–T–E–N *to the solid, silent sound of Ceco's new "Regent" Commercial Door of steel—full flush, 1¾" thick and "custom" in appearance. Your client will also like its beauty, strength, rigidity and easy-care design.*

■ *Inside the door is a strong fiber honeycomb core, one piece, full size, resin-impregnated. The core is held in place with epoxy adhesives to give the door unusual strength and flatness.*

■ *Top and bottom of Regent doors are flush — no voids to catch dirt. No visible welds — this door is flat and smooth. It is bonderized.*

■ *Regent doors are supplied as separate units — or in complete "packages" with frames and hardware.*

Similar in design and appearance is the new Ceco "Legionnaire" Door, 1 3/8" thick, for use in openings of average traffic. Ceco's full line includes the 1 3/4" "Medallion" Custom Door for monumental use; and the Recessed Panel and Fush Panel stile-and-rail Doors for industrial and commercial buildings.

This coupon brings you full information.

Please send Bulletin No. 2040-J containing details on Ceco's 1¾" "Regent" Commercial Doors and others.

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metal doors • steel and aluminum curtainwalls, windows, screens • steelforms • concrete reinforcing • steel joists • roofing products • steel buildings • metal lath

For more data, circle 130 on Inquiry Card

V-LOK framing interlocks without nuts, bolts or rivets. The Plaza Restaurant and Cocktail Lounge, one of the eight buildings with V-LOK framing, is shown below.

ARCHITECTS
Boullon & Williams, Seattle
PLANNING ENGINEER
Steve McCandliss, Century Concessions, Seattle
GENERAL CONTRACTOR
Rudy Simone (Dick Ziegler, Project Engr.), Seattle
ERECTOR & SUPPLIER
Taft Structurals, Inc., Seattle

How the V-LOK® framing system helped the Seattle World's Fair beat the clock

Century Concessions, the Seattle World's Fair major food service concession and their architects chose V-LOK framing for eight separate food service buildings. They total 13,488 square feet of roof area. These buildings went up in record time and symbolized the type of construction expected by the Fair's theme, "Century 21."

Ordered December 26, 1961 . . . all up and decked by February 1962 because of V-LOK's pre-fitted standardized steel members that fit together rapidly without nuts, bolts or rivets. A sledge hammer blow securely sets the interlocking deep end connections, and exclusive V-Section chords are available for faster, easier decking.

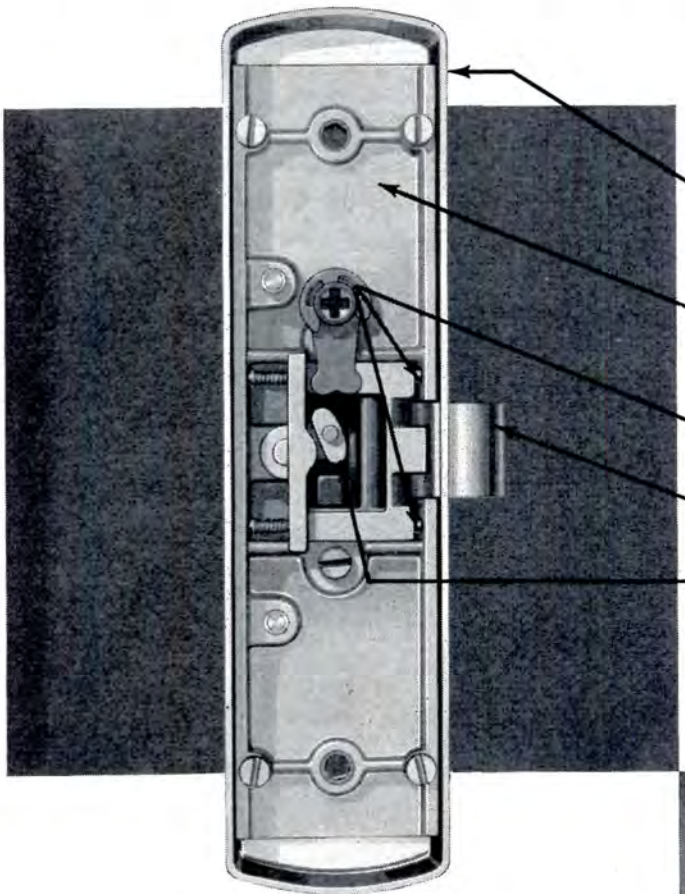
These buildings forcefully demonstrate the wide design latitude and functional beauty of exposed steel as a compatible feature in modern decor and finishing.

Macomber also supplied V-PURLINS for the Perimeter Buildings and the Gay Way.

Quality-controlled production is under the resident inspection of Pittsburgh Testing Laboratory. Plants: Los Angeles, California; Rock Island, Illinois; Canton, Ohio.

Exhibition buildings, schools, warehouse or factory . . . the V-LOK system gets them framed with unsurpassed ease, speed and freedom of design. To get the facts, send for free V-LOK literature.

A Close Look At Quality In Von Duprin's 66 Stainless Steel Device



For a convincing value comparison, take a look inside . . . you'll choose Von Duprin . . . "the safe way out!"

- Stainless steel housing covers are stamped and drawn from sturdy .078" stock.
- Forged bronze chassis in lock stile case reinforces a full 75% of housing area. Minimum wall thickness is .125".
- Neoprene bumpers between housing and chassis assure quiet operation.
- Stainless steel latch bolt and axles.
- Stainless steel master cam.

And there's more . . .

- Stainless steel adjustable roller strike permits smooth latch bolt operation with minimum wear.
- Stainless steel forged lever arms with stainless steel axles.
- Hidden "wedge-tite" fittings, extending 1¼" into crossbar, exert full-circumference locking force on crossbar, and give a smooth, uncluttered design.
- Stainless steel crossbar reinforced with steel tube.

VON DUPRIN DIVISION • VONNEGUT HARDWARE CO. • INDIANAPOLIS 25, IND.

For more data, circle 135 on Inquiry Card

Hotel Texas—Ft. Worth
Soundmaster 240 Dual
Operable Walls 100' x 21'

Mr. Houston

I was skeptical when the salesman said:

these operable walls give better* sound privacy than 8″ concrete block

"Frankly, I couldn't imagine accordion-folding partitions doing this kind of sound job. But the results have been amazing. We installed two of these 240's 15″ apart, and we're getting excellent sound privacy. Even the largest groups don't disturb each other in this divided space. And when you think that we operate 21-foot-high partitions across 100 feet in a matter of a minute, you get an idea of what real flexibility is like. Modernfolds are certainly better . . . and quicker . . . than any kind of folding wall I've ever seen. And this space is paying us a far better return than ever before. We don't even have any maintenance problems. Yet, the cost of these partitions was substantially below the wide-panel kind."

The statement above by Mr. Reagan T. Houston, executive director of sales for the Hotel Texas, gives you a good idea of Soundmaster effectiveness. We'd also like to give you more specific details—including the ASTM sound testing data. Just call your Modernfold distributor . . . or simply fill out the coupon below.

*Sound Transmission Losses: Soundmaster 240 Dual—46.8 decibels. 8″ Concrete Block Wall—45.6 decibels. Soundmaster 240 Single—38.2 decibels. 4″ Cinder Block Wall (painted)—34.1 decibels.

NEW CASTLE PRODUCTS, INC.
Dept. A282, New Castle, Indiana

Gentlemen: Please send information on Modernfolds for hotels.

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HOTEL _____

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NEW CASTLE PRODUCTS, INC. • NEW CASTLE, INDIANA
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"Modernfold" Operable Walls, Partitions and Doors; "Air Doors"; "Modern-Cote" Wall Coverings; "Peabody" School Furniture, "Pyrox" Sheathed Thermocouples.

For more data, circle 136 on Inquiry Card

Index to Advertising

PRE-FILED CATALOGS of the manufacturers listed below are available in the 1962 Sweet's Catalog File as follows: (A) Architectural File (green), IC Industrial Construction File (blue), (LC) Light-Construction File (yellow).

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This imaginative and practical installatic
Armstrong Tessera Vinyl Corlon flooring i
a stairway at the American Society for Me
Building, Metals Park, Ohio—architect .
Terence Kelly, A.I.A. The tough, flexible s
vinyl material is wrapped completely arc
the stair treads and installed on the tops
undersides of the landings. Versatile as
as decorative, Tessera was used in offi
hallways, the cafeteria, and other a
throughout the building.

Technical Data on Tessera: **uses:** he
duty commercial and de luxe residentia
teriors, above, on, or below grade; **gre**
and alkali resistance: excellent; **dimensi**
.090″ gauge in rolls 6 ft. wide and length
to 90 ft.; **stylings:** colored vinyl chips se
translucent vinyl in monochromatic and
ticolor designs, 20 colorings. Style 86
pictured at right.

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area can help you solve any flooring problems
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