



TEXTURE

THE FOURTH ARCHITECTURAL DIMENSION

Textured Quarry Tile is another new product from Summitville. An exclusive new process combines sparkling, easyto-clean ceramic glazed designs with the inherent beauty of time-proven quarry tile.

For the full story of this new artistic dimension contact your local ceramic tile contractor or write Direct—



MEMBER TILE COUNCIL OF AMERICA INC.

Architectural Forum January 1960

America rebuilding — a problem in continuity 85

1. CITIES

New life for yesterday's city 89

Providence, R.I. prepares to carry forward its tradition of good architecture by integrating structures of the past with new ideas for the city's future.

The exceptional comebacks 96

Without site clearance, few decaying neighborhoods have re-established themselves. But from those that have, a hope for renewal in continuity may emerge.

Tomorrow's city 104

Despite predictions that metropolitan "gray areas" are doomed, a FORUM roundup of urbanists indicates that the city can and must be rescued.

Main Street's vanishing patina 108

Casualties in the blast of today's mass rebuilding, the city's colorful old storefronts are poignant reminders of what has been lost—a gallery.

2. BUILDINGS

The money in modernization 115

At the tender age of 15, often less, every building in the country becomes a candidate for remodeling. But not all of them are worth the expense.

An office building reborn 118

Architect Ladislav Rado's imaginative design for KLM's new American headquarters has transformed an outmoded structure into a Fifth Avenue showpiece.

From repainting to redesign 122

Four handsome buildings that have benefited from remodeling, and from redesign.

11347 S. TECHNIQUES

The art that science forgot 133

Remodeling, still a haphazard process, is not yet industrially efficient—except where a few architects and engineers have shown how it should be done.

A theory for the future 138

From modern engineering concepts, a new rationale for systematic rebuilding.

4. ARCHITECTURE

Toward a new continuity 143

The linking of the past to the future in individual buildings and in entire cities is an esthetic as well as economic and human necessity.

- 5 News
- 13 People
- 49 Projects
- 55 Products
- 155 Abroad
- 163 Books
- 169 Excerpts
- 199 Forum
- Cover: Asia House by Philip Johnson, and its older Manhattan neighbor. Photo by George Cserna.
 - 200 Editorial, subscription, and advertising data.
 - 196 Advertising index.

Published by TIME INC. 9 Rockefeller Plaza, New York, N.Y. Entered as second-class matter at New York, N.Y. and at additional mailing offices. Subscription price \$6.50 a year. © 1960 TIME INC. All rights reserved.



it takes Dur-o-wal to keep them alike!

Two masonry walls: They can be twins in surface charm and solidity. Yet, one can be the better building investment—free of maintenance problems for important extra years. That's the one built with Dur-o-wal, the original steel masonry wall reinforcement.

A wall reinforced every second course with Standard Weight Dur-o-wal has 71 per cent greater flexural strength than its unreinforced counterpart.

With its trussed design, buttwelded construction, scientifically deformed rods, Dur-o-wal is considered the most practical thing of its kind by builders everywhere. Nationally wanted, Dur-o-wal is nationally distributed. Wherever you build a masonry wall, you can get Dur-o-wal.



RIGID BACKBONE OF STEEL FOR EVERY MASONRY WALL

Dur-O-waL Div., Cedar Rapids Block Co., CEDAR RAPIDS, IA. Dur-O-waL Prod., Inc., Box 628, SYRACUSE, N. Y. Dur-O-waL Div., Frontier Mfg. Co., Box 49, PHOENIX, ARIZ. Dur-O-waL Prod., Inc., 4500 E. Lombard St., BALTIMORE, MD. Dur-O-waL of III., 119 N. River St., AURORA, ILL. Dur-O-waL Prod. of Ala., Inc., Box 5446, BIRMINGHAM, ALA. Dur-O-waL of Colorado, 29th and Court St., PUEBLO, COLO. Dur-O-waL Inc., 165 Utah Street, TOLEDO, OHIO



Two engineered products that meet a need. Dur-o-wal reinforcement, shown above, and Rapid Control Joints, below. Weatherproof neoprene flanges on the latter flex with the joint, simplify the caulking problem.



6 Scientific Guides to the Use of COLOR

in

• HOSPITALS

SCHOOLS

- INDUSTRIAL PLANTS
- RETAIL STORES
- RESTAURANTS
- MOTELS



Colori

Including 36 Functional Colors and Instructions for their Use

If you are responsible for the specification of **color** in any of these six fields, these Colorizer Functional Color Kits will be an invaluable aid. They were prepared by a nationally-respected color authority, and show in precise detail how color can be used in these 6 types of institutions— not only to provide tasteful decoration but to promote morale and efficiency, better seeing, safety, and improved employee and public relations. Each kit illustrates and specifies exact colors for various interior and exterior areas—and explains **why**. The 36 recommended paint colors are coded for easy selection, and reflectance percentage is given for each color. Colorizer Paints are available throughout the U.S. and Canada. Choose from easier-to-use Colorizer "Instant Paint" for interiors . . . highest quality enamels . . . floor paints . . . wood finishes . . . long-lasting exterior finishes.



COLORIZER ASSOCIATES: Bennett's, Salt Lake City & Los Angeles - Blue Ribbon Paint Co., Wheeling, W. Va. - Walter N. Boysen Do., Dakland & Los Angeles, Calif. - Broeklyn Paint and Yarnish Co., Brooklyn, N. Y. - James Bute Co., Houston, Texas - Great Western Paint Mtg. Corp., Kansas City, Mo. - Jewel Paint & Varnish Co., Chicago, Illinois - Kchler-McLister Paint Co., Denver, Colo. - W. H. Sweney & Co., St. Paul, Minn. - Vane-Calvert Paint Co., St. Louis, Mo. - Warren Paint and Color Co., Nashville, Tenn. - George D. Wetherill & Co., Inc., Philadelphia, Penna. - The Imperial Flo-Glaze Paints, Ltd., Toronto, Canada - Jenson & Nichelson, Ltd., London, England.

Colorizer Associates 349 North Western Ave.	• Chicago 12, III.	
As an aid to be used in s Kit (or Kits) checked be	pecifying color, I would like th low:	e Colorizer Functional Colo
Schools Hospitals	Industrial Plants' Retail Stores	☐ Restaurants ☐ Motels
Name		
Title		
Company		A Charles
Address		
City	State	

You pay no more for unequalled SLOAN quality...

Flush urinals automatically with the Sloan Flushing System



DAY-NIGHT TIMER for large number of Flush Valves. Controls urinal Flush Valves for each toilet room in sequence at five minute or one hour intervals according to traffic hours of the building.



DOOR-OPERATED TIMER employs door switch (not furnished) which starts Timer as user enters toilet room. Flushing occurs within succeeding five minutes while successive door openings have no effect.



SINGLE CIRCUIT TIMER for flushing one Flush Valve (or two simultaneously).

THREE CIRCUIT TIMER for sequential flushing of three Flush Valves. Either one connected to light switch so that flushing occurs only when light is on and toilet room ready for use.

SLOAN



• In public and semi-public toilet rooms, the Sloan Automatic Flushing System provides important benefits for both user and owner. It is the most ideal method of urinal operation ever devised.

Pioneered through Sloan research, the system:

- · Eliminates the need of user operation
- Encourages better housekeeping
- of the toilet room
- Assures more hygienic conditions

The Sloan Automatic Flushing System provides accurate electric clock timing; is dependable in operation and trouble-free . . . while saving tremendous quantities of water. The Sloan Urinal Flush Valve is actuated by a Motor Operator (illustrated above); the flushing cycle is controlled by any one of several Timers (explained in captions at left.)

The Sloan Flushing System is already proven through thousands of installations in satisfactory daily service—and recent improvements bring it to peak efficiency. Here is another product packed with that bonus of quality you expect from Sloan. And, since you can have Sloan quality at no extra cost, why not make sure you get it.



VALVES

SLOAN VALVE COMPANY . 4300 WEST LAKE STREET . CHICAGO 24, ILLINOIS

News

Department of Commerce confirms forecast for continued high level of construction in 1960



YAMASAKI'S NEW DELHI PAVILION

A feature attraction in President Eisenhower's whirlwind, 11-nation tour last month was the just-completed World Agricultural Fair in New Delhi, where the U.S. was represented by a gold-domed pavilion designed by Architect Minoru Yamasaki (shown above talking to Indian workers). Yamasaki's pavilion, which Elsenhower opened at night ceremonies (lower picture), is really four buildings between which stand 32 precast concrete golden domes, each 17 feet across and 40 feet high. The domes cover open walkways between the buildings and around the several lagoons and fountains that separate the buildings. 1960 will be another big year for building—probably slightly bigger than the all-time record of 1959. This was forecast last fall by FORUM (Oct. '59), and last month it was underscored by the annual predictions of the Department of Commerce.

Commerce predicts a construction total of \$55.3 billion, a 2 per cent increase over 1959, which was in turn a whopping 10 per cent higher than 1958. (Allowing for price increases, the physical volume of building in 1960 will probably be about the same as in 1959.) FORUM had forecast a 1960 total for new construction of \$55.7 billion, a rise of 1.5 per cent from 1959. The difference in the over-all building totals reflects the difference in the timing of the two forecasts: FORUM's forecast, made just as the steel strike was getting under way, was based on an estimate of \$54.9 billion of new construction in 1959, whereas Commerce's forecast, made at year-end with solid knowledge of just how much the strike had cut into construction, based its forecast on a 1959 total of only \$54 billion. FORUM's forecast for 1960 was therefore based on higher 1959 totals than Commerce's, although both predictions agree closely on the amount of over-all dollar increases.

The biggest difference of viewpoint between FORUM and Commerce lies in estimates for residential construction in 1960. Although both forecasts see a drop in new dwelling unit construction (largest single category of building) in 1960, FORUM is somewhat less pessimistic than Commerce, which predicts a hefty \$1 billion drop in homebuilding. FORUM forecast a drop of half that magnitude. In any case, homebuilding is certain to decline in 1960 from its record level of \$17 billion last year, a 25 per cent increase over 1958. Homebuilders themselves have recently been predicting declines of from 10 per cent to 12 per cent in new housing starts. The reason for the anticipated decline is, of course, the tight mortgage money market. Some easing of this situation is foreseen for later in 1960. And there is a distinct possibility that Congress may give homebuilding the same sort of shot in the arm as it did last year, when it voted an emergency \$1 billion for the Federal National Mortgage Assn. to buy home mortgages, and

thereby expand the volume of lendable home mortgage funds.

Commerce supports FORUM's prediction that apartment construction will continue to boom in 1960 as it did last year, and will thereby account for a larger proportion of total new dwelling units than has been the case in recent years.

Commerce is more bullish on the outlook for non-residential construction than FORUM is; the biggest single difference lies in the Commerce prediction for office building—up \$300 million in 1960, compared to FORUM's estimated rise of only \$50 million. A major reason for this difference stems from Commerce's feeling that many projects that got under way last year will, for lack of steel and other reasons, contribute heavily to the statistics for 1960.

At first glance, Commerce would appear to be more bullish on industrial construction, also, but the biggest differences between the two forecasts are not in the 1960 figures but rather in those for 1959. The steel strike evidently accounted for a bite of about \$70 million out of 1959 industrial construction, for this is the difference between Commerce's post-strike forecast (of \$1,950 million for '59) and FORUM's pre-strike prediction (\$2,020 million). As for 1960, the two predictions are within \$50 million of each other (\$2,450 million for Commerce, \$2,400 million for FORUM) and in any case it will make the biggest year for industrial construction since the all-time peak in 1957.

On most other non-residential building categories, FORUM and Commerce are pretty much in agreement. One notable difference, however, shows up in estimates of social and recreational construction, which has been one of the fastest growing segments of building for several years. Whereas FORUM predicted a rise of only \$25 million in social-recreational construction, Commerce anticipates a 30 per cent increase, raising the 1960 total to \$700 million.

Both forecasts are almost identical in predictions of public building totals for 1960, but there are two significant differences: 1) Whereas FORUM predicted highway construction would be the same as in 1959, Commerce foresees a \$100 million drop, which is, coincidentally, exactly the difference in *continued on page* 6 the two estimates of 1959 highway building; and 2) FORUM forecast a \$100 million rise in military building, but Commerce predicts a \$115 million drop.

On the whole, the two forecasts support Commerce's observation that "New construction in 1960 should act as a stabilizing force, but not contribute to the over-all economic expansion as it did in 1959."

Segregation in Dallas a problem for AIA in '62

At last fall's board meeting, the directors of the American Institute of Architects enunciated a new policy: "That facilities be selected for national conventions which do not restrict any members of the AIA in the exercise of their membership rights as defined in the by-laws and related documents."

The reason for this new policy was, of course, the controversy over last summer's convention in New Orleans.



ROCKEFELLER CENTER-TEXAS STYLE

A \$100 million civic center for Houston was announced last month by officials of the Quintana Petroleum Corp. as a memorial for the late Hugh Cullen, Houston oil tycoon, and his wife. Cullen Center will cover 12 downtown acres. The composite photo above shows the proposed three office buildings, hotel, and parking facilities imposed on the city skyline. Architect Welton Becket who designed the center also plans to open his fourth branch office in the first building slated for completion -sometime in 1962. Financing has not yet been arranged, but the corporation says it will build the center with its own funds if it cannot, for any unexpected reason, get mortgage financing. Plans call for the entire center to be finished by 1966.

Several chapters, including the New York City chapter, were prepared to call for a resolution demanding such a statement, because of the fact that segregation in New Orleans prevented Negro members of AIA from participating fully in convention functions. (Although AIA has few Negro members none of whom went to New Orleans, several said they would have gone to the convention if it had been in a nonsegregated location.) An open floor discussion of the problem was avoided by shrewd maneuvering in New Orleans, but the directors promised to draft a policy statement at a subsequent meeting.

The big question now is not this year's convention in San Francisco, or the 1961 meeting at Denver, but rather the following year's scheduled meeting in Dallas. AIA Executive Director Edmund Purves told FORUM last month that "We don't anticipate any difficulty whatever" in Dallas, and added that "We have been pretty well assured by Texas members that it would be all right." Dallas AIA Chapter President George L. Dahl says he has been "assured by municipal officials and hotel people that there will be no segregation problems for Negroes attending the AIA convention."

But the fact is that none of the major Dallas hotels will serve Negroes today in public dining rooms or provide Negroes with room accommodations. A manager of one of the city's largest hotels says flatly "It just isn't done yet -I know of no exceptions among Dallas hotels." Negroes can attend sessions in private meeting rooms, and be served in private dining rooms in Dallas, but that is the limit of nonsegregation. In fact, there are three damage suits pending against the Statler-Hilton because that hotel refused to honor reservations made by Negroes coming to Dallas from out-of-town. But that hotel still holds firmly to a segregation policy. As a spokesman said last month, "We hope this situation will eventually work itself out, but right now we still have to go along with the general policy maintained by hotels in this area."

AIA's directors meet again late this month, and presumably the Dallas situation will be a topic of discussion. If no action is taken, it is likely that the same chapters that attempted to switch the site of last year's convention from New Orleans will work to get away from Dallas. And, as one AIA member said last month, "We will not be put off this time by the excuse that there is not time enough to make the switch."

Big business gets into Columbus renewal

Two powerful business organizations recently merged interests to form a new urban renewal company which could become a major force on the U.S. redevelopment scene. The two companies, Nationwide Development Co. and John W. Galbreath & Co., announced the formation of the United Redevelopment Corp. and indicated that the new company's first venture would be to try to get the job of redeveloping the Goodale District of Columbus, Ohio, a 55-acre multi-use site about one mile northwest of the city's central business district.

Columbus redevelopment is a natural for the new corporation, because both Galbreath and Nationwide have home offices there. Nationwide is a subsidiary of huge Nationwide Insurance and Galbreath is one of the biggest land developers in the U.S. Galbreath made his first move toward urban renewal last summer, when his company set up a special renewal division, headed by A. Charles Brooks, who has worked closely with Columbus's Slum Clearance and Rehabilitation Commission when he was a member of the Development Committee for Greater Columbus, a private advisory group. Galbreath enlisted the aid of long-time friend, Murray D. Lincoln, president of Nationwide Insurance, and the joint venture was launched. In 1953, Galbreath sold Lincoln 1,170 acres of land near Columbus on which Nationwide built its Lincoln Village community, for which Galbreath was sales agent.

The area that will be United Redevelopment's first target is an aging section of Columbus commonly called Flytown, not because of its insect muster, but rather because of the transient nature of its inhabitants over the years. Despite the seedy nature of the area, it is strategically located, accessible to Ohio State University, the Battelle Memorial Institute, and downtown Columbus. The tentative plan of the Slum Clearance and Rehabilitation Commissions calls for two to four family houses on about one-third of the residential area, the rest to be three-story and high-rise apartments making a total of about 1,000 units. SCAR wants to sell the residential and commercial areas (about 35 of the total 55 acres) as one package to a single redeveloper, and it is expected that the new Galbreath-Nationwide combine will have a fast and clear inside track. Not only does the new combine have solid financial backing (the project will probably cost around \$20 million) but, being familiar with the city's problems, it knows pretty well what SCAR demands. SCAR hopes to take bids by next spring on Goodale, and will reserve the right to pick any redeveloper, regardless of who might offer the low bid.

United Redevelopment is concentrating on redevelopment in its own yard at least for now. The expectation is that it will also develop plans for the city's biggest renewal area, the 110-acre Market-Mohawk project, but that so far is still in preliminary stages. However, the new company says it will not restrict itself to Columbus alone, although it has no definite plans for bidding on areas in other cities yet.

AIA Pres. Richards hits New York school plans

Last month, AIA President John Noble Richards vigorously attacked a proposal approved by New York Gov. Nelson Rockefeller to offer stock school plans to small communities in the State. Richards characterized the proposal as "socialized school building," and "planned waste," and noted that of 26 states that have previously attempted to use stock plans for schools, only six still use the technique, and five of those provide plans only for four-room schoolhouses.

Rockefeller, with the caution of an unannounced presidential candidate, refused to back the stock plan scheme wholeheartedly, but did give it his "qualified support." At the last session of the New York State legislature, a bill was introduced that would have made it mandatory that stock plans be used by cities of less than 125,000 persons. This measure died in a committee of the State Senate, but its sponsors say that they will submit it again this year. Rockfeller's scheme would be voluntary; the cities would be able to choose, if they elected to use the stock plan system, from about half a dozen different plans.

Richards, in his address before the New York Society of Architects, pointed out that stock plans, although conceived to save money by eliminating the architect's fee, actually are more



ZECKENDORF'S WASHINGTON PROPOSAL GETS A GREEN LIGHT

Entrepreneur William Zeckendorf's long delayed plans for Southwest Washington, D. C. moved an important step nearer reality last month. The District Redevelopment Land Agency finally approved construction of a 1,000room hotel and cluster of five office buildings (shown in model above). Designed by Architect I. M. Pei, the buildings will flank the new L'Enfant Plaza. Land Agency Director John Searles hopes that construction will begin by January 1, 1961. While the financial backing is still unsettled, Zeckendorf and the agency expect to reach an agreement in the next few months. costly. They are not easily adaptable to special problems of site and varying community needs. And schools, Richards asserted, "should reflect the character and uniqueness of each community." Perhaps the most damaging argument against the stock-plan scheme, is that they are not geared to incorporate "new advances in design and materials." Richards also pointed out that, in a recent investigation of the Bureau of Design and Construction of the New York City Board of Education, it was found that the cost of preparing plans by municipal architects ran from 18 to 20 per cent of the total construction cost, while private architects charge fees, for the same projects, of from 6 to 9 per cent. Concluded Richards: "The city saves 10 per cent when it commissions a trained private architect.'

Chicago suburb fights integrated housing

Integrated housing, heretofore largely an urban phenomenon, was creating headlines in suburbia last month, specifically in Deerfield, Ill., on Chicago's North Shore. And integration in housing was taking a giant stride toward reality throughout the biggest homebuilding state in the U.S.—California.

In California, the State Attorney General, Stanley Mosk, last month ruled that the recently passed state law prohibiting discrimination "in all business establishments of any kind whatsoever" applies to real estate offices. This, in effect, makes it unlawful for any real estate agent to discriminate in the sale or rental of any dwelling unit. Although Mosk's opinion is not the final legal word, it will stand until a court decision can reverse it.

In Deerfield, the question of integration is at a more workaday level than in California. Builder Morris Milgram, 43-year-old head of Modern Community Developers, Inc. (FORUM, Oct. '58), which has built two integrated housing developments near Philadelphia, Pa. (where Milgram himself lives), and two near Princeton, N. J., has bought a 51-lot site in Deerfield. There he proposes to sell 12 of his \$30,000 to \$35,000 homes to Negroes. Most of Deerfield's suburban, executive-class families are fighting Milgram, often hysterically, but so far ineffectively. An unofficial poll taken recently by the group opposing the project reportedly shows 3,500 residents against the integrated decontinued on page 9



EVER LOOK AT RELIGHTING THIS WAY?

The unusual perspective shown above illustrates this point: To get the most from each square foot of *floor* space, make the most of *ceiling* space. And the hardest working ceilings are planned around Day-Brite "Full Comfort" lighting.

This is particularly true in the modernization of offices, plants and stores. Nearly always, the easiest

and most effective way to increase productivity is by relighting with Day-



Day-Brite line, you'll find fixtures that solve problems caused by structural or budget limitations — fixtures delivering highest illumination efficiency without sacrificing appearance. To make sure *your* clients get the most from their ceilings, consult your Day-Brite representative. He's listed in the Yellow Pages. Day-Brite Lighting,

Brite equipment. In the complete

Day-Brite Lighting, Inc., St. Louis 15, Missouri and Santa Clara, California.

When you get down to "ceiling plans" call Day-Brite



DAY-BRITE'S NEW FAIRVIEW

For offices, stores and schools. 8 feet of Day-Brite quality and performance at half the price you'd expect to pay! Features the first full 8-foot prismatic enclosure. Lowbrightness CLEARTEX® panel of X-5 plastic (guaranteed not to discolor for 5 years). Translucent sides for soft ceiling lighting. Designed for easy installation, speedy servicing. velopment, only 460 for it, and professional rabble-rousers have converged on Deerfield in recent weeks to keep the pot bubbling.

Milgram, for his part, is still calm, even in the face of threats by Deerfield's Park Board to condemn his project site, if he does not sell it to them. Milgram hopes to keep the balance of Negroes to whites at about 1-to-3, as he has attempted to maintain quotas for minorities in all his other projects. (Milgram usually stabilizes the quota in the first few years of the project by requiring Negro sellers to sell only to Negroes, and whites to whites, or by simply buying up the houses himself should residents wish to sell.) Most of the arguments against Milgram's scheme are based on prejudice, or, in some cases, fear that property values will be hurt by the project. (Values have not fallen in any of Milgram's other projects.) The next hurdle for the builder will be to prevent the Park Board, or some other town body, from taking over the site by condemnation. Milgram says he will fight such a move by legal action, and adds, "I trust the people of Deerfield will abandon hysteria and realize that the sale of a few homes to Negroes of comparable economic and cultural backgrounds will not change property values." As for the poll, showing Deerfield against his project by almost nine to one, Milgram says "Human rights exist regardless of any poll."

sign traditions followed by many of the Soviet communities and republics.

Soviet architects have been grumbling that builders have not done justice to their advances in design, and more recently, there has been some criticism that the architects themselves have not been providing the proper leadership for the Soviet building boom, and this is reportedly the reason for Vlasov's article. How much effect Vlasov's article will have remains to be seen, but at least architecture no longer seems to be the stepchild it was for nearly 40 years under the Bolsheviks and Stalin.

NAREB ponders money, economics of renewal

Recently, about 5,000 realtors trekked to Toronto, Ontario for the annual convention of the National Association of Real Estate Boards. Although there were several speeches and sessions extolling the wonders of the host nation, and Toronto, the realtors were understandably more preoccupied with their own problems south of the border, particularly the question of high interest rates. On this issue, the visitors from the U.S. seemed unwilling to see their own plight (rates on conventional mortgages run about 6 to 61/2 per cent in the U.S.) in the context of Canadian mortgage rates-7 to 71/2 per cent. Besides voicing wide-spread complaints

about the stifling effects of high interest rates on building-and on real estate speculation-NAREB officially called for the establishment of a new National Monetary Commission to investigate the structure of monetary and credit mechanisms in the U.S. Such a move is a direct outgrowth not only of the association's growing concern over rising rates, but also of their fears that rates might be going still higher next year. These fears were reinforced by the annual survey of the Society of Industrial Realtors, which queried 300 financing agencies, found that 72 per cent believed rates would rise further next year, while only 2 per cent foresee any drop. However, 20 per cent of the correspondents foresee a greater supply of mortgage funds next year, relative to this year, while 34 per cent forecast less money available, and 46 per cent believe available funds will about match 1959 levels.

The realtors did considerable thinking and talking about the 1960s. Outgoing president James Udall predicted that for every two homes built in the fifties, there would be three built in the sixties, and the same would be true of shopping centers. And he said that "in the older areas of your city, a 1970 observer will see still more changes in new construction, in alteration of buildings, in removal of old structures that will make some of these areas unrecognizable in comparison with the appearance they present today."

continued on page 10

Soviet architects have their troubles, too

One of the first Soviet activities to be "liberated" following Stalin's death over six years ago was architecture, but recently, Soviet architects have complained that they are not getting needed support from either the government or the Communist party. Architect Aleksandr V. Vlasov, writing in the influential government paper Izvestia, recently charged that, although architects are laboring to achieve "reasonable simplicity and function" in design as a reaction to the more traditional rococo Russian style, builders and city planners are lagging behind. Also, Vlasov charged, there is no effort being made to educate the people to know and appreciate good "style" in furniture and clothing, as well as architecture, sculpture, and painting. Vlasov also said that architects cannot do an adequate job in the face of the conservative de-



TURNER-GALBREATH PROPOSE \$200 MILLION NEWARK REDEVELOPMENT PLAN

The redevelopment of a vast area adjacent to downtown Newark was proposed last month by Turner Construction Co. and John W. Galbreath & Co. The plan, which must be approved by the city, proposes four new office buildings (with a total 1-million ft. of space), and a residential development of 10,000 units in high- and low-rise structures. Architects for the venture are John R. Diehl & Francis R. Stein, of Princeton, N.J.

By way of instructing members on how they might utilize monies that NAREB hopes can be saved from recommended reductions in government spending (and presumably in taxation), the American Institute of Real Estate Appraisers, an affiliate of NAREB, published a series of case studies in real estate investment, showing how wealthy investors can enrich themselves while seemingly racking up staggering losses. For instance, one wealthy investor sunk over \$8 million into the purchase of an office building (\$1.7 million of this was his equity, the rest mortgage loans) which would produce no cash flow whatever for 19 years. In the first six years the total of interest on his mortgage plus depreciation charges exceed the net rent receipts from the property, and thus the investor has no taxable income whatever. After this time, however, the portion of amortization that is taxable rises more steeply, and so it is at this six-year point that the investor should sell. The payoff, according to the AIREA survey: Normal income, subject to high income tax rates, is deferred for six years while additional equity value is gained. This value



LINCOLN CENTER'S PHILHARMONIC

Although construction has been underway for eight months, the final design of the Philharmonic Hall in Manhattan's Lincoln Center for the Performing Arts was just announced last month. Designed by Architect Max Abramovitz, the hall's exterior has been simplified in each of several changes of detail since it was first announced (FORUM, Nov. '59). The schematic rendering of the Philharmonic (lower picture) shows the vast interior. Seating 2,400, the hall is rectangularly shaped, designed like a series of "shallow terraces not more than four or five rows in depth surrounding the main orchestra level and flowing into the platform itself . . ." An interior promenade overlooks the 50-foot high foyer.

is taxable at lower capital gains rates when the property is sold. Also, the net loss on income can be used as an offset against other income.

Such tax-loss mumbo-jumbo invariably generates more interest at NAREB meetings than does the question of routing urban blight, but the conventioners were drawn to attention by the remarks of James W. Rouse, mortgage banker and ACTION head, who is an old hand at preaching urban renewal in terms his listeners understand. Rouse warned the realtors that for cities to fail to get on with renewal "may be the most impractical action of all." He cited the "enormous economies" in coordinating public and private programs related to a comprehensive plan of neighborhood growth. In particular, Rouse mentioned "the huge savings to local government in the acquisition of land for schools, public buildings, and highways if the needs are projected and the sites acquired in advance of development and ahead of need."

New Jersey protests plans for giant jet-age airport

A huge, jet-age airport 25 miles west of Manhattan in an area known as the Great Swamp of New Jersey's Morris County was proposed last month by the Port of New York Authority. The airport's 10,000 acres would make it twice as big as Idlewild, now the biggest in the U.S. (The Dulles International Airport, now getting underway at Chantilly, Virginia, will also cover about 10,000 acres.) Runways would be 12,000 feet long, about double the length of most conventional big-city airport runways today, and buffer zones would be included, in the form of empty land parcels blocking the airport off from surrounding residential areas.

The Port Authority presented impressive arguments for the new airport, all pitched to the growing inadequacies of the area's three present air terminals, which the Port says will not be able to meet traffic needs by 1965. However, Jersey residents and legislators rose in quick protest to the Port's ambitious scheme. At a preliminary meeting, representatives from Morris County denounced the project, and many powerful Jersey figures boycotted the meeting completely because the highly profitable Port Authority last year ducked responsibility for aid to Jersey commuters. Governor Robert B. Meyner has said that a key factor in his approval or disapproval of the proposed airport will be the noise factor, but Meyner is hardly in favor of the plan, at least so far. Meyner said he would have to have "more than the assurance of the Port Authority" that jet engine noise would not be a nuisance to the well-heeled suburban communities surrounding the airport site. The Port Authority must have the approval of the State legislature to extend its present boundaries in New Jersey before the airport could be built, as Morris County is outside PA's present jurisdiction.

Should the New Jersey governmental units involved all approve the airport, it would be finished, according to the Port Authority, by 1968. Total cost, will be about \$220 million.

Briefs

Metropolitan government is a dying notion, according to Prof. Robert C. Wood, M.I.T. political scientist. Pointing to rejections of metropolitan government proposals by voters in St. Louis and Cleveland at last November's elections, Wood predicted that, "The can of worms of all local governments jumbled together is going to remain on the American scene . . . you can be sure there will be no systematic redrawing of the boundaries of local governments, except in isolated instances." Wood's pessimism may be reinforced when results are known of a Ford Foundationfinanced survey into voters' reasons for killing St. Louis metro proposals.

Workers in the building trades racked up one of their best post war years in terms of wage gains, in the year ended last July, according to the Bureau of Labor Statistics. With plumbers and iron workers leading the way (each group won a 20 cent per hour raise), building trades workers averaged hourly increases of 16 cents in the 12 months, pushing the average to \$3.51 per hour. Top paid workers: bricklayers at \$4.04 per hour.

Shopping centers out of railroad stations is the aim of a New York real estate firm, which has bought both the Rochester and Buffalo passenger terminals of the New York Central. The purchasers are Atkinson & Troutman, who have developed shopping centers in Indianapolis and commercial developments elsewhere in the U.S. The railroad will replace the stations with newer and, presumably, smaller facilities. END

Essential Books in the Architectural field ANY ONE* FREE WITH MEMBERSHIP IN THE SEVEN ARTS BOOK SOCIETY

IVING CIT

TACK, HMP AND ARCHITECTURE

ARCHITECTURE U.S.A. By Ian McCallum. "A remarkable book." – London Times. 240 pp., 8½ x 11, 500 photos, plans, drawings. Retail \$13,50. Member's price \$9.95.

THE NATURAL HOUSE and THE LIVING CITY. Both by Frank Lloyd Wright – purposeful small house living and correctives for over-centralization. Illustrated. Combined retail price \$15.00. Member's price (for both books) \$11.00.

PABLO PICASSO. By Wilhelm Boeck and Jaime Sabartès. 606 illus. (44 in color). Retail \$17,50. Member's price \$13,50.

SPACE, TIME AND ARCHITECTURE. Sigfried Giedion's contemporary classic. 780 pp., 450 illus. Retail \$12.50. Member's price \$9.50.

THE GREAT AMERICAN ARTISTS SERIES. Six handsomely boxed vols., 480 illus. (96 in color): Winslow Homet and Albert Ryder by Lloyd Goodrich; Thomas Eakins by Farfield Porter; Willem de Kooning by Thomas B, Hess; Stuart Davis by E. C. Goossen; Jackson Pollock by Frank O'Hara. Retail \$23.70. Member's Price \$13.95.

THE MOVIES and MASTERS OF PHOTOGRAPHY. Two lavish vols. tracing the history of new art forms. Combined retail price \$27.50. Member's price (for both books) \$20.00.

ARCHITECTURE AS SPACE. By Bruno Zevi. A high point in art analysis and A HISTORY OF MODERN ARCHITECTURE. By Jürgen Joedicke. A comprehensive survey. Combined retail price \$17.50. Member's price (for both books) \$13.45.

MASTERS OF MODERN ARCHITECTURE. By John Peter. Over 60 foremost architects in vivid repros. 230 pp., 232 photos, 9½ x 1234. Retail \$15.00 Member's price \$10.95.

THE NOTEBOOKS OF LEONARDO DA VINCI. Ed by Edward MacCurdy. Two vols., boxed. Retail \$10.00. Member's price \$7.50.

PIET MONDRIAN. Michel Seuphor's exhaustive study. 444 pp., 600 illus., 34 in color, 81/2 x 12. Retail \$17.50. Member's price \$13.50.

*You may choose two books marked "count as one" as your *free* gift or as your first selection.





...an invitation to those who want the finest in architecture and the arts

ARCHITECTURE is one of the major areas represented among Seven Arts Book Society selections — books, like those pictured here, that maintain a constant high level of scholarship, production, illustration, and significance. Members receive monthly notice and

authoritative review of such books, and order only the ones they want — at appreciable savings.

> We invite you to join the Seven Arts Book Society now, and to take advantage of the services and savings its members enjoy regularly. Begin your membership with one of the outstanding books shown here, and choose

any other to be sent to you *free*, as an introductory gift.

Your savings on this introductory offer alone can amount to as much as \$37.25.

ÿ



THE MOVIES



AS

		RCHITE
THEORS		A History of
rd MacCardy	masters of modern architecture	CHE
B)	L

THE SEVEN ARTS BOOK SOCIETY 215 Park Avenue South, New York 3, N. Y.

You may enter my name as a member and send me the free gift and first selection (at the special members' price plus postage and handling) indicated. I agree to take as few as five additional selectionsor alternates-in the next 12 months. I am to receive each month without charge the attractive Seven Arts News containing an extensive review of the forthcoming selection and descriptions of all other books available to me at member's prices. If I do not want the selection announced I can return your simple form saying "send me nothing," or use it to order another book from the more than 100 authoritative volumes offered in the course of a year. I may cancel my membership at any time after purchasing the five additional selections or alternates.

FREE GIFT			
FIRST	SELECTION		
MR.			
MRS.	- Land - Land		
MISS	please print		
ADDRESS			
Сіту	ZONE STATE		
	\$60-16		



Now watch carefully: you're looking at the most functional carpet you've ever seen. Carpet with its own inseparable sponge rubber base. Loma Loom is not rubber-backed carpet. It is not merely carpet attached to rubber. Loma Loom is all-in-one carpet with two working sides. Here's what this means to you: you use no underlay. Loma Loom is ready for installation on any surface, easily, economically. Sections can be cut out and replaced with virtually no seams showing. Unlimited design possibilities. Loma Loom comes in a full decorator color range and a variety of superior qualities—from ultra-luxury to ultra-economy.

Distributed by: Berven Carpets Corporation, Los Angeles and San Francisco, Calif.; Vol T. Blacknall Co., Atlanta, Ga.; Florwall Inc., Pittsburgh, Pa.; James Carpet and Furniture Distributors, Inc., Syracuse, New York; Theodore Johnson Carpet Co., Minneapolis, Minn.; Kelly Inc., Seattle, Wash.; The New England Floor Covering Co., Hartford, Conn. and Boston Mass.; A. D. Radinsky & Sons, Denver, Colo.; Elias Wilf Corp., Balt., Md., Phila., Pa.

Loma Loom, the carpet that grows out of sponge rubber, from Sidney Blumenthal, One Park Avenue, New York 16, N. Y. A Division of Burlington Industries



People

Slusser resigns as Public Housing Commissioner; Lawyer Weissbourd takes over Greenwald's operations



SLUSSER



WEISSBOURD

No federal program has suffered worse under the two terms of the Eisenhower Administration than the public housing program. It has been consistently stifled by the White House, and, recently, has been victim to personal feuds within the units of the Housing & Home Finance Agency itself. In terms of accomplishment, the record has been bleak. Not all of the Public Housing Administration's troubles can be laid at the feet of 62year-old Commissioner Charles E. Slusser, who has headed the program for six and a half years. Slusser started his tenure (after an unprecedented five terms as mayor of Akron, Ohio, 1944-1953) as an enthusiastic supporter of the housing philosophies of the late Senator Robert A. Taft, who had advocated a six-year, 810,000 unit program. Yet Slusser has never been permitted to ask for more than 35,000 units a year, and has, in fact, had to fight to keep that volume. Meanwhile, administrative difficulties both in Washington and in the cities themselves have led to a pile-up of over 99,000 units of public housing under contract, but not under construction yet.

Last month, Slusser, who has had the support of neither the professional "publie housers" nor his own Administration, wearily resigned. No successor has been named to inherit the stagnant muddle that has become the federal public housing program.

NEW DIRECTOR FOR GREENWALD'S EMPIRE

When builder Herbert S. Greenwald was killed on a Chicago-New York flight last February, he left behind a multi-million dollar complex of luxury apartments and urban renewal projects, either finished or in various stages of completion-and no apparent successor. Greenwald had shown little talent for setting up any chain of command, had himself tirelessly pored through every detail of his many projects (FORUM, May '58).

The job of pulling together the 50 odd separate corporate entities Greenwald had established, and of keeping the whole operation functioning, fell to the man who will manage the organization that has been

formed out of the Greenwald empire-Greenwald's lawyer (since 1950) and associate, 37-year-old Bernard "Barney" Weissbourd.

Weissbourd is an energetic native Chicagoan, who lives in nearby Evanston, Ill. with his wife and four children. (Greenwald, unlike Weissbourd, was a confirmed city-dweller who lived in a plush apartment in one of his Mies van der Rohedesigned glass-walled towers on Chicago's Lake Shore). Weissbourd, however, has other similarities to his former client besides being a Chicago native. Like Greenwald, he comes from modest circumstances -after his father died, Weissbourd's mother made neckties to help support herself and her 11-year old son. Like Greenwald, he was a brilliant scholar-he graduated from high school at 15, finished studies for a B.S. in chemistry at the University of Chicago (Greenwald's alma mater) in three years, entered law school at the urging of Chicago's President Robert M. Hutchins. The war interrupted his law studies, but, in 1943, Weissbourd was called back to Chicago to work on the famed Manhattan Project, which developed this nation's first atomic bomb.

Weissbourd returned to law school, and in 1950 became a partner of Joseph P. Antonow, who was Greenwald's lawyer. Weissbourd took over management of Greenwald's legal affairs, and, as the two men became friendly, Greenwald leaned on Weissbourd for help in the management of his business affairs as well.

At first it was not certain that Weissbourd would head the new corporationnow called Metropolitan Structures, Inc .--or whether one of Greenwald's powerful backers, such as Empire State Building owner Henry Crown, might take over. (Crown will still be an important backer of Metropolitan Structures.) But last month, Weissbourd became president of Metropolitan Structures and immediately announced the start of a project that had never gotten much beyond the idea stage when Greenwald was busily building in half a dozen cities.

The new project is a large motel-hotel in downtown Chicago. The hotel portion, which will be joined to the motel, will be 11 stories high, have 250 rooms. The total cost of the project-\$4 million. The building will be glass and aluminum faced, on a concrete frame.

continued on page 14

People contd.

Perhaps the most interesting fact about the motel-hotel is that it is not an urban renewal project and will not be designed by Ludwig Mies van der Rohe, Greenwald's famous co-worker on most of his projects. (The architects for the motelhotel will be A. Epstein & Sons.) Weissbourd said last month: "I think Mies is a great architect. . . . I intend to work with Mies as Greenwald did, but also I will be employing other architects for specific jobs."

Weissbourd also says that, where "Greenwald was interested in the designs of Mies, I am more interested in the technology of Mies. . . . I have the same basic interest in research and technology that I did when I was a scientist." Like Greenwald, he feels that U.S. building technology is somewhat laggard, and he hopes to pep it up by encouraging new techniques and materials in his own projects. For this purpose he plans to set up a research section in his own company.

Operating from Greenwald's old penthouse office at 135 S. La Salle St., Weissbourd says he will continue to press the work Greenwald started in urban renewal. He hopes to build more units in Detroit, Brooklyn, and Newark, where Greenwald started renewal projects, and he is considering projects in several smaller cities.

BRITAIN'S ENERGETIC INVESTOR

The recent announcement that a British development firm, City Centre Properties, Ltd., had made a \$25 million investment in the proposed \$100 million Grand Central office building in New York, generated interest on both sides of the Atlantic, but was no surprise to the many Britishers who have had dealings with City Centre's energetic chairman, Jack "King" Cotton. The 57-year-old Cotton has a reputation for executing massive projects with dispatch and efficiency. Several months ago, one of Cotton's representatives approached builder Erwin Wolfson about City Centre investing in Grand Central City, and the deal was clinched shortly thereafter. Besides the New York venture, in which his firm is a half-partner, he is working on a \$20 million redevelopment project in London's Piccadilly Circus, an \$18 million commercial-residential project at Notting Hill Gate (near Hyde Park), office buildings in Birmingham, South Africa, and the West Indies as well as a large development in South Wales.

Cotton rose to success from the obscurity of a Birmingham real estate office, where he took a job after attending King Edward's School and Cheltenham. On his 21st birthday Cotton quit his job, set up continued on page 16



Make SAFE

SAFER with

Buildings

for Commercial Buildings Retail Stores Institutions Factories... and other places of public assembly

No building is completely safe without protection from the hazards of sudden blackouts. Leading industries have adopted BIG BEAM for their emergency lighting needs. When regular lights fail, BIG BEAM goes on instantly and automatically. Provides hours of bright, safe illumination, until power from circuit is restored. BEAM-O-MATIC recharges itself automatically.

BEAM-O-MATIC shown above is one of a variety of BIG BEAM models available. Whichever BIG BEAM you select, you are providing the utmost in dependability.

For complete information, write today to

U-C-LITE Mfg. Co. 1042 W. Hubbard St. Canada: Bernard Marks & Co., Ltd., 70 Claremont Street, Toronto 3, Ontario

HONEYCOMB in SANITARY

PARTITIONS

UNION

Versatile UNION HONEYCOMB core material can be bonded to any facing material. Exceptional flatness speeds finishing and handling. Lightweight reduces shipping and labor costs. Kraft paper HONEYCOMB has one of the highest strength-weight ratios of any building material known. And it's one of the least expensive. Sanitary partitions with HONEY-COMB cores go up fast ... resist impact ... require minimum maintenance.

Write today for free booklet.





People contd.

BRADLEY PRODUCTS provide washroom economies

GROUP WASHFOUNTAINS * MULTI-PERSON SHOWERS



BRADLEY WASHFOUNTAINS serve groups 8 to 10 at the 54-in. full circular model yet each requires but one set of piping connections. Foot-control elimi-



have foot-control and self-flushing bowl also. No contagious faucet contacts. Does the job of two lavatories at lower cost. Stainless steel and vitreous enamel (white and five colors).



nates faucets, (no contagious contacts)self-flushing bowl prevents collection of used water for maximum in sanitation. The semicircular (wall type) serves 5 to 6.



COUNTERTYPE WASHFOUNTAIN has same sanitary features and foot-control, and can be supplied with glass filler faucet and/or bubbler. Bowls are made of stain-

less steel or vitreous enamel.



BRADLEY MULTI-PERSON SHOWERS are furnished partially assembled for quick installation. They may be supplied with stallseparating partitions and curtains (see upper left), or the Shower Column alone for

greatest economy. You get five showers at one installation cost and only three piping connections for all five showers. Each bather has complete control of water volume and temperature. Three heights available, 6', 5'6", and, for smaller folks, -5'.

BRADLEY WASHFOUNTAIN CO., 2235 W. Michigan St., Milwaukee 1, Wis.



a one-man office which was soon giving his former employer a run for his money. He also launched, after his career was successfully established in the mid-1930s, an architectural firm called Cotton, Ballard, and Blow. Cotton himself is not a trained architect, but he has strong convictions about the value of design and has a



BUILDER WOLFSON (L.) AND INVESTOR COTTON

hand in the designs of all his projects. (Not all staid Britishers share Cotton's taste, however. His firm's design for the major building at Piecadilly Circus, a 13-story office building, has created a major fuss in London, and set off an official investigation. Most of the criticism centers about the fact that Cotton proposes to make the building's facade a massive patchwork of billboards.)

Cotton today has most of the attributes of the modern, self-made millionaire. He is humble and self-effacing despite his dynamism in business dealings. He claims he likes to listen rather than talk, carries a cigarette lighter to light other persons' cigarettes (he smokes an occasional cigar, does not drink). Cotton characteristically expresses ignorance and some abhorrence of the grimy commercial world to which he is forced to devote some measure of his time, and claims to find his real pleasure in his art collection, his golf, and his gardening. Cotton reportedly has said, "I have never understood money. I don't even sign the checks myself-that's the part of it I never understand. Money for its own sake has never meant much to me. All I want to do is to spread happiness wherever I am and however I can." He has also reportedly said, "I'm not a man who gives away money easily. I'm a very difficult man when it comes to parting with it. I think about it a very great deal."

If there seems to be some ambivalence in Cotton's own mind about the value of money, there is none in what he does with it. He lives on a lavish scale, with a suite in the West End's posh Dorchester Hotel, a Georgian mansion at Marlow on the banks of the Thames, and another home in Birmingham. END

DUO-WASHFOUNTAINS

A factory-assembled wall panel in one foot modules . . . one that is self-sealing for life by mere installation. You never caulk it. And there are no visible outside joints or fasteners to mar the surface. This is Monopanl, the most unusual curtain wall. Tongue-and-groove joints with double vinyl gaskets provide the seal. The cross section sketch shown below tells the story.

Spanning ability is exceptional, as you can see from the configuration. Glass fiber insulation will not settle.

Beautiful Monopanl is furnished in a range of gauges. Exterior and interior faces can be specified in aluminum or galvanized steel. Choose from a selection of factoryapplied colors. Integral fenestration is available.

For further information refer to Sweet's 1960 Architectural File. For complete technical details and actual samples of Monopanl, contact your Butler Builder. He's listed in the Yellow Pages under "Buildings" or "Steel Buildings." Or write direct for a descriptive brochure and data sheets.



Manufacturers of Metal Buildings • Equipment for Farming, Oil Transportation, Outdoor Advertising • Contract Manufacturing Sales offices in Los Angeles and Richmond, Calif. • Houston, Tex. • Birmingham, Ala. • Kansas City, Mo. • Minneapolis, Minn. • Chicago, III. • Detroit, Mich. • Cleveland, Ohlo Pittsburgh, Pa. • New York City and Syracuse, N. Y. • Boston, Mass. • Washington, D. C. • Burlington, Ontario, Canada



HERE

SAFFTY





FIRE ALARM SYSTEMS

Where requirements are critical... where moral responsibility dictates a system that exceeds minimum ordnance regulations...look to Standard for the utmost in reliable fire alarm systems.

Standard systems incorporate every proven feature that can contribute to complete dependability of operation, including:

- Constant electrical supervision . . . double supervision in many systems.
- Extra quality components—from rugged resistors and heavy duty relays to positive action stations and soundly engineered signals.
- · UL Listing on all components.

Request new 32-page Fire Alarm System Catalog. Ask for Publication No. 246.

EMERGENCY LIGHTING SYSTEMS

In hospitals, banks, stores, schools, public buildings... wherever the safety of human life or the protection of property is paramount...good sense suggests selection of a STANDARD centralized emergency lighting system, featuring:

- Instantaneous, automatic operation.
- Constant and complete electrical supervision (even a burned out bulb is indicated).
- Automatic recovery.
- UL Listings on all equipment.

Request 20-page Emergency Lighting Catalog. Ask for Publication No. 243.





Pioneer in 1884 — Leader in 1959

THE STANDARD ELECTRIC TIME COMPANY





Travelling Display— Watch for showing in your area. See complete STAND-ARD Systems in operation.

showing so. See STANDsms in Lighting Equip









18

Bust by Malvina Hoffman, from The Corcoran Gallery of Art, Washington, D.C.

Beauty and Structure Become One

Through Facing Tile The plastic power of clay, expressed in the bust of Pavlova and the structural beauty of facing tile, reflects the kinship of sculpture and architecture. To the architect, facing tile offers integrity of design—structure, finish, flexibility, color, permanence—the material means to art.



1520 18th Street, N.W., Washington 6, D.C.

These companies contribute to Facing Tile research and development:

ARKETEX CERAMIC CORPORATION, Brazil, Ind. + CHARLESTON CLAY PRODUCTS CO., Charleston 22, W. Va. + THE CLAYCRAFT CO., Columbus 16, Ohio + HANLEY COMPANY, INC., Pittsburgh, Pa. + METROPOLITAN BRICK, INC., Canton 2, Ohio + MCNEES-KITTANNING CO., Kittanning, Pa. + NATCO CORPORATION, Pittsburgh 22, Pa. + STARK CERAMICS, INC., Canton 1, Ohio + WEST VIRGINIA BRICK CO., Charleston 24, W. Va. Increased production assures prompt delivery.



BEAUTY like this for as little as \$3 a square foot, *in place!* Panelettes are available in a variety of shapes, and in either natural aluminum or 11 standard Alcoa Alumalure* colors. In addition, you achieve individuality through—

Endless variations of grillage patterns

—simply by your own individual arrangement of the two basic components of the Sol-Dec system. The design above and the five suggestions in the box at the right are just six of the infinite range of designs that become possible.



Announcing a **New** dimension in architectural expression—

ALCOA SOL-DEC

low-cost aluminum solar decorative screen system

SUN SCREENS and grillage of Alcoa® Aluminum are not altogether new—many delightful and practical, modern, award-winning buildings owe much of their charm to just such usage of aluminum by inspired architects.

WHAT IS altogether new (and altogether exclusive with Alcoa) is the low-cost, easy-to-assemble Sol-Dec* system that permits real freedom of design in almost limitless variation while involving just two basic, standardized components. Cost? Only \$3 to 55 a square foot—in place!

THE NEW Alcoa Sol-Dec system comprises panelettes in lengths, shapes and colors to your order. These are quickly and easily slipped over the 3-in. aluminum I-beams, spaced on 8-in. centers, positioned to your designed pattern, snapped and crimped into place. The complete system is delivered directly to the job, ready for economical, foolproof assembly.

FOR THE full story of the exciting new vistas opened by Sol-Dec screens, write for Alcoa Aluminum Building Products 300-5, including design details. You'll find new ideas for remodeling old buildings and creating exciting new ones. Aluminum Company of America, 1822-A Alcoa Building, Pittsburgh 19, Pennsylvania.



Your Guide to the Best In Aluminum Value

For exciting drama watch "Alcoa Presents" every Tuesday, ABC-TV, and the Emmy Award winning "Alcoa Theatre" alternate Mondays, NBC-TV

*Trademarks of Aluminum Company of America

Quick, on-the-job assembly in the pattern created by you!

1. Alcoa Aluminum panelettes, delivered in lengths, shapes, widths for your design and in *your* choice of a variety of profiles—

2. are slid onto ends of I-beams and moved to desired position. Then3. panelette is quickly and permanently snapped and crimped into place. That's all!





CHESTER ALL-ALUMINU

ONLY POOL WARRANTED AGAINST RUST, CRACKS, AND LEAKS

 Indoor and Outdoor
 Pools in Olympic and
 A.A.U. Standard Sizes Custom-designed for Clubs, Municipalities, Parks, Hotels, Institu-tions, Schools.

← T-Shape Chester pool at Washington Park, Kenosha, Wisconsin. 47' x 165' with 35' x 42' diving bay. Ground broken, May 6, 1959 — opened for swim-ming in less than 12 weeks. Chester DIAVAC Filter pro-vides 325,000 gal. 6-hour turnover.

Always costs less per year than any other pool because of

the proven inherent imperviousness of aluminum to both interior and exterior corrosion . . . virtually no maintenance, no cracks or leaks. Proven by numerous industrial applications where only alu-

Write for literature and address of pool near you. Also Diavac Filters and Deck Equipment.

with

Ih

CHESTER PRODUCTS, Inc. Dept. A., Belle Ave. & B. & O. R.R. • Hamilton, Ohio

Small wonder that more architects, consulting engineers, and

pool planning committees are now specifying the Chester All-Aluminum Pool after careful comparison of all types.

Experience Proves: **Welded** Construction

SEND FOR FREE DATA SAXE WELDED CONNECTIONS

1701 ST. PAUL STREET . BALTIMORE 2, MARYLAND

Send me a copy of the new 1960 edition of the SAXE MANUAL FOR STRUCTURAL WELDING PRACTICE, as applied to Saxe Welded Connection Units for Welded Assembly.

Name		Title	
Company	100 M. 100		
Street			
City	Zone	State	
			AF-160

MONEY STEEL

SAVES

TIME

SEAT & CLIP

Produces BETTER BUILDINGS



When planning the sewer system for a completelynew, self-contained community like Indiantown Park, Fla., costs have to be kept low. But not at the expense of quality-thanks to Vitrified Clay Pipe. Here's why: Clay Pipe is the one pipe that combines low installation costs with guaranteed performance.

Unlike substitute materials, Clay Pipe handles anything that flows through a sewer without rotting, rusting, corroding, squashing or disintegrating. And new longer lengths with researchdeveloped Factory-Made Joints cut installation for the newly-developed town of Indiantown Park, Fla.

costs . . . stop roots and infiltration.

It is the only pipe with all the features you can trust!



WRITE TODAY for assistance in fitting Clay Pipe into your sewer project ... and be sure of the lowest cost with the best performance.



C-160-1



New City-County Building, Indianapolis, Ind.

Mahon M-Floor Construction throughout this modern building assures adequate in-the-floor raceways to meet any future requirements in electrical distribution or intercom wiring. Architects and Engineers:

Allied Architects & Engineers of Indianapolis, Inc. Associate Architects: Harley, Ellington & Day.

General Contractor: Huber, Hunt & Nichols, Inc.

Sectional View of Typical Mahon Electrified M-Floor Construction

Serving the Construction Industry Through Fabrication of Structural Steel, Steel Plate Components, and Building Products

Safeguards Modern City-County Building Against Electrical Obsolescence!

M-Floor Cel-Beam Sections Provide Adequate Raceways Under Every Square Foot of Floor Surface



of Steel and Aluminum

OTHER MAHON BUILDING PRODUCTS and SERVICES:

- Insulated Metal Curtain Walls
- Underwriters' Rated Metalclad Fire Walls
- Rolling Steel Doors (Standard or Underwriters' Labeled)
- Steel Roof Deck
- Long Span M-Decks (Cellular or Open Beam)
- Permanent Concrete Floor Forms
- Acoustical and Troffer Forms
- Acoustical Metal Walls and Partitions
- Acoustical Metal Ceilings
- Structural Steel—Fabrication and Erection
- Steel Plate Components—Riveted or Welded
 - ☆ For INFORMATION See SWEET'S FILES or Write for Catalogues

THE R. C. MAHON COMPANY • Detroit 34, Michigan Sales-Engineering Offices in Detroit, New York, Chicago, Los Angeles and San Francisco • Sales Representatives in all other Principal Cities



Builder: Sugar Brothers • Designer: Matthew J. Rosenstock and Associates • Consulting Architect: Eugene F. Peddle, A. I. A.



Akron's 7-story Carlton House to be cooled with individual Arkla-Servel units



Harry Sugar (left), one of the builders, and designer Matthew J. Rosenstock

Individual GAS units to cool and heat new \$2 million apartment house

Akron's luxurious Carlton House will mark the largest use of individual gas air conditioning units in a single apartment house.

Summer cooling and winter heating will be provided for the suites by 58 three-and-a-half and five ton Arkla-Servel Sun Valley gas air conditioners.

The Arkla-Servel gas air conditioning units were chosen after serious consideration of all types available. The designer insisted that each apartment have individual thermostat control as well as individual installations to eliminate the need for large compressors and any possible vibration. Because gas is also used for cooking as well as heating and cooling, there was no need for installing heavy cable, either.

The Arkla units will be installed in the utility rooms of each suite. Four small water towers, located on the roof, will provide condensing water for the system. The water will be constantly recirculated, thus keeping its cost at a minimum.

Check the facts and you too will see that modern Gas air conditioning out-performs all others. For specific details call your local Gas Company's air conditioning specialist, or write to the Arkla Air Conditioning Corporation, General Sales Office, 812 Main Street, Little Rock, Ark. American Gas Association

for Cooling, GAS is Good Business



Molded Drawers make built-ins behave...

Molded drawers in built-ins deliver the smooth, trouble-free drawer action of fine furniture.

Molded of Lustrex styrene in one piece, these drawers have no seams or joints. They won't stick, swell, warp, or jam, even under the most humid conditions. Dimensionally stable, they are freely interchangeable. Their smooth hard finish is scratchresistant, non-snagging. Rounded corners reduce cleaning to a simple wipe of a damp cloth. Molded drawers are unusually strong, yet weigh pounds less than conventional ones. Fronts can be wood or plastic surfaced. Partitioning can be customized to fit the specific needs.

Specify molded drawers, specially designed for built-ins in residential, institutional or commercial buildings.

Monsanto supplies LUSTREX, the styrene used by leading manufacturers in producing molded drawers. Monsanto Plastics are also the basic materials for many other products that add new values of comfort, convenience, and beauty to homes, offices, and factories. For your A. I. A. files, there is literature available on Molded Drawers, Laminated Architectural Glass and Melamine Laminated Plastic surfacing materials

LUSTREX: Reg. U. S. Pat. Off.

MONSANTO DESIGNER IN PLASTICS



EMICAL COMPANY	
n	
assachusetts	
JILT-IN IDEAS with Molded Drawers,"	and a list of sources of supply
Title	No. 6 19 19 19
	n assachusetts JILT-IN IDEAS with Molded Drawers,"

Company _____ Street & No

City

Zone

State



A-DECK — For purlin spacings not exceeding 8'4". Narrow ribs provide deck surface that supports the thinnest or softest types of insulation.

B-DECK—For spans to 10'0". Wide rib distributes metal for greater structural efficiency—gives higher section properties per pound of steel — well suited for use as side wall panels.



C-DECK—Carries normal roof loads over spans up to 20'0". Used extensively in canopies.



T-STEEL — New! Galvanized only. For clear spans to 32'0". Adaptable to acoustical and flush, luminous ceiling treatments. Provides superior diaphragm to transmit seismic and wind loads.



H-DECK — New! For simple spans from 10'0" to 20'0"— 3 and $4\frac{1}{2}"$ depths. Especially practical to cover walkways in shopping centers, schools, other installations.



B-ACOUSTIDECK — Two-in-one panel combines steel roof deck with acoustical ceiling having Noise-Reduction Coefficient of .70 — used for spans to 10'0". 24" coverage by 1½" depth.



C-ACOUSTIDECK — Offers same Noise-Reduction Coefficient as B-Acoustideck. Can be used for spans to 20'0". 12" coverage by 41/2" depth.



RIBFORM—High tensile steel form for concrete slabs over spans up to 8'0''. Three types: Standard, Heavy-Duty. Super-Duty (shown). Galvanized.

When it comes to roof

Whether your design calls for a dry insulation board roof or for wet-fill, there's an Inland roof system for the job — by the makers of Milcor steel build-ing products, famous for years for highest quality.

Inland steel deck is lightweight — weighs less than half as much as poured-inplace or pre-cast construction. You can space joists wider than otherwise and use lighter framework, to save both time and money.

Panels are easy to handle and weld in place — in any weather that a man can work. They don't need warmth for setting, nor time for curing. They don't

systems, INLAND covers everything!

absorb water, nor lose their strength when wet - the job stays on schedule.

Types A, B, C, and H decks have the additional advantage of a Bonderized, baked-enamel prime finish that resists on-the-job damage. One field coat of paint on these Inland decks usually does the job of two coats on ordinary decks.

Write for catalogs 240, 241, and 245 — or see Sweet's sections 2c/Inl, 11a/In, and 2a/In for full information on Inland steel roof deck and permanent centering. If you have an unusual problem, you can draw upon their diversified experience by consulting Inland's Engineers.



ENGINEERED PRODUCTS DIVISION

INLAND STEEL PRODUCTS COMPANY Dept. A, 4031 West Burnham Street Milwaukee 1, Wisconsin

DALLAS, DENVER, DETROIT, KANSAS CITY, LOS ANGELES, MILWAUKEE, MINNEAPOLIS, NEW ORLEANS, NEW YORK, ST. LOUIS



Architect + Moynahan + Contractor

A TEAM THAT BRINGS INTO BEING CURTAIN WALLED BUILDINGS OF GLEAMING, DELICATE BEAUTY THAT BELIES THE STRENGTH AND WEATHER TIGHTNESS NEC-ESSARY TO WITHSTAND MOTHER NATURE'S MOODS THROUGH THE YEARS.

BECOME PARTNERS IN PROG RESS WITH MOYNAHAN BRONZE CO. WRITE FOR IN-FORMATION ABOUT ITS PAT-ENTED CURTAIN WALL SYS-TEM AND THE MANY OTHER ARCHITECTURAL SERVICES AVAILABLE. CHECK THE CONSTRUCTION DETAILS IN SWEET'S.



There can be no compromise here!



The prime coat is the basic foundation that determines the long-lasting performance of coatings

There can be no compromise with the prime coat - it is the *basic* foundation, it must take hold and adhere tightly, it must provide a sound, compatible base for the finish coating. It is here that Rust-Oleum's experience as corrosion-resistant specialists can help you. Whether it's a shop coat by the fabricator, or job site application over structural steel, Rust-Oleum has the right primer for the specific job – from quick-drying primers for shop coating, unique primers to apply directly over rust, or bare metal primers. For the fullest measure of protection – specify the Rust-Oleum System of primer and finish coat. Your nearby Rust-Oleum Industrial Distributor and your Rust-Oleum Factory Specialist will be happy to work hand-in-hand with you.



See our complete catalog in Sweets featuring actual color chips.



RUST-OLEUM CORPORATION 2549 Oakton Street Evanston, Illinois

New 30-page Rust-Oleum Architectural Specifications Catalog Features actual color charts. Clip coupon to your letterhead for your free copy of Form No. 259-A.



Distinctive as your own fingerprint. A matter of excellence. STEEL WINDOWS HAVE THE STRENGTH AND RIGIDITY THAT NO OTHER WINDOW CAN MATCH

H()P

Since



CHAUTAUQUA NATIONAL BANK & TRUST CO., Branch Bank Building, Jamestown, N. Y. Architects, Beck & Tinkham General Contractors, Warren Construction Co., Inc.

HOPE'S STEEL WINDOWS AND CUSTOM-BUILT SUBFRAMES

In this branch bank the architects were successful in creating a building of distinction while coping with many complications demanded by the automotive age: outdoors, a teller's wicket accessible from the driver's seat of a customer's car yet protected from the weather, adjacent parking space for other customers; indoors, light and ventilation, quiet atmosphere and pleasant surroundings on a busy commercial site.

For this building Hope's Pressed Steel Subframes

were fabricated to the architects' designs. The windows installed in them were Hope's Heavy Intermediate Casements. Their flexibility and the freedom given by them in layout is of great help in the building's success. The owner's satisfaction with its charm and convenience is enhanced by the assurance that Hope's Window operation is dependable for the life of the building.

1818

Hope's engineering and planning assistance is always available to you without obligation.

Write for Catalog No. 161

HOPE'S WINDOWS, INC., Jamestown, N.Y.

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS


So Versatile, So Dependable ...and So Easy to Work With

McQuay thin-line design individual room Seasonmakers are popular, not only because of their convenient size, their high efficiency and their inherent quality, but because they are so extremely versatile and dependable. Every part is easily and quickly accessible. They are easy to install and easy to work with. For example, filters are easily changeable; the slide-out fan deck is quickly removable; the hand of coil is easily reversible in the field.

All McQuay Seasonmakers utilize central station heating and cooling and are available with capacities of 220, 330, 440, 520 and 640 cfm. They furnish individual room comfort at any desired temperature level—heated, filtered air in winter and cooled, dehumidified and filtered air in summer. Seasonmakers are ideal for multi-room buildings such as hotels, apartments, motels, schools, hospitals, offices and residences. If you haven't already done so, investigate McQuay individual room Seasonmakers. For complete information call the McQuay representative in or near your city, or write McQuay, Inc., 1609 Broadway St. N. E., Minneapolis 13, Minnesota.

thin-line design

SEASONMAKER

Juay





AIR CONDITIONING . HEATING . REFRIGERATION





2,750 squares of Ruberoid Built-Up Roofing blanket another modern plant with protection

275,000 square feet of Ruberoid Specification #203-A - Air-Vent Asphalt Felt and Special Bitumen with a gravel finish – are engineered into a tough, weather-tight roof for this mammoth new Eagle Pencil Company Plant.

The rigidly controlled quality of Ruberoid Special Roofing Bitumen – plus *engineered application by* Ruberoid Approved Roofers –has created durable roofs on all kinds of outstanding buildings across the nation. Whether you design, build, or have turn-key projects, specify Ruberoid Special Roofing Bitumen. The owner will be assured of: 1) fast, money-saving application; 2) greater ductility that increases resistance to cracking at low temperatures; 3) low melting point that means better self-healing properties: 4) trouble-free service, even under extremes in weather, season after season for many years.

Write for Ruberoid Built-Up Roofing specification data. The RUBEROID Co., 500 Fifth Avenue, New York 36, New York.



ASPHALT AND ASBESTOS BUILDING MATERIALS



MAINLINER by MILLS

WY, DA

Frouge

A new concept in free-standing space control . . . the latest addition to the six full height movable wall systems by Mills.

Mainliner teams perfectly with full height walls as it does here with Mills Flush Pilaster (background), to give you harmonized privacy —plus economy.

The versatile Mainliner is available in four heights and ten widths to fill virtually every need for office subdivision. You may choose from a wide range of baked enamel finish colors and clear or patterned obscure glass.

For details write to The MILLS Company, manufacturers of movable walls since 1921. The address is 962 Wayside Road, Cleveland 10, Ohio. If you must design efficient, comfortable work areas, you will find the Mills Planning Kit excellent help in visualizing arrangements; a request on your letterhead will bring you one. another case history of

ARCHITECT SPECIFIED MAINTENANCE

".... After 2 years, these HILLYARD-TREATED FLOORS look newer than ever!"

·····

Specified for initial treatment, recommended and used for follow-up maintenance, Hillyard specialized treatments have preserved the "like-new" condition of the floors in this beautiful modern building. Times has served only to deepen the lustre, brighten the colors. "These floors have actually improved in appearance!"

Professional Building, Rockford, III. Architect: Marshall T. Munz









Ask the Hillyard "Maintaineer®" for an expert's opinion on floor usage problems, and the treatment of choice after installation. He'll gladly serve as your "Job Captain". No charge; he's "On Your Staff, Not Your Payroll".



WRITE FOR FREE AIA FILES

Product information, draft specifications, material for your recommendations on follow-up maintenance. One for each type of flooring.



Glass does things to a building—It can brighten the inside, color the outside, beautify *every* side. From one source, all kinds of glass and metal products for commercial structures are available, and that one source is close to you. There are Pittsburgh Plate Glass Company branches and distributors all over the country. W. P. Fuller Company distributes PPG glass products on the West Coast. Remember, you can get complete information about glass, glazing, and sealants from your Pittsburgh architectural representative. See him about any PPG product, or see our catalogs in Sweet's.



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







Glass for beauty—A monumental bas-relief, smoothly integrated with shimmering curtain-walls of glass; that's the headquarters of the Mutual of Hartford Insurance Company, Hartford, Conn. And that's one of the beauties of glass. It blends so well, so unobtrusively with other architectural materials.

The great east façade is 110 feet long and 30 feet high. Cast from an original sand mold by sculptor Costantino Nivola, it consists of 132 concrete panels. The northern and southern exposures are framed in curtain-walls of glass, manufactured completely by Pittsburgh Plate Glass Company. Spandrels are dramatic Sable SPANDRELITE[®], Pittsburgh's glass in color. Windows are SOLARGRAY[®] Plate Glass for maximum light with minimum glare. And PITTCO[®] 82-X Metal Construction frames these components into a weathertight, timeless unit.

Pittsburgh's contribution didn't stop there. HERCULITE® Tempered Plate Glass Doors, West Tension Doors, PITTCO Hinges, Heavy Plate Glass windows, Polished and Rough Plate Glass partitions and Fiber Glass Insulation-all Pittsburgh products, all imaginatively used in the new structure.

When designing with glass, consider Pittsburgh Plate Glass Company as your complete source of supply. We have the production and supply facilities to meet your needs. Call on our Architectural Representatives for help with your glass applications. No obligation, of course.

Architect: Sherwood, Mills & Smith, Stamford, Connecticut.

Contractor: Industrial Construction Co., Hartford, Conn.

PITTSBURGH GLASS



. . . the basic architectural material



Glass for color—It's the Millville, New Jersey, office of The Prudential Insurance Company of America. And it's a shining example of what glass does for a building. SPANDRELITE[®], Pittsburgh's heat strengthened glass with ceramic color fused to the back, gives the curtain-wall its rich Peacock Blue luster. There are 18 standard hues of SPANDRELITE, with custom colors aplenty. And all of it is available in polished or





twill finish. These glass spandrels are tough. They can hold their own against sharp impact, window-rattling weather, or teeth-chattering temperatures. They won't corrode and are non-absorbent. We have a full-color booklet that will tell you all about Glass Clad Curtain-Wall systems. If you'd like a copy, write to Pittsburgh Plate Glass Company, Room 9233, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

Architect : Frank Grad & Sons, Newark, N. J. Contractor : Massett Bldg. Co., Atlantic City, N. J.









Glass for light—Every school needs a lot of glass. It invites natural daylight to cheer up the artificial light inside. It makes classrooms bright and lively for sharper vision, higher morale, and better grades. And it lets students enjoy nature all day long, yet protects them against her ugly moods.

That's the way it is at Maple Heights Junior High School, Maple Heights, Ohio. Walk around the building or through it you'll find Pittsburgh Glass everywhere. PENNVERNON[®] Window Glass, TUBELITE[®] Metal Doors, ¹/₄" Polished and Heavy Plate Glass, HIGH-FIDELITY[®] Mirrors all contribute to the sprightly atmosphere and spacious design. Consult your architect about the many famous Pittsburgh glass products now being used in school construction.

Architect: Outcalt, Guenther & Associates, Cleveland, Ohio

Contractor: H. F. Juergens, Bay Village, Ohio





The new Pittco "900" Series—You can frame windows and glass-clad walls completely with the related components of the new PITTCO "900" series. It is provided with a drainage system. All members are aluminum; all fastenings are concealed; all glass is held in neoprene strips and recessed to increase daylight opening. And the clean beauty of every line is strikingly apparent. For details, consult your PITTCO Metal Representative.



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

Projects

A roundup of recent and significant proposals



AMERICAN BAPTISTS' HEADQUARTERS AT VALLEY FORGE

Vincent G. Kling chose a circle to represent the unity of purpose of his client, the American Baptist Convention, which will bring all of its agencies together in this center at Valley Forge, Pa. Three office stories ring a chapel and courtyard (above), each agency's arc-shaped space separated by projecting stair towers. To symbolize the spread of missionary work, the one-story graphic arts building fans out from the ring (right). The smaller building (foreground) is a cafeteria and conference center. Cost: \$5.5 million.





APARTMENTS AND ROW HOUSES IN WASHINGTON, D.C.

Two schemes recently put forward would spruce up Washington's Foggy Bottom area: a \$20 million residential project (left), and the National Cultural Center (below). For the 6.5-acre residential site, Architects Kennard & Kennard propose 800 dwelling units divided into seven- and eight-story apartment buildings and row houses grouped around a swimming pool, pedestrian malls, and an outdoor cafe. A footbridge (far left) would span the inner belt highway and lead to the National Cultural Center. An underground garage would provide 1,600 parking spaces.

NATIONAL CULTURAL CENTER

Edward Durell Stone's design for the National Cultural Center in Washington D.C. (right) is a \$61 million giant curving over the Potomac on built-up terraces. Inside, under the dome, there will be a round hall big enough to hold a Presidential Ball or a formal reception. Branching out to the left and right will be a symphony hall to seat 3,000 and a large theater. Small auditoriums for chamber music and lectures will flank a 4,000-seat opera house at the rear.





vibrapac architectural block

Turn loose your creative imagination on Vibrapac Architectural Block. One style alone gives you countless numbers of wall patterns. And each Vibrapac wall provides fireproof, textured beauty of dramatic contrasts. What's more, it's so easy to maintain. Specify this exciting product, Vibrapac Architectural Block, on your new building projects. Most Vibrapac block plants can meet your specifications for architectural block—in many styles and sizes, interesting textures, and distinctive colors. Write for our A.I.A. Design Block Bulletin No. 139.

BESSER COMPANY Dept. 179, Alpena, Michigan, U. S. A. FIRST IN CONCRETE BLOCK MACHINES





COUNTY HOME FOR THE AGED IN KANSAS

Early this year Johnson County, Kan. will begin construction in Olathe of a \$700,-000 home for the county's aged (below), financed wholly from a bond issue approved last year. Each major section will be linked visually by the consistent use of folded-plate, thin-shell concrete roofs and physically by covered walkways. Included in the scheme are (left to right): a recreation and therapy wing, a cylindrical chapel, an infirmary, a one-story administration building, a long residential wing, and a dining hall (not shown). Associating architects: Mackie & Roark, John Lawrence Daw.



KOPPERS RESEARCH CENTER

Eventually the Koppers Company will concentrate all its research activities on a 176acre site in Monroeville, Pa. The bird's-eye view (left) is the complete center, the first part of which will be finished later this year. Now under construction are a laboratory and office building (near left) and a power plant. In the second stage, Koppers will build an applied research building (center). Architects: Voorhees, Walker, Smith, Smith & Haines.

CALIFORNIA CHURCH

Thin-shell concrete is the chief material in a three-building church complex (left) by Welton Becket & Associates in Los Angeles. Concrete hoops will alternate with glass wedges in the small chapel, and seven concrete vaults will span the sanctuary (near left). Colored glass chunks, embedded in concrete, will enclose the sanctuary's east and west ends and extend part way over side windows. The third building is a two-story rectangular fellowship hall.



SOUNDPROOF MUSIC BUILDING AT PRINCETON

By sinking practice rooms underground and soundproofing throughout, Architects Moore & Hutchins hope to make Princeton's music building (below) an acoustical marvel. The corrugated central portion will be a two-story hall large enough to hold a sym-

phony orchestra or the university's band and glee club; faculty offices and classrooms will stretch out at either side. The exterior will be limestone with bronze sash. The necessary funds, estimated at \$1 million, are being sought as part of a \$53 million campaign.



LOS ANGELES OFFICE-AND-WAREHOUSE BEHIND A SCREEN

Parke, Davis & Co. has commissioned well-known architects to design its combination branch offices and warehouses and is setting them on major traffic routes. Like others in the program, the project for Los Angeles (above) will be close to highways and rail lines; and it was designed by Charles Luckman Associates. Both buildings in the combination will be of reinforced concrete; the office portion (right) will be screened by a lacy aluminum grille extending 5 feet out from the aluminum window wall.



THE BURGESS-MANNING 3-WAY FUNCTIONAL CEILING

UNIFORM RADIANT HEATING UNIFORM RADIANT COOLING UNIFORM SOUND ABSORPTION

has the

SIX POINTS of SUPERIORITY that make it your Best Buy

- STRUCTURAL SIMPLICITY
- MAINTENANCE ECONOMY
- ACOUSTICAL EFFICIENCY
- THERMAL PERFORMANCE
- VISUAL SATISFACTION
- FLEXIBILITY
 Design & Physical

For complete descriptive information, write for "The Story of The Burgess-Manning Ceiling." It tells how you can obtain the ultimate in indoor comfort.

BURGESS-MANNING COMPANY

Architectural Products Division

709 East Park Avenue, Libertyville, Illinois

STRUCTURAL SIMPLICITY

Installed with usual suspended ceiling methods and components . . . no special framing for troffers . . . space above ceiling instantly accessible.

MAINTENANCE ECONOMY

Ceiling surface easily washable . . . all individual panels easily and quickly removable without damage . . . no mechanical maintenance . . . nothing to get out of order.

ACOUSTICAL EFFICIENCY

Choice of sound absorption coefficients identical to those of standard perforated metal panel acoustical ceilings . . . highest obtainable with regular construction.

THERMAL PERFORMANCE

Uniform heating and cooling . . . the only ceiling having direct contact between pipe grids and panels for even, efficient thermal conduction over the entire heating and cooling area.

VISUAL SATISFACTION

Special decorative designs available through variety of combinations in color, surface texture, inter-mixed panel sizes. Standard finish; - high-grade baked-on flat off-white enamel complementing all room colors.

FLEXIBILITY

Thermally and visually adaptable to any building module . . . panels and troffer lights interchangeable . . . panels salvageable for continued use in future remodelling and room changes.

Projects contd.



\$2 MILLION FLORIDA PLAYHOUSE

When the elaborate theater above is built, Fort Lauderdale theater-lovers will sample a host of luxuries: a staffed nursery for matinee-goers' children, a teen-age soda fountain and lounge, an art gallery, a library, a penthouse and club for post-performance dining and dancing, and a drivein ticket window. Alfred Browning Parker's design boasts the largest marquee in the world, allowing 30 cars to discharge their passengers at once. Building regulations require a hurricane-resistant reinforced concrete frame.

BOEING RESEARCH CENTER NEAR SEATTLE

As part of its push into basic research, the Boeing Airplane Co. plans an entirely new research center close to Seattle. The wall of the first unit (below), a laboratory, will be hung with porcelain enamel panels and gray heat-resisting glass. The small projecting portion (foreground) will grow into the next section: a twostory office building. Walter Dorwin Teague Associates, designers of the whole center, hid storage facilities in underground tunnels.



SCIENCE BUILDING AT WASHINGTON STATE COLLEGE

Late this spring the new science building at Western Washington College of Education in Bellingham (below) will open its aluminum doors. Inside, students will find a planetarium, aquarium, and greenhouses, plus an assortment of laboratories, lecture rooms, and faculty offices, all wrapped in an outside facing of colorful ceramic tile. The building's architect, Paul Thiry of Seattle, estimates the total cost (including equipment, furnishings, and fees) at \$2.5 million for 102,000 square feet of floor area.





TOLEDO FEDERAL BUILDING WITH A LANDSCAPED SETBACK

In downtown Toledo, the General Services Administration will build a seven-story, \$5 million Federal Building (above), designed by the local firm of Bellman, Gillett & Richards. Set behind a 30-foot landscaped area on the front and a 9-foot strip at the side, it will be faced with granite on the first floor and a porcelain enamel curtain wall above. In addition to a ground-floor post office, other U. S. agencies will share the building when it is completed in 1962.

SPACE-AGE RESEARCH CENTER

Nortronics, a division of the Northrop Corp., will build a 50-acre research center on the Palos Verdes peninsula south of Los Angeles. Four of the five buildings in the first segment (right) will be officelaboratories whose roof-top vents and other utilities will be consolidated and enclosed in double folded-plate concrete penthouses. Slightly removed from the quadrangle, the fifth structure will be a two-story administration building (top) built of steel and glass. Architects: Charles Luckman Associates, Los Angeles.



INLAND CELLUFLOR

Quick, inexpensive openings for electrification!

... <u>when</u>ever you want them, <u>wherever</u> you want them — with Celluflor

The typical office interior today is streamlined to the nth degree. Big open work areas — a bare minimum of walls.

Where, then do you put the miles upon miles of wire a modern office building needs now — and the additional miles it's sure to need tomorrow? More and more architects are reaching this logical conclusion: In Celluflor.

Since Celluflor provides wiring raceways 6" o.c. under every square foot of floor area, no worker need ever be more than inches away from electrical, telephone, and dictation service outlets. Whenever a tenant needs a new connection, he has an electrician drill through the floor and pull up the wires — anywhere in the room! Circuits can be changed — new service outlets installed or relocated — without costly alterations.

Many buildings with a future use this floor with a future — including Union Carbide office building, New York City, and Kaiser Center office building, Oakland, California.

There are other advantages of Celluflor — savings of steel, footings, construction time, and overhead. See Sweet's — or write for Catalog 270.



ENGINEERED PRODUCTS DIVISION

INLAND STEEL PRODUCTS COMPANY Dept. A, 4031 West Burnham Street Milwaukee 1, Wisconsin

ATLANTA, BALTIMORE, BUFFALO, CHICAGO, CINCINNATI, CLEVELAND, DALLAS, DENVER, DETROIT, KANSAS CITY, LOS ANGELES, MILWAUKEE, MINNEAPOLIS, NEW ORLEANS, NEW YORK, ST. LOUIS

Products

Aluminum curtain wall . . . plastic window tints . . . electronic guard system . . . water-repellent brick

ALUMINUM WALL SYSTEM combines stock shapes, varied sizes

For high-rise buildings, the Reynolds Aluminum Economy Wall System HR202 (below) integrates stock components in a choice of finishes and sizes. Operating within a framework of three basic window modules (3 feet 8 inches, 4 feet, and 4 feet 4 inches), the architect can select a wall section ranging from 8 to 13 feet high. Typical mullion and panel details are shown in drawings, right. The aluminum panels are finished in either porcelain enamel or baked enamel, and their cores are glass fiber or laminated cement asbestos and foamed styrene, respectively. The average cost for the wall is \$4 to \$4.50 per square foot, excluding glazing. Manufacturer: Reynolds Metals Co., Richmond 18, Va.





Plastic coating is "flowed" on window, using a hose attachment. Tinted portion, left, shows how plastic film cuts glare.



TINTED-IN-PLACE GLASS filters sun and heat through plastic

While the Eastern Air Lines terminal at New York's International Airport (FORUM, Nov. '59) was under construction, its architects learned that a strike would prevent delivery of the colored glass they specified. It was then, says Project Architect Alexander Bernhard (of Albert Gray's office), that they hit on the idea of tinting the glass in place. They hired a Chicago firm to apply a yellowish-green plastic coating to the terminal windows, its intensity and transparency varied for suncontrol purposes. A deep-colored, somewhat opaque coating was squirted on the control tower to give maximum protection from sun and glare; less sunny areas got lighter, more transparent coats.

Eastern Air Lines' tinted-to-order glass is but one example of the growing use of plastic glass coatings on new construction. *continued on page 56*

Products contd.



NOONTIME, U.S.A. The clock strikes twelve—all America steps out to lunch. In company cafeterias employees have a welcome chance to relax and associate with other fellow members. Halsey Taylor is in this picture—has been for years—with modern cafeteria coolers that speed service and provide health-safe drinking water. Plant and management know that whether it's a cooler or a fountain, if it's Taylor-made it's always dependable! *The Halsey W. Taylor Co., Warren, Ohio.*



They're many different kinds of cafeteria coolers in the Halsey Taylor line . . . some water-cooled, others air-cooled, all designed for lifetime service.



ASK FOR LATEST CATALOG, SEE SWEET'S OR THE YELLOW PAGES

Until recently, their use was pretty much limited to older structures in need of a "lift" or as an antidote to high air-conditioning bills during a hot summer.

The three best-known suppliers in the field buy their coatings from paint manufacturers, use similar application methods, and employ factory-trained dealers. The



coatings are: Acorn Advertisers, Inc.'s Plastic Glass Tint, made by the Rinshed-Mason Co. (the one applied to Eastern's terminal, photo above); American Glass Tinting Corp.'s Sun-X, made by Du Pont; and National Plastic Coating's Sun-Tint, made by Western States Lacquer Corp.

The application method common to all three is a "flow process." From a hose and nozzle at the top of the window, colored plastic runs evenly over the pane, the excess dripping into a trough at the bottom. There are minor variations in technique: Sun-X and Sun-Tint are inside coatings requiring no maintenance; Plastic Glass Tint usually goes outside and requires waxing and gentle polishing every two months. All three products are available in frosted and clear tints, such as green, blue, amber, gold, and gray; combinations give slightly different shades.

The major advantage of the plastic coatings is that they are cheaper than factory-tinted glass—as little as a third as much, says one company. Costs vary, of course, depending on the nature of the job, but the three firms quote costs at 40 cents to \$1.50 per square foot. Because the coatings reduce sun heat and glare, they are often used in store windows to cut fading losses—instead of shades, curtains, and awnings. They have also been widely used on factory, bank, and office-building windows to cut air-conditioning costs.

Manufacturers: Acorn Advertisers, Inc., 1123 W. Century Blvd., Los Angeles 44; American Glass Tinting Corp., P. O. Box

6565, Houston 5; National Plastic Coating Co., 4433

Southeast 28, Oklahoma City.

AUTOMATED GUARD SYSTEM protects industrial plants

Electronic devices to snare a thief, sniff a fire, or watch plant gates are parts of a complete protective system developed by Minneapolis-Honeywell Regulator Co. From a central control board (see photo), a single guard can keep close watch on an entire plant and extend his surveillance to its boundaries up to 20 miles away.

Because no two plants need identical protection, the Honeywell Electronic Security System, which is built to order around a compact console (4 by 4 feet, 2 feet deep), is adapted to whatever coverage is desired by the addition of subsystem panels. Though many combinations can be worked out, the manufacturer recommends at least two detection systems used in combination, chosen from such devices as fire and smoke detector heads, tamperproof magnetic switches on windows, electronic noise and motion detectors, and capacitance electronic fencing. Any of these alert the guard by both an audible alarm (horn, buzzer, or bell) and a visual alarm (lights on the panel) that indicate where the trouble is. By means of pushbutton switches on the panels, a guard can



control entry at plant gates and keep track of a visitor-a truck, for instanceby following it on TV. He can also speak with visitors over a two-way communication system. Electronic noise and motion detectors rely on pickups spotted about the building and a device called the Vitronic Eye, which detects changes in light patterns. Another motion detector, the Sono-Sentry, picks up changes in the sound-wave pattern made by beaming an audible signal into a closed area. An electronic fence, which detects the presence of unauthorized persons within 3 feet of it, also has a built-in compensator to prevent false alarms from such harmless causes as rain, sleet, birds, or blowing paper.

The savings from the substitution of electronics for manpower are expected to be considerable, up to 40 per cent of a company's annual operating expense for security. As for completeness, the manufacturer says the system "can detact any form of building security violation presently known to us." Even if the single guard should collapse at his post, a builtin safety device flashes a warning to police headquarters in the area.

Manufacturer: Minneapolis - Honeywell Regulator Co., 2747 Fourth Ave. South, Minneapolis 8.

continued on page 58



It seems like magic — the way room space changes with a Fairhurst Folding Wall. Here is a movable wall completely unlike any other; developed over nearly 5 decades of leadership in folding wall construction.

Inlaid with teak, walnut, and black Formica, this Unitfold Wall illustrates the special care taken to match exactly the glamorous new look of the Rice. Yet all the famous Fairhurst features are here: simple, manual operation . . . rigidity, with a look of massive permanence . . . as nearly soundproof* as modern engineering can make it.

Perhaps Fairhurst can solve your space problem. Write Dept. AF, for full information — no obligation, of course.

WALLS

Top photo shows Unitfold in place to permit simultaneous use of separated public rooms. Inset at right reveals matching permanent walls through partially opened Unitfold section.



- Kenneth Franzheim, Architect

*Tests have shown that Unitfold walls of this type block sound as completely as a 10"-12" SOLID BRICK WALL.



at U.N. Headquarters ... new U.S. Mission Building installs durable McKinney Hinges

There's a new addition to the United Nations. It's the impressive U.S. Mission to the United Nations Building. The unique design consists of a 12-story office wing with a facade of cast stone, an adjoining service core and a 2-story auditorium wing. Located near the U.N. Headquarters complex, the Mission Building functions as the only U.S. Embassy office building within the continental United States.

McKinney Hinges were chosen for installation throughout this proud addition to the U.N. It is through trouble-free performance on important jobs such as this, that McKinney has built a reputation for fine quality and dependability. On your next job, give your clients the best. Specify McKinney Hinges.

- Project: U.S. Mission to the United Nations Building, New York, N.Y.
- Associate Architects: Kelly & Gruzen-Kahn & Jacobs, New York, N.Y.
- Hardware Contractors: Atlantic Hardware & Supply Co., New York, N.Y.
- Hinges: 475 pair of McKinney 4½ x 4½ full mortise ball bearing butt hinges, plus additional quantities of other McKinney ball bearing hinges.

Ickinni



PROTECTIVE BRICK TREATMENT reduces water absorption rate

A chemical beauty treatment applied to brick directly from the kiln helps them retain their new look by reducing water absorption and, in turn, discoloration. (The photo shows a treated brick, top, and an untreated one after 6 hours in a



sodium-sulfate solution.) Especially recommended for very porous brick, such as the common and antique varieties, *Silaneal* seals out enough water, while allowing the brick to "breathe," to minimize staining and efflorescence. Silaneal is a dilute siliconate solution applied to brick as a dip or spray which dries to a colorless, odorless film.

Silaneal-treated brick offers some distinct advantages over untreated brick of high suction rate: a handsomer appearance over a long period (even white or light-colored brick will stay new looking longer), and the "wetting down" step in bricklaying can be eliminated.

Some brick manufacturers offer treated brick at no extra cost; others charge a slight premium.

Manufacturer: Dow Corning Corp., Midland, Mich.

MACHINE-APPLIED FIREPROOFING undercoats existing metal roof deck

Following the disastrous fire at General Motors' Livonia, Mich., plant six years ago, which was fed by dripping asphalt from the roof, similar metal roof deck installations in industrial buildings were downgraded from "incombustible" to "combustible." Two years later, the Factory Mutual Engineering Division of the Associated Factory Mutual Fire Insurance Companies, after extensive tests, set up two categories for existing insulated metal deck construction: Class I, low combustibility; Class II, all others.

For those rated Class II, a New Jersey firm manufactures a product called *Cafco Blaze-Shield*, an inexpensive coating which has been accepted by Factory Mutual as a means of upgrading Class II systems to Class I without installing sprinklers. Sprayed to the underside of a metal roof deck, it forms a light-density coating offering thermal insulation and improved sound conditioning at a cost of about 25 cents per square foot. The material is a blend of inorganic mineral fibers and binders, shipped dry in bags, and mixed with water on the site.

Manufacturer: Columbia Acoustics & Fireproofing Co., Stanhope, N.J.

PERFORATED FACING TILE absorbs and "loses" sound

Stuffed with a sound absorbing glass-fiber pad and perforated with a myriad of ¼inch surface holes, ceramic glazed structural facing tile has taken on acoustical properties. The new product is *SCR Acoustile*—the initials represent the Structural Clay Products Research Foundation of Geneva, Ill., which developed the tile.

Acoustically, the tile has a soundabsorption factor of 65 per cent and a sound transmission loss of 47 decibels, making it suitable for school cafeterias and corridors, music rooms, gymnasiums,



and factory areas. A 4-inch wall has a fire-resistance rating of one hour, or two hours if backed by ¾-inch of plaster.

When the perforations occur at regular intervals, the tile pattern resembles pegboard; a random-punched version is also available (see photos). In either pattern, the tile may be ordered in 25 glaze colors but in only one size: 4 by 5 by 12 inches. It costs 2 or 2½ times as much as structural glazed facing tile.

Manufacturer: Metropolitan Brick, Inc., 1017 Renkert Bldg., Canton, Oh.o.

PLASTIC FLAGGING TAPE marks boundary lines, danger spots

Some brightly colored vinyl tapes are made by Keuffel & Esser to flag stakes marking boundary lines, property and utility lines, and danger areas. The tapes are 1¹/₄ inches wide and cost 95 cents for a 300foot roll. They are said to be weatherand wind-resistant, and are easily marked with a pencil or ball-point pen.

Manufacturer: Keuffel & Esser Co., Adams and Third Sts., Hoboken, N.J. END



FOR FULL INFORMATION AND CATALOG WRITE TO:

LEVITON

LEVITON MANUFACTURING COMPANY • BROOKLYN 22, N. Y. Chicago • Los Angeles • Leviton (Canada) Limited, Montreal For your wire needs, contact our subsidiary: AMERICAN INSULATED WIRE CORPORATION



On a dry lake bed, 12 miles southwest of Kansas City, Vic Regnier built himself



This is Phase One. It includes 21 stores, 12 offices and a 13,000 sq. ft. basement



Architect: John F. Granstedt, Kansas City, Mo. Structural Engineers: Uri Seiden & Associates, Kansas City Contractor: Vic Regnier Builders, Inc., Kansas City Structural Steel Fabricator: Hankens Steel Erection Co., Belton, Mo.



800 feet of ranch style shopping. Its name: Ranch Mart. Its cost: \$1,250,000.



auditorium. Phases Two and Three will add store and office space, plus



bowling alley and large department store. Because Ranch Mart is located in the heart of the tornado belt, Regnier gave it a strong backbone of steel — 500 tons of USS Steel. "Experience has shown us," says Regnier, "that structural steel gives a building permanent strength. It's also the fastest, most economical material for tying a building together." Vic Regnier is sold on steel and U.S. Steel's ability to deliver, fast, anywhere in the country.



United States Steel Corporation—Pittsburgh Columbia-Geneva Steel—San Francisco Tennessee Coal & Iron—Fairfield, Alabama United States Steel Supply—Steel Service Centers United States Steel Export Company **United States Steel**

Profitable elevator modernization



with . . .

Montgomery[®] Elevators BY MAXIMUM UTILIZATION OF EXISTING ELEVATOR EQUIPMENT

Today, more than ever before, maintaining 100% occupancy with tenants of desirable quality is highly difficult with antiquated elevator equipment and service.

In the selection of Montgomery's self-operated "Measured-Demand" elevators, the 209 West Jackson Blvd. Building in Chicago now makes available the most modern, efficient, dependable vertical transportation for its 13 stories that equals the service, appearance and operating cost of any existing office building in the area of comparable size and location.

Investigate how MONTGOMERY can help you modernize your present elevator system economi-cally for better service to your tenants and clients.



•

0

ELEVATOR COMPANY MOLINE, ILLINOIS Exclusive Manufacturers of Possenger and Freight Elevators Since 1892

mo



ehlebach Hotel, Kansas City, Mo. w World Life Building, eattle, Wash.

- Seattle, Wash. See Marquette Hotel, Peoria, III. Seneral Hospital, Kansas City, Mo. 31 South Wabash Building, Chicago, III. owa-Illinois Gas & Electric Building, Davenport, Iowa Centennial Building, Springfield, III.



Pinhole Downlights with Designed Optics by Kliegl ... the Great Name in Lighting!

Designed optics . . . properly controlled accent and picture lighting from an inconspicuous light source. Kliegl Pinhole Downlights are equipped with adjustable fourway shutters and are fully focusable. They feature a precision, three lens, optical system for high efficiency illumination and sharp beam control without spill light.

Every feature of this outstanding Kliegl unit has been specifically designed to enhance and dramatize the natural beauty in a picture or other objets d'art.

Plan to use Kliegl Pinhole Downlights in your next project. In the meantime, for complete information, write for our Architectural Lighting Catalog.

lighting KLIEGL BROS. UNIVERSAL ELECTRIC STAGE LIGHTING CO., INC. 321 W. 50th ST., NEW YORK 19, N.Y. ORIGINATORS AND MANUFACTURERS OF KLIEGLIGHTS



GOWER SCHOOL ADDITION, Hinsdale, Illinois. Architect: Wight & Schlaebitz, Downers Grove, Illinois. Plumbing and heating contractor: Jerry & Phil's Plumbing & Heating, Inc., Brookfield, Illinois.

SUPERIOR ALL-COPPER PLUMBING IN THIS SCHOOL AT LOWER COST TO TAXPAYERS



COPPER SANITARY DRAINAGE LINES roughed-in among structural members at Gower School. This space-saving installation would have been impracticable with heavy, bulky pipe requiring threaded or caulked joints.

Phil Bergeron and Jerry Wehrmeister, plumbing contractors near Chicago, have found that the installation economies with copper tube and solder-joint fittings enable them to offer all-copper plumbing—water supply *and* sanitary drainage—at a cost lower than competitive bids based on installing ferrous piping. Recent jobs awarded to them as low bidder include the Gower School, the LaGrange Township Junior High School, a church, health center, two restaurants and a store. Anaconda was used for all these jobs. Phil Bergeron says, "We specify Anaconda Copper Tube and Fittings



COPPER SANITARY DRAINAGE LINES for second floor lavatories at the Gower School. Light weight of copper tube and ease of making solder joints save many dollars on multiple installations like this. Compact assemblies eliminate wide plumbing walls, give greater usable floor area.

because their consistent fine quality and close tolerances makes our work easier and keeps the job costs within our estimates."

Contractors, builders, and architects the country over are finding that they can provide long-lasting, lowmaintenance all-copper plumbing at a cost competitive with ferrous piping. For information on Anaconda Copper Tube and Fittings, write for a copy of Publication C-33. Address: The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.

COPPER TUBE AND FITTINGS Available through plumbing wholesalers PRODUCTS OF THE AMERICAN BRASS COMPANY





Architectural lighting

a new catalog by Century

New architectural developments demand a wider range of lighting equipment. Century's latest catalog presents concise information on lighting instruments for creative interiors. Four categories are presented which serve a multiplicity of functions: downlighting, diffuse lighting, wall lighting and accent lighting. As a first step in planning and selecting the proper lighting unit, Century will send its new architectural lighting catalog on request.



521 West 43rd Street, New York 36 1820-40 Berkeley Street, Santa Monica, Calif. 1477 N. E. 129th Street, N. Miami, Florida



Announcing the debut of a new, and extraordinary product for redwood ... Super Liquid Raw-Hide containing a sensational Ultra-Violet Light Inhibitor and Mildewcide. It is guaranteed to outlast and outwear ANY clear finish in its price class. Therefore, the next time you want a deluxe, long lasting clear redwood finish, you are invited to specify Super Liquid Raw-Hide (A.I.A. File No. 25-B-17) Linseed Oil Products Corp. Specialists in redwood finishes 1603 Talbert Ave., Santa Ana 7, Calif.



RESIDENCE OF MR. AND MRS. BRUNO K. GRAF: ARCHITECT. EDWARD D. STONE; INTERIOR DESIGNER. T H. ROBSJOHN-GIBBINGS: PHOTOGRAPHER, EZRA STOLLER

You'll always be proud of

... because the essential magnificence of this gracious material, its warm and personal beauty, its inimitable color and unique pattern make it a priceless treasure. Marble is forever beautiful and forever yours. Read the complete story in a beautifully illustrated brochure "Marble in the Home," available from

MARBLE INSTITUTE 32 SOUTH FIFTH AVENUE



OF AMERICA, INC. MOUNT VERNON, NEW YORK

Facade of the proposed office building for the State Employees **Building Corporation in** Sacramento, California, combines insulation value with handsome appearance. Thinlite panels of clear vista tiles, accented with colorful ceramic-faced glass tiles, were selected for floor-to-ceiling installation. They provide good vision while effectively reducing costs of airconditioning the building. Vista panels also admit maximum light and provide low heat transmission. Spandrel panels are green for contrast. Gray anodized aluminum struts are customfinished to the architect's specifications.



Complete freedom of design with prefabricated THINLITE

curtain walls



Office Building for the State Employees Building Corporation, Sacramento, California. Architect-Engineer West America Engineering Co., Inc., San Francisco, California

As IT HAS for so many other new buildings all over the country, THINLITE prefabricated curtain walls bring design distinction and beauty to the proposed office building for the State Employees Building Corporation in Sacramento, California.

For THINLITE combines all the excellences of curtain wall construction . . . plus almost *limitless design freedom*. Colorful random designs . . . exciting mosaic patterns . . . you have a wide choice of colors, shapes and textures, in stock or custom-prefabricated panels. No two THINLITE buildings need look alike! THINLITE is a completely weathertight wall. A double-Neoprene gasketing system automatically locks out wind and weather. All component parts are prefabricated. Very little cutting and fitting are needed at your job site. And that means really big construction savings for your clients! They save on maintenance, too, because THINLITE panels are self-washing. Aluminum struts can't rust or rot.

THINLITE offers you a brand-new dimension in design freedom. Send for complete data file on THINLITE now. Write Kimble Glass Company, subsidiary of Owens-Illinois, Department AF-1, Toledo 1, Ohio.

THINLITE CURTAIN WALL AN (I) PRODUCT



GENERAL OFFICES · TOLEDO 1, OHIO

Why do architects prefer **Roddis Doors 2** to 1?

De la

Recently an independent research organization asked architects: "What brand of flush veneered doors is your first choice preference?" More than twice as many chose *Roddis* than the next leading brand! Why this great vote of confidence?

These architects know the Roddis name represents a standard of quality and craftsmanship unmatched in the industry. A standard maintained through more than 60 years of manufacturing and design leadership.

Today, more and more architects are specify-

ing Roddis Doors. In the nation's schools, for example. School boards . . . and taxpayers . . . are vitally concerned that their new schools be built of quality products for greatest long-run economy. They insist on doors that will assure proper function, low maintenance and safety, for decades to come. Roddis has them!

Roddis now offers the most complete wood door line wholly designed and produced by a single manufacturer. May we send you our latest brochure? Write to:

Roddis Plywood Corporation, Marshfield, Wisconsin.



CURTAIN WALLS

by **GENERAL BRONZE**

FOR THE NEW HOME OFFICE BUILDING EQUITABLE LIFE ASSURANCE SOCIETY NEW YORK CITY

Contractor: Turner Construction Co. Architects: Skidmore, Owings & Merrill

Here's another of America's outstanding buildings—the new Home Office of the Equitable Life Assurance Society of America. And like so many other distinctive buildings, it too features Curtain Walls engineered, fabricated and erected by General Bronze.

To give a pleasing contrast to the natural finish aluminum grid and panel units, the architects, Skidmore, Owings & Merrill, have used black glass spandrels below each of the fixed light windows as well as black finish louvers on all the mechanical equipment floors.

If you are planning a curtain wall building in either aluminum, bronze or stainless steel, we can help you in many ways. For detailed information on GB products—curtain wall systems, windows, revolving doors, architectural metalwork—give us a call or see our catalogs in Sweet's.



GENERAL BRONZE CORPORATION · GARDEN CITY, N.Y. SALES OFFICE: 100 PARK AVE., NEW YORK 17, 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.

NOW you can design an air conditioned building for <u>much less</u> money with



Q-AIR FLOOR INSTALLATIONS INCLUDE: 1. Tennessee Eastman Company Industrial Relations Building, Kingsport, Tennessee. Owner-designed and built. 2. Police Headquarters Bldg., Fresno. California. Walter Wagner & Partners, Architets and Engineers; Lewis C. Nelson, Contractor. 3. MD Corporation, Pittsburgh, Pa. Gerard & McDonald, Architects and Engineers; Ragnar Benson, Contractor. 4. First National Bank Building, Fort Worth, Texas Skidmore, Owings and Merrill and Preston M. Geren, Architects; Childs Construction Co.—W. S. Bellows Construction Corp., Contractors. 5. Morristown Headquarters Bldg., Jersey Central Power and Light Co. and New Jersey Power and Light Co., Morristown, N. J. Bernard Kellenyi, Architect; Blanchard Const. Co., Contr. 6. Tarrant County Savings & Loan Assn., Fort Worth, Tex. Hedrick & Stanley, Architects and Engineers; Thomas S. Byrne, Inc., Contr.





Robertson Q AIR FLOOR

the three-way construction system that cuts costs three ways It is now more than a quarter of a century since H. H. Robertson Company developed and introduced Q-Floor, the strong, weight-saving cellular steel subflooring system that provides quick, efficient construction and continuous raceways for all types of wiring. This type of floor system has become the standard for commercial buildings. *Now, something completely new and revolutionary has been added.* Q-AIR FLOOR not only carries telephone and power lines, but provides hot and cold air for air conditioning as well. Occasional pairs of extra-wide structural cells fit in with the normal Q-Floor system (with no change in the two-foot module) and carry the air to mixing units for discharge into the room. This new system saves your client capital and operating dollars in three distinct ways:

Initial capital investment cut 5%

Since Q-Air Floor permits an average saving of a foot of space between each suspended ceiling and the floor surface above, a twenty-story building can be built at the same height as a nineteen-story structure built by older methods. This results in a substantial saving in structural steel, walls, piping . . . in fact every building material that is installed from floor to floor.

2 Reduced building height cuts BTU requirements 4% to 11%

In normal high-rise buildings, the BTU requirements for heating and cooling are based primarily on exterior wall exposure. Therefore, a saving of 6" to 16" per floor can easily reduce BTU needs by 4% to 11%. This reduction permits the use of lower capacity, lower cost equipment, effecting a saving on capital investment as well as in yearly operating cost.

3 Yearly power costs cut 30%

The Q-Air Floor system includes the Robertson Aerator, a mixing device with an exclusive seasonal changeover feature. Full blower power is used only for peak summer cooling. The rest of the year the system operates at about 65% of capacity. Older methods require a constant 100% volume of air all year. With Q-Air Floor yearly power cost can be reduced as much as 30%.









During the winter, Robertson Aerators satisfy heating requirements at 65% of peak volume.

For peak summer cooling, aeratorsdeliver 100% volume and system runs at full power.

As cold weather approaches, changeover device adjusts system back to 65% of peak volume.



Use coupon to send for complete details on Q-Air Floor construction.

H. H. Robertson Company 2403 Farmers Bank Building, Pittsburgh 22, Pa. In England-Robertson Thain Ltd., Ellesmere Port, Cheshire In Canada-Robertson-Irwin Ltd., Hamilton, Ontario • Edmonton, All	SRC berta
NAMETITLE	
COMPANY	
ADDRESS	
CITYSTATE	E PERSONAL STREET




ALSO MAKERS OF SAPPHIRE AND PENGUIN SLIDING WINDOWS . . . DAISY ALUMINUM GLASS DOORS

WESTINGHOUSE ELEVATOR "30-MINUTE



Fred C. Foy, Chairman and President Koppers Company, Inc. Pittsburgh, Pa.

66 About the time we were thinking of modernizing our elevators, several of us took time to look at what goes on both behind and in front of the scenes in a Westinghouse automatic elevator operation. What impressed us most was the smooth operation of the elevator cars and the time-saving potential of automatic elevators. Now that our Westinghouse elevators are in operation we find that they are working just as well as we thought they would. We are enthusiastic about them and I think this is true for most of the people in our building who ride them.



Gordon Murray, President First National Bank of Minneapolis Minneapolis, Minnesota

66 When we decided to convert our elevator system at the First National Soo Line Building to automatic in 1953, we made a thorough investigation of vertical transportation systems prior to the contract award. On the basis of that investigation, we chose Westinghouse for our modernization program. At the present time we are installing fourteen (14) Westinghouse elevators and three (3) stairways in our new First National Bank Building which will be ready for occupancy early in 1960.



Sutherland Cook, President Roosevelt Hotel Company Cedar Rapids, Iowa

I THE FORTER

66 The complete remodeling of the thirty-year-old HOTEL ROOSEVELT of Cedar Rapids, Iowa, included as one of the major features the installation of a Westinghouse Selectomatic-Automatic-Operatorless Elevator System with Automatic Traffic Pattern Control. The Westinghouse '30-Minute Pre-Investment Eye-Opener' convinced us that this was the best system and, after 15 months of operation, we find that our confidence was very well placed.



Ross Beatty, General Manager McCormick Estates, Roanoke Building 11 South LaSalle Street, Chicago, Illinois

66 Our technical staff carefully studied the bids we received for elevator modernization at the Roanoke Building, and toured several automatic elevator installations prior to making a recommendation to us. This research and the analysis of the bids led us to a decision for Westinghouse Selectomatic with Automatic Traffic Pattern and Traffic Sentinel features which was felt would provide the flexibility required for the unprecedented changing traffic conditions in our building. The installation is now complete, and we are quite pleased with our decision.

Executives experienced the PRE-INVESTMENT EYE-OPENER"

READ WHAT THESE IMPORTANT EXECUTIVES SAY ABOUT THE WESTINGHOUSE DEMONSTRATION—AND HOW IT INFLUENCED THEIR MODERNIZATION PLANS.

Because elevators can be the "showcase" of fine building ervice, Westinghouse invites you to see this convincing 0-minute demonstration. The elevator system for a newly planned building—or an existing one—is a key burchase . . . a serious investment. As such, it deserves he personal attention and approval of executives concerned with both tenant satisfaction and efficient operation of their building now—and in future years.

Make arrangements to see this behind-the-scenes demonstration by calling the Westinghouse Elevator Division Sales Office in your city. Consult the Yellow Pages of your telephone directory.

WESTINGHOUSE ELEVATORS AND ELECTRIC STAIRWAYS

YOU CAN BE SURE ... IF IT'S Westinghouse

Watch Westinghouse Lucille Ball-Desi Arnaz Shows CBS-TV Alternate Fridays



teve H. Bomar, Senior Vice President

6 Our study of operatorless elevators proved to our complete satisfaction that Westinghouse Selectomatic Automatic equipment was a wise choice for our main bank building. We have obtained safe, efficient elevator service from our installation which handles our heavy traffic peaks smoothly and quickly. We can heartily recommend a demonstration of Westinghouse to anyone interested in automatic equipment.



John Emery, President Thos. Emery Sons, Inc. Cincinnati, Ohio

66 My behind-the-scene look at the Westinghouse Automated Traffic Control proved that safe operatorless elevatoring is here today. What's more, this demonstration showed me that there is, indeed, a big difference between elevator systems. Westinghouse leadership in electronic automation certainly sold me on their system. WHETHER you're designing a Manhattan tower, a suburban school or a contemporary apartment house, Fenestra Curtainwall Systems offer you almost unlimited design freedom. Vertical and horizontal sections are engineered to meet your requirements for strength and wind loading . . . expansion and contraction . . . condensation control . . . weather tightness . . . and attachment to the structural system.

You can place fixed glass, ventilating sash or panels, wherever you desire—add the colorful sheen of porcelain enamel, steel or aluminum, flat or patterned; or the glitter of textured glass, the beauty of ceramic tile or masonry veneers.

Select from a wide range of aluminum and steel curtainwall systems, a design to meet your specific requirements. Proven Fenestra grid units offer economical fabrication and fast, systematic erection. Where construction for economy and early occupancy are basic requirements, Fenestraengineered "selective" grid units merit your further investigation.

FENWALL

ALUMINUM SYSTEM

Fenwall is an aluminum subframe system in standard and special sizes for fast and economical erection. Choice of 5 types of ventilation: top hung, project out, project in, casement, double hung (or combinations with fixed glass).

These complete curtainwall systems by



STEEL SYSTEM

A subframe system of cold-rolled profiles in galvanized material offers both selective and custom phases. Strength and economy are dominant features, with appearance having parallel importance.







 (\bigcirc)

m

뒨

STEEL SYSTEM

Fenestrawall combines customsize intermediate windows, porcelain infill panels and required structural grid members for design freedom.



Fenestrawall

This combination of Fenestra 1½" aluminum intermediate projected windows, for use with tubular mullions and insulated infill panels, meets the need for today's limited budget curtainwall jobs with complete design flexibility.





DOUBLE HUNG ALUMINUM SYSTEM

Combining the classic appearance and utility of double hung style windows with functionally modern insulated panels to form an integral curtainwall unit, Fenestra offers both an intermediate (DHA 2) and monumental (DHA 3) system to meet varying budget and design problems.





Fenestra offer new design freedom!

DOUBLE HUNG STEEL SYSTEM

This system is factory assembled from custom-size double hung windows (with or without hopper vent) and porcelain enameled, exterior-faced insulated infill panels.





All panels are factory installed and weather sealed to reduce costly field operations and assure maximum quality control.

Your design is factory assembled in large grid units to save time and money on the job and to reduce the number of joints to be sealed in the field.

The complete package is engineered, fabricated, delivered and erected by a single responsible source.

Write for complete details. Fenestra Incorporated, Dept. AF-1, 2296 East Grand Boulevard, Detroit 11, Michigan; or consult the Yellow Pages.



Your single source of supply for BUILDING PANELS • DOORS WINDOWS • CURTAINWALLS

IN CHICAGO...

Al Rubin, leading masonry contractor, gets maximum crack resistance with



Mr. Rubin (standing) notes how easily Keywall is handled on one of his current jobs, the Hyde Park Shopping Center on Chicago's south side. Hyde Park Project Contractor: Webb & Knapp Inc., Chicago. Architects: I. M. Pei & Associates, New York; Harry Weese & Associates, Chicago. General Contractor for Shopping Center: Inland Construction Co., Chicago.



galvanized masonry reinforcement

"You just can't beat Keywall," says Al Rubin, president of Arco Construction Company, Chicago, Illinois. "It's the easiest-to-handle joint reinforcement I know...my men really like to work with it. And I get the results I want. That's why I always urge the use of Keywall wherever joint reinforcement is specified."

By using Keywall masonry reinforcement on his jobs, Rubin gets stronger walls with greater crack resistance. This is one of the reasons he's recognized for quality masonry by leading Chicago architects and builders.

Rubin's men prefer Keywall. They use it right. Installation details, such as reinforcing corners so they are stronger than the wall itself...lapping joints in straight walls to assure continuous reinforcement... getting full embedment of reinforcement, even when lapping, without increasing thickness of masonry joints... are easily done with Keywall. These superior features, vital in the effectiveness of any reinforcement, make walls reinforced with Keywall stronger and more crack resistant at lower cost.

Keywall comes in easy-to-handle 200-foot rolls, galvanized for rust-free storage. Made for the following wall thicknesses: 4", 6", 8", 10" and 12".



These two Lake Meadows units on Chicago's south side are a prime example of Rubin's fine masonry work. Keywall was used throughout. Architect: Skidmore, Owens & Merrill, Chicago. General Contractor: Turner Construction Co., Chicago.

1

Rubin used Keywall on the International Minerals & Chemicals Company office building in suburban Skokie. Photographs (left) show interior and exterior masonry construction of this attractive building. Architect: Perkins & Will, Chicago. General Contractor: Turner Construction Co., Chicago.



Peoria 7, Illinois Keywall ● Keycorner ● Keymesh[®] ● Keystrip ● Welded Wire Fabric ● Nails

When the Effect is FLUSH ... The Hinge is SOSS

NATIONAL BANK OF DETROIT ARCHITECT: Albert Kahn Associated Architects & Engineers, Inc. BUILDER: Bryant & Detwiler Company INTERIOR DESIGN: W. B. Ford Design Associates, Inc.



(Below) This movie screen in the board room of the bank can be concealed by folding walnut panels fitted with Soss Invisible Hinges. When the panels are closed, the effect is flush.



For complete information and prices, see your building supply dealer or hardware dealer, or write us.



MANUFACTURING COMPANY

P.O. Box 38, Dept. AF-7 Harper Station • Detroit 13, Michigan



A typical National Bank of Detroit executive office. The door is fitted with Soss Invisible Hinges (see photo at left) so that when the door is closed (as seen in room interior photo above) the flush effect of the walls is sustained.

The clean, modern lines of the new main office of the National Bank of Detroit are maintained even to the flush effect of the doors, thanks to Soss Invisible Hinges, which are installed on every executive office door. When the desired effect is to create a smooth, "flush" appearance, Soss Invisible Hinges are a necessity.





The only way to eliminate protruding hinge butts. Entire hinge is hidden from view when door is closed. Available in wide range of sizes and finishes for nearly every wood and metal application.

OTHER QUALITY SOSS HARDWARE

Soss LEV-R-LATCH opens door with a flick of a finger, eliminates knob. In all standard finishes.



Soss OLIVE BUTT HINGE does the job superbly well in the event that butt hinges are mandatory. Architect: Minoru Yamasaki and Associates. General Contractor: Darin and Armstrong, Inc.

Reynolds "Jewel on Stilts" has INLOCK® leakproof gaskets

AAAAA

Dramatizing the multiplicity of uses for aluminum, the dazzling new Detroit headquarters building for the Great Lakes Sales Region of Reynolds Metals Company has Inlock Neoprene Structural Gaskets to protect its beauty against leaks permanently.

Scintillating with aluminum throughout, the nickname "jewel on stilts" fits perfectly. A major feature is the gold anodized sun screen on all four sides of the upper floors. Back of the screen, the curtain walls are leakproof with H-Type Inlock Gaskets.

Leaks are locked out by the separate filler strip which zips into place quickly. There's an everlasting pressure on the sealing edges, with no local pressure points. All joints and corners are injection molded.

Unusual savings are possible on maintenance costs with Inlock gaskets. They eliminate painting and recaulking, outmode mastic glazing methods. And installation from inside or outside is simple.

Write or phone us about your sealing problem. We will design a gasket to solve it perfectly. Inlock functional designs are patented, cannot be copied or duplicated. Send for latest catalog with many standard sections. Write Inland Manufacturing Division, 2747 Inland Ave., Dayton, Ohio.

Specify ...





INLAND MANUFACTURING DIVISION General Motors Corporation, Dayton, Ohio

Same and the second sec Marrie Contraction of the second seco One continuous Inlock Gasket, over 25 feet in length, at each vertical mullion-joins glass and panel sections of the 2nd and 3rd floors.

Naxxxx R



Smoke barriers, specified from the Aetnapak catalog of stock components, enabled Troup Junior High School and 18 other New Haven, Conn. schools to quickly comply with fire code regulations. For the



Aetna Steel Products Corporation, 730 Fifth Avenue, New York 19.



CONTRACTOR: R. A. CIVITELLO COMPANY . ARCHITECT: LESTER J. A. JULIANELLE

State

70-foot-long smoke screen-stairwell enclosure shown above, Aetna Steel delivered frame sections, doors and hardware within a week. No special engineering drawings or custom production were required.



Write for complete Aetnapak catalog:

ARE THE ACOUSTICAL CEILINGS YOU SPECIFY AS UP-TO-DATE AS THE BUILDING YOU DESIGN?

Ø

W.

To get all details on Silent Ceiling's unique architectural advantages, send coupon today!

The fast pace in most architects' offices makes it difficult to stay fully informed on every new material.

But before writing the specs for your next acoustical installation, it'll pay you to carefully check the unique features Eastern's "Silent Ceiling" offers. This all-new, all-metal acoustical ceiling is made up of steel panels (prefitted with sound absorbing pads) which are constructed with interlocking lips to assure a vibration-proof, micro-smooth surface.

Eastern's Silent Ceiling—available in modules up to 8' long—is designed to speed installation and is rated Class "A" in flame resistance.



F

601 Wicomico St., Baitimore 30, Md. Please send, without obligation, full details on the new Eastern "Silent Ceiling".

NAME

STREET

CITY. ZONE. STATE

FORUM

EDITOR-IN-CHIEF: Henry R. Luce EXECUTIVE ASSISTANT: Albert L. Furth PRESIDENT: Roy E. Larsen EDITORIAL DIRECTOR: Hedley Donovan

EDITOR Douglas Haskell, AIA

MANAGING EDITOR Joseph C. Hazen Jr., AIA

ART DIRECTOR Paul Grotz

ASSOCIATE EDITORS

David Allison, Peter Blake, AIA, Russell Bourne, David Carlson, Frank Fogarty, Jane Jacobs, Walter McQuade, AIA, Richard A. Miller, AIA, Ogden Tanner, AIA, Stephen G. Thompson, Mary Elizabeth Young, Richard Saunders (Washington), Allan Temko (West Coast)

ASSISTANT TO THE EDITOR

Mary Jane Lightbown

RESEARCH STAFF

Mireille Gerould, chief; Benita Galanti, Joan Mebane, Kip Mueller, Anne Peyton

ART STAFF

Ray Komai, associate art director; Martha Blake, Charlotte Winter, associates; Peter Bradford, Frank H. Medina, assistants

EDITORIAL ASSISTANTS

Anne Le Crenier, Henry Martin Ottmann, Ann Wilson

CONSULTANTS

Miles L. Colean, FAIA Lawrence Lessing

PUBLISHER Ralph Delahaye Paine Jr.

GENERAL MANAGER Charles B. Bear

ADVERTISING DIRECTOR S. C. Lawson

ARCHITECTURAL FORUM Published by TIME INC.

America rebuilding

A problem in continuity

Recalling how the discovery of America "fired the imagination of the Old World to the point of frenzy," the French Dominican priest R. L. Bruckberger asks himself what the first settlers found on the New Continent that so captivated them and all others? And he replies, "Their delight lay in finding nothing. They had to start afresh . . . as though they stood on the threshold of history." They were in paradise. "As they set foot upon those wild, abandoned shores, these Puritans first carefully shook from their feet the dust of the ancient European Babylon, then kneeled to bestow a pious kiss upon the Promised Land, the *tabula rasa* of their Utopia."

Tabula rasa, the "clean slate," is what America is no more. The offspring of the early Utopians are now born into a nation which is a world power with a built-up civilization — and a built-up country.

Yet that first deep habit persists, and the Song of the Broadaxe and the Song of the Open Road have been followed by the daily western on the tv screen. Accustomed to the thought of the great open lands next door, Americans find it hard to grasp that people unhappy in existing cities cannot simply move out and onward as before, creating new communities—or suburbs—and leaving old messes behind, as the pioneers did. Adjusted to independent, individual enterprise, the sons of the pioneers find with dismay that no matter where they build they are soon surrounded—and not always happily—and the value of what they do becomes dependent very largely on others.

Subtly and gradually there has grown a new frontier that ranges not outward from existing boundaries but *inward* into existing communities which the pious forefathers and their not so pious successors founded. Here lies the new job to be done, and it is a job of rebuilding; here, to paraphrase Carlyle, now lies America. Not yet is America suffused, however, with the idea of rebuilding. Not yet is there an avid appetite for rebuilding, or a considered approach to it, or a proper technique for it. Not yet has this new exploration been met with hallelujahs. *(continued)* The sheer scope and speed of the transformations that have already been effected, without hallelujahs, should nevertheless fire the imagination. Within less than a century the heart of Chicago was transformed from a city of wood to one of brick, then one of steel, but with elements of the wooden city still remaining. Los Angeles, which was, rather unbelievably, a nice little cowtown in 1880, population 11,000, became successively an orange town, a retirement town, a movie town, an oil town, an air center, a manufacturing center, and the world's biggest roadtown; and the bits and pieces of all this stand intermingled.

Sums spent for individual building renovation are big but give only a partial picture of America's never-ending redevelopment. Adequate statistics do not exist, so building economists such as Miles Colean have furnished shrewd approximations. According to Colean, for every three dollars that the American spends on new construction he spends another dollar and more on maintenance and repairs, or "patch and paint work." The annual maintenance and repair bill is moving upward from \$20 billion. Beyond that there are alterations and additions of all kinds, moving upward toward \$12 billion, and of this the share devoted to houses and buildings is over \$8 billion.

The full scope of rebuilding

A far more vivid notion of the coming rebuilding problem may be gained by contemplating the three so-called "explosions" that will reinforce one another. The well advertised population explosion means, according to the best prognosticators, that the year 1970 will see 213 million Americans compared with 178 million today, and the year 2000 may perhaps see as many as 375 million. Add a predicted gain for the decade of 10 to 20 million in automobile population, "exploding" onto perhaps \$60 billion worth of new highways. Top it with a \$500 billion boom in new construction—equal in value, though of course not in bulk, to all existing structures.

Now the point is that all of this will happen on the same total land area, no more; and inevitably a great deal will have to be changed in existing built-up areas. Since one man's building stands in everyman's city, his single structure, even if he builds it completely new, is in respect to the city as a whole merely an alteration. And ever more often the individual building, too, may have to be altered in the future rather than wildly torn down to make way for a new one, as America husbands her resources under continuing defense burdens. What this all adds up to is America Rebuilding.

Now in all such discussions of growth and trend, there is one hidden but rock-hard assumption—the assumption that American building is a continuity. This might seem hardly worth mentioning, it is so self-evident. Yet it works squarely against ingrained American habit, the habit of considering only new buildings as significant—and as a neverending series of separate undertakings on fresh land viewed as *tabula rasa*.

America lacks a controlling philosophy which considers its history as a continuity, its cities as a continuity, its architecture as a continuity, and the life cycle of the individual structure as one, to be so planned from the very beginning of each undertaking. The cities of America are full of "fresh starts," and so is its architecture, and so is its building technology. The consequence is too much new building that disrupts instead of furthering city organization, too much new architecture that is not adjusted to the existing city picture, and new building that is not fitted for efficient conversion—whether by addition, remodeling, or demolition—not to speak of remodeling that fits with nothing.

The problem of restoring harmonious continuity is the key problem to which the editors have devoted this issue of FORUM. They have not forgotten that it must be achieved mainly by voluntary agreement and mutual adjustment, not by superimposed authority. The issue is divided into four sections: rebuilding as the art of cities, as building economics, as building technology, and as architecture. Continuity is conceived as no relapse into the past, no surrender. It is viewed as the essential economy of effective progress. Nor does it betray the great American dream. After many a deviation and mistake, the evidence is that Americans are ready to apply themselves to the new exploration: really converting the Promised Land of the forefathers into the New Jerusalem for the children.



America rebuilding









CITIES





College Hill map shows proposed 25-year plan for organic redevelopment. The shaded area indicates the extent to which the college campuses are likely to grow. Numbers refer to the following landmarks: (1) the First Baptist Church; (2) St. John's Cathedral; (3) Benefit Street; (4) Roger Williams Spring; (5) the Rhode Island School of Design; (6) Brown University; (7) Pembroke College; and (8) the Hope High School and its grounds. The panoramic view, below, shows most of College Hill today, with its sadly rundown water front on the Providence River in the foreground. The area at right is centered on South Main Street; the white spire visible at far left is that of the First Baptist Church.



New life for yesterday's city

Providence hopes to preserve its architectural tradition by integrating structures of the past with plans for the future

RIVER

NT

The story of College Hill in Providence, R. I., is a fine demonstration of what can happen if a band of enthusiastic amateurs and idealistic professionals decides to tackle the impossible.

The impossible, in this case, is a 400-acre neighborhood about two minutes' drive from downtown Providence (see plan and panoramic view, opposite). This neighborhood-College Hill-has been largely and happily by-passed by progress (one reason: it is tough to build a rhinestone factory on a 30-degree slope); it contains three college campuses-Brown, Pembroke, Rhode Island School of Design; it boasts the lovely, Gibbs-inspired First Baptist Church of 1775, and the charming, neo-Gothic, Episcopal St. John's Cathedral of 1810; it also includes numerous, handsome old houses, ranging from earliest Colonial, through stately Greek Revival, to exuberant Victorian, some in fine shape, most of them falling apart due to neglect. It has, moreover, two distinct slum areas-a predominantly Negro slum to the north, a predominantly Portuguese slum to the south; and, finally, it can point to a liberal dose of historic associations: Roger Williams built his settlement at the foot of College Hill, Washington and Revere stopped off and slept in houses along Benefit Street.

The routine way of rebuilding as heterogeneous an area as this would probably be to encourage the colleges to handle their own problems with whatever aid might be available to them, and to hand over everything else to a developer to tear down and rebuild from scratch. There would be a few, polite obituary notices lamenting the sad loss of historic Benefit Street, and there would be some irate editorials about inadequate relocation of displaced families; but progress must be served.

Instead, College Hill has taken the first steps to becoming an organically renewed community. It has fully recognized the problem of urban continuity by determining to preserve what is best in its past, and it has just as fully recognized the problem of urban growth by determining to find a place for new construction. And in doing these things, College Hill has avoided the mistakes of preservationists in areas like Georgetown (where all new construction must conform to outdated styles and standards), and the equally serious mistakes of ruthless modernists elsewhere, who have plunked big (and foreign-looking) projects into the midst of established neighborhoods.

Initiative from below

The spark that touched off a remarkable series of chain reactions at College Hill was a rather insensitive move some eight years ago by the management of Brown University. At that time, Brown decided to build a vast complex of bulky, false-Colonial dormitories and tore down some 30 historically valuable houses, including Governor Padelford's house, to clear the site. Providence preservationists were up in arms, but could do nothing to stop the destruction. They did, however, determine to stop any more of this architectural erosion and turned to the City Plan Commission for help.

The Plan Commission, in turn, applied for aid under Section 314 in the Federal Housing Act which empowers the federal Urban Renewal Administration to make grants to specific cities for certain "demonstration studies." The Commission persuaded federal authorities to help finance a study of how an important, historic area might be renewed. The federal government chipped in with close to \$50,000, the Preservation Society raised about \$20,000 by popular subscription, and the Plan Commission agreed to supply an additional amount (in staff services, etc.) to bring the city's share of the cost up to 50 per cent of what the Government had provided.

There is nothing new about a preservationist society raising money to save a famous building or a famous street. But there is something distinctly new about the realization, on the part of the Providence preservationists, that their objectives could be attained only if they were linked to proposals for intelligent, future growth. The Providence preservationists never thought that they could (or should) make a museum out of College Hill; they did think, however, that there was a legitimate place for tradition in any plans for the future.

Help from many quarters

With the funds in hand, the Plan Commission retained Blair Associates to help conduct the College Hill demonstration study. Before long, the Providence demonstrators discovered that they had available to them numerous resources in unexpected places on which to draw for help.

There was, for example, Dean Darby Betts of St. John's Cathedral. Dean Betts, who had once studied architecture, helped develop a program under which the Diocese would acquire historically valuable but run-down houses around St. John's Cathedral, remodel them from foundations to roof, and turn them into housing for the aged. There was also Mrs. Malcolm Chace, a well-to-do preservationist who decided to buy more than a dozen run-down, but historically valuable houses at the north end of Benefit Street-the "spine" of College Hill-and restore them completely, leaving only the interiors to be fixed up by families wishing to buy the 2 to 4,000 square foot shells for from \$11,500 to \$18,000. There was Austin Daley, at City Hall, who went to work in the College Hill slum areas and managed to get some 500 dwelling units brought up to standard by their landlords simply by enforcing the minimum housing laws. There was the National Park Service which-it suddenly turned out-was perfectly willing to consider making the area around the Roger Williams Spring a National







PHOTOS: 6. RICHARD BENJAMIN; 8. BROWN PHOTO LAB.; 9. RHODE ISLAND SCHOOL OF DESIGN.



College Hill, as it looks today, is shown in these photos; the drawings, from the demonstration study, show how it might look tomorrow. Opposite are typical, residential areas: (1) Early 19th century houses on Benefit Street; (2) Georgian house to the south of the Brown Campus; (3) suggested renewal of backyard area, with off-street parking and small, communal playgrounds; (4) a row of houses remodeled by Mrs. Chace on Benefit Street; and (5) suggested off-street parking behind Benefit Street, designed to take advantage of sloping terrain. Above and below are shown commercial and institutional areas; (6) a typical shopping area on Thayer Street; (7) a proposal for a small, pedestrian shopping mall; (8) the First Baptist Church, built in 1775; and (9) the new dormitories of the Rhode Island School of Design, completed recently by Architects Robinson, Green & Beretta, with Pietro Belluschi as consultant. These modern buildings blend well with existing structures on College Hill.

Park. There was a young architect, William D. Warner, who, as project director, covered every square inch of College Hill, took hundreds of photographs, studied ways of relating modern structures to neighboring old ones. There was the fact that, as one preservationist put it, "the atmosphere down at our City Hall was exceptionally good-the Plan Commission put in much more time and energy than they were being paid for." There were the colleges on College Hill which-after some clumsy, initial moves-became staunch allies of the project. And, finally, there was the Providence Redevelopment Agency-one of the most active in the country-which was constantly studying potential redevelopment sites within and around the College Hill area, and which was to play an increasingly important role as the study neared completion (of this, more in a moment).

A program for continuity

Last summer, after two years of concerted effort on the part of these Providence citizens and agencies, the demonstration study was completed. It was presented in a handsomely illustrated, 213-page booklet which detailed the problems of historic preservation, of zoning, traffic, parking, slum clearance, etc., listed specific proposals for the renewal of College Hill, and then presented a program for communal action. The study was one of the finest jobs of its kind ever done in the U.S. and attracted immediate public support, both in Providence and throughout the rest of the State.

In brief, the study proposed that the milelong Benefit Street be turned into a "historic trail," with an enlarged Roger Williams Park and Museum near the north end of the street, and with tourist facilities near its south end, along Providence's sadly neglected waterfront. The study further proposed a new shopping center along Thayer Street, at the eastern fringe of College Hill, in place of the honkytonk shopping facilities that now exist in the area. And it finally proposed the rehabilitation of numerous streets and blocks on College Hill by various means: by the restoration of historically valuable structures; by the removal and possible replacement of unsalvageable buildings (the replacement, generally, taking the form of modern houses carefully related in form and scale to neighboring old ones); and by the introduction of pedestrian walks, parks, playgrounds

and off-street parking areas. The drawing, opposite, shows the sort of result envisaged by the study.

First steps toward realization

So far, so good. But beautiful dreams have been put on paper before, only to die in the cold light of daily reality. Will this be the fate of the College Hill study?

Apparently not. In the few months since the study was first published, the following concrete steps have been taken:

• a permanent College Hill committee has been formed, with Dean Betts as chairman, to guide the development of the proposed plans;

▶ an act providing for "Historic Area Zoning" (as proposed in the original study) was passed by the Rhode Island General Assembly during its 1959 session and made applicable to other towns in the State as well. Significantly, owing to the influence of Dean Betts, this farsighted act does *not* repeat the error of Georgetown's proprietors in demanding that new construction must be "look-alike," fake-antique. Five other Rhode Island towns are about to enact Historic Area zoning ordinances as envisaged by the new act;



▶ a bill to create a historic park at the site of Roger Williams Spring will come up before Congress at its next session;

▶ there has been an intense interest in the proposal on the part of Providence banks (the R. I. Hospital Trust put a copy of the report on every executive's desk), on the part of the College Hill institutions, and on the part of both local and out-of-town developers;

▶ finally, and most importantly, the Providence Redevelopment Agency decided, last month, to extend its Randall Square Project area to take in a large portion of College Hill, thus preparing the worst slum areas on College Hill for possible renewal under Title I (see map below).

To most of the enthusiastic amateurs connected with the study, these indications of progress are still hard to believe. For the past ten years or so, Providence—like many other New England towns—has been hard hit by the flight of certain industries to the South. Providence's economic future did not look bright. Still, the City of Philadelphia seemed to have similar problems a dozen years ago, yet it managed to push ahead simply because its various citizens' groups provided the initial impetus. It looks as if the story might be repeated in Providence.

The chain reaction started at College Hill has spread to other New England areas as well: at Newport, Yale's Christopher Tunnard is conducting a similar study, and another effort is under way at Portsmouth, N. H. But the most important, immediate dividend of the College Hill study may be this: impressed by the College Hill effort, the Urban Renewal Administration a year ago offered a grant to Providence for another "Demonstration Study," of the downtown area. This study will be completed in the spring and should have an important impact upon the future development of the city.

In 1953, when the preservationists first started their hue and cry, few "realists" thought they had a chance to achieve more than a couple of newspaper headlines. Today, as a result of dedicated citizen-action and enlightened support from City Hall, Providence is in a state of ferment and, despite many remaining obstacles, great things seem within reach. Not every urban renewal problem can be tackled this way; but many of them can be, and the approach tried in Providence seems more suitable to our society than renewal by fiat—from above.

New urban renewal area now being studied is shown on map (left), also the degree to which it overlaps the College Hill area. Most of remainder of College Hill is covered by campuses.



Study proposes that fine houses on College Hill (above) be preserved and integrated with new ones of similar scale (below).



America rebuilding

The exceptional comebacks

三日本の

Without complete clearance, few decaying neighborhoods have reestablished themselves; but from those that have, a hope for renewal in continuity may emerge

Important as they seem today, the precedents for rebuilding America's cities will not be the dramatic clean-slate projects such as Pittsburgh's Golden Triangle office complex, New York's cultural center at Lincoln Square, or the housing at Chicago's Lake Meadows (below). Instead, future renewal will likely follow patterns now being set in the Society Hill projects in Philadelphia or in the Hyde Park-Kenwood community renewal program to the south of Lake Meadows (sketch right)-efforts where clearance and reconstruction are strategically knitted into subtle renewal programs of many dimensions. Perhaps even a few districts such as Jackson Square in San Francisco (page 101), where brand-new building is practically unknown, or Factor's Walk in Savannah (page 102), where the touch of remodeling has been so

THE LEWELLYN STUDIO



Lake Meadows housing in Chicago was built on cleared land.

light as to be hardly noticed, may bulk as important to the future as today's biggest Title I projects. Indeed, if a project like Eugene, Oregon's Courthouse Square Civic Center (page 100) is a proper portent, American cities large and small will tie civic improvements, private construction, and Title I renewal into programs of integrated city rebuilding. And in these programs the distinction between building and rebuilding will be all but erased.

This new pattern does not mean that largescale projects will be unnecessary. Where decay has eaten too deep, or where a neighborhood has neither saving grace nor heart, large-scale clearance and reconstruction may be the only solution. In the case of Lake Meadows, at least, the replacement of what may well have been the nation's number one slum with apartment towers in a wide grass meadow was doubtless a wise exorcism. In fact, Architect George Fred Keck, a long-time resident of the Hyde Park-Kenwood area, believes that the community around the University of Chicago can be renewed short of complete clearance primarily because the closer-in Lake Meadows section was completely cleared. "Now, instead of a slum, we have the best neighborhood in Chicago next door," says Keck.

Julian Levi, executive director of the nonofficial South East Chicago Commission, gadflyprodders of Hyde Park-Kenwood's renewal, draws the distinction between the two neighborhoods this way: "In Lake Meadows they were working on a corpse. Here we've got a live patient, and we try not to forget it."

The trick, of course, is to match the treatment to the case. But until recently, too many public officials, businessmen's committees, and city planners tended to consider any neighborhood as the "corpus delicti" for a "renewal"



munity of Hyde Park-Kenwood is obtaining a focus in civic space and civic spirit in the new shopping plaza and town-house squares now being built by Webb & Knapp. The project by Architects I.M. Pei and Harry Weese replaces decayed stores in the core of the area.





Fifty-fifth Street before and after.





Harper Avenue before and after.

N D 5 1000 D 4 2003 ILLINOIS CENTRAL RE 1000 D 4 100

Transformation of Chicago's gloomy 55th Street into a residential square surrounding two ten-story apartment buildings (1) and a stretch of Harper Avenue nearby into an elegant small town-house square (2) are parts of the Title I project now bringing new residential patterns to the heart of Hyde Park-Kenwood. A smaller pedestrian square in the shopping center (3), now being completed, proves a pleasant contrast to the stores it replaced, while the first of nearly 250 owner-occupied town houses (4) proves that city living can be attractive. (The town houses sell in a range between \$19,000 and \$38,000.) Nearby, the University of Chicago is doing its part in the 55th Street transformation by constructing a new men's residence hall (5) by Architect Harry Weese, while in other parts of the community other institutions, schools, churches, and groups of individuals are preparing to participate in the new renewal plan.







program. Too often, as in Brooklyn's historic Heights section, a neighborhood fast renewing itself has had to contend with unsympathetic renewal schemes or antithetical civic monuments at its peripheries, imposed upon it unwanted.

On the other hand, antiquarians and quick, slick promoters tended to hang shutters on useless buildings and set old lanterns on antiquated streets needing far more drastic reconstruction. In Savannah, Georgia, for example, hard-by some fine, no-nonsense commercial rebuilding at Factors' Walk, a useless gas manufacturing plant was renovated into "colonial" houses and apartments. Ingenious as such performances may be, they miss the point as sadly as the most grandiose official "renewal" plans.

Unfortunately for people who like their answers in simples, it is not enough simply to mix treatments either. For every subtle and proper mixture of saved buildings and new buildings like Providence's College Hill (page 90), there are ten cases of arbitrary or insensitive mixtures such as St. Louis' soon-to-becomplete Plaza Square renewal where two churches mixed with six slab towers merely confuse the otherwise orderly arrangement.

Worse yet is Norfolk, Virginia's "Colonial Square," a 20-acre section of the 140-acre downtown renewal, where, according to the renewal plan, three surviving colonial buildings will be surrounded by a "colonial composite—a more modern version of the old village green."

Even more common than Norfolk's sadly misplaced effort at continuity is the effort to restore the *appearance* of the past at all costs. New Orleans' Vieux Carré Commission, for example, with legal authority to enforce their edicts, insists that all portions of a structure, even those parts behind high garden walls, be restored in the ancient style of the Quarter. Except for the window air conditioners, all new construction must look as if it is a centuryand-a-half old. Recently the style fetish took its ultimate turn when a filling station was approved because it was designed to match a segment of old slave quarters on the site.

The truer values

However, pleasant these nostalgic tokens may be, to save them alone is to miss the point. Restoring old buildings and establishing ersatz architectural cohesion are dilettante acts compared to preserving sound social structures, maintaining important investments in structures, and continuing *fundamental* characteristics of community form and design. Indeed, if a single one of these values is present in the first place, it calls for more careful nourishment in a renewal program than the finest piece of "architecture worth saving."

Actually, to nourish these values, it is not so much what's done as how it's done that's important. The first step in the Hyde Park-Kenwood renewal, for example, was to clear and rebuild, under Title I, a delinquent and decayed commercial stretch of 55th Street. With this core area renewal under way, a community renewal plan was developed. This plan, which was approved in the fall of 1958, delineates a few further clearance areas around the periphery of the community and next to existing parks, public facilities, and institutions. Now at last, with the new Title I "town houses" being occupied and the residents of the community possessing a clear understanding of the further stages of the plan, the Hyde Park-Kenwood Community Conference is planning an all-out, house-to-house rehabilitation campaign. With strict code enforcement teased out of City Hall and a \$30 million local mortgage kitty available, Conference Director Harry Bovshow is hopefully mapping a successful private rehabilitation program.

A strategic renewal need not be the sole pre-



Rape of the front yard. The carefully planned, positive efforts to rebuild a better America are the subject of this issue of FORUM. Unfortunately, they are far outnumbered by the unplanned, negative incidents of unbuilding that are continually taking place everywhere. For example: the commercial violation of a residential front yard (above) fostered by careless zoning laws or lax administration. This example of unbuilding and the others scattered through this issue are all from the recent "Plus and Minus" exhibition of Cincinnati's Contemporary Arts Center, which recently took a hard look around the city. Courthouse Square in Eugene, Oregon was enlarged by one-half block when the courthouse (top) was replaced by a new structure by Architects Wilmsen & Endicott (center). Included in the \$2.5 million project, which was based on a master plan prepared five years ago by a collaborative group of nearly two dozen local architeets, was a parking structure for 229 cars and a handsome new landscape for the Square itself. Around the edges of the project are some related private ventures including an old structure remodeled into a legal center and a pedestrian walk developed through an old alley connecting the Square to Eugene's main street (photos right). Several owners of buildings with rear ends facing the Square are remodeling them. Next stage in the public phase of the plan is a new municipal center adjacent to the existing development. The site for the new development is part of a Title I renewal area. Next important stage in the private phase of the plan is the construction of a new United States National Bank on the square.

rogative of a big-city neighborhood. Eugene, Oregon, a county seat with a population of 45,000, is in the midst of a many-faceted reconstruction of her Courthouse Square area, thanks to a master plan prepared by a committee of local architects five years ago (page 100). Actually, the big city has a harder time of it. Without an articulate leadership and the power of the University of Chicago, the Hyde Park-Kenwood program probably would not have had a chance in the vast reaches of Chicago.

Fortunately, however, the lesson of Hyde Park-Kenwood's program has not been lost on the city. An omnibus municipal agency, termed the Community Conservation Board, has been established to steer similar programs through the maze of federal, state, and local assistance programs and to coordinate the planning, legal, and operating functions of some 12 other municipal organizations which are involved in one phase of urban renewal or another.

This municipal coordinating agency should be a salubrious example to cities elsewhere, where inter- and intra-government confusion has caused some tragic strategic errors in renewal. Despite the requirement of a community renewal plan in the Housing Act of 1954, too many cities blunder their way through renewal programs. ("It's hard enough," says one HHFA official, "to get them to face Mecca.")

How rare, for example, is the case of the Title I renewal area of Philadelphia's Society Hill. This project overlooking the Delaware River (FORUM, Dec. '58) was ready to go when the completion of the new produce market



Courthouse Square under construction and complete. . . .

a remodeled office building nearby and an alley converted to a pedestrian way.







San Francisco's Jackson Square, which is not a square at all but a collection of renovated buildings on Jackson, Gold, and Pacific Streets between Montgomery and Sansome (photos right), started its renewal in the late thirties when the eity's serious artists, joined by a few architects and decorators, began converting loft spaces to studios. According to one of these early residents: "It was too good a thing, too close to downtown to remain unnoticed. Inexorably the decorators moved in, rents went up, and the artists moved out—to North Beach, Potrero Hill, and the Fillmore District."

But with the intrusion of decorators and wholesale showrooms into the Jackson Square neighborhood came new amenities such as street trees. (San Francisco is virtually a treeless city.) Moreover, although the decorators predominate, there is much else going on in Jackson Square which is good for the eity as a whole. A little theater group, the Company of the Golden Hind, has taken over an old music hall next to Herman Miller Co.'s showroom. Architect John Bolles has established a handsome commercial art gallery near his own building.

As in many other self-renewing areas, Jackson Square, containing old buildings of the highest value, garish structures left from the "Barbary Coast" or later "International Settlement" days on Pacific Street, and nondescript structures of later days, should now consider how much of this past should be preserved. The city, for its part, should consider ways of bringing enclaves such as Jackson Square into the mainstream of the city instead of looking on them as islands of preciosity.

caused the buildings on the site, formerly used by food wholesalers now relocated in the new market, to be vacated. Thus, a painful time of uncertainty was avoided.

Graceful houses and obstinate residents

While the replacement of old market streets with urbane apartment towers and town-house groups will provide an important anchor for Society Hill, the telling circumstances is the existence of hundreds of Revolutionary Period houses on the streets nearby. As any Philadelphia realtor knows, there has been a slow trend back to these houses ever since the end of World War II, when architects, advertising men, and a liberal sprinkling of *The Saturday Evening Post* editors started resettling the area. (The trend was recently aided by Mayor Richardson Dilworth, who has a new \$150,000 home on Society Hill.)

On Society Hill, as in many another neighborhood from Washington's Georgetown to the backside of Boston's Beacon Hill, renewal occurred despite bad structural and sanitary conditions, mixed and incompatible land use, and inadequate open space and public facilities. Obviously, these sobering indices, important as they are, do not signal the intangible value of a









Factors' Walk, a group of buildings along Savannah, Georgia's river front, was constantly being built and rebuilt through the prosperous nineteenth century. The Cotton Exchange (left, photo at right), constructed in 1887, straddles a eity street which bisects the row of warehouse-office buildings and was one of the first buildings in the U.S. to use "air-rights." The handsome buildings, generally two stories high when viewed from the bluff side and five stories high when viewed from the riverfront, fell into a period of neglect with the decline in southern cotton fortunes.

In 1952, when the Cotton Exchange closed, the Chamber of Commerce bought and restored the structure for its own use (Architects: Levy & Kiley), thus stimulating a revival of the historic Walk. In 1956, the city joined the effort by remodeling the Thomas Gamble Building (right). (Architects for the remodeling were Cletus W. & William P. Bergen.) Today, fresh paint and air conditioning signify rehabilitation elsewhere on the Walk.

handsome old landmark like Benefit Street in Providence's College Hill renewal, nor do they reveal the instinctive remodeling possibilities in a bedraggled Jackson Square warehouse in San Francisco.

Indeed, Jackson Square, which inside of this decade snowballed from an area of abandoned honky-tonks and whisky warehouses into a posh, elegant, and occasionally overdecorated center for the decorative arts (page 101), is perhaps the nation's top recent example of private renewal. The question is, why does this activity occur in sections such as Jackson Square when it is so hard to start elsewhere?

The answer is obtained, quite simply, by consulting the people and looking at the areas they choose. In a word, they are alike. Both the areas and the people in them are unusual. Russell Lynes would call the people "tastemakers." Normally, they are artists, writers, teachers, and professional people, naturally led by architects and planners unwilling to take their own suburban or high-rise medicine. The areas are identifiable as somewhat special "places," normally convenient to downtown and (unfortunately for the cause of American democracy) segregated or naturally immune from pressures of Negro settlement. (Possible exception: Hyde Park-Kenwood, where after initial concern, Negro settlement eased up to near 40 per cent without any local panic-an almost unheard-of phenomenon.) In these neighborhoods, there is normally an intimate small scale to buildings and streets. Row-house neighborhoods, for instance, have a far better chance than high-rise or apartment-house districts.



Magdalen Street in Norwich, England, was selected as a joint demonstration by the Civic Trust and the Norwich City Council of how an area could be improved, without major alterations or expense, if all concerned could be persuaded to work together. Typical Magdalen Street (before and after photos, right) had lost much of its charm and character. The answer was to assess the street as a whole, and with the help of the experienced eyes of Industrial Designer Mischa Black of the Design Research Unit and Norwich Architect Bernard Feilden. After numerous meetings with local merchants, the designers developed a manual which stated general principles and objectives and established color and graphics systems for the street. Public agencies cooperated as the local merchants began translating the manual into the renovation of their own shops. Street lighting poles, for example, were removed, and new lights were attached to buildings. The church and the bank were spotlighted at night to substitute for obtrusive street lighting.

Districts which look inward to small parks or central open spaces come back quicker than those on endless grid-pattern streets.

Time and again, from New York's Sutton Place renewal in the twenties to the Jackson Square renewal in the fifties, the right combination of ingenious individuals and distinctive neighborhood qualities has resulted in renewal, regardless of odds. But only now, a decade after the evolution of renewal as a public venture, are the cases of natural renewal being occasionally stimulated by public authority. From such small ventures as the \$40,000 remodeling of the Thomas Gamble Building on Factors' Walk in Savannah for a library and municipal offices and a \$76,000 remodeling of the old Cotton Exchange for a Chamber of Commerce Headquarters (page 102), to such major integrations as the massive program now successfully launched in Hyde Park-Kenwood. public programs and private investment are here and there in pursuit of the same goals. And as small as these beginnings may be compared to future urban rebuilding (page 104) they are, nevertheless, hopeful portents.

In many communities, the technique of joint public and private effort may be hard to learn. In these places, a beginning might be made with such common materials as street signs, canvas awnings, and paint. As was discovered in the experimental Magdalen Street project in Norwich, England (right), such a project is enough to challenge the best designers, the soundest economists, and the most patient politicians.

Actually, it's not so much what's done as how it's done that counts.





Bank before and after. . . .

and comparable views farther down the street.





Architectural Forum / January 1960

The future of cities

Despite economists' predictions that metropolitan "gray areas" are doomed, a FORUM roundup of urbanists indicates that the city must and can be rescued

It is impossible to miss the note of dismay that pervades current economic writings on urban problems. What they chronicle is decline, and the authors generally offer no cure but only pious sentiments concerning the future.

At the start of the last decade, American cities were declining only relatively: they were still growing in population, trade, and jobs but not so fast as the surrounding suburbs. Today the decline of central cities has begun to appear absolute. The graphs representing the central cities' share of things, as shown in Raymond Vernon's study (at the Harvard School of Business Administration) on The Changing Economic Function of the Central City, all point downward. Boston, Chicago, Detroit, Pittsburgh, St. Louis, and San Francisco all had absolute declines in number of manufacturing jobs and were approching toward actual declines in commerce. New York is the most prominent city that has suffered an absolute decline in population but far from the only one. How could this be? Is not new growth in America 85 per cent urban?

The answer is that the vaunted urban population growth is indeed occurring in metropolitan regions but at the fringes, and not at the centers. Consequently the central cities are declining in the very face of urban growth.

Because of this over-all decline, the successful examples of spot or area rebuilding reported on previous pages have had to be labeled for the moment as "the exceptional comebacks." Most of the economists believe that total slum clearance and city rehabilitation would call for subsidies so massive as to wreck the federal budget. This is generally said with regret and swathed in loquacious politeness.

Of course economists have been thoroughly wrong before in predicting what could not be done, and they speak always out of a prevailing climate. (For example, they may have other interests more pressing in their opinion.) At the exact moment of the economists' dire declarations about cities, the national economy as a whole is doing reasonably well despite a federal budget half devoted to defense, despite massive subsidies to agriculture, and to the automotive and fuel industries too in the form of a \$40 billion program of federally subsidized highways. Then again intense study of city economics is still new, and especially the study of all the city's "little local economies." As the Committee for Economic Development itself has pointed out, "the situation is comparable to our lack of knowledge about the national economy prior to about 30 years ago, when we began to develop our first system of national accounts with which to measure the national economy." Moreover, economists tend to base predictions on the present state of the arts, crediting the effect of past major inventions but not daring to imagine major ones in the future. So General Otto Nelson, of New York Life, has trenchantly declared with respect to city rebuilding: "The things economists predict will happen only if we are stupid."

The critical problem: "gray areas"

After all these skepticisms regarding economic prediction have been registered, it still remains highly prudent to take these predictions into account and to rely on economic motives, especially in dealing with the crux of the problem of arresting city deterioration by rebuilding, the rescue of the so-called "gray areas."

"Gray areas" are called gray because they are not clearly one thing or another, and of all city areas their prospects look the most hopeless. They lie neither at the city center (which still retains some power as a magnet) nor at the fringe in the suburbs (which have space for living); their boundaries are amorphous; their building uses are mixed residential, commercial, and industrial. Charles Blessing, Director of Planning in the City of Detroit, declares mordantly that "gray areas as used in recent economic studies include all of the corporate city except the central business district itself." Gray areas as commonly described are far from being all slum, containing as they do good sound districts of middle-class housing; but these are nevertheless the areas in which slums start soonest. Dr. Luther Gulick calls them "massed areas of contiguous obsolescence."

In dealing with these great gray areas as the core of the city problem, FORUM agreed with Dr. Gulick and Coleman Woodbury that the frequent habit of "trying to recreate the physical cities of the late nineteenth and early twentieth centuries" is nonsense. So the magazine asked top-rank urban economists and planners what should be done to put gray areas on a more solid footing-and a new one. Should deteriorating gray areas be left alone to find their own market level? Or should new uses be encouraged? In the city of the future what kinds of use belong in today's gray areas, and can support themselves there? What changes in federal, state, or municipal housing policy might reverse residential decline and stimulate upturn? Could codes and code enforcement secure continued improvement? And what could be done by spot renovation?

Aid needed

Only Charles Blessing, speaking out of his experience in Detroit; gave the view that indefinite deterioration was not in the cards on a market basis: the others said it was, but that the city could simply not let it happen. "The social cost in human suffering and degradation is too great," said Dr. Gulick, and the economic cost to the city too heavy. Moreover, said he, "even zero valuation will not induce anyone to buy and do something with the worst properties, and without these nothing can be started up," so solutions cannot be obtained by "natural market" economics. Blessing thought that a federal expenditure equal to the investment in foreign aid—\$70 billion in 15 years would suffice to help cities revitalize themselves. Even now, Blessing deposed, Detroit is moving systematically to rebuild 11 per cent of the city.

All assumed that housing would be the mainstay of the revitalized gray area, and James Felt, realtor chairman of the New York City Planning Commission, thought that in New York moderate-priced rental and cooperative housing in renewal areas could compete effectively with VA and FHA housing in the outlying suburbs, because of reduction in travel time and cost of commutation.

Housing needed

It was Catherine Bauer, housing expert at the University of California, who was most emphatic that gray-area problems are closely related to the over-all housing situation. "These vast areas require a continuous process of redevelopment and drastic modernization serving all income groups," she said. This process can never even get started as long as federal policies result primarily in a chronic housing

UNBUILDING AMERICA



Desecration on the corner. Of all the country's junked-up street corners perhaps the most exemplary is the corner of Cincinnati's Central Avenue and West Sixth Street. Here, backside architecture (Central Market, at left), grotesque municipal street furniture, and a particularly clangorous collection of signs have combined to destroy a colorful place for neighborhood lounging.

shortage and in limiting the market for new housing almost wholly to upper-income families. "We are barely meeting the minimum demands for new housing created by family formation and increased population in our cities," she quoted Builder Carl Mitnick of San Francisco as saying, "and we are doing absolutely nothing to forestall further deterioration in our existing stock of houses." "The shortage keeps old housing overvalued," continued Miss Bauer, "insures the constant creation of new slums instead of modernization, maximizing the evil effects of racial discrimination, and makes redevelopment excessively expensive. The limited market for new housing keeps most families penned up in old structures, and insures a continuance of the shortage. Under these conditions, the handful of heavily subsidized, highdensity apartments produced by present renewal policy, by and large solely for very high-income or very low-income families, probably only makes the situation worse for gray areas in general."

Economic free choice needed

Others, like Miss Bauer, linked the housing shortage in general with the special "gray area" problem: a big and growing proportion of its inhabitants is, so to speak, place-locked. Negroes, Puerto Ricans, Mexicans, and Orientals in particular cannot move even when they have the money. Mr. David A. Wallace, director of the Planning Council of The Greater Baltimore Committee, Inc. was especially emphatic on this aspect. To loosen up those solid pockets of racial minority surrounded by blight that drag down gray areas, he proposed major programs to a) open up opportunities for Negro housing in the suburbs, and b) obtain nondiscriminatory laws securing scatteration of Negro communities within cities. Manifestly not an easy thing to accomplish, having possibilities of backfiring if not skillfully managed, this would of course lift that monopoly advantage which the slum landlord derives from captive occupancies, throwing entire areas into deterioration.

Community pattern needed

Such reasoning was only one manifestation of the importance attached by planners to physical pattern as a key factor in urban economics —a factor so sadly neglected by conventional economists. Chester Rapkin of the University

of Pennsylvania's Institute for Urban Studies was one, but not the only one, who emphasized that "the key to renewal of gray areas is scale." Although, said he, a large potential demand exists for moderately priced accommodations in these locations, "the demand will be forthcoming only if the scale of operations is large enough to create a totally new environment." Such environment, he did not trouble to add, could often supply a greater scale of effective spaciousness for individual families. Useless, said he, to try renovating isolated structures or even blocks surrounded by acres of deterioration. And Felt, enlarging on this point, emphasized importance of new zoning, and moreover of a "community renewal program" making the natural local communities within a big city the units for study and action.

The influence of physical pattern on economic demand in a real estate situation came up again and again in other declarations: some emphasized the value of spotting civic improvements such as schools strategically to encourage Felt's local communities (in cities most inhabitants distinctly "buy" a neighborhood and not simply a dwelling), and others stressed the importance of cutting new traffic and parking patterns to improve within-city access.

Some industry can return

In the matter of industrial uses, nothing very radical was suggested. Obviously, said Mr. James Saalberg of the Detroit City Planning staff, supplementing the answers of Charles Blessing, modern technology has made old industrial plants within the city obsolete, but specialized industries can thrive again within today's gray areas, provided only that planning gives them rapid access and "elbow room." And nobody has yet fully explored how greatly some industries might benefit from in-city location, and how much more compactly modern industrial plant, like the later automobile, can be built, compared to the sprawling models which were justified by efficiency calculations but rested really on a primitive concept of inefficient space use (see FORUM, Dec. '59, on in-city industrial parks). Moreover, nobody has yet spelled out how beneficently the new industrial compactness might work if coupled systematically with new zoning that would allow clean modern industry to live conveniently next door to clean modern housing. But

this has been the thesis, on other occasions, of New York Architect-Planner Ralph Walker. It could improve the economy of gray areas.

Code enforcement

On one of FORUM's questions the response was unexpectedly unanimous. None of the urban specialists agreed with the view professed by many realtors that code enforcement would be enough by itself to enforce significant renovation. All who responded to this question stressed that although there is wisdom, as Rapkin remarked, in demolishing the worst properties and boarding up empties that may eventually be reclaimed-thus deflating them of their inflated values and making them cheap enough for private or public acquisition for improvement-large-scale condemnation of occupied dwellings, in the face of serious shortages in the low-income range, could only throw people into the street and cause political uproar.

Far better to remove those extra financial burdens placed on rental housing by both the Federal Treasury and the procedures of federal agencies, which have helped bring down the share of rental housing in the total output by two-thirds between the years 1929 and 1959. Rental housing is city housing and gray area housing. And Felt in New York pointed with justifiable pride to the wide range produced in his city of unassisted private programs-FHA's 207 or 213, and conventionally financed (though the latter tends to serve only higher incomes). Said he, some admixture of higher income population is desirable in gray areas, and not undesirable. So too, once a neighborhood is on the upward swing, through the mixed rehabilitation and new construction redevelopment of large areas under Title I, liberal application of Section 220 would supply to individuals the needed financial assistance for renovations.

Summing up, the urban specialists interpreted the prophecies of city doom by the economists as the first admission ever made that the American economy might have to take a big licking in a major area, and stand helpless before the abandonment of a big investment and a decline in the standard of living. In part, the response was simply an angry rejoinder that "this cannot be, because we will not let it be." Yet the major burden of the response was of a wider and more general significance.

What it was based on was the one thing which economists had not dared, or had not thought, to foretell in the city area-a better product, by the application of imagination. The urbanists talked about new inventionapplied to the city itself to transform the city. And an urban building, so their replies implied, is not like other commodities. It is not a single object, nor one freely shipped and traded. Firmly fixed to one spot, the building depends on its spot: it is like a drama of which an integral part is the stage, the setting, the surrounding. Such a setting, as an inseparable element of the building's economic value, can be produced only by joint action of many agencies private and public. But "economists don't understand space," as Catherine Bauer keenly observes, so they are quite unable to measure all those crucial city inventions that relate to space arrangement.

It may be that within the coming decade some cities will continue to shrink. Some gray areas may prove useful only for recreation or urban agriculture. But the cities in general refuse to abandon their huge investment, economic, social, and cultural. And they will prove that whereas architecture does mighty well to study economics, the salvation of urban economics lies in understanding architecture and planning.



Strangulation by wire. In an effort to keep up with new times, old neighborhoods have required ever more ungainly communications services, systems built upon systems, poles braced by other poles. And often perched in the middle, as above this row of rundown Cincinnati houses, is a transformer, looking like a symbolic hangman caught up in his own equipment.

Main Street's vanishing patina

The cities of America have been called melting pots, but their commercial heat never succeeded in melting the stubborn individuality of all the craftsmen who migrated to this country from over the world in the past century to open flavorful little stores. In just the 2,500 city blocks of Manhattan Island, for example, there still are 33,000 separate shops, and even after several generations a surprising number of their older fronts remain very personal essays: large painted eyes stare out from optometrists' windows; giant keys dangle from locksmiths' window heads; stripes, and more stripes, proclaim barbers. It is a fetching, humorous, eye-language. Its accent is the kind of rich raw color which improves with age, acquiring heart with layers of city grit.

In today's blast of rebuilding, however, many of the most stubborn of these pockets of vitality are at last crumbling, if not torn down totally, being mutilated in the name of improvement, their personalities tamed into the conformity of the current stock store-front package—neat, hygienic, faceless. The loss of these odd old store fronts is a poignant regret but a difficult one to explain. Is it just the pain of cutting any long-lasting visual connection with the past? Possibly so, because the past is surely the biggest ingredient of the present. Certainly, architects are laboring mightily in the design of shopping centers to bring back some of this human richness.

A human patina on a building, however, cannot be prefabricated overnight. It took many years of storekeepers' pleasure in their customers, in their trades, and in their neighborhoods to give these store fronts their meaty subjective charge. It also took pride in even a prosaic way of life. If this kind of individual storekeeper is being remodeled out of existence—as it seems he is this, too, may be something to be uneasy about.


A pair of well-worn barber shops which hit two of today's architectural targets: richness and mood.











They look hale and hearty, but since being photographed three of these eight old storefronts have perished before progress.













A classical commercial hypnotist, above, and, right, a city vegetable patch.







应该时间。但10

The money in modernization

At the tender age of fifteen—often less—every building in the country is a candidate for remodeling; but not all are worth the cost

The best hope for the rebuilding of America's cities lies in the happy fact that usually there is money to be made in modernization. Often it is big money—in higher rental income or expanded business volume. Sometimes modernization pays off by pulling a building out of an economic tail spin, or by forestalling one. Other times it is used to convert a building to a new purpose at a substantial saving to the new occupant over the cost of erecting a new building. Some recent cases in point:

▶ In Chicago, a ten-story loft building was refurbished for about \$250,000 and converted into office space, raising the average rent from 92 cents to \$3.50 per square foot—a net increase of about \$350,000 a year.

▶ In Philadelphia, an eight-story cigar factory was transformed into a modern hospital for \$1,950,250—about \$634,000 less than the cost of a new building of comparable size.

▶ In St. Ann, Mo., the St. Louis County Library spent \$120,000 to convert a 750-seat theater into a branch library—at a saving of \$30,000 over costs of comparable new quarters.

▶ In Washington, D.C., Builder-Realtor Elmer L. Klavans converted a 60-year-old four-story walk-up into 96 apartments (double the original number) for \$330,000, and raised its annual rent roll from \$36,000 to \$102,000.

In the vast business of building modernization (\$4 billion of expenditures last year) it would be too much to expect that every job would be as successful as those cited above. Indeed, there are countless failures: many buildings are ineptly remodeled; many others are remodeled that should not have been. To be certain of ending up on the right side of the ledger, the intelligent investor in modernization knows the economics of the business. He is familiar with the elementary fact that the need for modernization stems from three kinds of obsolescence: physical, mechanical and economic. And, he knows that obsolescence is not simply a matter of age.

Obsolescence of the physical variety is related to design and structure. If a building's floors are not capable of carrying today's heftier office machines, if its space cannot be readily subdivided to house the larger number of employees per square foot that new buildings accommodate, if the structure is such that new wiring and air-conditioning ducts cannot be inconspicuously fished through the floors or ceilings or walls-if its physical obsolescence has gone this far, it is probably not worth the cost of modernization. Such are the problems unhappily faced by the famous Carson, Pirie, Scott department store in Chicago. The biggest threat to the preservation of this Louis Sullivan masterpiece is the difficulty of unobtrusively bringing in the new wiring needed for modern merchandising techniques.

The second kind of obsolescence is related directly to the rate of technological development within the building industry. Since World War II, mechanical obsolescence has been stepped up greatly by the perfection of air-conditioning, automatic elevatoring, high-intensity lighting, wide-span structure, sound control, underfloor wiring, and a host of other mechanical details. As a consequence, buildings erected immediately after the war, though still in style architecturally, became obsolete in many ways almost overnight. After completing its first three Gateway Center buildings in Pittsburgh, for instance, the Equitable Life Assurance Society had to spend \$800,000 to convert them to automatic operatorless elevators. It found that this large outlay was fully justified, however, by the consequent wage savings.

Because they are out in plain sight, physical and technical obsolescence are easy to see and correct. Not so, economic obsolescence. It relates to such intangibles as the size of the building in relation to its intended purpose, the purpose in relation to the use of the neighboring buildings, and the outlook for their use in relation to the general economic health of the neighborhood. It is quite possible that a comparatively new, well-equipped building could be economically obsolete, for neighborhoods are constantly changing. A first-class building in a sharply declining neighborhood is obviously a poor modernization risk; but a "low use" building in an improving neighborhood would be a good candidate for modernization, conversion, or replacement.

Solving the problem of economic obsolescence is even more difficult than diagnosing it. Often the only answer is to sell and get out and take one's loss. (Incidentally, if the price is low enough, it may permit the new owner, who will have a much smaller stake in the property, to work out an economically sound program of modernization, conversion, or replacement—in much the same way that redevelopers benefit from the write-down of cleared slum lands.)

Correction of economic obsolescence is often impossible because of factors beyond the control

UNBUILDING AMERICA



Blasphemy by billboard. Cincinnati's Fountain Square, built in the late 19th century, sought to give the city center a rich and dignified focal point of splashing delight. The splash remains, but the dignity is now worth not much more than a smile of pity, having been outshouted by the gigantic oaths of the surrounding signs.

of the property owner. An owner might, for instance, find it impossible to purchase adjoining property to make room for a replacement building that would be big enough to be economically feasible. And unless he takes a commanding position in the neighborhood, he runs the risk of having the area decline as the result of the lethargy of his neighbors.

Mistakes of this kind are not easy to make, however, for in a declining area-or even in one that is uncertain-the owner will find that it is almost impossible to obtain reasonable longterm financing for modernization. His bankers will save him from getting into trouble. The lenders will not advance funds for modernization today with any more alacrity than for new construction. Among the five largest life insurance companies, not one has a special department to process loans for commercial property uplifting. Instead they examine such loan applications on the same criteria as new building loans, and today such lending is done far less on the security of the real estate alone than on the credit standing of the owner and the security of his leases.

Although the overriding general considerations outlined above may govern his decision and the decision of the lenders who may finance the project, an owner of a building will of course have to come to grips sooner or later with the specific economics of his own particular property. What will its modernization cost, and how much increased income may be anticipated? According to Architect Kenneth H. Ripnen, a New York specialist in office layout and remodeling, "Office space costs \$20 to \$40 a square foot to build and \$5 to \$15 a foot to recondition." Philadelphia Architect Clarence S. Thalheimer sets a much higher price on modernization: "By spending 60 to 70 per cent of what a new building would cost, an owner can do a top-notch remodeling job on a central business district building, and he will have extended the life of the building by 25 yearsassuming that it is well located.

Obviously, no two cases are alike, and the opinions of these two architects indicate that the range is sweeping. However, much can be learned from the experience of experts operating in the nation's biggest modernization market—New York City. Five case studies are briefed on the facing page; a sixth case is presented in detail on the pages that follow.

Five case studies in modernization economics:

Last year National Biscuit Co. moved into new quarters in New Jersev and vacated 1,855,000 square feet of floor area in 22 office, commercial, and manufacturing buildings in the industrial section of midtown Manhattan. The property was sold to Syndicator Louis J. Glickman for a purchase money mortgage of \$5 million, plus an agreement to spend at least \$2 million on modernization within the next two years. Actually, Glickman's modernization program will cost almost \$4 million, including \$480,000 for new elevators and shaftways, \$150,000 for improving existing elevators, \$775,000 for heating, plumbing, and sprinkler system improvements, \$175,000 for electrical service improvements, and \$850,000 for tenant area alterations and improvements. Last month approximately 650,000 square feet had been leased for about \$1.25 per square foot, and negotiations were underway on leases for another 500,000 square feet.

When it moved uptown from Union Square to its new building at 5th Ave. and 37th St. in 1905, Tiffany & Co. proudly described it as a "palace" that Architects McKim, Mead & White had been commissioned to design as "the noblest of its kind." But times changed, Tiffany & Co. continued to prosper, and in 1940 it moved to another new building still farther uptown. After a series of real estate transactions, and use as a blood donor center during the war, the 37th St. building was sold in 1951 to Henry Goelet, who modernized it to the tune of \$1 million, including architect's fee. Major expenses were \$350,000 to raise the original ground floor several feet to street level, to cut modern show windows out of the masonry walls for new ground-floor stores, and to construct a new 15,000square-foot intermediate floor in the upper portion of the original high-ceilinged ground floor; \$91,000 for office-tenant partitions and alterations; \$109,000 for new store windows and alterations; \$42,000 for a private elevator to the intermediate floor; and \$315,000 to remodel the lobby and convert four elevators to operatorless operation. Including the new floor, the building is now an eight-story and two-cellar structure with a total floor area of 150,000 square feet. After modernization the former "palace" was architecturally no thoroughbred, but Goelet was able to up the building's income from a \$100,000 annual loss to a \$100,000 annual profit, and to resell recently for \$900,000 profit.

In their modernizing of a 42-story office tower at 444 Madison Avenue, Oestreicher Realty Co. and Freeman & Gerla plan to invest almost \$3 million during a seven-year period-plus their original \$10.5million purchase price. During this period they also expect to increase the building's annual net operating income from \$898,000 to \$1,375,000 and to end up with the equivalent of "a new and modern structure with a full life expectancy of over 50 years." Major improvement outlays include \$250,000 for a flashy entry and marble lobby, \$1,050,000 for a central airconditioning system (an average of \$3 per square foot of the building's 350,000 square feet of rentable floor area), and \$2.1 million (or about \$6 per square foot, for tenant area improvements and alterations. Having given the structure a new identity, both physically and psychologically, the new owners have upgraded its tenancy, and in the first three years of their program have been able to increase its rent from an average of \$4 to \$6 per square foot. They acquired the property on a \$8 million mortgage from a commercial bank and have financed the improvement program under conventional arrangements plus additional capital investment. The building has been named for its principal new tenant: Newsweek.

▶ In 1955 Aaron Levine bought a 14-story, 80,000square-foot bank and office building in the Wall Street area and immediately started to upgrade it. For a central air-conditioning system he spent \$175,000 (about \$2.20 per square foot), and had no difficulty in persuading tenants to pay an extra \$1 per square foot for the service. For this he used \$50,000 in cash, and financed the other \$125,000 with the manufacturer over three years. Currently he has a \$200,000 elevator conversion program in process, which will be paid for with a \$100,000 loan from a commercial bank and \$100,000 from building reserves. He also has spent another \$30,000 on washroom improvements; nothing on the exterior. Architect: Arnold A. Arbeit.

Early in 1956, H. H. Barrie, a hat manufacturer, had to move from the site of a slum clearance project. About three blocks away, at 670 Broadway, he purchased an 85 by 135 foot, five-story and basement building erected about 1875, for which he paid \$75,000 cash over three mortgages totaling \$134,000. The occupant of the single large ground-floor store had just gone out of business, cutting the rental income of the building to about \$42,000 a year; other store vacancies in the area were common. Barrie took over one floor of the building for his hat making operations and, after subdividing the ground floor into three stores, occupied one of them as a sales outlet for his hats. Rents from the two other stores, plus rent increases from upper floor tenants, have now raised the building's rent roll to \$58,000 a year. Barrie's subsequent modernization program has cost about another \$60,000 in cash. This includes \$2,000 for steam cleaning the exterior of the building, \$15,000 for the store conversion work, \$10,000 for modernizing and enlarging the lobby, \$15,000 for a new operatorless passenger elevator cab, \$3,500 for new electric lines, \$2,000 for new sprinkler heads, \$8,000 for new sidewalks, and \$3,000 for fluorescent lighting and redecorating in all public areas. He also is modernizing tenant office areas and washrooms as leases are renewed.

Since taking over the building subject to an existing, open \$65,000 first mortgage, Barrie has been able to obtain a new ten-year, \$85,000 first mortgage from a savings bank, has reduced the second mortgage from \$48,000 to \$39,000, and has eliminated the third mortgage. Neighbors credit him with spurring other upgrading in the area (store vacancies have been declining) and he has received several offers for the improved building that would have given him an attractive profit. Although he had never previously engaged in property management or modernization, Barrie's experience in this case has led him to consider buying and modernizing other buildings on an investment basis to supplement his hat business.



An office building reborn



After: a busy corner, handsomely opened up.

Before: a solid storefront, pierced by windows.



Imaginative redesign transforms an outmoded structure into an elegant Fifth Avenue showpiece

One of the more sophisticated commercial remodelings of recent years, exceptional even for New York's fashionable Fifth Avenue, is the conversion of a 35-year-old department store and office building into airily handsome new headquarters for Koninklijke Luchtvaart Maatschappij, N.V., better known as KLM Royal Dutch Airlines.

KLM, which had helped start "airline row" ten years earlier in a narrow, five-story building on Fifth Avenue near 46th Street, was looking around for more space when Brokers Cushman & Wakefield suggested the 13-story McCutcheon building three blocks north. Like many companies, KLM was hesitant about getting into the real estate business beyond its own immediate needs. But a heavily traveled, highly international corner right across from Rockefeller Center, plus enough space to serve almost any future expansion, proved a proposition not easy to resist. KLM signed a net lease of 20 years and two 25-year options with the owners, New York's venerable Henry Phipps Estates, agreed to take over operation of the building and spend at least \$1,750,000 bringing it up to date.

To satisfy its own needs, KLM planned on spending more, and did (see photos and cost breakdown overleaf). After the realtors had helped relocate some 50 small office tenants who had space above the old five-story store, Architect Ladislav Rado and his KLM counterpart, Walter Hart, worked with Turner Construction Co. to clear out interiors and begin refurbishing. As in most modern or modernized buildings, mechanical improvements took the lion's share: \$1.3 million, or about 40 per cent of total remodeling costs. In KLM's case this included new lighting and rewiring for A.C., conversion of the three existing office elevators to automatic cabs at \$60,000 each, relocation and refitting of washrooms, and installation of a heating-air-conditioning system using two 230-ton absorption units in the penthouse and three fan rooms to serve floor zones with varying requirements. The system takes advantage of cheap New York steam in summer to do its cooling, operates economically at a fraction of capacity when serving late-working reservations and ticket offices on lower floors. Cost: about \$4.50 per square foot for 138,000 square feet of office space.

The most striking element of the \$3 million modernization, however, is the transformation of McCutcheon's heavily-enclosed main sales floor into an artful and highly visible KLM ticket office. By stripping off the old masonry up through the second storey, encasing the steel columns in white marble, and inserting bronze spandrel grilles and a cast aluminum frieze, Architect Rado fashioned a slimly elegant, nicely detailed facade 35 feet high. Not only does the new facade fit the old building as though it had been there all along, but it does the city a rare kindness by opening up a whole corner along a crowded street. The chief attractions visible inside, apart from fresh-faced KLM clerks, are a 10-foot openwork globe which turns slowly in the front corner, and a vast "electric mural" which twinkles behind the ticket counters like a night air view of city lights. (The mural, designed by MIT Professor-Artist Gyorgy Kepes, is made of black-faced aluminum panels with thousands of perforations, backed by colored glass and batteries of flashing lights.)

Back of this inviting sales office, the other half of the L-shaped, 12,000 square foot ground floor awaits rental to a store with its own continued on page 190

ARCHITECTS: Antonin Raymond & L. L. Rado (Howard Bonington, project manager) CO-ORDINATING ARCHITECT FOR KLM: Walter Hart ENGINEERS: Paul Weidlinger (structural), Ebner Associates (mechanical, electrical) MU-RALIST: Gyorgy Kepes GENERAL CONTRACTOR: Turner Construction Co.



REMODELING COSTS

General (\$575,500)

Demolition\$	120,000
Concrete, masonry	170,000
Hollow metal, iron, steel	85,000
Bronze facade, dec. panels	105,500
	47,000
Glass, glazing	48,000
Stone veneers	40,000
Interiors (\$333,000)	
Terrazzo floors, ceramic tiles	16,000
Resilient floors	20,000
Acoustical ceilings, baffles	67,000
Venetian, vertical blinds	18,000
Painting	32,000
Partitions (KLM floors)	50,000
Cabinet work, counters	65,000
Railings, frames, conveyors	25,000
Mural, globe, decorations	40,000
Mechanical (\$1,347,500)	
Heating-ventilating-air conditioning	634,500
Plumbing (incl. all new washrooms)	124,000
Electrical (incl. conversion to A.C.)	406,000
Elevators (3, conversion to auto.)	183,000
Misc. and fees (\$637,000)	
General conditions, contractor fees	387,000
Architectural, engineering fees	250,000

TOTAL (see text) \$2,893,000







Low-ceilinged area at the rear provides intimate contrast.



Mural of night-flight uses colored glass, blinking lights.



From repainting to redesign

These four handsome buildings have benefited from remodeling — plus sensitive redesign — in various degrees

Several years ago, when New York Architects Steinhardt & Thompson were asked to remodel an old warehouse in Newark, they responded so enthusiastically and so inventively that their client wound up before an arbitration board. The site and existing buildings were his on a long-term tax-free fixed rental from the city, but when the city fathers saw the transformation which the architects brought about in the old shambles of a structure (new walls, new windows, new interior finish, new services, new heating and cooling, new lighting, plus a new wing), they asked for taxes. This was no remodeling, they grumbled, but a new building on their site and the city was entitled to taxes on that basis.

Although no city money had gone into the renovation, the argument wound up in arbitration, where teams of experts for complainant and defendant vied to establish when a remodeling does or does not equal a replacement, justifying a new land lease. The defendant won the nod, but the fact that he subsequently resold his lease at a substantial profit did not add to the clarity of the situation, or to the city's contentment with the decision.

On these nine pages are five progressive illustrations in the depth of remodeling, ranging from a millionaire's old mansion on Manhattan's upper Fifth Avenue that was very tenderly and tactfully transformed into a school of fine arts, to a classic art museum in Texas remodeled by a new wing which all but devoured the old be-columned temple. Legal definitions aside, what this ascending order of good renovations demonstrates—as does every remodeling—is that the essential to success is the establishing of just what degree of change the client wishes to bring off, not only in the physical services of the building but in its character. In other words, the building not only has to be remodeled, but redesigned.

A footnote to these pages, covering an easier, more automatic, but by no means more satisfactory approach to the process, is illustrated on page 130.

Handled with architectural care, a fine Fifth Avenue mansion is converted into a fine arts school

1 In 1911 tobacco magnate James B. Duke decreed himself a town house on New York's Fifth Avenue at East 78th Street, and turned to a famous, fastidious Philadelphia architect, Horace Trumbauer, for its exquisite Louis XVI design. When, in 1958, Duke's widow and daughter, Doris, decreed the house should become New York University's, to shelter one of the nation's largest graduate department of fine arts, they turned again to a Philadelphia architectural firm for the light touch which would preserve Trumbauer's triumph but make the structure more usable to the new owner—and on a modest budget (\$150,000).

Trumbauer had traveled to France for his "inspiration," modeling the house precisely after the *Hôtel Labottière* in Bordeaux—but bigger. The new architects—Robert Venturi, Cope & Lippincott, a young firm—thought, instead, of more recent sojourns in Italy. One of the architectural feats most prominent there is the number of beautiful palazzi which have been transformed into useful civic buildings



Duke mansion exterior remains its solid, dignified self.

Interior was remodeled lightly, discreetly; projection screens in lecture room were added without scarring panels.



without marring their aged exquisiteness, by accepting age as the basic element of the environment. So that is what they did with the Duke house.

The exterior was unchanged; inside, the service rooms in the basement became slide collection departments and the like. On the main floor the drawing room became a seminar room, the ballroom a lecture room, the library a lounge, the dining room a reading room. Reception rooms became administration offices, and the main hall an exhibition space. On the second floor, seven bedrooms and sitting rooms were invested with book shelves, and an eighth with stacks, splitting the department's library into sections. Marble bathroom walls were burlapped, the floors corked, and the bathrooms became offices, as did the 15 or so servants' rooms of the third floor.

Typical of these architects' politeness toward their Philadelphia predecessor was their treatment of his paneled walls and lighting. Almost nothing was hung directly on Trumbauer's paneling. Even the stock shelving stands independently of the walls, on its own structure. Crystal chandeliers remain resplendent in the large rooms (with recessed downlights added in the ceiling to aid in note-taking). In providing the necessary projection facilities, screens were not hung on the walls, but were floated out from walls on brackets. Furniture was chosen discreetly, not to try to match the decor but to exist amiably within it: for example, simple but graceful imported Czechoslovakian bentwood chairs.

Small as the changes seem, the designers, by maintaining a strict and stylish consistency in every detail, succeeded quietly in taking over the environment. In deciding not to carve up this great period house they also struck a sensible blow against what Architect Venturi terms wryly "America's cult of obsolescence." With the Duke donation to N.Y.U. the city did lose a sizeable chunk from its tax roll (the house was assessed at \$50,000, the land at \$800,000) but it was lucky to retain this nugget of charm from a fancy past.

ARCHITECT: Robert Venturi, Cope & Lippincott, Associated Architects; ELECTRICAL ENGINEER: A. Ernest D'Ambly; LIGHTING CONSULTANT: Richard Kelly, STRUCTURAL ENGINEER: Keast and Hood Company.

Lights are hung from ceiling or from shelving.



Second-floor bedrooms of Duke mansion were remodeled into libraries, offices.



Details: foot of shelf standard (left) and newly burlapped bathroom walls.





Power of paint is proved in before and after views.



The old inner keep of a west coast political boss is refurbished—but not deflavored—for business use

2 A half mile from San Francisco Bay, and not far from the rising Jackson Square section (see page 101), the new Columbus Tower juts up at a major intersection, its Byzantine-blue, gilt-trimmed dome glinting prosperously in the superior California sun. But a year and a half—and \$155,000 in renovation costs—ago, this was the Sentinel Building, a running down remnant of earthquake days available for a total price of \$76,000.

It was picked up at that price by a Dutchborn trader and investor, Robert Moor, who had settled in San Francisco; he asked Architect Henrik Bull to renovate it. The building was constructed in 1906 in a spare-no-expense spirit by a baronial political boss, Abe Ruef. In Bull's opinion its period spirit deserved retention, so he restored it with a stylish paint job and not too many exterior changes. But, by just one or two degrees of obsolescence more than the Duke House, this building did need physical overhaul. Bull ripped out the disorganized ground floor walls and replaced them with rich blue glass mosaic tile and tall windows, and he also gutted the plumbing, heating, elevatoring, and electrical systems.

Within four months of the upper floors' completion they all were rented. The ground floor then became a crowded coffee shop, and the basement is being remodeled for a radio station. Gross rentals are already up from a prerenovation \$11,000 to \$39,000, the net up from \$5,000 to \$26,500.

ARCHITECT: Henrik Bull; STRUCTURAL ENGINEER: Nathan Karp; MECHANICAL ENGINEER: K.T. Belotelkin & Assocs.; ELECTRICAL ENGINEER: Smith & Garthorne.

New windows arch mildly beneath robust old bays.



Forty years after a three alarm fire in Aspen, Colorado, a new owner repairs the damage

3 This group of small stores waited a long time to be remodeled, but when it happened the physical change was major; only the exterior facade survived, and even a part of this became a false front, the entry to an outdoor space behind it. This sophistication, however, was intrinsic in the approach to the remodeling, for false fronts are a real part of the enduring character of the old Victorian mining town of Aspen, Colorado. The people who have been coaxing this souvenir town to life in recent years aim deliberately to reproduce the flavor of its original, silver-rush atmosphere—not only for the sake of nostalgia, but sound commerce.

It was on this basis that Architect Fredric Benedict was able to persuade a national drugstore chain *not* to help modernize the corner drugstore with the usual gleaming armor of metal and porcelain enamel, but instead to let him modernize it only up to about 1890. Next to the drugstore, behind an old wood-columned facade, he sunk a courtyard restaurant below street level, with small shops opening off a sidewalk level passage, and a new floor of rental office space upstairs.

The new owner is pleased with the financial remodeling of this corner. He bought the burned out package at the fire sale price of \$16,000 in 1954, but the fire had happened so long before that there was a 25-year-old cottonwood tree growing up out of the old cellar (Benedict kept it and focused the restaurant court on it). The rubble of the second floor of the drugstore had not even been removed, but left standing, with a new roof added at its old floor level. The rental income was \$75 per month from the druggist for ground level plus basement.

In addition to the buying price, the new owner, a retired tanner, invested \$122,000 (\$100,000 for the office wing and restaurant and shops, \$3,000 for the restaurant terrace and balcony, \$19,000 for the drugstore) and raised the monthly gross rent to \$1,318.

ARCHITECT: Fredric Benedict; MECHANICAL ENGINEER: A. M. Riley, Jr.; LANDSCAPE CON-TRACTOR: Henry Pedersen; GENERAL CONTRAC-TOR: Richard Wright.



Restaurant plaza is sunken below street level.





Old façade, burned out at left, became half store, half plaza screen.



Remodeled front is topped by a second story of offices facing the plaza at right.

Renovation by devouring: Houston's classic museum is enlarged by a new "wing" of considerably different classic cast

4 Until quite recently the Houston Museum of Fine Arts had two colonnaded facades with a stoney architectural air of massive resistance. It was a Greek temple with hardly a Texas accent.

At present the Houston Museum of Fine Arts ostensibly has a new "wing," yet it is a fact that the new wing almost completely takes over the bleak old classic building. The new portion is a thing of airy elegance which doubles the floor space of the old museum and brings the old place right up to date in the display world of modern art.

The central Greek colonnade, the original grand entrance of the old building, still stands. This, however, is no longer the main entrance, but is now, in effect, the back porch, and this was the abrupt about-face with which Architect Ludwig Mies van der Rohe accomplished his transformation. The new section, an \$850,000 gift to the Museum, contains essentially the same kind of space Mies was discussing decades ago for a hypothetical museum: one big room with the complete flexibility of no permanent partitions or columns. To get this space he suspended the big roof 30 feet above the floor from four large girders above its plate. Across the new front he fanned a gigantic wall of grey tinted glass in a graceful curve.

The new museum already looks forward to the next remodeling. "When they came to me," says Mies, "they wanted an addition to an existing building, but I told them you'd better think of an end. Cullinan Hall must be part of a master plan so we know where to go in the future." The master plan which he provided establishes that the next addition to the museum will not be a further remodeling of its new character, but a real continuation: the curved glass wall will come down, and a two-story extension of glass walled galleries will be added.

ARCHITECT: Mies van der Rohe; RESIDENT ARCHITECTS: Staub, Rather & Howze; STRUC-TURAL ENGINEER: Kornacker & Associates; MECHANICAL AND ELECTRICAL ENGINEER: H. C. Will; GENERAL CONTRACTOR: Farnsworth & Chambers Co., Inc.



Classic façades of the original museum form rear and side of new building.



Columnless interior of the new wing belies its classicism.



New front, formerly the rear of the museum, has classic regularity of its own.



HEDRICH-BLESSING

Wide-span roof, hung from trusses, shelters a single big exhibition space.



DAN HARDY

New building presents a curved façade to the street; the old classic porticos face to the rear and the right.



A final question concerning individual buildings: is remodeling sometimes suffocation?

In comparison with the extensive, pains-J taking enlargement of the Houston Fine Arts Museum, remodeling can also seem quite easy. The complete "skin job" is all too tempting to many building owners and designers, who see in it a way to wash away all past stylistic sins and start anew with a fine, freshly powdered face, grafted on the old building's skull.

This of course is understandable, especially in commercial buildings, where the aura of newness can itself rent office space, or sell merchandise. The cosmetic industry is a big one.

But when a skin job is merely confusing (see photo upper right-quick, which is before, which is after?) or when it wipes a lot of expression off an old face and replaces it with vacuity (lower right) it is difficult to justify as complete by any measure.



First Federal Savings and Loan Building, Minneapolis-before and after.



J. C. Penney Co., Minneapolis-before and after.



Marquette National Bank Building, Minneapolis-before and after.



Hall's store, Kansas City, Mo.-before (untidiness but character) and after (a good facade-but only for air conditioning).

ARCHITECTS FOR THESE REMODELINGS

RIGHT AND ABOVE, LARSON AND MCLAREN; BELOW, WELTON BECKET AND ASSOCIATES









The art that science forgot

Remodeling, still a haphazard process, is not yet industrially efficient —except where a few architects and engineers have made a start.

Billowing in plaster dust, probing, chipping, gouging with blunt instruments to find and pull out old building entrails, remodeling goes on all the time, but only as building's stepchild and architecture's bastard. There is almost no architectural literature devoted to remodeling. Yet a big share of the \$20 billion reported as spent annually on "maintenance and repair" is actually remodeling, and so is a big share of the "additions and alterations" bill of \$12 billion more—\$4 billion on non-residential buildings.

Since remodeling is certain, moreover, to increase, the time has come to get it dignified. discussed, and incorporated into the industrial structure of America. There are precedents in other fields. The rebuilding of machines is, for example, no longer haphazard, or treated as a stepchild. One of the great social services rendered by Ford Motor Company to consumers was inauguration of the replacement service whereby a motor or other machine connected with the automobile could be promptly removed in favor of a factory-reconditioned substitute while the ailing part went back to be rebuilt itself under factory-controlled conditions. Before that the motorist was at the mercy of corner-garage mechanics for delicate rebuilding operations, and the building owner to this day still depends largely on something like that.

The building industry itself does have some precedents for more industrialized remodeling. Long ago office partitions, for example, began to be so designed that they could be removed, rearranged, or replaced so quickly, and with so little disruption, that this remodeling process was no longer referred to as "remodeling" at all. It was not sufficiently messy.

To arrive at better practice it is necessary first to redefine remodeling in a more progressive, industrialized fashion; then to comb existing practice for industrializing leads; and finally to formulate some principles that might help start an industrialized remodeling theory.

A good remodeling definition would be simply the extension of a good building definition. Good building today is the efficient assembly at the site of subassemblies prepared in industrial establishments. By the same reasoning, remodeling is the efficient dis-assembly, reassembly, or changed reassembly, of parts of the same kind. And the "disassembly" share of it is held to a minimum.

The reason why old-timers will never agree that there can be industrialization of remodeling is the axiom that "every case is different." A quick review will reveal this—but further observation will show that it is far from the whole truth.

When a building owner has remodeling in mind—either for purposes of efficiency or for prestige, and in either case for more income the first step of his architect is to examine the building and then recommend three or four alternative preliminary schemes. If one of these is tentatively accepted, an engineering study is made next, to determine the limitations imposed





Blockbusters on wheels. The gnawing appetite of the automobile is difficult to satisfy. When fed a bone (like the parking facility in the background), its spatial hunger is only stimulated. Here, parking lots chew away at the very heart of Cincinnati, where the newly remodeled Church of St. Peter & St. James and neighboring civic buildings attempt to establish a stable environment of urban culture. by the existing structure ("every building is different") and the cost of renovation. If the plan involves extensive rebuilding, the engineering study will require tedious days of exploration, because oftentimes the original engineering drawings no longer can be found. In very old buildings the engineer has to tear into the existing fabric to find what is there. Engineer Fred S. Dubin believes that the most creative aspect of rebuilding technology lies in this original analysis "of the building's function, structure, and mechanics." Says he: "The objectives of rebuilding are the same as new building-to come up with the most efficient collection of systems possible-but the ways of achieving the objective are more devious in a rebuilding project."

The trend toward new kinds of system

Different as every case of remodeling is from every other, there is nevertheless enough likeness among groups to lead to some classification. There are, for example, exterior façade jobs, interior rearrangement jobs, interior finish jobs, and mechanical or electrical jobs. Significantly enough, facade jobs predominate; and the reasons why they predominate show that remodeling is cheapest where it is most industrialized, i.e., systematic. The first reason why a facade remodeling is easier and less costly is that facades are the most accessible part of a building, and accessible with minimum disturbance either to the existing fabric or to the occupants. The second reason is that once a new facade system has been devised, the operations-from bay to bay and from floor to floor-are repetitive and can be industrially rationalized. The third reason lies in the recent development of industrialized curtain walls and screen walls. The curtain wall device has allowed many an old building, no longer requiring windows, to hide itself behind vertical acreages of corrugated aluminum facing, rapidly assembled; and the still more recent peek-a-boo screen wall, equally prefabricated, allows existing windows to remain in use, with only a little pointing up, behind the screen which makes the building look new. The secret of economy in curtain and screen is that their erection involves the absolute minimum of disassembly to the existing construction; they simply add a new as-





New facade for 13 stores in downtown Knoxville involved more than an aluminum screen. Photo (above) shows the old, dingy area to the rear of the stores; these buildings were torn down to provide parking space, then the new facade and promenade were added to the rear of the 13 stores (sketch, above), giving them unity and a new face.

Retaining character: The new facade for Block & Kuhl's store in Peoria (below) keeps the basic proportions and appearance of the old building. Instead of hanging a completely new skin, the architects retained the cornice and pilasters, inserted ceramic veneer panels. The sketch indicates the method used to bolt panels to the steel frame.



sembly or substructure, put together with all the ease and efficiency of new building.

Examples of recent façade work illustrate increasingly industrialized methods. In the Block & Kuhl Department Store renovation in Peoria, Ill. (below), Architects Smith, Hinchman & Grylls found a wonderful chance to retain the existing proportions and good character of the building, including an existing cornice difficult to reduplicate in its decorative effect today. The decision adopted by the architects and owners was not to hang a new skin on the building but simply to remove existing windows and spandrels from between existing columns and floor beams, and to insert ceramic veneer panels-an easy, standardized, repetitive operation yielding more character and prestige than any other which, in this instance, might have been adopted. The square foot cost was \$6, as against \$8 to \$10 for an equivalent new wall.

Knoxville, Tennessee's Gay Street Promenade (above) shows a still more industrialized answer. Architects Painter, Weeks & McCarty found they could cover the "rear" wall with a block-long string of stores with a single metal filigree screen of aluminum, 54 feet high and 550 feet long. The advantage of such a screen is of course that it is an independent new structural assembly, which can go up as quickly as new construction does, and which needs to be anchored to the existing wall only at intermittent points with easily adjustable steel braces. Nor does such a screen have to be bent in and out to every nook and cranny of existing façades, as a skin-tight remodeling

135







THE ART THAT SCIENCE FORGOT

<u>≺ {{{</u>

New grille for Miami's Dade Federal Savings and Loan building (photos and sketch, left) was installed by breaking through the existing masonry wall and welding supporting members to the building's steel columns.



FLOOR PLAN OF 27TH FLOOR

Floor-by-floor renovation is illustrated in New York's Newsweek building. A new air conditioning system was installed as an independent unit on each of the building's top floors. A small air compressor unit was closeted on each floor, as shown in a typical floor plan (above).



Old ducts were used anew in the renovation of the Museum of Modern Art's air conditioning system (above), at a saving of some \$150,000. The system's capacity was tripled and extended to the upper floors, which had not previously been air conditioned.

$\leftarrow \parallel \parallel$

Aluminum facade on Thalhimer department store, in Richmond, designed by Architects Copeland, Novak & Israel, creates a large, unified structure. The small corner buildings were altered during the renovation. The new frame for the skin was bolted to the old masonry wall. would; nor do existing windows and masonry need more than a utility job of repointing, hidden as they are behind the scintillating new screen. With the screen, the former "rear" wall was made the front.

Just to complete this brilliant job of remodeling, the architects put up a block-long, elevated, covered promenade, after razing junky old buildings nearby to clear the way for a combined parking lot on that side. (Photo, page 135). The result was to transform the character of an entire downtown area. Technically the interesting thing about this elevated walkway is that it, like the new façade, was built as an independent new subassembly. Its support was made independent of existing structure, so once again there was notable absence of tearing into the old work.

Certainly the façade for the Dade Federal Savings and Loan building, in Miami, by Edwin T. Reeder Associates, Architects and Engineers (opp. page, top), illustrates an industrialized approach, with its utilization of a standard grille, supported by linkage to the building's existing steel columns. No technical difficulties were encountered in this project.

Within the building

In interiors, too, good remodelers disturb as little of the existing building assembly as they can. Example: the Newsweek building in New York, a 42-story structure, which is having its interior treated by Engineers Jaros, Baum & Bolles, as really 42 different renovation projects in a single building. Once again the principle of efficiency calls for disturbing existing structures as little as possible. The airconditioning system, in particular, avoids the bulky risers of a central system; these would have to cut through floor after floor, always in alignment. Using the more compact compressor units now furnished by air conditioning manufacturers as a great aid to fussless remodeling, the engineers needed only to instal horizontal ducts, which were put in place just as they would have been in a job of new construction, above false ceilings in the corridors. The result was that tenants on each floor received an air conditioning system all their own (see plan, left, above).

In the case of the Museum of Modern Art in New York and its air conditioning system, Engineer Dubin worked another switch. Here a central system, since outgrown, was already installed. Among the "structures" that Dubin wanted to preserve with minimum disruption was the central duct system itself, which luckily proved to be well placed and of heavy-gauge construction, and therefore capable of handling triple the air velocity without buckling. Accordingly Dubin kept the ducts at a saving of \$150,000, replaced the old compressors and blowers in the basement with larger units, changed the air outlet diffusers for the higher velocity, and set sound-attenuating boxes behind them. For the upper working-space floors, not previously air conditioned, Dubin did have to run new ducts and new diffusers, but he employed a steam absorption system instead of electric, to avoid the disturbance of adding new electrical capacity in an old building. (The added cooling was 150 tons.) Incidentally, basement space has been reserved already for a 400-ton unit, doubling the present capacity of the whole building, to serve a planned addition as big as the present establishment. This cost is estimated at only \$5,000 but the expenditure may save as much as \$50,000 of excess cost that would accrue in future air conditioning of the new space, if such anticipatory provision had not been made (see plan, left, below).

In all these examples, two ideas constantly recur: progressive remodeling is done in such a way as to disrupt existing assemblies as little as possible, and to arrange matters so that any new assemblies can be built as nearly as possible as if the job were a new building.

UNBUILDING AMERICA



Imprisonment of the plaza. When a pedestrian park is built, its liberating influence is always hoped to extend beyond the immediate park limits. In this Cincinnati case, however, the buildings that border the park shut it in, looming like the walls of a prison. And the park visitor, taunted by slogans of "joy" and "liberty", serves out his time with the vain patience of the yardbird.

A theory for the future

Startling new efficiencies have entered building through new concepts. Prefabrication was one; modular design another; articulated design a third. Industrialized remodeling can be the next

There is scarcely a competent remodeler alive who does not know the first principle of remodeling: "Disassemble just as little of the existing building assembly as you can." And yet the mental set of human beings is such that the very word "remodeling" evokes the image of an existing structure being taken apart and reshaped. Several years ago there was the interesting example of the University of Miami, which wanted a modern building designed on a left-over traditional concrete frame. Two architects broke their heads over how to change the frame to fit new plans. The third, Robert Little, says he woke up one morning with the better answer: "Change nothing-leave the old frame just as it is. Where something different is needed, don't take away-add."

The notion, "don't take away, add," which Little promptly dubbed "additive remodeling," was the germ of a fine new idea. His particular application of it, in Miami, was offbeat, and perhaps not of universal significance-although Miami did get the equivalent of a good modern building without the cost of either building a whole new frame or monkeying with the old one. (Where Little needed different support, he simply added concrete-filled pipe columns; where needless stairs were bothersome, he simply added an easy ramp on top; where windows did not fit between columns, he simply added a foot or two of cantilevering and let them "slide past.") But Little's discovery was capable of being generalized. To the first maxim, "Disassemble as little of the existing structure as you can," it added a second: "If possible produce a new subassembly independent of the old." To put it rather summarily, this means lining old rooms with new "false rooms," just as the building facade is lined with a new "false front." What is avoided is all the deep surgery of altering the old structures and finishes themselves, an occupation ill suited to this non-handicraft age.

The intrinsic advantage of building these closely fitting but independently constructed "stage sets" and "drops" into the existing structure or in front of it is that the erection procedure is made as direct and simple as new construction; the needed anchorages to the old, being confined to a few points, are achievable with a few adjustable gimmicks. Contrasted with this, the old-fashioned procedure depends on endless scribing, and troweling, and fitting, all by expensive labor. Moreover, in keeping with the new idea, the new utilities and service systems need not be sunk into the wall but can usually be built on the surface of the old wall; the work is done in the open, and after that a sort of vertical "plenum" is created by putting up a new "false wall," out in front of the new utilities, on exactly the same principle as "false ceilings" are now used to create and disguise open plenums for ductwork overhead. Today's thin partition materials are thoroughly suitable for all this, and the only new manufactured element that would be useful would by "remodeling" door and windown frames with wider, or perhaps adjustable, heads, jambs, and sills.

So far, so good: the new subassembly, produced independently of the old to which it is attached, involves the minimum of wasteful disassembly of the old. Yet this does not ex-



Design for future change: Architect Louis Kahn's approach to the problem of anticipating a building's future needs is illustrated in his Medical Research Laboratory for the University of Pennsylvania, above and right. Kahn carefully separates "servant space" from "served space." Thus, each of the building's three laboratory towers has sub-towers rising alongside; these sub-towers house ducts, conduit, pipes, fire exits. As new mechanical equipment is added, it will be placed in the sub-towers' servant spaces.



haust the new thinking already available towards industrialized remodeling. Such industrialization and rationalization has to start at the very beginning, with the building's initial design. For many years, Mr. K. Lönberg-Holm, buried in the cavernous recesses of the F. W. Dodge Corporation, has been trying to put across the concept that all buildings, like all organisms, are subject to a life cycle, as predictable and as inevitable as the life cycle in Nature. The building cycle involves research, design, construction, use and elimination-and repeat. One of Holm's chief contentions is that design which anticipates the cycle as a whole makes each succeeding step more rational and easier.

To anticipate the future it is not necessary, however, to make the mistake that some architects have made, misinterpreting Holm's idea. For example, it may be an error to provide excess capacity, such as excess elevator shafts, in the beginning, against possible future need. In the interval between construction and reconstruction a new technology may come up, such as today's electronically equipped elevators, permitting more work to be done or more volume carried in the existing space and making the extra space a waste. The new idea does mean providing the kind of building in which added shafts, and other such things, would be easy to introduce if needed: and there is a world of difference between this valid idea and its misinterpretation.

Holm's principle, "Anticipate remodeling in the initial design," carries a corollary, which might be put this way, in keeping with the very important principle of design articulation: "Design each 'system' in the building—the structural system, the heating or air-conditioning system, the wiring, the plumbing, etc.—to be self-contained for easy assembly, with interconnections to other systems held to a minimum and made easy to alter."

Some examples of anticipatory design

Such building ideas greatly clarify principles which average practice tries only to approximate. But approximations exist.

For example, Architect William Tabler, in his Dallas Statler Hotel, pioneered the construction of multi-story bathroom stacks as "substructures" independent of the building frame. Almost unlimited remodeling will be easy in the future without touching the structure.

It is possible that Philadelphia Architect Louis I. Kahn has made a further rational advance toward rational remodeling. In his Medical Research Building for the University of Pennsylvania, now under construction, Kahn has gone beyond making independent substructures out of the mechanical and electrical services: he has, so to speak, built a separate house for them. There is a house for the people (which Kahn calls "master space") and a house for the services (which Kahn calls "servant space"), both clamped to one another (see illustration, p. 139). The so-called "servant spaces" are giant building columns hollowed out and expanded to create closets, or little rooms, at every floor, containing the vertical supply. Horizontal distribution is through those familiar plenums, or "mechanical attics," which are in common use today over "false" ceilings. Obviously all sorts of remodeling will be possible in the "space for the people" without need for any important disruption of mechanical service, and vice-versa mechanical changes can be made in the mechanical "house" with minimal disruption for the people. In Kahn's hands all this has made for more expressive and better architecture. Similar treatment, in a one-story horizontal building, has been achieved by Engineer Fred Dubin and Architect Warren Ashley, whose enlarged "crawl space" under the new Concord Carlisle high school is another example of a "house" for the mechanical systems permitting the easy and almost unlimited remodeling of supply to rooms above.

Here, then, are the beginnings of a rationale transforming remodeling into a systematic, industrialized operation:

Minimum disassembly of existing structure.

All possible work by addition, not subtraction.

Where possible, production of new subassemblies independent of the old, making production as systematic as "new building."

• Maximum self-containment for all building systems; interconnections held to a minimum and made easily changeable.

Anticipation of remodeling in the initial design—not by advance provision of excess areas or facilities but by design which will make such provision easy at the right time.

And, perhaps, design which will give building service systems their own house.



ARCHITECTURE



ARCHITECTURE

Architectural Forum / January 1960



Toward a new continuity

The linking of past to future in the city is an esthetic as well as economic and human necessity

It may be seen at this point that, beyond the plaster dust and the rending noise of the remodeler's crowbars, this issue of FORUM is attempting to look at the rebuilding of urban America in a new way-or at least in a way relatively new for most Americans. It is an attempt to see rebuilding not as isolated events of public or private enterprise, with all the haphazard charms or horrors of street accidents, but as an opportunity to relate rebuilding old or new to the living fabric of the city, its functions, flavors, neighborhoods, and economics, its past and its future. Underlying all this is the strong feeling that if order is ever to be drawn out of the present urban chaos, there must enter some governing elements of good taste and even esthetics, a reawakening to the over-all architecture of cities.

Next to language, as Lewis Mumford has pointed out, the city remains man's greatest work of art. Beside the city, all other arts and sciences are marginal or subsidiary, for the city in its focusing of human consciousness is the mother and habitation of all these. The roots of the city go deep in the human condition, and the city's physical growth through the centuries reflects all stages, triumphs, defeats, and crises of the human spirit. The very nexus of the modern crisis is in the cities.

In mankind's long transition from nomadic to communal being, the first pure expression of the now dominant Western concept of the city occurred in Greece, an ideal that man could not long live up to. Its next great expression was in the medieval city, a walled organic growth around cathedral and castle, which lost

in freedom what it gained in cohesion, through a warm, tightly knit warren of irregular streets. Modern research has established that the city of the Middle Ages was not the dungeon it has been painted but a balanced, homogeneous creation, held together by common belief, a city of rural-based trade and clean handcraft industries, wind- and water-powered. It existed in a world marvelously underpopulated by present standards, no major city of the fourteenth century exceeding 50,000 souls. Its vestiges may still be found in small, clean agricultural towns, to which men return with some refreshment.

In the great creative explosion of the Renaissance, the medieval city was opened out to new vistas, plazas, splendors, and growth, reaching a formal but humane order, with some echoes of the Grecian unities, in the eighteenth century and the Enlightenment. Hard on the heels of this, however, and stemming from one of the central forces of the Renaissance-experimental science-came what some have judged to be a new Dark Age: the industrial revolution. In its first raw stages, only beginning to abate, the new industrialism set the now familiar urban pattern of dark industrial towns and vast metropolitan conurbations, of mechanical riot, congestion, and population endlessly exploding. Behind these great and unprecedented new energies was the rise of private capitalism, based on individual judgement, which loosed a certain anarchic force upon the development of city and environs. Instead of the city being viewed as a work of art, designed for the enlargement and repose of the human spirit, it came to be seen largely and simply as a mechanism for making money.

On balance, industrialism so far has generated more good than evil, in the sense of having opened an entirely new epoch in human

Düsseldorf's new office tower (overleaf) is linked in spirit and fine detail to its older neighbors. Architect: Schneider-Esleben.


A quiet stressing of structural lines and arched brickwork over windows makes this new school wing in Turin, Italy, of uncompromising modern design, discreetly a part of the old edifice in the background. Architect: Giorgio Raineri. development, of making possible more and fuller life, of offering the only surcease thus far to brute labor and human poverty. And in the advanced technics of electricity, electronics, and chemistry lies the promise of a cleaner, more humane and effortless stage of physical well-being. But unless industrialism begins to solve its pressing urban problems, the residue of early clutter, ugliness, and waste, it too may be superseded by another order.

The saving principles

The difficulty is that, whereas the creation of cities in the past flowed out of a slow, almost instinctive molding of form to human use and aspiration, with time to heal all wounds, the modern city has come so fast so far, and on such a scale, divorced from nature, that any rebuilding of it closer to human dimensions demands a conscious effort, a conscious esthetic to guide it. No such esthetic yet exists—and it is never likely to come in the form of copybook rules or packaged formulae, so dear to the practical minded—but this issue of FORUM may point the way toward some few general principles of urban renovation, old and new, recognized in part, and already in practice here and there.

ELIMINATION. No rebuilding on the scale needed can be accomplished without a conscious policy of elimination. Elimination is at the base of all art, as it is of all healthy biological organisms. Much of the urban product of the earlier industrial revolution is hopelessly obsolete and not worth saving; e.g., old-law tenements, large patches of gray area, many marginal industrial buildings, most transportation systems. Many renovations of old neighborhoods or other areas cannot get started or begin to make sense without first eliminating dead tissue or applying the scalpel for entirely new developments-see the Hyde Park-Kenwood project in Chicago, page 98. Research and a planned program are needed to develop the instruments, economic, governmental, or otherwise, to make elimination a continuous civic process, so that new slums and gray areas are not being created faster than the old are cleaned out.

SEGREGATION. To bring more orderliness to the city, a conscious policy of segregation, not of the racial variety but of urban functions, needs to be developed. Absolute separation of vehicular from pedestrian traffic is now a fairly well-recognized goal of advanced planners; segregation of residential neighborhoods from heavy industrial and others (new light industries may cleanly fit in) is likewise pursued; segregation may extend even to the design theory of new buildings (see page 138) to separate the mechanical from other interior functions for greater ease of operation, maintenance, and future change. Specialization is a powerful fact of modern life, and it may well be extended further into the structure of the city. The solution to such an area as New York's garment district, for instance, may be to divert through-traffic around or over it on elevated highways, leaving street level for truck deliveries and its own peculiar form of pushcart traffic, thus isolating the district to allow it to redevelop to its own specialized needs. An example on a smaller scale may be seen in Knoxville's newly integrated shopping block, page 135. What is needed to guide such developments is re-examination of what goes where in the modern city, what constitutes a neighborhood in modern terms, about which almost nothing is known today, again calling for a strong draught of research.

CONTINUITY. To knit all this together without too much rigidity, there is growing need for a new principle of urban continuity, a connective tissue of architectural design to remove raw edges, heal over scar tissue, and link past to present and to the future. To save what is best and salvageable from the past is not only an economic but a strongly esthetic and human necessity. The conviction, indeed, has been growing for some time that what is needed in the modern metropolis, scarified by over a century of industrial drive, is some of the medieval city's biological balance, the interpenetration of greenness and human-scale neighborhoods, some of the Renaissance city's splendors, the opening of space to a new order, without for a moment relinquishing the basic, hard-won advances of modern technics and design. For this new synthesis, to which many signs are pointing, research can be of little direct help. Only the development of esthetic judgement and desire can forward the design.

Of continuity and contrast

The new continuity needed on the city scene is of a subtle kind. It is not per se the slavish restoration of ancient forms or the dusty pursuit of a new eclecticism, which, wherever tried,



**

-2

a.

100

This modern church house and school for century-old First Presbyterian Church on lower Fifth Avenue, New York, maintains continuity by simply repeating the church's Gothic quatrefoil parapet as ornament. Architect: Edgar Tafel.



has led in the main to a dead level of mediocrity or the lifeless air of a museum. Careful modernization of certain elegant city features and areas —the better New York brownstones, Georgetown's quiet, shaded streets, the colonial mews of old Philadelphia—can preserve a certain valid charm in cityscapes, but it does not begin to grapple with the major problems of industrialism's raw edges in the city, the vast deteriorating areas of no particular style or character.

Nor does the new continuity desired exclude contrast, the shock of the new, the quietly assertive statement of contemporaneity. The concept of foreground and background building is valuable here to divert the dullness of simpleminded sameness. Rather the new architectural continuity should seek to express a rapport between old and new in the echoing of a line, a detail, a texture of materials, on wholly modern terms; in cleaning up and emphasizing structure; in treating surroundings with respect; in, finally pursuing above all fitness, perhaps the most subtle and difficult element to achieve in the practice of the social arts.

Few of these qualities have been particularly characteristic of America until recently. The frontier spirit and pioneer industrialism, with their contempt for the past, have only begun to give way to a subtler, more civilized spirit. Such a project as the Providence regeneration (page 90) would have been unthinkable a decade ago, and though it is yet but a dream, it is a hopeful one. However, nearly all the illustrations on these pages showing the quality in continuity to be striven for are European. Not that the European cannot be guilty of bad taste-see the picture at right, and much of the rebuilding of war-torn capitols like London-or that these examples are wholly faultless. But the European has had centuries of working and reworking the palimpsest of his cities into the loving symbols of the human community. Paul Schneider-Esleben's new office tower in Düsseldorf (page 143) and Ignazio Gardella's new apartment house next to the Church of Spirito Santo in Venice (page 148) may stand as shining symbols of that subtle art.

Perhaps the most articulate of European architects struggling with the problem of continuity in the city is Giovanni Michelucci of Florence, who went into near retirement under Mussolini to free himself from the "formal slavery" of academic training and Fascist ideals, and blossomed forth in the postwar rebuilding of his native city. His most notable work is the new addition to the Cassa di Risparmio or savings bank in the heart of the old quarter, which manages, under a series of rolling vaults and sensitively handled glazing, to fit without break into the old façade and into the landscape of a quiet cathedral garden and famous cathedral dome to the rear. "What I esteem most highly," says he, "is a work which, when completed, will look as if it had always been there. It is a work like a public square where nothing subjugates man, and everything, even when apparently chaotic, is justified by an internal order."

Elsewhere Michelucci has said : "I feel a great melancholy when I see the foundations of old buildings weathered by time being steeped in a chemical compound merely to prolong their life, whereas a building which is being transformed to suit the current needs of men is always a source of delight to me. I should like each of my own buildings, from the day of their completion, to appear to be ready for any such future adaptations. But this attitude calls for a renunciation on the part of the architect of the habit of interposing himself between the design and the men who will eventually use the completed building, and a renunciation of methods and media that are too sophisticated for the client. . . .

"I do not thereby mean to criticize the ration-



Unbuilding also goes on in Europe, as seen in this boxy bank on stilts, of an eye-stopping, horizontal, rectangular modernity, wrapped unfeelingly around the soaring vertical lines of one of Cologne's churches. Architect: Theodor Kelter.

alist movement in architecture, which has been historically justified by the many positive contributions it has made; I am criticizing that vestigial rigidity of stand which can still be discerned in many of the works of architects of my generation. I am criticizing the lack of courage to let go and recognize the human and imaginative elements in design; I am criticizing above all the fear of 'yielding' something to popular taste. . . One needs to sense the manner whereby traditional popular elements can be harmonized with the new, and one needs to uncover within oneself certain experiences common to all men. . . .

"Our purpose should not be for each architect to build his own triumphal arch but to contribute to the form of the city, as if it were a living being whose harmonious existence provides a justification of our work and of our lives."

The future discipline

It is an open question whether in the anarchy of modern art and times such idealism or discipline can flourish. Or whether in the individualism of the democratic process, the determination of real estate business to allow only that kind of zoning or control that squeezes out the highest rent per cubic foot of available site, and the general apathy of many government leaders to all things urban, whether men can go on to build more harmonious, homogeneous, and humane cities.

But the place, the only place to make a beginning is on the design boards of the architectural profession, and in the minds of men of good will and good taste. Democracy can work only thus, by persuasion, example, and the setting forth of good works. If this is well done, the rebuilding of cities may yet catch that tide of hunger for expression of the arts in which there are many popular and provocative omens of things to come.

Continuity of closer vintage is shown in the strong, vertical stone facing and dark glass spandrels adopted to keep the new Time & Life Building, New York, in context with its Rockefeller Center neighbors. Architects: Harrison & Abramovitz.



FOLDOOR Sound guard

FOLDOOR continues its leadership in the field of sound-retardant folding doors with the introduction of Soundguard—the new folding partition that separates both space and sound, with an unprecedented high level of efficiency.

Soundguard offers greater sound reduction . . . over a wider range . . . than any other folding partition available today. This is due not only to the denser sound insulation within the partition itself, but also to complete perimeter sealing.



Here's a fresh, new idea in "space designing"...

Here's something different—exciting—functional and decorative—a brand new design medium! Ideal for use as screens, space dividers, entryways, railings or for pure decoration. FiliGrille (shown in illustration above, at left) is an original ornamental grille work of $\frac{34}{7}$ thick polystyrene in standard designs, factory-fabricated in customized panels. Complete framing systems adaptable to any application. Simple, economical to use, ready to install. Ask for details.

both space and sound effectively

Soundguard provides a tight seal that blocks sound from passing around jambs and operating edges. Only in Soundguard will you find this exceptional feature!

Soundguard is smart in appearance, with smooth fabric draping. Soundguard has the strongest framework of any folding partition, resulting in an unbelievable ease of operation, even with partitions up to 20-foot heights and maximum widths. We'll gladly send you complete information.

HOLCOMB & HOKE	
FOLD COOR FOLDING PARTITIONS AND DOORS	Holc Dept. India
and the second	

Holcomb & Hoke Mfg. Co., Inc. Dept. A-21, 1545 Van Buren St. Indianapolis 7, Indiana

Please send complete information	ation on:
FOLDOOR Soundguard	🔲 FiliGrille
Name	
Firm	
Street	
City	State



TRUSCON DONOVAN STEEL WINDOWS were used in the construction of the beautiful Wheat Street Baptist Church Educational Building, Atlanta, Georgia. Truscon Donovan Awning Type Windows offer the architect unique advantages of lighting and ventilation without drafts, and maintain the depth and dignity of church and institutional construction. Truscon Intermediate Projected and Intermediate Casement Windows, photo right, complement the two-story portion of this church building. Architect: Edward C. Miller; Contractor: Barge Thompson, Inc.



MODERN TRUSCON BUILDING PRODUCTS FOR CLASSICAL BEAUTY

Truscon Metal Building Products are designed and produced to preserve the beauty and dignity of modern institutional architecture.

Slim, trim, Truscon Steel and Aluminum Windows let more sunlight and fresh air in . . . give depth to exterior vertical and horizontal building lines.

Interiors, too, offer architects and builders new free-

dom in design. Strong, sturdy, Truscon Metal Lath and Accessories can be formed to fit columns, arches, stairwells, for greater creativity in wall finishing.

Let Truscon engineers work with you in designing, engineering, and erecting the finest steel building products possible for your project. Call, or write today.



TRUSCON VISION-VENT[®] WINDOW-WALLS set the style for the Proviso High School West, at Hillside, Illinois. VISION-VENT goes up easy, goes up fast; for VISION-VENT is a wall design with the window already in place. This simplified erection method reduced construction costs. Architects: Perkins and Will; Contractor: Powers Construction Company, Chicago, Illinois.



TRUSCON DOUBLEMESH HERRINGBONE® METAL LATH AND ACCESSORIES were used in designing and finishing the attractive walls of the First Federal Savings & Loan, new bank building, Youngstown, Ohio. Truscon Metal Lath and Accessories provide fire-resistant, crack-resistant, sound-resistant construction. Architects and Contractors: St. Louis Building & Equipment Corporation, St. Louis, Missouri.



Steels and Steel Products

REPUBLIC STEEL	CONTORATION
1441 REPUBLIC BLD	G CLEVELAND 1, OHIO
Please send informa	tion for the following products:
	an Steel Windows Truscon Vision-Ven Lath and Accessories
L Huscon Metal I	can and necessories
	Title
Name	Title



BRUNNER

0

Dunham-Bush, Inc.

WEST HARTFORD 10 . CONNECTICUT . U. S. A.

with SPECIFICATION FLEXIBILITY

DIRECT DRIVE

Again—from the leader a beneficial advance in compressor adaptability.

Brunner's new line of multi-drive units can fully satisfy any compressor requirement . . . providing a specification flexibility that substantially widens application latitude.

As illustrated, the line includes the direct drive model, the hermetically sealed model, and the belt-driven model. And to ensure the integrity of performance for which Brunner has been famous for fifty-three years, these units are constructed of only the highest grade materials; and are equipped with built-in capacity control, oil control valves, replaceable cylinders, and other important features.

The line's horsepower range is 71/2-100. Each model is obtainable in either the water-cooled or the evaporative type.

For more information, contact the Dunham-Bush sales engineer near you, or write for Form No. 775.



BELT DRIVE

HERMETIC DRIVE

Abroad

A continuing review of international building









SWEDISH MUSIC

A new client that is emerging as one of Europe's more amenable architectural patrons is the management association. A case in point is the Association of Swedish Employers, which recently commissioned Architect Anders Tengbom to design this training college on an inlet outside of Stockholm. The college consists of four main buildings: a dormitory, dining hall, staff building, and student center. Whether or not the sharp notches of the dormitory's two-story brick façade give the students' rooms better views or light control (see plan and interior, far left), they do give the campus a characteristic, vertical rhythm that sounds right amid the surrounding pines and birches.



WHISKY FACE IN JAPAN

In the hills above Osaka, where the low mean temperature and high humidity provide an environment ideal for whisky-making, the Yasui architectural firm has given the Kotobuki-ya Brewing Co. two new buildings and a recognizable corporate face. Both buildings are concrete-framed and are sheathed in ceramic tile. The smaller building (background, photo above) is the distillation plant. The larger, which is used for sorting and processing the grain, is topped by two ribbed-steel drying towers that symbolically recall the form of the company's original furnace.





HEALTH IN MANILA

Another post-U.N. indication that international cooperation can result in good architecture is the World Health Organization's building in Manila by Philippine Architect Alfredo J. Luz. It consists of two elements: An eliptical conference hall and a rectilinear, fourstory administration building. The underside of the conference hall's quadri-partite shell roof is acoustically treated; from it is suspended a baffle housing air conditioning and lighting (photo at left).





TENSION IN BONN

Bonn's new Beethoven Hall not only looks unusual externally (above), with its dome swelling above the Rhine bank restaurants and lounges, it also has an unusual interior plan. Concert-goers are routed down a long corridor from the box office, past the cloakrooms, and through outer and inner lobbies before they reach the main hall. Architect Siegfried Wolske, by this plan, hoped to "create emotional tension." He also hoped to prevent "the conventional mass-feeling" among the audience by separating the 1,400 chairs in the egg-shaped main hall, by providing stairs from the floor of the hall to the balconies (see plan) and by covering the dome's steel structure with a playful, bright yellow plaster ceiling (below).





COLD IN SWITZERLAND

Those who feel that modern architecture is cold and forbidding will find easy evidence for their claim in this Swiss crematorium. For although it is well designed, in a series of courts, gateways, and buildings of varied height, there is a precise formality about the installation that seems somewhat grimmer than necessary. Visitors enter beneath a high arch, proceed down a long avenue (above) and beneath a lower arch, arrive eventually

at an antiseptic, slightly raised porch which separates the tilt-roofed "memorial hall" from the low-lying crematorium. Beneath the porch is a hidden passageway which provides an efficient, one-way shuttle between the two buildings. Only in the memorial hall (right), where a broadspreading cross dominates a wood-ceilinged chapel, does the architecture (by Zurich Architects Edi and Ruth Lanners) offer room for compassion.





WHEEL IN AUSTRALIA

Australian Architect Robert Eggleston chose a wheel-shaped roof for his Bendigo (Victoria) service station not merely because it seemed an appropriate form but also because of the possibilities of cantilevering it out from the station's circular core. The wheel consists of 42-foot lengths of galvanized steel that are turned up at their edges like tapered troughs. The troughs, one facing up, the next facing down, are bolted to each other and come in to a concrete ring beam at the core. An additional advantage of this construction method was that the identically proportioned troughs could be stacked up in a "nest," were transported the 600 miles from the shop in one load.

BULGE IN COLOGNE

Hans Schilling's St. Alban's church is a striking memorial to the war dead of Cologne. It is built of stone from the rubble of the city's bombed buildings (mostly the old Cologne opera house). The lofty walls of the church, pierced by a series of random windows (photo below), lead up to a kind of climax at the peak of the apse. In plan, the apse appears as a parabolic bulge in the pentagonal form.



JULIUS SHULMAN



THIS PANEL SUPPORTS ITSELF

WIIII WIIIIIIII **BUILDS SPANS UP TO 250 FEET!**

WONDER BUILDING" Truss-Skin" ROOF SYSTEMS

There's nothing like it in the industry - a structural component so efficient it supports itself, saves 50% in building costs and erection time !

Double Corrugation design is the reason. Patented Wonder Building panels are heavy-gauge, zinc-coated steel double-curved and corrugated for rugged strength and rigidity. They're the only structural members required for an entire roof ! Simple, bolted construction means fast assembly on the job.

"Truss-Skin" Roof Systems are independent structural units exceptionally adaptable to bowling alleys, arenas, gymnasiums, super markets - all wide span structures. They're available in widths up to 250 feet, in any length. See your Wonder Building distributor for complete facts and figures - or write Dept. M-160.

See our listing in Sweet's Architectural File Index No. 2b/Wo.

DOUBLE CORRUGATION!

Patented Wonder Building panels are Coro-Crimped in small corrugations — assemble in 2-foot corru-gations. Strongest building design in the industry!



RUGGED STRENGTH!

Each Wonder Building panel is a structural member complete in itself! Simple bolt and nut assembly gives positive panel to panel connection. This unique construction forms an unyielding roof with low weight to strength ratio. Sealed joints and neoprene washers assure a weather-tight fit.



PRE-ENGINEERED!

"Truss-Skin" roof panels (24 to 12 ga.) are pre-engineered and precision-formed at the factory, Match accurately for fast, low-cost assembly. It's the most economical way to cover huge spans. No girders, posts or pillars—no painting or roofing. Easily insulated. Fiber glass panels provide natural lighting.



LOW COST FINANCE PLANS AVAILABLE. Let your Wonder Building structure pay for itself while you use it! Special purchase arrangements feature low down payment, attractive interest rates – budget installments

wonder building corporation of america 30 North LaSalle Street, Chicago 2, Illinois

158



View of the student lounge in the Burnsville school in Savage, Minnesota, showing an imaginative use of Natco ceramic glazed Vitritile. Architects: Haarstick Lundgren & Associates, Inc.

Today there are many new, exciting uses of NATCO VITRITILE

Yes, today imaginative minds are blending Natco ceramic glazed Vitritile in harmony with other compatible building and decorating materials to create modern showplaces of color and design.

Vitritile, available in a complete selection of modern field and accent colors, offers an unlimited choice of color combinations. And, because the colors are permanent, walls will retain their original "new look" for the life of any building.

Combine your creative talents with the functional and decorative qualities of Natco structural clay facing tile on your next building job. Write for catalog S-59.



Vitritile comes in three nominal face sizes: $8'' \times 16''$, $5\frac{1}{3}'' \times 12''$ and $5\frac{1}{3}'' \times 8''$.

Today's idea becomes tomorrow's showplace . . . when Natco structural clay products are in the picture



GENERAL OFFICES: 327 Fifth Avenue, Pittsburgh 22, Pennsylvania . . . Branch Offices: Boston • Chicago • Detroit • Houston • New York • Philadelphia • Pittsburgh • Syracuse Birmingham, Alabama • Brazil, Indiana ... IN CANADA: Natco Clay Products Limited, Toronto

What architects should know about office sound control problems...and



The elements which make sound energy difficult to control are the almost friction-free medium of air, and the tremendous range of the human ear as a sound receiver. Since most speech and typical office machine sounds fall within the area of maximum ear sensitivity (600 to 6,000 cycles), proper control within this range is a major element in increasing worker efficiency and reducing office fatigue. The noise level of a room can be measured in terms of decibels, the smallest amount of sound the human ear can detect. Most offices have a rating of between 40 and 80 decibels. The job must be analyzed to see what type of sound problem exists. If noisy machines annoy people in the room, then the problem is one of soaking up the noise or sound absorption. If the problem is to stop the sounds that originate in the room from going into the next room, then it concerns transmission, and walls, rather than partitions, must be installed.

its solution with GR soundex partitions



Sound waves travel in every direction from their source. When they strike something, part is absorbed and part bounces off in all directions, SOUNDEX partitions trap and absorb sound waves. They have a noise-reduction coefficient (NRC) of .85, which means we can reduce the noise level as much as 38% in some rooms, Where the problem of sound transmission is concerned, Soundex walls are recommended. The sound blocking quality of these walls rates high (40 decibels), more than enough for all but "heated" discussions.

the secret is the floating core principle





Design possibilities are unlimited with ROMANY·SPARTAN Ceramic Tile

Bright, matte and crystalline glazes in a tremendous range of sizes and shapes. Unglazed mosaics in porcelain and natural clay, plain and textured. All are available in the greatest variety of colors and shades you've ever seen. Use them alone or in endless combination to produce the precise decorative effect you wish. And for exterior use, Romany Spartan tile is certified frost-proof-your assurance of care-free permanence-yet you pay no premium. For your next job, indoors or out, consider low-cost Romany Spartan, the designer's line. Your nearby Romany Spartan sales representative or distributor will be glad to work with you-even arrange for design help if you like. Call him-he's listed in the Yellow Pages. United States Ceramic Tile Company, Dept. AF-11, Canton 2, Ohio.



Curtain wall panels of unglazed Romany Spartan ceramic mosaics provide a decorative exterior wall finish for Orlando's new Citizens National Bank.



Plate No. 1090

CITIZENS NATIONAL BANK Orlando, Florida Architecta: THE EDWIN T. REEDER ASSOCIATES Miami, Forida



UNITED STATES CERAMIC TILE COMPANY MEMBER: THE PRODUCERS' COUNCIL, INC.



Corning Glass Works Building, 717 Fifth Avenue, New York City. Architect: Harrison and Abramovitz and Abbe. Fixtures by Globe.

With a world of glass to choose from

Harrison and Abramovitz and Abbe chose a unique crystal and opal glass panel to control the lighting in the reception room of our new building at 717 Fifth Avenue.

The panel is our Crystopal Pattern No. 71. You'll see why our glassmakers combined these two types of glass when you step into the room.

You will be aware of a subtle, sophisticated control of light. For the crystal prisms transmit a high level of illumination while lowering brightness. The dash of opal reduces reflected glare, blends the various lamp hues into a single warm tone.

An added benefit *only* glass can confer: the impression our room makes on your hundredth visit will be the same as your first. For these glass panels won't fade. Warp. Or discolor. The lighting effect the architects planned into the room is there to stay.

We hope you can arrange to visit our new building soon. You'll find it a three-dimensional text-

book on how to use glass as a structural, design, and light control medium.

Meanwhile send for a free copy of our "Commercial Lighting Application Guide." It's a useful working bulletin that explains how to achieve the kind of lighting you see here. Write: Corning Glass Works, 64 Crystal Street, Corning, N. Y.



CORNING GLASS WORKS

Books

Venice . . . New York . . . San Francisco



IGNAZIO GARDELLA. Introductory essay by Giulio Carlo Argan. Edited and published by Edizioni di Comunita, Via Mansoni 12, Milan, Italy. 201 pp. 8" x 10", Illus. About \$8.00.

Ignazio Gardella is one of Italy's most consistently promising architects. This chronologically arranged review of his work seems to explain, unintentionally, why there is a possibility that he will never build a widely-acclaimed masterpiece.

Now in his middle years, Gardella was a young man at the time of Italian architecture's conflict against Fascist formalism, and he actively participated in that struggle. Indeed, his work today is still marked by a persistent informality that is delightful without ever being beautiful, skillfully planned without ever looking organized. And perhaps it is this undogmatic character, this concern for the peculiarities of a building and its site (see his Venice apartment house, above), that has kept his modest reputation from becoming something more.

While being grateful for this well-presented book in English and Italian, readers will undoubtedly miss a more informative introduction. The essay supplied by Giulio Carlo Argan sounds depressingly like a conversation overheard at an international architects' convention.

MADE IN NEW YORK—Case studies in Metropolitan Manufacturing. Studies by Roy B. Helfgott, W. Eric Gustafson, James M. Hund; edited by Max Hall. Published by Harvard University Press, Cambridge 38, Mass. 388 pp. $534'' \times 81/2''$. \$6.75.

This is the second part of the far-reaching New York Metropolitan Region Study that Harvard's Graduate School of Public Administration is carrying out for the Regional Plan Association. The first part of the Study was an introductory look at all the city's problems and prospects (FORUM, Dec. '59); six more close-up studies and a concluding volume by Study Director Raymond Vernon will round out the undertaking.

Editor Hall's volume concentrates on the city as a manufacturing center, spotlighting women's and children's apparel, printing and publishing, and electronics as the industries that best reflect the town's changing manufacturing status. Together, the three industries employ 28 per cent of the city's working population. Each of the "case studies" is made in an effort to find out what forces are effective in keeping the industry in New York and what forces attempt to pull it outward. And in each case the objective is pursued with both reportorial zeal and academic thoroughness. It is the analysis of these centripidal and centrifugal forces that readers from other cities will find of particular help in estimating the stability of their own manufacturing operations.

Editor Hall hesitates to make any dogmatic conclusion from the results of his writers' reports. But he does hazard a guess that New York's greatest attribute as a manufacturing center is its off-beat character, its ability to shuck off standardization (that American virtue) and to come up with a better mousetrap—quickly.

THE NEWCOMERS — Negroes and Puerto Ricans in a Changing Metropolis. By Oscar Handlin. Published by Harvard University Press, Cambridge 38, Mass. 171 pp. 5¾" x 8½". \$4.00.

This third volume in the New York Metropolitan Region Study by Pulitzer-prize winning Harvard historian Oscar Handlin, is a well-balanced, astute look at one of the big city's most urgent problems—the fast-breaking changes wrought by a heavy influx of Negroes and Puerto Ricans in recent years. Handlin foresees a 60 to 75 per cent increase in the Negro and Puerto Rican populations of the New York metropolitan region in the next two decades, which will raise their percentage of the total region's population from its current 12 per cent to nearly 20 per cent.

This growth in New York's Negro and Puerto Rican communities need not be a cause for alarm, Handlin says, although he admits that social disorder has been "an inescapable concomitant of all urban growth, whatever the population involved." The responsibility for minimizing such disorder, Handlin feels, lies squarely with the community-the problems involved "can best be solved through the development of communal institutions under responsible leadership." Significantly, Handlin adds that a lessening of prejudice and a coincident rise in social and economic opportunities are "essential to such development." Although Handlin, with a hiscontinued on p. 164



And, of course, it *couldn't*, not 800 years ago. But today, Glidorama Window Walls offer the modern architect the *flexibility* he requires for creative expression and pleasingly different building designs. Not monotonous repetition, but window wall patterns that emphasize the individuality of your architecture.

Glidorama's experience in fabricating modular unit window walls with integral horizontal gliding aluminum windows, assures you of dependable, superior craftsmanship on every job. We will be pleased to offer suggestions or assist you in developing Glidorama Window Walls which reflect your creative requirements.

> Write for architectural bulletin GL-10. Glidorama Division, Whizzer Industries, Inc., 353 S. Sanford St., Pontiac, Mich.



torian's eye for significant detail, draws parallels between current Negro and Puerto Rican migration to New York and earlier migrations from Europe, he also acknowledges that the "newcomers" of today have two additional barriers to overcome besides the more traditional ones. These are color and fundamental changes in the city since the 19th century when most European migration occurred.

Handlin says it will take more than

"slum clearance or expansion of recreational facilities" to improve the conditions under which the newcomers must live and work. "When color and ethnic identity cease to be unbearable burdens, when opportunity for jobs, education and housing become genuinely equal, and when the family acquires a measure of stability, the Negroes and Puerto Ricans will at least have a firm base upon which to construct a sound communal life."

Special lift for VIPs*



Recordlift speeds interfloor delivery in multi-story buildings; features modern **MAGNETIC MEMORY** control

*VIPs are tough on time. They're impatient. They dislike being tied up by coffee breaks, a chat in the hall, small delays. VIPs are Very Important Papers - mail, policies, files, contracts, invoices - going places, doing things. VIPs run the business world.

In a single day, a Standard Recordlift can automatically distribute tons of VIPs throughout a multi-story building. And this talented vertical conveyor does it with ease, economy, safety.

To operate the system, the operator presses a button for the floor desired. When the carrier is moved into the loading station, the Magnetic Memory device automatically transmits a signal to the carrier tabs or to the tabs on the container (whichever method is used). When it reaches the correct floor, a reading head decodes the digital signal and

commands the unloading station to deliver the container.

This is multi-story materials distribution at its best — its fastest.

For complete details, including list of outstanding installations, write STANDARD CONVEYOR COM-PANY, Dept. BB-1, North St. Paul 9,







SAN FRANCISCO-A Profile with Pictures. By Barnaby Conrad. Published by the Viking Press, 625 Madison Ave., New York 22, N.Y. 228 pp. 81/2" x 111/4". Illus. \$8.50.

THE SAN FRANCISCO BAY AREA-A Metropolis in Perspective, By Mel Scott, Published by the University of California Press, Berkeley and Los Angeles. 333 pp. 81/2" x 11". Illus. \$12.50.

San Francisco, that proud-bosomed, fogcrowned princess among American cities, has easily had more literate lovers than all those of dowager Boston and teenaged Los Angeles combined. As bullfighterportraitist-restaurateur Barney Conrad points out in this latest "unabashed valentine", everyone from Rud Kipling ("a mad city, with women of remarkable beauty") to Chronicle columnist Herb ("Baghdad by the Bay") Caen has wrestled with San Francisco's unique charms, without ever really pinning her down. Conrad's own love song is composed in a few lively words and many striking pictures: the inevitable but nonetheless lovable portraits of Black Bart in handlebars, Emperor Norton in epaulettes, and Lillie Coit in her bottle of booze; some extraordinary shots of the '06 fire, the bridges, fog, cable cars, people, and architecture (mostly the grand old styles, with Wright's V. C. Morris store thrown in for luck and a wealth of newer Bay Area accomplishments left out).

Lover Mel Scott, on the other hand, looks at his princess with the more sober eyes of a city planner and teacher, prying into her colorful and sometimes scandalous past in an attempt to guide her everpromising future. The physical growth and pains of few metropolitan regions have been so lengthily documented as in this book: the petty civic rivalries and high-handed traction gangs; the Burnham plan of '05, the Regional Plan Association of '25-'27, and other early, agonizing attempts to get people to look at their growing metropolis as a whole; the struggles for water supply, ports, airports, parks, highways, rapid transit, bay crossings, clean air and water; the beginnings of a new era of redevelopment and planning. END

Excerpts

Tight money . . . twin embassies . . . no schools

THE MONEY CRISIS

Developer William Zeckendorf called for a popular outcry against the shortage of money at a fall HHFA forum in New York.

There is nothing that I can tell you, at the present moment, that is more important than the subject of tight money. The nation's solvency is at stake. It is not just a matter of our industry as such. It is not just a matter of our wishes to restore our communities. We are in a very dangerous position. Not since 1932 or 1933 have money rates been known to achieve the present level. This economy is on trial. I cannot believe that the ingenuity of the nation's economic administrators has such faults as to permit this to continue and not to try to remedy it. People don't seem to be aware of what is happening, and I only can tell you that unless the voice of the American people is raised against this anachronistic approach to the economy, we are in for trouble, and it will start with Congress.

WHAT CRISIS?

Presidential Assistant Don Paarlberg, speaking before the National Lumber Manufacturers Association in Washington, took a rather more conservative view of the money situation than Mr. Zeckendorf (above).

I am aware of the problems posed for the housing industry and urban renewal by a short supply of credit and a high rate of interest. The housing industry probably is more vulnerable to changes in the availability of credit and in the interest rate than is any other large segment of American business. A rise in the rate of interest might persuade a hesitant citizen to postpone the purchase of a home, while it might not persuade him to postpone the purchase of a television set. High interest rates and limited credit supplies are a reflection of a high level of economic activity and a strong demand for credit. They are the inescapable result of a credit picture which results from necessary efforts to curb inflation.

It might be possible, by making credit superabundant, to supply funds to all who desire to borrow and thus to bring about a temporary reduction in the rate of interest. But such a flood of credit would feed the fires of inflation and create more problems for the housing business than it could possibly solve. No knowledgeable and responsible person would recommend such a course.



AMERICANS ABROAD

The editors of the British Architects' Journal evidence a degree of confusion when they compared two recent U.S. embassies by Eero Saarinen.

How many buildings does it take to make a style? We were under the impression that the new American embassy in London (bottom photo, above) was an attempt to reflect the scale and character of Grosvenor Square, although frankly we don't quite see how it does. But now we are even more confused by the appearance of a picture of another new American embassy, this time in Oslo, Norway (top photo, above), a chip off the new Mayfair block. However, according to the handout, the new embassy style "differs sharply from the current trend of office buildings . . . the exterior walls, the facade, actually help support the weight of the building." And so the wheel of revolution turns.

IT'S THE PLANNERS' FAULT

When speaking before the Northeastern Regional Conference of the American Institute of Planners, Webb & Knapp Vice President William L. Slayton turned on his hosts as the major factor responsible for bad urban design.

In large urban redevelopment areas you have a tremendous opportunity to create something bold and imaginative. You have the opportunity to experiment to try out new ideas. You have a chance to break away from standard layouts. For heaven's sake, stop using the criteria of the suburban subdivision for these intown areas. I'm convinced that the planning schools forget we have cities—they limit their training to subdivisions. They still talk of buffer apartments between commercial and residential. They still have a horror of mixing land uses. Where are





How to design a showplace

Alcoa[®] Alumalure opens up whole new areas of imagination, new possibilities for beauty—without adding premium cost! Select from 11 handsome colors, plus natural aluminum finish. You can add this striking new beauty at rather astonishing *low* cost . . . whether you're planning an industrial building, school, shopping or recreation center, warehouse, or any other structure.

All the construction and long-range economies of Alcoa Aluminum are yours. It covers more area faster during erection because it comes in sheets as large as 48 in. wide, 30 ft long. It is lightweight, goes up faster, handles easi Aluminum requires no maintenance because it's corrosi resistant. Available in your choice of corrugated, V-bea ribbed or flat sheet. And Alumalure*, a tough, bak enamel finish on aluminum, has already passed the 15-ye mark in a rigorous test of durability. Lasting beauty remarkably low cost that's worth investigation now!

Your local Alcoa sales office has samples. For co swatches and full technical data, write: Aluminum Co pany of America, 823-M Alcoa Building, Pittsburgh 19, J *Trademark of Aluminum Company of Ame



Building site, courtesy George A. Fuller Co., New York, N.Y.

and leave your client smiling



Alcoa has an established architectural consulting service for architects, owners, consulting engineers, contractors. For technical counsel on aluminum applications, contact your nearest Alcoa sales office.



DR EXCITING DRAMA WATCH "ALCOA PRESENTS" EVERY TUESDAY, ABC-TV, AND THE EMMY AWARD WINNING "ALCOA THEATRE" ALTERNATE MONDAYS, NBC-TV

the planners who are looking at what people want—or can be expected to want —in in-town living?

You can encourage good urban design if you will stop discouraging it. Planners are one of the major obstacles to good urban design. It is you who are inhibiting new ideas, new approaches, and really good design. How?

First, by approaching design mathematically through the controls of the zoning ordinance. You measure density by families or people per acre, and relate it to housing types. You do not examine the design to ascertain its livability nor relate the design to the kinds of families who will live in the area. You establish mathematical limits and say that anything above is bad. And you even say that low density is good per se!

You do the same thing with coverage, set back, height, street width, parking,



small receptors to complete integral deck top units, HAWS meets your specs in three versatile materials: rugged enameled iron, 17 gauge stainless steel, and molded fiberglass in color! Equip them with virtually any combination of HAWS faucet and fountain fixtures for classroom service. See the full line in SWEET'S, or send for your free catalog. **Illustrated is Model 2450** in enameled iron.



etc. You do not examine a design in terms of function. You examine it by mathematical formula. This will not produce good design.

You should be working with designers to help break down your sterile, mathematical standards. When you have a chance to work with a competent designer, you should encourage, not discourage, new approaches and ideas. I repeat, it is the planner who is stifling good urban design.

THE SCHOOL AS MUSEUM

Remembering Jonathan Swift's advice to the English regarding the disposition of the children of Ireland, William Harlan Hale, writing in the November Horizon, posed a similarly drastic solution to the U.S. school problem.

Though I have long passed into that Place where-as I wrote in my epitaphmy indignation can no longer lacerate my heart, I remain the Enemy of all Oppression, Pretense, and human Vanity. Having turned my Thoughts, for many Years, to the Follies of the Learned, I now offer for your consideration a Proposal that may resolve your Difficulties, silence your Opponents, and lead to a unique Fulfillment. It is more modest than the Proposal I once offered for the Disposition of the Children of Ireland, the times then being of far greater Disorder and Distress. My present thought is simply that publick Educators in America, having so widely abandoned Education in all but Name, now draw the logical Conclusion and discontinue it altogether, closing the Schools as Relicts of the Past and transferring their remaining Exercises to Playgrounds and Playhouses.

The Advantages of this Proposal are obvious and many. It would lift a crushing Burden of Taxation. It would relieve Parents who are now filled with Melancholy at the Failure of their Children to do better in their Studies, or even to learn to read, from further Anxiety on this account. It would release many Teachers, now bound to lives of Penury, to more promising Employment. It would, by removing the Temptations of Literacy, eliminate the Incursions of foreign Propaganda against which your Statesmen have inveigh'd-and it would turn out the Scribblers of your popular sheets upon other pastures, too, thereby augmenting the world's useful Labour Force.

What immense Possibilities would arise, if my Proposal were acted upon! The Pursuit of Happiness, long profess'd as an American goal, would now be made complete, particularly for the tender Young on the Threshold of Life. School buildings would be left as mere *Museums*, giving mute testimony, as Monuments, Tombs, and Catacombs now do, to Man's Struggles and Burdens in the Past. END Reynolds helps the inevitable happen faster with

luminum n Modern rchitecture

A metal that is rustproof, light, strong . . . that combines initial economy with virtual freedom from maintenance . . . is destined inevitably to swift rise in the construction field. Add aluminum's natural beauty, plus the ability to take on many colors and finishes, and you have further design values for the architect.

Reynolds has helped the inevitable happen faster. Engineering and design teamwork with manufacturercustomers, architects and builders have improved both products and application techniques. The development of roll fabricating and other production methods have further reduced costs. And Reynolds, with the world's largest anodizing facilities, has pioneered in the use of color.

Reynolds has also explored new architectural realms for aluminum, as well as dramatizing accepted uses, in the building of the Company's national headquarters in Richmond and its regional headquarters in Detroit. You are invited to visit these imaginative yet practical showplaces. For further information write Reynolds Metals Company, Dept. AM-5, Richmond 18, Virginia.



1

1

Reynolds-fabricated units comprising aluminum windows and spandrels together with vertical columns make up the exterior of 666 Fifth Avenue, New York, N.Y. Owners and Builders: Tishman Realty & Construction Company, Inc., New York, N.Y. Architects: Carson and Lundin, New York, N.Y. Exterior Wall Erectors: F. H. Sparks Company, Inc., New York.

> demonstrate aluminum' swift rise

Reynolds-fabricated aluminum grids form the exterior of the Commonwealth Promenade Apartments and the 900 Esplanade Apartments, Chicago.

		H	-				H	-	ł		
		-	I				Ľ				
			Ļ	1	4		H	F	4	-	
		H	-		-	+	H	ŧ	H	Ē	
		H		-	t	đ	Ħ		H		1
			Ē	-	Ĭ		Ľ				
		-	-				Ц			-	-
	-	4	-	=	+	=	μ	-	=		-
ŀ	-	+	+	-	H	H	H	ł	H	Ħ	
				-		Đ	t		H	Ē	
		Π					П			L	
	1		-		+					-	
ŀ	-	H	+	-	-	F	-	-	-		8
	-	H	t		t		Ħ		t	T	İ
		-	-								- 1
	1	1	-		-	-	H		1		-
	-					-	H		+	Ħ	-
	N.		17	No.			Ħ			đ	1
		2	R.º		2.43	4.					
Le.		4	4								-

Builders and Developers: Herbert S. Greenwald and Samuel N. Katzin. Architect: Mies van der Rohe. Associate Architects & Engineers: Friedman, Alschuler & Sincere, Chicago. Architectural Metal Fabricator-Erectors: David Architectural Iron Works, Chicago.

Residence Hall, Zeckendorf Campus, Long Island University, Brooklyn, N.Y.



No matter what the job, large or small, Reynolds engineers are always ready to help you with specialized design projects in aluminum. If your office Library does not have Reynolds authoritative three volume set "Aluminum in Modern Architecture," please write to Dept. AM-5, Reynolds Metals Company, Richmond 18, Virginia.

Introducing REYNOLDS NEW MULTI-STORY ECONO-WALL SYSTEM 202!

The new REYNOLDS ECONO-WALL SYS-TEM 202 specified for this building provides a multi-story wall having all the advantages of stock units, yet permitting the architect to coordinate aesthetically with his own design. The insulated wall panels, which fit three basic window modules, are available in a choice of porcelain enameled and baked enameled finishes. Mullions offer a range of structural capacity. Installation of windows and panels erected from the inside minimizes construction time. This economical system for schools, office buildings, apartments, etc., is another convincing demonstration of aluminum's versatility.

ARCHITECT: S. J. Kessler & Sons, New York, N. Y. GENERAL CONTRACTOR: Leon D. DeMatteis & Sons, Inc. Elmont, N. Y. CURTAIN WALL ERECTOR: Steelset Corporation, New York, N. Y. Porcelain enamel aluminum panels by Erie Enamelling Company, Erie, Pa.



DU PONT PLAZA CENTER MIAMI, FLORIDA featuring Reynolds Aluminum Intermediate Projected Windows

ARCHITECT: John E. Peterson & Frank H. Shuflin, Miami, Florida

CONTRACTOR: Arkin Construction Company, Miami, Florida

ERECTOR OF WINDOWS & MULLIONS: F. H. Sparks Company, Inc., New York

استنارك		



ARCHITECTS: Faulkner, Kingsbury & Stenhouse, Washington, D.C.

GENERAL CONTRACTORS: Charles H. Tompkins Co., Washington, D.C.

WINDOW ERECTION CONTRACTORS: F. H. Sparks Co. of Maryland, Inc., Baltimore, Md.



165 EAST 72ND STREET, NEW YORK featuring Reynolds Aluminum Double-Hung Windows OWNER-BUILDER: J. J. Secoles, New York ARCHITECT: Boak & Raad, New York

REYNOLDS ALUMINUM WINDOWS

Reynolds Aluminum Windows are proving their quality construction—as well as the inherent advantages of aluminum in many important buildings. For literature in A.I.A. file form, write Reynolds Metals Company, Dept.AM-5, Richmond 18, Va.



See these Reynolds shows on ABC-TV network: "BOURBON STREET BEAT" and James Michener's "ADVENTURES IN PARADISE" Monday nights; "ALL-STAR GOLF" Saturdays.



MASTIC TILE DIVISION • The RUBEROID Co.

announces the second



to stimulate a major contribution to

MORE EFFECTIVE UTILIZATION OF SCHOOL PLANT — EDUCATION for youth and adult RECREATION for all the family

TURN PAGE FOR DETAILS

awards

OPEN TO ALL CONTESTANTS

Grand prize	10,000.00
2nd prize	5,000.00
3rd prize	2,500.00
6 Merit Awards of	500.00

STUDENTS ONLY

1st prize	2,000.00
2nd prize	1,000.00
3rd prize	500.00
4 Merit Awards of	250.00

eligibility

OPEN TO:

Registered architects of the U.S.A.

Architectural assistants to registered architects of U.S.A.

Students of schools which are members or associate members of Collegiate School of Architecture as of 1959/60.

NOTE: Special awards for students not successful in general competition. Students winning a major award will not be considered for student awards.

Endorsed by the National Institute for Architectural Education. (Subject to approval of submission of this program.)

jury

HENRY L. KAMPHOEFNER, Dean, School of Design, North Carolina State College, Raleigh, North Carolina DR. HARRY JAMES CARMAN,

Dean Emeritus, Columbia College, N. Y. WILLIAM W. CAUDILL, AIA,

Houston, Texas JOHN LYON REID, FAIA,

San Francisco, California EBERLE M. SMITH, AIA,

Detroit, Michigan

Professional Adviser A. GORDON LORIMER, AIA

MASTIC TILE DIVISION

\$25,000 annual

THE FIRST ANNUAL COMPETITION had as its premise "BETTER LIVING FOR THE MIDDLE INCOME FAMILY". A quarter section site of 160 acres adjacent to a new industrial park was chosen as typical of sites now being developed throughout the country as tract housing.

The architectural profession was given the challenge of developing this property as "A PLACE TO LIVE AND REAR A FAMILY". Many significant solutions were presented which, it is hoped, will result in improvement of tract development.

The Second Annual Competition extends the challenge to the architectural profession for the next important element of family living—"EDUCATION FOR YOUTH AND ADULT—RECREATION FOR ALL THE FAMILY".

Many communities are struggling with the problem of bond issues successively added to the community tax burden as the continued pressure of educational needs forces the sometime reluctant community into action. These educational taxes added to the taxes required for other needed and desirable community facilities, such as parks and recreation, cumulate in an economic drain on the middle income house owner. There is therefore a daily growing problem of solving the overall community needs on a long range basis of physical planning and financial funding.

Last year's winning design provided for neighborhood community facilities at its core with safe pedestrian access. The local school authority has felt that the 614 dwelling units provided warrant an elementary school at the core of the development and has taken independent steps to achieve this. However, Junior High School, High School and Community College facilities will eventually be needed for the large residential growth in the surrounding territory.

While short of the ideal and limited by existing controlling factors a definite attempt has been made by the Municipal Government to establish suitable zoning conditions for future growth. Through a collaborative effort of community and industry, a generous tract of land has been made tentatively available for community education and recreation needs subject to demonstration of its suitability and financial feasibility under a long range bonding program.

Hot controversy and concern exists in the community as to the validity of current educational techniques and the need for a stiffer educational approach to match the technical demands of the space age. The rising cost of modern educational plants has been very strongly challenged. It has been decided to retain a firm of architects to prepare a feasibility study of the use of the above tract of land for education and active and passive recreation, and to submit preliminary plans for the first projected

element of construction, a Junior High School.

You are the hypothetical architect

THIS IS THE PROGRAM: Overall development of the 280 acre site with integration of the following facilities:

- 1. Junior High School for 2,000 students.
- 2. High School for 2,500 students.
- 3. Community College (2 years) for 1,200 students.
- 4. Active and passive recreation for a rapidly growing satellite community providing greatest flexibility and sustaining revenue potential within the limitations of available land.
- 5. Adult use of educational and associate athletic facilities to the greatest extent possible without sacrifice of prime function.

The existing county road will be restricted for local access but the substantial volume of traffic engendered by the proposed community facilities shall be considered, including the problem of safe access to the site from the rapidly growing residential area to the southwest.

The overall study need be developed only to the extent necessary to demonstrate general site planning and functional integration or juxtaposition of facilities for maximum usage at minimum overall cost.

The Junior High School shall be developed in sufficient detail as to demonstrate educational objectives, plan organization, architectural character and general type of construction. Anticipated construction cost shall be given as a lump sum for the building only, excluding site development beyond a line five (5) feet from the building. Cost per square foot of gross area and cost per pupil shall be stated.

To permit uniformity of cost factors the local conditions shall be considered the U.S. Average of 535, as published in Engineering News Record Building Cost Index, listed below.

A typewritten analysis stating the educational objectives considered and developed in the solution shall be incorporated in the submission together with any other pertinent data which the Contestant may wish to present for the consideration of the Jury.

"I believe that only through education can we meet the many challenges and problems of today. How to provide the necessary physical facilities, without sacrificing educational quality and imposing too-heavy tax burdens, is a problem weighing heavily on every community. It is hoped that this competition will stimulate practical, workable solutions to this great challenge and develop a closer collaboration between the architect, educator and private citizen."

> SEYMOUR MILSTEIN, President MASTIC TILE DIVISION • THE RUBEROID CO.

			NDEX DEC. 25, 195 NEWS RECORD	38	AVERAGE TEMPERATURE IN	4 °F.	HUMIDITY - 8 AM
AND	Atlanta Baltimore Birmingham Boston	472 542 493 542 562 515 533 469 532 574 533	Los Angeles Minneapolis New Orleans New York Philadelphia Pittsburgh St. Louis San Francisco Seattle Montreal Toronto	609 569 595 563	MAX. January 42 July 88 Extremes 109 PREVAILING WINDS January July Average		January July Normal PRECIPITATION Normal Sunshine Frequency Daytime Cloudiness Cloudy Days Winter Sunshine Summer Sunshine Dense Fog

design competition





MASTIC TILE DIVISION · The RUBEROID Co.

Houston, Tex. • Joliet, III. • Long Beach, Calif. • Newburgh, N.Y. Vinyl Tile • Rubber Tile • Asphalt Tile • Vinyl-Asbestos Tile • Plastic Wall Tile

method of submission

ACH SUBMISSION SHALL consist of not more than three 30x40 H illustration boards, used vertically, of sufficient weight to permit handling and display. Drawings shall be in black and white suitable for reproduction. For uniformity in judging, the overall site plan shall be drawn at the scale of 1" equals 200'. Typewritten information, schedules, etc. may be applied to front of illustration boards. There shall be no projecting lettering or other materials. Each board shall have a thin card mounted face inward on the back with gummed tape, bearing the Contestant's name (or names, if a joint submission), address, and school or office affiliation; a statement signed by the Contestant(s) that this particular submission has not been previously submitted in any other competition; the name of the individual or individuals to whom award check is to be made payable and address of the individual to whom it is to be mailed if award is made for the submission. If the contestant is an undergraduate student he will so indicate on the back of the submission.

Submissions shall be addressed to Mastic Tile Division, The Ruberoid Co. and delivered to The Architectural League of New York, 115 East 40th Street, New York 16, New York, not later than 12 Midnight on June 30, 1960. Submissions will be returned by prepaid registered mail wherever possible. However, the sponsor cannot assume responsibility for loss or damage to entries. Exhibit, reproduction and publication rights are reserved by the sponsor for a period of one year after award.

Submissions will be numbered in order of receipt and each will be anonymous until the Jury has judged the entries which are identified by number only. The Jury shall have full and final power in the selection of all entries for award. By taking part in this program the Contestant(s) agree(s) that he shall have and make no claim against the Jury, any member thereof, the sponsor, the endorsing institutions, on account of anything that may be done or omitted to be done, except for awards made to him. The mailing of the check payable in the amount awarded to the name or names given on the original entry shall constitute full payment of the award.

Notification of awards to entrants will be made by the sponsor as soon as practicable after judging is completed, and payment of award as above shall also be made as soon as practicable.

The sponsor has not set any restrictive conditions as to materials, method of construction, or design classification.

It is hoped that the results of this competition will awaken community interest toward long range growth planning.

NOTE:

It is felt that the problem of distribution of answers to questions may cause inequities among contestants. Therefore the contestants should rest on their own judgment of the problem as stated.



MASTIC TILE DIVISION · The RUBEROID Co.

Houston, Tex. • Joliet, III. • Long Beach, Calif. • Newburgh, N. Y. Vinyl Tile • Rubber Tile • Asphalt Tile • Vinyl-Asbestos Tile • Plastic Wall Tile

ENTRANTS ARE REQUESTED TO REGISTER PRIOR TO MAY 15, 1960

MASTIC TILE DIVISION • The RUBEROID Co. P.O. Box 128, Vails Gate, N. Y.

I intend to enter the Second Annual Design Competition.

Please send me _____ additional copies of the program for the design competition.

Name				
Firm or School	E. DIVISION 611	11. 11.6		
Address	City	Zone	State	-

ADDITIONAL ENTRIES ARE AVAILABLE FROM THE MASTIC TILE DIVISION • THE RUBEROID CO., THEIR REPRESENTATIVES AND DISTRIBUTORS. APPROVED BY THE COMMITTEE ON COMPETITIONS OF THE AMERICAN INSTITUTE OF ARCHITECTS

ANOTHER NORTON **first**!

JRUMLINE SURFACE-MOUNTED DOOR CLOSERS

set new standards of architectural harmony with the clean-lined simplicity of contemporary door design.

SEE THE FOLLOWING PAGES FOR FULL DETAILS

MODERN DOOR CLOSERS FOR MODERN DOORS ...built to serve, not for years, but for a lifetime.

Note how perfectly the TRIMLINE close

NORTON TRIMLINE

The "New Look" in Door Closers for the "New Look" in Doors

As architectural "gingerbread" has continue giving way to the clean, uncluttered look, th need for door closers to match has grown in creasingly urgent. Norton design has alway kept well ahead of that need, but never at th cost of reducing efficiency for the sake of con pactness or styling.

THERE'S A NORTON CLOSER TO

More New-Look NORTON Closers For New-Look Doors

Engineered for today's demanding service requirements, styled for the modern look in today's doors and trim, yet with no deviation from traditional Norton quality and operating efficiency.

SERIES 750 CORNER-TYPE CLOSER

New extruded aluminum closer for metal or wood exterior doors with narrow top rail.

Powerful as it is, this unique closer is amazingly inconspicuous because it blends so smoothly with the door's top rail. The arm channel is set into the top rail so that it cannot be seen. Full rack-and-pinion mechanism combines with a special spring to assure maximum durability and unvarying efficiency. Handles the heaviest of standard exterior doors with ease.

EXTRA-COMPACT FULL SURFACE CLOSER

A miracle of compactness...projects only 1½ inches from door...less than half as much as regular surface-mounted closers. Nevertheless, this closer is designed and built in the Norton tradition to withstand constant use, maintaining full closing power and top operating efficiency at all times. For interior doors only...Models 702N and 703N.

SERIES 704 FOR HEAVIER DOORS

Norton developed this series to satisfy the many requests for closers like 702 and 703, but heavier and more powerful. Shell is of molded aluminum enclosed in a wrought metal covering of pleasing modern design. Projects only $2^{"}$. Suitable for doors up to $3'6" \ge 7'$... regular or holder arms... surface-mounted shoe only.



armonizes with this modern narrow-rail door.

Norton's outstanding new *Trimline* series is product of this policy. The trim, modern lines ich suggested the name make *Trimline* closideal for the narrow-rail doors now so widely ed, but they are equally at home on any door. *Trimline* closer mounts neatly on the top rail, minates hangovers, blends beautifully into a trim, and unobtrusively complements the sign of the door.

TIME-TESTED MECHANISM

imline closers are true liquid-type closers with the rugged dependability of the time-tested, orton-originated rack-and-pinion mechanism oved virtually indestructible in thousands of tallations. They are powered by a specially signed spring of highest-quality steel.

Closing speed can be precisely regulated with ooth, quiet operation throughout the swing the door. The shell is lightweight aluminum, al container for the Nortol fluid which proes both checking action and constant lubriion of every part. *Trimline* closers are nonnded, too; can be used on doors opening her left or right. The same Trimline closer serves for doors that swing out or in, right or left...is practically invisible from outside.



The *Trimline* series comes in sizes B, C, D and E, to handle doors of all standard weights and sizes...any desired type of arm. Send today for detailed specifications. No obligation...just mail coupon on page 4 of this insert.

IEET EVERY DESIGN REQUIREMENT

NORTON INADOR® CLOSERS

The out-of-sight closer that never intrudes upon the clean lines of modern door design.

The name INADOR applies not merely to a single model but to a complete line of single-acting closers for metal or wood *interior doors* hung on butts. Correctly installed, the INADOR closer is virtually invisible, since the entire mechanism fits snugly in the top rail of the door.

INADOR closers are available with all types of arms and mounts needed to take care of practically any specification. And, when you specify INADOR, you are specifying easy, efficient, almost maintenancefree operation for many years to come.







Norton lintel-concealed door closers

Here's the closest approach yet to a completely invisible door closer. Size for size, it matches any surfacemounted exposed-arm closer in power. It can also be equipped with a concealed arm as illustrated, providing almost 100% concealment when door is closed. Double-piston action used in no other concealed closer permits this one to be changed from right to left hand in the field. All other advantages of Norton Surface-Mounted Closers PLUS maximum concealment for harmony of design.

Closers like this have served for 50 years or more!

NORTON"

Among the most widely used of all closers is the Norton Standard Model Full Surface Closer shown above. Here is the up-to-date version of the original Norton Door Closer, hailed as "revolutionary and challenging" when introduced in 1880. Many thousands of similar Norton Door Closers are still in daily use in some of America's best-known public buildings after 30 years and longer in continuous service. Available in sizes B, C, D, E and F, with standard fittings to meet every door closer need.

NEW CATALOG & DATA BOOK FREE TO ARCHITECTS... No obligation. Just mail the coupon.

NORTON DOOR CLOSER CO.

Dept. AF-109, Berrien Springs, Michigan Rush me a free copy of your latest loose-leaf catalog and data book

Firm Name	the second second second second second
Name	Title
Address	
City & Zone	State


* Anodized Aluminum 🗛 dimension Y= freedom of design!

In

Created in SPECTRA-COLORS and GEOMETRIC PATTERNS that add a new concept to interior and exterior applications

Specify ANOTEC* for new construc-tion or modernization! Ideal for sun deflectors, decorative wall panels, spandrels, column facings, window guards, room-dividers, parapet and terrace railings, swimming pool enclo-sures, patio screens, grilles, louvers, gates, fences, etc.

Complete information and specifications available upon request.



74	KLEMP.	0,	,	/
Klemp	Carrier .	Intern	national	

1379 N. North Branch Street • Chicago 22, Illinois • MO-hawk 4-4530

KLEMP INTERNAT 1379 N. North Branch Chicago 22, Illinois		AF -1
	plete information	and specifications on
Please have one of	of your representat	tives contact me.
Name		
Name Firm		
Firm	Zone	State

*Trademark

door control problems

good reason for turning to GJ.

With GJ you have the one complete line of builders' hardware designed for most every problem of stopping or holding the door . . . including the safe cushioning and silencing of the door's action.

If yours is one of those "never before heard of" types of problems, keep in mind that GJ engineers have worked out special adaptations to meet unusual problems of installation and function for over 35 years. Some of the early adaptations are "standards of the industry" today.

And if it's extra quality you require for hard daily usage, long continuous wear, etc., these are assured by GJ's long record of producing "life of the building" hardware.

Meeting door control problems—one and all—is our only business. Every order gets the careful consideration of experienced door control engineering. Your specification always means more when you write in "... shall be GJ...".



Membrane fireproofing: a re-examination

For years, membrane fireproofing has been the standard method of attaining low-cost fire protection in floor-ceiling assemblies. For example, where one-hour or two-hour construction was required—and an acoustical ceiling was wanted—most specifications called for mineral fiber acoustical tile cemented to either a lath and plaster or gypsum board membrane. The acoustical ceiling tile alone could not offer rated fire protection to the structural members in the assembly.

Now a new method of membrane fireproofing, Armstrong Acoustical Fire Guard, eliminates the need for intermediate fire protection between the suspended tile ceiling and the structural floor above. Acoustical Fire Guard is the first acoustical ceiling tile to offer rated fire protection to structural steel. Floor-ceiling assemblies using Acoustical Fire Guard as *the only protective element* beneath the structural floor have received one-, two-, and four-hour ratings from Underwriters' Laboratories, Inc.

Because Acoustical Fire Guard eliminates the need for additional fire protection above the suspended ceiling, it offers significant savings in construction time and cost. It is installed in a completely "dry" operation; there are no delays of the kind caused by "wet" work. This has already enabled many general contractors to save three to six weeks' construction time.

Through elimination of materials and labor, Acoustical Fire Guard can mean savings of up to 30¢ per square foot, depending upon locale, building design, type of fire protection being considered, and type of alternative acoustical ceiling being considered.

There are many instances when Acoustical Fire Guard ceilings will provide greater fire protection than would be the case with alternative methods. In such cases, this additional protection will usually be recognized in the form of lower fire insurance rates—year after year—on the building and its contents.

Acoustical Fire Guard offers unlimited accessibility to pipes, ducts, and electrical fixtures above the acoustical ceiling. Its acoustical efficiency is built in at the factory and does not depend upon the skill of the man who installs it. And it is an interior finish that requires no job painting after it is installed.

Acoustical Fire Guard has been chosen for millions of square feet of fire-retardant ceilings in commercial, institutional, educational, and industrial buildings across the country.

If you would like to learn more about this remarkable new ceiling, contact your Armstrong acoustical contractor or your nearest Armstrong district office. Or write to Armstrong Cork Company, 4201 Rooney Street, Lancaster, Pa.

acoustical tile offers rated fire protection

significant savings in time and cost

additional advantages



St. Luke's Church, Camilus, (near Syracuse), New York—a beautiful example of advanced wood technology put to use in church architecture. Here laminated hyperbolic parabaloid construction made possible this dramatic application of the ancient Christian symbol of the triangle. Sargent, Webster, Crenshaw and Folley, architects.

Design should never be the servant of materialfor new answers...look to WOOD

What matters creativity—unless materials at hand can translate the blueprint into reality? Wood can modestly boast of its versatility, of its close association through the centuries with the highest aspirations of architects and craftsmen alike. It is no less true today! Thanks to the new technology of wood, laminated beams and other products undreamed-of ten years ago are making way for a new era of structural sophistication. Add to this the new work in wood preservatives, the new opportunities in exterior and interior colors, finishes and textures—you have what amounts to a *new* material whose only design limit is your imagination! For more information on designing with wood, write to:

NATIONAL LUMBER MANUFACTURERS ASSOCIATION Wood Information Center, 1319 18th St., N.W., Washington 6, D.C.





Architect Percival Goodman wanted a dramatic entrance screen for Temple Beth El in Providence, R. I. Egg-crate wood wall has insets of stained glass, provides rich shadow patterns and luminous color.



When design calls for unobtrusive elegance, wood is the natural choice. Here neutral hardwood paneling creates a handsome backdrop for objects of art in a private home. Philip C. Johnson, architect.



Wood handles a double function in the design of this airy, weekend house. Imaginative hung construction was used to take advantage of wood's structural strength, and at the same time create a strong design pattern that gives distinction to a limited-budget proect. George Matsumoto, architect.

KLM OFFICE BUILDING continued from page 120

entrance on 49th Street. Atop the building, two setback floors have been redone as the airline's main U.S. offices, with a small executive lounge, conference rooms and an employee cafeteria above (photos right).

On the intervening eight floors, additional funds have been allotted to partition 96,000 sq. ft. for tenants, who will pay \$6 to \$7 per sq. ft. for full office floors (slightly more for partial floors), about the same as for comparable space in new buildings nearby. Other costs -new furniture, displays, moving expenses, telephones, taxes, lost rental income during construction, and legal, brokerage and management fees-will bring KLM's total remodeling investment to about \$3.6 million, a bargain compared to complete demolition and new construction on the site. KLM will be content to break even on the operation of its new building; greater prestige, more business, and a home suitable for years to come are counted ample profit.

Private lounge on the 13th floor is a glass-plated eyrie overlooking Rockefeller Center. An employee cafeteria nearby (below) keeps the rooftop flavor with louvered skylights facing north. Tenant floors below provide well-arranged modern office space, served by new central washrooms (see plan).



PHOTOS : LENI ISELIN

For complete satisfaction – **permaCushion*** hardwood floors are jointly guaranteed

That's right, the PermaCushion floor system is guaranteed two ways — the flooring materials and the installation. These component parts are guaranteed in writing by *both* manufacturer and installer — certainly an expression of confidence in each other's work.

To you, this means complete satisfaction. It means, specifically, that any defects arising from faulty workmanship or materials will be corrected free of charge. When you specify PermaCushion, you can be confident of quality and responsibility.

For information and name of your nearest authorized PermaCushion installer, write Robbins Flooring Company, Reed City, Mich., Attn: Dept. AF-160.

SEE DUR CATALOG IN SWEETS

*T.M. Reg. U.S. Pat. Off. *U.S. Pat. No. 2862255









Sanymetal uses extra strong hardware especially designed for porcelain, such as these brackets designed to properly carry the weight of large panels and prevent sagging.



DELUXE, Porcena installations should have hardware that is beautiful as well as strong. Flush design of Sanymetal hinges, hinge brackets, latches, etc., gives you the clean, attractive appearance you want.

PORCENA

for schools, public buildings, deluxe installations

You can be confident of beauty, of long-run economy, when you select Sanymetal Porcena porcelain enamel on steel as the material for toilet compartments. In 24 years of experience, and thousands of Porcena installations, there has not been *one* failure due to material or design. The secret of this record lies in the quality porcelain, the strong hardware, and the correct handling and assembly technique which Sanymetal uses. For an example of results, ask us about the case of one large school system, where vandalism or deterioration causes the replacement of toilet compartment panels (of another material) at the rate of one per calendar day, but where a Sanymetal PORCENA installation has stood up, year after year, without damage.



Sanymetal

THE NAME PLATE IDENTIFIES EVERY SANYMETAL INSTALLATION PRODUCTS COMPANY, INC. 1687 Urbana Road, Cleveland 12, Ohio Representatives in principal cities

In Canada: Westeel Products, Ltd., Montreal, Toronto, Winnipeg



3,893 ft. of movable Aetnawall-A almost entirely replaced interior masonry walls throughout the working and executive areas in the new Berkshire Life Insurance Building, Pittsfield, Mass. A wide range of partition panels gave unusual flexibility to



Aetna Steel Products Corporation, 730 Fifth Avenue, New York 19, N.Y.

translucent Kalwall Panel Unit Walls...



A new low in installed cost...



Factory Preassembly

Translucent Panels, Opaque Panels, windows and louvers — all are preassembled to your arrangement at the Kalwall plant. Completed modular units require only perimeter sealing at the site. Units are available in sizes up to 4' x 20', in a variety of colors and light transmission factors-there's nothing for workmen to assemble.



Simplified installation

Fasten clamp-type head and sill in opening — position panels, — and seal with Kalwall battens and elastic sealing tape. It's that simple to install the Kalwall Panel Unit Wall.

Kalwall installation by Winner-Whelan, Trenton, N. J.

3-story motel - no supporting framework required

Send in prints of your job. They'll be back in a matter of days showing you how simple, how practical it is to build the Kalwall Panel Unit way.

KALWALL CORPORATION

43 Union Street, Manchester, New Hampshire

KALWALL CORPORATION

Dept. AF, 43 Union	Street, Manchester, N. H.	
Please send me co	mplete information on:	
Kalwall Panels	Kalwall Panel Unit Wall	☐ Kalwall Skylights
Name		••••••
Addresss		
Audresss		
City	Zone	State

Ad Index

A
Aetna Steel Products Corp82, 83, 192, 193 Jamian Advertising & Publicity, Inc.
Aluminum Company of America
Fuller & Smith & Ross, Inc.
Kenyon & Eckhardt, Inc.
American Gas Association
Armstrong Cork Company
Ogilvy, Benson & Mather, Inc.
Besser Company
Bestwall Gypsum Company 198 Thomas & David, Inc. Bradley Washfountain Co 16
Kirkgasser-Drew Advertising
Burgess-Manning Co
Butler Manufacturing Co 17 Aubrey, Finlay, Marley & Hodgson
Autorey, Finiay, Mariey & Hoagson Blumenthal & Co. Inc., Sidney 12
Blumenthal & Co., Inc., Sidney 12 Altman-Stoller Advertising, Inc.
Century Lighting, Inc 64
Kenneth L. Curtis-Adv. Design Chester Products. Inc
The Lewis W. Selmeier Co.
Colorizer Associates 3 Rippey, Henderson, Bucknum & Co.
Corning Glass Works 162
The Rumrill Company, Inc.
Day-Brite Lighting, Inc. 8 Winius-Brandon Co.
Dunham-Bush, Inc
William Schaller Co., Inc.
Roche, Rickerd & Cleary, Inc. 2
Eastern Products Corporation
The S. A. Levyne Company
Facing Tile Institute 19
Henry J. Kaufman & Associates
J. C. Bull, Inc.
Fenestra Incorporated
Flexicore Co., Inc 197 Yeck & Yeck
Yeck & Yeck
General Bronze Corp 69 Wildrick & Miller, Inc.
Glidorama Div., Whizzer Industries 163 Rossi & Co.
Rossi & Co. Glynn-Johnson Corp 186
Edwin E. Geiger Advertising
GR Products, Inc 160 The Jaqua Company
the second second second second second
Haws Drinking Faucet Co 172
Pacific Advertising Staff
Hillyard Chemical Company 28 Fardon Advertising, Inc.
Holcomb & Hoke Mfg. Co 151 Bozell & Jacobs, Inc.
Bozell & Jacobs, Inc. Hope's Windows, Inc

 Inland Manufacturing Division General Motors Corp
Kalwall Corporation 194, 195 Noyes & Company, Incorporated Kentile, Inc. Cover IV Benton & Bowles, Inc. Keystone Steel & Wire Co. 78, 79 Fuller & Smith & Ross, Inc. Klemp International 185 Elliot, Jaynes & Baruch 62 Carpenter-Procter, Inc. 62
Leviton Mfg. Co. 59 Al Paul Lefton Co., Inc. Linseed Oil Products Corp. 64 Buss, Bear & Associates, Inc.
Mahon Company, The E. C.24, 25Anderson IncorporatedMarble Institute of America, Inc.65More & Company, Inc.Mastio Tile Division,The Ruberoid Company, 107, 178, 179, 180S. R. Leon Company, Inc.Metchning Mig. Co.68Mctohum, MacLeod & Grove, Inc.McCloskey-Grant Corp.62Cahall Advertising AgencyMile Company, The36Mapadi-Sarett AssociatesMile Company, The61Mile Company, The61Masanto Chemical Co.28, 29Needham, Louis & Brorby, Inc.62Matter Liggett Advertising Agency62Mile Company, The63Mine Chemical Co.28, 29Masanto Chemical Co.28, 29More Liggett Advertising, Inc.62Masanto Chemical Co.63More Louis & Brorby, Inc.62Matter Liggett Advertising Agency63More Louis & Brorby, Inc.63Matter Louis Co.64Masanto Chemical Co.63Matter Louis & Brorby, Inc.63Matter Louis & Co.64Maynahan Bronze Co.62Matter Co.64Matter Co.
 Natco Corporation
Owens-Illinois Glass Co. (Eimble Glass Co., Subsid.)
Peterson Window Corp

Republic Steel Corp	53
Reynolds Metals Co	76
Bobbins Flooring Co 1 Schmidt & Sefton Advertising	90
Robertson Company, H. H	71
Roddis Plywood Corp J. Walter Thompson Co.	68
Ruberoid Company, The Fuller & Smith & Ross, Inc.	36
Rust-Oleum Corp O'Grady-Andersen-Gray, Inc.	33

Sanymetal Products Co., Inc., The li Clark & Bobertz, Inc., Hickok-Donnelley Div.	91
Saxe Welded Construction Progressive Art Studios Adv. Div.	22
Seven Arts Book Society Roeding & Arnold, Inc.	11
Sloan Valve Company Reincke, Meyer & Finn, Inc.	4
Soss Manufacturing Co Stockwell & Marcuse	80
Standard Conveyor Co 1 Klau, Van Pietersom, Dunlap, Inc.	64
Standard Electric Time Co., The William Schaller Co., Inc.	18
Summitville, Tiles, IncCover	п

 Taylor Co., The Halsey W.
 56

 The Advertising Agency of William Cohen
 56

 Tattle & Balley
 15

 Thy, of Allied Thermal Corp.
 15

 Wilson, Haight, Welch & Grover, Inc.
 15

 U.-C.Lite Mig. Co.
 4

 Merrill, McEnroe & Associates, Inc.
 14

 Merrill, McEnroe & Associates, Inc.
 14

 Smith, Hagel & Knudsen, Inc.
 161

 The Grisvold-Eshleman Co.
 161

 The Grisvold-Eshleman Co.
 161

 The Grisvold-Eshleman Co.
 161

 The Grisvold-Eshleman Co.
 162

 The Grisvold-Eshleman Co.
 163

 The Grisvold-Eshleman Co.
 164

 The Grisvold-Eshleman Co.
 164

 The Grisvold-Eshleman Co.
 164

 The Batten, Barton, Durstine & Osborn, Inc.
 166

 Matten, Barton, Durstine & Osborn, Inc.
 169

 Nogel-Peterson Co.
 169

 Ross Llewellyn, Inc.
 169

 Westinghouse Electric Corp.
 74. 75

 Fuller & Smith & Ross, Inc.
 169

 Westinghouse Electric Corp.
 165, 166, 167, 168

 Fuller & Smith & Ross, Inc.
 160</td

Wonder Building Corp. of America...... 158 Franklin Advertising, Inc.



SECTION AA. Precast cellular concrete Flexicore decks provide fireproof structural floors and roofs at Fairmay Apartments, Chicago. The five buildings are masonry wall-bearing except for reinforced concrete stairway and elevator core. Design called for 75 psf live load.



TYPICAL FLOOR FRAMING. Each 3800-sq. ft. Flexicore deck was placed, leveled and grouted in two days. Available on third day as work deck for erection of walls and frame for next story.



SECTION BB. Clear span of 18'-6" between masonry bearing walls permits simplified design and fast construction. Underside of Flexicore deck is exposed for finished ceiling.

How to Design a Low-Cost, Fireproof Apartment Building





Edward Marks, Architect, Evanston, Illinois



The use of Flexicore precast decks permitted Fairmay Apartments to meet Chicago's strict fire code, and resulted in substantial savings to the owners. High-speed erection permitted earlier occupancy and exposed Flexicore slabs eliminated ceiling plaster.

For more information on this project, ask for Flexicore Facts No. 78. Write The Flexicore Co., Inc., Dayton, Ohio, the Flexicore Manufacturers Association, 297 S. High St., Columbus 15, Ohio or look under "Flexicore" in the white pages of your telephone book.



YOUR MARGIN OF SAFETY

GENUINE MEMBRANE IREPROOFING

BESTWALL GYPSUM

"CUSTOM QUALITY" PRODUCTS MEETING MODERN DEMANDS

Matching modern architectural thinking is the combination of Bestwall's light weight gypsum materials and their adaptability freedom of design and interior finish plus the all-important "margin of safety", FIREPROOFING.

Specify custom quality products manufactured by the Bestwall Gypsum Company, exclusive producers of glass textile fibered gypsum plasters. One square yard of membrane fireproofing plaster contains 1,500,000 lineal feet of glass fibers.

In addition to gypsum lath and base coat plasters, the Bestwall product line also includes attachment clips, accessories and finishing plasters—all designed to complete the "margin of safety" system.

PRODUCTS

BUILDING



Additional details and architectural specifications for Bestwall Membrane Fireproofing can be obtained from your local Bestwall representative, or write . . .

BESTWALL GYPSUM COMPANY Ardmore, Pennsylvania Plants and offices throughout the United States

YOUR BEST BUY IS

Forum

Capital renewal . . . low embassies . . . forgotten schools

A NEW WASHINGTON

Forum:

Your article, "First Steps Toward a New Washington" (Dec. '59), tells two stories well:

1. That good design and good architecture with scope, variety and taste can and must be part of our thinking in urban renewal projects; and

2. That successful urban renewal, within the atmosphere of our free and private enterprise system, must give a reasonable return on investment to encourage a proper flow of capital for such projects. This does not mean exorbitant profits, but it does call for a return comparable to that of other competing investment opportunities.

Jim Scheuer's experience in the Capitol Park Apartments bears these points out in a very practical way.

> ALBERT M. GREENFIELD Bankers Securities Corporation Philadelphia

EMBASSIES AT 51/2 PER CENT

Forum:

I would like to comment on your December editorial on the State Department's foreign buildings program. I doubt if the eriticism Congressman Hays makes on the taste of the architectural committee would have arisen if there had not been an economic problem. He naturally suspects this fancy architecture costs a lot of money. However, in the case of the embassy, residence, and office building I designed in Tegucigalpa, Hondorus (photo, left), my records indicate quite another reason for the high cost. This reason was related to foreign policy but in such a way that it would not be obvious to investigators.

In the first place my fee was certainly on the low side, $5\frac{1}{2}$ per cent including Spanish notes on the drawings, Spanish translation of the specifications and checking of shop drawings, but excluding supervision. Furthermore, it was figured partially on budget cost and partially on bid price but not on the final cost.

The original budget cost was so low that Congressman Hays certainly could not criticize it. The records show that after the bid opening I forced the successful bidders to revise their prices downward so that the general contract amounts plus a reasonable contingent came to about \$400,000. But later this was revised upward (to \$600,000) for no other purpose than to allow the local builders to break even.

In other words it may be that in a number of cases such as this the additional cost would have been justified policywise, but must be looked on as foreign aid rather than as building cost.

MICHAEL M. HARE, architect Smithtown, N. Y.

SCHOOLS ARE FOR TEACHING

Forum:

In our obsession with what you aptly call the "productivity push" we seem to be forgetting that education is not so much produced as induced (FORUM, Nov. '59). The quality of a man's education is to be measured not by how much he has learned and how quickly he has mastered it, but by the strength of his intellect and the sensitivity of his spirit. And there is no evidence at all that education in this sense can be mass-produced.

To be sure, we need to attack our present inadequacies, for our schools are full of them, and we are desperately short of creative new approaches to the old persistent problems. But it would be too bad if we were to become so engrossed with the clever manipulation of space, time, groups, and gadgetry that we forgot what we began looking for in the first place.

This, we must continue to emphasize, is a school in which each student can enjoy close relationships with teachers who are not only efficient instructors, but also wise and able counselors—an institution whose principal purpose is to help youngsters improve and grow as individuals.

The most useful buildings, in the long run, will be those which are best designed to facilitate that kind of education.

> JOHN H. FISCHER, dean Teachers College Columbia University New York City

Forum:

Your November story, "The productivity push in schools," is the first I have seen that attempts to pull together most of the "experiments" in secondary education and place them in proper focus for the benefit of the architects. If there is one thing an architect should do in designing schools in the next few years, it is to keep in mind *continued on page 200*



that the coming changes can make his present school as obsolete tomorrow as the old wall-bearing monstrosities of past generations are today.

If we are to accommodate the changing educational concepts, we have to be able to "sweep" clean a whole floor area, and replan to meet the new requirements. This means a great deal of architectural ingenuity, as well as a readily available supply of suitable materials. What we need of industry, right now, is some honest-to-God research and development in the field of demountable and movable partitions. These would have to be low in cost, with good sound-reduction qualities, and simplicity of installation.

I recognize that this is not an easy task, but in terms of a large potential market, the results would be well worth the effort.

JOHN W. McLEOD, architect McLeod & Ferrara Washington, D.C.

SELF-CHEATING CITIES

Forum:

Your excellent editorial titled "Cheating the Cities" (Sept. '59) brings out the need for a blast at the cities themselves. Overlooked it seems, is the 'God helps them that help themselves' approach to urban renewal.

The cities have been cheating themselves for a long, long time. The cheating has been extreme, and done primarily on the basis of discriminatory enforcement of health and safety codes, the subsidy of slum areas by low taxes and the penalizing of new construction by high taxes.

Many slum buildings would be eliminated if minimum health and safety codes were as rigorously enforced for all existing buildings as they are on new construction.

Land taxes, separate from improvement taxes, should be determined by zoning. If all lands in a city were taxed on this basis, slums would pay the same land tax per square foot as the decent neighborhoods.

Tax penalties on new construction force new developments outside the city boundary. Taxes on new residential construction are often many times the tax on a comparable size house on an identical size lot in an identically zoned area. It is understandable that the market price of a house should vary due to physical condition, plan, design, etc.; but to the city the cost of the facilities and services are the same. It is not reasonable that the city discriminate between identical land use improvements.

These three premises, if acted upon by the cities, would make it unprofitable to misuse land and neglect buildings: Slums and blighted areas would no longer be good investments.

Federal aid cannot be expected to solve urban deterioration year after year but instead should be called upon to solve the spot problems that the cities cannot of their own honest effort solve themselves.

LYMAN ENNIS, architect Los Angeles

Reader Ennis' premise regarding the vigorous enforcement of health and safety codes for existing buildings is correct, so far as it goes. The unhappy problem is that the more strenuously codes are enforced, the more people are put on the streets.-ED.

LIGHT ON CHURCHES

Forum :

Father Scott's "Journey among churches" in your December issue is an admirable examination of intent as well as technique in architecture, one which all of us should welcome, especially from outside the ranks. But I wonder at his joy in the exuberant in church design, as opposed to the austere, the thoughtful. (See his illustration of





Baur's chapel at Hem, France --photo above, top.) Father Scott emphasizes color above all else in his article: ". . . there can be no excuse if the church fails to provide it. Indeed, if I were asked what impressed me most in all the new churches I saw, I would sum it up in that one word."

The new Shrine of the Immaculate Conception in Washington, D.C. unfinished in many ways, has clear glass where the stained glass eventually will be. And while I am sure that this big Byzantine type is not the kind of church Father Scott, as a clear opponent of eclecticism, likes, it struck me that the clear cool light of day coming into that vast space gives it a wonderfully

thoughtful quality, evoking that contemplative passion, religion. I wonder if it will be as evocative when the jewelry is added, the colored glass. Prettier, yes.

It makes me remember a very dissimilar church, Mies van der Rohe's little Chapel on the campus at Illinois Institute of Technology in Chicago (bottom photo). I don't remember any color there. But I do remember being caught by the seriousness of the space. I am not a Calvinist, incidentally, but a Catholic.

MICHAEL MAAS, architect New York City

ELECTRIC HEAT

Forum :

Your article "Electric heating puts on the heat" (FORUM, Oct. '59) made good, convincing reading until I came to the quotation from "one manufacturer." He mentions a heating system costing \$300,000. That is about 15 per cent of a normal job. So the job would figure to be a \$2 million school building. Where is the client who pays an 8 per cent fee on a commission of that kind and size? And is there any support for the statement that an electrical system will cost half as much? And what's that about architects who specify the more costly system for no other reason than to fatten their fee? Come, come manufacturer, what have you manufactured?

PETER VANDER LAAN, chairman Public and Professional Relations Committee Michigan Society of Architects Detroit

It speaks well for a profession that it is quick to defend its ethical practice, though not to the exclusion of possible fault or criticism. FORUM reported the view of a reputable manufacturer, who must necessarily be nameless. The figures used were merely for purposes of example .- ED.

ARCHITECTURAL FORUM is published monthly by TIME INC., Time & Life building, 9 Rockefeller Plaza, New York 20, N. Y. SUBSCRIPTION SERVICE: Address all subscriptions and correspondence concerning them to: Acchitectural Yorum Subscription Dept, 540 N. Michigan Ave, Chicago 11, Ill. Subscription rates: in U.S., U.S. Possessions and Canada, one year \$6.50; elsewhere one year \$10. Single copies, if available, \$1. CHANGE OF ADDRESS: Four weeks are required for change of address. When ordering a change please mame magazine and furnish a label from a recent wrapper. If no label is available please state as exactly as possible the address to which magazine and even address. EDITORIAL CORRESPONDENCE should be addressed to ACHITECTURAL FORUM, 9 Rockefeller Plaza, New York 20, N. Y. FORUM will not be responsible for and it will not return such material unless accom-panied by postage. Morkefeller Plaza, New York 20, N. Y. Turk Nr. also publies Time LUE, FORTURE

ADVERTISING CORRESPONDENCE should be addressed to the advertising correspondence should be addressed to the advertising director, ARCHITECTURAL FORUM, 9 Rockefeller Plaza, New York 20, N. Y. TIME INC, also publishes TIME, LIFE, FORTUNE, SPORTS ILLUSTRATED and HOUSE & HOME. Chairman, Maurice T. Moore; President, Roy E. Larsen; Executive Vice President for Publishing, Howard Black; Executive Vice President and Treasurer, Charles L. Stillman; Vice President and Secretary, D. W. Brumbaugh; Vice President, Edgar R. Baker, Bernard Barnes, Clay Buckhout, Arnold W. Carlson, Allen Grover, Andrew Heiskell, C. D. Jackson, J. Edward King, James A. Linen, Ralph D. Paine Jr., P. I. Prentice, Weston C. Pullen Jr.; Comptroller and Assistant Secretary, John F. Harvey.



Weldwood® Glasweld® faced curtain walls in gray offer a subtle contrast to vividly colored sun screens on the Bishop Mora Salesian High School, Los Angeles, Calif. Architects: Yates and Szeptycki. Panels supplied by Colorboard of California.

CURTAIN WALL PANELS OF PERMANENT COLOR

GLASWELD is United States Plywood's new all-mineral building panel, supplied in over 20 permanent exterior colors. Appropriate to a wide range of applications in curtain wall construction, Glasweld stays flat and will not "oil-can," "orange-peel," rust, or corrode. It is weatherproof and fireproof. Because Glasweld is permanently colored, it does not require maintenance. It machines cleanly and can be cut on the site. Used as a facing for a component panel, Glasweld will not photograph any core material. Glasweld is guaranteed colorfast.

WELDWOOD GLASWELD

	hited States Plywood 5 West 44th Street, New York 36, N. Y. (AF 1-60
wo	aase send me the new 12-page data booklet, "Weld bod Glasweld" – #1914. Gives detailed drowings ecifications, and physical characteristics.
No	ime
Fir	m
Ac	ldress
Cit	yState

KENCOVE® VINYL WALL BASE

ANOTHER DISTINCTIVE PRODUCT IN

ζ.	E	N	Т	I	\mathbf{L}	E
	\mathbf{F}	\mathbf{L}	0	0	R	\mathbf{S}

Now... KenCove costs no more than rubber base! Inside and outside corners can be formed on the job, saving dollars. (Factory molded corners also available – see below.) Matte finish hides wall irregularities. Takes hard usage, resists marring. Call your Kentile Representative or see Sweet's File.



FACTORY MOLDED CORNERS: 4" and 6" high for outside corners; 4" high only for inside.

COLORS: Two completely new colors, White and Beige...plus Green, Sumac Red, Black, Gray, Brown and Russet.

SIZES: New White and Beige... 4" high in 48" lengths only. Other colors...2½", 4" and 6" high in 48" lengths... also 2½" and 4" high in 96-foot rolls.

© 1959, Kentile, Inc., Brooklyn 15, N. Y.