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March/April '59

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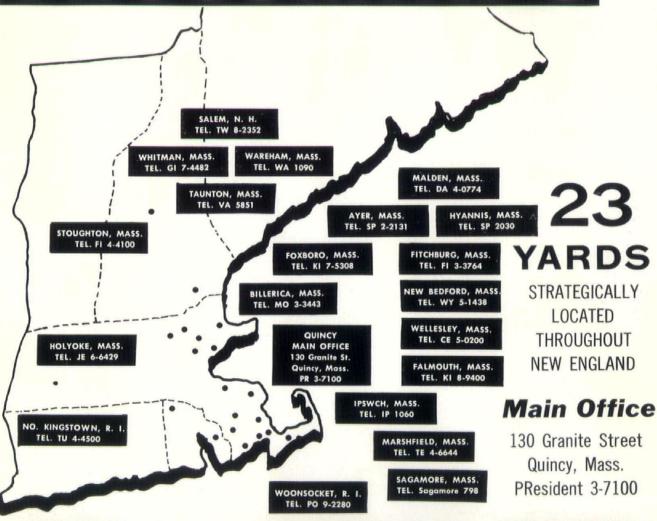
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### PART ONE

This is the first of a series of articles by Architect Jan Reiner, formerly of Boston, who is now practicing architecture in New Port Richey. A graduate of Harvard University and a recipient of an AIA fellowship, Reiner spent two years as a student with Le Corbusier in Paris and another two years with Ove Bank in Oslo. He practiced architecture in California and Massachusetts before going to Florida last year.

Architecture is the art of creating a physical background for a way of life. It encompasses a wide range of forms and designs, from the intimacy of a house plan to the comprehensiveness of a regional layout.

Although architecture is produced by individuals, it is a social art because it sums up and reflects the beliefs and ideologies of a time. Through the interplay of shapes and forms, which affect us by their delicacy or force, their optimism or serenity, architecture makes visible the life of a time.

Specific ideologies produce specific building forms and ornaments reflecting the prevailing philosophy of life. Architecture thus gives visual form to a civilization, so that, centuries later, that civilization is known and evaluated by that form.

## Distinct Styles

Mature societies produce their own forms — their distinct styles of architecture. Generations later, these styles become part of the public domain. Like all great art, architecture belongs to all mankind. But societies that did not ripen into mature civilizations did not produce a distinct architecture. They borrowed one. Ancient Rome borrowed from classical Greece, and 19th Century America borrowed from art-conscious Europe.

The charm of travel is partly derived from seeing various styles of architecture, which reflect various ways of living and building. Man's images of his world are recreated in his domes, colonnades, courtyards, and his town-walls and village-greens. Here architecture, "the mother of the arts," acts as a three-dimensional mirror, revealing bygone civilizations and building technologies.

### Art and Technology

Since architecture springs from technological reality and often from economic necessity, it must inevitably go beyond the symbolic and decorative. Art and technology — both in a state of perpetual growth — must complement each other. They unite, much in the way that intuition and reason do. Intuition, like a design concept, is free and boundless, while reason, like an engineering computation, is based on experience and always works within limited bounds.

Nature gave man his basic building materials. The forest provided logs and boards, which suggested post and beam construction and resulted in rectilinear styles of architecture. Clay deposits inspired the production of brick and the invention of the vault and dome, and this, in turn, contributed to the plastic styles of architecture.

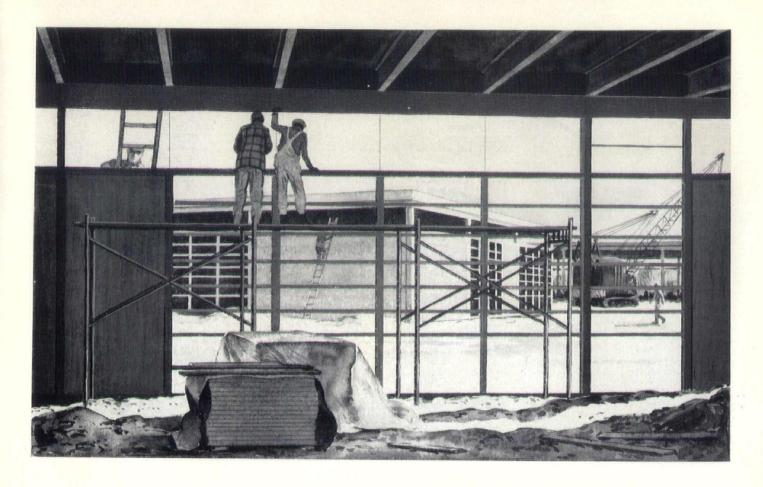
In our own age, these are being superseded by concrete and steel skeleton frames clad with light-weight curtain walls. In the appearance of buildings, this historic transition is reflected in a gradual change from heaviness to weightlessness.

A landscape setting has always been the background against which man sculptured his buildings. A mysterious rock or tree formation may have inspired a shrine; a meadow with a winding stream a homestead; a mountain ridge or a river bend a protected settlement. For ages, the crossing of trade routes and waterways prompted the foundation of commercial and industrial communities.

### Influence of Climate

Climate has always influenced the shape of buildings: a window size or an eave projection must always be suited to local sun and rain. And climate has also influenced the layout of cities; the direction and width of streets were not always accidents — often they were influenced by prevailing winds and rains just as much as by the topography of the land and the life and traffic on that land.

With the advent of the 20th century, technology and the emergence of the "one world" concept, architecture today — like man today — is on its way to becoming a world citizen. Mass-production and mass-distribution, the two trademarks of an industrialized society, are beginning to replace regional styles of architecture with a mechanized uniformity. Like modern airplanes, modern cities are beginning to look alike - both downtowns and suburbs. The architectural differences which now exist reflect primarily the degree of industrialization which a country has reached, rather than specific regional trends. And yet, in the long run, it is these regional aspects with their ethnic, climatic, and landscape nuances which will be the seed from which a new architectural tradition will grow. It will crystallize within the orbit of new potentialities of metal, concrete, wood, glass and plastics, together with new ways of mass-producing and new concepts of land use.



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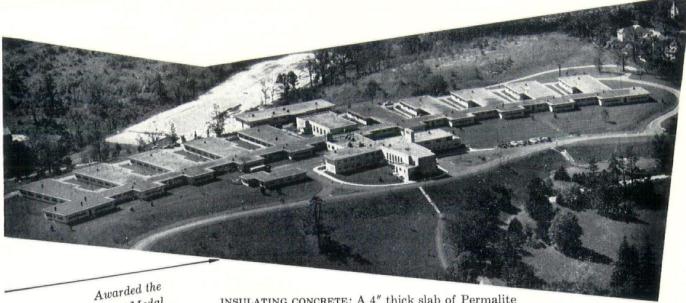
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ways in building

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# An Architectural Samples Bureau for New England

The publishers of *New England Architect and Builder*, *Illustrated* have for many months been considering the possibility of establishing a NEW ENGLAND ARCHITECTURAL CENTER in Boston.

Its purpose and function would be manifold. First in line is to conduct an Architectural Samples Bureau — a large area in which display space would be available to manufacturers of construction materials, products and equipment. A "LIVE" show to be open on a year-round basis, not just for a week or a few days. This is not a new idea; architectural centers exist right now in New York City, New Jersey, Washington, D. C., and Miami. Others are being established in many other parts of the nation. Why not in New England?

The displays and samples would be available for inspection to everyone in the Construction, Architectural and Engineering field, and possibly to the general public. It would become a centralized meeting place for Architects and their clients to examine firsthand the materials to be approved. Manufacturers' representatives and salesmen can arrange to bring prospective buyers in to demonstrate full-scale examples of their products. It would serve as a giant size "Showroom"—a year-round "Trade Show."

Other facilities to be included are conference rooms for special sales meetings and private promotional group showings, and also for Architects to interview or be interviewed by prospective clients and building committees. This would provide a club atmosphere away from the interruptions of a busy office routine.

Other possibilities are — a central employment bureau for specialized personnel — an information bureau — a manufacturers' representatives directory bureau — in short, exactly what the name implies — a NEW ENGLAND ARCHITECTURAL CENTER — centrally located in the heart of Boston.

Needless to say that a venture of this kind requires a sizable investment on our part. We have spoken to many people in construction in order to sound out their opinions of this project. We would now like to get a cross-section opinion from our readers before advancing.

What do you think of the idea?

Is it something we in the trade and profession need and can use to good advantage?

Would you have use for the facilities of an Architectural Center?

Have you thought of other facilities not mentioned here which could be incorporated into the Center?

Sincerely, we request your help in deciding whether or not this could be an asset to the industry.

THE PUBLISHERS

### NOTICE TO OUR PAID SUBSCRIBERS

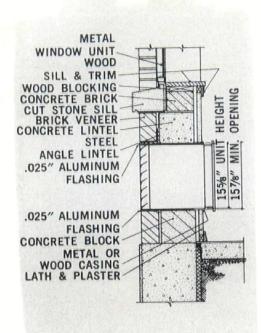
The printing and publishing problems which beset a young publication are often created by situations beyond simple control. Therefore, in order to bring the monthly mailing date back to normal, we have combined the 1959 MARCH and APRIL issues only into one special issue. From now on, NEW ENGLAND ARCHITECT and BUILDER, ILLUSTRATED will be mailed to you during the second week of each month of the year. Your paid subscription will be automatically extended one month to take up the slack.

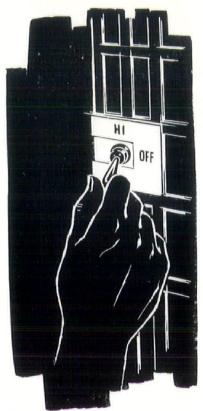


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and

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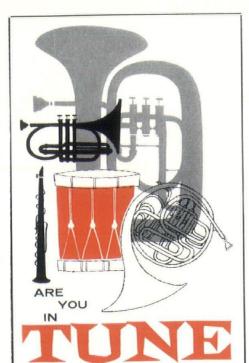
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Mrs. Mildred Gainey Reardon

Congratulations to Mrs. Mildred Gainey Reardon on her twelfth anniversary as publisher of *Gainey's Construction Newsletter*, and the start of her fortieth year in the construction reporting field.

Prior to the start of her own publication, "Miss Gainey" as she is known to the New England construction industry served her apprenticeship as News Manager with *Brown's Letters*.

"I started on this new venture, because I felt that there was a definite need of new blood and competition in this field," she said. "The events of the past twelve years have borne this out."

"Ours is a service," she went on. "We feel that we are providing this service, not only to our subscribers, but also to architects, engineers, public officials and owners who provide us with information. The wide dissemination of this information provides healthier and competitive bidding, giving the architect and owner the best of building services and materials for the best price."

"We are the only individual daily construction news service operating on a six-state basis in the country. With the exception of one national concern, other news services, both daily and weekly, cover metropolitan areas or one or two states at the most," she said.

When "Miss Gainey" started her Newsletter in 1947, the reaction from architects and engineers and public officials she had known for years was immediate.

These same news sources gave their fullest cooperation.

"Without these people," she said, "we would have been doomed to failure."

"We enjoy excellent relations with them. They feel that when giving the information to us for publication they are saving their own office personnel the needless task of giving information over and over again to everyone who calls them."

The information gathered is used by different companies at different stages in the construction cycle. By far the most important is the project out for figures, when the general description of the project, closing dates, times and places, contractors figuring and availability of plans and specifications is paramount to the many subcontractors and suppliers who want to submit bids. Almost equally important, however, is the project in its planning stages. Full coverage during this period allows firms to more or less schedule their coming programs.

From an inauspicious start in a small office at 89 State Street, Gainey's has gradually branched out. Ten months ago they moved to new offices at 40 Central Street, Boston.

The main reason for the change in location was the availability of what has been described as "the finest plan room in the country." Excellent "north light" from a many-windowed room has been augmented by banks of modern fluorescent lighting, which provides excellent conditions for the reading of blueprints made available by architects throughout New England.

In addition to the modern plan room, the new office has simplified the mechanical end of news gathering for Miss Gainey's associates.

# Letters to the Editor

Having worked for many years to secure a wider recognition of the intrinsic merits of a well-run competition, I was particularly grateful to notice your excellent presentation of this subject in the current issue of the New England Architect and Builder. It is an extraordinary thing that in a country which unceasingly professes its belief in the merits of competition, that one should find such reluctance to put the concept to work in such a vital field as architecture.

If we can succeed in creating a great international competition for the selection of an architect for our new City Hall, I feel we may well change the thinking of the country as a whole in this matter, which could be of such importance to architecture and to architects.

With my compliments to you for your excellent publication.

James Lawrence, Jr., Chairman Committee of Civic Design Mass. Association of Architects

### Dear Sir:

I am employed by the city of Boston and, although not an architect or engineer, feel that one of the most gruesome structures in the city, if not in the entire country, is our own City Hall. I have always felt that Boston, known throughout the world as the cultural center of the Western Hemisphere, should point the way for others in science, medicine, art, and certainly in architecture. Many of the finest architects in the world are located in and around Boston. I find, however, that there are instances where we are being left behind. One look at the Boston City Hall will bear me out, especially when compared to the new Toronto City Hall (New England Architect and Builder, Illustrated, February 1959). In view of my feelings, I am especially happy to learn that there are others who are sincere enough in their convictions to attempt to move the city of Boston back to its rightful place among cities of the world. Both the Massachusetts State Association of Architects and your fine publication are to be commended for your interest in sponsoring a competition, similar to the one in Toronto, to find an architect for a new Boston City Hall. May your project be successful.

Very truly yours,

(Name withheld by request)

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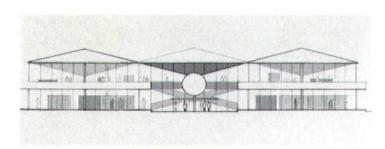
## HARVARD ARCHITECTURAL

# **CONSTRUCTION WORKSHOP**

One of the major accomplishments of conlemporary architecture was the integration of design and construction as inseparable parts of a total architectural process. This healthy merging counteracted the unfortunate split between visual and structural aspects that had developed in American architecture.



Students prepare mock-ups

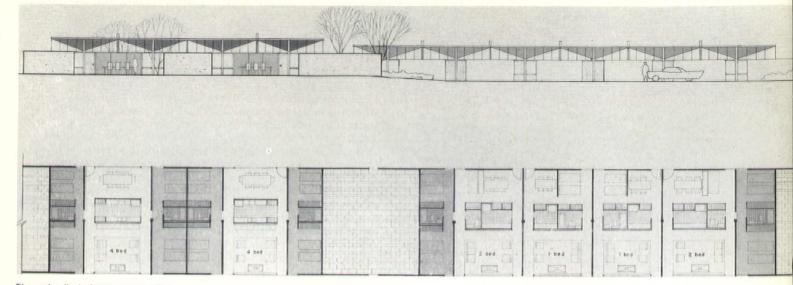


Paraboloid umbrella in tomorrow's building



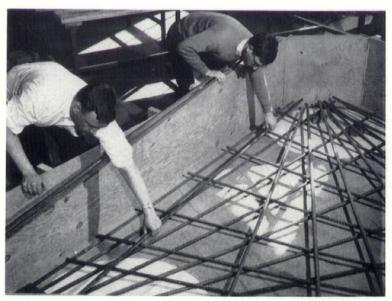
Now, however, the rapidly multiplying complexities and techniques of modern building methods are threatening to revive the former separation of design and construction. This trend clearly must be resisted with all the means at our disposal. Architecture must take into consideration not only the social requirements of our times, but also the best possible use of modern technical knowledge.

In order to combat the recurrent disintegration between construction and design, architectural students in the Harvard Graduate School of Design were given the problem of dealing with analysis, design, and actual construction of building components for today's dwelling. The object of the experimental work was to find what economic and technical problems must be overcome in order to lower the cost of building without sacrificing the standards of good design and architectural qualities. The work was done in the Architectural Construction Workshop of the Graduate School of Design, under the direction of Dean Jose Luis Sert, Professor Huson Jackson and Visiting Critics Eduardo Sacriste and Alvaro Ortega.

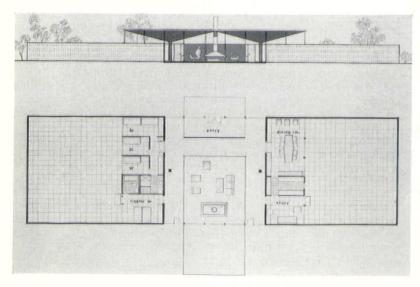


The umbrella in home construction

The Workshop became the center for sample collections of building materials, series of building trade demonstrations, and talks by construction experts. Experiments in full-size detailing, scaling of parts, mock-ups, and large-scale structural models were used for achieving a closer integration of design and construction in architecture. All of the work was done by the students themselves. Materials were generously contributed by several business firms.



Students prepare footing design for umbrella



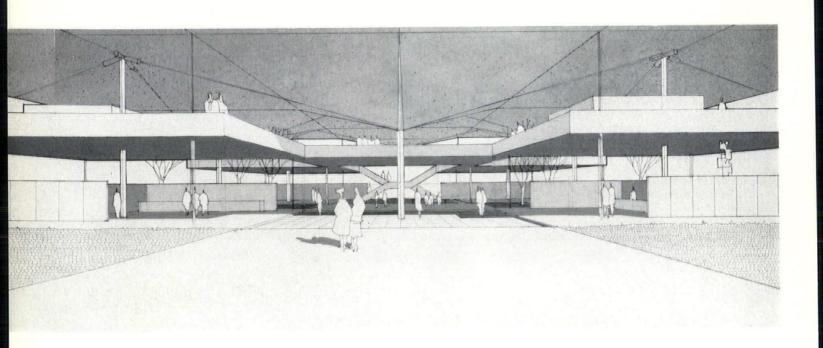
The students were divided into two working teams. The projects were intended to incorporate flexible means of design, which would lessen the regimentation of repetitive elements, and imagination leading towards an economical and feasible building technique for the Boston area. It was required that building methods be suitable for small projects without the use of heavy equipment.

The teams began a comparative analysis of different building materials and techniques generally used for walls, roofs, floors, and miscellaneous components. Next came the design and execution of the proposed building components, considering manufacture, transportation, and assembly techniques.



The umbrella team

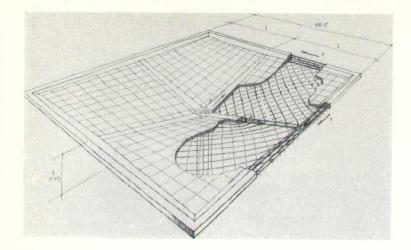
One team, comprised of graduate students Daniel C. Dunham, David W. Busing, Richard A. Barker, and David W. Beer, began investigation of the reinforced concrete hyperbolic paraboloid umbrella, preliminary to construction of a full-scale model on Harvard land some time in the spring. The team was concerned with the foundation and footing design for the specific site and with the modifications and uses of the "umbrella" form in general. Under the direction of the instructors and through consultations with experts in the various fields of construction, the team became acquainted with the problems and advantages of the thin-shell form. The students made frequent trips to the construction site of an umbrella similar to the one to be erected by them



Precast Concrete roof team

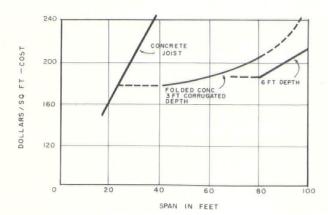


in order to observe all phases of forming and pouring of the concrete for the structure. In the Construction Workshop, small models were built and studied in experiments in scale, lighting, and other visual aspects from various viewpoints. Engineering and analysis research was performed, and important details were worked out in scale models in concrete. Possible alternative shapes of edge beams and column details were studied in relation to appearance and to structural efficiency. Full scale sections were built to acquaint the students with the actual size of the elements and the techniques of work in thin shells. Possible uses were proposed and designed, in drawings showing their applicability, and details were built to show possible connections of walls to the exterior surface of the shell.



As an attempt to acquaint the students with the characteristics of a certain type of new building, the experimental work was extremely successful. Although field experience is normally acquired by Harvard architectural students during the summer months or after graduation, this type of structure at the present time is seldom tried in New England and the student would be unlikely to find an office engaged in such experimental work. Thus the School of Design provides an opportunity for practical experience on less frequently built structural forms.

The second team, comprised of David Hattis, Lester Glass, Maxwell Isley, David Bourke and Michael Graves, concerned themselves with the investigation of possible roofing solutions for low-cost dwellings. They were primarily interested in something that could possibly be erected by individual home owners or by unskilled labor. Permanence, durability and low maintenance, low cost materials requiring simple tools, equipment and methods for erection, appealing appearance of surface finishes with minimum of skilled finishing operations, and space flexibility in finished dwelling under roof structures were other factors considered. After investigation, the team decided that concrete as a material seemed best suited to satisfy all the criteria if the complex form-work required in its traditional use could be eliminated.



CURVE SHOWS VARIATION OF COST WITH SPAN

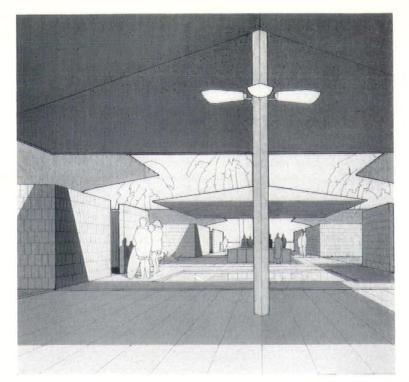
Cross section of the umbrella

It was felt that an investigation of thin-shelled structures in concrete would narrow the field in a search for a solution, if form-work could be eliminated. Quarter full-sized experiments were conducted in concrete using a variety of thinshell structural forms, without benefit of formwork. Stretched steel mesh and light reinforcing were used to form and support the concrete, the mesh remaining a permanent part of the finished structure. As a result of the experiments and further study it was felt that the possible solutions to the problem using concrete lay in two directions: (a) precasting of relatively light-weight elements in a highly durable reusable form, the precast elements to be capable of erection without complex hoisting equipment; and (b) devising a



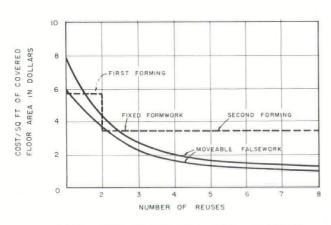
From form work . . . . to completion



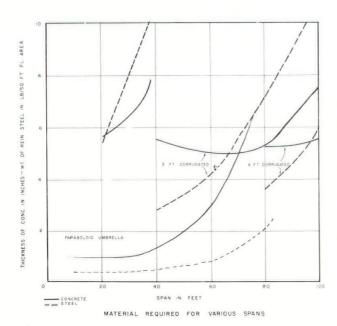


form for an application of the mesh technique which would not be adversely affected by sagging and by the lack of rigid form-work. Since the principles of the arch are well understood, it was decided to use this form in solution of the problem by the precasting technique. A three-section segmental arch was designed and a permanent reusable plywood form was constructed for the casting of the arch sections. After being cast and cured, the sections were raised into place through the use of a block and tackle so as to bear on previously constructed walls of concrete block.

Experimentation with the various "draped mesh" shells led to the conclusion that an inverted barrel with a catenary section could be constructed to span longitudinally during the time required for placing and curing the concrete. The longitudinal supports could then be removed and the resulting structure would span as a beam of great depth in the longitudinal direction.



TYPICAL COST CURVES FOR ROOF FORMWORK



Students put finishing touches on precast arch

In order to accomplish this, standard scaffolding was erected and the mesh hung between the tops of the scaffolding. The proper reinforcing steel was placed and tied to the mesh, which had a removable paper backing in order to contain all of the concrete. After the pouring and curing, the scaffolding was removed and the shell assumed its bearing as a beam on previously constructed block walls, upon which curved concrete diaphragms had been poured. The curve of the diaphragm which receives the shell was obtained by experimentally hanging the mesh in a catenary.

The roof structure project also enabled the students to gain practical building knowledge working upon experimental structures not likely to be encountered yet in the typical architectural office.



# AASA/NEA

**EXHIBIT** 

The American Association of School Administrators, a division of the National Education Association, held a most successful exhibit at Atlantic City, New Jersey on February 14–18. Plans of 250 school buildings from all corners of the nation were displayed, in addition to projects of more than 400 firms and organizations.

Exhibits were classified into approximately 100 groups. The exhibit provided definite and tangible help to the school administrator, principal, teacher and board member, in addition to providing consultation with experts in many fields.

The School Building Architectural exhibit proved that schools are being designed today which add more to the instructional program and the basic needs of pupil as well as teacher.

The exhibit jury, comprised of three architects and three school administrators, cited two New England Architectural firms for outstanding work: Korslund, LeNormand and Quann of Norwood, Mass. (Newton South High School, Newton, Mass.), and Warren H. Ashley, West Hartford, Conn. (Concord-Carlisle High School, Concord, Mass.).

Charles F. Fitch, Jr., Commissioner of Education for the state of New Hampshire, was a member of the Exhibit Jury.

Building specialists were in the exhibit area at all times to answer questions and to assist the thousands of visitors in understanding details of building plans.

Among the New England architectural firms participating in the exhibit were:

The Architects Collaborative, Cambridge, Mass.
William F. Pollard, Jr., High School, Needham, Mass.
Derwood A. Newman, Superintendent

Warren H. Ashley, West Hartford, Conn.
Fletcher Judson Elementary School, Watertown, Conn.
Joseph B. Porter, Superintendent
and
Concord-Carlisle High School, Concord, Mass.
Dr. Robert S. Ireland, Superintendent

C. W. Buckley, Inc., Worcester, Mass.
Forest Grove Junior High School, Worcester, Mass.
Leo Doherty, Superintendent

Donald S. Gilman, Springfield, Mass.

Daniel B. Branton Elementary School, Springfield, Mass.
T. Joseph McCook, Superintendent

Hellman and Wilson, Falmouth, Mass.
East Falmouth Elementary School, East Falmouth, Mass.
Harry S. Merson, Superintendent

Kilham, Hopkins, Greeley, and Brodie, Boston, Mass. Hull High School, Hull, Mass. Louis O. Forrest, Superintendent

Korslund, LeNormand and Quann, Inc., Norwood, Mass. Newton South High School, Newton, Mass. E. N. Dennard, Superintendent

Nichols and Butterfield, West Hartford, Conn.
Frederick V. Conrad High School, West Hartford, Conn.
Edmund H. Thorne, Superintendent

Smith and Sellew, Boston, Mass.

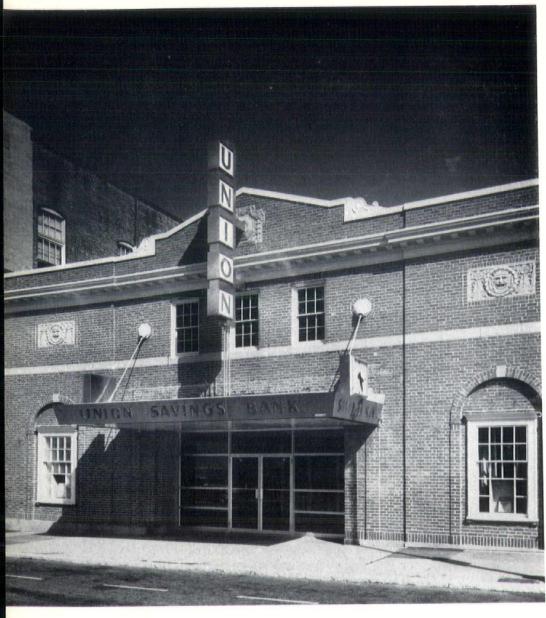
Bancroft School, Worcester, Mass.

Private school

Tracey and Hildreth, Nashua, N. H.
Winnacunnett High School, Hampton, N. H.

Elroy Webber, Springfield, Mass.

Addition to Sixteen Acres School, Richland Center, Mass.
T. Joseph McCook, Superintendent



ARCHITECT

KORSLUND, Le NORMAND & QUANN, INC.

Norwood, Massachusetts

# BANKERS' FORESIGHT ARCHITECTS' INGENUITY

# SOLVED SAVINGS BANK EXPANSION PROGRAM

The decline of the movie house in the wake of television's versatility is evident throughout New England as it is throughout the country.





WILLIAM B. CAROLAN
President, Union Savings
Bank of Boston



FRANCIS A. McQUAID

Assistant Treasurer

Manager Norwood Branch

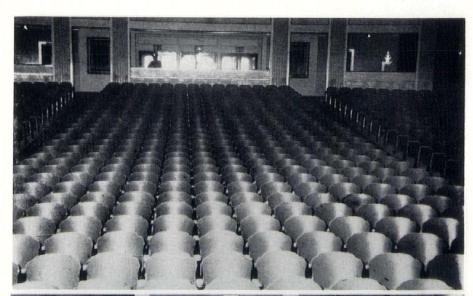


WILLIAM E. MACKEY
Vice President

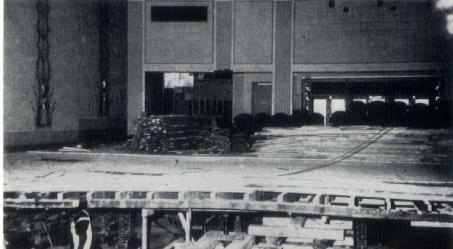
Thus today we find in many cities and towns the vacant theater, waiting, as it were, for someone, or something, to bring it back to life.

In direct contrast to the movie industry, however, banking has taken on a new look in cities, towns, and even in small communities throughout the New England states, and because of it has been "forced" to either expand or to seek larger quarters to handle an ever-increasing business.

In most cases, the cost of expansion, or construction of a new building in a central location has been either fantastically expensive or impossible. To locate anew or to expand operations in most cases is improbable, especially where the business section is completely built up. This was the case in Norwood. The Union Savings Bank branch office was facing an immediate need for expansion, but there was not room enough in their first office, or for that matter anywhere on the main stem, for such a move.



Theater auditorium prior to reconstruction

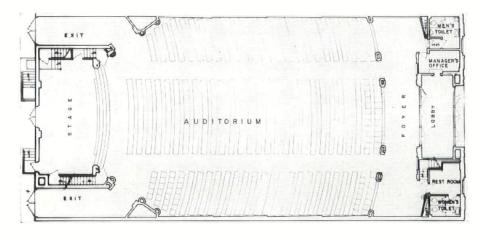


Quartered and sawed, the auditorium floor was raised and leveled with the use of jacks Union Savings Bank President William B. Carolan assigned William E. Mackey, Vice President, and Francis A. McQuaid, Assistant Treasurer and Norwood Branch Manager, to the task of finding new quarters that would provide the bank with a central location, as well as comfortable customer convenience. Almost immediately Mackey and McQuaid realized the value of the "old Guild Theater" which had been vacant for 10 years.

The bankers then turned to the architectural firm of Korslund, LeNormand and Quann, and presented their problem. They were fortunate in that Harry J. Korslund had worked on the remodeling of the theater in 1931, and again after a fire had nearly demolished the building in 1937.

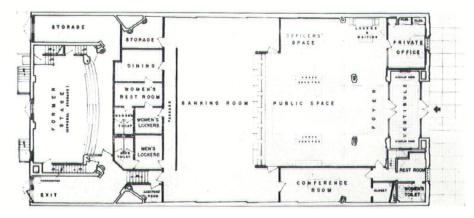
The first problem, a seemingly difficult one, fortunately turned out to be comparatively easy. Because the theater floor was sound and in extremely good condition, it was not necessary to construct a new floor. Workers simply cut the original floor into sections, and then raised them to the desired height through the use of jacks and pilings.

The next step was to lower the extremely high ceiling by approximately six feet. This was done by hanging a new ceiling, utilizing a luminous egg crate design to its maximum. Not only was this practical for illumination, but it was also used to filter fresh air into the building continuously without creating a draft.



Building shown as theater

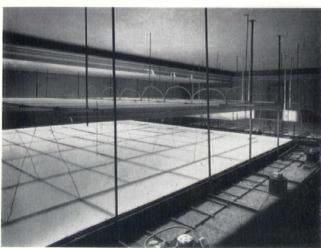
The architects disturbed only a minimum of structural members. The original lobby was left intact and is now used for advertising purposes, both by the bank itself, and by other community projects.



Floor plan of building as Bank Office

The original ticket office and men's room were transformed into a luxurious president's office. The theater foyer provided ample room for overall customer convenience. Because of the length of the building, enough space was available for seven teller windows. More than enough room was left for banking purposes. Rest rooms and a large dining room were included behind a divider wall, on which a huge, hand-carved replica of the Union Savings Bank emblem is located. Another theater feature that made the project even more desirable was the inclusion of air conditioning and heating facilities designed for the theater, and dictated by state law. Both units were more than adequate for the bank. Because of







lack of windows, the use of color was a necessity to eliminate the "closed in" feeling. The expert use of warm, sunny pastels and proper lighting was successful in creating the aura of daylight.

If the need for future development becomes evident, there is still a large portion of the building available. The stage area and the upstairs projection rooms have not been touched, and can be utilized at any time.

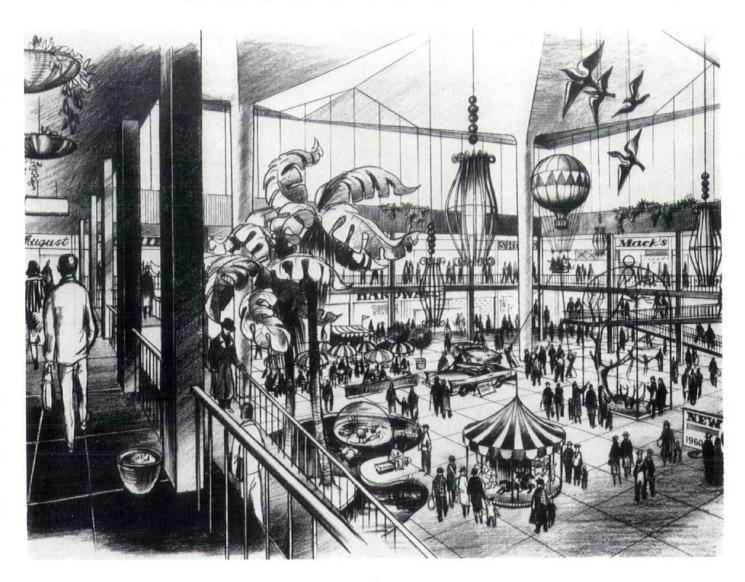
The old theater marquee makes one of the most effective signs in the area, which can be seen from either end of the town.

To duplicate the building today would cost more than \$200,000. The cost for the Union Savings Bank, including the cost of the building (\$36,000) and the complete renovation (\$60,000), is not half that amount.

Today the Union Savings in Norwood is one of the most impressive banking institutions in New England, in addition to being one of the town's foremost show places.

The foresight of the bankers, plus the architects' know-how have shown what can be done. The Norwood project will no doubt point the way for other business men throughout New England eager to expand . . . but at a minimum expense.

# SHOPPING CENTER



ARCHITECTS
HENNEBERG & HENNEBERG

OWNER & GENERAL CONTRACTOR

J. R. CIANCHETTE & SONS

ENGINEER RICHARD PESTKOWSKI

Bangor, Maine will be the site of a "jet-age" shopping center designed by Henneberg & Henneberg, Architects and City Planners, of Cambridge, Mass., which epitomizes the utmost in architectural beauty while providing the maximum in functional design.

The Center is located on a site easily accessible from Routes 1, 2, 9, 15, and 202, and a new "industrial spur" divided highway which allows traffic from areas South and East of Bangor to reach the center without entering traffic congested areas.

# BANGOR - MAINE

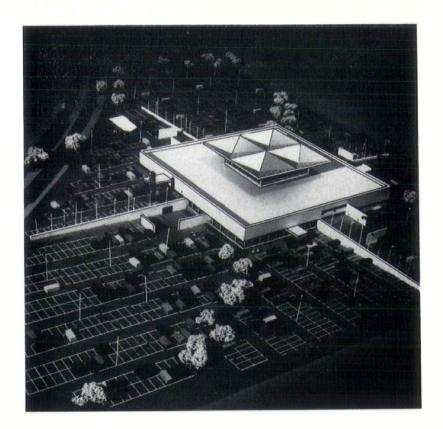


The Center will allow a maximum number of cars to be parked within short walking distance and will provide easy approaches for shoppers and freight from road to parking and from parking to building.

Parking areas surrounding the Center will be divided into four zones, two of which will lead to the lower level, and the other two to the upper level. This arrangement allows a two-level building, both levels of which will get the same attention from the shoppers, eliminating the discrimination of shops located in the "basement."

The striking roof design, which incorporates four paraboloid umbrellas, will become the landmark of the area. At night, soft lights will be played on the "umbrellas" from beneath which will give an impression of floating objects.

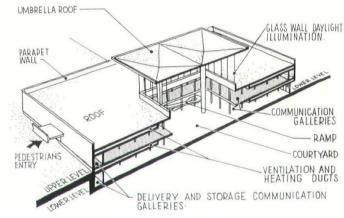
A magnificent court is accessible from both levels of the parking space by means of wide internal streets located at each corner of the building, and serves as a main "avenue" towards which all shop windows are directed. Stairs and low incline ramps inside the court provide intercommunication of both shopping levels,

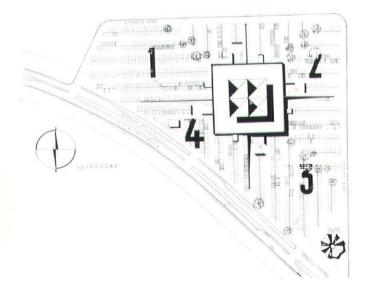


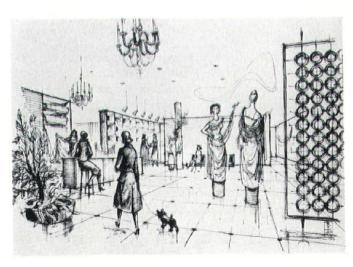
and permit the customer to visit every business establishment in the Center without going outdoors.

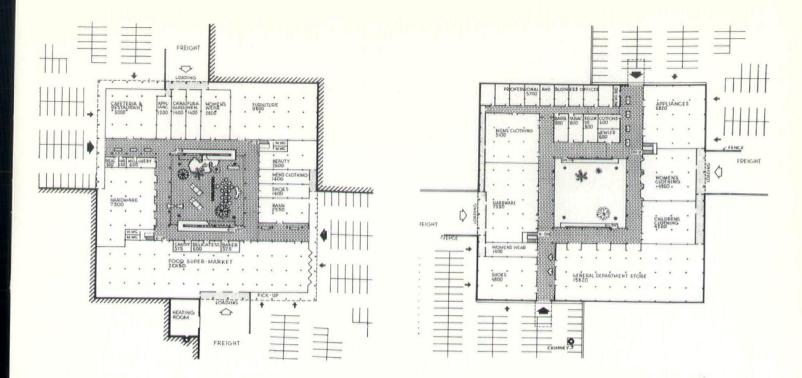
Unlike any other shopping center in existence, once shoppers enter the Center they can leisurely shop in every corner of it, completely protected at all times from the heat or the cold. The Center is designed for the widest possible variety of modern shops to attract the greatest possible number of consumers.

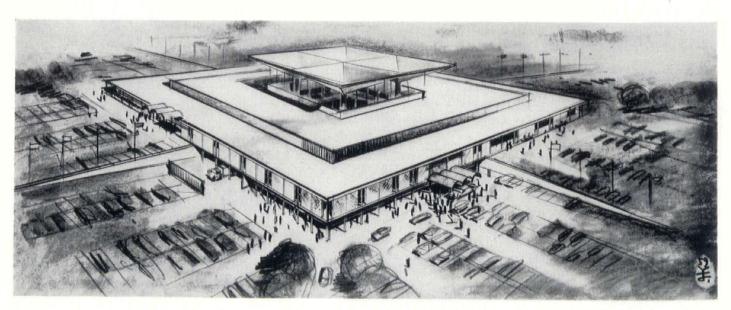
The Court, or Plaza, besides bringing all shops within a close view of the shopper, may also be utilized for auto, boat or fashion shows, a sidewalk cafe, an amusement park for children or practically any function that an enterprising merchant might desire. Once the











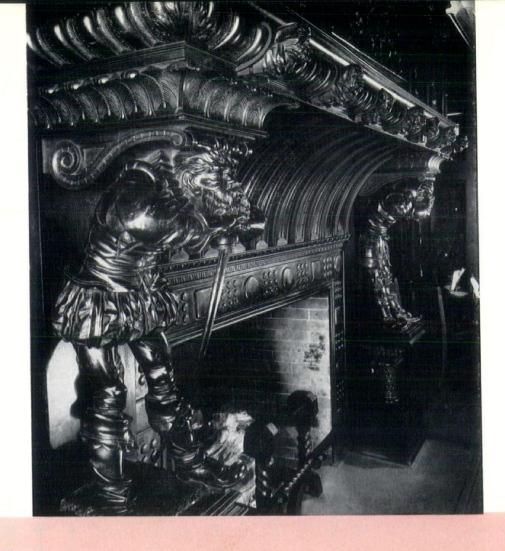
shopper enters the Center, he will immediately be drawn by the aura of a giant carnival or Eastern bazaar.

The homogeneity of the architectural design for the store window, display and sales areas is stressed throughout the building. The design is also directed at relating the customer to the merchandise in such a manner as to provide a modern and simple frame for the variety of easily visible goods. Actually, there will be no glass between the customer and the window display. A unique "glass-less" window will serve to draw the customer into the shop. The cross-court visibility allows the public to find the way into a store

of their choice without unnecessary confusion but with the possibility of seeing other shops on the way.

The design also allows the shopper to visit any shop he may choose, regardless of where he parks, without walking long distances as in a sprawling type of shopping center. Adequate air-conditioning and heating units will be installed for comfortable customer convenience.

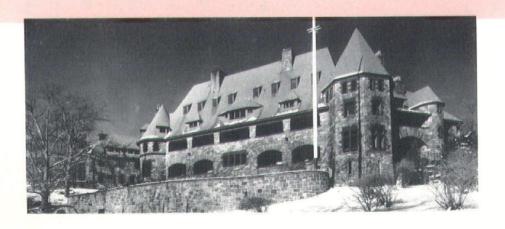
This new idea of central arrangement, with expansion around it, allows the maximum space for shops and the 1500-car parking facility.



NOBLE and GREENOUGH SCHOOL

DEDHAM : MASSACHUSETTS

In this day and age of functional design being the keyword in almost all school building, it is refreshing to note that there are institutions where the old world atmosphere prevails, rather than the rigidity of modern construction. On the banks of the Charles River, in Dedham, Mass., is located a medieval castle which houses the major portion of the student body of the Noble and Greenough School.



On August 30, 1921, the Noble and Greenough School bought Riverdale, the fabulous property on the Charles River in Dedham belonging to the Nickerson family, and in September of the next year the school began its fifty-seventh year in its new home. It marked the change from a day school in Boston to a country-day and boarding school in the country. Classes could now be held uninterrupted by the noise of the city traffic, and athletic fields were available at the school itself. The new location was a beauty spot, surrounded as it was by the winding Charles River and acres of luxurious woods. In time several new school buildings were to be built on the property, but today as then, one building dominates the picture, as impressive even by itself as the land on which it is located. The red-roofed, stone-walled main building provoked as much awe and admiration to the visitors of the nineteenth century, as it does to those who visit the school today. There were practically as many unanswered questions about the castle then as there are today. And some of them Mr. Albert W. Nickerson, the original owner, the man who first thought of building the castle, probably took pleasure in not answering and leaving the answers to people's imaginations.

Mr. Nickerson employed as his architect the late Henry Hobson Richardson, who had designed Trinity Church and was famous throughout the country. The castle was no copy of any particular European structure, but a combination of the ideas of the architect and Mr. Nickerson. Construction began in June 1887, and the building was not completed until three years later.

The first problem of the building was blasting, as the castle was to be set on a large ledge, looking down over the peninsula to the river. The dynamite used to blast the ledge was kept in a cement house, the foundations of which still stand. A look at the present cellar walls gives an idea of the magnitude of the job, one of the inner walls being cut out of solid stone. Red oak wood was used on much of the panelling. Probably the rarest wood in the castle was the satinwood from Ceylon, which is still in the small room of the present common room. The floors were polished as smooth as enamel. Some of the bedrooms had eight coats of paint before they were ready for occupancy. Each of the bathrooms had marble basins, magnificent deep bathtubs, that were enjoyed by the early Noble's boarders but have since mainly been replaced by showers, and tiled floors. The furnishings, many of which were imported from Europe, were luxurious. Most of the furnishings were sold or taken by members of the family, but a few pieces such as the round table in the library remain as reminders of the original atmosphere. The stone fireplace in the common room still bears the Nickerson coat of arms.

The cost of this amazing building was \$230,000. Today it would cost well over a million dollars to construct a similar building.







### M T A PROGRESS

### PERINI CORPORATION CONTRACTORS



View showing new subway section without roof at bell-mouth connection. Above is steel supporting temporary bridge.



View looking East toward Kenmore Square. In foreground is section of the completed subway at the bell-mouth connection. Left is temporary bridge running View looking East toward Kenmore Square. over bell-mouth connection.

The newest link in Boston's rapid transit system, which will add another 10 miles to the already extensive system, is expected to be completed the first of July, only a year after the project began.

The project, being done by the Perini Corporation, will tie in the now defunct B&A Railroad's Highland Branch line with Boston's Transit Authority, Metropolitan adding 13 stations to the MTA system.

In addition to the engineering problems inherent in any such undertaking, the MTA tie-in has had

several unique engineering difficulties. After tearing down a six-floor apartment building, the problem was to keep traffic flowing smoothly while digging 45 feet deep under Beacon Street, one of Boston's most traveled thoroughfares. This was done by setting up temporary steel bracing for a traffic bridge.

It was also necessary to break through the existing MTA subway walls, without disrupting service, to complete the bell-mouth connection at Beacon Street. Construction of the bell-mouth connection was enhanced by utilizing the "contact method" of erecting soldier beams, a comparatively new method in the Boston area.

Using the existing roadbed, it was necessary to replace only 25 per cent of the rail, and 50 per cent of the ties. When completed, the entire system will be electrified, and at least one new sub-station will be erected. New yard facilities at Cleveland Circle are planned, in addition to renovation or new buildings at the sites of the original 13 stations. Parking facilities are also being included, with the purchase of property at the Grove Street station to allow parking for 2,000 cars. A 500-car parking lot will be built at the Woodland station located on Route 16.

The Project Engineer is David C. Malone of Framingham, Mass. Project Manager is Irving Huie of Holbrook, Mass. Electrical construction is being done by Mass. Electric Construction Co. Track construction is by the Acme Construction Co., of Ohio.

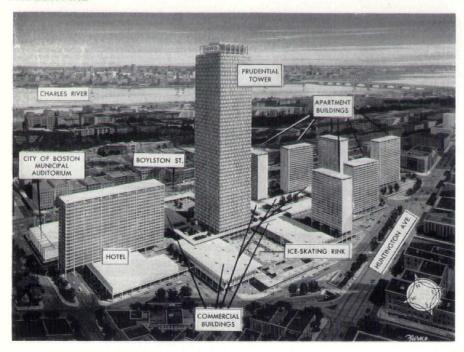


View showing existing subway with new permanent steel roof at the bell-mouth connection. Tunnel still being used for regular MTA service.

# Bulletin DIGEST

AS COMPILED BY M. PATRICIA WILLIAMS, ASSOCIATE EDITOR

### PRUDENTIAL



Boston's famed old Mechanics Building has been completely razed to make way for one of the giant architectural accomplishments of the age . . . the construction of the \$100,000,000 Prudential Center.

The Center will encompass thirtyone and one-third acres in Boston's Back Bay section—an area more than twice the size of Rockefeller Center. A Plaza, which will create a new surface level over the low-elevation site, will be constructed over practically the entire property. Focal point of the project will be the Prudential Tower which will include 52 stories and will rise more than 750 feet above the ground, making it the tallest building in the world outside Manhattan.

Buildings will occupy about 25 percent of the property. The remaining surface will be devoted to parking and transportation facilities and landscaping that will include reflecting pools, terraces, covered walkways, and many other features.

Some 250,000 square feet of space will be devoted to commercial buildings, including banking facilities, restaurants, specialty shops, and other retail stores. Plans also call for an ice-skating rink, 1,750 apartment units, a 25-story, 1000-room hotel, and a combined convention and exhibition hall facility which will be owned by the city of Boston, and financed, built, and operated by the city's Auditorium Commission.

In answer to one of Boston's most pressing problems, parking facilities on the surface and on three levels beneath the plaza will accommodate approximately 4,000 cars. Escalators and elevators will provide access to the various buildings from the parking areas.

New England Architect and Builder, Illustrated will keep in close contact with the project, and will present articles from time to time until the Center is finally completed.

## HARTFORD ARCHITECT MOVES TO NEW OFFICES

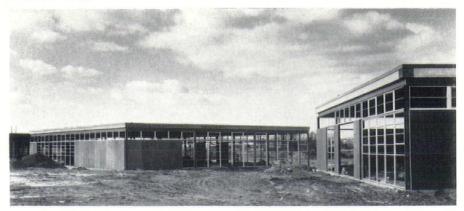
Keith Sellers Heine, prominent Hartford architect, recently moved his offices from 7 Oxford Street to the Mutual of Hartford Building on 95 Woodland Street.

Mr. Heine has maintained a busy and diversified architectural practice in Hartford for thirty-two years. Recent projects in Hartford vicinity have included the Lewis W. Batchelder School, the Hartford Golf Club, a Fire Station and numerous residences.

Mr. Heine is a former President of the Connecticut Chapter of the American Institute of Architects and is licensed to practice in Massachusetts and New York as well as Connecticut.



new england ARCHITECT and BUILDER, illustrated — MARCH-APRIL, 1959



Several model plants are under construction at the Natick Industrial Center, another Cerel-Perini entity where Dynamac Incorporated will relocate their new facilities.

The Cerel-Perini Associates Industrial Park, located in Natick, Mass., has moved out of the specification stage and is now well along in the construction stage. The Natick Park is one of 11 such Cerel-Perini industrial sites located throughout Massachusetts.

Two new industries, Dynamac Incorporated and the Ewen Knight Corporation, are among the New England companies who are awaiting completion of plant facilities at the Natick Park.

The 11 sites, located in Sturbridge, Framingham, Brockton, Southboro, Westboro, Holliston, the New York streets site in Boston, and in Natick where there are three sites, boast the latest in small plant innovations.

Six basic designs have been selected

to date for all of the plants, but new designs can be incorporated if a client prefers. All plants will have sprinkler and air conditioning systems, and can be subdivided to provide office, laboratory, manufacturing, or other types of areas the buyer desires.

Individual clients may specify the size of plant they desire, and all plants can be doubled in size when expansion is necessitated at a minimum cost.

All necessary utilities and transportation facilities will be available to the new plant owner. The industrial park offers the manufacturer a chance to increase his production facilities at a time when the need is greatest, in addition to providing pleasant, comfortable working conditions.



Construction on the new plant facilities for the Ewen Knight Corporation progresses rapidly at the East Natick Industrial Park.

### ART AND MUSIC BUILDING

Contract for the Art and Music building to be erected at Colby College, Waterville, Maine, has been awarded to H. P. Cummings Co., Winthrop, Maine. The \$825,000 building is part of the college's \$2,500,000 Program of Fulfillment. Classrooms for social sciences and humanities were provided last month with the opening of a building in honor of Elijah Parish Lovejoy, America's first martyr to press freedom.

# TWO MORE SCHOOLS FOR CONNECTICUT

One school has been completed in Connecticut and another has just recently begun. The \$1,298,000 Longfellow elementary school in Bridgeport will be put into use next September. Architect is Toby Vece and contractor is the Gellatly Construction Company. Meanwhile, work is just beginning on a \$600,000 elementary school at Montville. Contractor is Alexander Schnip & Sons of Norwich.

# MODEL OF GRAND CENTRAL CITY IN NEW YORK

Grand Central City, the largest commercial office building in the world, will be built on the 3½ acre site adjoining Grand Central Terminal on Park Avenue, New York.

The final plan for the eight-sided skyscraper, which will contain 2.4 million square feet of rentable area, was developed over a six-month period by two Cambridge architects, Walter Gropius, partner of The Architects Collaborative and Pietro Belluschi, Dean of the School of Architecture, M.I.T. in their capacity as design consultants for the



structure and Richard Roth of Emery Roth & Sons, New York architects for the building. Construction is expected to begin on the \$100,000,000 building by late this year with completion scheduled for 1962.

The elongated octagon skyscraper rests on a broad 6-story base that will tie into and continue the horizontal roof line of the Terminal. Fifty-five stories high, the tower is designed by the architects to have a "prismatic effect": the tall expanses of glass will brilliantly reflect light as the sun moves over the building's eight separate planes during the course of the day.

The building base and transitional floors carrying the tower, will contain approximately 800,000 square feet. Individual tower floors ranging in size from 31,000 to 35,000 square feet will provide an additional area of nearly 1,600,000 square feet.

# "SCIENCE WALL OF HONOR" AT THE UNIVERSITY OF BRIDGEPORT



A Science Wall of Honor to commemorate and perpetuate the names of twenty-five of the world's "Immortals of Science" whose fundamental discoveries have yielded the greatest benefits to mankind is to be created at the University of Bridgeport (in Bridgeport, Connecticut), Dr. James H. Halsey, president of the university announces. The Science Wall of Honor will be incorporated in the \$1,400,000 Charles A. Dana Hall of Science now under construction on the UB campus.

The selection of the scientists to be honored in this manner will be conducted on a world-wide basis, Dr. Halsey said. Heads of colleges and universities of all known four-year colleges and universities in the world, editors of all daily newspapers in the U.S.A. and in world capital cities, leading Science organizations, editors of selected national and international science periodicals, a selected list of popular American periodicals and others who would be able to render opinions on this matter will participate in the election process as electors.

Any individual in the world's history may be nominated for the Science Wall of Honor except that only those who have been deceased at least 10 years will be considered, Dr. Halsey stated. Recognition in all instances will be limited to accomplishments in the fields of natural science and not to philosophy, history, or the social sciences.

The names of the science immortals will be inscribed in the limestone walls of the Science structure as an eternal memorial to the men and women who have contributed most importantly to the fund of man's knowledge, Dr. Halsey observed, and as a daily source of inspiration to countless future generations of Bridgeport University students.

Twenty-five names will be inscribed on the Science Wall of Honor when the structure is completed in January, 1960. The name of one scientist will be added each year for the next 25 years when a total of 50 names will have been inscribed. At that time, only one name will be added every five years. Future selections will be made in a manner to be determined by the university's board of trustees.

### PRACTICE CONTINUED

Arrangements have been made to continue the firm of David J. Abrahams & Associates, Architects, under the personal direction of Israel Nigrosh, who was the Senior Associate and a Member of the Organization for over twenty-three years. The objective of the office is to carry forward with the same reputation for service and fine quality of architectural work for which they have been known in the past.

The practice is to continue under the same name and at the same address — 651 Boylston St., Boston, Mass.

### **NEW ARCHITECTURAL FIRM**

Thomas Wagner, Saugus architect, recently announced the formation of a partnership under the firm name of Wagner, Salisbury and Harding. The new offices are located at 120 South Common Street, Lynn, Mass. Mr. Wagner and Mr. Harding studied at the Hart School of Architecture and the Boston Architectural Center. Mr. Salisbury graduated from the Rhode Island School of Design. The firm will offer complete architectural services for all types of buildings.

#### PROMOTION

The John M. Rufo Associates, Inc. of 89 Adams Street, Newton 58, Massachusetts is pleased to announce the promotion of Frank J. Cullati from Project Engineer to the office of Vice-President effective January 15, 1959.

### WALKER ARCHITECT FOR NEW SCIENCE BUILDING

Ground breaking ceremonies were recently held for the new \$1,350,000 Science Building to be erected on the University of Bridgeport campus. Attending the ceremonies were Architect C. Wellington Walker, Charles L. Gellatly, whose company is General Contractor for the building and Francis F. D'Addario of D'Addario Construction Company who will perform the excavation work. The new building will house chemistry and physics laboratories as well as the Departments of Biology, Art and Psychology. lecture hall seating 513 will also be included. This new building will be the largest of the 46 structures on the campus.

(Continued on page 33)





The family room of the Alcoa Care-free Home is designed to provide the ultimate in leisurely family living.

Textured, color anodized aluminum, as well as natural aluminum, has been used to highlight and frame natural woods in this dramatic home of ideas.

### RESTRAINED ELEGANCE

As Discussed by Herbert Howarth Coe

There is a new trend in interior design and it is referred to as "restrained elegance." It indicates a greater elegance in floor finishes, wall decorations, furniture in every room — from dining room to bath, according to Herbert H. Coe, Boston Interior Designer and President of the New England Chapter of American Institute of Designers.

The second country-wide trend is toward a greater interest in traditional furnishings, says Mr. Coe. Not that modern furniture is being forgotten, but now it is being used in combination with traditional pieces. Modern furniture, meanwhile, is losing its stark, clinical look. Lately, furniture has shown a surprising emphasis on curves and circles. They appear in dining and coffee tables, in the curved fronts of chests or drawers, and even fabrics, doors, and floors now forego the flat look to a large degree.



Close-up of the glass gable end of Alcoa's Care-free Home. All glass is set in aluminum sash. Decking under the eave is natural cypress.



View from the front door of Alcoa Care-free Home reveals the spacious living room area, highlighted by a glass wall of double-glazed sliding glass doors, for true year-round, indoor-outdoor living. All furnishings are by Herbert Howarth Coe Associates, 71 Newbury Street, Boston.

The vinyl floor has become one of the most popular, often used with insets of brass. Tastes in vinyl run from brass to mosaic to tortoise shell. Parquet floors are also enjoying a big comeback. Many of them are braided or of carved wood for the three-dimensional effect.

Leather is also finding its way into many homes again, as upholstery, table tops, and even as wall and floor covering.

The mixing of modern and periods is probably the single most important trend. Many times modern has been mixed with several periods in one room, or home, and even period furniture or accessories from several countries.

There is also a definite interest in furniture and accessories of Gothic, Moroccan, Greek, Spanish, and African origin. The European influences, English, French, Italian, are felt throughout the country in antiques or in reproductions. Painted Venetian furniture is enjoying new popularity.

(Continued on next page)



Housewives especially favor the new trend because it often calls for less than the customary housekeeping techniques. Painted furniture, for instance, often looks better if you don't get the dust off, but brush it in.

To sum it up, the new look in home fashions leans toward a mixing rather than matching of styles and periods. Modern has been softened. There is a new scale to the furniture, a new interest in rich accent pieces, and a blend with the old for a softer, more livable look. In interior design, this is the age when the individual viewpoint reigns supreme.

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ARCHITECTS: Kahn & Jacobs, New York
GENERAL CONTRACTOR:

George A. Fuller Company, Boston, Mass.

Open tanks on 18th floor used for water pressure due to height of building. House pumps are located in basement.



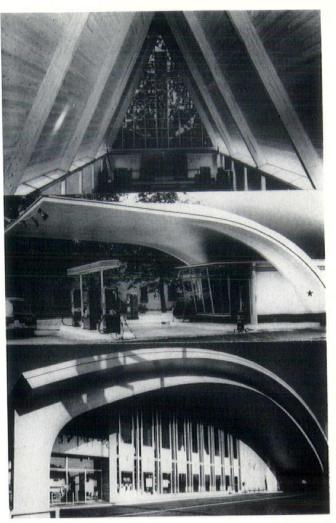
Reflector pool at main entrance has all facilities of modern swimming pool, including chlorination and heat in the water.

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## LAMINATION SPURS NEW TREND IN DESIGN



Pictured are three examples of exciting new structural design made possible through the use of laminated timbers. These eye-catching structures typify the trend toward a new type of architectural design that is sweeping both America and the Continent.

Two of the world's foremost timber laminating companies have joined in an agreement which grants to each firm exclusive rights to the other's manufacturing processes, machinery and equipment.

The announcement was made this week by M. C. Hanisch, Jr., president of Unit Structures, Inc., of Peshtigo, Wisconsin, one of the principals. A similar announcement is being made at this time by H. Ernst Deleth, president of the N. V. Nemaho Company of Doetinchem, Holland, the other principal.

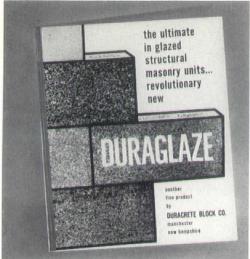
The two companies will also exchange technical, engineering and research information.

Arrangements for the working agreement were resolved last September when Hanisch visited Holland as part of a six-week tour of European laminating companies.

Engineering and production personnel of Unit Structures and Nemaho will exchange visits in the near future to co-ordinate projects of mutual interest.

The working agreement establishes the basis for joint enterprises outside the United States.

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The beauty of DURAGLAZE is measured by the eye . . . fashionable and practical color tones are available to please the most discriminating clients who expect the unusual in decor for nominal installation costs.

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# EXHIBITION OF CONNECTICUT ARCHITECTURE

The NEW HAVEN FESTIVAL OF ARTS was first presented in June 1958 on the New Haven Green and was attended by 50,000 visitors. Visual and performing arts are presented to the public free of charge. The festival will again be held on the New Haven Green, June 23 to June 29, from 10 A.M. to 10 P.M.

The Festival of Arts Exhibition of Architecture is intended to bring outstanding examples of recent Connecticut architecture to the attention of the public and to promote greater interest and understanding of better design in public and private structures. The Festival Committee is endorsed by the Connecticut Chapter of the American Institute of Architecture and the Connecticut Society of Architecture. The first Festival architectural exhibit in 1958 was the travelling exhibition of "A Century of New England Architecture" supplied and sponsored by the A.I.A. For 1959 the Committee proposes to invite the submission of plans and photographs by entrants under the conditions set forth below. The Jury will select for the 1959 Festival sufficient and diversified entries as far as space permits, and will designate one of the selected entries as winner of the 1959 Award Certificate for Architectural Design. The Jury will also award Honorable Mentions in various building types.

The Exhibition is open to architects registered in the State of Connecticut, both residents and non-residents, for a project completed in the State within the last ten years. The work shall be submitted in the name of the architect, or firm of architects or associates responsible for its design and execution.

### PARTNERSHIP

Arthur H. Cohen and Abraham J. Goldberg announce formation of a partnership for the practice of architecture as of January 12, 1959, with offices at 739 Boylston Street, Boston, Mass.

### ADMITTED

On January 1, 1959 Arthur W. Brown and Herbert R. Fisher, Jr. were admitted to partnership in the firm of Adden, Parker, Clinch & Crimp and the firm name was changed to Clinch, Crimp, Brown & Fisher, 177 State St., Boston, Mass.

### L. GROSSMAN SONS

L. Grossman Sons, Inc., of Quincy, Mass., New England-wide building materials firm, has announced simultaneous honors which were bestowed on them recently.

The Office of International Trade Fairs has asked the firm to demonstrate how an American hardware store operates as a community service as part of the Hardware-Building Materials display in the official U. S. Exhibit at the Pozan International Trade Fair to be held in Poland from June 7–21.

The firm also announced that they have won a third consecutive high award in the National Brand Name Retailer-of-the-Year competition, for promotion of brand name products in 1958.

# PLAN...

# economical summer

# cooling with





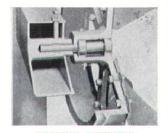
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# Frank Cloyd Wright

1870-1959

Frank Lloyd Wright, often referred to as the greatest American architect of the 20th century, died at Phoenix, Arizona, on April 9, after an emergency operation for treatment of an intestinal tract obstruction. He was 89 years of age.

Throughout his life Wright waged a neverending battle with contemporary schools of thought. His fame as a master builder and a genius was acclaimed abroad long before his own countrymen accepted his work. Many critics regarded him as "theatrical," and denounced his style as uncouth and inhuman, and without any sympathetic alliance with true culture.

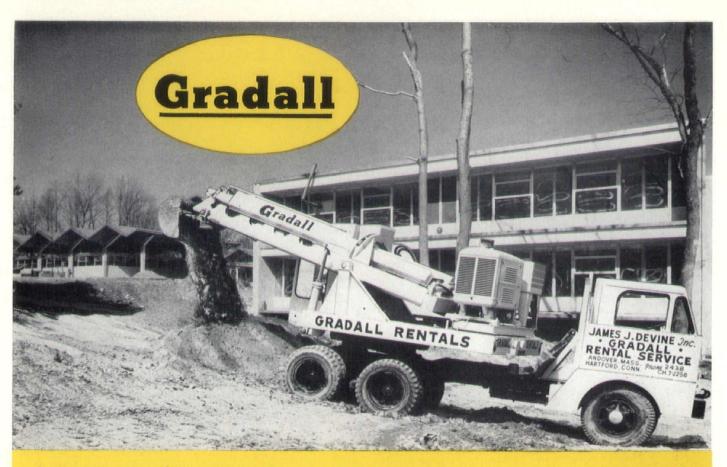
At the age of 18, after quitting college, Wright was fortunate in obtaining a job with Louis Sullivan, at that time one of Boston's foremost architects. He worked with Sullivan for six years, and then struck out on his own to spread his individualistic style, completely abandoning the long-standing European architectural forms.

Wright maintained a school near Phoenix, which he called Taliesin, Welsh for "radiant brow." Here students from all over the world came to learn from "the master."

His famous "prairie houses," located throughout the Midwest — with innovations including the use of horizontal lines to make the houses seem part of the terrain, and roof apertures for interior lighting and corner windows, virtually unheard of then — were the first "modern homes." Today, almost a half century later, the houses still look modern.

He designed more than 700 buildings around the world during his "rebellious" career. One of his first projects was a modern office building at Buffalo, N. Y., which included such novelties as air conditioning, metal furniture and plate glass doors and windows. Wright believed in blending machine-age precision lines with nature's living forms in stone, steel, wood or glass.

Although some of his sharpest verbal blasts were leveled at the American Institute of Architecture, the institute named him the 15th winner in 42 years of its gold medal "for distinguished service to the advancement of the art and the profession of architecture."



# \*Gradall works all day... every day in building construction

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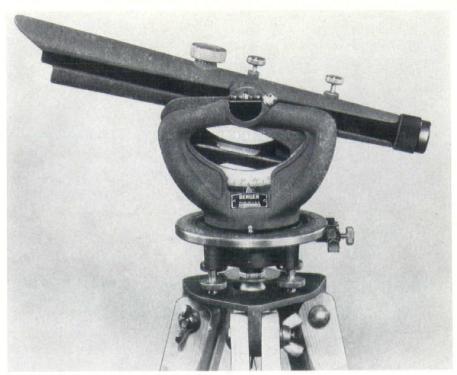
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#### **BUILDERS' TRANSIT-LEVEL**



NEW BERGER "SPEED-A-LINER" BUILDERS' TRANSIT-LEVEL answers the need among builders, farmers and contractors for an instrument with greater accuracy and ease of operation, yet suitably low in price. Leading the list of features is a 13-power, interior focusing telescope for accurate readings at greater distances. The instrument has a streamlined, built-in sunshade and an underslung level vial for greater protection against breakage and the sun's rays. A sensitive plate vial is also included to level the base and reduce the time lost when turning angles or checking vertical alignment. The spring-loaded lever type telescope lock permits quick and positive conversion from a transit to a level. The 4-screw leveling head has been fully enclosed for dust protection. The instrument gives fast, accurate readings to one degree — with estimations to ½ degree — and is ideally suited for setting batter boards, aligning stone walls, foundations, brickwork, laying out driveways, parking lots and scores of other projects. Complete with carrying case, plumb bob, white ash tripod and instruction manual. It retails for \$98.75, F.O.B. factory.

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#### MONDAY, MARCH 23rd

in our new location at

777 BOYLSTON STREET, BOSTON, MASSACHUSETTS
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Our 177 State Street Branch and the Offset Plant at 270 Congress Street will remain at same locations.

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#### PLASTIC DESIGN IN STEEL

A new manual, *Plastic Design In Steel*, prepared and published by American Institute of Steel Construction, is a practical reference for the professional engineer concerned with the design of one- and two-story continuous structures.

Plastic design is a new method for designing steel structures, based on new knowledge of the behavior of continuous steel structures loaded beyond the yield point. It has been tested extensively in this country and Great Britain and studies show savings of 15 to 20 percent in the quantity of steel needed for structures designed by this method as compared with those based on elastic analysis.

To facilitate the designer's work this book contains a handy set of charts and formulas covering continuous beam and single and multispan rigid frames, and an economy table based on the plastic moment strength of rolled sections.

There are separate sections in the book on the design of continuous beams and single-span and multispan frames — with careful attention given to design details and connections. Details covered include column design, connections, lateral bracing and unsymmetrical sections.

A chapter on methods of analysis reviews the equilibrium method for designing continuous beam and single span, single story rigid frame structures as well as the mechanism method for more complex continuous structures.

Rules for Plastic Design and Fabrication adopted by AISC are included and the various design examples used conform to these rules and to the AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.

The book has 104 pages and is fully illustrated. The price is \$4.00 and copies are available from American Institute of Steel Construction, 101 Park Ave., New York 17.



## New Magneciter\* Generator gives important performance advantages

Now you can have Onan engineering and Onan dependability in high-capacity plants, too! In gasoline-powered models, 100, 125, and 150KW sizes have been added to the line. New diesel models include 10, 15, 25, 35, 50, 60, 75, 100, 125, 150, 175, and 200KW capacities. All standard voltages are available.

All models are powered by heavy-duty industrial engines matched to the power requirements of the generator. Custom modifications to meet the needs of particular applications add to the versatility of the new Onan line. Automatic controls for standby installations are available for each model.

### All plants 100KW and larger are Magneciter-equipped

This new Onan generator with static exciter and voltage regulator has these advantages for both standby and primary power installations:

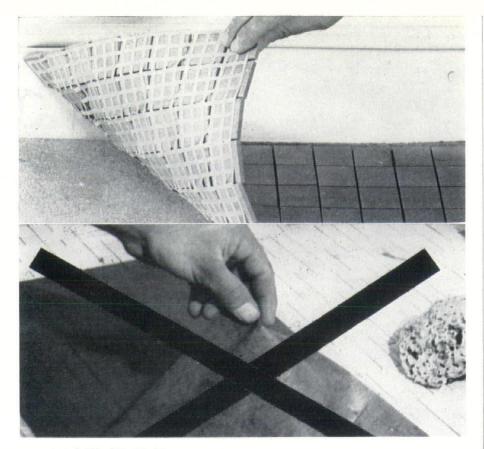
- Simplicity Eliminates hundreds of electrical connections, the commutator and its brush rig.
- Constant voltage Voltage dip is less than 20% with motor starting load. Stable generator operating conditions re-establish within two seconds after load is applied.
- Lighter weight, more compact Plants are shorter by a foot or more, lighter in weight.
- Less maintenance, easier servicing The static exciter and regulator are externally mounted and easily accessible.
- \*Onan alternator with static excitation and static voltage regulation.

In Massachusetts and Rhode Island, the fine products illustrated above are sold and serviced by the J. H. Westerbeke Corp.

Here in Dorchester, we have a large stock of parts, engineers to help you on details of application and trained service personnel to assure that you obtain complete satisfaction from your purchase.

#### J. H. WESTERBEKE CORP.

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#### STYLON CORPORATION

Guesswork and considerable on-the-site labor are eliminated with the release of new "Sure-Set" backing by Stylon Corporation, New England's only ceramic tile manufacturer.

The perforated backing for ceramic floor tile allows the ceramic patterns to be set face-up into cement or mastic and eliminates the removal of paper hitherto used to hold the patterns in place. Equally important, tilemen no longer take any chances with pattern mix-ups during installation, since Sure-Set allows the sheets of tile to be set with the pattern showing.

The polyethylene backing is waterproof and has been thoroughly tested. Virtually 50 per cent of the tile area comes into contact with the bonding material and 70 per cent of the linear edges. It can be used on walls in unique settings with no danger of the sheets shifting. Elimination of paper removal speeds up installation and sharply reduces labor costs at the building site.

Sure-Set backing is available for all floor tile on request from Stylon, and costs slightly more than conventional mountings.

### Bulletin Digest - Continued

#### **ELECTED PRESIDENT**

R. Leslie Mullen, 33, has been elected president and chief executive officer of Lehigh Structural Steel Company, Allentown, Pa., it was announced recently. George J. Neumann was elected executive vice president. At the same time Mr. Mullen was elected president of the company's two subsidiary organizations, Lehigh Construction Company and Utilities Service Company.

Lehigh Structural Steel Company, a 40-year old concern, ranks among the ten largest structural steel fabricating companies in the country. Mr. Mullen succeeds his father, the late Thomas R. Mullen, who was one of the founders of the company.

#### AISC REPORT

Dallas — Less costly steel highway bridges can result from increased standardization of details in their design according to a leader of the nation's structural steel fabricating industry.

James M. Straub, president of Fort Pitt Bridge Works, Pittsburgh, Pa., and first vice president of American Institute of Steel Construction, urged adoption of widely tested items recommended as standards by federal, state and county highway groups in a speech here recently before the American Road Builders Association.



OFFICE BUILDING — Yewell Associates, Inc., Burlington, Mass. Charles H. Cole, II, A.I.A., Architect A. J. Martini, Inc., Contractor

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Standards include such items as bearings, diaphragms, drains, expansion joints, railings and composite shear connectors.

"Steel lends itself quite naturally to standardization and various items introduced by the industry have done much already to modify costs, speed deliveries and otherwise simplify the handling of bridgebuilding projects," Mr. Straub said.

"Today, for example, rolled steel beams can be obtained on call in a handy variety of standard sizes and weights. In addition, numerous detail designs adopted and tested by highway groups are available for economical fabrication and duplication to meet the requirements of loading, span, structure type and site conditions," he added.

In conclusion Mr. Straub stated that the country's steelmaking capacity has been increased 61 percent over its potential at the close of World War II. As a result of this expansion the industry's ability to produce structural shapes is now up to a record level of 8 million tons — and the fabricating capacity of the structural steel industry is also at a record height.

Orders for fabricated items, mainly for bridges, to be completed for the national highway building program alone this year will total more than 1,000,000 tons of steel, he said.

GOATSKIN is the new pattern of Weldron, the vinyl upholstery material produced by the Barash Company Division of United States Plywood Corporation. The embossing for the new pattern was made from a choice portion of a goatskin which was chosen as most nearly perfect after a six-months search involving inspection of hundreds of hides.

## GOATSKIN INTRODUCED AS NEW WELDRON PATTERN

Goatskin is the new pattern of Weldron, the vinyl upholstery material produced by the Barash Company Division of United States Plywood Corporation.

Mike Barash, general manager of the Barash Company, says the new Weldron is available in gold, copper and silver, as well as in black and white and a choice of 15 colors.

Weldron's new goatskin pattern is a reproduction of a skin which was selected as most nearly perfect after literally hundreds were inspected over a six-months period. From this ideal skin a choice portion only a foot square was cut out as the prototype from which the Weldron embossing was made.

Barash points out that although goatskin is a luxury leather selling for more than \$2.00 per square foot, Weldron Goatskin — with a consistent pattern superior to that of any individual hide available — will sell for only about 30 cents a square foot.

Furthermore, says Barash, Weldron Goatskin has qualities superior to natural goatskin. It is tougher, more weather resistant, has higher tensile strength, higher bursting strength, will not discolor and has better aging properties.

Like other patterns of Weldron, Goatskin is manufactured by laminating color to the underside of a tough vinyl sheet and bonding it to an elastic fabric back. Its threeway stretch makes it remarkably easy to drape, pleat, tuft and tailor.

Weldron also is available in four other patterns: Imperial, Ranch Morocco, Nutra and Shantung.

SPECIFY Cabot's

## Stain finishes are trouble-free... won't <u>peel - crack - blister!</u>



Portland Garden Club, Portland, Ore. Exterior siding and trim finished with Cabot's Stains, Architect: John Storrs, Portland.

# Cabot's STAINS

They are ideal for shingles, rustic siding, smooth siding (clapboard, novelty), Texture 111, board and batten, because they

- permit moisture to escape
   ideal for use on window frames, trim
- need no scraping, thinning or priming
- cost 1/2 as much as good paint
- can be restained in another color, or painted over
- preserve wood from decay, insects, weather
- are suitable for all kinds of lumber — cedar, redwood, etc.

35 distinctly different shades — from dramatic deep tones to weathering grays and modern pastels.

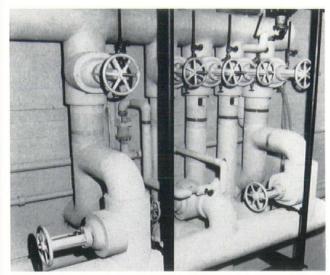


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## NEW ENGLAND INSULATION CO.

## WICS

WOMEN
IN
CONSTRUCTION









Scenes from the recent cocktail party held recently for Women In Construction show that an enjoyable evening was enjoyed by all. The F. H. Curtin Insurance Agency, Inc., of Boston was host for the affair.

## "In the dry" 45 FEET below the river



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Proper bearing for concrete stack foundation

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Removal of ground water during spring run-off of the Connecticut River, April 1958

#### PROBLEM SOLVED:

By installation of 2-stage CLARK WELLPOINT System providing a dry sub-grade to a 45' depth

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Power Plant

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To All Busy Males — DO NOT READ

## why don't YOU join WOMEN IN CONSTRUCTION

Meet the girls you speak with on the 'phone each day. Become acquainted with YOUR business associates. We need the prestige of YOUR membership to add to the prestige of our organization. Do YOUR part to encourage cooperation and a more thorough understanding among WOMEN CONSTRUCTION. All of All of you who are associated with Construction, Architectural and Engineering firms and those engaged with supply houses for the industry, along with reports and periodicals for same, are eligible for membership. This covers a great deal of territory . . . so come on girls . . . help to increase the rapidly growing membership of the Boston Chapter. Do come to one of our future meetings! You will be amazed at the progress in 8 short months! Hope to see you soon.

For additional information, drop a note to:

M. Patricia Williams, Chairman, Publicity & Public Relations, Boston Chapter, Women in Construction, c/o New England Architect & Builder, Illustrated, 215 Stuart Street, Boston 16, Massachusetts or call HU 2-4340.

#### ANOTHER COCKTAIL PARTY IN HONOR OF THE WICS

A Cocktail Party was held recently for Women In Construction by the F. H. Curtin Insurance Agency, Inc. Mary A. Curtin, Vice-President of the WICS, was hostess. Her brothers, Joseph L., Francis H., John J., and George E., acted as hosts. The social gathering was held at the Agency's new offices located at 689 Concord Avenue, Cambridge, Mass. The affair prefaced a monthly meeting. As is evidenced in the photos, an excellent time was had by all.

#### DINATALE WILL ADDRESS WICS AND THEIR EMPLOYERS

Anthony N. DiNatale, Massachusetts Commissioner of Public Works, will address Women In Construction of Boston at a meeting to be held on April 21st at the Boston Club. This will be a first annual affair when the WICS will wine and dine their "bosses."

Commissioner DiNatale, is an internationally known businessman. The high regard for his established reputation in his field is evidenced by the fact that he has been invited to consult with the Massachusetts Institute of Technology regarding his designs and inventions. Administrative ability and sound, respected judgment in the business world are some of the assets brought to the Mass. Department of Public Works by Mr. DiNatale.

The Boston Chapter of Women In Construction, which is just 8 months young, has made great progress in membership and its attempts to promote good will throughout all segments of the construction industry.

#### WICS HOLD AUDITION

A miscellaneous-type auction was held by WOMEN IN CONSTRUCTION at the March meeting. Theresa Kiley of Stamell Construction Co., Inc., (the Tallulah of the Construction Industry) presided as auctioneer. Thanks to Theresa's charming and witty auctioneering prowess, and the enthusiasm demonstrated by the WICS, a substantial sum was raised for the treasury.

## AWARDED

This resume was compiled with the cooperation of GAINEY'S CONSTRUC-TION NEWSLETTER of Boston, Mass. and represents a total of \$40,533,300 in building construction contracts awarded during the period February 15, 1959 through March 15, 1959.

MASSACHUSETTS		NEWTON	\$137,773
AMHERST Dormitory #19 — Univ. of Mass.	\$1,193,008	Elem. School Addn. — City of Newton Archt: Carl Koch & Assoc., Cambridge Contr: Louis Proia Constr. Co., Newton	
Archt: Louis W. Ross, Boston Contr: Aquadro & Cerruti, Inc., Northampton, Mass.		NORTHAMPTON Hospital Addns. — Cooley Dickinson Hosp.	\$1,257,000
BEDFORD Data Analysis Lab. — USA Corps of Engrs.	\$219,666	Archt: James H. Ritchie & Assoc., Boston Contr: Columbia Constr. Co., Malden, Mass.	
Archt: Samuel Glazer & Assoc., Boston Contr: James Farina Corp., Newton, Mass.		PEABODY High School Rehab. Program — City of Peabody	\$479,913
BEDFORD Hospital (Alts 3 Bldgs) — Vets Admin. Archt: James H. Ritchie & Assoc., Boston	\$2,767,820	Archt: John M. Gray Co., Boston Contr: Stamell Constr. Co., Cambridge	
Contr: Kay-Cee Constr. Co., Skokie, III.		PETERSHAM Town Hall Bldg. — Petersham	\$104,500
BOSTON Med. Research Bldg. — Boston Univ. Archt: Shepley, Bulfinch, Richardson & Abbott, Boston, Mass.	\$2,500,000	Archt: Arthur H. Brooks, Cambridge Contr: R. H. Hamilton & Sons, Inc., Princeton, Mass.	
Contr: Vappi & Co., Inc., Cambridge, Mass.	\$214,000	PITTSFIELD Hospital Addn. — Pittsfield Gen. Hosp.	\$2,116,366
BRIGHTON Summer Tent Theatre — MDC Parks Div. Archt: Saltonstall & Morton, Boston	<b>\$214,000</b>	Archt: Marcus & Nocka, Boston Contr: Daniel O'Connell's Sons, Inc., Holyoke, Mass.	
Contr: M. Solimando, Inc., Dorchester, Mass.  CA MBRIDGE Elementary School — Cambridge Archt: M. A. Dyer Co., Boston	\$2,148,274	ROXBURY School Addn. — David A. Ellis School Archt: Mario V. Caputo, Boston Contr: James S. Kelliher, Quincy, Mass.	\$358,208
Contr: John Bowen Co., Inc., Dorchester, Mass.	\$194,000	SALEM	\$264,823
FALMOUTH Squadron Hdqtrs. Bldg. — USA Corps of Engrs. Archt: Hellman & Wilson, Falmouth, Mass. Contr: Welbilt Constr., Inc., Newton, Mass.	\$194,000	Classrooms — State Teachers' College Archt: James H. Boulger, Salem, Mass. Contr: Clemenzi Constr. Co., Beverly, Mass.	
FRANKLIN Housing for Elderly — Town of Franklin	\$444,607	SCITUATE Sr. High School — Town of Scituate Archt: Korslund, Le Normand & Quann, Inc., Norwood	\$1,229,000
Archt: Associated Architects & Engineers, Boston, Mass. Contr: Paul Sardella, Roslindale, Mass.		Contr: Brick & Concrete Constr. Co., Dedham, Mass.	
HOLYOKE Housing for Elderly — City of Holyoke Archt: William W. Drummey, Boston Contr: Fred J. Findlen & Sons, Dedham, Mass.	\$379,900	SCITUATE High School Addn. — Town of Scituate Archt: Hoover & Hill Assoc., Cambridge Contr: Edward Goverman, Roxbury, Mass.	\$185,858
MELROSE High School Addn. — City of Melrose Archt: Valtz & Kimberley, Melrose Contr: L & R Constr. Co., No. Reading, Mass.	\$975,654	SOUTH HADLEY Housing for Elderly — So. Hadley Archt: Associated Architects & Engineers, Boston, Mass. Contr: Leo P. Stramese, Northampton, Mass.	\$409,000

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#### CONTRACTS AWARDED — Continued

SPRINGFIELD  Religious Education Bldg. — Bethesda Lutheran Church, Springfield, Mass.  Archt: Munson, Mallis, Bradley, Patterson & Burgener, Springfield, Mass.  Contr: Leo Spear Constr. Co., Springfield	\$215,000
TAUNTON First Dist. Court Bldg. Addn. — Bristol County Archt: Carlton H. Manter, Taunton Contr: G. W. Carpenter, Inc., Fall River	\$169,840
WALTHAM Vocational Shops and Classrooms — Walter E. Fernald State School Archt: Frank R. Masiello Assoc., Worcester Contr: Dionne Constr. & Engrg. Corp., Revere, Mass.	\$179,780
WELLESLEY Incinerator Bldg. — Town of Wellesley Engr: Charles T. Main, Inc., Boston Contr: Clark & Smith, Inc., Quincy, Mass.	\$268,955
WEST PEABODY Fire Sta. and Public Library — City of Peabody Archt: Theodore B. Hanna, Boston Contr: James J. Welch & Co., Salem, Mass.	\$123,411
WILBRAHAM Ice Cream Plant — Friendly Ice Cream Corp. Archt: John D. Phillips, East Longmeadow Contr: E. J. Pinney Co., Inc., Springfield	\$1,000,000
WORCESTER Insurance Bldg. Alts. — Paul Revere Insurance Co. Archt: Hoyle, Doran & Berry, Boston Contr: E. J. Cross Co., Worcester	\$518,762

Archt: Hoyle, Doran & Berry, Boston Contr: E. J. Cross Co., Worcester	
CONNECTICUT	
BERLIN High School Addn. — Town of Berlin Archt: Gordon MacMaster, Cheshire, Conn. Contr: Frank E. Downes Constr. Co., New Britain	\$285,470
BETHEL Factory — Harco Chemical Co. Archt: Frank LaVava, Danbury, Conn. Contr: A. A. Canzier, Danbury, Conn.	\$182,000
BRIDGEPORT Incinerator Plant — City of Bridgeport Engr: H. K. Gatley, Bridgeport Contr: Pittsburg DesMoines Steel Co., N. Y. C.	\$305,490
CLINTON Elem. School — Clinton Archt: Earle F. Prout, Providence, R. I. Contr: J. Warren Mylchreest, Inc., Middletown, Conn.	\$598,833
CROMWELL Elem. School — Town of Cromwell Archt: The Malmfeldt Assoc., Hartford Contr: Associated Constr. Co., Hartford	\$319,800
FITCHVILLE Fields Mem. Sch. Addn. — Town of Bozrah Archt: Chandler & Palmer, Norwich, Conn. Contr: F. W. Brown Co., Yantic, Conn.	\$206,705
GREENWICH Parkway Elem. School — Town of Greenwich Archt: Sherwood Mills & Smith, Stamford Contr: John C. Smith, Inc., New Canaan, Conn.	\$799,968
HAMDEN Religious School — Temple Miskan Israel Archt: Fritz Nathan — New York City Contr: Mariani Constr. Co., New Haven, Conn.	\$1,500,000
HARTFORD Shoreham Motor Hotel — Hartford Archt: Kane & Fairchild, Hartford Contr: Southern New Eng. Contrg. Co., Hartford	\$850,000
OLD MYSTIC (STONINGTON)  Elem. School — Town of Stonington  Archt: Scholfield, Lindsay & Liebig, Waterford, Conn.  Contr: Lorello & Naccarato Mystic Conn.	\$202,550



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NEW BRITAIN Pulaski Jr. High School — New Britain Archt: Wilkins & Steiker, Hartford Contr: Ames Constr. Co., Hartford	\$1,550,000
NEW LONDON FBM Training Facility — USA 3rd Naval Dist. Archt: Douglas Orr, New Haven Contr: Alexander Schnip & Sons, Norwich, Conn.	\$267,440
NEW HAVEN  Oak Tree Project — 3 Apt. Bldgs. and Shopping Center — University Towers, Inc., New York City Archt: Kahn & Jacobs, New York City Contr: Phoenix Constr. Corp., 120 E 41 St., New York City	\$4,025,000
STAMFORD Sr. High School — City of Stamford Archt: Urbahn, Brayton & Burrows, New York City Contr: George L. Hickey, Inc., Stamford	\$4,269,890
WATERBURY Mary Abbott Elem. Sch. Addn. — Waterbury Archt: Alexander & Nichols, Waterbury Contr: General Bldg. Co., Waterbury	\$127,500
WATERBURY Gilmartin Elem. School — Waterbury Archt: Joseph Stein, Waterbury Contr: Mauro Constr. Co., No. Banford	\$414,000
WEST HARTFORD Chemical Treatment Plant — Metro. Dist. Board of Contract & Supply, Stamford, Conn. Contr. Anderson Fairoaks Constr. Co., Hartford, Conn.	\$408,000
WEST HAVEN Library — West Haven, Conn. Archt: Henry Schraub Kelley, New Haven Contr: Jack Halprin, Inc., New Haven, Conn.	\$160,000
WEST HARTFORD Educational Wing — First Baptist Church Archt: The Malmfeldt Assoc., Hartford Contr: A. F. Peaslee, Inc., Hartford	\$217,000

RHODE ISLAND	
COVENTRY Warehouse Addn. — Hoescht Chem. Corp. Archt: Creer, Kent, Cruise & Aldrich, Providence, R. I. Contr: A. F. Smiley Constr. Co., Pawtucket	\$165,400
LITTLE COMPTON Gymnasium-Auditorium, Josephine Wheeler School, Town of Little Compton Archt: Thomas Marvell, Fall River, Mass. Contr: Compton Constr. Co., Little Compton	\$130,695
NEWPORT Barracks — USA First Naval Dist. Engr: Charles A. Maguire & Assoc., Boston Contr: Franchi Constr. Co., W. Newton, Mass.	\$849,942
NEWPORT Recreational Facility — USA First Naval Dist. Archt: Michael Traficante, East Providence Contr: ATR Constr. Co., Newport, R. I.	\$508,111
PAWTUCKET Parochial Sch. and Convent — St. Maria Goretti Church, Pawtucket, R. I. Archt: Robinson, Green & Berretta, Providence, R. I. Contr: E. Turgeon Constr. Co., Providence, R. I.	\$400,000
WOONSOCKET Bernon Heights Elem. School — Woonsocket Archt: Joseph M. Mosher Assoc., Providence, R. I. Contr: Ideal Constr. Co. of Woonsocket, R. I.	\$577,840

#### NEW HAMPSHIRE

HUDSON	\$188,548
Alvirne High Sch. Addn. — Hudson	
Archt: Irving W. Hersey Assoc., Durham, N. H.	
Contr: Seppalo & Aho, New Ipswich, N. H.	

#### CONTRACTS AWARDED - Continued

NASHUA

Motel and Steak House — Daniel Webster Development
Corp., Nashua, N. H.

Archt: Charles H. Lench, Jr., Duxbury, Mass.

Contr: Realty Constr. & Engrg., Inc., Reading, Mass.

MAINE KENNEBUNK \$229,688 Sewage Treatment Plant — Kennebunk Contr. #2 Engr: Whitman & Howard, Boston Contr: Remi O Fortin Constr. Co., Londonderry, N. H. KENNEBUNK \$124.846 Sewage Treatment Plant — Kennebunk Contr. #4 Engr: Whitman & Howard, Boston Contr: Remi O Fortin Constr. Co., Londonderry, N. H. \$265,230 Water Filter Plant — Kittery Water District Engr: Whitman & Howard, Boston Contr: Shuman Constr. Co., Brookline, Mass. \$318,066 Jack Jr. High Sch. Addn. — Portland Archt: James Saunders Assoc., Portland

#### VERMONT

MIDDLEBURY
Hospital Addn. — Porter Hosp.
Archt: Helge Westermann, New York City
Contr: Wright & Morrissey, Inc., Burlington, Vt.

DORSET
Dorset Elem. School
Archt: Helmer & Cole, Woodstock, Vt.
Contr: Gerald E. Morrissey, Inc., Bennington, Vt.

WINDSOR
\$227,000

Windsor High School Addn. Archt: Helmer & Cole, Woodstock, Vt. Contr: Douglas E. Page, Claremont, N. H.

Contr: Kibler & Storer Inc., Yarmouth, Maine

## STYLON CORPORATION ACQUIRES CONTROL OF REDONDO TILE COMPANY OF CALIFORNIA

Steadfast faith in New England as fertile soil for growth underlies the announced purchase of a controlling interest in a West Coast company by a New England-based manufacturer which goes coast-to-coast on the eve of its tenth anniversary.

The arrival of Stylon Corporation of Milford at nation-wide status concludes at least for the present the step by step growth of a company which many observers felt had little chance of success a decade ago on grounds that "there are no other similar plants in the area." New England investment bankers have subsequently become the firm's staunchest supporters.

Stylon was formed in 1949 by Joseph Mass, then owner of a ceramic tile distributing business in Boston and a prominent local realtor. Stylon's first merchandise was turned out that fall from a renovated rubber plant in Milford, 30 miles southwest of Boston in Worcester County.

Since then, Mass has increased his original 40,000 square foot stake in Milford to 100,000, and added two new modern plants in Florence, Alabama. His factory space now totals 300,000 square feet and his productive capacity at full operation is rated at 21,000,000 square feet of ceramic tile annually. The two Florence plants were completed in 1953 and 1956.

(Continued on page 49)

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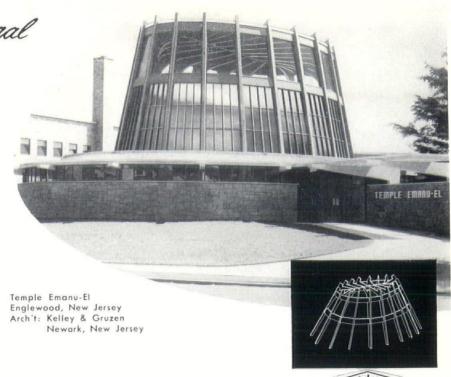
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ELECTRICAL ENGINEER, John D. Dillon, New York, N. Y.

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 $Entrance\ lobby\ of\ the\ Fire\ Research\ Building, Portland\ Cement\ Association\ Laboratory, Skokie,\ Illinois$ 

## PLASTIC FORM LINERS FOR CONCRETE

Concrete is recognized as a versatile building material. The architectural beauty that can be achieved through different textures, patterns and colors is not so well known. The recent development of casting concrete against plastic form liners to produce satin-like smooth, glossy surfaces is one more method that can be added to the variety of surface treatments available for producing attractive concrete walls.

In October 1956 a member of the Structural Bureau of the Portland Cement Association in Chicago met with a development engineer from the U. S. Rubber Company to discuss the possibility of using one of their sheet plastic materials for a form liner. When it was learned that the material could be readily molded or formed to almost any design, it was decided to make several sample panel liners and cast concrete against them.

The first three concrete panels were cast in plastic form liners in January 1957. When the concrete panels were removed from the forms, they not only had very pleasing and bold designs but the surface of the concrete was found to be unprecedentedly smooth. It was this glass-like finish that created an unusual amount of interest and hastened the development of plastic form liners. As a matter of fact, a very smooth finish has led some people to think that the surface is composed of some new material. However, the laboratories report that there is no chemical or other action between the plastic and cement. Examination shows the surface to be a thin layer of high quality cement paste. This layer will absorb water, thus proving that microscopic voids of air are present which allow the concrete to "breathe" and have durability against exposure conditions.

Experiments were tried on many different types of plastics in search for one that would have sufficient flexibility to withstand the strain of handling and stripping, be rigid enough to mold architectural patterns without sagging, and be able to be reused so that economy in their use would be realized. The end result was the development by U. S. Rubber of an unpigmented plastic sheet called Lustreform No. 2900.

Lustreform No. 2900 is molded and sold by a group of commercial distributor-fabricators. The material comes to them from U. S. Rubber in two sheet sizes, 52 x 66 in. and 52 x 86 in. with one side exceedingly smooth and the other side finely textured. This permits a choice of smooth or mat concrete finish. The plastic may be molded by vacuum forming over patterns of various materials such as wood, plaster of Paris and glass. One of the pleasant surprises connected with the plastic form liners has been the successful use of colors in the concrete. The gloss greatly enhances the appearance of color and allows use of smaller amounts of pigment in the concrete. Most of the colors used

(Continued on next page)



Entrance to the Fire Research Building of the Portland Cement Association Laboratory, Skokie, Illinois.

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have been synthetic iron oxides in amounts varying from 1 to 6 per cent by weight of cement. These colors have all been pre-blended with the dry cement prior to mixing. Black colors have been extremely finely divided carbon black in two forms, one a liquid that was mixed with the mixing water and the other a powder pre-blended with cement.

One of the questions most frequently asked in regard to the glossy surface is that of durability. A series of tests have been initiated utilizing  $6 \times 6 \times 1$ -in. specimens with one side and the edges glossy smooth. The troweled side of the specimens has been water-proofed so that all moisture penetration must occur through the finish.

Three types of tests are in progress: freezing-and-thawing, wetting-and-drying, and detergent scrubbing. After numerous cycles of freezing-and-thawing, wetting-and-drying, and scrubbing with detergent solution, no significant surface deterioration has been found.

The liners can be used for precast units, concrete masonry, and cast-in-place construction. It appears that the largest field for use of plastic form liners is in the production of precast wall panels in which a texture, design or special pattern is desired. Cast face down against a plastic liner it is possible to produce a highly satisfactory unit. One of the first uses in precast concrete was in the construction of the new Fire Research Center of the Portland Cement Association in Skokie, III. The liners were used extensively on the precast concrete columns and lobby of the building.

Another use is to apply a textured or colored face to concrete blocks. This is accomplished by filling a plastic mold 3/4 in. deep with a 1:2 mortar mix and then placing a cured standard block face down on the mortar. The mold and block are then vibrated for 20 to 30 seconds on a vibrating table and set aside to cure for three days. In New England the form liners were used in construction of the Lutheran Church in Windsor, Conn. and the Lutheran Church in Groton, Conn. Both churches were designed by Painchaud & Ryder, architects, of Madison, Conn. The masonry units were supplied by Arnold Caputo, Plasticrete Corp. of Hamden, Conn.

In Massachusetts the plastic form liners were used for cast-in-place concrete on the Worcester Expressway, designed by Charles A. Maguire & Assoc. of Boston, and now under construction. The liners enabled the designer to produce a striking architectural pattern on the concrete bridge walls.

The liners are readily available in the New England area from Larry Leonard, Mercury Plastics Corp., 7 Springfield St., Chicopee, Mass. Information on mix design and recommended construction practices can be had from the Portland Cement Association district office in Boston.

The ease of stripping, low cost, beauty of texture and design, and general simplicity in the use of plastic form liners give promise to render them one of the major methods of achieving decorative concrete surfaces.

#### (Stylon Corporation — Continued)

The addition of Redondo gives Stylon 70,000 square feet more of manufacturing space, and 3,000,000 square feet more of manufactured product annually at capacity. This places Stylon fourth largest in the industry.

Stylon remains the only ceramic tile manufacturer in New England from which it will direct its newly acquired coast to coast operations. It was the first company to enter the industry with nationwide ambitions in roughly 25 years. Heavy starting-up costs and a substantial product development period are credited with keeping the industry to a limited number of producing companies.

The U. S. ceramic tile industry produces nearly a quarter-billion square feet of ceramic tile annually, valued at wholesale at an estimated \$125,000,000.

Stylon and its Redondo subsidiary will be capable of producing nearly one-tenth of that total at capacity in only the tenth year of the parent company's operation.

Ceramic tile is found in homes at virtually all cost levels. It is used conventionally as floor, wall and countertop coverings in bathrooms, but increasingly in kitchens, patios, "mud-rooms," foyers and externally on building facings. Industry and commerce make wide use of it because of its ease of maintenance, its durability and colorful appearance. Its use by ancient Egyptians and others makes ceramic tile one of the world's oldest building materials.

Stylon's stock originally appeared on the American Stock Exchange in 1952. Its Florence plants were financed through the floating of City of Florence municipal bonds in 1952 and 1955. These bonds were convertible into Stylon common stock. The company is now owned by approximately 6,000 shareholders.

#### **JOSEPH MASS, President, Stylon Corporation**

Joseph Mass, 50, was born in New Jersey and moved to Boston in the 1930's. There he cut his teeth in the ceramic tile business, first by investing his life savings in a sub-contracting business, next as a ceramic tile distributor. He expanded his distributing business into other cities, notably Washington, D. C.

Mr. Mass is prominent in Boston and Florida real estate circles. He is a principal in Boston's Mass-Maloney Corporation, a real estate firm, and in 1956 directed his energies into the constructing of Palm Beach Towers in Florida, a fabulous 271 apartment hotel on the site formerly occupied by Flagler's Royal Poinciana. The Palm Beach Towers is a veritable showplace for Stylon ceramic tile.

He is a partner of Lou Perini, Boston contractor and owner of the Milwaukee Braves, and Martin Cerel, Boston realtor, in a \$350,000,000 residential and commerical development in West Palm Beach. He is currently behind the promotion of a "Bazaar International" in that fast-growing area. The Bazaar is a one-roof shopping center along the lines of the Roman Forum or Greek Agora which will house internationally flavored products such as china, cutlery, silverware alongside foodstuffs and staple products. The Bazaar was designed by Alfred Browning Parker, Miami architect, and will cost \$2,000,000.

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February bookings of fabricated structural steel climbed 25 per cent over the previous month, totaling 294,367 tons. According to reports compiled by the American Institute of Steel Construction this jump in new orders exceeded last year's corresponding February tonnage by 109,000 tons.

Total bookings for the first two months of 1959 were 530,151 tons. This represents an increase of 52 per cent over the 1958 recession - months of January and February when only 347,804 tons were booked for both months combined.

Fabricated structural steel shipments during February were 216,127 tons, a drop of four per cent from January. Total shipments for the first two months of this year were 440,387 tons.

Total backlog of future work increased to 1,863,791 tons. Of this amount, 1,149,904 tons are scheduled for fabrication during the next four months ending June 30. A summary of the monthly bookings and shipments is shown below:

	Total Tonnage Entire Industry 1959	Total Tonnage Entire Industry 1958	Percent Change	Total Tonnage Entire Industry 1954
Bookings				
January	235,784	162,158	+45	221,156
February	294,367	185,646	+ 59	343,771
Total	530,151	347,804	+ 52	564,927
Shipments				
January	224,260	316,742	- 29	310,786
February	216,127	282,576	- 24	320,906
Total	440,387	599,318	_ 27	631,692



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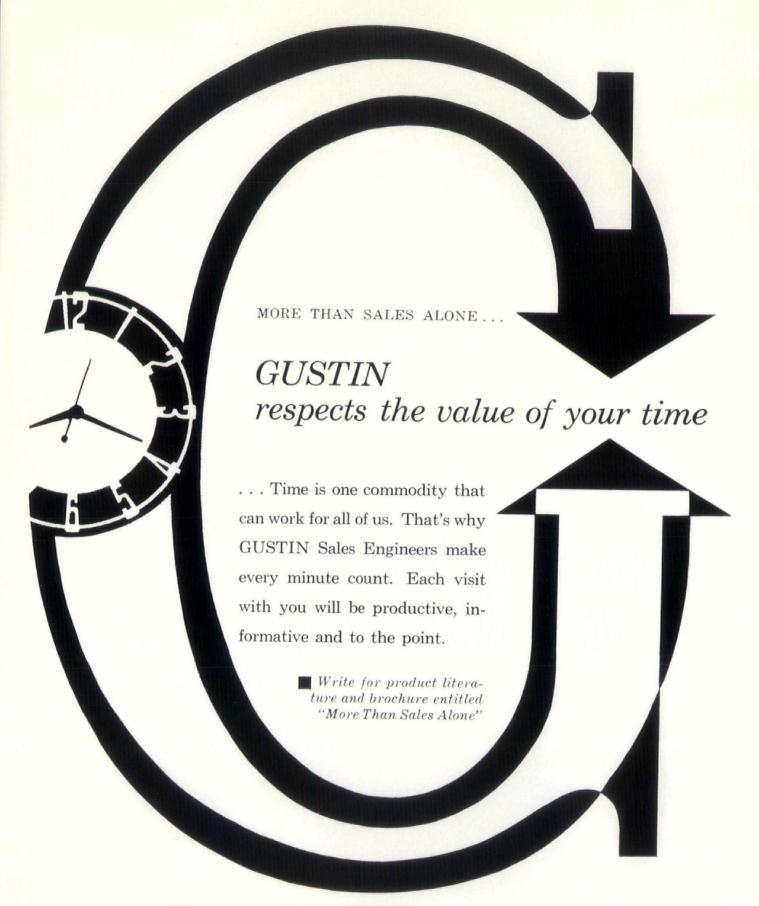
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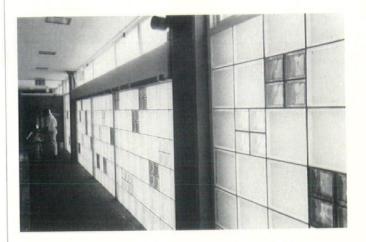
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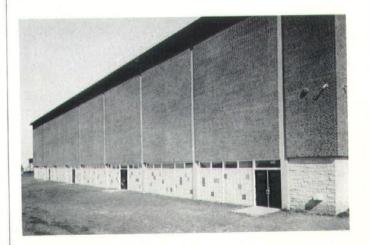
#### COLORFUL DAYLIGHT WALL SOLVES LOCKER ROOM DESIGN PROBLEMS



One of the design problems solved by architects Perkins & Will, Chicago and Neville, Sharp & Simon, Kansas City, Missouri, at the new \$3,700,000 Shawnee Mission East High School near Kansas City, Missouri, was the outer wall of the locker room areas located at a lower level beneath the gymnasium.

Such an area requires (1) privacy, (2) light, (3) insulation value to maintain comfort, and (4) a contribution to both exterior and interior design.

The architects' solution was the use of complete walls of glass blocks combining sun-controlling "Suntrol" glass blocks with new ceramic-faced Color Glass Blocks. Both are products of the Pittsburgh Corning Corporation, Pittsburgh, Pennsylvania.



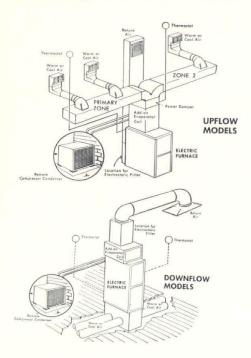
The wall admits diffused, soft light and has an insulation value equal to that of a twelve-inch concrete block wall. The color blocks are coated with a translucent ceramic finish and resist weathering as well as the glass itself.

#### **NEW ELECTRIC FURNACE**

Four banks of Electrical elements for economical, modulated heat supply in accordance with climatic needs are featured in the new Supreme Series Electric Furnaces introduced by the Majestic Company, Inc., Huntington, Indiana.

Individual room control for heating, cooling, filtering and humidification can all be accomplished through the addition of a multi-zoned power damper assembly, evaporator cooling coil, remote condenser, electrostatic filter and humidifier. The furnace itself requires only twice the load of the average electric range.

In most cases, no change of entrance or transformer is necessary and installation can be made with the mere change of the entrance switch.



The four-bank, modulated heating elements are easy to reach, easy to service and can be replaced as entire units or by stringing resistance wire on the job. All elements are completely pre-wired at the factory with the four banks of heaters staged by a special control panel.

This panel swings conveniently away from the cabinet to afford easy access to all mechanical and electrical components, including heating elements and fan and limit control.

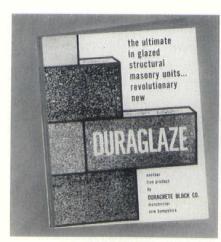
The new Supreme Series electric furnaces are made in "large" and "small" cabinet sizes. The "large" downflow is  $26\frac{1}{2}$ " wide and  $63\frac{1}{8}$ " high and is 30" in depth. The "large" upflow unit is  $26\frac{1}{2}$ " wide

and 48½" high and is 30" in depth. The "small" upflow measures 17" wide, 40" in height and 30" in depth. The "small" downflow is 17" wide, 55½" in height and 30" in depth. Three wattage inputs are possible: 3,000, 5,000 and 6,000 per bank with a BTU range of 41,000 to 82,000. Both large and small cabinet sizes have the same heating capacity. The large size cabinet has a larger blower and motor for greater cooling needs. Cooling cabinets to be used on both large and small electric furnaces are those listed in Majestic catalogs: the 24,000 BTU cooling coil and cabinet is for the small electric furnace and the 35,000 to 60,000 cooling coil and cabinet is for the large electric unit.

#### GLAZED CONCRETE BLOCK

The manufacturer of DURAGLAZE BLOCK claims this new product to be the dynamic answer to decorative structural block requirements.

Available in twelve design colors it is ideally used where simple maintenance and long-lasting beauty are demanded of walls. Resin is mechanically applied and bonded on concrete blocks to produce a smooth, dense, colorful surface. It is highly resistant to moisture, chemicals, and abrasives and has been thoroughly tested and approved by recognized testing laboratories. Permanent and economical it is intended for use in schools, hospitals, homes, office buildings, dormitories, dairies, and laboratories.



Detailed brochures and specification information are available by writing to: DURACRETE BLOCK COMPANY, Route 3 North, Manchester, New Hampshire.

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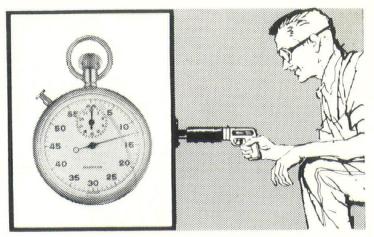
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## NEW PAMPHLETS EXPLAIN TECHNICAL PHASES OF ONAN PRODUCTS

A new series of educational pamphlets covering complicated electrical and technical characteristics of engine driven generating equipment has recently been published by D. W. Onan & Sons Inc., Minneapolis 14, Minnesota.

Titled "Onan 'Power Talks' . . . from the Sales Department," the colorful pocket-sized bulletins deal with the various technical phases of Onan Products (electric generating plants, air-cooled engines, separate generators) their operation and their use.

Although written in easy-to-understand language, the series retains the technical points necessary to understand and converse in these often-misunderstood areas. Well illustrated, the pamphlets should be of considerble help to both the initiate and the expert in the various technical fields which are covered by these bulletins.

"Power Talks" are available free of charge from the manufacturer, D. W. Onan & Sons Inc., Minneapolis 14, Minnesota.

## JOHNS-MANVILLE DEVELOPS NEW CEILING PANELS IN DEEP-FISSURED DESIGN FOR DO-IT-YOURSELF HOME FIELD

New high fashion ceiling panels which contain 100,000 noise traps are now being marketed nationally for the do-it-yourself home field by Johns-Manville.

Called "Kleftone," the easy to install acoustical panels absorb up to 75 per cent of the room noise that strikes them. Enough panels to cover an average room ceiling costs as little as \$28.56.

The new J-M panel has a sculptured fissure pattern designed to match the luxury look of the costlier types of acoustical panels. The deep fissures and tiny perforations give the material a high degree of sound absorption performance.

The material is furnished with a white, factory-applied finish and requires no further decorative treatment. The panels come with J-M's "lightning joint" construction which conceals all nails or staples.

How you can install an acoustical ceiling over a weekend is described in a 12-page illustrated booklet which the company has just published. For a copy (enclose 10¢) write: Johns-Manville, 22 E. 40th Street, New York 16, N. Y.

WAKEFIELD, MASS., APRIL 7. — The Mass. Survey and Development Corporation is distributing a new shower ensemble that enables elderly persons, children and the physically impaired to enjoy the pleasures of a shower without the hazard of slipping. This flex-spray shower may be used in the normal shower position or taken down from the wall for use while sitting in the bathtub.

A spokesman for the firm reports the new-type shower is in use at projects for the elderly under the jurisdiction of the Massachusetts Housing Authority.

#### HARVARD-RADCLIFFE DRAMA CENTER

Work is scheduled to begin shortly on a new Drama Center for Harvard and Radcliffe Colleges in Cambridge. Designed primarily as an educational building, the center will contain a working library and classrooms, along with a main theater seating 515 and a smaller experimental theater seating 100.

Designed by Hugh A. Stubbins and Associates, Cambridge architects, the building will be constructed of red brick and glass, with an overlay of white screening. Completion is expected in 15 to 18 months.

Plans call for a device which will enable the main auditorium to take three forms — an Elizabethan theater, a proscenium, and a theater-in-the-round. Changes will be made within minutes.

The building will be called the Loeb Drama Center in honor of John M. Loeb, Harvard '24, and his family, whose gift was primarily responsible for the building.

#### \$2,000,000 SCHOOL AT NEW HAVEN

Ground-breaking ceremonies were held earlier this month at the site of the proposed North Haven Junior High School, North Haven, Conn. The P. Francini Co. of Derby, Conn. will construct the \$2,000,000 building. Architects Schilling and Goldbecker of New Haven, Conn. designed the brick and steel school building for 1,200 students. It is expected that the school will be ready for September enrollment in 1960.

#### **ACOUSTICAL FIRE-GUARD**

A new acoustical product development that adds significant properties of fire-protection to public buildings has been announced by the Armstrong Cork Company.

Called Armstrong Acoustical Fire-Guard, the new ceiling system is described as one of the most outstanding developments in the 49-year history of the acoustical industry.

It is the first acoustical tile ceiling to gain a two-hour Fire Retardant Time Design Rating in official tests conducted by Underwriters' Laboratory, Inc. It is designed to provide effective fire protection for structural steel members and the floor or roof assembly under which it is installed.

In announcing the development, E. J. Hodapp, Assistant Manager of Armstrong's Acoustical Sales Department, said that Acoustical Fire-Guard is of major significance in the design and construction of modern public buildings where fire-protection has assumed more and more importance.

"Safeguarding lives and property is a matter of vital concern, and today,

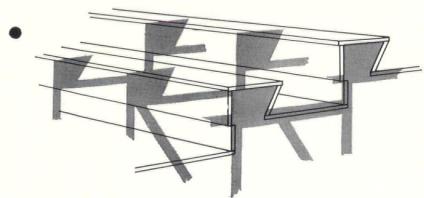
more than ever before, the performance of all building components is being re-examined. Building codes reflect this growing concern."

The new system not only provides a simplified procedure for protecting structural steel members and floor assemblies against the ravages of fire, but saves construction time as well.

Acoustical Fire-Guard, even combined with minimum floor construction, is able to resist dangerous transmission of heat up through the assembly for at least two hours,

(Continued on page 56)

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thereby helping to check the spread of fire to upper areas of a building. Tests further demonstrated that the Fire-Guard ceiling offers sufficient protection for structural steel joists to enable them to carry their prescribed loads for over 6 hours in a

Until now, Hodapp explained, mechanically suspended acoustical tile ceilings could not prohibit the passage of flame and heat to areas above the ceiling. As a result, before acoustical tile could be applied, it has been necessary under most local building codes to utilize reinforced concrete construction or to construct some type of intermediate fire-stop using metal lath and plaster or certain spray-on materials. Each of these methods involved added expense and often necessitated costly construction delays.

Acoustical Fire-Guard, Hodapp continued, completely eliminates the



Shown beside an artist's drawing of the Acoustical Fire-Guard ceiling system, E. J. Hodapp, Assistant Manager of Acoustical Sales, Armstrong Cork Company, compares a new Fire-Guard tile (top) with one actually used in official Underwriters' Laboratory tests. The test tile is completely intact, even though it was subjected to intense flames and heat for over six hours. Acoustical Fire-Guard is the only acoustical tile ceiling capable of resisting dangerous transmission of heat up through the floor or roof assembly.



The ability of Acoustical Fire-Guard to resist the passage of flame and dangerous transmission of heat to the areas above the ceiling stems from the unique edge-detail of the tile itself. Each tile is locked together with other tiles surrounding it, and is supported at the corners by a galvanized steel spline filled into the tile kerf.

A closeup view of an actual Fire-Guard installation shows a workman snapping a galvanized steel spline into place in the main runner and centering it so that it straddles the tile joint. This is done to give equal support to the four tiles resting on the spline.

need for these measures. It can be suspended directly from bar joists or carrying channels, and requires only a 10" air space between the structural floor or deck and the Fire-Guard system to meet the qualifications for a two-hour rating. The ceiling itself serves as a fire protective membrane for the floor structure above, and at the same time provides an attractive, sound absorbent interior finish for the room below.

The heart of the Fire-Guard system is a densely packed mineral fiber tile with a special tongue, groove and kerfed edge detail that permits an interlocking of the tiles. Each tile rests on a clip spline,  $3\frac{1}{2}$ " in length,

which has been snapped onto a steel main runner. The runners are installed on 12" centers and are attached to the bar joists or carrying channels with galvanized clips placed at nominal 4' intervals. Border tiles are supported by concealed annular nails inserted in border splines and fastened into nailing channels.

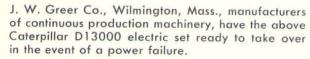
Acoustical Fire-Guard, with a Noise Reduction Coefficient of .75, possesses the same high sound-absorbing efficiency as regular incombustible tile ceilings when they are installed by mechanical suspension. Initially, it will be available in a Full Random perforated design only. More designs are expected to follow shortly.

new england ARCHITECT and BUILDER. illustrated — MARCH-APRIL, 1959

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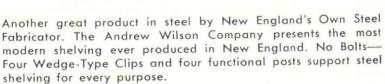
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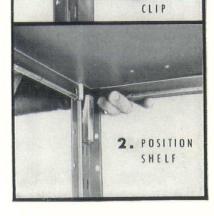


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#### ADAMS ENGINEERING COMPANY

MIAMI, Fla. — A new one-piece aluminum threshold designated as Model A1 has been added to the ABC building product line manufactured by Adams Engineering Co., according to Charles Silvers, president.

Silvers said the unit now complements a completely redesigned line of ABC thresholds that includes Model A2 which is reversible for inswinging or outswinging doors, Model A3 Hi-Rug design which also is dual-purpose and Model B1 which is designed for outswinging doors only.

Model A1, which is reversible, is installed in instances where jambs are narrower or where a smaller-size threshold is preferred.

Completely new features for the entire line include elimination of caulking bead. A tubular vinyl seal at bottom eliminates any need for caulking. In addition, a new, neat-appearing vinyl flange now stops dirt from entering any weatherstrip recess, eliminating dirt-collecting ridges. As a result, the units are easy to clean and maintenance free.

All screw holes on dual-purpose units are now hidden by high quality vinyl weatherstrip at both top and bottom which seals against water, cold, dust, insects and snow.

The ABC thresholds, made of high-quality, heavy-gauge aluminum, won't rust or corrode and are available in special sizes or may be ordered in standard 30, 32 and 36 inch sizes.



On the glazed wall of this school building J-M Asbestos Transitop is used for the curtain wall panels.

Transitop is not only an effective but also an economical and attractive material for locations of this kind. Transitop is also an ideal material for both industrial and residential construction.



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JOHNS-MANVILLE TRANSITOP is a complete 4' wide by 8', up to 12' long wall unit, consisting of an integrally impregnated insulating board core, faced on two sides with Asbestos Flexboard sheets. A waterproof adhesive is used to laminate Asbestos Flexboard faces to the core. This adhesive contains no casein or bituminous materials. It is colorless and completely waterproof.

JOHNS-MANVILLE TRANSITOP offers architects, designers and builders a simple and economical method of providing panelized curtain walls. Its outstanding advantages as a curtain wall unit include its durability, weather resistance and almost complete freedom of maintenance. As a curtain wall, Transitop reduces the dead load, increases useable floor space, provides adequate insulation, and is easy to erect. Its high structural strength and ease of workability make possible real economies to the architect, designer and builder. Performance specifications for Transitop include: durability - light weight - excellent insulation resistance — high structural strength — weather resistance moisture resistance — flexibility — demountable features — reduction in sound transmission — large size units — readily adaptable to all types of framing — ease of erection — attractive appearance — little or no maintenance and last but not least, its moderate cost.

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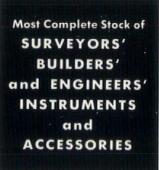
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Construction information and advice on any contemplated use of these buildings and further information on features and erection may be had by writing: Steel Building Co., Inc., 28 Allerton St., Roxbury, Mass.





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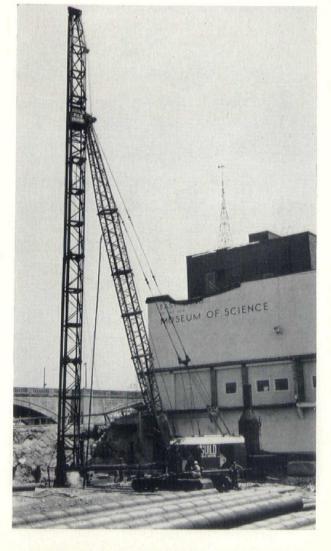
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#### INDUSTRY SALUTES FHA

Another national trade association in the building industry has joined in the "Industry Salute to the Federal Housing Administration" observing the 25th Anniversary of the FHA in June.

The celebration will take the form of a dinner and program on June 18 at the Sheraton Park Hotel in Washington, D. C. Distinguished leaders in business, banking and government will be special guests.

FHA was established June 27, 1934 and, as a self-supporting operation, has exerted a great influence on the home building, rental housing and residential modernization and repair markets.

Organizations sponsoring the FHA salute include: American Institute of Architects, National Association of Plumbing Contractors, American Bankers Association, American Life Convention, Associated General Contractors of America, National Association of Home Builders, Home Manufacturers' Association, Life Insurance Association of America, National League of Insured Savings Associations, Mortgage Bankers Association of America, National Association of Mutual Savings Banks, Producers' Council, Inc., National Association of Real Estate Boards, National Retail Lumber Dealers, and the United States Savings and Loan League.

#### PUSH-BUTTON POST OFFICE

Ground-breaking ceremonies for the world's first fully mechanized, \$20,000,000 post office in Providence, R. I., got under way on April 2.

The post office building, which will be presented in detail in a future issue of New England Architect and Builder, Illustrated, will be approximately two city blocks long, and will cover 132,000 square feet. Only two interior supporting columns will be used within the building despite its spacious area. A heliport with 8,000 square feet of landing space and a lubritorium will adjoin the post office. Drive-in windows and extensive driveways and parking areas will be provided. The post office will also adjoin mainline rail facilities, will be 20 minutes from an airport, and will be served by an express highway. Postmaster-General Arthur E. Summerfield was among the principal speakers at the ground-breaking ceremonies.

Charles A. Maguire and Associates, Architects, of Providence, designed the building. Gilbane Building Company of Providence will do the construction work for Intelex Systems, Inc., a subsidiary of International Telephone and Telegraph Corporation.

#### PLASTICRETE CORPORATION

The Plasticrete Corporation of Hamden, Conn., held its third architectural masonry exhibit of the season at the Avon Country Club, Hamden, on March 15–16. Hundreds of persons professionally interested in building trends and activities were on hand for the exhibition. The feature of the show was Plasticrete's new grillebloc, in addition to the company's more traditional masonry and brick lines.

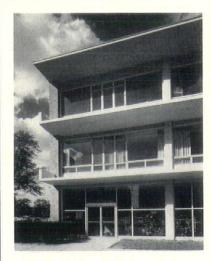
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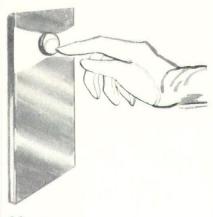
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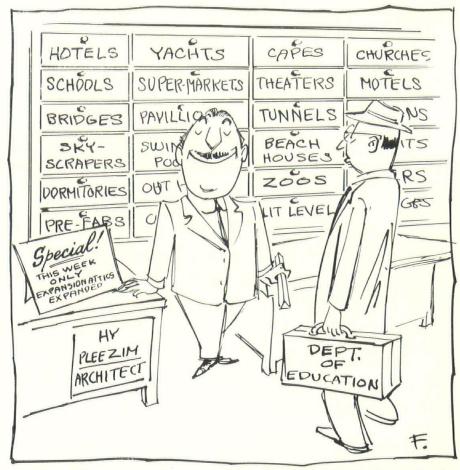
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