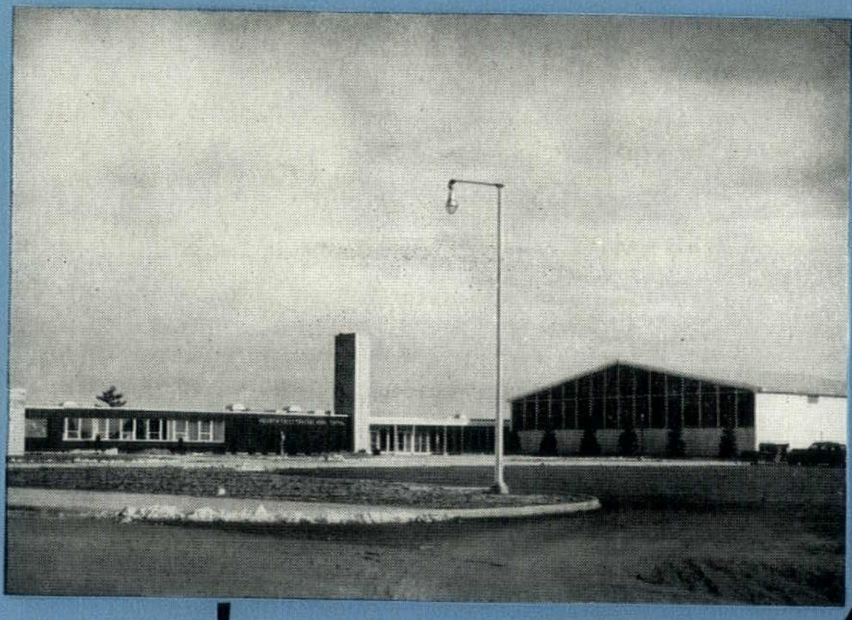
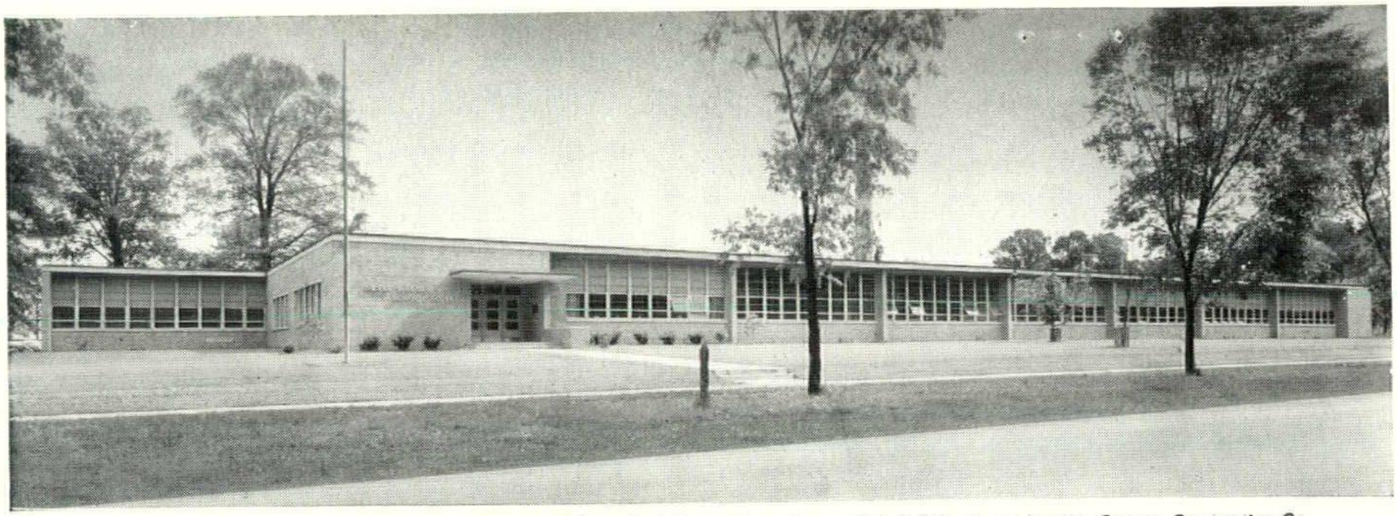
EMPIRE STATE ARCHITECT

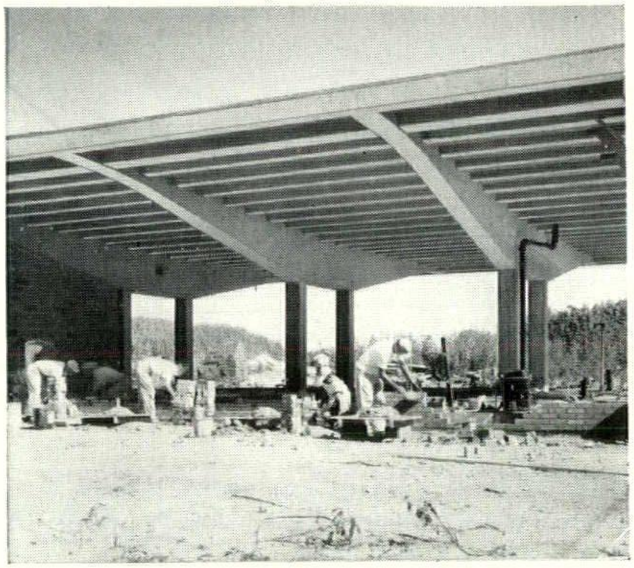


15th ANNIVERSARY ISSUE

MAY - JUNE
1956
VOLUME XVI - NUMBER III



Merle Sidener School, Indianapolis. Architects: Daggett, Naegele & Daggett; engineers: Fink & Roberts; contractor: Cannon Construction Co.



Above: The all-concrete roof covers two rows of outside classrooms and a central corridor. With its overhang, the roof is 68 ft. wide. Below: 29-ft. concrete cantilever beams extend from corridor columns over the classrooms and exterior walls.

Concrete and Cantilever Design Cut Costs for Modern School

Attractive, modern appearance distinguishes this fine school, completed at a cost of only 92¢ per cu. ft.—20 to 25 per cent less than the cost of other new buildings of comparable size and quality in the area.

Concrete cantilever beams at 17′ 2″ centers are an outstanding feature in the design. Supported on twin concrete columns that form a central corridor, they extend beyond the exterior walls of the classrooms as roof overhang. Concrete ribs between the cantilever beams carry lightweight precast concrete panels that form the roof.

In the auditorium, cantilever beams from opposite walls join at the center of the room to form a 58-ft. roof span (see drawing below). Exposed concrete masonry, used for partitions and backup throughout the structure, assures maximum firesafety, economy and durability.

Concrete construction for schools is moderate in first cost, means lower maintenance expense and extra long life. These factors add up to ***low annual cost***—which pleases school officials and taxpayers alike.

Write for free booklet on concrete school design and construction, distributed only in the U. S. and Canada.

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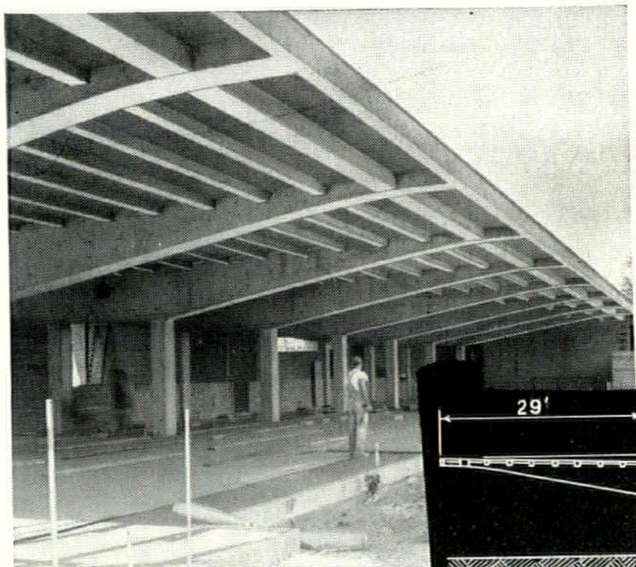
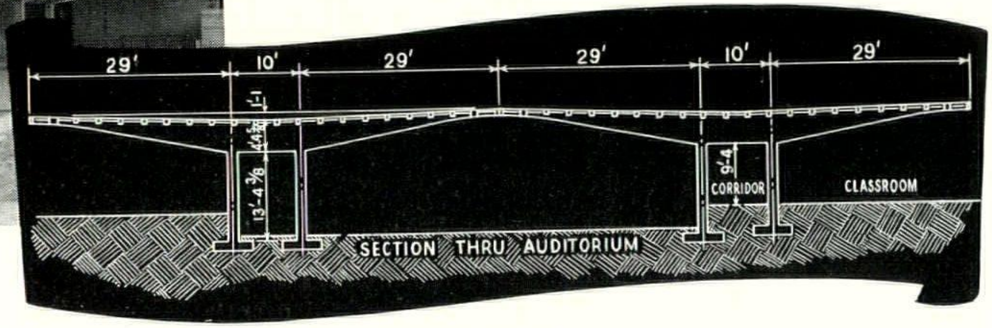
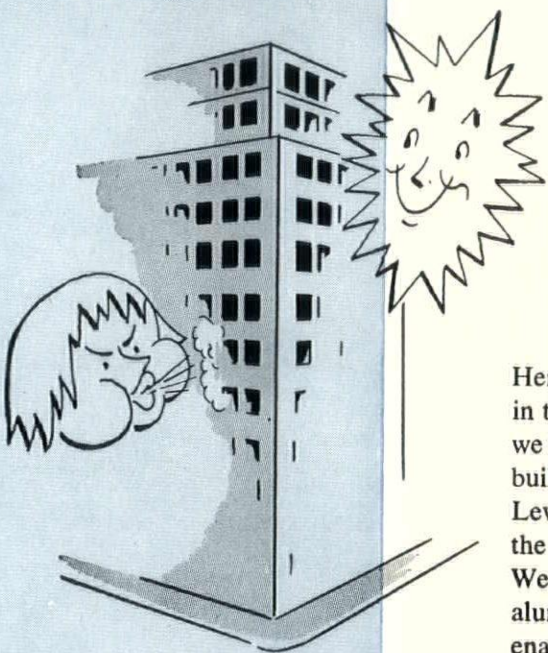
A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work



Right: cantilever beams extend across auditorium from opposite walls, meet at center. Floor here is lowered 4 ft.



what about expansion and contraction in curtain wall design?

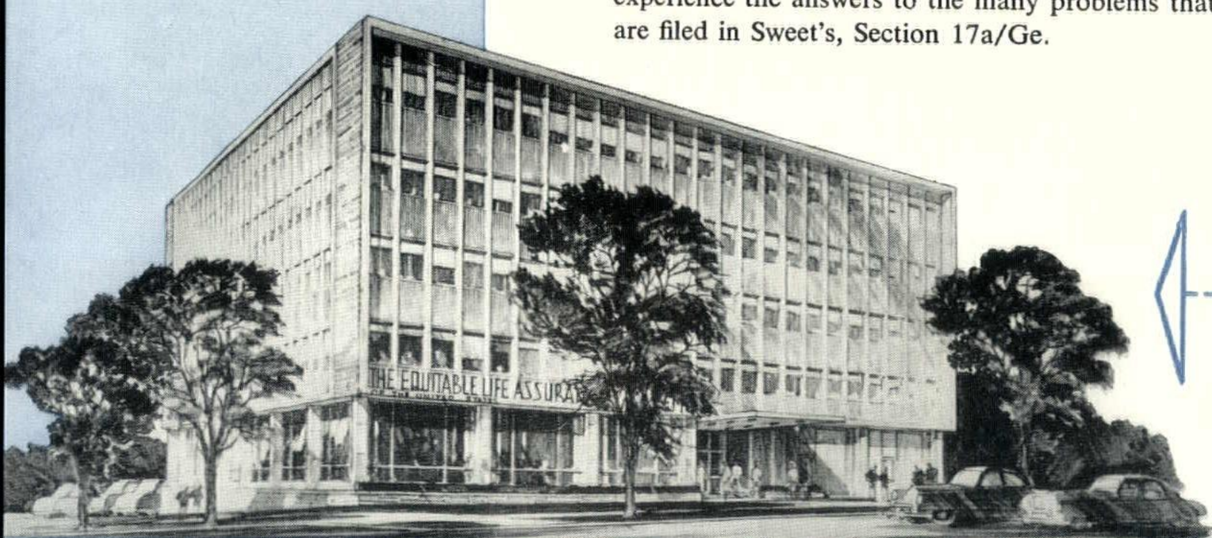


Providing for proper expansion and contraction while keeping the building weathertight is but one of the many engineering and design problems that must be solved before any curtain wall job can be 100% satisfactory. Proper integration of the windows and wall panels is another phase of curtain wall that can best be handled by an experienced manufacturer of both architectural metalwork and windows.

While the design and fabrication of curtain walls may appear to be a simple, easy job, it's actually a highly specialized field that demands the attention of experienced specialists.

Here at General Bronze we have had more than 10 years' practical experience in this new and highly specialized field. Since our pioneering work in 1946 we have designed, fabricated and installed curtain wall systems for many outstanding buildings (United Nations Secretariat Building, the ALCOA Building, Lever House, 99 and 460 Park Avenue Buildings, the RCA Cherry Hill Offices, the Second National Bank Building, Houston, Texas, and others). We have produced curtain wall systems involving aluminum skins, grids with aluminum windows and insulating panels of colored alumilite or porcelain enamel as well as stainless steel grids with glass panels.

If you are interested in achieving all the many time-, money- and space-saving advantages that modern curtain walls offer without any of the headaches, call in the General Bronze representative today. He can supply from experience the answers to the many problems that may arise. Our catalogs are filed in Sweet's, Section 17a/Ge.



Another CURTAIN WALL by GENERAL BRONZE

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Milwaukee, Wisc.
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Irwin W. Clavan, consultant
Contractor: H. Schmitt & Son

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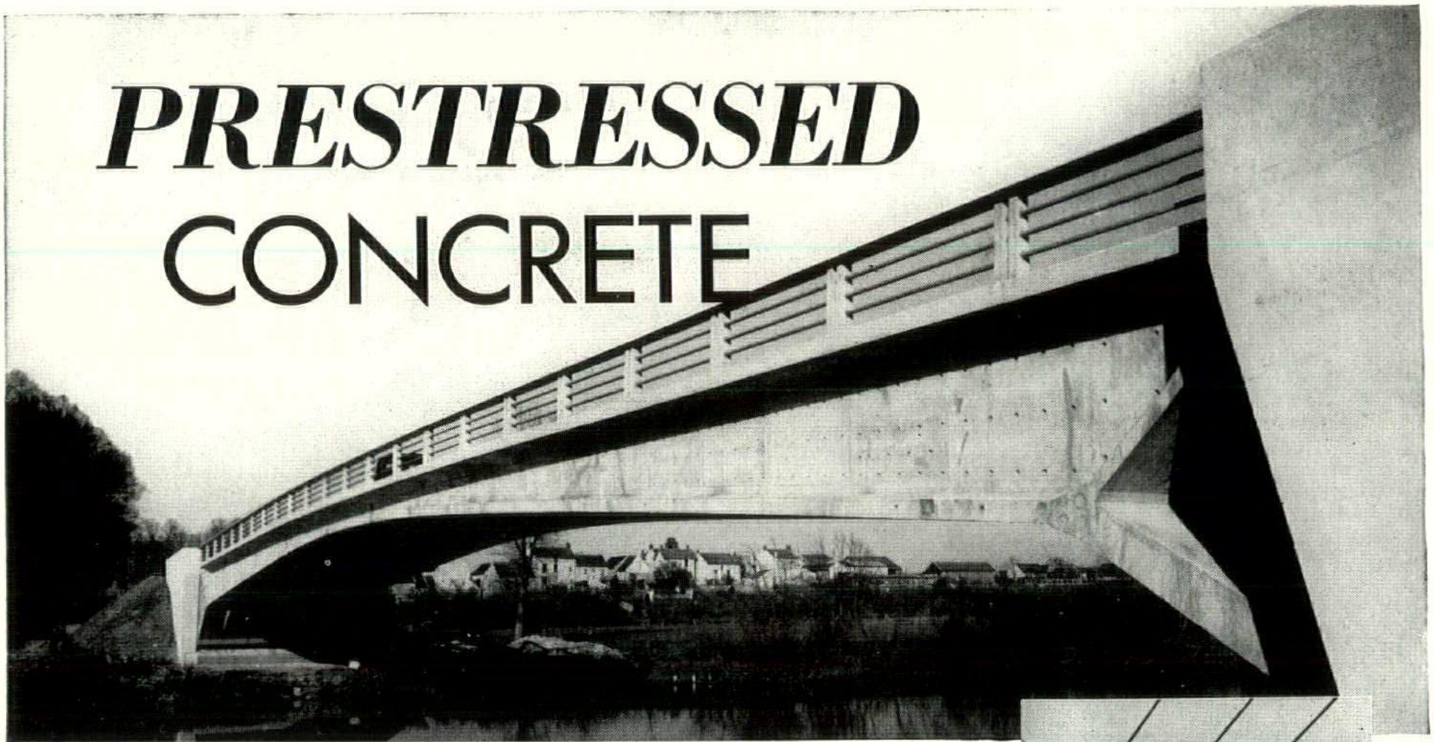

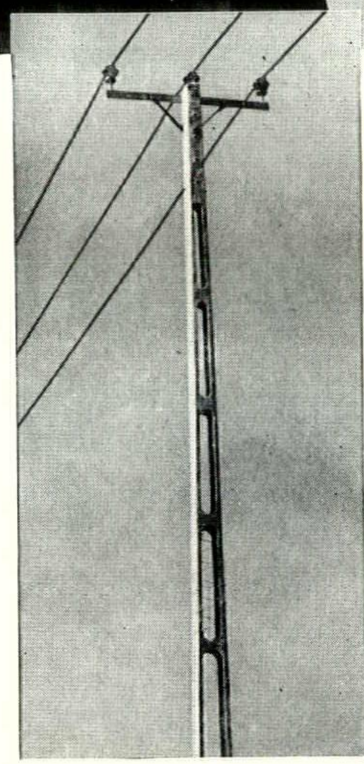

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Prestressing transforms concrete economically into a flexible, efficient building material that takes tension without cracking, and overcomes tensile stresses caused by loads, impact, and volume change. For greater bending moment, we use only the best concrete and high tensile strength steel.

Let our engineers consult with you on this revolutionary construction material.

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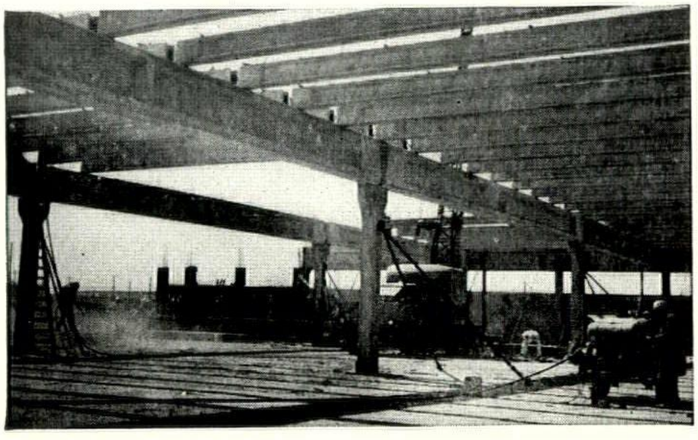

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NEW HAVEN 3, CONN.

Ironbound Continuous Strip hardwood gymnasium floor in Marion Central School, Marion, N. Y. Architect: Smith & Stickney, Rochester, N. Y.

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Fifty years from now, this Ironbound* Continuous Strip* hardwood floor will look just as it does today! Given only normal maintenance, it will have the same smooth beauty, the same tight-grained toughness and uniform resiliency. It will be just as popular, too — with coaches, players and maintenance men.

Ironbound Continuous Strip floors are found in gymnasiums, bakeries, machine shops, newspaper plants, post offices, schools and industrial buildings from coast to coast — every job fully guaranteed by both installer and manufacturer.

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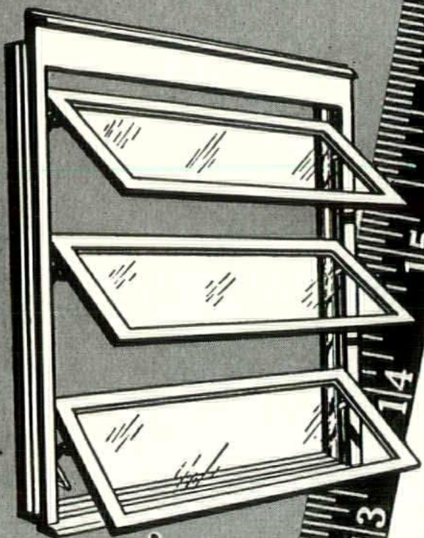
WOOD AWNING WINDOWS



Consider the various elements that determine whether a window *measures up* to your specifications. QUALITY, PERFORMANCE and STYLE are primary considerations, of course, since they translate to home-buyer satisfaction. There's ECONOMY of labor that results from EASE-OF-INSTALLATION...made possible only by the manufacturer's rigid adherence to precise dimensions. Finally, you are concerned with the availability of a complete RANGE of SIZES and STYLES to meet every window requirement.

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STRUCTURAL SOUNDNESS

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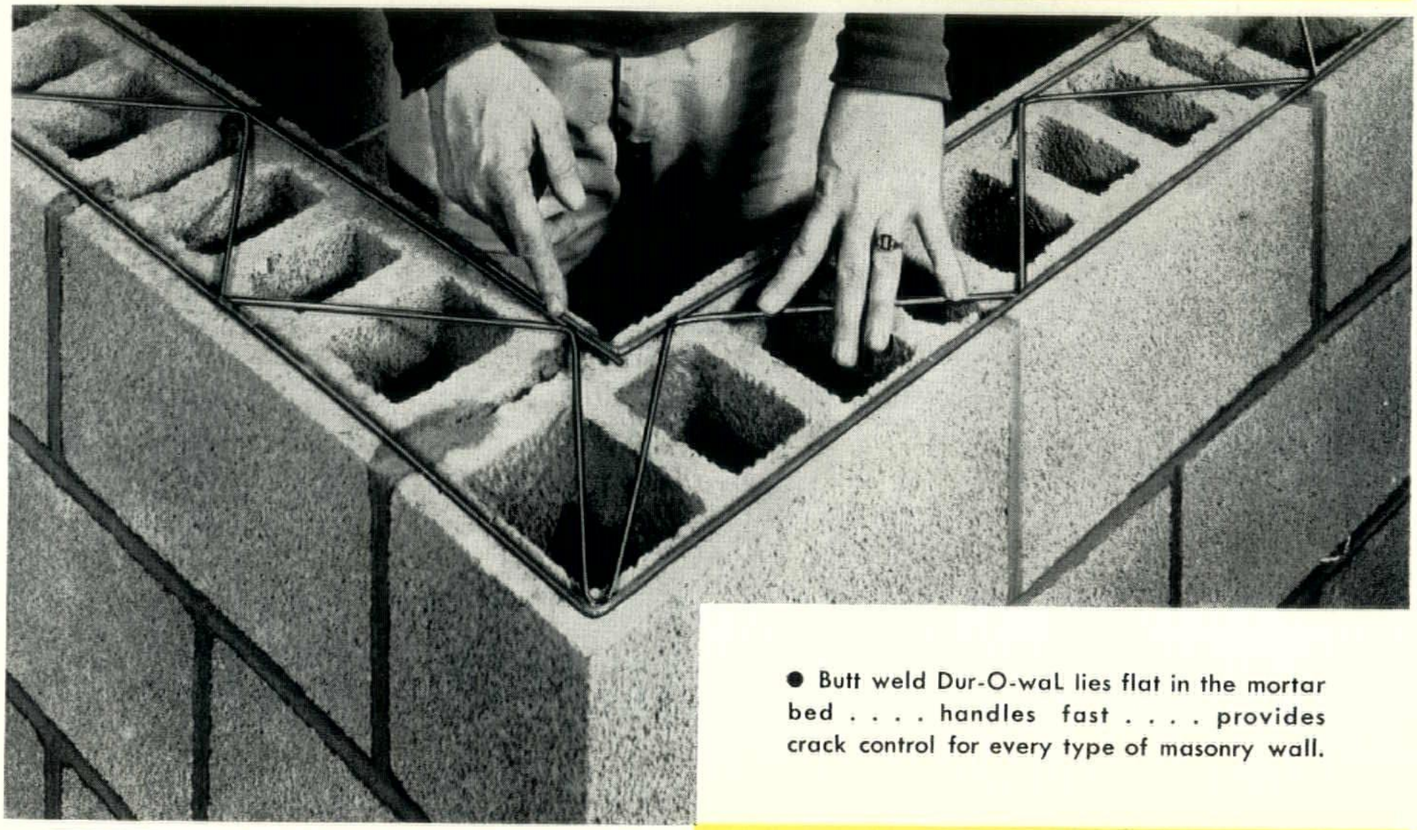

- Butt weld Dur-O-waL lies flat in the mortar bed . . . . handles fast . . . . provides crack control for every type of masonry wall.

6 REASONS why Architects Specify Dur-O-waL

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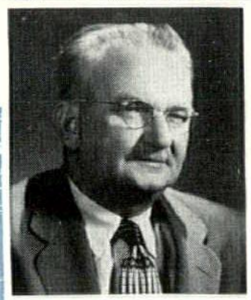


John A. Simpson, A.I.A.
Architect, Norfolk, Va.

Another new school saves money with the Nesbitt Series Wind-o-line System

The $600,000 Ocean Air Elementary School of Norfolk, Virginia, will have "the thermal environment most conducive to learning" because Architect John A. Simpson specified *heating and ventilating by Nesbitt*.

By designing for a zoned, two-pipe, forced-hot-water installation, the architect reduced costs with the Nesbitt Series Wind-o-line System. Mains and piping were simplified; night controls and approximately 1,000 lineal feet of pipe covering were eliminated.

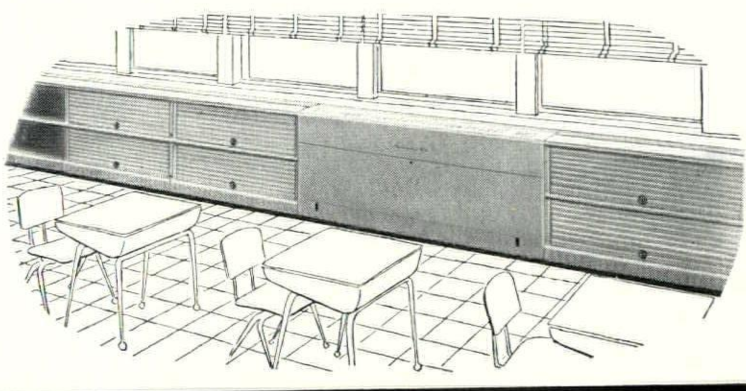
The key to the economy of the Nesbitt Series Wind-o-line System is the Syncretizer's hot water heating element which multipasses a much smaller quantity of higher temperature water than is circulated by conventional systems. This reduces the size of pipes and pumps and permits the Wind-o-line tubing to serve as supply and return piping for entire classroom wings, thus eliminating mains, costly pipe trenches, coverings, and runouts. Without other investment, the system's gravity heat maintains overnight temperatures.

Besides economy, the Nesbitt System offers greater comfort and protection. With the water temperature regulated by outdoor temperatures, the desired thermal environment is better maintained in every classroom and Wind-o-line protection along exposed surfaces is constantly related to actual needs.

Other systems requiring pipe trenches and runouts cost up to 20% more in construction, equipment and installation expenses. It will pay you to go Nesbitt.

Write today for Publication 104

Wind-o-line radiation may be had in wall-hung casings integrated with the Syncretizer, or recessed in standard Nesbitt storage cabinets. Architect Simpson chose this "Nesbitt Package" because it saved 30% over custom wood shelving.



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SERIES WIND·O·LINE SYSTEM

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EMPIRE STATE ARCHITECT

THE OFFICIAL PUBLICATION
NEW YORK STATE ASSOCIATION OF ARCHITECTS

Address all communications regarding the State Association to the Secretary, Simeon Heller, 38-11 Union Street, Flushing 54, New York; all editorial comments to Charles Rockwell Ellis, 433 South Salina Street, Syracuse 2, New York; all editorial material to Warren Neal Wittek, 819 Forest Ave., Buffalo 9, New York; and inquiries regarding advertising to the Publisher.

Publisher Julian L. Kahle
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Published 6 Times a Year

1956 CONVENTION

Lake Placid Club

Lake Placid, New York

October 25-26-27

Action on the Tennis Courts at the Lake Placid Club!

Registration blanks for the 1956 Convention are now in the hands of the Chairman of the Publicity Committee and will be mailed together with other pertinent data about June 15.

In making your applications, kindly follow all instructions called for on the pink reservation sheet; particularly, number of reservations, time of arrival, and be sure your check is made payable to Charles R. Ellis, Treas., and mailed to Daniel Nelson, Reservation Manager, Lake Placid Club, Essex County, New York, in the pre-addressed envelope.

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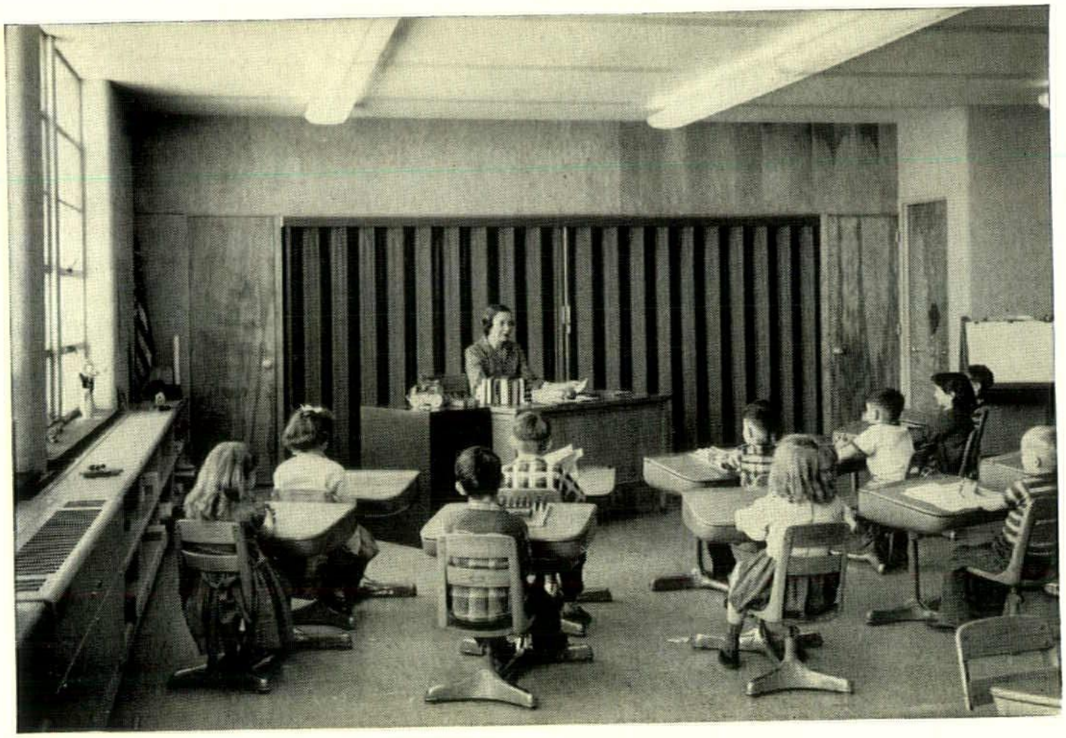
ON THE COVER

Hudson Falls Central High School, Hudson Falls, New York. Sargent, Webster, Crenshaw & Folley, Architects. Gymnasium entrance showing office section and gymnasium windows.

CONSULT **AMERICAN SEATING** FIRST IN SCHOOL FURNITURE



Classroom in Lenox Avenue School, Elmira Heights, New York.

H. E. Townsend, President of Board of Education, Elmira Heights, New York: "Rugged, die-formed construction, and high quality insure long service life."

Harry H. Hatten, Superintendent of Schools, Elmira Heights, New York: "Visual and postural features of the American Seating line mean greater student comfort."

Functional American Seating furniture adapts to modern styling in Elmira Heights, N.Y., school system

ANOTHER EXAMPLE OF VERSATILITY IN AMERICAN SEATING SCHOOL FURNITURE

Today's architects, school authorities, and city engineers join forces in designing, approving, and equipping the nation's most modern schools. This is evidenced by the Elmira Heights school system, which each year buys more and more American Seating furniture as needed, and whose up-to-date classrooms are the last word in color-styling, lighting, and equipment.

American Seating desks, chairs, tables, and other school furnishings are used throughout the school, with harmonious, happy results. Choosing the furniture to meet exact needs was no problem here, because American Seating manufactures a complete line of functional, posture-perfect furniture that makes teaching simpler and more effective, makes learning easier.

If you are now planning to build or remodel a school, call in an American Seating man. He offers you greater use-values in every price bracket — with the biggest range of types and sizes, more exclusive features than any other make. See him today!

Donald G. Fudge, Architect, Fudge & Underhill, Elmira, New York: "Advanced styling of American Seating furniture makes it ideal for today's modern school designs."

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PARTNERS IN PROGRESS

Just 15 years ago, the Empire State Architect Magazine was born, to serve the architects and engineers of New York State. It was only an eight-page edition, but similar in format to the interesting publication it is today.

Frederick W. Reinhold, president and founder of Anchor Concrete Products, Inc.

One of the few advertisers in that first edition was Anchor Concrete Products, Inc. of Buffalo, a company that had been formed just five years previous — 20 years ago — by Frederick W. Reinhold.

It was in March of 1936 that Mr. Reinhold, with four employees, started his company at 1375 William Street. The company had one Multiplex block-making machine that turned out about 1600 8″ concrete blocks per eight hour day.

As The Empire State Architect Magazine has progressed through the years to become the fine architectural publication that it is today, so has Anchor Concrete Products, Inc. progressed to become the largest producer under one roof of lightweight concrete masonry products in New York State, and one of the very largest in the United States.

Anchor — which has never missed an issue in The Empire State Architect — has been joined by many fine advertisers in the pages of the magazine, all introducing their new products and bringing messages of interest and assistance to architects and engineers.

As The Architect has steadily grown from an eight-page magazine to its present average size of 40 to 48 pages, Anchor has grown from its single block-making machine to three Besser Vibrapacs that turn out, at one time, three 8″ equivalent blocks at a rate of approximately 32,000 per 16 hour day. Anchor has produced and sold its 60,000,000th block in its 20th year.

Mr. Reinhold has been a leader in the concrete masonry industry in the United States, just as he has been a leader in advertising and promotion in The Architect, and one who has been responsible for interesting other advertisers in using the magazine.

It is interesting to note this paragraph from The Concrete Manufacturer of October, 1948:

"The war building program created an entirely new crop of problems for the industry, and it soon became evident that association (National Concrete Masonry Association) activities would have to be greatly expanded if concrete masonry units were to receive adequate consideration. To meet this challenge, a small group of block producers, with the assistance of several manufacturers of concrete products machinery, underwrote a project which would provide for the full-time services of a completely independent organization. To the initiative and perseverance of that group must go much of the credit for establishing the strong, effective association which serves their industry today.

"The list of officers and members of the board of directors in 1942 who planned and executed this important development, still reads like a copy of 'Who's Who In The Concrete Block Industry'."

The secretary-treasurer at that time was Mr. F. W. Reinhold.

Mr. Reinhold went on to serve as president of the National Concrete Masonry Association in 1944. He is today one of its most active members, serving on its board and taking a leading role in helping to develop the numerous new products of the industry.

He is a member of the Building Committee that has been planning the new research laboratory of the National Concrete Masonry Association, construction of which will start soon on a site in West Chicago.

Mr. Reinhold also was instrumental in organizing the New York State Concrete Masonry Association, of which he is a director and one of its most active members.

Following the opening of the Anchor plant in 1936, the company seemed to grow by leaps and bounds. In

On hand for the "unveiling" of the three new Autoclaves at Anchor Concrete Products in 1954 was Warren Trevor Rogers (center), now president of the New York State Association of Architects, and at that time president of the Buffalo-Western New York Chapter, AIA. Looking on are Merton Marshall (left), then president of the Niagara Falls Builders Exchange, and George Herman, then president of the Construction Industry Employers Association.

1938, the first high production block-making machine, a Stearns Joltcrete, was added, and in 1940 a Besser Vibrapac high production machine was installed.

Soon Anchor outgrew its plant, and Mr. Reinhold started to look for new property. He purchased considerable acreage in the Town of Cheektowaga, and in 1946 — just 10 years later — the present large, efficient plant was opened with three Besser Vibrapacs and more than 100 employees.

A new, two-story office building was constructed in 1951. This building features most of the products manufactured by Anchor, such as colored and ground

(More)

face blocks laid in new and attractive patterns; Flexicore precast prestressed floor and roof slabs with warm air radiant heat; precast lintels and sills, and others. In this their 20th year, Anchor has started a two-story addition to its office building which will include its own testing and research laboratory.

March 8, 1954, was another banner date in the history of Anchor, for it was on that day that the first Autoclave high-pressure steam-cured preshrunk blocks were produced. Three Autoclaves had been installed by Anchor at a cost of more than $250,000, an expenditure designed to give the architect a stabilized, stronger, more highly efficient lightweight block.

Mr. Reinhold, who is actively interested in new products, product improvement and research, was not content to just produce blocks. In 1940, Anchor started the manufacture of Flexicore slabs – one of 20 plants in the country to manufacture this product. At the present time, more than four and one-quarter million square feet of Flexicore has been shipped in a 300-mile radius of Buffalo.

Other new products, such as Strestcrete precast reinforced slabs, were introduced to the area, along with blocks of innumerable sizes and decorative attractiveness. Anchor is planning production of plastic face blocks in varying sizes and shapes; grout block, and others.

Many architects have long contended that the concrete block is one of the most flexible materials known to the construction industry.

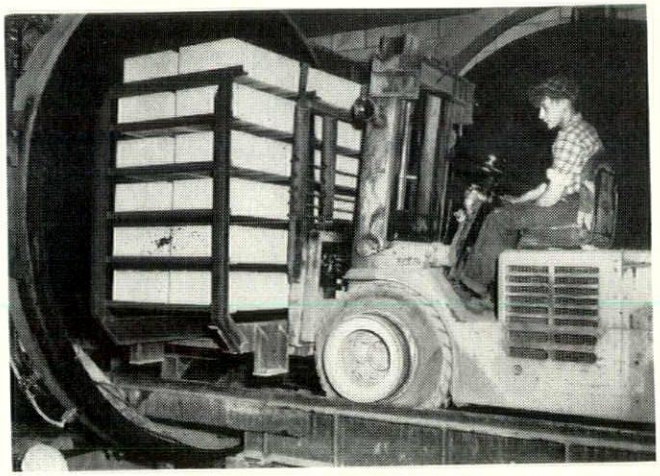
The concrete masonry industry has reacted to the concepts of architects by designing scored units, intricate wall patterns and units of different shapes which lend variation to exposed wall interiors. Many architects have demonstrated what can be done with standard units to create wall patterns that express more and more of the almost limitless pattern combinations that make a wall a thing of beauty instead of dead occupied space. The next 10 years, Mr. Reinhold observes, will see many new shapes in concrete masonry products, all designed to help the architect express himself in a truly individual way.

The beauty and flexibility of concrete blocks, used with imagination, were well illustrated in an article in the March issue of House and Home entitled "Behold the Lowly Concrete Block . . . It Isn't Lowly Any More." Noted the article: "You can get straight lines, or curves, smooth surfaces, rough textures, or bright colors, and you can get just about any pattern under the sun."

Anchor last year produced some 6,500,000 blocks – as compared with the approximately 120,000 produced the first year of operation 20 years ago.

Total production of block in the United States last year was more than two billion 8x8x16″ or equivalent units. This national total would be sufficient to span the country from the Atlantic to the Pacific with 10 walls each 10 feet in height and 8 inches in thickness. Or, if it were confined to house construction it would build a million homes, or sufficient to house the entire population in the great cities of Detroit, Cleveland, and Philadelphia.

The use of concrete masonry produced by Anchor is by no means confined to homes, for they find their way in increasing quantities into every conceivable



Autoclave concrete masonry blocks are shown here coming from a high-pressure Autoclave kiln at Anchor Concrete Products, completely cured, 12 hours after being placed in the Autoclave as uncured concrete.

type of building – for partitions in great metropolitan office buildings and hotels; for theaters, churches, apartments, multiple story buildings of every kind, schools, commercial and industrial structures, farm buildings, and swimming pools.

It is little wonder that concrete block represents 70 per cent of the volume of all masonry in the United States.

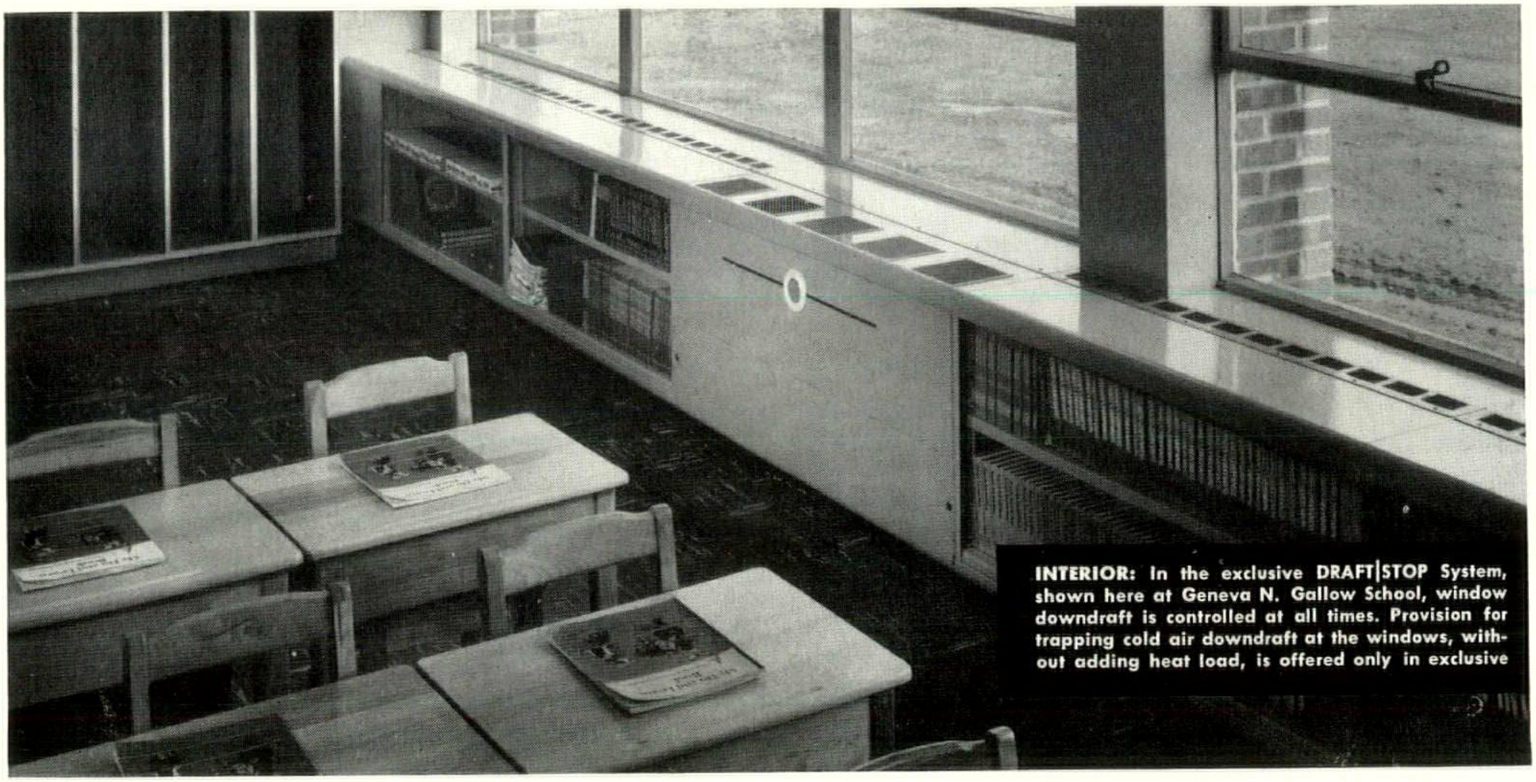
A new revolution in the industry is imminent. Equipment now under design and soon under actual tests will make the production and delivery of concrete masonry products almost completely automatic. The advantages of this kind of mechanism will accrue to architects, private home builders, and the consumer.

Due to high speed block producing machines and increasing efficiency and mechanization in the Anchor plant, products have increased in cost by only 40 per cent during the past 20 years. This, contrasted with the prices of other building materials which have increased an average of over 100 per cent, is also a contributing factor toward the popularity of concrete masonry, Mr. Reinhold points out.

Mr. Reinhold, associated with the concrete products industry since 1920 prior to organizing Anchor Concrete Products, has several "veterans" with him at Anchor. William Schiesel was with the company when it started in 1936 and is now its treasurer; Harvey Lee, vice-president in charge of sales and secretary, started in April, 1937; Raymond R. Reinhold was one of the first members and first superintendent of the plant. Later Mr. Reinhold's two sons, Grant, now vice-president in charge of production, and Elmer, now director of transportation, joined the organization. Dan L. Sutter has been with Anchor since 1949. He is a graduate architect and engineer, and is an associate member of the Buffalo-Western New York Chapter, A.I.A.

On Jan. 1, 1956, Richard Frazier, civil engineer, came with Anchor in charge of plant operations, quality control, research and new product development.

Anchor Concrete Products, Inc., which has grown with The Empire State Architect, pays tribute to this fine publication and to the organization – the New York State Association of Architects – which had the foresight and initiative 15 years ago to launch this vitally important magazine.



New Long Island School Gets...

More Classroom Comfort per Dollar

EASY to see why Island Trees, Long Island folks can be more than a little bit proud of their new Geneva N. Gallow School. Here's design that pleases the eye, planning that stretches town tax dollars. Planning that includes Herman Nelson DRAFT|STOP units. Not only do these units provide all the essentials for classroom comfort, they save costly fuel at the same time. Actually, they are *cooling* most of the time the classroom is occupied. They heat only when heat is needed to keep temperature at an ideal comfort level.

DRAFT|STOP, finest known cooling-heating-ventilating system, traps and warms the flow of cold air pouring down off large window surfaces without adding to the heat load. It mixes this air with exactly the right amount of fresh, clean outside air, then gently circulates it evenly, comfortably—with *no* "dead spots", *no* "cold pockets", *and no drafts!* Perfect classroom climate, more classroom comfort per dollar . . . always. If you are planning a new school or a school modernization program, it will pay you to talk with your Herman Nelson man. (See list below), or write direct to Herman Nelson Unit Ventilator Products, American Air Filter Company, Inc., Louisville 8, Kentucky.

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NEW YORK 17—
American Air Filter Company, Inc., 70 East 45th Street

ROCHESTER 4—
Howard J. Henderson, Jr., 950 Sibley Tower Building

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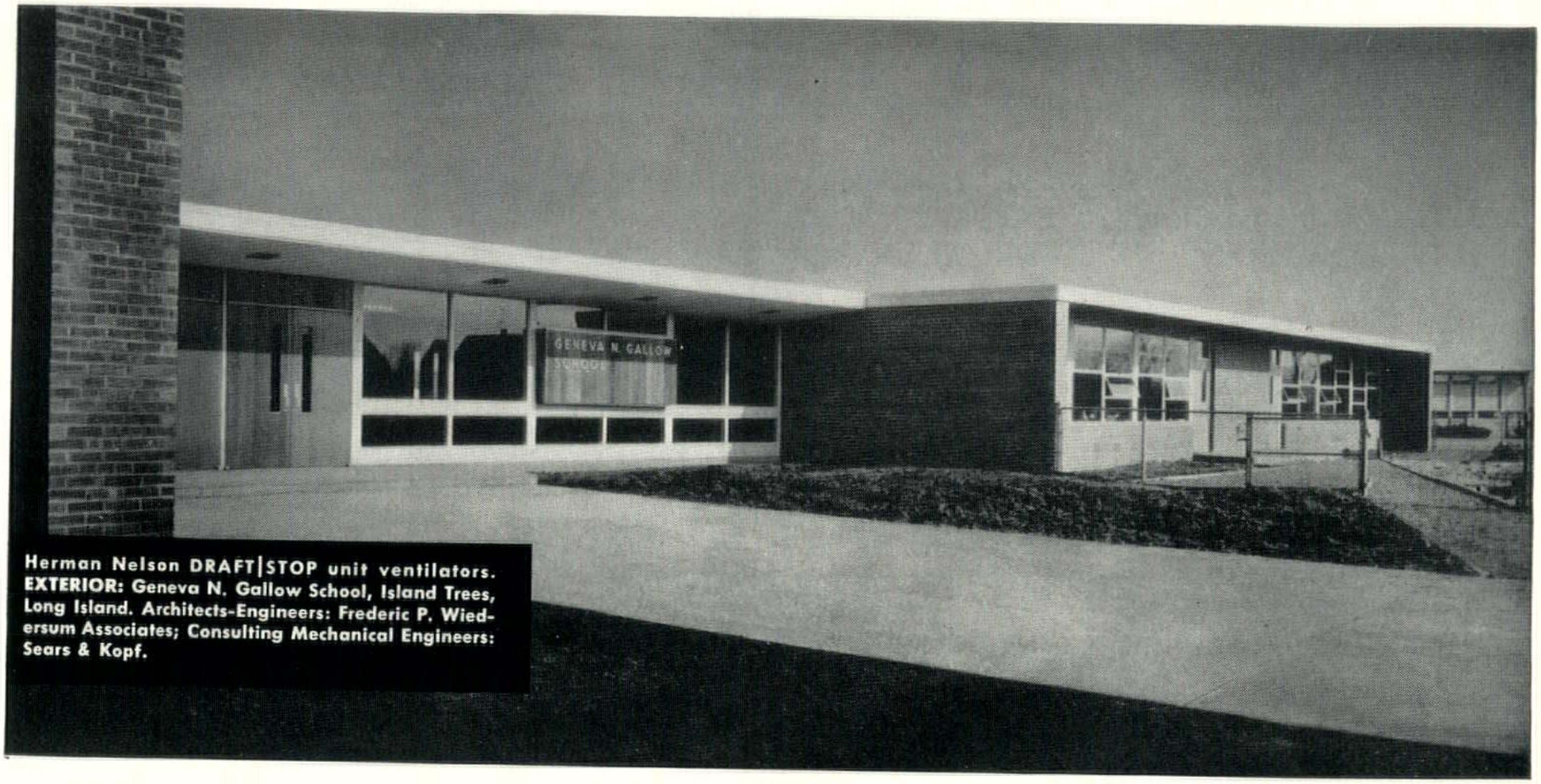

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Albion, New York
University of Buffalo
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Jamestown, New York
Buffalo Street School
Jamestown, New York
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Hauppauge, New York
Our Lady of Grace School
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Island Trees, L. I., New York
Island Trees School No. 3
Island Trees, L. I., New York
Woodstock School
Woodstock, New York
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Brockport, New York
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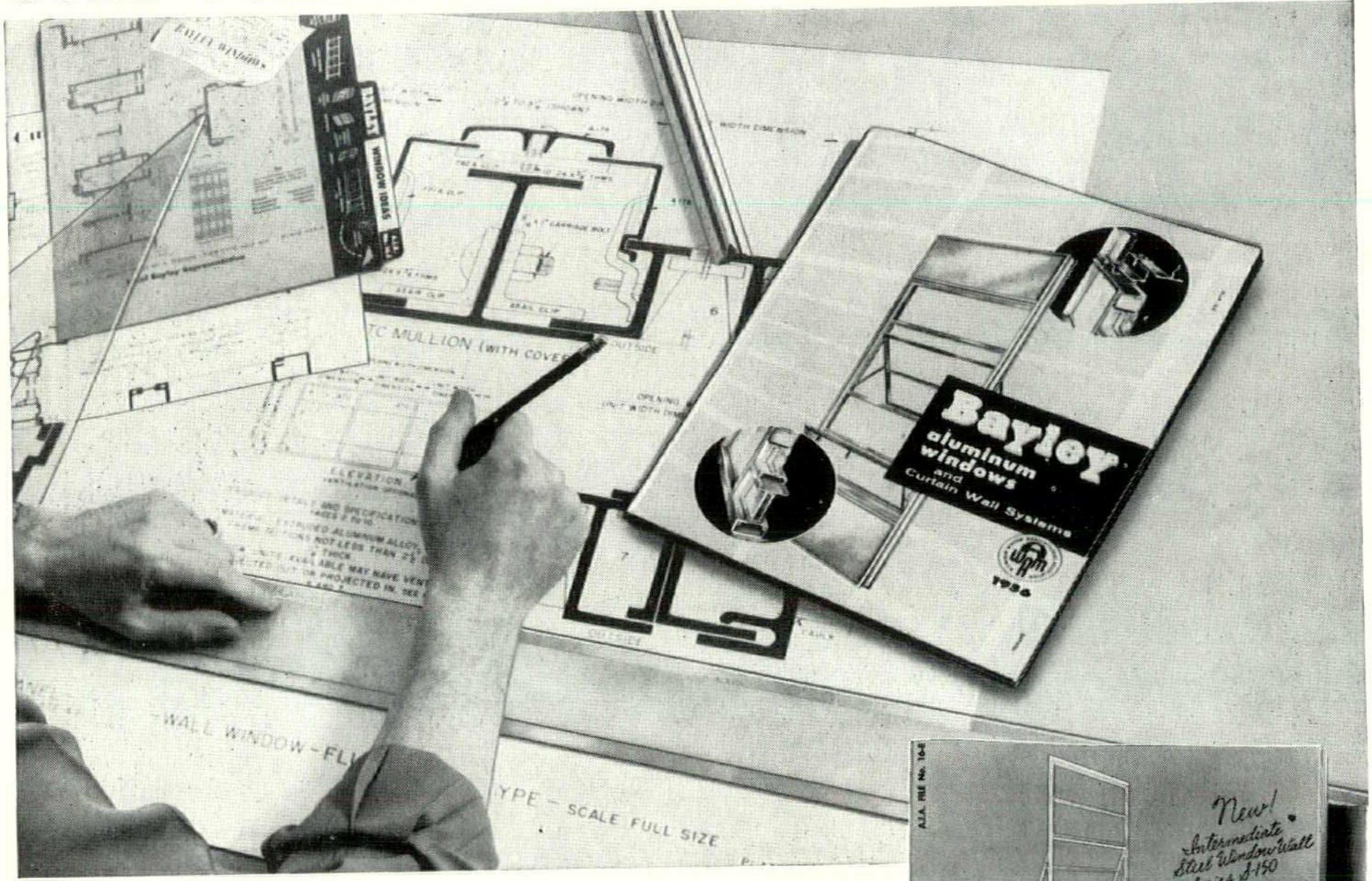

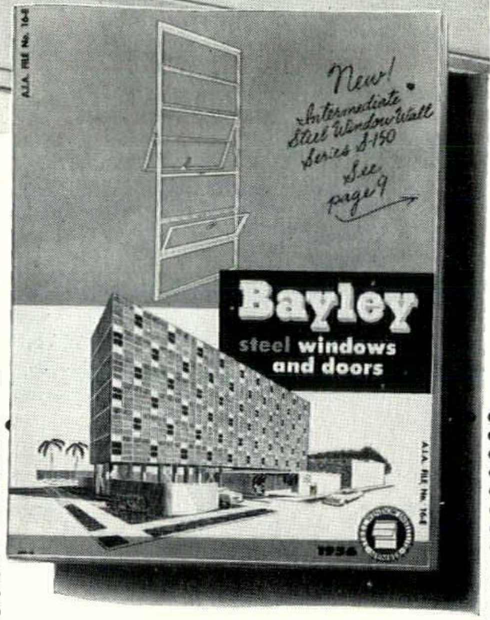

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THE 15th ANNIVERSARY OF THE EMPIRE STATE ARCHITECT

REFLECTIONS

It started at the first Rochester convention. That wasn't the first New York State Association of Architects convention, there having been two prior meetings, but it was certainly the first larger gathering of architects from both upstate and the New York City area.

Charles C. Platt of the New York chapter offered the resolution directing the president to take steps to establish a magazine or news letter to go to each member periodically. It carried, but had no appropriation with which such an enterprise could be started.

Being in complete sympathy with the idea, I found myself in New York within the next few weeks. None of the three publishers I approached were interested, although one did take a week-end to consider the matter.

Returning here, I was shortly to hear from Julian Kahle, who had been informed of the association's hopes by one of the New York publishers. Mr. Kahle had launched a successful publication for one of Buffalo's clubs, which had in fact, a membership larger than our State Association.

Numerous talks followed, possible methods of financing, reimbursement for expenses and distribution of any profits were outlined.

Eventually a contract was drawn and approved by the Board of Directors. The magazine was launched — all eight pages of it — and that it has been kept afloat has been a result of the many who have taken up the cause — not the least of whom has been the publisher.

If I have any advice for anyone contemplating the publication of a magazine it is merely this — "It will be a lot easier if there are funds available with which to start." JAMES W. KIDENEY

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15 YEARS WITH THE EMPIRE STATE ARCHITECT

Conceived during the formative and transitionary years of 1937-1940, during the presidency of James W. Kideney, an official publication for the New York State Association of Architects was sanctioned and subsidized for one year by the Board of Directors.

Infancy

Born as the May - June 1941 issue, attended by Jim Kideney as Editor, and Julian L. Kahle, as Publisher, it was christened "Empire State Architect," a name which had been carefully selected with due regard to grandparents, irrespective of gender.

Child's Diseases

During the next two or three years, not unlike any growing child, the publication was plagued with minor afflictions affecting its growth. It did, however, manage to creep and eventually walk without further financial aid.

Malnutrition

Lack of interest and participation by the profession and difficulty in obtaining advertising for national manufacturers soon caused alarm to the Publication Committee. How to excite advertisers became paramount to the life of the magazine.

Inoculation

The injection of interesting articles outside the profession, articles by Contributing Editors in related professions, articles by Associate Editors within the profession, and selection of a specific category of buildings for each issue, as suggested by M. L. King, together with a competition for and selection of a new cover design effected a temporary cure.

Lean and Hungry

Our child of 1941 eventually developed a desire for a more and greater variety of food although a seemingly ample and varied menu had been approved. To properly balance the rations, maintaining the proper relation between income and cost and bolster the publication during low tide, it became necessary to pay on a per-page rate for additional pages of editorial material. Later our Association assumed, in part, the cost of adequate cuts to properly spice and season the editorial material.

Operation

At about seven years of age our growing son was faced with an emergency operation. There had been symptoms of the approaching attack by comments on policy, management, control, revenue, and the expiration of a contract with Publisher Kahle.

The operation was performed one hot August evening at the home of Storrs Barrows, Rochester, New York. Nurses in attendance were Isabel Kideney, Edna Ellis, and Winifred Barrows. Assisting in the operation were James Kideney, Charles Ellis, Matthew Del Gaudio, Storrs Barrows, and Julian Kahle. The operation was for a new and more comprehensive contract with Publisher Kahle. The operation was successful and the patient is still living in spite of a slight relapse five years later.

Thank you, Storrs, for those delicious steaks from the outdoor fireplace and you, Win, for the trimmings and hospitality.

Awkward Years

All too soon our youth, carrying the editorial material, hurdled past the advertising. Several different vitamin tablets were administered to support the advertising. D plus A (determine in advance) loomed as the greatest stimulant and is still being given seasonally and with varying compounds.

This treatment requires first, that determination of building types for each of the six issues in a year be made not less than six months in advance. Second, the featured building in each issue to be selected, if possible, four months, in advance of the publication.

Teen-Age

During the past three years, the volume and quality of the editorial material have shown a marked improvement. The subject matter covers more varied fields. The authors are from all areas of the state. The articles are better illustrated and command reader interest.

Our commercial advertising is constantly improving in quantity and quality, inviting the attention of our readers and assisting in the selection of materials to be incorporated in structures which we architects plan and design.

Our teen-age boy is running a determined and steady race. May his footing be ever on firm ground though the course be rough and rugged.

Thanks to all within and outside of the architectural profession who have contributed to the success of the "Empire State Architect" during the nearly fifteen years that I have been allied with its development and growth.

Charles Rockwell Ellis, Chairman
Publication Committee

PROGRESS REPORT

The importance of the New York State Association of Architects in professional and legislative affairs in the State of New York, began in 1928. Up to that time, all the architectural organizations in New York State operated without coordination, and in legislative matters, appeared before the legislative bodies as individual groups, with the result that their arguments carried very little weight.

This was especially noticeable in 1928 and 1929 when housing legislation was introduced at Albany, and the various chapters and societies in the state appeared through their representatives, all with conflicting views, with the result that the housing program broke down during these two years.

In 1930, James F. Bly who had been president of the New York Society of Architects, became instrumental in organizing a Council of Architects of the State of New York with a view to coordinating the legislative activities of the various chapters and societies, and thereafter the Council appeared as a representative of the entire profession in New York State. Membership in the Council, at that time, was by organization, and Mr. Bly steered the Council through many difficult channels. While he was president, the Council was firmly moulded and became a recognized group.

He was succeeded in 1936 by Robert E. Kohn who continued the policies of Jim Bly.

Bob Kohn was succeeded in 1937 by J. Riley Gordon, during whose administration, the Council was merged with the New York State Association of Architects, which then became a membership organization.

Upon the untimely death of Riley Gordon, in 1937, Jim Kideney became president and continued as such until 1942. The Empire State Architect was started in May of 1941 by Jim Kideney who carried out a one-man campaign to establish the bulletin which began with an issue of six pages. The organization increased in influence and importance during Jim's presidency.

In 1942, Charlie Ellis was elected to the presidency and during the difficult war years, held the organization intact. During Charlie's administration and due to his untiring efforts, the organization succeeded in prevailing upon the State Department of Public Works to employ private architects in connection with the Public Works program for the State of New York.

The writer continued Charlie's program during his own incumbency as president until 1947 when he was succeeded by C. Storrs Barrows during whose administration the New York State Association of Architects became an affiliate of The American Institute of Architects, increasing the scope and influence considerably.

Our legislative program increased in volume and importance during these years and in Storrs' administration, we found ourselves required to make regular appearances before the legislative bodies in Albany on matters of legislation affecting the architects. We were represented at Albany by the late Maxwell Cantor whose personality and perseverance were a great factor in the successful recognition of our organization by the legislators.

The policy of effective legislation was continued by Henry Murphy during 1949-1951, as president, and the growth in membership during this period was noticeable. The importance of the New York State Association of Architects developed also among other groups including planning, labor and banking.

Henry Murphy was succeeded in 1951 by Donald Faragher who served until 1953. During Don's administration, the association suffered a great loss when Max Cantor passed away.

However, we were fortunate in having Sam Hertz as our representative since 1953. Sam has served with great credit to himself and to the organization.

Don Faragher established the Convention Committee of the State Association for the 1952 and 1953 conventions.

Don was succeeded in 1953 by Adolph Goldberg who continued the policies of his predecessors, making the State Association a factor not only in the state but also in architectural circles throughout the United States. Adolph's personality and ability were a great asset to our organization.

Adolph was succeeded in 1955 by Trevor W. Rogers who, by his accomplishments so far, has demonstrated his ability and sincerity and under him, we know further progress will be made in developing the importance of the Association to the state and to the country.

The various conventions held by the New York State Association of Architects since 1937, have been increasing in popularity, attendance, accomplishments and outside interests, besides being successful financially. Through these conventions, men from the various parts of the state have become better acquainted, with the result that disagreements and misunderstanding have disappeared, and with the more important result that some very sincere friendships have developed among men residing and doing business in various parts of the state. The wives and families of the members have taken a greater interest in the affairs of the organization and have participated greatly at the various functions during the conventions. This has also created close friendships among the ladies and developed greater interest in the profession and in the organization.

With the progress already made and with the membership alert for future possibilities, the influence and importance of the State Association will continue and its individual effects upon the profession throughout the state, and reflected throughout the nation, will be a great factor in the future of architecture.

M. W. Del Gaudio

COBBLESTONE ARCHITECTURE

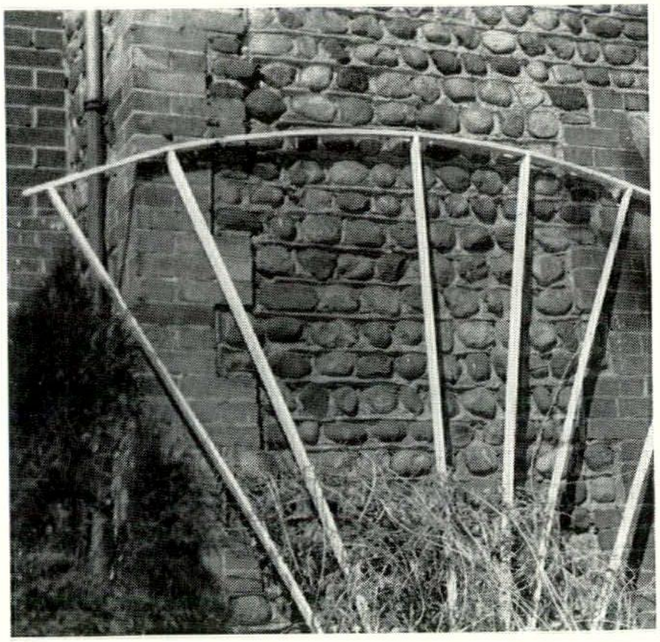
Third Installment

By Carl F. Schmidt, *Architect*

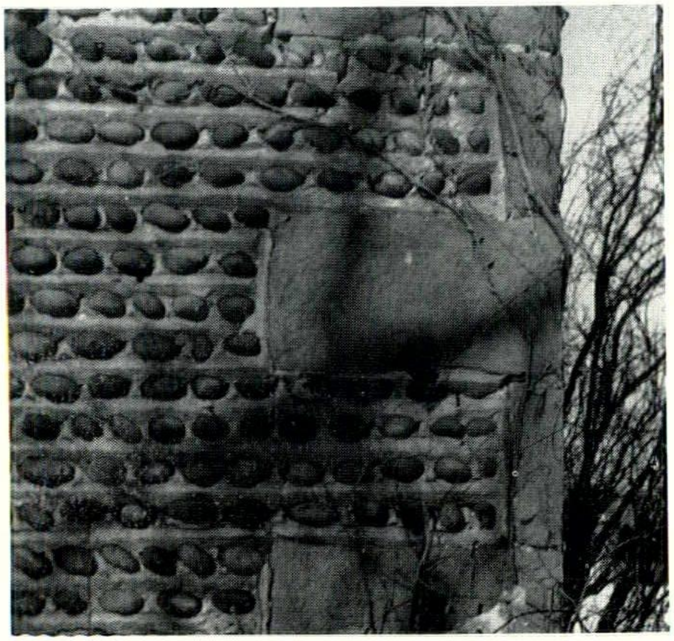
The idea of building quoins or large squared stones into the external corners of buildings is very old. Often the body of the wall was built up of small stones or brick and the quoins were used to strengthen the corners and to stabilize the appearance of the mass. Quoins were both practical and beautiful. When the pre-cobblestone era house and barn foundations were built of fieldstones the masons used larger stones at the corners, but rarely used regular cut quoin stones.

From the very beginning of the so called cobblestone house era the masons used roughly formed quoins of red Medina sandstone or gray limestone of various sizes. Occasionally they used merely slabs, broken from the layers of limestone, with rough surfaces and edges. In the Sheldon House the quoins are three and one-half to five inches high, from fifteen to eighteen inches long, with about seven inch wide exposed ends. The quoins in the Longfellow House, now destroyed, were from seven and one-half to nine inches high, sixteen to twenty inches long, with four inch wide exposed ends. In the Throop House the quoins vary from eleven and one-half inches to twelve inches high, eighteen inches long, with five to six inch exposed ends.

The vertical surfaces of the cobblestone walls during the Early Period were very flat — that is the stones projected only about one-half to three-quarter inch beyond the deepest penetration of the mortar joint. A wall built of large stones with this type of mortar joint could easily have been built without quoins, but the masons preferred to use some form corner stones or piers built of brick or stones to add strength and dignity to their designs.



Brick quoins were also used at the external corners as well as around window and door frames.



Throughout the cobblestone era some masons pried up slabs of limestone from exposed layers and roughly formed them into blocks. No attempt was made to finish the faces of the quoins.

Later, as the cobblestone masonry developed, and the stones became smaller and projected more and more beyond the mortar joint, it was absolutely necessary to use some form of stone quoins or piers at the external corners. During the Late Period work as much as half of each cobblestone would have been exposed at the external angles if the quoins had been omitted and cobblestone courses continued around the corners. These stones would have been loosened easily by weathering or dislodged by accident.

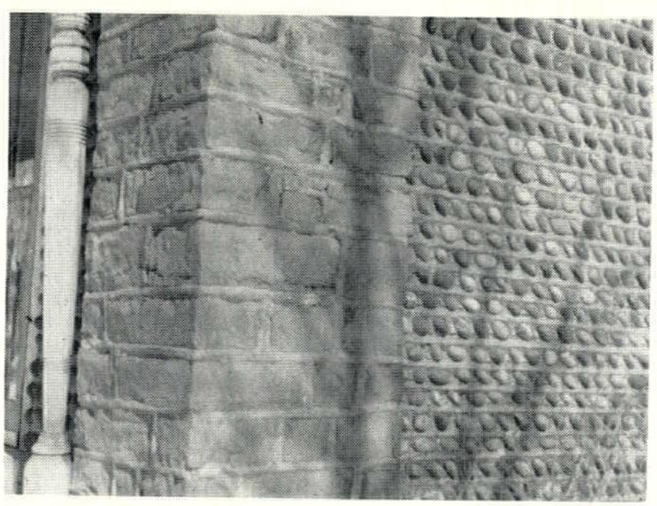
The door and window jambs presented the same problem, less than half of each stone was bedded into the masonry wall. This hazard was corrected by setting the two inch thick plank window and door frames out to within two inches of the face of the cobblestones and filling the space between the stones and the plank frames with mortar flush with the face of the wood frames.

During the Middle and Late Periods the sizes of the stone quoins remained fairly constant, about twelve inches high, eighteen inches long, with six inch wide exposed ends. This standardization of the size of quoins was, no doubt, due to the fact that stone-cutters opened quarries and built up a stock of stone sills and lintels for doors and windows as well as quoins which could be purchased by the builders. We know of such quarries at Geneva, Rochester, LeRoy and Medina, because account books and records kept by owners of some cobblestone houses list such purchases, and where they were made.

After 1835 the quoins were usually carefully cut with square edges, and smooth surfaces. Sometimes the four edges of the face of the quoin were scored with parallel tooled lines about one and one-half inches long, at right angles to the sides, forming a border. Quoins were also cut with beveled edges. In this case the stones are about seven or eight inches thick so that the narrow exposed ends are not too small. In a few instances the mason built in brick quoins. Bricks were also used to build piers at each corner of the house and then covered with plaster. On several houses the corner piers were covered with a wide wooden pilaster.

On two buildings the masons used the most direct method by forming rounded corners, about an eighteen inch radius. This enabled the mason to continue the stone courses around the corner in a continuous line and was a structurally sound solution.

The following letter, published in the "New Genesee Farmer" Vol. 11, No. 5, 1841 is an interesting discussion of cobblestone masonry and also speaks of "rounding" the corners.



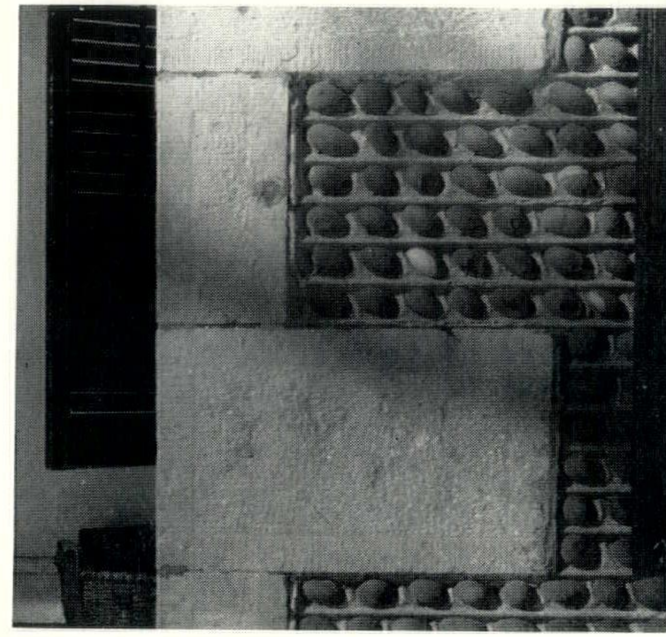
Stone piers were sometimes used, either flush with the wall or projecting as in this example in the form of a pilaster.

"COBBLESTONE BUILDINGS"

"The first cobblestone buildings that I remember to have seen were at Pittsford in Monroe County, nearly twenty years ago, and from the rude appearance of the work at that time, I have supposed the art was then in its infancy, but perhaps some gentlemen of that neighborhood will furnish a sketch of its history.

"About six years ago the first building of that description was erected in this quarter, one mile east of Aurora, and in my opinion the walls are more beautiful than brick. The beauty of such structures, however, will mainly depend on the size and color of the stone, though the color of the sand will have an influence.

"If the sand and stone are both dark colored, the building will have a lurid aspect; for the proportion of lime in the mortar (one-eighth or one-ninth) is too small to whiten it sufficiently, but if the sand is a light



At the stone quarries the quoins were often finished with tooled borders and the enclosed panels finished a pointed chisel.

gray, the contrast of the colors with dark stone, will be pleasing.

"Cobblestone of any size not exceeding six inches in diameter may be used, but for the regular courses on the outside those of two inches in diameter should be preferred. Small stone gives the building a much neater aspect. Two inch stones are very neat, though three inch stones will answer. The inside row of stones may be twice as large as those on the outside.

"The mortar is composed of one bushel of fresh stone lime to eight or nine bushels of clean sharp sand. As the strength of the building depends on the goodness of the mortar, it is very important that sand of the first quality should be obtained. Yellow sand or any sand that contains clay should be rejected. Gray sand is sometimes found so pure as not to discolor the water into which it is thrown, and such should be procured if possible.

"Mortar that has been made some weeks is generally preferred. Some masons are particular to reduce the lime to a thin paste, and then while it is hot to apply the sand.

An interesting example where the builder used wood pilasters at the corners, behind which are no doubt brick or stone piers.

"The thickness of the wall is sixteen inches, though twelve inches will answer very well for the gable ends above the garret floor.

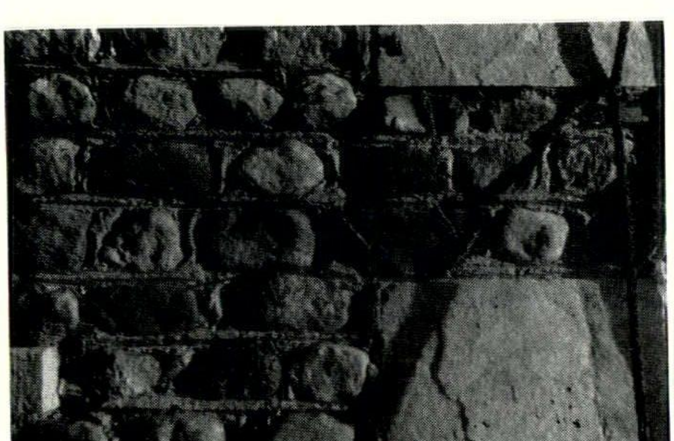
"When the foundation or cellar wall is leveled and prepared, a layer of two (or two and a half) inches of mortar is spread over it, and the stones are pressed into the mortar in two rows which mark the outside and inside of the wall, leaving about an inch between each adjoining stone in the same row. If the wall is to be grouted, the two rows are formed into two ridges by filling the vacancy between the stones with mortar, and the space between these two ridges (about a foot in width) is filled with such stones as are not wanted for the regular courses. The grout is then applied. If the wall is not to be grouted, however, the mortar should be carefully pressed round every stone, making the wall solid without flaw or interstice. When one course is leveled, begin another.

"Between every two adjoining courses on the outside some have the mortar to project as far out as the stone, in a regular line round the building. It is wrought to an edge with the trowel, and adds to the neatness as well as to the strength of the wall; for during the process the mortar is pressed round each stone; and the smoother it is made, the stronger it will be, and the better will it resist disintegration.

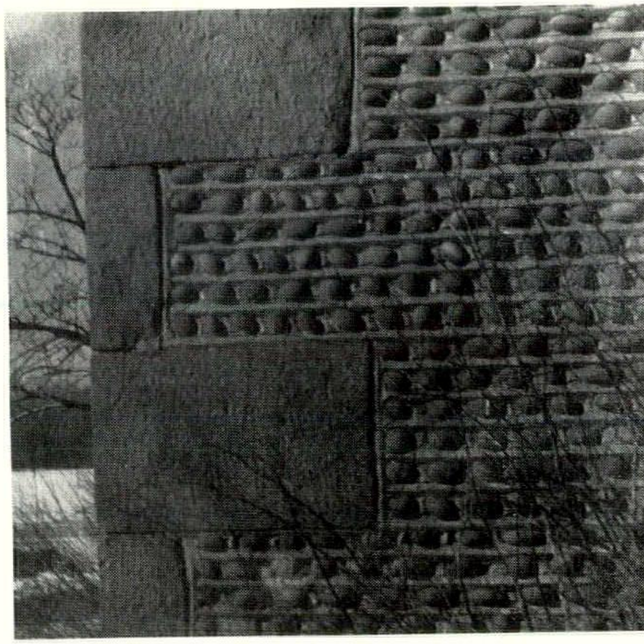
"It has generally been the practice to have the corners formed of cut stone; but in a two story building erected last season within a few miles of us, this expense was avoided by rounding the corners and using cobblestones. The stone is not the only saving by this plan, however, much of the masons' time is consumed in laying such corner stone.

"On the first mentioned building, the workmen were employed by the day. Four walls, amounting to 146 feet in length, were commonly raised eighteen inches every day by three masons. This is a little short of 99 cubic feet of wall or six perches to each workman. Sometimes in damp weather they had to stop a while for the mortar to set.

"The building erected last season was contracted for by the perch at 37½ cents; and half of this sum additional, was allowed for the tender. The walls, however, were grouted – that is, all the interstices between the stones were filled with liquid mortar; and this substance must have more time to set. For this reason no more than three courses a day can be laid in dry weather; and not any when it is showery.



The walls built of fieldstones were usually very flat compared to the walls built of round or oval shaped lake-washed stones. Although this type of wall could have been built without quoins or piers the masons always built the corners with stone or brick quoins or stone piers.



Quoins were sometimes roughly squared and the faces finished with penetrations made with a pointed chisel.

"It requires from ten to twelve bushels of sand to a perch besides the lime when made into mortar; and cobblestones lie in a heap when thrown from the wagon about as compactly as they do in a wall.

"If cobblestone buildings are as cheap as wood, as one of those proprietors believes, they will be much cheaper in the long run; and this will be evident when we consider the frequent paintings which are necessary to keep a frame house in decent repair.

"P. S. Since writing the above, I have received two communications from persons who have had cobblestone houses erected. One says, 'The thickness of the wall is measured from the outside of the stones. Pieces of timber, 4 x 6 inches and two feet long, are used for setting the lines. These lines are laid in the courses just finished, and the line is drawn through saw-cuts just 16 inches apart.'

"The other says, 'the cost of cobble is about 1/6th less than brick; and probably ¼ or 1/3 less than wood, – on the supposition that the stones made be laid within a mile, and sand within two and one-half miles.' It must be evident, however, that the expense of cobble, brick, wood and stone, must differ considerably in different places, according to the prices of those materials and the distance they have to be carried – Alb. Cultivator D. T.

Greatfield Cayuga County."

Many people, who are interested in cobblestone houses, often ask, how did the masons make the mortar, because in most instances the mortar is just as good today as when the building was erected. The edges of "V" shaped joints are sharp and show very little weathering. Whereas on some of the houses the mortar has weathered away to such an extent that the original form of the horizontal and vertical joints is difficult to reconstruct.

The finish of the mortar varied from smooth to very coarse, sometimes full of large grains of gravel as large as a sixteenth of an inch in diameter. It also varied in color, from a dull gray through various shades of buff, yellow and brown.

(Continued on Page 59.)

BUILDING FOR THE STATE of NEW YORK, 1790-1890

Part III GOVERNMENT HOUSE

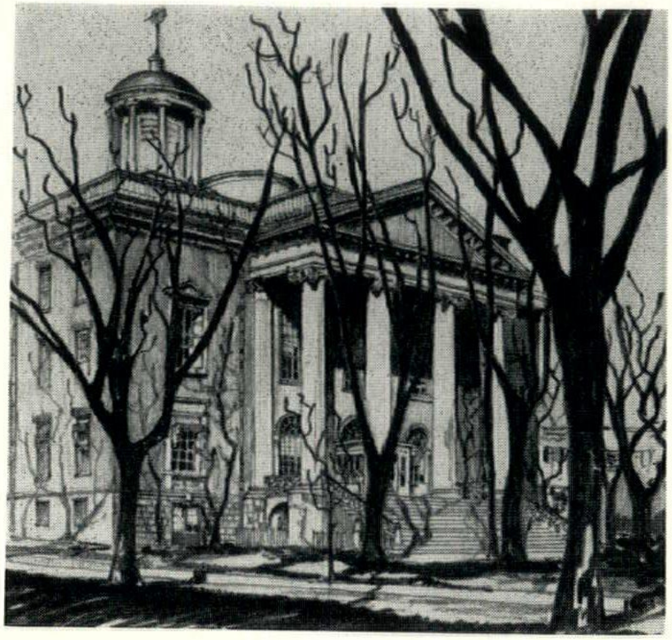
By Harley J. McKee

The transfer of governmental activity from New York City to Albany appears to have taken place gradually. The state Legislature held several sessions in that city before making it the permanent seat of government on March 10, 1797. Members met in the mid-eighteenth century town hall or "Stadt Huis," which had been erected at Hudson and Market Streets to serve as municipal jail, court house and common council meeting place. It is interesting to realize that several buildings were shared during these early years by the city and the state, and some were erected jointly. In addition to legislative chambers, the state government needed a courtroom, prison, offices for the secretary, record storage, and official residences for the governor and the secretary.

The governor's mansion was rented, at least for a time. Among the papers formerly in the comptroller's office, which were rescued from a Canadian paper mill by the Onondaga Historical Association, is one dated May 5, 1803. "To the Treasurer of the State of New York . . . . . . pay to Abraham D. Lansing out of any moneys in the Treasury the sum of Seven Hundred and ninety-two dollars in full for the rent of the house occupied by his Excellency the Governor to the first Instant, and the taxes thereon . . . ." This was signed by Elisha Jenkins, Comptroller.

The house occupied by the state secretary was purchased by the state, in a deal involving the sale of his former residence in New York City, on Broadway. This brought in \$16,800, which left the treasury a surplus after the purchase and repairing of the house in Albany for \$13,597.74½. These repairs, costing \$586.78, were chiefly carpentry, painting and decorating. Among the three men or firms connected with the work was the well known architect Philip Hooker, who for an 8% fee superintended carpentry and finish woodwork. There is no indication that he made any drawings for this job. The two men working under his direction, John Fraser and Samuel Hooker, received 11 shillings (\$1.37½) per day; this is shown on an itemized bill signed by Philip Hooker, covering the period between March 12 and April 22, 1806. His duties included purchase of materials and payment of the workmen; he apparently advanced the money for his part of the job. Overall direction of repairs to the house was given by the secretary himself, Thomas Tillotson, whose signature appears on several bills.

The story of the first state Capitol building has been told by Edward W. Root in his comprehensive book on Philip Hooker. The perspective by A. A. Jenkins, shown herewith, was made after a photograph published in Mr. Root's book, and is a view from the southeast. The building was 90′ wide and 115′ long, built of brown sandstone. The east front, with four Ionic columns, simulated a two-story appearance, but the building really contained three stories. In addition to other facilities, it contained the Albany common council chamber, state Assembly chamber 50′ by 56′, Senate chamber 28′ by 50′, and a Supreme Court room 40′ by 50′. Philip Hooker was the architect. His first designs were made between March 1802 and March 1803, and the final designs between April 1804 and April 1806, when the foundations were laid out. The architect received \$250 for drawing the plans and for some superintendence up to April 4, 1806. He superintended the construction and received a salary of \$4.00 per day for this service. In addition he performed some other work such as carving the Ionic capitals, drawing a perspective view and designing some iron work; for these he received appropriate additional payment. By the summer of 1809 the building appears to have been complete enough for occupation by the common council and the state court, although some finish work continued through the year.



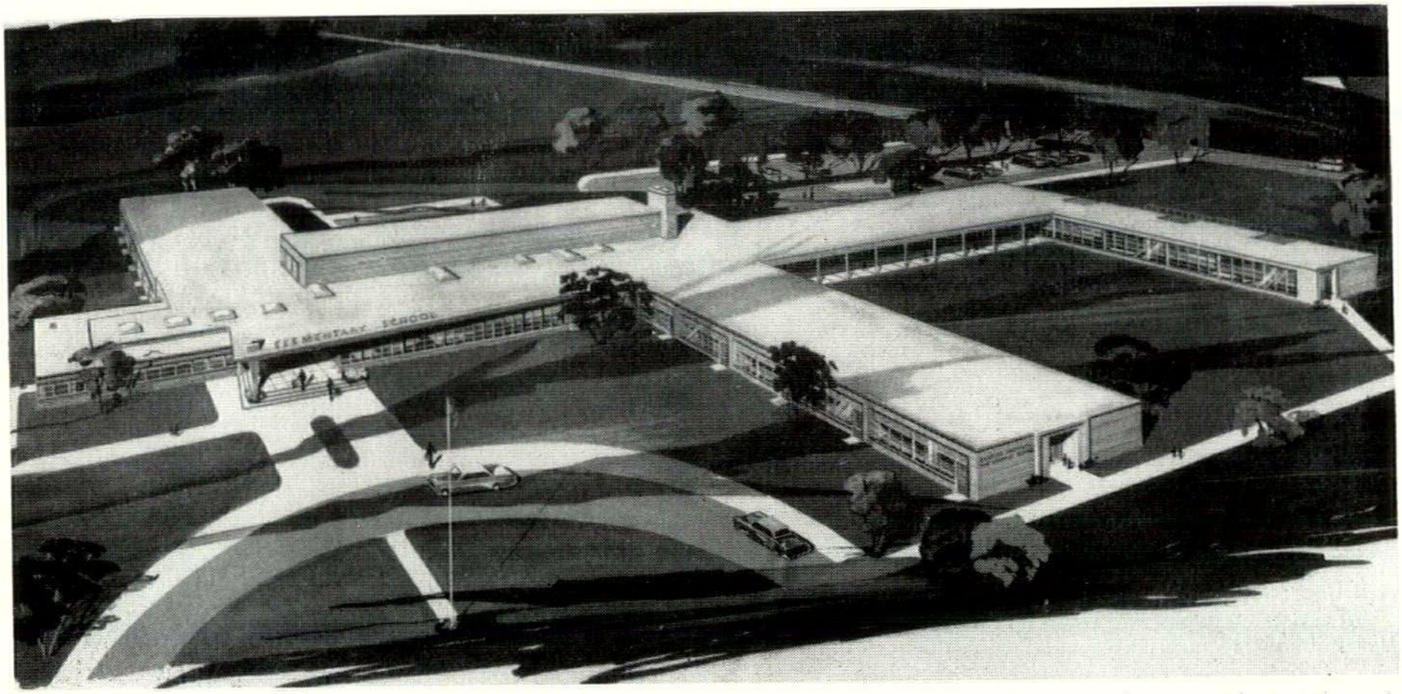
Initiative for the erection of the Capitol building appears to have come from the city of Albany. The municipal government was in need of better quarters, and they may have considered the possibility that other cities would try to attract the Legislature away from Albany. In any case, the city made a substantial total contribution of \$34,200, according to Root, while the cost to the state was some \$70,000 or more. The building was located on the north side of State Street near the southeast corner of the present capitol, until its demolition in 1883.

As early as 1796 a state prison was under construction in Albany. A bill dated November 10th for "work and materials to models of Iron Pipes intended to be placed in solitary Cells" indicated that one William Sanders may have been the architect. Records show that surplus materials consisting of hard brick, soft brick, lime and stone, amounting to a total value of 396 pounds (nearly \$1000), were sold during 1797 and 1798. This sum was applied toward the cost of erecting an office building for the secretary, which had been authorized by the Legislature on March 10, 1797, during its 20th session. The building was to provide space for keeping records, books, papers and other things belonging to the secretary of the state, and other public papers the Legislature might direct, an office for the secretary, and an office for the clerk of the supreme court. Although ten thousand dollars was set as the limit for cost of building and lot, in the end the building alone cost almost two and one-half times the stipulated sum.

SPRINGVILLE ELEMENTARY SCHOOL

SPRINGVILLE, N. Y.

FOIT AND BASCHNAGEL, *Architects*



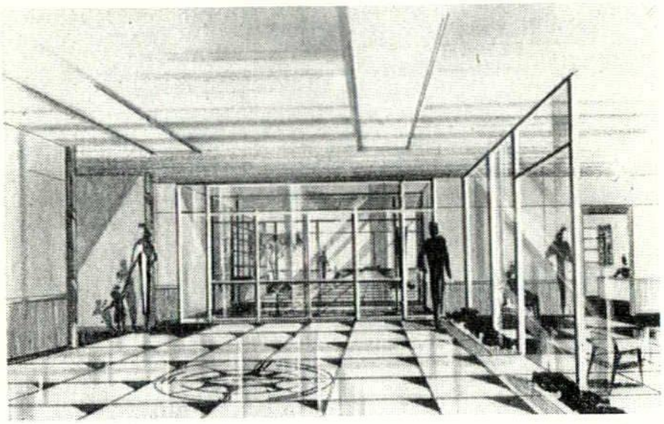
The Springville School has an area of 74,246 square feet, and is located on a 20-acre site. This Kindergarten through Sixth Grade School will house 800 elementary children in a four-zone plan, where the facilities of Auditeria, Playroom, Library, and Administration are grouped in a core, to connect the separate classroom areas, one for each age group. By separating the older from younger children in self-contained classroom units, it is possible to develop a program for each age group within the total school plant.

Since the building was to be located in the rolling, open country, south of Buffalo, a low, one-story, structure seemed most natural. It is contemporary in feeling, and embodying the newest of successfully tried school-plant construction features. The school is built of fire-resistant materials throughout, with outside walls of red sand faced brick, lightweight block backup, and gray stone trim. The reinforced concrete floor slab is supported on concrete piers, making a crawl space under the entire building. The lightweight concrete roof slab is supported by a steel frame and metal joints. Interior partitions are, in general, metal studs with block walls around the Playroom, Locker Room, and Kitchen.

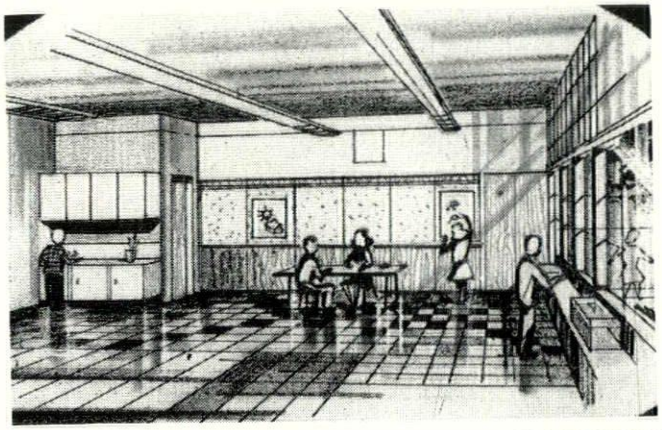
The classrooms are typical of present-day planning, with built-in bookshelves, closet, bulletin boards, and chalk boards. Daylight is supplied through fenestration of panels of light directing glass block over a clear-vision, projected type window strip. Plaster walls, acoustone ceiling, and vinyl asbestos floor complete the room.

Pupils requiring special attention will be located in Remedial and Special Classrooms.

In all grades, there was a definite emphasis put on having a close relation to the natural setting of the outdoors. An exterior door has been provided in all classrooms. The Kindergarten rooms have a separate work alcove, and their own outdoor play area. The court formed by the two north wings, provides a covered area for outdoor educational activity for grades one through three.



LOBBY



CLASS ROOM

The Auditeria-Playroom, a multi-purpose room, with two large folding partitions, is designed for dining, assemblies, play, and athletic games. It will be jointly used by the school and community. There will be a wood floor in the play area, while the remaining portion will be vinyl asbestos. There are large window areas in the Auditeria, and a high band of glass block in the Playroom. There is a ceramic tile wainscot throughout the room.

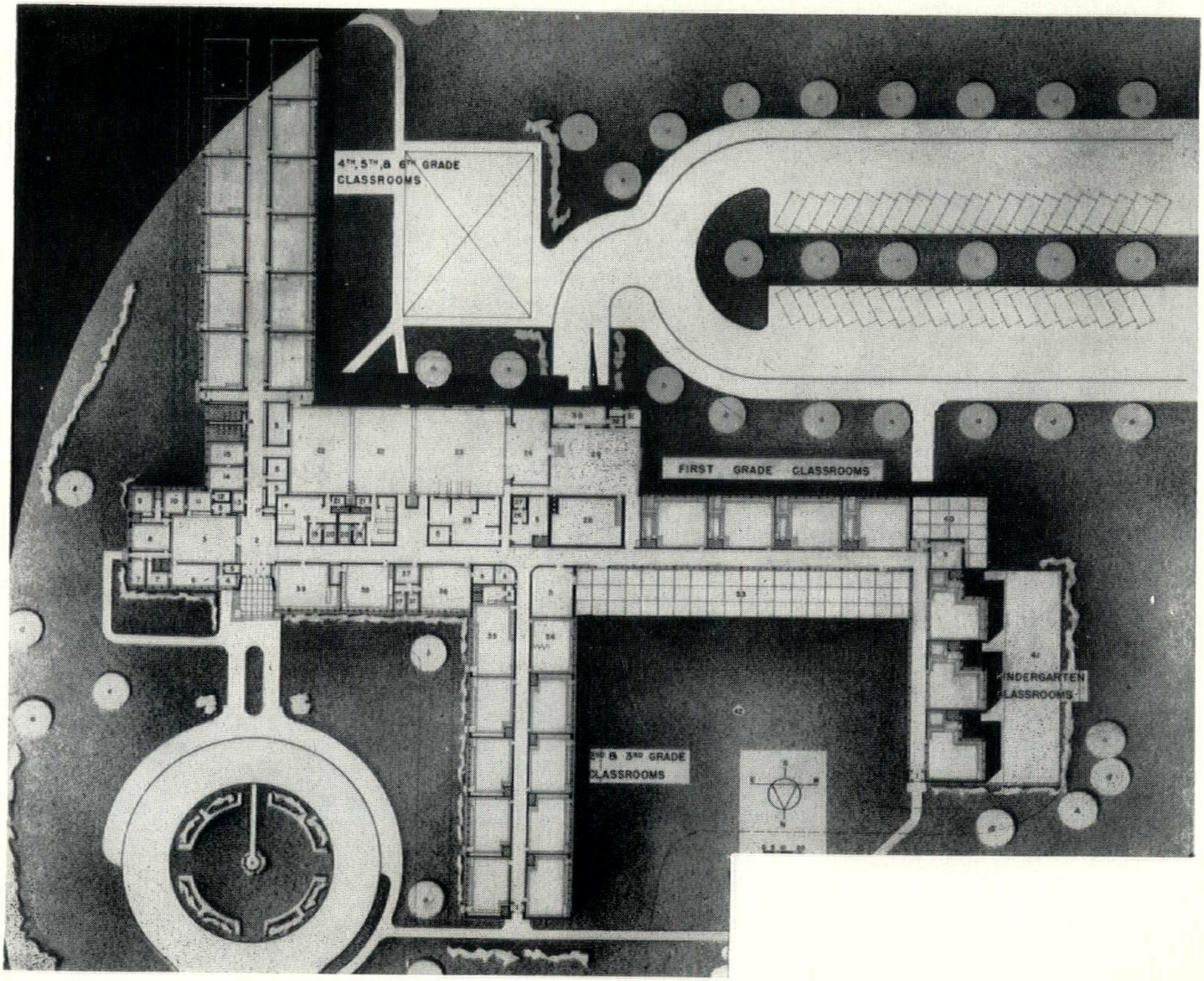
The corridors have terrazzo floors and ceramic tile wainscot. The Public Lobby, with a terrazzo floor and wood paneling wainscot, opens from aluminum and glass entranceway partitions. A planting area and glass wall separates the Waiting Room from the lobby.

Toilet Rooms and Kitchen have tile walls with ceramic tile floors and vinyl tile respectively. Acoustical ceilings are used throughout.

The heating shall be a forced hot water system, supplemented by unit ventilators. Provisions have been made for future air conditioning.

Supplementary lighting in the classrooms is by means of incandescent lights, and the remaining portion of the building will be equipped with fluorescent fixtures. A loud-speaker system is to be installed, so that private calls can be initiated from the classroom to the office.

Color systems are planned in combination with lighting and fenestration, to reduce glare and eye strain, and to allow a variety which will add to the aesthetic qualities of the building.

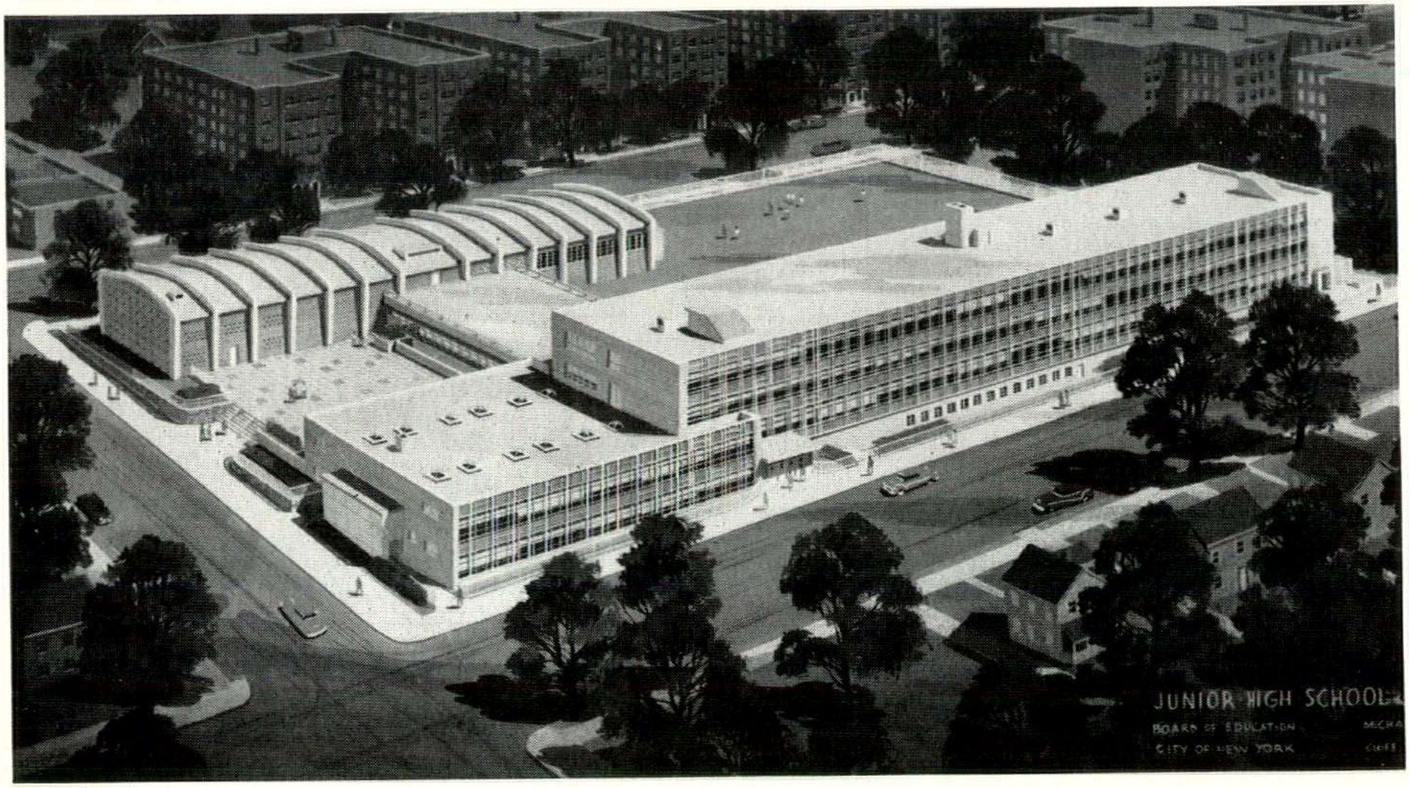


1. Vestibule
2. Lobby
3. Waiting Room
4. Dental Room
5. Storage Room
6. Health Room
7. Conference Room
8. Teachers' Room
9. Assistant Principal
10. Principal's Office
11. General Office
12. Vault
13. Teachers' Work Room
14. Clerk's Office
15. Board Room
16. Janitor's Closet
17. Telephone
18. Locker Room
19. Drying Room
20. Shower Room
21. Gym Instructor's
22. Playroom
23. Auditeria
24. Stage
25. Kitchen
26. Refrigerator
27. Freezer
28. Boiler Room
29. Receiving and Storage
30. Loading Platform
31. Janitor's Room
32. Garbage Room
33. Cover Play Area
34. Remedial Classroom
35. Special Classroom
36. Music Room
37. Practice Room
38. Art Room
39. Library
40. Covered Bus Area
41. Fenced Play Area
42. Primary Play Area

JUNIOR HIGH SCHOOL 189 QUEENS

BOARD OF EDUCATION
CITY OF NEW YORK

MICHAEL L. RADOSLOVICH
Chief Architect



This building is of fireproof construction, with a three-story and basement classroom wing, and a one-story shop wing with basement cafeteria, which are connected by way of a one-story concourse and basement to the one-story and basement Auditorium-Gymnasium wing. The framework, floor and roof slabs are of reinforced concrete, and the Auditorium-Gymnasium unit is spanned by a series of pre-cast concrete bents of modified parabolic Architectural Design, with Flex-i-core long span roofing between each bent. Roofing is of the built-up type, finished with slag, except for the Auditorium-Gymnasium wing which has white marble chip surfacing.

Exterior walls are largely of curtain wall construction, with windows of steel, set in hollow metal mullions and spandrel panels of dark green-mottled porcelain enameled steel. Ceramic glazed brick or light grey in color is used on walls of the classroom and shop wings, with a light blue-green color for walls of the Auditorium-Gymnasium wing. Trim is of colored glazed architectural terra-cotta, or limestone.

The interior of the building will have painted plastered walls on hollow cinder block partitions and furring, except in service areas. Ceilings for the most part are concrete slabs rubbed and painted.

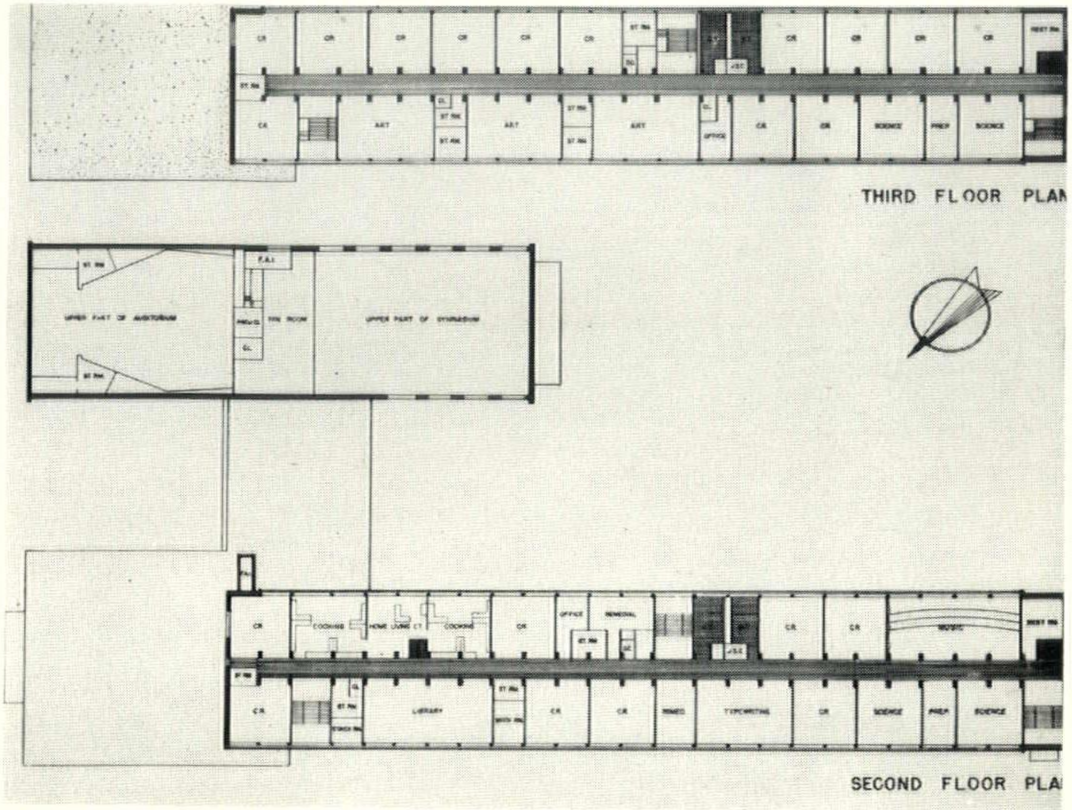
Concrete floor slabs are covered with asphalt tile in attractive colors and patterns. Walls of corridors have glazed structural facing tile wainscots in 5″ x 12″ units, carried up to door height, with plaster above. Ceiling of corridors have acoustic tile. Display boards and display cases are set into the wainscots of corridors. Stair halls are faced with 5″ x 8″ glazed structural facing tile over the entire wall surface.

The entrance concourse connects the classroom-shop wing to the Auditorium-Gymnasium wing, and the exterior is largely of porcelain enameled metal and glass. A special modern floor and wall design has been employed in this area. Floors are of vitrified tiles laid out in a bold pattern. Walls are of ceramic glazed tile in special large patterns. One large wall area will have a mural worked out in mosaic tile, depicting the various activities in the school curriculum. An open monumental stair connects this concourse with the basement and cafeteria level below. Ceilings are of acoustic tile.

The auditorium is totally enclosed, and is designed in a simple modern treatment with splayed walls and ceiling surfaces to insure good acoustics. Surfaces are to be finished in plaster, wood panels, and perforated metal pans. The floor is pitched and has fixed opera chair seats.

The gymnasium has maple flooring, with walls of 5″ x 12″ clear glazed structural facing tile carried up to sill height, and exposed lightweight concrete block above. The ceiling has perforated metal pan acoustic units which follow the curve of the arch. A folding door separates the Boys' and Girls' areas, and can be opened for a full-sized gymnasium.

The cafeteria is located in the basement, and has walls of 5″ x 12″ glazed structural facing tile wainscot height and plastered block above to the ceiling. Floors are of asphalt tile in attractive colors and pattern. Ceiling is acoustic tile. Kitchen and serving space have vitreous tile floors and ceramic glazed tile faced walls to ceiling height. The ceilings are perforated acoustic metal pans. Kitchen and serving area fixtures, counters, etc. are of stainless steel construction.



THIRD FLOOR PLAN

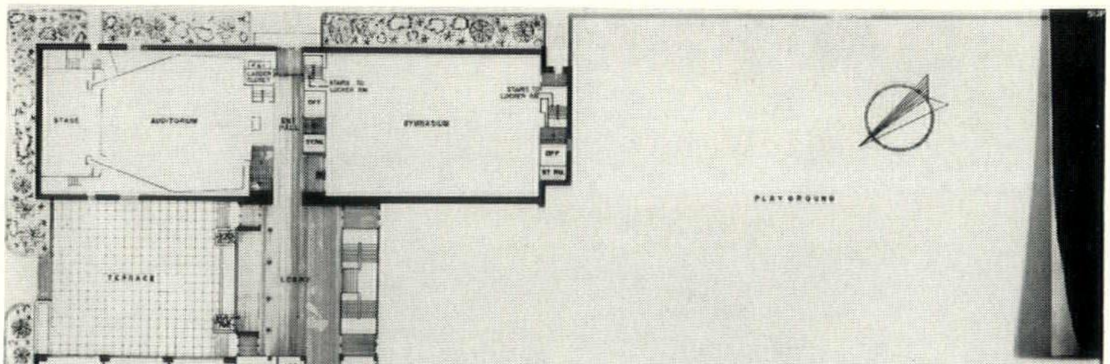
SECOND FLOOR PLAN

Toilet rooms throughout have vitreous tile floors and bases, with ceramic glazed tile wainscots in attractive colors, and exposed lightweight concrete block walls above.

The building will be heated by low-pressure vacuum steam heating system using vulcan type convectors. Classrooms and shops are ventilated by means of a system of independent vertical flues to roof level, where they are gathered together and exhausted by fans.

The Auditorium and Gymnasium are on a separate hot-air system connected with a central fan room. The Auditorium has ceiling air diffusers, and mushrooms beneath the fixed seats. The Gymnasium has grilles at the window sills and at floor level.

Lighting generally consists of fluorescent fixtures for classrooms, shops, offices, cafeteria and lobby, elsewhere incandescent fixtures are used. The electric contract includes a public-address system operated from a control room off the Principal's Office, provisions for future television hook-ups, a fire signal system, and fire alarm system.

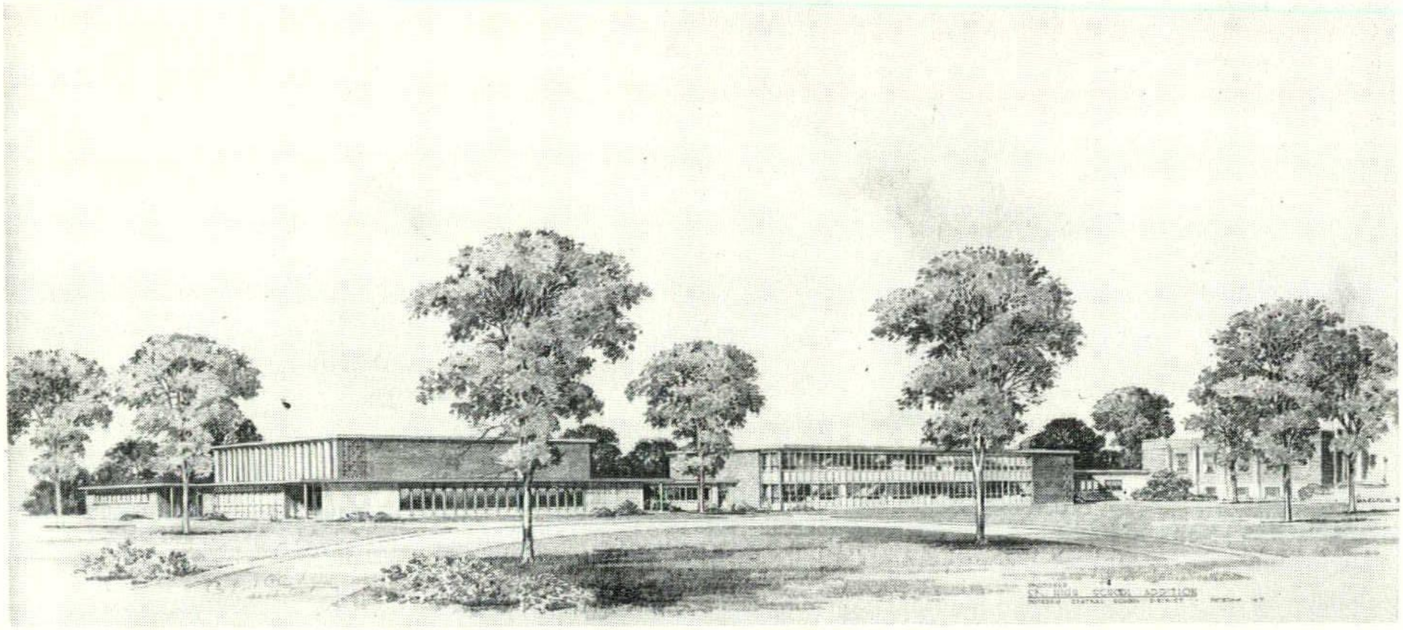


FIRST FLOOR PLAN

POTSDAM CENTRAL SCHOOL DISTRICT

POTSDAM, NEW YORK

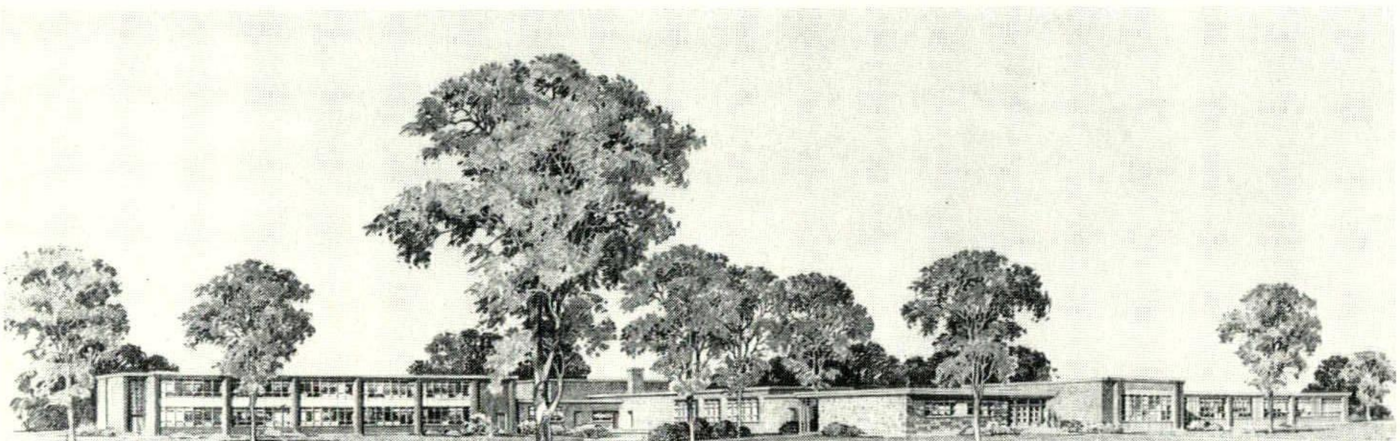
CARL W. CLARK, *Architect*



SENIOR HIGH SCHOOL ADDITION

This project involved planning and executing a building program to satisfy the needs of the newly-formed Potsdam Central School District. At the present time the children of the district are housed in twenty-seven different buildings, twenty-one of which are one-teacher schools. Under the new program the present junior-senior high school is used for junior high school activities. An addition will provide a new shop, recitation rooms, advanced and general science areas, business education areas, art and drawing, homemaking, library, study rooms, gymnasium, locker rooms, and District Offices. A new cafeteria-kitchen will service both the senior and junior high school buildings. The existing auditorium and music suite will be remodeled and be used by both groups. The gymnasium, seating approximately 1,000 in a separate wing, eliminates interference with the academic program and is readily accessible from the athletic field and parking areas.

On the same site a new elementary school will house



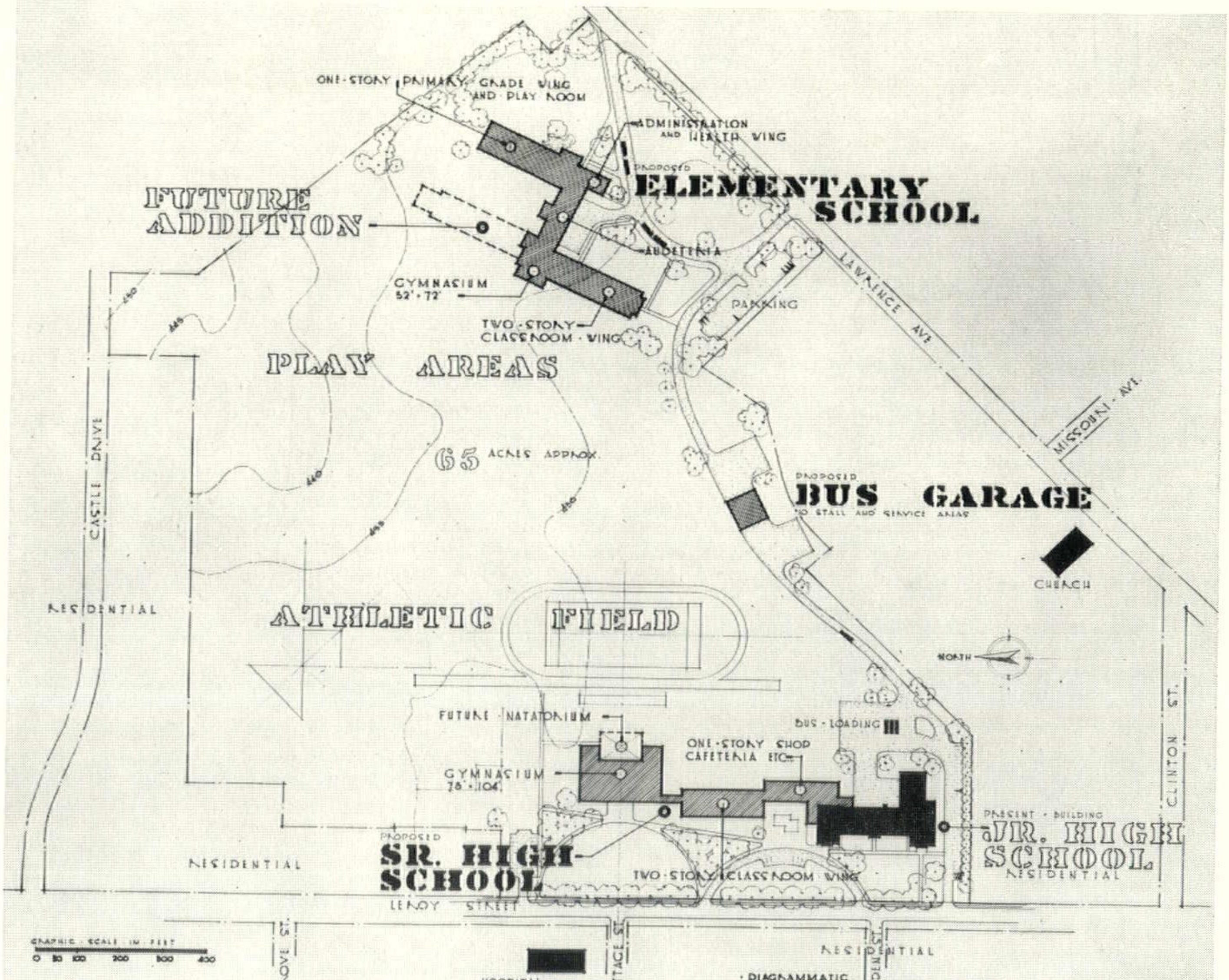
PROPOSED ELEMENTARY SCHOOL

800 students, the majority of those children now using antiquated facilities throughout the district. The building will contain twenty-eight classrooms, a combination auditorium-cafeteria, library, gymnasium, playroom, and special rooms for homemaking, science, arts, crafts, music, health, remedial work, administration, kitchen, and utility areas.

Age groups are separated in classroom wings, one-story for the primary grades and two-story for the intermediate grades.

Naturally it is designed for a future addition to handle the anticipated growing needs of the district.

The buildings located on a 65-acre site will be simple and attractive, blending with the residential area in which they are located. The buildings themselves will be contemporary in design, built of traditional materials but shaped to fit today's educational programs. Plans to landscape the entire site have been executed in order to convert the entire campus into a community beauty spot.



DEPEW JUNIOR-SENIOR HIGH SCHOOL

DEPEW, NEW YORK

DUANE LYMAN AND ASSOCIATES, *Architects*

In 1949 the Depew Board of Education required additional space for their educational program, which was to become the hot water boiler of the High School cationally obsolete building. Among the alternatives considered were building a temporary building on the crowded High School site, and purchasing a new site and erecting the first floor wing of what was to become a future Junior-Senior High School. This wing would be used temporarily to house elementary grades until the time the High School was built and the two present buildings were released for elementary grades exclusively. The oldest building became a community building.

A fifty acre site was purchased, the High School planned, and the one story wing erected in 1951-52. The wing was designed structurally and mechanically for a future second floor and heated by a boiler which was to become the hot water boiler of the High School. The District voted the High School on February 25, 1953 and construction started June 1, 1953. The building was dedicated June 9, 1955 having been in use most of the preceding school year. The fifty acres are developed in areas for field hockey, soccer, softball, tennis, outdoor basketball, handball, baseball, football, a quarter mile track, and parking.

The High School was designed for over 1,000 pupils with 10 grade rooms, and rooms for general science, co-operative vocational training, art, mechanical drawing, industrial arts, audio visual, library, music, study halls (2), recitation (10), advanced science (3), commercial (4), and homemaking (4). There is a rifle range, a 42′ x 75′ swimming pool, an 80′ x 100′ gymnasium, an auditorium seating 1,013, and a cafeteria which also serves for small meetings. The school is used for a year round adult education program offering courses in typing, homemaking, English, industrial arts, driver training, sketching, painting, photography, gymnasium and swimming.

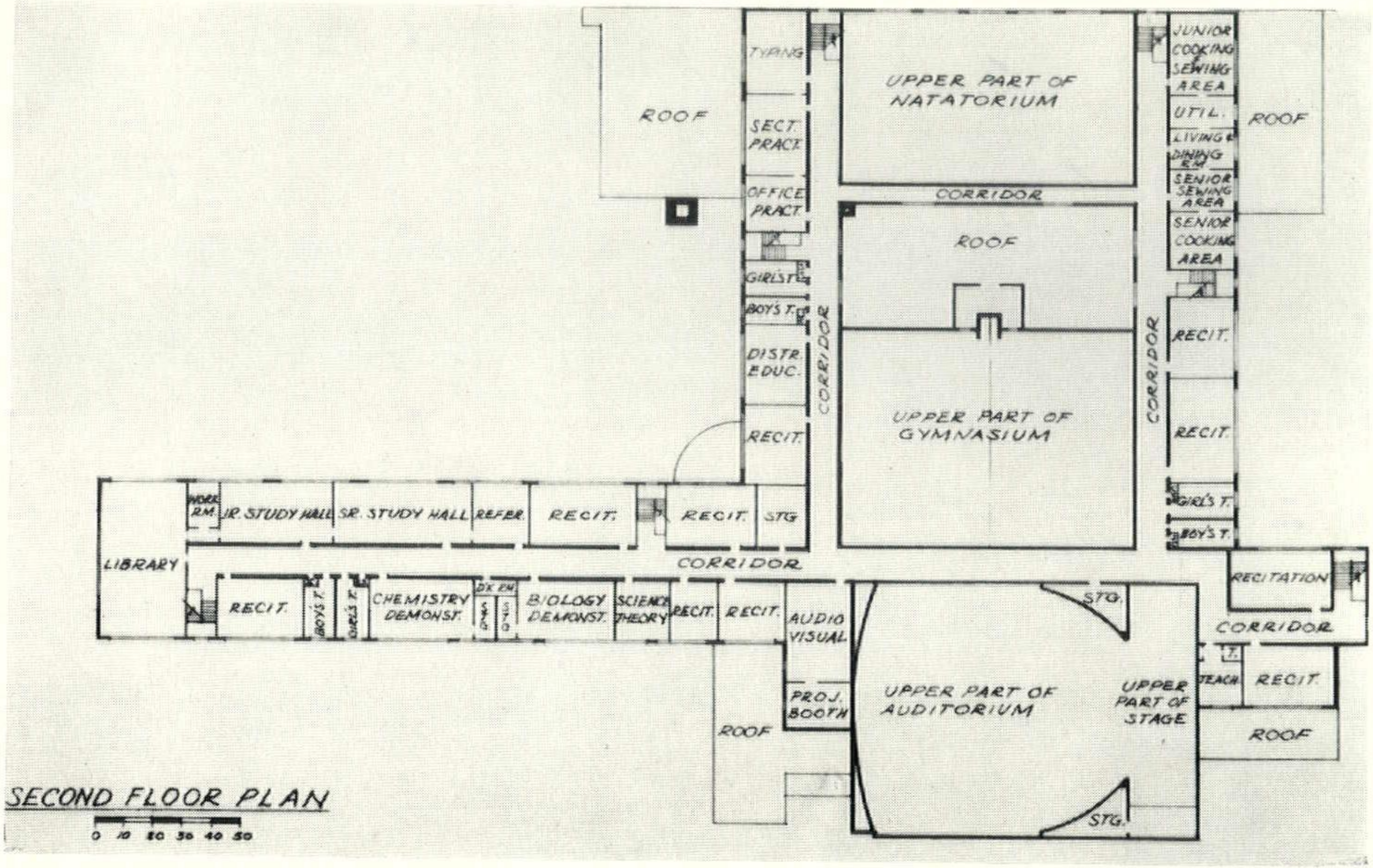
The exterior of the building is a gray-tan mat-textured Belden brick with Indiana limestone trim. The Board room wall is finished in turquoise terra cotta and the auditorium wall in buff terra cotta. A two-way concrete first floor slab and steel frame support a reinforced concrete second floor and bar joist and poured gypsum roof.

Corridors are finished with terrazzo floors, structural glazed tile wainscots, plaster walls and acoustic tile ceilings. Classrooms have asphalt tile floors and rubber base. The natatorium has a corrugated aluminum ceiling. The lighting is generally incandescent with fluorescent in the art rooms and shops. The heating system is an oil fired low pressure vapor system.

These are the figures for the High School Addition only:

Cubic contents:	1,984,000 cu. ft.	
Area:	107,010 sq. ft.	
General contract (Hydro Construction Co.)		$1,303,469
Plumbing contract (H. C. Mapes Corp.)		72,835
Heating and Ventilating contract (H. C. Mapes)		134,550
Electric contract (Truscott Electric Co.)		146,418
Construction Cost of Addition		$1,657,272

Guy H. Baldwin



SECOND FLOOR PLAN

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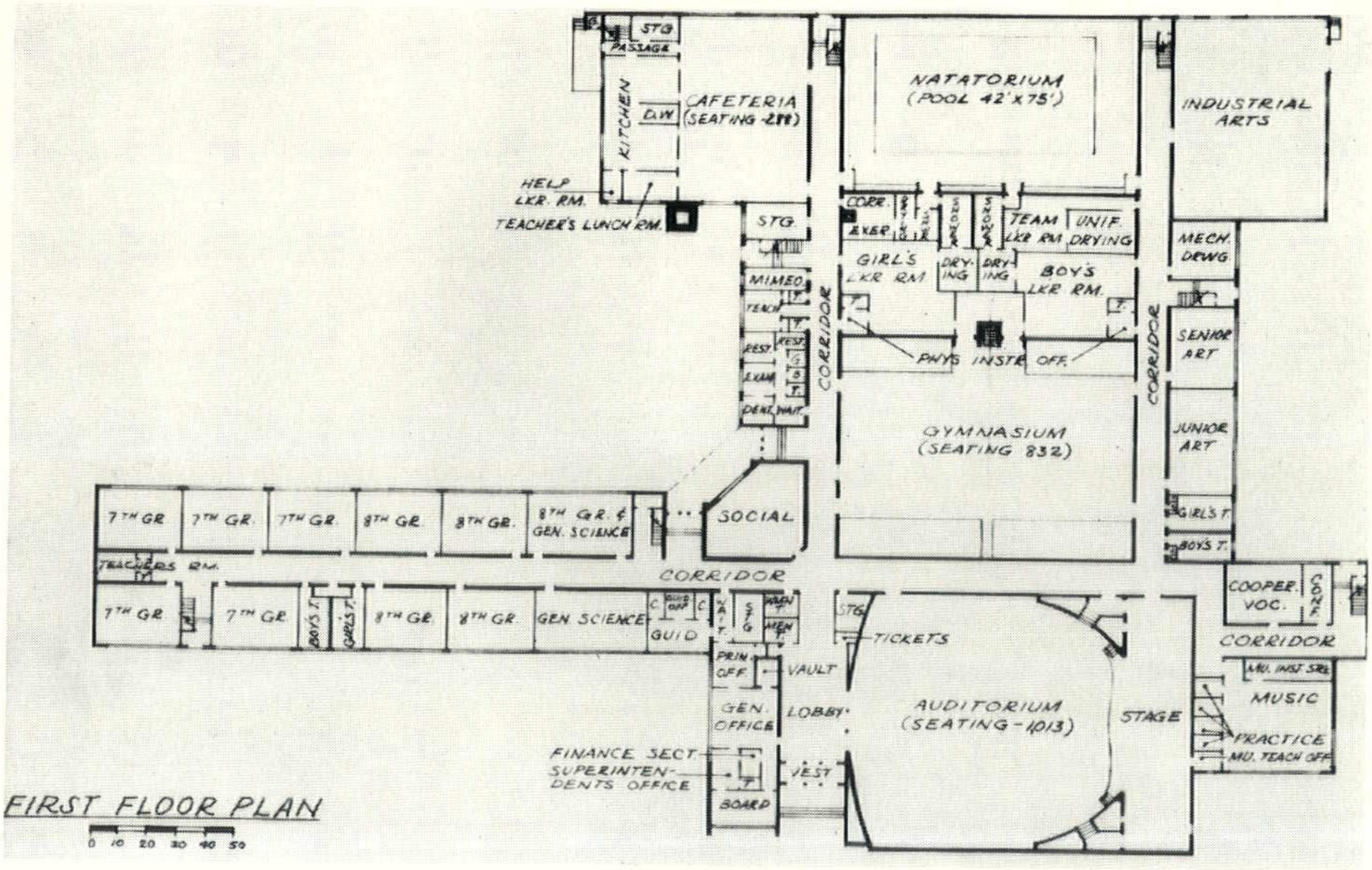
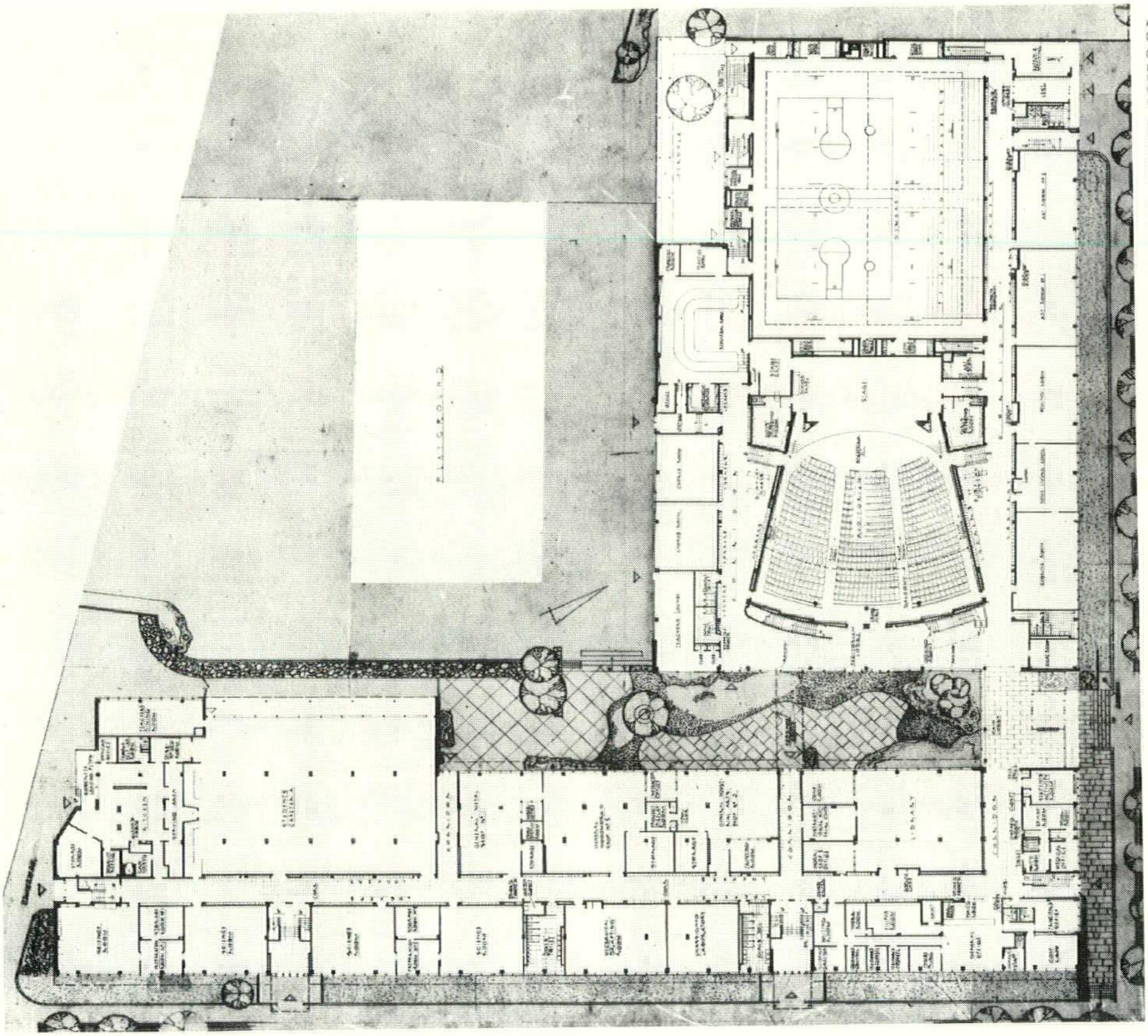
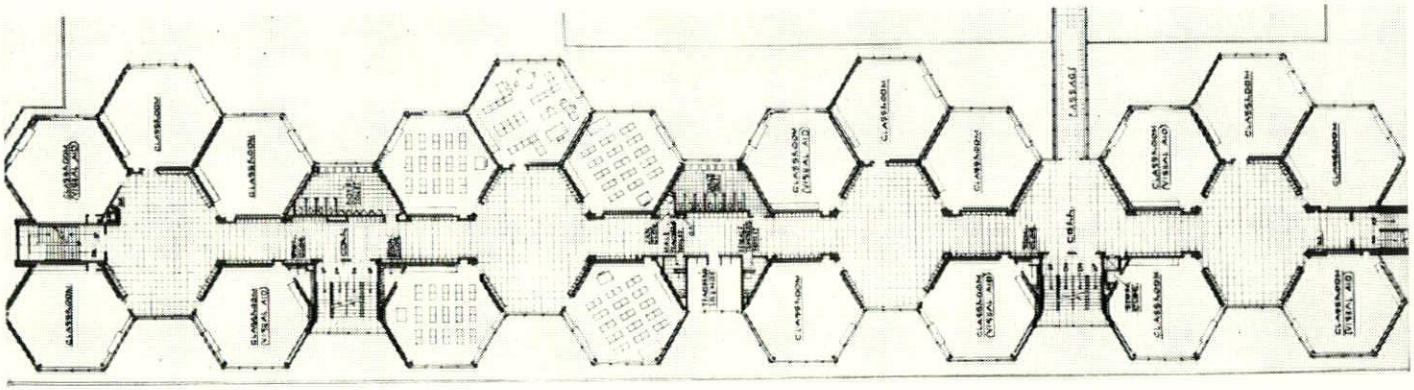


FIRST FLOOR PLAN

0 10 20 30 40 50



CLINTON PLACE JUNIOR HIGH SCHOOL



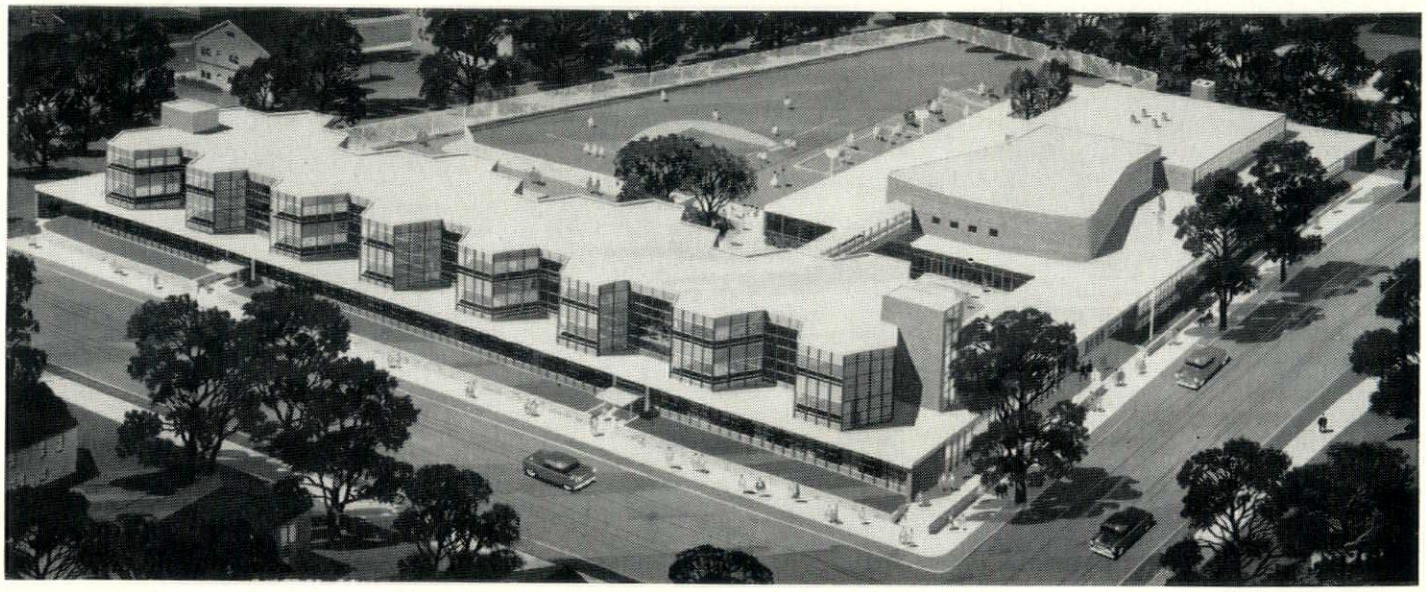
CLINTON PLACE JUNIOR HIGH SCHOOL

BOARD OF EDUCATION,

CITY OF NEWARK, N. J.

DR. JOSEPH SCHOTLAND, *Supt. in Charge Business*

KELLY & GRUZEN, *Architects*



Site and Location: 4 acres, corner Clinton Pl. and Randolph Pl.
Student Population: 1600
Facilities: 56 Educational rooms; library; cafeteria; boys and girls gym; auditorium. 3-story L-shaped building.
Sq. Ft.: 169,000. *Volume* – 2,400,000 cu. ft.
Construction: Steel frame; glass and metal panel walls; concrete slab floor and roof construction; terrazzo and lino-tile floor finish; plaster-facing tile wall finish.
Mechanical Systems: Low pressure, steam-oil heat; unit ventilation in classrooms.

Construction contracts awarded August 1955:

General Construction	$2,526,865.
Heating-Ventilating	440,945.
Electrical	338,660.
Plumbing	188,300.
Kitchen Equipment	35,882.*
	$3,530,592.

*Other built-in equipment included in General Contract, including Laboratory, Shop, Gym, Auditorium equipment.

The school is planned with two major wings. One will be a three-story teaching wing, the upper two floors of which will contain six-sided classrooms, while the first floor will have administrative offices, vocational shops, a library and a 530-seat cafeteria. The other wing, along Randolph Place, will contain a 1,000-seat auditorium with orchestra and balcony levels, a gymnasium with maximum spectator capacity of 900, music rehearsal rooms, fine arts department, homemaking rooms, teachers' lounge and the boiler plant.

In the early stages of the planning when the hexagonal clusters were proposed, members of the Board of Education and Dr. Joseph H. Schotland, Assistant Superintendent in charge of Business, made a complete analysis of the design, studying its advantages over more conventional designs.

In their analysis, the Board set up the actual area of a typical hexagonal classroom on a gymnasium floor in order to examine the flexibility of furniture and equipment layout that was possible, finding that the hexagon is adaptable to an infinite variety of arrangements to meet every classroom requirement. It was determined that there are numerous functional advantages in the hexagon.

The hexagonal classrooms are to be housed in a series of clusters, each cluster containing five rooms. The clusters are connected by a common, natural lighted central corridor which extends the length of the wing. There are four clusters on the second floor and four on the third floor, making eight clusters and providing for a total of 40 classrooms within a comparatively compact and centralized area. Administrative offices, vocational shops, the library and a 530-seat cafeteria will be on the first floor level of this wing.

In addition to providing a maximum amount of natural light for each classroom and the central corridor, the principal aims of the architects' design are twofold: to achieve a classroom grouping which will establish teaching and general activity spaces most adaptable to present day educational doctrines; and to make possible certain construction and space economies which are required in the planning of a large city school on a reasonably restricted site.

The "family" grouping of the five classroom units in each cluster will facilitate organizing the various grade levels into more cohesive groups, both educationally and socially. By placing pupils of certain age groups in specific locations, it will be possible to control and integrate more effectively the teaching and general activities of each group and will afford each pupil a greater sense of identity with his group.

Programming of classes may also be arranged and scheduled around the activities of each group within specific clusters, thus reducing the load of corridor traffic considerably. Pupils proceeding to and from classrooms, will not block or jam corridor traffic since each classroom door will be set back from the main line of the corridor. The hexagons will form, in effect, a small "lobby" off the corridor in the core of each cluster, thereby providing less congested approaches to classrooms.

Natural light, sunshine and air will come into the corridor at many points, lending a strong note of cheerfulness to areas which seldom see sunlight. It is expected that on normal days, very little artificial light will be required for the entire central corridor core.

Advantages to be found in the hexagonal classrooms, will be in the maximum amount of natural light they will have and in the flexibility of equipment arrangement possible within a minimum amount of floor area. Elimination of right angle corners will provide extra width to the rooms and also give students much better visibility of all classroom walls. In the use of artificial lighting for classrooms, which will consist of fluorescent fixtures encased in plastic, more light will be delivered to working surfaces in the hexagonal room than would be possible in a rectangular room with the same number of fixtures. Economies in heating will be possible since less area will be serviced than in a rectangular room with the same amount of glass. There will also be less area of interior partitions to be maintained or repainted, affording considerable long range economy.

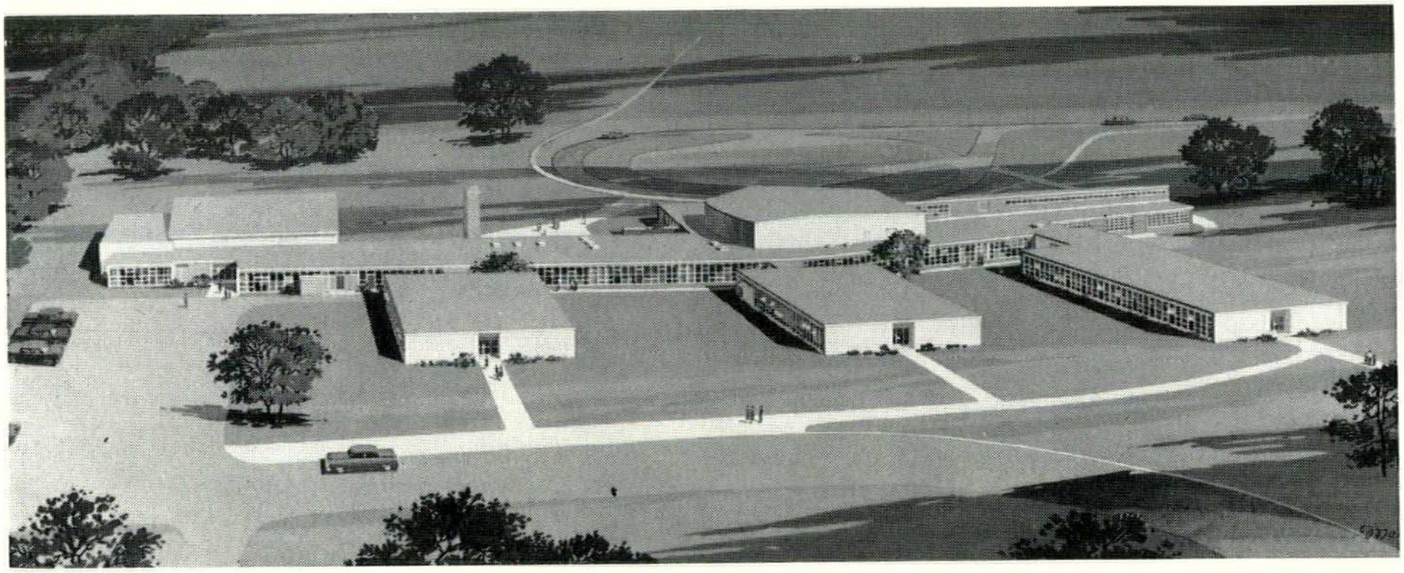
Construction of the school will consist of fireproofed steel frame, with reinforced concrete floor slabs and acoustical ceilings. Exterior walls of the hexagonal classrooms will consist of colored porcelain enamel steel spandrel panels reaching from floor to sill height above which there will be a 3 ft. high clear glass vision strip, after which glass block (with color filters) will reach to the ceiling height.

The main entrance to the school will be off Randolph Place into a link and courtyard joining both school wings. An overhead link enclosed with glass will provide direct access to the auditorium and gymnasium from the teaching wing.

HUDSON FALLS CENTRAL JUNIOR-SENIOR HIGH SCHOOL

HUDSON FALLS, NEW YORK

SARGENT-WEBSTER-CRENSHAW & FOLLEY, *Architects*



This building, a one-story structure, was designed with the aid of Engelhardt, Engelhardt & Leggett as Educational Consultants. The basic scheme of the plan was to establish student bodies of smaller groups or "cores." The use of three semi-attached wings, offered a smaller sized student group of the same age which could act separately, depending upon the central group only for specialized subjects.

The school provides 31 classrooms, a central shop wing consisting of four shops, a three-section homemaking suite, library and music department. A two station gymnasium, seating 1,000 spectators, was located adjacent to the playing field yet central to the academic areas and the entrance for easy access by the public.

Close to the gymnasium, were located the cafeteria and kitchen. Access to the kitchen for supplies was provided by driveway from the rear street. This location allowed use of these rooms for small public meetings and in connection with the various activities in the gymnasium.

Also, close to the large parking lot in the front, is located the auditorium seating 900 people. This auditorium provides a community facility not before existing in the district.

The building consists of a structural steel frame with bar joist floor and roof system. The floor slab is constructed of reinforced concrete on corrugated steel centering. The roof deck is of mineralized and fire proofed composition deck which is capped with a 20-year bonded tar and gravel roof.

The exterior walls are of masonry block with marble exterior finish. The white Vermont marble is a 1¼" veneer and is so anchored to the block walls to form a cavity. The monotony of the marble was broken with aluminum trim and stained cypress boarding.

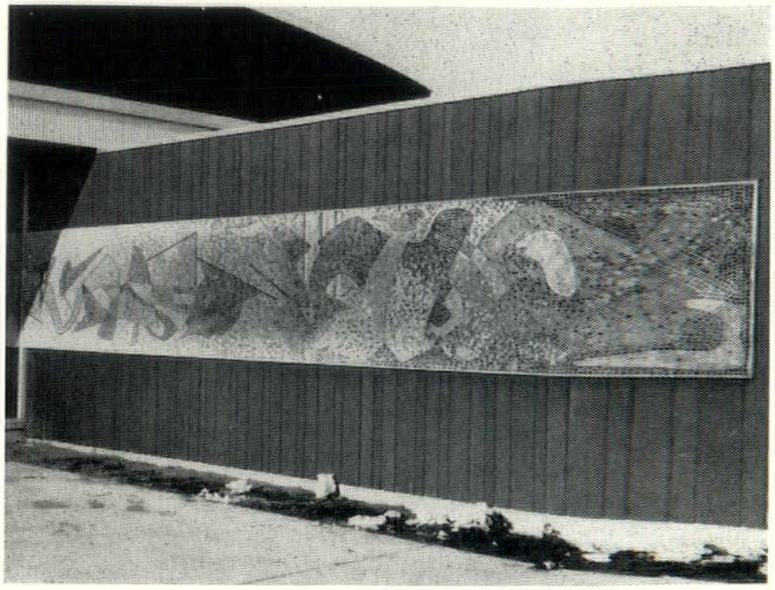
Aluminum windows extend from the ceiling to within 6" of the floor in classrooms. Light control is effected by vertical louvered blinds of varying colors which add interest to the building exterior.

At the entrance to the auditorium, an abstract glass mosaic mural, executed by Professor Larry Argiro of New Paltz State Teachers College, was placed to mark this important public entrance and to add interest to the exterior.

Throughout the building, much use has been made of glass mosaic panels to brighten the interior and provide sanitary surfaces for such equipment as drinking fountains.

To eliminate the cold, institutional appearance of many rooms and corridors, liberal use of vertical wood boarding and cork display walls was employed. Still other exposed surfaces were covered with vinyl plastic covering, allowing easy maintenance of the wall.

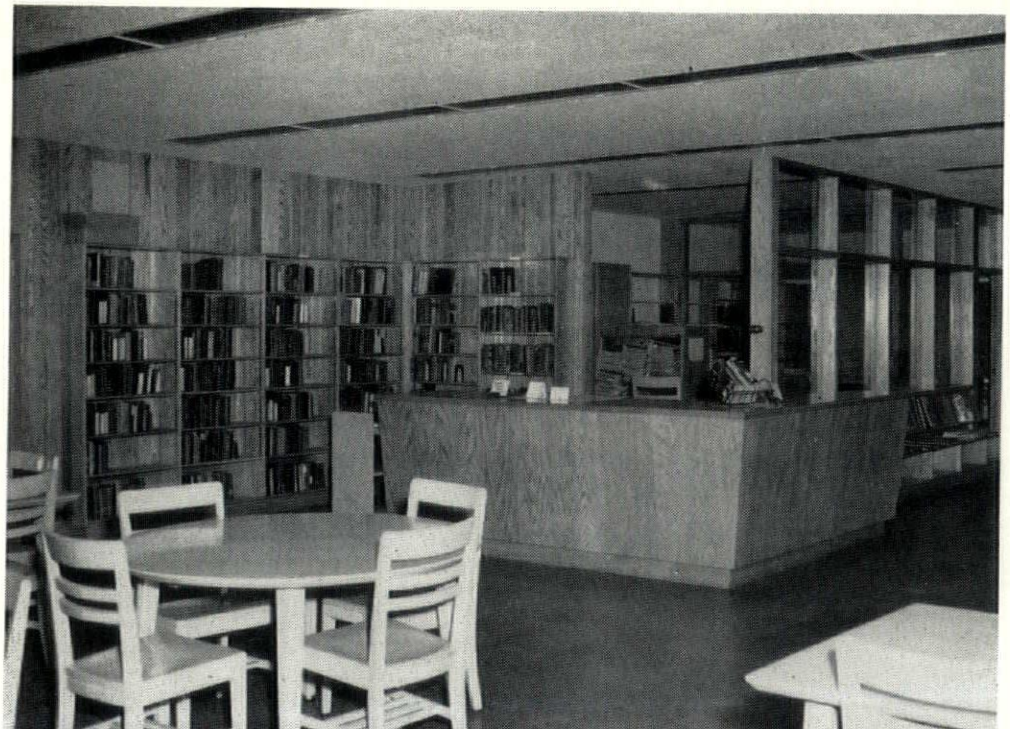
In general, corridor floors are terrazzo and classroom floors are of asphalt tile. Most ceilings are of mineral acoustic tile cemented to a gypsum board backing.



Abstract glass mosaic by artist, Larry Argiro, illustrates to students the development of man's knowledge from early "trial and error" to tomorrow's "ultimate knowledge."

Heating is by forced warm air with thermostatic individual room control by means of mixing dampers and booster coils. Each wing, and area is supplied with air from a large steam unit heater located in unfinished pipe spaces. The air used in heating can be transferred to the cooling cycle instantly by the individual room thermostats. Boilers are fired by natural gas.

The total cost of the structure including cabinet work and site work was $1,574,730.00.

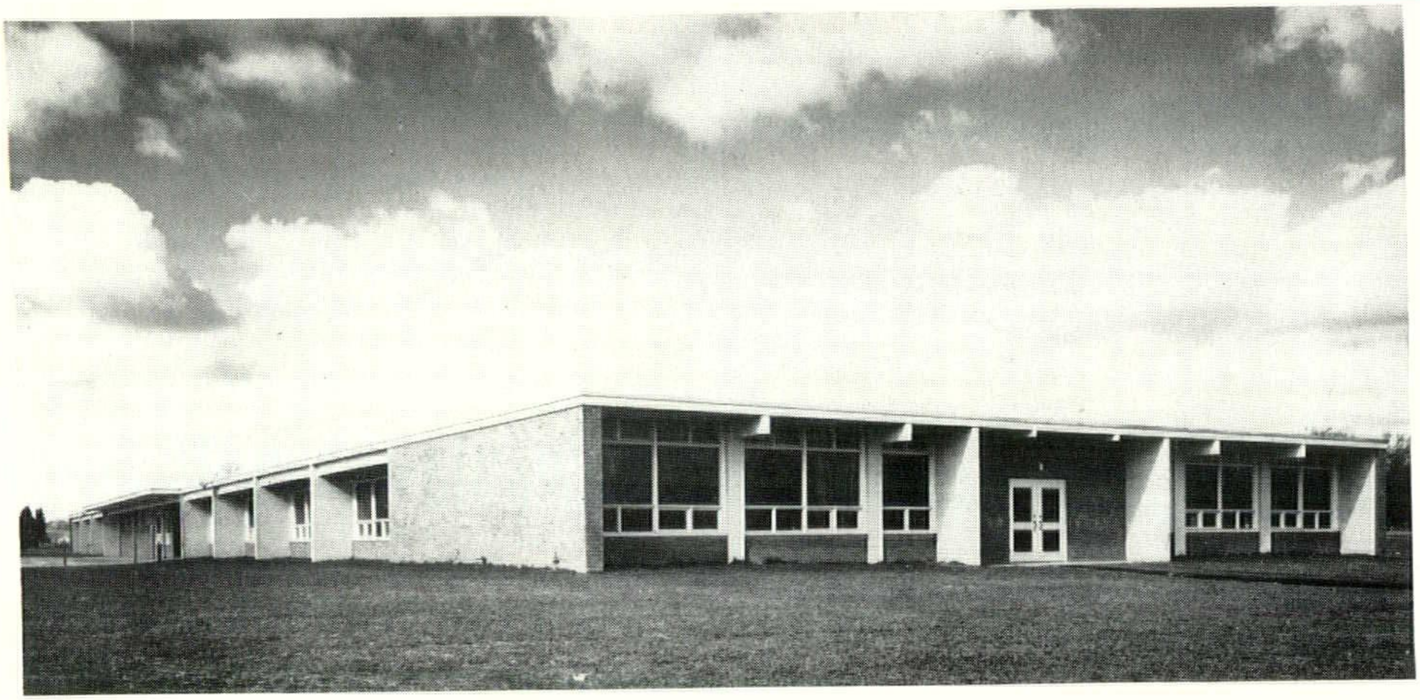


Oak flooring used for wall finish for quiet feeling in the library. Librarian's desk controls entire room including the work and storage area.

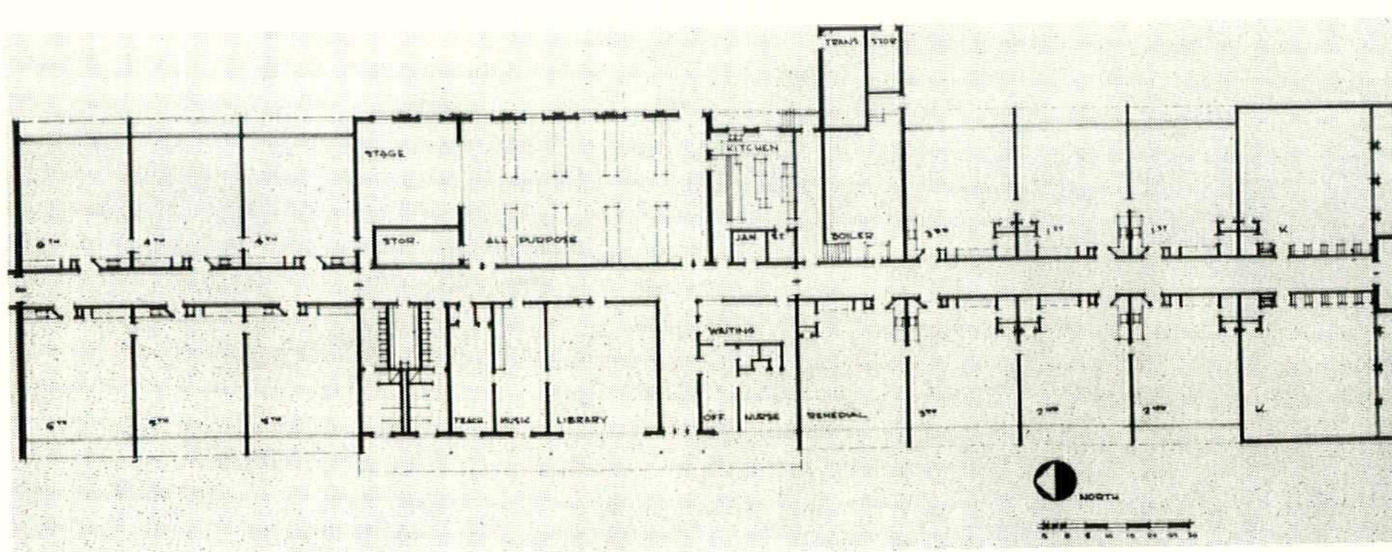
VAN BUREN ELEMENTARY SCHOOL

BALDWINSVILLE, N. Y.

KETCHAM-MILLER-ARNOLD, *Architects*



In 1953, Baldwinsville, like so many central school districts, foresaw a critical need for additional elementary classrooms in the immediate future. It had just completed a new 1200 pupil high school and new bus garage and the resulting financial condition of the District dictated a policy of strictest economy in design of the new elementary facilities. The architects were told by the Board of Education to prepare sketches for a complete 15-room building which could not cost more than $.80 per cubic foot and which could be duplicated on other sites in the district as the rapid population increase in the district might warrant. A bond issue was voted in the amount of $340,000 of which $276,000 was allocated to building construction. Plans were completed and bids received in March 1954 and low bids for the construction of the building itself, ex-



clusive of roads, walks and grading and portable equipment, totaled $257,623, or $18,377 under the estimate. The total of the low bids resulted in unit costs as follows:

Per Room	$17,175.00	Per Sq. Ft.	$ 9.80
Per Cu. Ft.	.70	Per Pupil	575.00

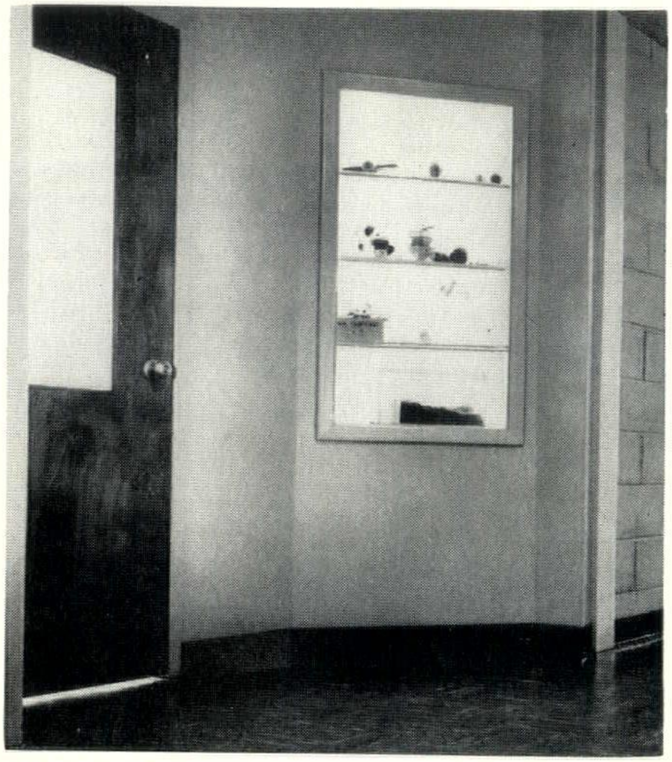
It is interesting to note that the average of 25 bids received showed an average cost per square foot of $11.42. The unobligated balance of $18,377 remaining after award to the low bidders was subsequently expended by the Board of Education to improve finishes in certain areas which, for understandable reasons, had initially been kept to a minimum by the Architects.

The structure consists of a floor slab on grade, wall bearing cavity walls with exposed block interiors and partial brick exterior wythe, laminated wood beams supporting 4″ wood roof deck and 20-year roof. All masonry walls and partitions have joint reinforcement, vertical control joints and bond beams. All lighting is incandescent and the heating system consists of an oil-fired boiler and fin tube perimeter radiation with air supplied to and exhausted from classrooms via plenums above corridor ceiling.

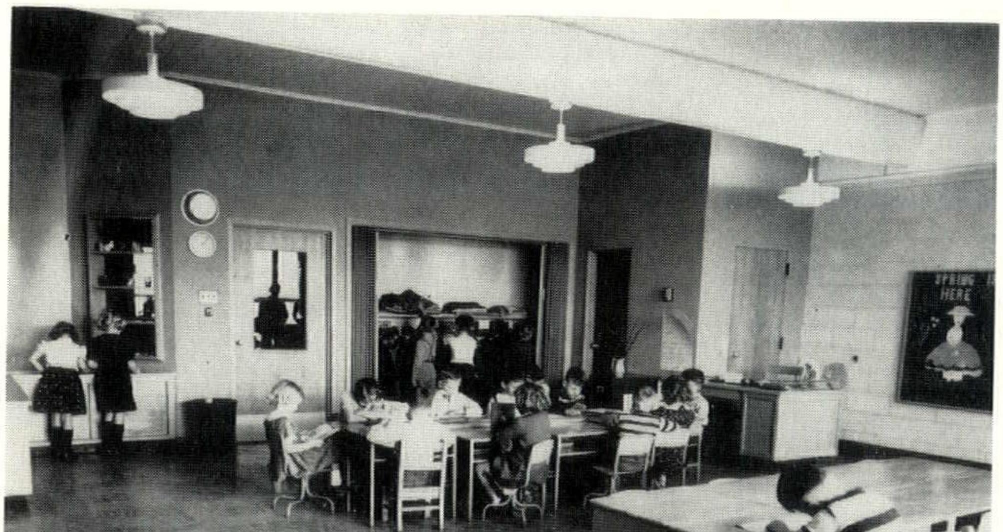
Room finishes include asphalt tile in all areas except main lobby, where terrazzo is used, acoustical tile ceiling in corridors, exposed masonry walls are painted and the exposed wood roof construction is also painted to form the finished ceiling.

Windows are provided between classrooms and corridor for the display of class projects. Each classroom entrance is in a plastered recess from the corridor. Work counters and sinks are provided in each room and wardrobes are closed with folding fabric partitions. Chalkboards are enameled steel with metal backing. Wood windows were used with projected vents and interior doors are mineral core with wood veneer. Exterior doors are hollow metal. Minimum shower facilities are provided in the toilet rooms for use in conjunction with athletic activities in the all-purpose room.

This building has been in use for a year and the Board of Education will receive bids on a second similar project within the month. Needless to say, no one concerned with the project hopes for bids as favorable as those received on the original.



VIEW OF CLASSROOM ENTRANCE FROM CORRIDOR



TYPICAL PRIMARY CLASSROOM

IS OUR ARCHITECTURE "STYLE" OR "FASHION"?

HAROLD R. SLEEPER, F.A.I.A.

According to our history books, all the great periods of history resulted in architectural styles. But "style" is not "fashion." Nowhere do I see any reference to architectural fashions. Heretofore, "fashion" has been too transitory to apply to great art or architecture.

For ages the styles of architecture matured slowly as they were gradually nurtured by local customs, materials and environment. These great styles took years or generations to achieve their full flower. This was true of the Renaissance and of our own Colonial and Greek Revival styles.

But near the turn of the century we suddenly reversed this process and forgot local conditions and influences: we had a fling at choosing our architecture from all over the globe and from any and all periods. Books showed us what had been built throughout the ages. Some of our clients could even afford to import complete interiors of the style which appealed.

We built in whatever style we chose, borrowing freely from antiquity, the Middle Ages, the Renaissance or China. Where we built, how we lived, what materials were indigenous were scarcely of moment in our plans for buildings and houses. We were like kids in a toyshop – with charge accounts.

We did manage to recover slowly from that flood of styles. Today architects may use their own native past styles, but the older imports have virtually ceased.

The International Style took away our gusto for the variety heretofore used, although to a large extent this was also an import. It shared the faults of eclectic architecture with little consideration for local conditions, environment and materials. Buildings tended to look alike, from San Francisco to Algiers, from Rio to New York. It was, however, an approach to a style.

At about the time of the Empire State Architect's first birthday this trend had stopped and we are now passing on to newer fields. The question is: Where are we going?

Our contemporary architecture has not matured. We are impatient to do something new after a few experiments with one type. Designers frantically change with the wind from one fashion to another. When one seems successful, all follow – all glass, all aluminum, all porcelain enamel.

Communication and travel are today so excellent that the entire world knows what is being built everywhere. Magazines keep us up to date. So whenever we see a new idiom in California, Texas or Italy we can catch on and make it our own cliché. The schools have their favorite architects and model their problems on the work of such architects. Strangely, the favorite masters are favorites in the forty-eight States. As these students get into offices they retain their preferences and fight hard for their choices. So their resulting work has a great similarity from Coast to Coast, until new favorites arise.

The worrisome aspect is that the cycles of change, from the use of a few design idioms to a few new ones, occur in bursts which are short-lived – at most, a few years.

The store fronts designed ten or fifteen years ago are outmoded and likely objects for renovation for a new tenant.

Zoning ordinances, when first enacted, greatly influenced our New York City skyline. From the canyon of regular parallel rows of similar heights on Park Avenue we suddenly awoke to the twin-tower-period of Central Park West. This envelope change was dictated by law and the seeming economy of building. Those styles lasted several years.

Our new projects have shown that we have outgrown our past theories that the maximum volume had to be built – a very heartwarming thought.

Today, walking up Park Avenue and Fifth Avenue, one wonders: demolition of dozens of buildings, new buildings following each scrapping process. The buildings being wrecked are not slums, are not eyesores – are not even old buildings in this modern age. One wonders whether all of these new buildings are to be of one fashion. From the appearance of the buildings erected in our City in the last few years, they probably will be the same.

The rash of new buildings erected during the last seven or eight years in the Grand Central zone are predominantly of the spandrel type, commonly known as the layer-cake or ribbon style. There were a few exceptions – those with the vertical brick columns, and most influential, the all-glass fronts.

This all-glass-front has spread throughout the country like wildfire. First the United Nations Building, then Lever House, then the Manufacturers' Trust: then the rash – wherever you go: office buildings, laboratories, plants, dairies, apartment buildings must have their glass-fronts. Whereas the originals have great merit and fitted well their purpose, the copies are not likely to be sound solutions.

Most of these new glass-fronts are of the mullion type. Gone are the office building "layer cakes," now to be looked at as a passing phase of our architecture. We *must* have glass, like the new Seagram Building, from floor to ceiling, how many banks will be small reproductions of the Manufacturers' Trust Building?

These fashions last such a short time that it gives concern to those who hope to see the real growth of a style.

Isn't it apparent that our city architecture develops as do fashions in clothes? Today's fashion will surely be eclipsed in a few years.

Our clients – what do they think of investing for permanence in a fashion? In something that will be "old hat" in a few years after completion? Of course where publicity is the client's goal, an eye-stopper is understandable. Architects who follow the leader must be sure their designs consider their client's long-range interests. There is no doubt that there will be more and more rapid obsolescence of buildings, from a design standpoint.

What next? Why not sunshades? In South America we have examples which satisfy not only the eye but which serve to function with the climate and orientation. Anyone seeing the recent exhibit of South American architecture at the Modern Museum must have been impressed by this fact. Will we proceed to place sunshades where the sun doesn't shine, just as we now place glass to help heat our buildings in summer and to cool them in winter?

A "style" instead of a "fashion" will mature when we consider more factors than a slick skin and the easy clichés – when we design for site, environment and our special way of life, with our clients' ultimate aims in mind. We have all the technological knowledge, we have the designers, the artists, the materials. The next fifteen years of the Empire State Architect's life should tell whether or not an American Style is maturing and whether it will come from this State.

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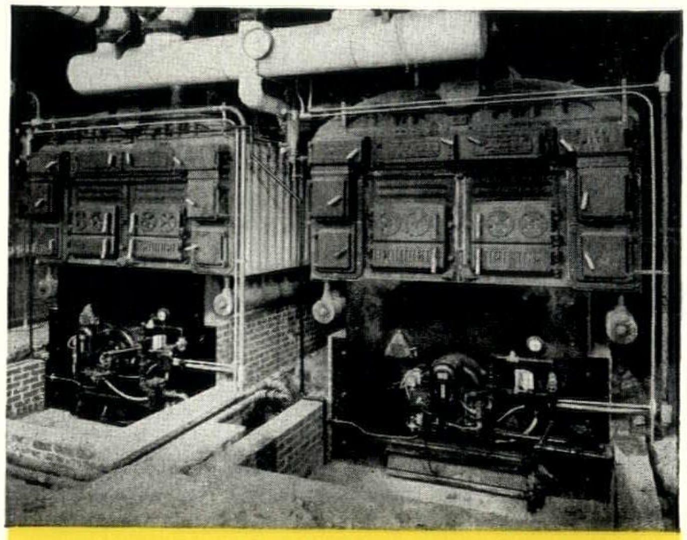

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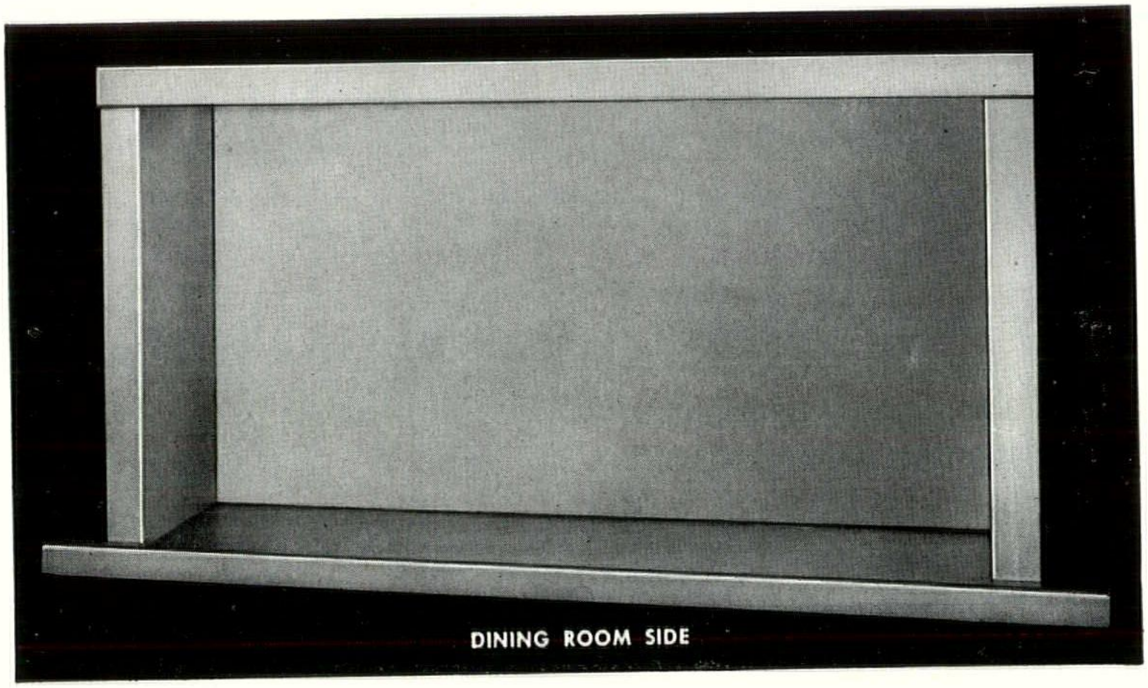
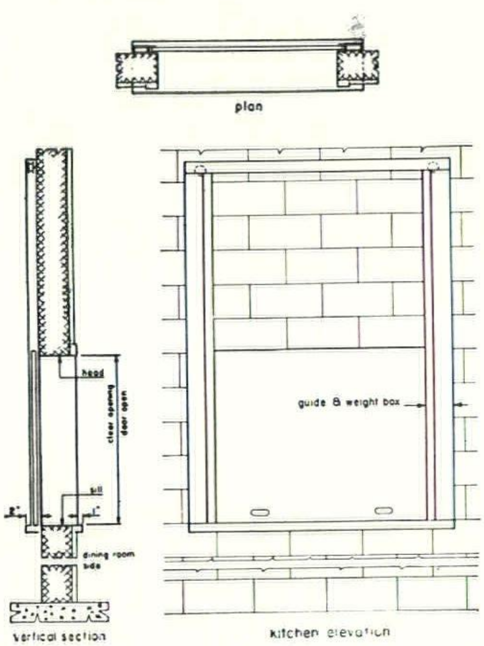


ease service

between kitchen and dining room in many prominent schools



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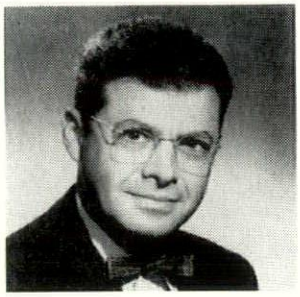
CURTAIN WALL PERFORMANCE SPECIFICATIONS

Ben John Small, A.I.A.

An address before the Michigan Society of Architects
Detroit, Michigan — March 16, 1956



Three years and four days ago I was privileged to stand before your august body and make sounds like an expert — you know, a guy who avoids the small errors as he sweeps on to the grand fallacy. At that time, among the pearls of wisdom that rolled from this podium, I made reference to a multi-million dollar air base my office designed. Since we are discussing curtain walls today, my remarks could very well be in the nature of a progress report. For the benefit of those who were not in attendance at the 1953 meeting, may I again bring up the air base job, only because it represents an extreme condition from which lessons may be learned in terms of structures here in the states.

Back in January of 1951 my partner came panting into my room bursting with the intelligence that we were just commissioned to design Thule Air Base in Greenland, 900 miles from the North Pole, and the lowest temperature there was minus fiftiesh and the highest plus fiftiesh and I had damm well get busy and produce a performance specification for some 8 million square feet of prefabricated floor, wall and roof panels.

When Herb Johnson of Alcoa told me about today's program I immediately excavated from my files some papers I penned in 1951 pertaining to prefabricated panel performance. Now, I want you to know that these files of mine are quite unique. As a specification writer I would be wholly sterile without them. It took me twenty-five years to develop them to a point where the problem has to be on the order of an intercontinental ballistic missile to stump me. This kind of talk may appear to you as somewhat immodest but I am deliberately exposing my inner soul to give you a clinical view of one man's technological tantrum.

In my files you will find precious material on how to write a convincing sounding performance specification without really knowing what you are talking about, how to get the most out of grandfather clauses, weasel words for every occasion, a package of re-treaded punctuation marks, a nice assortment of guarantee clauses guaranteed to impress lay juries in court, 10 tips to hard-pressed contractors on how to create extras, 11 tips to hard-pressed architects on how to wiggle out of them, for those who claim that there's nothing to writing specifications, a year's supply of old envelopes upon which to write on the back of, and a do-it-yourself "or approved equal" kit.

Finally, I came to the file marked "Prefab Panels." I hardly know where to begin in describing the contents of this folder. It was not exactly a shining example of orderliness as befits a man of early toilet training. I found a collection of notes written on the backs of old envelopes snatched from that other file and written mostly while attending panel discussions.

I would guess that the most effective way of boring you would be to recite some of the tips, self-warnings and yearnings for the perfect panel which we needed so desperately to create rapid enclosure within the frighteningly short Greenland summer construction period. Remember this was in 1951 and to prove to you how brilliant we were, note how many of these groping considerations are applicable today. End of commercial.

I must apologize because these diary-like notes have never been edited — some of them ain't even in good English. Nevertheless, here they are in their naked splendor.

Item — Thank goodness, the Greenlandic Eskimos don't have a building code, although I'd love to turn to something for guidance even if I had to pay 6 sealskins for it.

Item — No matter what the panels are ultimately they just got to be extremely easy to install. They tell me it ain't fun to work outdoors in heavy winds and low temperatures. Better recruit U.S. workers coming from the cold states. Come to think of it the panels should have fasteners workable with heavy gloves on large hands. Since we will be having heavy gloves on large hands belonging to large workers panels better be rugged for rough handling. It's awfully hard to be tender when one's ears are brittle.

Item — Since the panels are going to be virtually "slapped" in place better design the structures for less than jewel-like precision and build in more field adjustment tolerances.

Item — Since we have one story structures only, maybe we ought to try stringing a series of panels together on the ground first thereby erecting larger areas quicker.

Item — In case the foremen's head freezes and puts the right panel in the wrong place, better make provision for easy removability without disassembling the whole works.

Item — Since some of the panels are going to be shipped up and others flown up, better think of a design that stacks well in transportation and requires minimum cubage. Maybe some panels could be collapsible to avoid shipping air from here to there. (This later turned out to be the floor panels.)

Item — I wonder if the panels need to be waterproof for transit purposes, in case they are dumped in the sea by accident? Anyway, they ought to be capable of easy repair. I guess the finish should be somewhat resistant to damage and certainly no vandalism-minded character should be able to take out his bad luck on the poor defenseless panels because he was assigned to this deep freeze dungeon.

Item — For speedy enclosure the panels better come from the states complete with triple glazing therein. Exterior light should be plastic, to ward off the blows of windblown gravel. Better hang the doors in them, stateside, complete with hardware. Don't forget to sheathe the door handles in plastic instead of metal for the benefit of forgetful Joe who insists on touching metal with his bare hands to see if his skin really comes off.

Item — Try to keep down to a minimum panel types and sizes. We need the standard floor, wall and roof panels, panels with complete doors and windows in them, corner panels, roof panels with prepared holes in them for penetrations by ventilators, pipes and the like and panels to receive utility connections.

Item — For the smallest buildings, panels should be load-bearing both vertically and horizontally.

Item — Since insulation is probably the most important part of the panel, find a vapor barrier with as nearly close to zero permeability as possible. Even God's instructions to Noah warned him about the vapor barrier. The Lord said: "Make thee an ark of gopher wood: rooms shalt thou make in the ark, and shall pitch it within and without with pitch." Wet or frozen insulation is fatal here so better wrap it in its own envelope of sheet vinyl, or something capable of sealing against vapor transmission. Check fiber glass verses rock wool for hygroscopic characteristics.

Item — Should we use metal, watch out for corrosion — mostly in transit — it's pretty dry around Thule. I am told you could ignite a 2" x 4" with a single match!

Item — Now our panel shapes up to be 4" thick. We need 3½" of insulation for the proper "U" value. We decide to use 3¼ lbs. of density fiber glass in batt form for the walls and roofs and a 6" thick blanket for the floors.

Item — One thing we have just got to watch like mad. Avoid metallic through wall conductivity. Litchfield (my partner) who just came back from Thule reports that in some of the Danish buildings roofing nails showed long icicles in the attic, as well as powdered snow which developed as a result of accumulated moisture. This has to be swept out regularly to prevent ceiling leaks during the late spring and summer thaw. Therefore, through-wall metal fastenings are out as well as attic spaces.

Item — We don't want any screw or bolt heads showing on the exterior, or for that matter any projection since these spawn icicles some ten to twelve feet long.

Item — To breathe or not to breathe is a rough question for our panels. If they breathe then the very fine powdery blow snow will penetrate through the nostrils into the deep dark panel interior and liquify under summer solar heat and then start weeping all over the place. If this happens in our roof panels we're in a mess. If our panels don't breathe and if our vaperproof insulation envelope remains unpierced then we need fear no internal diastrophism.

Item — If we have anymore office discussions on the subject of joints between panels, I am going to take to the bottle with a vengeance. What a vexing problem this is! Joints prevent absolute continuity of the vapor barrier, we cannot hope for a material that will retain adhesiveness and flexibility through all our extremes of temperature; we cannot hope for perfect workmanship to obviate the inevitable caulking holidays; we know nothing of what the special problems of oxidation at low temperatures will do to the compound; we know nothing of the deteriorating impact of the sun's actinic rays in this region; we know nothing about prolonged exposure to the relentless frigid aridity of the North on caulking compounds never heretofore compounded; laboratory tests are meaningless, and I wish I stuck to fiddle playing.

So much for the notes. I have only touched upon some of the design problems and have little time left here to recount them all. In retrospect, now, 5 years later, it can be said we were just lucky for actually there is much to be learned. Design blunders are made — look what big business caulking has become — and will continue to be made, unless there is established some sort of central repository for recorded experience, good and bad.

All of us who have employed panels in the last decade should be conscientious contributors to the repository if we are to advance this important architectural and technical renaissance. I don't agree with C. F. Kettering who said, "If you want to kill any idea in the world today, get a committee working on it."

Just as the Aluminum Window Manufacturer's Association has made important strides in promoting good window specifications on a performance basis, so can the curtain wall people through joint action by its manufacturers and architects. The Princeton Study concerning stainless steel curtain walls would make a splendid starting point insofar as design objectives are concerned. An industry wide performance specification should establish the area of interest for the curtain wall contractor with special attention given to "Work Not Included."

Let's stop here for a moment and with bowed heads acknowledge that curtain walls have come to stay. Even the Sweet's Catalog people this year have created a special category under the heading of "Curtain Walls" in Section 3. I looked up the roster of manufacturers represented and thought I had blundered into the window section. Every window manufacturer I had ever heard of, and few I hadn't are in there pitching with their "U" values waving in the breeze. Sweets has seen fit to categorize the curtain wall craft as follows:—

- Curtain Walls — Aluminum or Bronze
  - Frame, glass — 8 companies
  - Frame, window, aluminum or bronze spandrel — 28 companies
  - Frame, window, composition spandrel — 11 companies
  - Frame, window glass spandrel — 5 companies
  - Frame, window marble spandrel — 1 company
  - Frame, window, porcelain enamel spandrel — 23 companies
  - Frame, window, steel, stainless steel spandrel — 16 companies
  - Panel — 11 companies
- Curtain Walls — Asbestos — Cement Panel — 1 company
- Curtain Walls — Marble spandrels and panels — any marble company
- Curtain Walls — Porcelain Enamel
  - Panel — 11 companies
  - Spandrels and Panels — 15 companies
- Curtain Walls — Steel or stainless steel
  - Frame, glass — 1 company
  - Frame, window, aluminum or bronze spandrel — 4 companies
  - Frame, window glass spandrel — 1 company
  - Frame, window, porcelain enamel spandrel — 6 companies
  - Frame, window, steel, stainless steel spandrel — 8 companies
  - Panel — 6 companies

Of course, many of these companies are listed in several of the aforementioned categories, but nevertheless there remains heavy representation. All would be well if only these people would get together to make less regemented confusion out of orderly chaos. I spoke of the need for industry agreement on who does what. The "Work Not Included" clause in many manufacturers, suggested specifications is at least one small argument for this need. Listen to this.

Manufacturer "A" says in effect he does not furnish structural steel, back-up walls, convector covers, metal stools, glazing materials (except continuous glazing bead), glazing, finish caulking, wall cleaning after erection and preparation for attachment of mullion anchoring clips — this refers to punching structural steel and to installing inserts in concrete.

Manufacturer "B" excludes only structural steel supports, eave flashings and sash girt flashings.

Manufacturer "C" excludes only structural steel supports and all field painting.

Manufacturer "D" suggests to the specifier three choices as follows:—

"All fastening materials shall be (1) furnished and installed by this contractor, (2) furnished by framing manufacturer and installed by this contractor, (3) furnished and installed by the framing manufacturer."

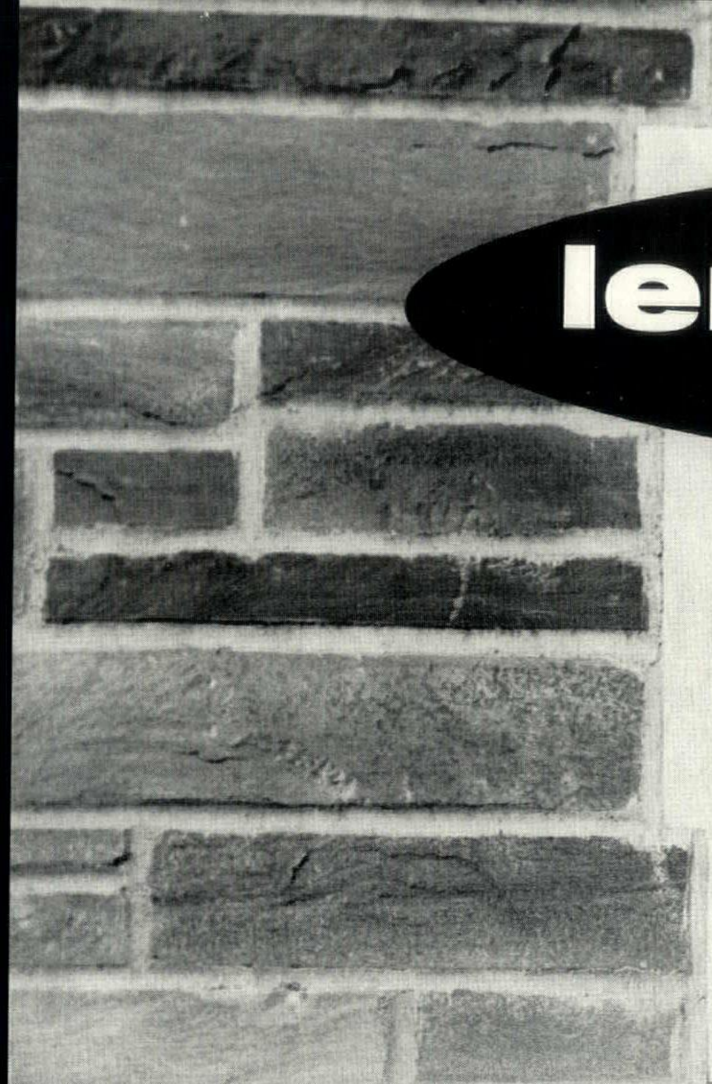
Manufacturer "E" includes caulking and gasketing material and so on. See what I mean?

In the view of one prominent New York General Contractor, he thinks the architect should not tie the hands of the General Contractor with respect to "who does what." If the General Contractor wishes to father a joint venture between a cross-eyed window sub-contractor and a ravishing beauty of a panel sub-contractor in the interest of job economy he should be permitted to do this, since to do otherwise would be obviously inconsistent with the cardinal principle of the performance specification.

A good performance specification for curtain walls would cover, among other factors, such things as Callender included in the Princeton Study namely, durability, size, thickness, weight, insulation factor, fire resistance, rating, wind resistance, weatherproof and vaporproof requirements, internal ventilation and drainage, expansion and contraction provisions, removability, sound transmission, sound deadening against rain and wind, erection criteria, anchorage characteristics, handleability, shipping characteristics, fabrication requirements, appearance restrictions, maintenance data, and so on.

I am quite mindful of Mark Twain's admonition "Nothing so needs reforming as other people's habits" but I do hope sincerely that labor jurisdictional disputes regarding curtain walls do not become a hindering factor in the days to come. For every new type of prefabricated wall panel that appears on the architectural scene a new type of hassle is sure to shadow it. Take for instance an innocent little plywood panel faced with light-gage aluminum. I know of an instance where the iron workers claimed it because the panel was to be set in metal window frames, but since the panel had a wood core and facings were of light-gage metal the carpenters protested only to have the whole shebang settled by the caulkers who installed it on the grounds that the panels were required to be set in caulking. It is a good thing the panels did not have one face of porcelain for the glaziers would have been heard from, since porcelain is glass.

(Continued on Page 56.)



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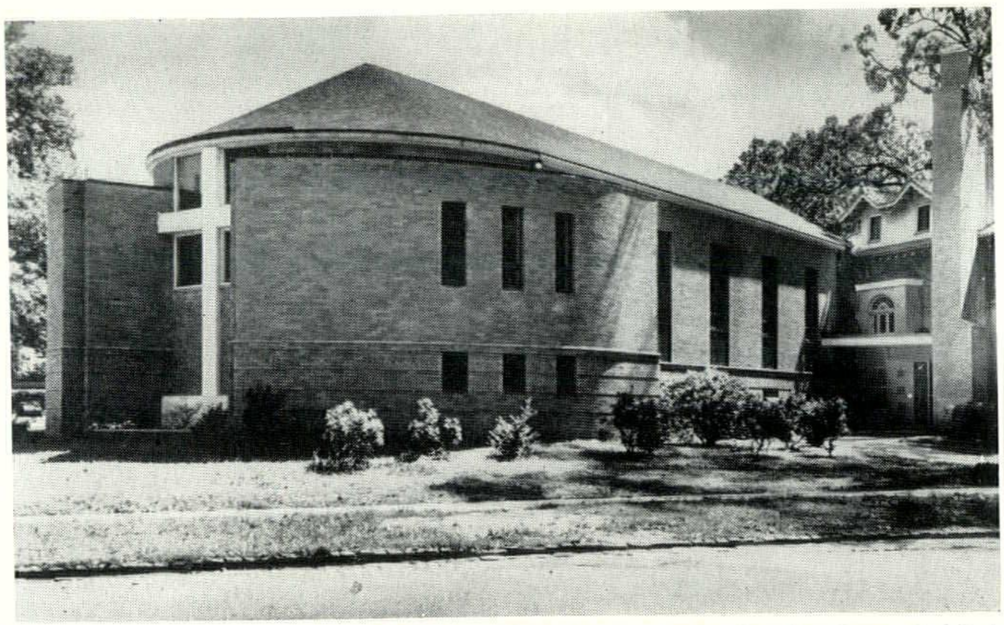

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PROGRESS IN SCHOOL BUILDING

by MALCOLM B. MOYER

Recently two unusual releases have come from the State Education Department. One, a full page circular letter inviting more originality in schoolhouse design and closing with "Let the Dreamers Dream!"

The other, a rather extensive Newspaper Report of an "interview," with Dr. Essex, wherein he opined that the only way to reduce school building costs was to go to "Pre Fabs!"

Those of us who have been taking bids on schoolhouse construction this Spring have had some nasty jolts, from over-runs. Probably these have induced the School Grounds and Building Division to speak up.

The writer has been working with the State Education Department since 1924 and never once during this period has there been a time, when the design of a school building could be undertaken without a lot of restrictions, which reduced the end product to the monotony of standardization.

As of today, the one story structures appear to be a gesture towards cost reduction but forthwith some one in the department is demanding deeper class rooms, which involve heavier roof members, which increases costs.

The use of long one story buildings raises the plumbing costs in appreciable amounts. The demand for two toilet rooms per class room instead of the conventional central toilet rooms together with a sink in each room increases the plumbing costs greatly. If the older grades could be placed above the (K thru 3rd) toilet system costs would be greatly reduced.

Lighting demands, thanks to a successful propaganda campaign by the Utility Companies are about three times what they formerly were. The widespread demand for elaborate public address systems, with heavy fluorescent lighting has increased the ratio of electrical to total costs a great deal.

The heating system with fancy unit ventilators and complicated control systems have increased in cost. The single story roof increases total school building heat loss by about 75%. Broad bands of windows add greatly to the room heat losses, and bring in a lighting problem of keeping the glare of the Sun's direct rays out of the children's eyes. They bring in an added amount of heat during Spring and Fall, which cannot be counteracted by the reduced volume of air now permitted and render some rooms scarcely usable.

The Venetian Blind Manufacturers are having a field day because the glare of the "open sided" class room would make intolerable conditions without their product covering most of the glass. These blinds add a considerable amount to the overall cost.

If the dreamers must don strait jackets before they commence seeking inspiration in somnambulism, how can real progress be expected?

On the other hand if ready cut schools resemble most ready cut houses, will they attract bankers to buy 30 year bond issues, based upon them as security?

Will the taxpayers be as willing to vote for bond issues if all they get for their money is a sort of shed like structure held together with bolts and screws?

These questions must be answered and proper action taken before we can make greater progress in school building.

ANTHRACITE IN NEW YORK STATE SCHOOLS

By Norman C. Curtain

The post war development of equipment designed to take advantage of the physical and chemical characteristics of Anthracite has brought it to a convenience and economic level comparable to other fuels available in the space heating field. The modern school with its ranch type single story design has been able to utilize this equipment and to retain the long recognized advantages of unlimited safe storage and cleanliness.

Growing public interest in reducing or eliminating air pollution has brought the use of anthracite, which is smokeless under all conditions, sharply into focus. This is particularly important in schools built in urban areas with high concentration of residences, and in rapidly developing suburban areas which are entirely residential.

Two important developments have taken place in anthracite equipment design.

GRAVITY WATER COOLED GRATE

The Losch Boiler Company of Summit Station, Pa. developed an integral boiler burner unit with a capacity of 7200 sq. ft. EDR steam using the cross feed principle on a water-cooled grate. Further research directed toward the development of a conversion water-cooled grate resulted in a design which could be applied to all conventional cast iron and steel boilers up to capacities of 20,000 sq. ft. EDR steam.

This grate, which has been developed by Losch and Electric Furnace Man, Inc. of Emmaus, Pa., consists of almost flat steel plates. (Angle is lowered 7° from the horizontal feed end to the discharge end.) It is made of ¼ inch steel plates with 3/32 inch holes drilled on ¾ inch centers. A water chamber ¾ inch deep located under the grate is supplied by water from the boiler through flexible connections. The water reaches the grate at the upper end and is circulated by gravity into the boiler below the water line. In this manner, heat from the fuel bed is absorbed by the boiler water and in many cases increases the boiler output by 10% to 15%. Application is limited to low pressure heating boilers.

Coal is fed by gravity from a hopper, running along the length of the boiler, to the grate. The grate is suspended on hangers so that it can move freely. A cam which is connected to the gear box of the drive unit is so arranged as to reciprocate the grate, thus creating movement of fresh fuel across the retort where it is burned and at the same time discharging the ash from the free end to specially-designed containers located at the base of the boiler. The total width of the active grate area from the time the fresh coal enters until it is discharged as ash, is 16 inches. The total movement of the grate is ¼ inch. The rate of the coal feed can be regulated by the number of reciprocations and can be set to move the grate once every 40 seconds for maximum movement and once every 5 minutes for minimum movement. Intermediate positions provide regulation in accordance with the heating load to be carried. Any adjustment by the operator is quickly and easily accomplished.

The water-cooled grate eliminates moving parts in the burning zone and provides a trouble-free automatic anthracite burner. Over-sized foreign matter will not make the grate inoperative. While the grate width is fixed, variations of from 30″ to 84″ in length are available. Where fire box dimensions permit, a conversion grate can be installed on both sides of the boiler. As a result of maintaining a thin fuel bed, a continuous high burning rate can be sustained without the development of excess air as a result of uneven distribution in burning. Field tests indicate boiler and furnace efficiencies will average from 75 to 82%.

MECHANICAL CROSS FEED AIR COOLED GRATE

The Motorstokor Division of the Hershey Machine & Foundry Company of Manheim, Pa. entered the commercial burner field with the development of a cross-feed conversion unit using air cooled tuyeres rather than water-cooled systems.

The manufacturer developed a cast iron high silicon tuyere bar 14 inches in length with an extra-long cooling fin, so cast as to provide pads between the tuyere bars. The total free area of the grate is a maximum of 5%.

In order to insure uniform fuel bed thickness throughout the length and width of the grate, a twin worm feeding system was developed. Coal is picked up from a universal bin feeder and discharged into a hopper box, thus preventing feeding of the coal directly from above to the supply worm. The supply worm is designed with a capacity slightly in excess of the four distribution plungers so as to insure uniform supply of coal throughout the length of the retort. To prevent overfeeding of coal at the remote end of the supply worm, a reverse flight worm picks up the excess coal and returns it to the hopper box.

In this design, all moving parts are outside the burning zone. The tuyere design is free from metal growth and wear and service costs are low.

There are no obstructions in front of the boiler since the burner can be installed from either side. Capacities of present installations are 200 lb. of coal per hour for the two-section unit and 300 lb. of coal per hour for the three-section unit. Applications may be made to high and low pressure boilers. Radiation loads up to 9750 sq. ft. EDR steam can be carried by a single unit.

CUSTODIAL ATTENTION

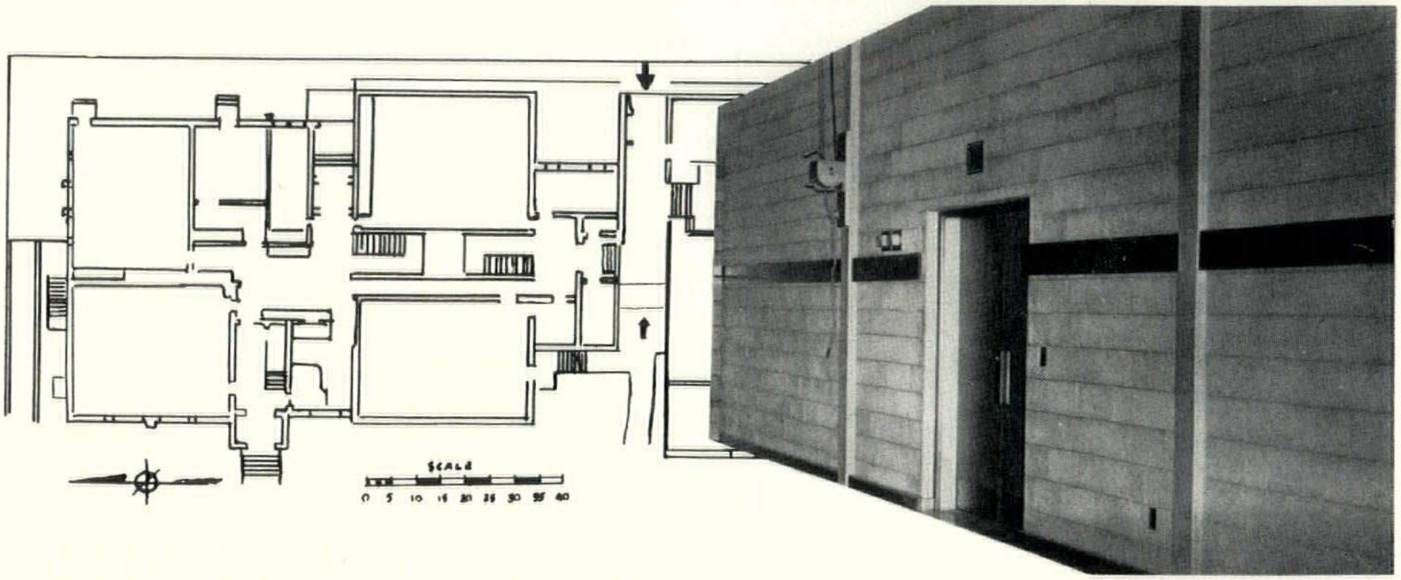
The fact that anthracite is fed automatically from the bin; that ash is discharged continuously during the running cycle and that ash can be removed automatically from the base of the boiler reduces custodial attention to a minimum. Typical case histories show that 1 to 1½ man hours per school day during the heating season is the total time required in an average twelve room school with gymnasium and auditorium for boiler room duties.

These duties are usually performed while class rooms are occupied and in no way interfere with other custodial services. Complete automatic controls are standard equipment.

Simplicity of design and the elimination of fuel and air adjustments further reduce custodial attention. The Fuel Management Division of the New York City Board of Education, following an exhaustive study of

(More)

One answer
to four school construction demands



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modern anthracite burners, has adopted the equipment for eight schools in their modernization program. Simplicity and low maintenance cost were the deciding factors in the adoption of this policy.

The New York State cities have adopted modern anthracite installations almost universally in their schools. Syracuse and Elmira are the cities which are doing this.

FUEL COST

The architect and engineer are frequently faced with the problem of estimating the fuel requirements of new schools.

Many factors are involved in the total fuel requirement for a school. It is not difficult to make an accurate estimate when these factors are known or can be established. These items and the terms in which they are expressed as well as the sources of this information are given here:

1. Ventilating Load – E.D.R. steam radiation
2. Direct Heating Load – E.D.R. steam radiation
3. Hot Water Load – gallons per day
4. Mean Average Outside Temperature (from A.S.H. & V.E. Guide)
5. Total Number of Days in Heating Season (from A.S.H. & V.E. Guide)
6. Total Number of Heat Required School Days (from School Board)

The total annual fuel requirements is the sum of fuel quantities needed for ventilating, heating and hot water. Since the heating value of all fuels is in BTU's per unit (lb., gal. or cu. ft.) it is only necessary to determine total BTU's for these various uses. The following formulae can be applied:

(Continued on Page 56.)

HEATING BTU per year = (Heating Load (EDR Steam) x 240 (BTU/sq ft/hr) x No. of Heating hrs x T1) / Design Temperature Difference

T1 is difference between average daily room temperature and mean average outside temperature.

VENTILATION BTU per year = (Ventilating Load (EDR Steam) x 240 x No. of Ventilating Hours x T11) / Design Temperature Difference

T11 is difference between 70°F and Mean average outside temperature

HOT WATER BTU per year = Daily Load (gal) x 8.33 x 100 (degree rise) x No. of school days

FUEL CONSUMPTION TONS OF ANTHRACITE = Total Annual BTU's Required / 12500 (BTU/lb) x .70 (% Efficiency) x 2000 (lbs/ton)

TYPICAL EXAMPLE *Rochester, N. Y.*

AVERAGE ROOM TEMP:

2 Hours at 75°F 8 Hours at 70°F 14 Hours at 55°F

Average Daily Room Temperature = 61.6°F

Total number of days in heating season 260
Total number of school days 185
Total number of heat required school days 170
Ratio of heat required school days to total days – 17/26

SEASON AVERAGE TEMPERATURE MAINTAINED

170 days at 61.6°F 90 days (260-170) at 55° Season Average 59.3°F

NUMBER OF HOURS FOR HEATING AND VENTILATING

Total Hours in Heating Season = 24 x 260 = 6240 Hrs.
Total Hours in Ventilating Season = 6240 x 17/26 x 8/24 = 1360 hours
T1 For Rochester, N. Y.: 59.3° - 40°* = 19.3° T11 For Rochester, N. Y.: 70° - 40°* = 30°
*Means Average outside temperature for 6500 degree days

The following established heating values should be used.
Rice Anthracite – 12,500 BTU/lb. – 25,000,000 BTU/ton
No. 2 Fuel Oil – 140,000 BTU/Gal. *No. 5 Fuel Oil – 147,000 BTU/Gal.
Gas From Local Rate Schedule
*Where preheating is required, it will add approximately ½ cent per gallon to the fuel cost.

Transportation is a major factor affecting fuel costs. Costs will vary, almost county to county depending on the distance from the original source of supply.

The proximity of the anthracite region in Northeast Pennsylvania gives it a price advantage in all areas of New York State. Cost comparisons will depend on the size of anthracite, and the kinds of other fuels being considered. Today's modern anthracite equipment has established efficiencies comparable with those of other fuels used in school buildings. Therefore costs can be made on the direct BTU basis by applying local prices for the respective fuels.

With the development of new anthracite equipment to meet the demand for convenience, cleanliness and economy combined with anthracite's long recognized advantages of safety and dependability, today's architect can rely on this fuel to meet every requirement for schools.

To assist architects throughout New York State, the Anthracite Information Bureau, 342 Madison Avenue, New York, has prepared a complete handbook of technical data on the new equipment now available. It will be sent, without charge, to any architects desiring to have a copy.

OPERATING DATA
SCOTIA, NEW YORK SCHOOLS AUTOMATIC ANTHRACITE EQUIPMENT

SCHOOL	*LINCOLN*	*GLENDALE*	*GLENWARDEN*
Number of Classrooms	21	14	10
Number of Boilers	2	2	2
Type-Capacity Boiler	Pacific (15,180 EDR)	Pacific (10,330 EDR)	Pacific (10,330)
Stoker	Comb. Eng. Skelly	Comb. Eng. Skelly	Comb. Eng. Skelly
Stoker Capacity	480 lbs/hr	320 lbs/hr	320 lbs/hr
No. of Custodians	2	1½	1½
HEATING			
Labor	2-4 man hrs/day	2-3 man hrs/day	2-3 man hrs/day
Fuel	Rice Anthracite	Rice Anthracite	Rice Anthracite
Annual Quantity	215 tons	170 tons	150 tons

CURTAIN WALL PERFORMANCE *(Continued)*

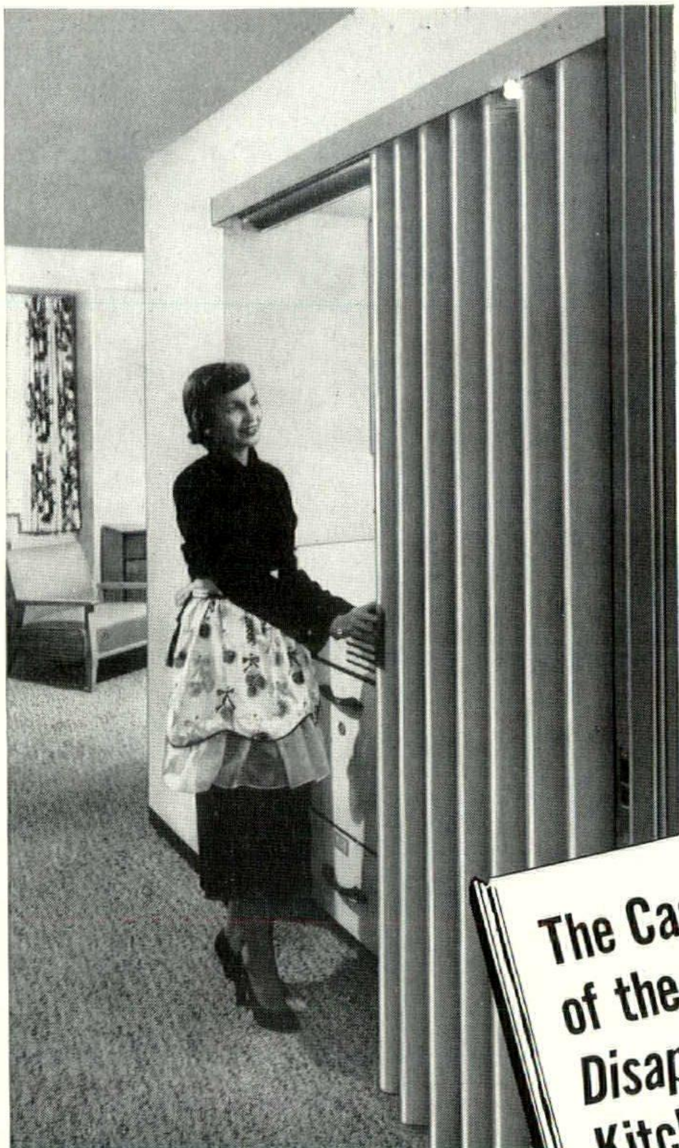
A short while ago I told a leading curtain wall manufacturer about our meeting today and asked him to say something brilliant on the subject. Before one could say "whoinhell designed that panel" he gushed forth with the paraphrased following:

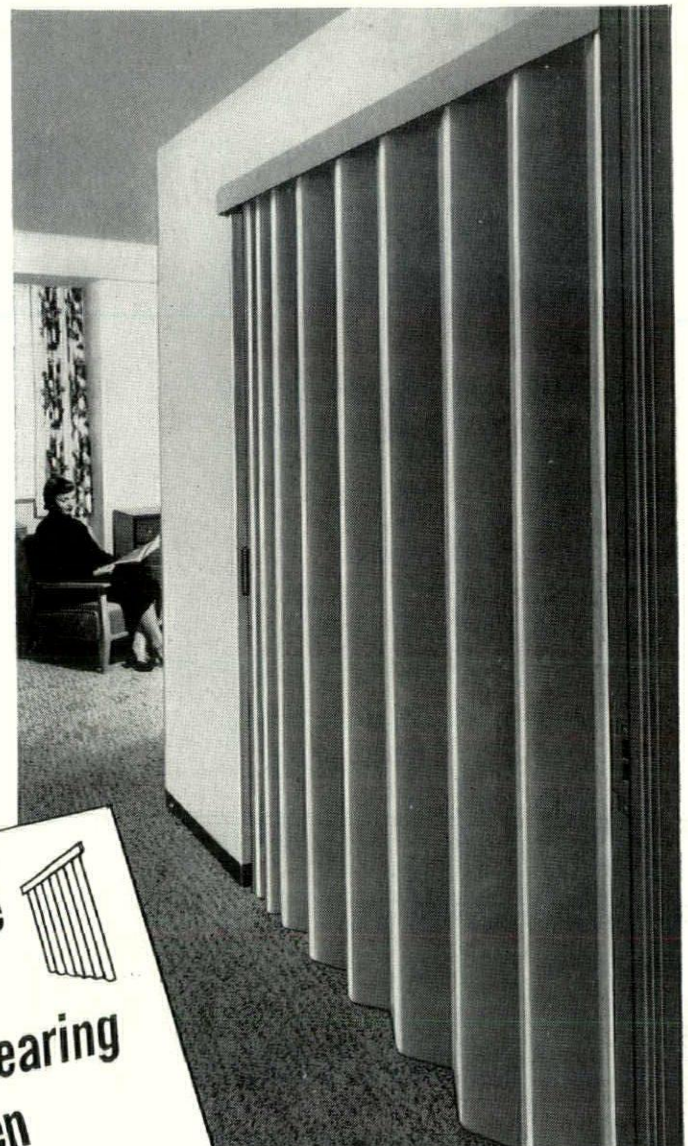
"Here we are about the oldest established curtain wall makers and suddenly we find ourselves competing with jokers who buy a window here and a panel there and get someone else to do the erection and off they go dividing responsibility all over the lot and stigmatizing our trade as a bunch of opportunists. First thing you know architects will throw us out as they have other trades where difficulties had become unbearable. No legitimate curtain wall manufacturer should permit any erection gang to put up his stuff other than the manufacturer's own trained crews. For true economy the curtain wall assembly must be fabricated in its entirety in the manufacturer's plant. Architects should become increasingly aware of the fact that the biggest bugaboo in curtain wall construction is leaks first, then for the erection crews problems of proper alignment, then proper allowances for field tolerances to accommodate the inevitable construction inaccuracies and then a thorough recognition that buildings are not static and therefore require ample provision for expansion and construction in all directions.

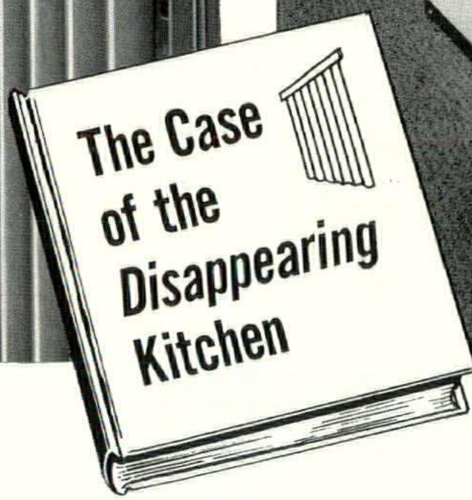
"In my office on a recent large curtain wall project we called in two reputable manufacturers, made sure we were talking to their technical "low pressure" people and squeezed their best advice out of them. We think it well to talk to more than one manufacturer just to double check several approaches to a given problem. On our public and private work our specifications stress performance objectives not unlike the approach we take in waterproofing specifications. We all know it is foolhardy to specify each and every grunt in a waterproofing system and then blithely require the Contractor to furnish a guarantee.

"When the shop drawing for our curtain wall system come in these are viewed with excitement paralleling a ship launching. We study these to see what is being offered and how well they comply with the requirements of the Contract Documents. The sample examination stage is important too. We usually take the assembly apart and perform an autopsy that would make a medical examiner beam. Gawd do we take ouselves seriously at this point. The background of the proposed curtain wall subcontractor is also examined with great care. In the main we exercise more than reasonable care from birth to 'in situ' of the curtain walls for if we don't on this increasing complex phase of practice it could be curtains for us."

Thank you for having me here today and excuse me for rushing off for I must catch a plane to Greenland – curtain wall igloos, you know. Thank you.







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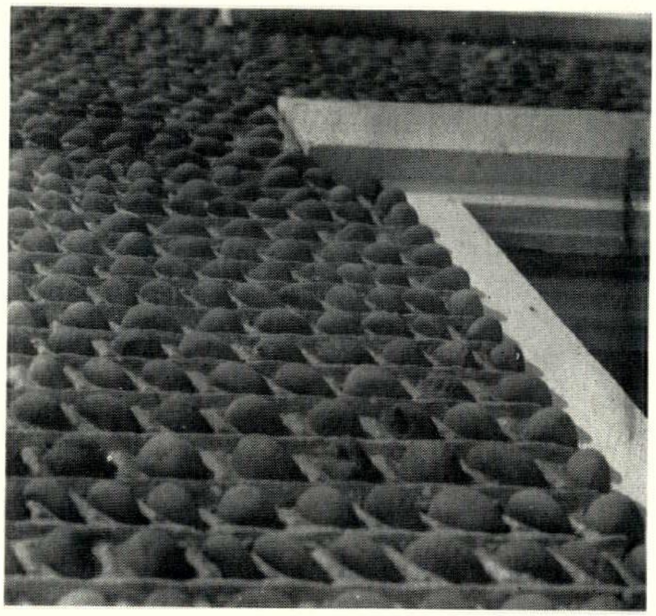
The masons, undoubtedly, had their own formulas for mixing the mortar and experience was their best teacher in selecting the right quality of burnt lime and the most suitable gravel.

We do know that some of the masons prepared the mortar in the following manner. In the fall of the year they dug a pit near the site of the proposed building, about six feet square and six feet deep. Into the pit was deposited a quantity of burnt limestone and water. It was then covered with cow-manure and allowed to stand over winter. Whether additional ingredients were added or how it was mixed I have not been able to uncover.



In the later cobblestone masonry the lake-washed stones projected considerably more than the early fieldstones. Stone quoins or corner piers were necessary at external corners.

The lime was burnt in local lime pits in a crude manner. Some of the lumps would be over-burnt and some under-burnt, and no doubt, much of the quality of the lime mortar depended upon the right selection of the lump lime.

Some of the masonry walls were built by unskilled or careless craftsmen. The mortar was of a poor quality and the carpentry work was of inferior workmanship. However, this poor craftsmanship does not apply only to the cobblestone buildings, it can also be seen in the Greek Revival and even more so in the Victorian work.

The reason for this poor workmanship that found its way into the building craft was probably caused by the phenomenal population growth of western New York State between 1830 and 1860.

The population of cities doubled in four or five years and villages grew up like mushrooms. It is difficult for us today to imagine the demand for stores, shops and houses. The need for buildings combined with a moving population must have completely broken down the old apprentice system. In all probability it was possible during those years for mechanics with but a year or two of training, to undertake the construction of buildings which they were not qualified to erect. A general decline in the art of building was inevitable.

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In the copper tube sanitary drainage system at the left, four sections (circled) can be prefabricated in the shop while waiting for construction to reach the roughing-in stage. The work is done easier and faster and helps eliminate costly delays to building schedules.

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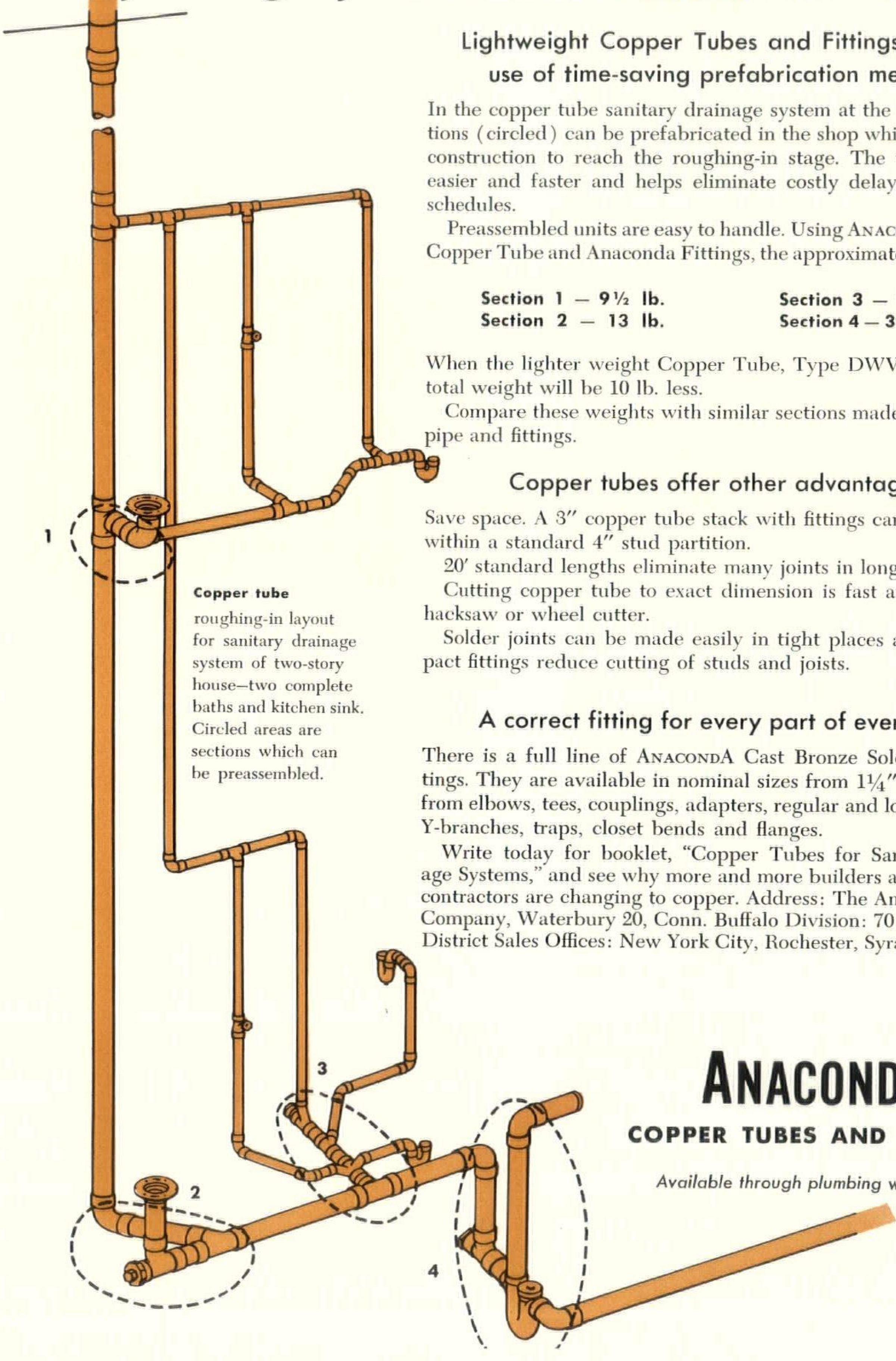

Copper tube roughing-in layout for sanitary drainage system of two-story house—two complete baths and kitchen sink. Circled areas are sections which can be preassembled.

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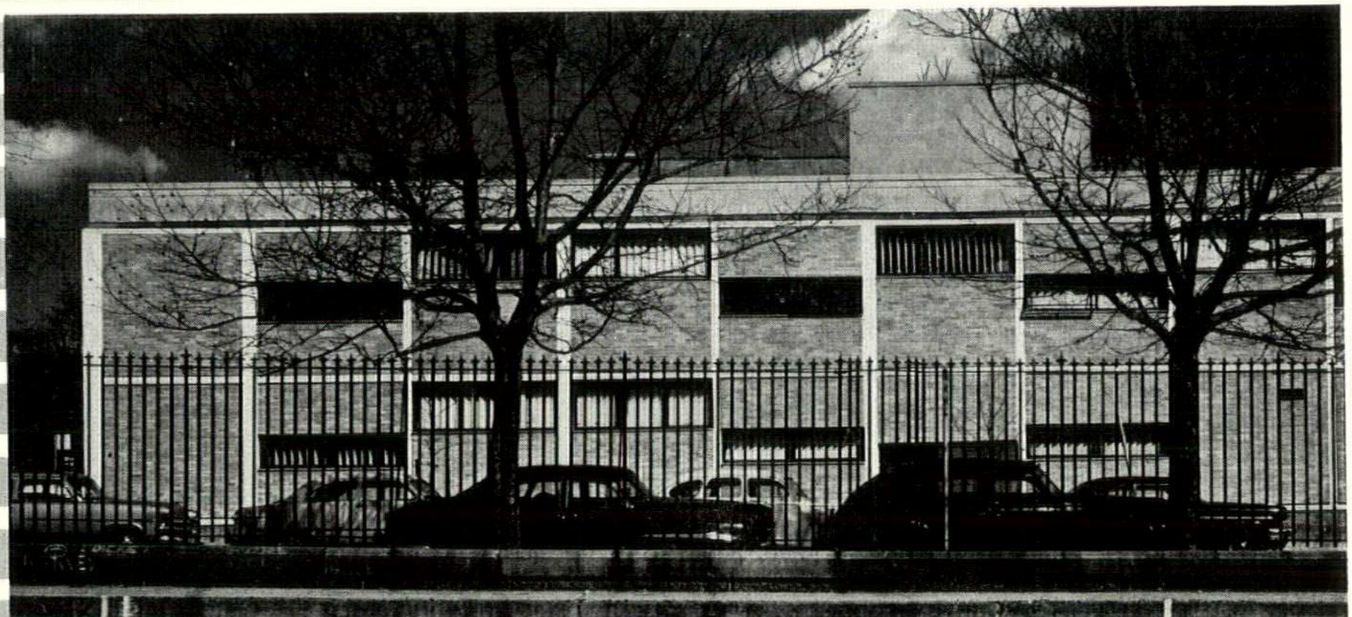

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