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ON THE COVER

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Write for Bulletin No. 161

HOPE'S WINDOWS, INC., Jamestown, N.Y.
THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS
FROM THE DESK OF THE PRESIDENT

Efforts have been made lately through broadsides of certain public officials and magazine writers to urge a "re-use" policy and the employment of only permanent civil-service technicians for the preparation of the plans and specifications for new schools. All this in the name of economy and simplicity of design.

Will any intelligent, thoughtful person sincerely approve such extraordinary recommendations?

We admit gladly that private architects have no monopoly in brains, and that there are many skilled professional civil-service career men in public service who have few superiors in private practice. But there is no field of present-day activity in which there are greater chances for changes in fundamental concepts than in elementary and high school planning. Are we to ignore these exciting challenges and continue to design according to obsolete standards?

The chief influence, next to the family and home, for developing the minds and characters of our children is our schools. Mr. Carl B. Munck, president of the National School Board Association, Inc., in a recent article in School Management, points out that "We are engaged, as all critics of the schools tell us so loudly and often, in a fierce competitive struggle for supremacy in the field of knowledge. Shouldn't we be thinking less about taxes and more about how to provide our children with the finest teachers and facilities that money can buy?" Or would the critics prefer we design schools, as Commissioner Robert Moses has stated, as "problems to be shot to Univac by pneumatic tube to come zooming back neatly packaged and completely solved."

I join with those, as I am sure you do, in and out of our profession who say "enough of all this nonsense."

It would be tragically wasteful and the poorest economy to try and cut initial costs only to find that the cost of maintaining poor materials and finishes becomes exorbitant. It is far better to have a higher initial expense and be assured of proper efficiency and appearance — and lower maintenance costs — than to save money unwisely at the beginning. Theodore Roosevelt said, "Do not let selfish men or greedy interests skin your country of its beauty. The World and the Future and your very children shall judge you according as you deal with this Sacred Trust."

HARRY M. PRINCE, President
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As I write this we are in the middle of the 1959 legislative session in Albany. I believe our membership will be interested in a progress report from your executive director who is in weekly attendance on the Albany scene in your behalf. Already numerous bills affecting the architectural profession have been introduced, some of which N.Y.S.A.A. heartily supports and many others we vigorously oppose.

As always each year, the various committees and sub-committees concerned with legislation are giving careful study to the many pending bills. These include the committees on Multiple Dwellings, Multiple Residence, Labor Law, State Building Code, Education, Ethics and Professional Practice, and of course, the indefatigable Legislative Committee itself, co-chaired by Matthew W. Del Gaudio and Richard Roth and composed of dedicated men who meet frequently during the session and contribute generously of their time and counsel in behalf of their fellow-architects.

Among the more important and controversial measures introduced in both houses thus far are the perennial corporate practice engineering bills and legislation to permit waiving of requirements for architect's license of persons with 15 or more years experience as architects. To these we are opposed and hope to defeat again.

Carrying out the mandate of the 1958 N.Y.S.A.A. Convention, we have had introduced amendments to the State Education Law eliminating the dollar and cubic contents in the law and substituting a square footage basis for the requirement of an architect's seal on all plans filed involving livable residential areas, but excepting bona fide farm buildings. In cooperation with the State Education Department, and at the instigation of our Committee on Ethics and Professional Practice, legislation is also being prepared which will tighten the rule on disciplinary proceedings for unprofessional conduct, similar to that which now prevails in the engineering law. These are bills we favor and trust to receive the approval of the Legislature.

More controversial are proposed amendments to the Labor Law and Executive Law which attempt to clarify and define the jurisdiction between the State Building Code Commission and the Labor Department in matters relating to safety requirements in mercantile and industrial buildings and factories in areas where the State Building Code prevails. Because of the various conflicts of interest, this question may not be so readily resolved. We hope it will for the benefit of the architect who oftentimes "is in the middle" of the controversy which is not in the public interest.

Housing and bills on changes in the Multiple Dwelling and Multiple Residence laws are being carefully analyzed. Thanks to the splendid cooperation of Senator MacNeil Mitchell and his excellent Joint Legislative Committee there is a close feeling of unanimity in such legislation.

Remaining to be determined is the $500 million bond issue outside the debt limit for New York City school construction, which has received one approval and requires the current Legislature's adoption before it can be submitted for referendum.

Pending also is a Resolution introduced by Senator John Hughes and Assemblyman Don Brown, both of Syracuse, calling for an investigation of all state contracts awarded and fees paid to engineers and architects during the past four years. Our Legislative Committee is studying the question and is obtaining all the data it can before taking any position on the Resolution.

Suffice to say, the 1959 session holds much of importance for architects. You may be assured, the committees of N.Y.S.A.A. and your executive director will do all in their power to keep our constituent organizations fully informed as to the progress and development of any legislation affecting our membership interest.

JOSEPH F. ADDONIZIO, Executive Director
New York State Association of Architects, Inc.
The Second United Presbyterian Church of Amherst is a re-located congregation. It had been a city church, the Second United Presbyterian Church of Buffalo, where, until a few years ago, it flourished. At that time, its congregation began moving to the suburbs. Many of the re-located members still traveled the distance into the city to attend services but, as time went on, this became increasingly difficult. Then came an opportunity to sell their building to the City of Buffalo which desperately needed it for conversion into an elementary school. The city's offer was accepted and the congregation purchased property in Williamsville in an area where many of the old congregation had settled. The last church service in the old building was held Easter Sunday morning 1957 and exactly one year later on Easter Sunday 1958, the congregation moved into this new building.

An unusual feature of the Williamsville area which influenced the planning of the building, is the solid rock lying, in some cases, merely inches below the surface of the ground. With this condition, basement areas were not feasible but the site was large enough to permit the building to spread out above grade.

The present congregation is expected to grow considerably in the future due to the church's location in a rapidly developing area. For this reason, provisions were made for extensive future expansion of the educational and social facilities. The future wing will include a large assembly area with stage facilities and eight classrooms. When this is built, the present assembly area will be partitioned into permanent classrooms.
Because of the church’s location in a suburban area, most of the congregation arrives by automobile. A large parking area was provided and it became important to have a major entrance convenient to this. A pleasantly landscaped court leads to a vestibule from which one may enter either the assembly or the church. The church offices have been placed to take advantage of convenient parking and so located as to be readily accessible when the rest of the building is closed.

Finishes in the church proper are brick, painted plaster, laminated wood beams and wood roof deck. All the structure is exposed and incorporated into the design. The Nave and the Balcony together seat about 280 people. The choir and the organ console are located behind a screen to the right of the Chancel, with the organ speakers mounted on open beams directly above. The entire east wall of the Chancel is composed of a diffusing glass which floods the area with a soft light highlighting a simple oak cross mounted on the brick wall which forms the backdrop for the Chancel. Pews and Chancel furniture were all Architect designed and are finished in a light oak to match the woodwork in the Church.

The Women’s Parlor adjacent to the Narthex serves a number of functions. Besides being a Church parlor and a place for women’s organizations to meet, it also serves as a brides’ room and a nursery.

The total cost of the project, including drives, walks and parking area, but excluding seeding, landscaping and architectural fees was $156,800.00 or $17.45 a square foot.
This church is planned for a mission congregation of the United Lutheran Church of America in Auburn. The congregation, when they first contacted us, numbered under 100 and are meeting in a converted residence. They felt the urgent need for a new facility to attract new membership and to stabilize themselves as a congregation. After some delay in selecting the proper site, a lot was purchased with 350 feet frontage by 200 feet deep, on the outskirts of Auburn.

The program called for a Church building to seat 120 with a Fellowship Hall and Kitchen, Pastor’s study, and a Mother’s Room. After some deliberation locating the Choir, a balcony was decided upon. Future expansion would include Christian education facilities.

Preliminary designs explored the possibilities of creating a building that would be almost all roof. The framed A-frame scheme in an equilateral triangle, a self-sufficient rigid shape grew from this search. As the Church would have a small seating capacity, no side aisles were required and a side rail to provide a floating platform was designed. Adjoining this rail we arranged a shelf with heating ducts beneath and strip lighting and then plain wood sash set horizontally to pick up ground reflection for natural light all out of direct view of the congregation. This shelf will also allow for planting boxes. The front wall of the Church faces south and we designed stock side light units glazed with colored glass all to stack between 2x6 studs. This will flood light into the Narthex and the balcony floats clear of this wall, which will give a very spacious feeling in a small Narthex. The large porch attached to the front accentuates the triangular motif and allows a sheltered and formal approach as well as a gathering place that the Narthex does not completely afford. The only other lighting in the Nave is a concealed sash panel in back of the Chancel to flood the back wall with light further screened by simple Redwood fins. The site slopes steeply to the rear and the full basement is provided with 2 entrances on grade and considerable natural light. This basement contains a Pastor’s study, toilet facilities, a Fellowship Hall with dining space for 130 and a kitchen.

The site will provide parking for 85 cars and a separate Christian education building at right
angles to the present building connected by a pas sageway. The expansion of the Nave will be to the Chancel end if this is ever required. The Church can seat up to 160 exclusive of balcony. The desire of the congregation for a dramatic symbol led us through many studies of towers. We then took an opposite tack and provided an extension of the masonry front wall with a freestanding pier to act as a retaining wall and to receive a cross or sculpture. This provides a nice base for the Church, ties it into the ground and will be ideal for their expressed purposes.

Construction started in September, 1958. The contractor is the T. G. Gable Construction Co., Inc., Romulus, New York. Contract price is $52,654.00. The Reverend Floyd Duff is pastor of the congregation and Mr. David Litke is Chairman of the Building Committee. They are hoping to dedicate their new Church this Easter.

RENSSELAER STUDENT AWARDED FIRST PRIZE

Michael G. Mostoller of Pittsburgh, third year man in architecture at Rensselaer Polytechnic Institute, was awarded the first prize of $100 offered by the N.Y. State Assoc. of Architects for his design of the new cover for the association’s bimonthly publication, Empire State Architect.

Students from Columbia University, Cooper Union, Cornell University, Pratt Institute, Syracuse University and Rensselaer competed in design, with the top man from each college awarded a prize of $25. Their entries, sealed to prevent identification of the names and colleges, were then judged by committee of six, headed by Daniel Klinger, Troy architect. Joseph F. Addonizio, executive director of the association, was a member of the committee and made the presentation personally to Mr. Mostoller before a meeting of the faculty of the School of Architecture at Rensselaer.

The winning design featured the initials of the Empire State Architect. Each of the designs included the name of the publication, the statement that it is the official organ of the State association, and the words, Month, Year, Volume and Number.

The New York State Association of Architects includes 14 chapter organizations. Harry M. Prince, New York City, is president.

Levine Named to Commission

David Levine, member of our Bronx Chapter and vice-president of the New York Chapter of the American Society of Landscape Architects, has been named Landscape Architect member of the Art Commission of the City of New York.
When the late architect Ralph Adams Cram — designer of the Cathedral of St. John the Divine — was planning some of the Gothic buildings that made him internationally famous, he called upon a Rochester firm to meet his fastidious requirements for stained glass windows.

As a result, Cram’s chapels at Princeton University and Mercersburg Academy and his Sacred Heart Cathedral in Jersey City are all graced with windows by the Pike Stained Glass Studio.

Architects, builders and clergymen — before and after Cram — all over the nation were impressed by the quality workmanship that led him to employ Pike’s.

For Pike artists and artisans are represented by work at such diverse places as the Cornell University Chapel, a cathedral at Bluefields, Nicaragua; the Rundel Memorial Building, Hobart College and the chapel of the Rescue Mission.

In 1958, Pike’s marked its 50th anniversary in an industry where the painstaking handicraftsmanship of 1000 years ago goes hand-in-hand with the newest techniques of art and design.

When 34-year-old William J. Pike decided to set out on his own on March 25, 1908, he had a solid grounding in his craft.

In his native New York City, he had served his apprenticeship with the famed Tiffany Studios, then the nation’s leading maker of stained glass windows.

After he had moved to Rochester with his parents, young Pike soon found work with one of the many small stained glass firms then located there.

Besides filling commissions from churches, colleges and architects, Pike began doing residence and school work (a vogue that is now returning in modern architecture). Many large houses still have examples of his work in door windows depicting scenes from Robin Hood and other tales of early England.

And his transom windows illustrating nursery rhymes in lead silhouette still can be seen in local schools.

But with the depression of the 30s came a lull in construction of churches, large private residences and any public buildings that went much beyond the utilitarian. So Pike’s, in common with the stained glass industry throughout the country, suffered.

The coming of World War II only prolonged the depression for stained glass window makers. Shortages of lead and solder for anything but war work, coupled with the ban on civilian, non-industrial construction, further restricted the available jobs.

About 12 years ago, after Pike’s had again begun to hit its stride, a disastrous fire wiped out the studio.

Instead of calling it quits — at an age when most men are content to have been retired for years — the 72-year-old Pike demonstrated remarkable resiliency. He immediately salvaged what little equipment he could, bought some more and continued the business in the studio’s present location.

How successful that comeback has been is evidenced by a partial list of some of the firm’s recent commissions: Trinity Episcopal Church, Buffalo; the Catholic Cathedral at Bluefields, Nicaragua; the Lutheran Reformation Church and the Nazareth College Library, Rochester and St. Peter’s Episcopal Church, Geneva.

Even before his death in April 1958, Pike had stepped down from the active management of the business. But its continuity in the family was insured when his nephew, James J. O’Hara, succeeded him.
To an enterprise where artistry, handicraft, history, theology and a sense of business must contribute to every product, O'Hara brings something of each.

As a student on summer vacations from the College of the City of New York, he worked at Pike's, learning some of the fundamentals.

Back at college, he majored in art. But this meant not only preparing himself in the techniques of the artist. For under the CCNY honors system, he was able to prepare a syllabus and devote three terms to studying — under the guidance of a faculty member — stained glass. He wrote monographs about stained glass and studied finished products in churches and studios.

Now O'Hara draws heavily on this background to cope with some of the odd problems that crop up in stained glass window-making.

One is the frequent question of how saints or Biblical characters looked, or of how Christ himself looked, for there is no known first-hand portrait of Him or even an exact physical description.

"Everyone has his own concept of what Christ looked like," says O'Hara. "In some stained glass windows you'll see a bold, vigorous, muscular man of action.

"In others, He is depicted with a pensive, spiritual, sweet face.

Madonnas and the Saints are familiar window subjects in many churches.

"Some show Christ with a beard. In others He is clean-shaven."

To insure that Pike's artists' concept of Christ will measure up to congregation's ideal, O'Hara shows black-and-white drawings — known as "cartoons" — to the pastor or church board and works out any differences between them.

American stained glass church windows, in O'Hara's view, have undergone a change. Decades ago, they told a more literal, realistic message than they do today. A favorite was a guardian angel yanking back a child about to walk off the edge of a precipice. Or another, to demonstrate unquestioning devotion to God, was Abraham about to sacrifice his son, Isaac. Occasionally, a window was so humanistic as to be utterly unrelated to doctrine — showing, for example, a landscape dear to the donor.

Frequently, too, there would be a scene with Christ lecturing to a group of children and prominent among them would be a deceased offspring of the person who gave the window.

Today, the trend is not so much toward telling a literal story, O'Hara says, as to symbolize the mysteries — "the ineffable aspects" — of religion.
This is the final installment of a series of articles dealing with the field and laboratory investigations which are essential to an intelligent and satisfactory foundation selection and design. Previous articles in this series appeared in the March-April, May-June and November-December 1958 issues of the Empire State Architect. Part 3 summarized the soil classification systems used in civil engineering works and covered the simple field identification tests that are used to identify the principal types of soils.

This article deals with the significance of laboratory tests, outlining the tests that are necessary to determine the index and engineering properties of soil. Also included is a summary of the use of data from both laboratory and field tests.

**Significance of Laboratory Soil Testing**

The rapid development of the field of soil mechanics since its introduction into this country in 1925 by Dr. Karl Terzaghi has emphasized the importance of laboratory testing programs. Routine soil classification tests are of practical importance to the engineer in permitting more accurate identification of soils and in affording preliminary indication of soil behavior under loading. These routine classification or index tests also serve as a helpful guide to the experienced engineer who must evaluate the potentialities of soil as a construction material. The testing of soils for engineering properties such as permeability, compressibility and shearing strength are necessary for seepage studies, settlement analyses and stability problems.

The object and/or significance of each of the various laboratory soil tests used to determine index and engineering properties follow:

1. **Specific Gravity of Soils**
   
   The specific gravity of a soil is required for most calculations involving hydrometer analysis, void ratio, porosity, unit weight, etc. It may also aid in soil classification and identification.

2. **Mechanical Analysis**
   
   (a) Sieve analysis
   
   (b) Hydrometer analysis

   The object of the mechanical analysis is to determine the grain-size distribution of a soil. The coarser grains of soils are separated by means of calibrated sieves while the portions of a soil finer than a No. 200 sieve (0.074 mm) are separated by one of several methods based on sedimentation such as the hydrometer method.

   A grain size curve will aid in soil classification, but it must be kept in mind that the size of grains is but one of the factors on which soil action depends.

   A hydrometer analysis of a soil is necessary to determine the percentage of sizes smaller than 0.02 mm, which is the critical size with respect to frost action.

3. **Atterberg Limits**

   The most important use of the Atterberg Limits is in identifying and classifying fine-grained soils. Also, the Atterberg Limits permit estimates and compressibility, permeability, rate of volume change and shear strength of soil. The difference between the liquid and plastic limits (plasticity index, PI) represents the water content range within which the soil is in the plastic range.

4. **Permeability Tests**

   Permeability is the facility with which water can flow through the voids in a soil. This property is a very important one, having much significance in many engineering problems such as settlement analyses, slope studies, frost action problems, highway drainage and construction of earth dams.

5. **Compaction Test**

   The object of this test is to determine the relationship between water content and density for a given soil and a given compactive effort and to study the effects of different compactive efforts on the optimum moisture content and dry unit weight of a soil.

   The most important use of soil as a construction material is in the formation of fills and subgrades. Soil for highway and airfield fills, earth dams, and other embankments must be placed in a dense state for the following reasons:

   (a) to have adequate shear strength
   
   (b) to minimize settlement
   
   (c) to increase imperviousness

   Compaction tests are used primarily to serve as a basis for compaction specifications on earthwork construction projects.
6. California Bearing Ratio Test (Laboratory)

The California Bearing Ratio (CBR) is a measure of the shearing resistance of a soil under controlled density and moisture conditions. The bearing value determined from this test is used in conjunction with empirical curves for designing flexible pavements. The CBR value is expressed as a percentage of a standard penetration value for crushed stone.

7. Consolidation Test

The object of this test is to determine the amount and rate of compression of a laterally confined cohesive material subjected to an axial load.

Data from consolidation tests are used to predict the amount and rate of settlement of structures and fill placed above compressible clay strata.

Also, data from consolidation tests are useful in affording indirect determinations of coefficients of permeability or relatively impervious soils.

8. Shear Tests

Shearing resistance of soils may be determined in the laboratory by the use of the direct shear test, the triaxial compression test and the unconfined compression test. It must be emphasized that the shearing strength of a soil is a controlling factor in analyzing soil stability problems such as stability of slopes, foundation design and retaining wall design.

(a) Direct Shear Test

The direct shear test was one of the earliest tests developed to determine the shear strength of soils. An advantage of this test is the simplicity and rapidity of the operation. However, only the stresses on a horizontal plane are known except at failure in this test. Another important disadvantage of the direct shear test is the unequal stress distribution over the shearing surface.

(b) Triaxial Compression Test

The triaxial compression test gives the most consistent and reliable results for both cohesionless and cohesive soils. Triaxial compression apparatus is more complicated than direct shear or unconfined compression machines but is more adaptable to special requirements which may be necessary to simulate field conditions. Progressive effects are smaller in the triaxial compression test than in the direct shear test. Also, the complete state of stress is known at all stages of this test, whereas only the failure stresses are known in the direct shear test.

(c) Unconfined Compression Test

The unconfined compression test is a special form of the triaxial test that can only be used on cohesive soil. It is good practice to run the test on both undisturbed and remolded specimens to evaluate the effects of disturbance on the shearing strength. The value of the shear strength is commonly taken equal to \( \frac{1}{2} \) the unconfined compressive strength, which is generally on the conservative side. An advantage of this test is the convenience and rapidity of the operation.

9. Field Density Test

The significance of this test will also be covered in this article in view of its importance in earthwork projects.

The field density test is of value primarily in the control of compaction on earthwork construction such as embankments and base courses. The dry unit weight of the soil as actually compacted is determined from this test and this value is then compared with the maximum dry unit weight to which the soil should be compacted to obtain the percent compaction. Specifications for placing fill in the field usually require the contractor to obtain from 90 to 100 percent compaction as determined from some specified energy. The moisture content of the soil being compacted is also determined in order to check whether the compaction in the field is being carried out under conditions of optimum moisture content.

Since the strength of a soil depends on its water content and its void ratio, the natural density of soil in place can be used as an indication of its stability or bearing value.

A summary of the use of laboratory and field test results on soils is shown in Table 1.

It is emphasized that the majority of the laboratory tests which are necessary to determine the engineering properties of soil fall in the category of Detailed Exploration. The results of the preliminary underground exploration may indicate the need for additional detailed data before a safe or economical design can be made. As mentioned in the second article of this series, the detailed investigation has as its objective accurate data on the engineering properties of the critical soil strata.

For example, when the safety of the soil mass

(Continued on page 27)
The architect's performance embodies something of the suave stage-performing mind reader and of the deft magician. The mind he reads, of course, is that of his client — be the client an individual or a group of individuals.

And, the rabbit he must pull out of the hat is the building, designed and executed to meet the desires and requirements of the client. The building is, in effect, the product of the mind-reading.

The process between reading the mind and pulling the rabbit from the hat is one of the most complex of this admittedly complex, technical present-day. It is of particular importance to lay citizens, considering the billions in community funds going at this moment into such projects as schools, churches, government buildings, cultural facilities, sports and recreation centers, and commercial buildings.

Throughout the planning and execution of the structure, it is the architect's job, in fact his obligation, to understand the basic factors of approximately 125 trades which may confront him from day to day.

Particularly on large projects he co-ordinates the techniques of other specialists and consultants:

The Structural Engineer, Mechanical Engineer, Electrical Engineer, Acoustical Engineer, Civil Engineer, Landscape Architect, Kitchen, Hardware and Laboratory Equipment Consultants, Lighting Consultant, Color Consultant.

Many members of these related fields devote their entire professional lives to cooperation with architects. But, although he shares his work with so many, the architect carries by far the greatest part of the responsibility.

He is the major responsibility for the condition of the rabbit when it finally emerges from the hat.

For the step-by-step process, take the outline of the American Institute of Architects itself:

The architect visits the property, or, if it has not been purchased yet, helps select it and — budgets the cost.

Then he develops sketches of various solutions of the problem in rough form, showing size and arrangement of the rooms and general characteristics of the building. From these sketches, preliminary drawings are made and are examined and re-examined to be sure that the client understands what he is getting — in appearance and function.

Next, on the owner's authorization, the architect prepares the working drawing. These consist of plans, elevations, sections and details which show construction and kind of material, together with notes and schedules. Drawings also are made of the plumbing, heating, air conditioning and electrical installations, of structural steel and reinforced concrete work.

An architect's legal knowledge comes into play, for building codes must be considered, as well as other ordinances and regulations.

He also writes the complementary specifications which establish the quality and method of assembly of every item going into the construction of the building — from foundation concrete to hardware to the last coat of paint.

These drawings and specifications are the builder's guide, and when they are correctly followed, the building will be as the client and the architect planned it.

Again on the owner's authority, the architect advertises for bids from contractors. He canvases the bids and makes recommendations to the owner concerning award of the contracts. The architect then assists in preparation of contract agreements which define general conditions, contract price, time limitations and other technical matters.

As construction proceeds, the architect makes periodic inspections of the work to see if it is being erected in full compliance with the drawings and specifications. He prepares full size details, checks shop drawings, and outlines color schedules. As the contractor sends in his bills, the architect keeps a running account of the cost of the building and certifies payments to the contractor.

When the project is finished, all required tests made, and the usual guarantees received from contractors, his normal services as the architect have been completed... the rabbit is out of the hat.
When designing a church, an architect is challenged by more difficult problems than are presented by any other form of building, state the editors of *Architectural Record*, the professional magazine for architects and engineers published by F. W. Dodge Corporation.

Five churches which attempt to achieve a proper religious expression are presented pictorially in the current issue of *Architectural Record*. The churches presented are modest, small, unpretentious. Several have strong symbolic power.

The Protestant Chapel at Tech Town, Finland, (a community composed mainly of students at the Institute of Technology in nearby Helsinki) is a fine modern chapel with some fundamental features which connect it with the traditions of Finnish architecture. In the past, builders placed their sanctuaries in the landscape with great skill and sensitiveness, and accented the special quality of the church environment with a semi-enclosed forecourt, as was done in this church.

This new chapel comprises three major spaces: a front court for open air services partially enclosed by brick walls and fencing; a low ceilinged area which includes congregation hall and clubroom; and a chapel with a steeply rising ceiling and an altar wall of clear glass at its low end. Through the glass is revealed a carefully studied outdoor scene: a mass of fir trees in the background and just in front, on the same axis as the indoor altar, a wood cross. The vestments of the clergy provide the only bright color in the austere surroundings of red brick, natural finish wood, dark green fir trees and snow. Architects: Kaija & Heikki Siren.

The clergy and laity of the Protestant Episcopal Chapel of St. James the Fisherman, Wellfleet, Mass., decided that they wanted an informal church in which lay participation was important. They requested the architect, Olav Hammarstrom, to design a church which would allow laymen to rise from their seats to participate directly in the service. Directed by the wishes of this congregation, the architect devised a plan in which no worshipper is more than six seats away from the Holy Table at the center. The celebrants of the service surround the altar instead of standing before it; performers in the liturgy are able to sit with their families.

St. Sylvester's Roman Catholic Church, Eminence, Mo., in the Ozark Mountains, is built in the simple materials and manner of the old farmhouses and barns of this part of the South. Walls are of brown-gray stone 2 ft. thick. Roof is 2-in. by 4-in. wooden decking in a natural finish laid on heavy timbers and covered with composition shingle. Architects: Helmuth, Obata & Kassabaum.

The congregation of St. Peter's Lutheran Church, Norwalk, Conn., discovered that the developing emphasis on group activity rendered their old church inadequate. Their architects, Pederson and Tilney, designed for them a two level church which provided a generous area for an assembly room, a kitchen, and a gymnasium to be built in the future. The church is of brick, redwood and concrete and is completely air conditioned.

Brentwood Methodist Church, Denver, Colorado, is now using a structure for worship which will eventually become an educational wing in an extensive master plan. The three-sided communion rail on a raised platform is a continuous ledge which holds the implements of communion service. Worshippers kneel on both sides of each rail and face each other during communion. Laminated wood arches support a wood roof decking which is exposed on the interior. Exterior finish is glass and brick. Architect: W. C. Muchow.

**MURALS AND SCULPTURE ARE EDUCATIONAL TOOLS**

The Architectural League of New York, entering the city's current school construction controversy, noted that murals and sculpture "have brightened the lives and enriched the minds of our children" — for less than one-tenth of one percent of the Board of Education's school building budget.

Morris Ketchum, Jr., League president, declared: "Good murals and sculpture, like good architecture, are in themselves good educational tools. At a cost of less than one-tenth of one per cent of the school building budget, our city's Board of Education has brightened the lives and enriched the minds of our children. Never before has so much been done for so little."

The League, located at 115 East 40th Street, is dedicated to collaboration of the building arts. League membership includes the world's leading architects, designers, engineers, sculptors, city planners, mural painters, editors and educators.
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CONSOLIDATED BRICK CO., INC., HORSEHEADS, N.Y.
Brighton Reformed Church
Walzer and Miller, Architect and Engineer
300 Genesee St. Rochester, New York

The program, as prepared by a study committee, called for a modified colonial design with a church seating capacity of 400 in the Nave and a total seating of 500. This was accomplished by locating the Chapel at the rear of the Nave separated by a partial glass partition. The Sunday School was to provide for an enrollment of 330 students, with classrooms for all ages from infants to adults.

The exterior finishes are sawed bed ashlar stone base course with Norman brick and cast stone trim. The interior finish of the Nave and Chapel is lightweight block in an ashlar pattern. The remainder of the rooms on the First Floor are of plaster or plywood paneling. The basement rooms are concrete block, painted.

The first floor is concrete slab on bar joist. The roof over the Church proper is supported on glued laminated arches and purlins. The remainder of the roof is constructed of wood rafters. Finished floors are asphalt tile. Finished ceilings in all rooms except the Nave are acoustical tile.

The heating system is gas-fired steam with a sectional cast-iron boiler. The Church is lighted by twelve hanging lanterns. The classrooms are lighted with fluorescent light.

Contracts were awarded in April 1958.
Total construction cost was $192,063.00 at a cost of $11.20 per square foot or 79.8 cents per cubic foot.
Jury Named For 1959
R. S. Reynolds Award

The American Institute of Architects today announced the names of five distinguished architects to serve as the Jury for the 1959 R. S. Reynolds Memorial Award for the most significant work of architecture, in the creation of which aluminum has been an important contributing factor.

The Reynolds Award — which consists of a $25,000 honorary payment plus an emblem — is international in character. The Jurors therefore have been selected by the AIA Board of Directors from both the U.S. and abroad.

Named to the Reynolds Award Jury were:

John Noble Richards of Toledo, Ohio;
Eero Saarinen of Bloomfield Hills, Michigan;
Robert F. Alexander of Los Angeles, California;
William W. Caudill of Corning, New York;
Carlos Contreras of Mexico City, Mexico.

The Jury will meet in Washington May 11 and 12 to consider nominations for the 1959 Award. The chairman, selected by the Jury, will announce the recipient of the Award within a week after judging is completed.

The Award will be presented at the annual convention of The American Institute of Architects in the summer of 1959.

The Reynolds Memorial Award is conferred annually and prime consideration is given to the creative value of the architect's contribution to the use of aluminum, and its potential influence on the architecture of our times, rather than to the size or type of structure.

Biographies of Jury Members

John Noble Richards, F.A.I.A., President of The American Institute of Architects and senior partner of Bellman, Gillett & Richards, Toledo architectural and engineering firm. He attended the University of Pennsylvania and there was awarded the Cret Medal in 1928 for Excellence in Architectural Design. He was graduated in 1930 with the degree of Bachelor of Architecture. He also was awarded the Stewardson Traveling Scholarship enabling him to travel and study in Italy, France, Germany, Belgium, Holland and England.

Mr. Richards served as president of the Toledo Junior Chamber of Commerce and in 1940 received the organization's Achievement Award presented annually to the outstanding young man in the community. He has been president of the Toledo Chapter, American Institute of Architects, and has served on national AIA committees including fees and education. He was, from 1950 through 1953, a member of the board of directors of The American Institute of Architects representing the Great Lakes District, an area of four states, and

(Continued on page 32)

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Architect's Professional Liability Insurance

An Architect Looks at a Professional Problem

BY ARNOLD W. LEDERER, Architect

Recently there has been considerable controversy and confusion about Architect's Professional Liability Insurance. In an effort to clarify this situation, I offer the following information based on data issued by a reputable insurance company.

In today’s insurance market two basic types of Architect’s Professional Liability policies are available. The first of these is known as the “Accident” form and provides coverage for negligent acts, errors or omissions of the insured which cause an accident. An “accident” is defined as physical damage to tangible property or bodily injury and would include, but is not limited to structural collapse, a wall crack, a roof leak, a person becoming injured or some other similar unexpected event.

The second form of coverage is known as the “Occurrence” form and provides coverage regardless of whether the negligent act, error or omission causes an accident. This type of policy includes coverage for the so-called “hazards of the business” which heretofore have generally been thought of as uninsurable. An example of a loss that would be covered under the “Occurrence” form, but not under the “Accident” form would be: An Architect designs a building and specifies that a given size air duct be used with the air-conditioning system. After completion of the building, it is discovered that the ducts are not of sufficient size to carry the required amount of air and, consequently, must be replaced. In this particular situation there has been no physical damage to tangible property or bodily injury; however, the Architect has incurred the expense of correcting his mistake. All policies written on the occurrence basis contain a deductible clause, the minimum deductible being $500.00. The premium for this type of policy usually runs considerably higher than the “Accident” form.

Listed below are a series of questions and answers that bring out major points of both forms of policies.

---

**Accident Basis**

- Policy covers all negligent acts, errors or omissions that result in an accident.
- Yes

**Occurrence Basis**

- Policy covers all negligent acts, errors or omissions except as shown below. (See Items 1, 4 and 6).
- Yes
- No, the policy must be written to include a deductible clause—minimum deductible being $500.00. Premiums vary from approximately 100% to 250% in excess of “Accident” form, depending on the type and amount of work done by the insured.
- Yes

---

1. Does policy cover all claims made against the insured as a result of any negligent acts, errors or omissions committed by the insured?
   - Yes

2. Does policy protect the insured for work done by his employees, associates and consultants?
   - Yes

3. Does policy provide full coverage?
   - Yes

4. How do the premiums compare?
   - Lowest cost form available.

5. Does policy provide coverage for world-wide operations?
   - Yes

6. Does policy provide coverage for supervision of construction?
   - Yes

7. Does policy provide coverage for defense of suits; payment of premiums for appeal and release of attachment bonds?
   - Yes

8. Are the payments referred to above in addition to the applicable limit of liability provided by the policy?
   - Yes

9. Does policy provide coverage for work done prior to effective date of policy?
   - Yes

10. Does policy provide automatic coverage at no additional cost for new partners taken in during policy year?
    - Yes (See Note #1)

11. Are both forms of coverage available from the same source? If so, who?
    - Yes — Adgate A. Lipscomb & Son, 1000 Vermont Avenue, N.W., Washington 5, D.C.

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JANUARY - FEBRUARY / 26
Subsurface Investigations
(Continued from page 19)

or structure is critical, then detailed data on the shear strength of the soil are required. Also, if preliminary studies indicate that the bearing capacity of the soil for footing foundations is adequate but that settlement may be excessive, consolidation data would be required from the critical strata in order to afford estimates of maximum and differential settlements. The results of the settlement study will either show that the proposed footing foundations are adequate to support the contemplated loads or that some other solution is necessary. If the expected settlements are excessive, it would be necessary to study other foundation solutions.

A discussion of foundation solutions for difficult sites will appear in a later issue.

TABLE 1
Summary of Use of Laboratory and Field Test Results

<table>
<thead>
<tr>
<th>Type of Test</th>
<th>Use of Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Laboratory Tests</td>
<td>Necessary for hydrometer analysis, void ratio, etc.</td>
</tr>
<tr>
<td>1. Specific Gravity of Solids</td>
<td>Soil Classification. Estimate frost action, compaction characteristics, shear strength, permeability.</td>
</tr>
<tr>
<td>a. Sieve</td>
<td>Estimate compressibility of &quot;normally loaded&quot; clays.</td>
</tr>
<tr>
<td>b. Hydrometer</td>
<td>Correlate with compressibility, compaction, etc.</td>
</tr>
<tr>
<td>3. Atterberg Limits</td>
<td>Flow problems</td>
</tr>
<tr>
<td>a. Liquid limit</td>
<td>flow nets</td>
</tr>
<tr>
<td>b. Plastic limit</td>
<td>drainage</td>
</tr>
<tr>
<td>c. Shrinkage limit</td>
<td>Settlement predictions.</td>
</tr>
<tr>
<td>5. Permeability</td>
<td>Specifications for placing of fill.</td>
</tr>
<tr>
<td>a. Constant head</td>
<td>Design criteria for flexible pavements.</td>
</tr>
<tr>
<td>b. Falling head</td>
<td>Loss of weight by ignition identifies organic materials.</td>
</tr>
<tr>
<td>6. Consolidation</td>
<td>Indicates presence of calcium carbonates.</td>
</tr>
<tr>
<td>7. Shear Tests</td>
<td>Control of placing of fill.</td>
</tr>
<tr>
<td>a. Direct Shear</td>
<td>Design criteria for flexible pavements.</td>
</tr>
<tr>
<td>b. Triaxial</td>
<td>For investigation of allowable bearing capacity and modulus of subgrade reaction. Results may be misleading unless interpreted properly.</td>
</tr>
<tr>
<td>c. Unconfined Compression</td>
<td>For stability problems.</td>
</tr>
<tr>
<td>8. Compaction Test</td>
<td></td>
</tr>
<tr>
<td>9. California Bearing Ratio</td>
<td></td>
</tr>
<tr>
<td>10. Ignition Test</td>
<td></td>
</tr>
<tr>
<td>11. Treatment with hydrochloric acid</td>
<td></td>
</tr>
<tr>
<td>B. Field Tests</td>
<td></td>
</tr>
<tr>
<td>1. Field Density</td>
<td></td>
</tr>
<tr>
<td>2. California Bearing Ratio</td>
<td></td>
</tr>
<tr>
<td>3. Plate Test</td>
<td></td>
</tr>
<tr>
<td>4. Field Vane Shear Test</td>
<td></td>
</tr>
</tbody>
</table>
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Included in the new Manual are recent developments in building technology in which significant progress has been made since the earlier edition of the Manual was published in 1954. Among these are methods of preventing suds backup at plumbing fixtures on the lower floors of multi-story buildings, and smoke and heat vents in large one-story factory buildings.

The new Code Manual, a 350-page illustrated handbook, is intended to assist building officials, architects, engineers, and builders in interpreting and enforcing the State Code, which is now used by 286 municipalities in every part of the state.

Maj. Gen. Edward J. McGrew, Jr., Chairman of the State Building Code Commission, pointed out that other products and methods than those in the Code Manual might also satisfy the performance requirements of the State Code. New products of proven merit are not barred because they do not appear in the Manual, he said.

The new edition of the Manual is again divided, like the Code itself, into five parts: general provisions, space standards, structural standards, fire-safety standards, and equipment standards. Hundreds of cross references to specific provisions of the State Code make it easy to use the Manual as an accessory publication of the Code.

Twenty thousand copies of the earlier editions of the Manual have been distributed, not only in this state but throughout the country.
BUILDING PRODUCTS REGISTRY SERVICE NOW AVAILABLE

The "Building Products Registry Service" a unique, new reference service to building products and equipment, has been officially launched by The American Institute of Architects after seven years of committee study and as many months of preparation.

The service, available to all AIA members for a nominal subscription fee, consists of:

1) The "Register" itself which will list and tabulate building products and equipment according to performance, installation and use conditions, tests performed, and other technical data needed for pre-selection analysis;

2) A Reporting Service on completed installations which will include information on product behavior and other data resulting from practical experience designed to improve product use and installation by the architect;

3) A Field Inspection Service on the part of experienced building technicians who will visit architects' offices to collect data on installations;

4) Reports on new products and test data prior to listing in each annual edition of the Register.

With approximately 1,500 advance subscriptions by member architects and pledges of participation by over 600 manufacturers listing more than 1,300 products in the bag, the AIA Board of Directors has now given the project the green light. The first Register which will include 18 product and equipment categories is scheduled for distribution by mid-June.

"The response to this new service has been most gratifying," says Theodore W. Dominick, AIA, who heads the new AIA service at the Institute headquarters. "More than half of the subscribing architects have paid their $25.00 subscription fee in advance, over a two week period after billing. And the manufacturer pledges received lead me to believe that in five years or less we will reach our aim of listing some 15,000 products."

Dominick visualizes AIA's Building Products Registry Service as a national clearing house on product use for practicing architects. It will provide architects with required data in a simple, well organized and handy form and help manufacturers by bringing their products to the architects' attention at the time specification selection is made.

"BPR can be of inestimable value to manufacturers by informing them on the need for new products and new uses of existing products as well as by helping them develop better product literature and 'limitation of use' statements," Mr. Dominick said.

Data reporting forms for such information as the manufacturers wish to list in the Register will be distributed to those who have pledged participation starting in mid-February.

Headquarters of the AIA Building Products Registry Service are at The Octagon, 1735 New York Avenue, N.W., Washington, D.C.

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Roof Contr.: Neville Concrete Pipe Co.

Zonatile re-inforced vermiculite concrete roof slabs combine permanence and structural strength with 100% fire safety. Installed at amazing speed in any weather, they save on installation cost and hurry construction. Weighing only 10 1/2 lbs. per sq. ft. they cut the weight and cost of supporting structural materials. The underside of Zonatile is an attractive ceiling finish in itself, or may be decorated in any way.

Zonatile saws like wood. One man installs quickly, in any weather, over sub-purlins or standard shapes. Size: 3" x 36" x 18".

A.I.A. Exhibits At 1959 N.A.H.B. Chicago Convention

“...as low as 2 per cent of the overall cost.” Actual reproduction of a typical cost breakdown of a medium priced house shows “architectural service and plans” to be one third less than “carpeting” and only slightly higher than “lawn and shrubs.”

Architects can help homebuilders with design variety, site planning, color coordination, materials and techniques, organization of projects, and flexibility, the exhibit points out.

Following display at the 1959 NAHB Convention, the exhibit will be shown at local and regional homebuilding industry shows and meetings.
Professional Liability Insurance
(Continued from page 26)

Note #1 — Policy provides coverage for prior work if, at the
time of the negligent act, error or omission, there was
in force insurance that would have covered the loss had it occurred and been discovered
at that time, provided that no claim was made for said loss before the inception of
this policy.

The “Occurrence” form contract described above is
offered by another insurance company; however, the
policy I have, has available an “Occurrence” form policy
that is even broader than the described policy and at
comparable rates and is broader in the following respects.
(a) The policy is completely retroactive, providing
coverage for all previous work of the firm and previous
work of any partner, executive officer, director or stock-
holder done while in any capacity, with the insured firm
or otherwise. The other “Occurrence” form can be en-
dorsed to provide retroactive coverage for the firm at
an additional premium.
(b) Coverage is automatically provided for all bridges
and tunnels not in excess of 150 feet in over-all length.
(c) Policy covers work done in connection with perma-
nent structures to be erected on fair or exhibition grounds.

I hope the information imparted has given a better under-
standing of the coverages that are available in today’s
market. If you have any specific questions concerning any
phase of Architect’s Professional Liability insurance, con-
tact your Insurance Committee. George J. Cavalieri of
394 East 149th Street, New York 55, N. Y. is the
chairman.

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(Continued from page 25)

was president of the Great Lakes Regional Council, A.I.A. He is presently serving as an AIA insurance trustee.

He was advanced to Fellowship in The American Institute of Architects in 1954. In 1955 he was elected second vice president of the AIA and the following year was named the organization's first vice president, serving in that office for two years. He was elected president of the AIA at the organization's annual meeting held in Cleveland in July of 1958.

Eero Saarinen, F.A.I.A., Finnish-born architect studied sculpture at the Académie de la Grande Chaumière in Paris during 1929-30. He entered the School of Architecture at Yale University in 1931, graduating with a Bachelor of Fine Arts degree and high honors in 1934. The next two years were spent traveling in Europe on the Charles O. Matcham Fellowship. He received an Honorary Master's degree from Yale University in 1949.

In the field of architecture, to which he has devoted most of his time, Eero Saarinen was a partner in the firm of Eliel and Eero Saarinen from 1937 to 1939; a partner in the firm of Saarinen, Swanson and Saarinen from 1939 to 1947; a partner in the firm of Saarinen, Saarinen and Associates from 1947 to July 1950; and is now principal partner in the firm of Eero Saarinen and Associates. During the Second World War, he served with the Office of Strategic Services in Washington, D.C. (1942-45).

His many projects include: Klein­hams Music Hall, Buffalo, N.Y. 1939; Summer Opera House, Berkshire Music Center, Lenox, Massachusetts, 1940; Crow Island School, Winnetka, Illinois, 1939; Tabernacle Church of Christ, Columbus, Indiana, 1941; Campus plan, Science and Pharmacy Building, Drake University, Des Moines, 1916; Irwin-Union Trust Company, Columbus, Indiana, 1955; General Motors Technical Center, Warren, Michigan, 1950-56; Auditorium and Chapel, M.I.T., 1955; Women's Dormitories and Dining Hall, Dake University, Des Moines, 1954. He served as Consultant to the Secretary of the Air Force on the Air Force Academy in Colorado.

Recipient First Prize (with Eliel Saarinen and J. Robert Swanson) Smithsonian Gallery of Art, 1939; two First Prizes (with Charles Eames) Museum of Modern Art Furniture Competition, 1940; Grand Architectural Award, Boston Arts Festival, 1953; four First Honor Awards (AIA) for buildings, 1955 and 1956.

Fellow of the A.I.A. and member of Congres Internationaux d'Architecture Moderne, and National Institute of Arts & Letters, N.A.

Robert E. Alexander, F.A.I.A., graduate of Cornell University, where he received his Bachelor of Architecture degree in 1930. Present firm, Robert E. Alexander and Richard J. Neutra, F.A.I.A.

His projects include: Orange Coast College, University of California Elementary Demonstration School, Los Angeles; Baldwin Hills School and Shops with partner Richard J. Neutra; American Embassy, Karachi, Pakistan; St. John's College, Annapolis, Maryland (with others); County of Los Angeles Hall of Records.

Member of the faculty of the College of Architecture, University of Southern California since 1952. Member of the U.N. Mission to India, 1951; Consultant, Public Housing Administration, 1950; and consultant to the Government of Guam, 1951-52; member of the Planning Commission, City of Los Angeles, 1945-51 and its president, 1948-50.

Recipient of distinguished Honor Award, Southern California Chapter, AIA, 1946 and 1951. Honor Award, AIA, 1954.

Fellow of The American Institute of Architects; member of the Philippine League of Architecture, International Centre Regional Planning and Development, National Association of Housing and Redevelopment Officials, National Arbitration Association and has been a contributor to many professional publications.

William W. Caudill, A.I.A., a graduate of Oklahoma A. & M. College, Bachelor of Architecture, 1937 and Master of Architecture, Massachusetts Institute of Technology, 1939. He received an Honorary Doctor of Laws in 1957 from Eastern Michigan College. His Master's thesis was "A Twenty Year School Building Program for Stillwater, Oklahoma," a plan which he and his firm set in motion eleven years later. He taught architecture at Texas A. & M. following his graduation from M.I.T. and performed research on school buildings. Prior to World War II he wrote Space for Teaching, a publication of the Texas Engineering Experiment Station for which he served as School Research Architect. Since 1937 he has been doing special research in school design and construction, worked as architectural designer for College Architect for Oklahoma A. & M. in 1938, designed development plans for Texas A. & M. in 1940, served as chief engineer in charge of engineering and construction for $15,000,000 war construction 1943-44.

Mr. Caudill is a member of the Editorial Advisory Board, The School Executive; National Advisory Committee, Teachers Competencies Study, Central Michigan College; National Council on School House Construction; Building Research Institute; Texas Education Agency Study Committee on Effective Use of School properties and Instructional Personnel; Texas Association of School Administrators, and is past Chairman of the A.I.A. National School Committee.

Principal in Caudill and Rowlett, Architects, 1946. Principal in Caudill, Rowlett, Scott and Associates, Architects-Engineers 1948 to present. His present firm has designed approximately two hundred schools, seventeen of which have received National Awards, as well as other building types.

Mr. Caudill has authored, besides Space for Teaching, Your Schools, and articles on school design in School Management, School Executive, and Architectural Forum. His latest book, Toward Better School Design, is a summary of his experience in research and practice in school design.

Carlos Contreras, Honorary Fellow of The American Institute of Architects, is an eminent Mexican architect. He received his Bachelor of Architecture degree from Columbia University, New York City in 1921 and has served as a Professor of Architecture at that University, teaching design and languages. Mr. Contreras has been a leader in city planning and public works in his own country. Abroad, he has represented Mexico at numerous congresses on planning and has written widely on the subject, including its legal aspects. He is or has been a member of the National Association for the Planning of the Mexican Republic; President and member of the National Conference of City Planning; National Housing Association's Executive Committee of International Federation for Housing and Town Planning; member of the Society of Mexican Architects.