Did you know about the technical assistance that is available to every user of Materialite? It is a 3-point program, that has been of immense value to architects, engineers and redi-mix concrete producers.

Here's how it works:
1. Our engineers work with the architect and project engineer at the design stage, and perfect a Materialite concrete mix design to meet the project's specific requirements.
2. Our engineers work with the redi-mix producer who will supply the concrete, so that he will achieve the proper quality control for the redi-mix.
3. Our engineers work with the project until it is running smoothly, and the architect is receiving the precise type of Materialite concrete that he wants.

Under this program, all our experience and all our capabilities are made available to you. The charts reproduced here illustrate graphically the value of this program, for they show the average results obtained in pouring over ¼ million cubic yards of Materialite concrete on projects all over the Middle West - concrete poured by many local redi-mix producers. Bear in mind that these are actual jobsite results; they are not laboratory tests.

Materialite - A high quality expanded shale lightweight concrete aggregate manufactured by a scientifically controlled process. The exclusive non-porous, sealed surfaces achieve maximum cement utilization, providing the ultimate in strength and dimensional stability.

The only sealed surface lightweight aggregate produced in the Midwest.
The PLANTS:

DES MOINES CLAY CO.

First in Fine Face Brick has been their motto for 50 years. Produces the famous Queen Marys, Old English, and Tudors in the sanded Colonial Line. The latest addition is the Heritage Line, which has a wide color range from a Dark Brown to Red, Cinnamon Pink, and Antique White.

FORT DODGE BRICK & TILE

Famous for quality clay products since 1890. This plant makes outstanding black and dark brown brick, as well as soft tone reds and buff. Also produces quality face tile.

MASON CITY BRICK & TILE CO.

The largest producer of Structural Clay Backup & Partition Tile in the Central U.S.A. Makes a variety of sizes in backup units for every conceivable type of wall construction. Also partition and floor tile of a variety of sizes and physical properties.

OSKALOOSA CLAY PRODUCTS CO.

Produces an outstanding line of Red and Brownish Red Face brick, also buffs and ivories; has been exceptionally successful in producing Red & Buff Floor Brick, which are used widely in commercial and industrial construction.

OTTUMWA BRICK & TILE CO.

Outstanding clay deposits made this plant versatile in the production of face brick and tile. Colors range from soft reds, through buffs, cocoa browns and greys. The new tunnel kiln makes uniform quality, an important attribute.

REDFIELD BRICK & TILE CO.

Redfield is known for their famous Redfield Reds. This plant is kept busy producing their famous red brick and facing tile. They also find time to make patio tile, step brick and drain tile.

SEND FOR FREE BROCHURE IN COLOR.
Imagine a floor as tough and beautiful as traditional terrazzo at a fraction of the cost. With no seams to catch dirt. No chance of staining or corrosion from chemicals. No maintenance under normal usage, except for periodic washing. No need for structural reinforcement. Imagine installing a floor as unique as this in only three days, start to finish, and you've imagined a ChemTraz Thinset Terrazzo Floor. ChemTraz Thinset is a hard, durable, scuff-resistant polyester or epoxy floor, decorated with a striking array of marble chip aggregates to recreate the richness of centuries-old terrazzo. ChemTraz Thinset is perfect for schools, hospitals, restaurants, public buildings, large offices or any commercial or industrial installation. For more facts concerning ChemTraz Thinset, contact Chemtronics Division of Fibre Glass-Evercoat Co., Inc., 6600 Cornell Road, Cincinnati, Ohio 45242.

This magnificent seamless floor sets new standards for ageless beauty, economy, low maintenance, and (important to you) remarkably easy installation.

Contact your Wisconsin Factory Representative

NOVOTNY, INC.

647 West Virginia St.
Milwaukee, Wisconsin 53204
Phone A/C 414 276-1899 or 272-
There's a Difference...

between the Herman Andrae Electric Company and the first electric light bulb...

About three years, to be precise.

That's right, Andrae Electric came into being just three years after the electric light bulb was invented; the firm is currently celebrating its 85th year of continuous operation. This makes Andrae the oldest electrical contractor in the country . . . perhaps in the world.

There's a difference...

Between electrical contractors too. Every architect is aware of this . . . and every responsible architect wants to have specific questions answered before requesting an electrical contractor to bid on a job. Based on our experience, these are the questions:

- Is the contractor financially responsible?
- What is the contractor's current work load and manpower situation?
- What is the contractor's "track record" on completion dates?
- What is the calibre of the contractor's work?
- Does the contractor offer a fair and equitable price . . . and stick to it?

Here are Andrae's answers...

- Andrae Electric has open lines of credit at major financial institutions in the area; Andrae can obtain a performance bond of any size.
- Andrae maintains a work force of over 100 people.
- Andrae has never missed a completion date on an assignment.
- Andrae adheres to quality standards that have survived the abrasiveness of time, the impatience of people and the test of continued performance.
- Andrae's price is based on fact . . . experience . . . and knowledge of the business. Andrae "installs" a job . . . it does not "throw one in." As an architect, you know the difference.

Is there a difference? You bet...and between us, as the saying goes..."Viva La Difference!"

Andrae ELECTRIC COMPANY

2110 West Clybourn Street
Phone 933-6970
Quality and Responsibility

A hallmark for precast and prestressed concrete... the Quality and Responsibility commitment represented by membership in the Wisconsin Precast-Prestressed Concrete Association. **Quality** to provide the best in products and services, reflecting professional competence and pride of workmanship. **Responsibility** to accept work for which adequate capacity and resources exist, and to fulfill faithfully every contractual obligation. For precast and prestressed concrete with a hallmark you can depend on... any time, any place in Wisconsin... call or write an Association producer who is committed to giving you Quality and Responsibility. And for your ready reference, be sure to request a copy of the Association's Prestressed Concrete and Architectural Precast Concrete Specification Guides.

WISCONSIN PRECAST-PRESTRESSED CONCRETE ASSOCIATION

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Address</th>
<th>Phone Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONCRETE RESEARCH, INC.</td>
<td>P. O. Box 491, Waukesha 53186</td>
<td>414-542-8061</td>
</tr>
<tr>
<td>DUWE PRECAST CONCRETE PRODUCTS, INC.</td>
<td>P. O. Box 1277, Oshkosh 54901</td>
<td>414-231-3980</td>
</tr>
<tr>
<td>EAU CLAIRE PRESTRESS, INC.</td>
<td>1061 Menomonie St, Eau Claire 54701</td>
<td>715-835-5146</td>
</tr>
<tr>
<td>HUISCHMIDT ENGINEERING CO.</td>
<td>P. O. Box 209, Sussex 53089</td>
<td>414-781-9700</td>
</tr>
<tr>
<td>F. HURLBUT CO.</td>
<td>P. O. Box 9, Green Bay 54305</td>
<td>414-432-7731</td>
</tr>
<tr>
<td>J. W. PETERS &amp; SONS, INC.</td>
<td>P. O. Box 160, Burlington 53105</td>
<td>414-763-2401</td>
</tr>
<tr>
<td>PRE-CAST CONCRETE PRODUCTS, INC.</td>
<td>Route 1, Box 192-A, Lien Road, Madison 53714</td>
<td>608-249-0156</td>
</tr>
<tr>
<td>PRESTRESSED CONCRETE PRODUCTS CORP.</td>
<td>P. O. Box 7, Verona 53593</td>
<td>608-845-6431</td>
</tr>
<tr>
<td>SPANCRETE, INCORPORATED</td>
<td>1120 N. Bluemound Drive, Appleton 54910</td>
<td>414-734-5641</td>
</tr>
<tr>
<td>SPANCRETE INDUSTRIES, INC.</td>
<td>10919 W. Blue Mound Rd, Milwaukee 53226</td>
<td>414-258-4110</td>
</tr>
<tr>
<td>WISCONSIN VALLEY CONCRETE PRODUCTS CO.</td>
<td>P. O. Box 668, Wisconsin Rapids 54494</td>
<td>715-423-7500</td>
</tr>
</tbody>
</table>
Views expressed in articles appearing in Wisconsin Architect do not necessarily represent the views of the Wisconsin Architect, AIA, unless so stated. Wisconsin Architect and its publishers disclaim any and all liability for statements made by authors in contributing articles.
A BRAND NEW SCOPE OF DESIGN

Here is just another tool for total design from Best Block. Use Skyliner No. 1 to break up the monotony and give a pleasing effect of brick exterior. Great for walls or panels.

SAVE UP TO 30 and 40% in wall costs by using SKYLINER No. 1 instead of brick veneer with standard block backup.

You get uniform, well tooled joints with SKYLINER No. 1 for considerably less cost.

JUST ANOTHER WAY IN WHICH BEST BLOCK WORKS WITH THE ARCHITECT FOR SOUND DESIGN COMBINED WITH ECONOMY.
This past year was another outstanding year in Chapter activity with twenty-four of our twenty-six committees producing results.

The committee chairmen and their members should receive recognition for their fine efforts. In 1967 we can expect an even more challenging year and we will again depend heavily on the committees.

As a new year is beginning, we should all work together to improve the status of our profession and to improve the conditions under which we work.

Our major goals at this time are:

Legislative:
Our primary goal is to improve the Registration Act and remove some of the inequities which now exist.

Our efforts along these lines have been well underway and success will depend greatly on the cooperation of ALL MEMBERS when called upon.

School of Architecture:
Our "Ad-Hoc" Committee of three members is charged with coordinating the efforts of our members, the Education Committee and the Wisconsin Architects Foundation. They have done their job well to date and will face many more challenges before their job is done. Our first task was to "Show a need" for a School and we feel this has been accomplished. The next assignment is to assist the University in determining the type of School (or Schools) and the location.

Regional Convention:
Plans are just about complete for the Regional Convention at the Sheraton-Schroeder Hotel in Milwaukee on April 5, 6 and 7. Our Annual Membership meeting will be held at this time and we hope to see you there.

Membership:
Our total membership has reached the 500 mark. However, more effort must be made to pick up membership of the newly registered Architects.

Committee Activity:
The Committee Structure is broken down into four Commissions and the Director — Advisor of each Commission reports monthly to the Executive Committee. This system has been very effective and greatly improved the communications with the Committees.

We should encourage continued Committee activity and increase activity with related societies and Governmental Agencies.

Communications with Members:
The Section Directors form the link between the Chapter and the Sections. The Directors, therefore, have a real responsibility to keep the Sections informed and to coordinate the efforts of the Sections and the Chapter. The feasibility of a monthly chapter newsletter to all members is now being studied and will probably be put into effect very shortly.

Cost of Architect Services:
A survey is now under way by the A.I.A. for the fifty states. We expect about six or seven representative firms in Wisconsin to be included. Results of the survey will be reported to the A.I.A. Executive Committee at the National Convention in May. When the results of the survey become known, the recommended minimum fee schedule for Wisconsin will be reviewed and updated.
PERMANENCE AND BEAUTY IN CONCRETE
BY HUFSCHMIDT ENGINEERING CO.

U.S. Postal Facility
Milwaukee, Wisconsin
Architect: Miller and Waltz
Consulting Engineer: Amman and Whitney, Inc.
Precast Concrete by Hufschmidt Engineering Co.

Other Outstanding Projects in 1966

Food Service Facility
Wisconsin State University — La Crosse
General Contractor: Nels Johnson Construction Co., Inc.
Architect: Durrant: Deininger: Dommer: Kramer: Gordon

Library
University of Wisconsin — Milwaukee
General Contractor: Bauer Construction Co., Inc.
Architect: Fitzhugh Scott — Architect

Edward A. MacDowell Elementary School
Milwaukee
General Contractor: Woerfel Corporation
Architect: Maynard W. Meyer & Associates

Municipal Building and Library
Menomonee Falls
General Contractor: Oliver Construction Company
Architect: Herbst, Jacoby & Herbst, Inc.

Penney’s Regional Catalog Center
Second Addition
Wauwatosa
General Contractor: Hunzinger Construction Company
Architect: Jordan Miller and George Waltz, Architects

1966-67 Residence Halls
Wisconsin State University — Eau Claire
General Contractor: Sheehy Construction Company

1966-67 Residence Halls
Wisconsin State University — Whitewater
General Contractor: J. P. Cullen & Son Corporation

St. Francis Hospital
Blue Island, Illinois
General Contractor: M. A. Lombard & Son Company
Architect: Siberz, Purcell, Cuthbert, Architects

CUSTOM PRECASTING AND PRESTRESSING . . . ARCHITECTURAL AND STRUCTURAL CONCRETE

HUFSCHMIDT ENGINEERING CO.
HWY. 164  •  SUSSEX, WISCONSIN 53089  •  PHONE 414-781-9700
A·201 General Conditions

by William H. Scheick, FAIA, Executive Director

Representatives of AIA, AGC and the insurance industry, meeting on January 10, 1967, agreed on a re-wording of 4.18.3, which makes the document usable and which should end all controversy that has taken place in the field.

The new wording, approved by the Executive Committee of both AIA and AGC, is deemed fully insurable by the insurance industry. The agreement is the result of collaboration by AIA and AGC which resolves earlier differences, clarifies misunderstandings and achieves our mutual objectives for a clear-cut definition of the respective responsibilities of architects and contractors.

A review of the controversy, the new wording of 4.18.3, and information on using current supplies of the 1966 A-201 follows:

Since the issuance late last year of the 1966 edition of AIA Document A-201, "General Conditions of the Contract for Construction," there have been some misunderstandings in the field on the exact intent and the insurability of the indemnification ("hold harmless") provision of the document contained in Paragraph 4.18.

The 1966 editions of the General Conditions of the Contract for Construction (Document A-201), the Owner-Architect Agreement (Document B-131), and the Owner-Contractor Agreement (Document A-101) have been more closely coordinated than heretofore. They carefully delineate the principle that the Architect is fully responsible for his professional services and that the Contractor is fully responsible for construction operations and safety procedures until final completion.

Because of the increasing number and seriousness of claims against Architects in recent years, directly related to the Architect's alleged partial or joint responsibility resulting from construction operations, the Institute, after thorough and thoughtful consideration, decided to include in the 1966 edition of A-201 an indemnification provision which would protect the Architect against this alleged secondary or passive responsibility for claims arising out of the construction operations.

The indemnification provision written in A-201 is considered by the Institute's legal counsel, insurance counsel and documents experts to be entirely fair and reasonable. It is furthermore, an extremely moderate indemnification compared to many other similar clauses that have been used by many practitioners and owners. Briefly, the indemnification provision written in A-201:

1. Does not apply to the work itself, but only to neighboring or adjacent property which might be damaged during the construction operations;
2. Applies only to injury situations where the person injured is an employee of the Contractor or of a Subcontractor, or a member of the public;
3. Does not impose any liability on the Contractor unless he has been negligent, and then only if his negligence is the major cause of the claim.

Although the Institute's legal and insurance counsel feel that the original wording of Paragraph 4.18 was entirely clear in this matter, a number of contractors and some insurers took the view that the Architect was attempting to make the Contractor responsible for the Architect's professional liability. As indicated in the above explanation of the indemnification section, this was not the case.

However, in order to resolve this apparent misunderstanding expeditiously and satisfactorily, a meeting was held on January 10, 1967, at AIA headquarters, attended by top representatives of the Institute, the Associated General Contractors and the insurance industry. At that meeting the entire indemnification paragraph was thoroughly discussed. It was agreed that no change was required in Subparagraphs 4.18.1 or 4.18.2. In order to assure that the insurance industry would provide insurance for this obligation of the Contractor, however, revised wording for Subparagraph 4.18.3 was prepared and agreed upon. Insurance industry representatives agreed that with this revised Subparagraph, the indemnification should be insurable throughout the industry at reasonable cost. A joint press release was then issued by AIA and AGC on January 12, 1697.

The Executive Committee of The American Institute of Architects and the Executive Committee of the Associated General Contractors have now both approved this change.

The appropriate key personnel in the insurance industry are being so notified.

The wording of the Subparagraph 4.18.3 as originally printed was as follows:

"4.18.3 The obligations of the Contractor under this Paragraph 4.18 shall not extend to any claim, damage, loss or expense which is attributable in whole or in substantial part to a defect in drawings or specifications prepared by the Architect."

The new wording which has been agreed upon replaces Subparagraph 4.18.3 as printed, and is as follows:

"4.18.3 The obligations of the Contractor under this Paragraph 4.18 shall not extend to the liability of the Architect, his agents or employees arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the Architect, his agents or employees provided such giving or failure to give is the primary cause of the injury or damage."

This new Subparagraph clearly eliminates any responsibility of the Contractor to indemnify the Architect from liability arising out of the drawings, specifications...

(Continued on page 27)
THE 1,247th MO-SAI PANEL IS
GUIDED INTO PLACE ON THE 2nd
HIGH-RISE DORM AT WSU-OSHKOSH

Construction scenes like this are re-enacted daily throughout the nation as Badger Mo-Sai Panels are used in construction projects where permanence, low maintenance and enduring beauty are essential.

Badger Mo-Sai Panels also offer other advantages, such as design versatility. They can be produced in any shapes desired and are available in a variety of colors. The natural beauty of exposed aggregate has made Mo-Sai Panels a frequently specified material for the construction of shopping centers, office buildings, educational, civic and industrial structures.

Speed of construction, as demanded for most of today's building projects, is accomplished beautifully with Badger Mo-Sai Panels.

Badger CONCRETE COMPANY
437 MARION ROAD
OSHKOSH, WISCONSIN
Thoughts by Kenton A. Peters, President, Western Section

With increasing regularity the architectural profession is subjected to infringement by other professions, by commercial ventures and frequent attacks in the legislature. Because of this considerable effort and money must be expended yearly defending the architect and his sphere of practice.

From time to time the architects mount the bulwarks with appropriate battle cries and with long practiced outbursts of moral indignation. In no way meaning to disparage the considerable efforts made by those who have manned the defenses, we must acknowledge that few accomplishments of lasting merit have been made. Remaining are, to mention a few, the challenges of the so-called “Package Dealer,” the conflict between architectural and engineering registration, the liability laws.

These problems are real and they offer a substantial threat to the Wisconsin Architect and his maintenance of a successful practice. But as important as they may be to one’s practice, they bear a much greater significance. They are symptoms, the visible evidence, of a deterioration of the importance of the profession in contemporary life. Among the obvious signs are the increasing influence and activity of semi-professionals in the design and construction field—semi-professionals who have achieved their “registration” by self-proclamation and not by training: the courteous but indulgent nod given to the advice of the architect in the making of governmental decisions in matters related to the environment. As obvious as these are the most illuminating, most disturbing sign is the general disregard of the architect, his advice, and his guidance by the general public.

Make no mistake. I bemoan not the loss of status but the loss of influence, the loss of power to touch with effectiveness those who control the machinery to alter the environment.

As salving to the wounds as it might be, we cannot blame the “uncultural masses” as the source of our illness. Although the nature of architectural practice has changed significantly becoming extremely more complex, we cannot take refuge in that excuse. We have failed to respond to the demands of a truly contemporary practice. Not that the architect has failed to improve or prepare himself to meet these needs, but because he has failed to realize that his responsibility to improve goes far beyond his own technical improvement. Revealing and perhaps appropriate to this point is the painted sign on the barricade of a local construction project: “God isn’t dead, he just doesn’t want to get involved.” Applied to the architect the paraphrasing would be obvious. The illness of which we suffer is of our own making.

Assuming office in this organization which has waxed and waned in importance and influence imposed upon us collectively, the necessity of acknowledging our ills and the weakening vitality of the membership. It also impressed upon us the necessity of making a decision either to follow a course consistent with our intended purpose or of admitting, and enjoying the prospect of a social club with our appropriate “hail fellow” atmosphere, meeting monthly to benefit from the comradeship of fellow architects. The former course was chosen.

The intention to proceed with a program to strengthen the organization was based solely on one purpose— to improve the profession. This decision was based upon several factors:

First: We are currently faced with numerous environmental problems which promise to increase in intensity and severity and which, if ignored or mishandled, will result in substantial attrition of human and natural resources. Presently the ability of the professions to solve intelligently these problems has not kept pace with the demands. It therefore becomes apparent that we must be cognizant of the nature and magnitude of the problem and acknowledge the limited preparation we have for dealing with it. Concurrently, we must strive to understand the interrelatedness of our environment and the necessity of integrating all facets, including architecture, in order to achieve a viable organism.

Second: An awareness of the problem while necessary and basic will not in itself bring forth a solution. Because of the scale and complexity of the task and its dynamic character, any approach to development of a guidance pattern must be the product both of many disciplines and of an attitude of interrelatedness on the part of the individuals of each discipline. We must seek a community of interest, first amongst ourselves as architects and then with those of other fields whose efforts impinge upon factors which will influence the development and evolution of our living space.

Third: The effectiveness of the two factors previously stressed will be limited and academic if relegated to the archives of typical professional activity. Those sincerely concerned with the quality of our environment, present and future, and with the maintenance and improvement of human values must become involved and committed to join with those forces through which the design principles, concepts, patterns and attitudes can be fostered and implemented.

The professional cannot be content to trust to others the nurture and application of his efforts. He must be prepared to enter the political and public arena actively to persuade, to cajole, to influence and to criticize in order to complete his commitment.

The world will continue to grow and the space we live in will change. Regardless of what you or I do this will occur. The question we face is not will or won’t, but how, in what manner. In this we have a stake.
Bravo! Bravissimo! Ole! Nice going—La Crosse

In a time when communities are strenuously busy to improve their urban scenes, when Federal Government grants are sought to help accomplish these efforts, La Crosse performed a rather astounding feat of community cooperation. It set a shining example of what private initiative can do.

For more than five years, the good people of La Crosse put up with the unsightly and eye-insulting scene shown on the opposite page. This “hole” had once housed the Linker Building, erected at 4th and Main Sts. in La Crosse in 1901. 60 years later a fire destroyed the building. Ben Marcus of Milwaukee purchased the property in 1961. The gutted structure was condemned and came down, leaving the open basement, which was shabbily fenced with grey wood. In 1963 a windstorm dumped this fence into the “hole” and another stronger fence was erected. And that was all that was seemingly going to happen to one of the busiest corners in downtown La Crosse.

Not so! Early in 1966, the Greater La Crosse Chamber of Commerce under the leadership of its President, D. B. Reinhart, formed the “La Crosse Beautiful” Committee. Seventeen members volunteered to serve on this committee. Among them was Carl Schubert, A.I.A., of Carl Schubert and Associates, Architects. The Committee wasted no time to choose as its first project what people had come to call the “downtown dump.”

Architect Schubert, a cultured, widely travelled gentleman, by his profession sensitive to esthetics, knew just what to do about the “trash hole.”

He prepared plans for a sunken garden, presented them to his fellow members of the Committee, who approved them enthusiastically. And that started it all.

Believing in the first things first procedure, Mayor Warren Loveland of La Crosse contacted owner Ben Marcus for permission of beautification of his property. Mr. Marcus graciously and generously agreed to lease the property to the City of La Crosse for $1 a year.

The Committee then drew up a list of contractors and suppliers it felt might be inclined to help and contribute to this community project that was to be accomplished without any substantial funds.

Carl Schubert who donated his services is still delighted and impressed by the response the project received. All in all, 93 individuals, firms, organizations including the local police, firemen, press, radio and TV got into the spirit of things and participated in accomplishing the sunken Man-Lay garden at a donated estimated cost in materials and labor of some $30,000.

He cannot recall one single request that was denied. “Some people even thanked us that we asked for their help.” He is still overwhelmed by the spirit of cooperation the project generated.

Prime movers were Mr. Dick Morse and Don Patrucci, both of the Chamber of Commerce, who were joined by nurseryman John Wagner in their energetic efforts. La Crosse excavating firms (Bert Nelson of Peter Nelson and Sons; Greg Adams of Adams-Hagman, Inc., and Bill Kammel of Kammel Excavating Contractors) moved trucks and bulldozers into the “hole” in August. A week later, members of Bricklayers’ Local No. 1 sealed off doorways and storage vaults in the basement walls. Boy Scout troops volunteered their labor. Members of the Plasterers’ Union resurfaced the walls.

The Biesanz Stone Company of Winona, Minnesota, generously donated 24 stone planters and several stone slabs, one of the largest contributions to the project. “We are still overwhelmed by the generosity of Mr. Bill Biesanz.”

A landscape firm donated the huge boulders which were placed by the Swanson Moving Company. Volunteers planted donated trees and shrubs, others sodded the 88 x 110 foot garden. Volunteers from the Laborers’, Plumbers’, Electricians’, and Truck Drivers’, Unions worked at night and on weekends. Local restaurants provided free refreshments and food. An illuminated fountain was given by the Rain-Jet Company.

Six weeks after the initial start, the community of La Crosse had turned with alacrity what was an eyesore into a pleasant garden complete with landscaping, stone walks, benches, fountain and a planter fence.

We regret not to be able to mention all the ninety-three spirited citizens involved in this successful reversal but we do say to them all: Nice Going!
The Farmers & Merchants Union Bank in Columbus, Wisconsin, began its second century of service to the community of Columbus in 1961. It celebrated this important event with opening its new addition to the building that had brought national recognition in architectural circles all over America when it was designed by Louis Sullivan in 1920.

The addition came about under singularly unique circumstances according to James T. Potter of Law, Law, Potter and Nystrom, Architects of Madison, who had been commissioned with the task.

Naturally we were proud to have been selected to design the addition to Louis Sullivan's building," Jim conceded, "but I approached the commission with awe and awareness of its challenge. Sullivan was one of the greatest architects of all time. We wanted to do everything right, to make sure the addition was in keeping with the original building, but we knew it was possible to stumble. It has happened before."

Fortunately, for everyone who is interested in architecture, the late President of the Bank, Mr. Fred A. Stare, Vice President T. B. Thomas and members of the Board of Directors were of the same spirit as the founder of the Bank, Mr. J. R. Wheeler, who commissioned Louis Sullivan to design the building, located at the corner of Dickason Blvd. and Broadway.
Mr. Stare during his tenure as President of the Bank had become very interested in the history of the building and wrote: "Through a score of years prior to 1919, Mr. Wheeler took notes and sketches and plans grew as the needs manifested themselves. He visited banks in Wisconsin and other states and recorded in his ever accompanying notebook observed features of advantage and disadvantage. Now, among the many banks visited at various times, were some designed by the noted architect, Louis Sullivan. The originality, adaptableness to banking purposes, without too much regard to cramping traditions, of these buildings made so deep an impression that there came the day when in the architect's Chicago office, Mr. Russell Wheeler, banker, and Mr. Louis Sullivan, architect, discussed possible lines of construction for the new Columbus Farmers and Merchants Union Bank.

"Then Mr. Sullivan came to Columbus to get the environment of the proposed building, realizing that such a structure must harmonize not alone with its purposes and uses as a place of business, and with the plans and ideas of the owner, but also with the space to be occupied and with the surroundings." In his report in the Special Edition of the Columbus Journal-Republican, Mr. Stare continues: "With the setting established, the limits of the length and height determined, and acquainted with the demands of 25 years of banking experience, investigation, and tested conclusion concerning the essentials of spacing, arrangement, equipment and general essentials furnished by Mr. Wheeler, Mr. Sullivan went back to Chicago to shape
a design for the bank. While demanding the utmost of the practical and the serviceable, and while insisting upon an economy consistent with the established principles of bank building expenditures, Mr. Wheeler put aside outgrown traditions, and gave the genius of a great architect free scope in the designing of a building, not new for the sake of newness, nor original for the sake of originality, but new and original for the sake of superior serviceableness and beauty.” Mr. Stare significantly ends: “And, why not? Is there any reason why the men and women of the smaller city and the country about it should not have the best for their service and seeing when they have occasion to do business at a bank? What is genius for, if not for their service to people who do the world’s work, and carry on the world’s business.”

In this same spirit the new addition was begun. The officers and directors of the bank wisely determined that the addition be entirely in harmony with the original design and that nothing be done to detract from it. Jim Potter observed: “The owners deserve great credit for realizing the architectural value of their building and being willing to spend sufficient money to match it.”

The current addition as it stands has found praise by architect Potter’s peers throughout the State and is actually the second design he conceived. Initially the bank owned such a small lot that a two-story building was necessary. This design would have interfered with the original building’s scale and neither architect Potter nor the officers of the Bank were happy with it. The design went, however, through working-drawing stage, when suddenly the opportunity to buy the adjacent building presented itself. It is with great satisfaction that we can report that the Officers and Directors of the Farmers and Merchants Union Bank did not hesitate to buy the building, demolish it and to scrap the first design in order to give architect Potter a site that would allow a more compatible design. This action certainly proves the owners’ deep respect for their
building, and a deep understanding and appreciation of Mr. Sullivan's genius. Jim Potter recalls: "Both Mr. Stare, then President, and Mr. T. B. Thomas, at that time Executive Vice-President, were most cooperative in working with us. Complete harmony prevailed throughout the entire project."

The 1900 square foot addition contains public areas on the first floor that match the existing spaces as closely as possible. Where possible details were reproduced exactly, i.e., the bay window and window seat, oak wainscot, grass cloth over plaster, etc. Where this was not possible, architect Potter carried out the spirit of the original as best as he could. In order to keep as much of the character of the conference room, for instance, an important feature in the existing building, which had many windows that were being blocked out by the addition wrapping around this area, Jim glazed these windows with plate glass mirrors. The new addition is a literal extension of Sullivan's spirit with only thirty feet of additional frontage but 52 feet of depth and 54 feet forming an L 16 feet wide partly behind the original building, in which will be found an additional vault, stairway and retiring rooms. Also at the southeast corner, there is a drive-up window for auto-banking. The entire structure is air-conditioned. How it was possible to come as close to the original building as was actually achieved reads like an interesting, architectural detective story with lots of suspense.

There were no original drawings, specifications or records of the Sullivan job, only a set of blueprints, part of which is reproduced here. Mr. Stare by inclination had developed into a historian about the bank building and reported: "It was a real problem when it came to matching the original materials." But Mr. Stare was lucky in finding a copy of the July 1920 issue of the Western Architect, which contained an article on the new bank in Columbus. In it the writer noted that the brick manufacturer was a firm in Crawfordsville, Indiana. Mr. Stare contacted the Rotary Club in Crawfordsville asking them to supply him with a list of brick companies that were operating in 1919. "After some to-do, the brick was traced to a firm in Attica, Indiana. The plant was run by sons of the original supplier and they still had on hand the dies for the brick Sullivan
used." The firm agreed to supply the bricks, but since the brick was a special color and size, the banker had to buy a full kiln load of 50,000 while only 18,000 bricks were needed for the addition. Mr. Stare recalled in an interview in 1961: "They were just as anxious as we were to have the bricks in the Sullivan building, so they agreed to let us have the other portion at the price of common brick. We are glad we have them. We may want to add something else, perhaps another drive-in window, and we'll have the brick available to match the rest of the building." The darkest bricks of the 50,000 were sorted out and used by architect Potter for the addition. To find the terra cotta ornaments was less of a task. Common knowledge led the bank officials to a manufacturer in Illinois. Luckily and somewhat a small miracle, this company had indeed made the Sullivan ornaments and still had his original drawings in its files.

There was still work involved though. The mottled green glaze on the original ornaments had weathered and would have contrasted too sharply with the new terra cotta. The manufacturer prepared 32 samples in various shades of green before the bank officials and the architect were satisfied with the match of materials.
Matching the shade of the Japanese grass cloth was not quite as difficult. It had darkened only slightly. Again Mr. Stare exhausted the samples of three dealers and in the process he learned of a Milwaukee Materials firm, that might have some similar material. The firm sent a sample which matched quite well. It was interesting that this firm had last sold this material in 1949. Construction of the addition finally started in 1960. The bank acted as its own general contractor, subletting the work to as many local tradesmen as possible. The total cost for the addition amounted to $120,000, doubling the amount it cost to build the original building in 1920.

Sensitive to Sullivan's design, Jim Potter comments: "In a rapidly changing world this building, so far ahead of its time, displays a quality of security and permanence equalled by few buildings."

In a time when economics are more important than aesthetics it certainly must be observed that the combination of a well informed and sympathetic owner, a sensitive architect and an unprecedented set of lucky circumstances brought about an addition to a building that is annually visited by hundreds of student architects and others interested in one of the last buildings the great Louis Sullivan designed.
A Leo Steppat memorial exhibition is being held from February 12 through March 6 in the galleries of the Student Union at the University of Wisconsin in Madison. It is co-sponsored by the Union Gallery Committee and the Department of Art and Art Education of which Mr. Steppat was an influential member, from 1955 until his death in 1965, at 55 years of age.

With his wife, Anneliese, a designer and weaver, he came to the U.S. in 1940, refugees from racial persecution in their native Vienna where both were well-known. Immediately after his arrival, Mr. Steppat tied for first place in a national competition for a sculpture in the front of the Pentagon Building. It was the first of numerous art awards he was to win in this country.

His coming to Wisconsin coincided with a resurgence in the visual arts. His contribution became immeasurable to the growth of sculpture in quantity, creativity and quality. In 1961, the year he and Anneliese shared an exhibition at the Milwaukee Art Center, 15 of the 25 sculptures in the Wisconsin Painters and Sculptors Annual, held there earlier, were by his students. In 1963 the Wisconsin Architects gave him an Award of Merit.

The last work he did, posthumously cast in bronze, was commissioned by students of the new Homestead-Thiensville-Mequon High School and dedicated in September, 1965. The students collected among themselves enough money for the casting and Mrs. Steppat, delighted by their choice of him, gave them the design.

Many of his works remain for purchase, and arrangements may be made with Mrs. Steppat, 1105 Rutledge St., Madison, Wis.

A perfect epitaph for him might be his own words, "The pursuit of creativity, not happiness, is the purpose and obligation of man."

Leo Steppat said often that mood is the main element of his sculptures. In an interview, he described his method: "I begin with a piece of metal — a shape — and immediately commit myself. Then the sculpture goes from one form to the next."

Whatever the mood that he translated into his oeuvres, it was never merely a personal and self-limiting state of emotion or mind. It was always an informed mood — informed by his understanding of nature's workings and by his insights into the history of man and of art. He possessed (to borrow a description which fits him from a lecture by Jacques Maritain) that "intercommunication between the inner being of things and the inner being of the human self which is a kind of divination."

Sculptor Steppat remains best known for his wrought and welded metal sculptures, a form that demands rigorous, direct treatment. The iridescent soldering at the joined metal parts enhances the cubist angularity of his forms: in his stylized zoomorphs, as in "Dying Beast"; in his abstractions, as in "Dolmen for Bar-Kochba"; in his nonobjective creations, as in "Till Eulenspiegel." But his geometric shapes are never severely regular but rather organic approximations, like those in rough nature. The three cited works are examples also of recurrent themes in his work, the first of mighty anguish, the second of ineluctable power, the third of lyrical inventiveness.

Mr. Steppat drew from all of art history in arriving at his own "sculpture in form." Sometimes he did this playfully, as in his depiction of a satyr in "Homage to Picasso," which echoes a phase of the work of his great contemporary. Picasso's creations in similar mode and mood are echoes of primitive art styles and of classic subject matter. So Steppat's playful homage is an echo of an echo, a vivid re-reincarnation of a twisted tragicomic figure blowing his persuasive pipes. The satyr emerges in 20th century Steppat-style, in welded metals, but any classic bacchante would recognize him instantly for what he is.

Many of Mr. Steppat's non-objective sculptures might be seen as visual music, "Toccata Ecclesiastica No. 2," for an instance, or the aforementioned, "Till Eulenspiegel." These travel through space as well as occupy it, and there are 'rests' between the progressions of forms, and the forms suggest 'strings,' 'gongs' and 'cymbals.'

He was evidently so thoroughly schooled in the techniques of art that he was free to create in any style; and so self-aware that anything he created emerged with a presence derived from him. His most naturalistic
work is "The Waiting One," a standing figure modeled in a composite of gypsum and sand over pipe lath, which testifies to his virtuosity — and reverence — in handling the human form.

Artist Steppat’s meanings resided in his mediums as much as in the shapes and surfaces he made. Thus, the strength of steel in "Dolmen for Bar-Kochba" intensifies the powerful, eternal tension inherent in the rugged shapes of the monument.

Color and texture are important as the shapes they confirm in his sculptures. Often the steel of his work is brazed with glittering brass, shining copper and gleaming silver. Chemical treatments have brought out iridescent greens, browns and reds. Surfaces are engraved or embossed with symbols, of his own devising sometimes, or traditional as the Alpha and Omega and the Chi Rho in "Treasury for Sacred Vessels or Reliquaries."

Among his more recent works are several made for religious use, some for Jewish ritual and some for Christian. A silver cross, set with semi-precious stones and slenderly attenuated so that it might be used for processional purposes, won him one of his last prizes not long before he died. His "Tabernacle for Scrolls" is an eloquent and ruggedly elegant repository, as befits a church fitment for an ancient faith.
Dolmen for Bar-Kochba/81 inches.

Dying Beast/30 inches.

Till Eulenspiegel/78 inches.

Treasury for Sacred Vessels or Reliquaries/108 inches.
An architect is a “Master Builder.” This is a phrase often heard and used by architects in the past. But is it true today? The nature of the profession has altered radically in the past quarter century. The rapid advances in knowledge in all phases of the profession are amazing. Our attention is constantly called to the proliferation of new products. The new equipment for construction and techniques of construction has swelled. The basic elements of design are being researched and broadened as never before.

Architects are certainly well aware of the rapid changes and are constantly fighting the education gap. Books and magazines, seminars and conventions are among the means we have to try to keep up. The problem is becoming acute at all levels of the profession.

The AIA has recognized the seriousness of the problems and has been doing extensive research to seek ways to resolve them. The AIA has temporarily tried to divide the problems into several parts, recognizing that they are parts of a whole problem.

The most obvious problem is formal education for the training of architects. In the forefront of recognizing the inadequacies of the “Beaux Arts” approach to architectural training was the Bauhaus. The importance and success of Bauhaus can be attested to by the long list of outstanding leaders in all the visual arts who trained and taught at the school. The arrival to this country of Gropius, Mies and Moholy-Nagy began the badly needed revamping of architectural education. A look at the curriculum of some of the schools of architecture today will show that a new revolution of educational needs and techniques is occurring. In order to bring some degrees of cohesion and recognition to the realities of architecture today, the AIA has commissioned Dean Robert L. Geddes of Princeton to head a study team and to prepare a report to the AIA. This study has become known as the Princeton Report and is scheduled to be presented soon. Dean Geddes has accepted the invitation to appear at our convention to present the seminar on formal education for practice.

The profession has come to recognize that not all people in architecture are or should be practicing architects. By virtue of temperament, interest, skill, etc., these people are not interested in becoming practicing architects. But they are vital to the operation and success of an office. The title now used for the more specialized skills is technicians. And to become a competent technician requires a different type of training. Some universities are now aware of the differences in education and are preparing separate course programs to do a better job of preparing these people. The chairman of the AIA committee dealing with this problem, Mr. Clinton Ternstrom, AIA, will present this phase.

No one need be reminded that education never ceases. But one very important part of education, available to everyone, and sadly neglected is the gap between formal education and practice. Most states require a period of apprenticeship. During this time, it is presumed, the prospective architect will complete his basic education. But this rarely happens. The AIA has had programs in the past but they have not worked. A new program is being developed which should prove to be more realistic to introduce and execute.

The final phase of education to be pursued is the problem of continuing education.

The convention will, as always, include numerous other offerings. The largest number of exhibitors in the Chapter’s history will take over the entire fifth floor. Prizes, a free walking lunch, an eye-opener party, the annual banquet, a unique old time “German hospitality” program and a special women’s program should round out the convention.

The dates: April 5, 6, and 7. The place: The Sheraton-Schroeder Hotel, Milwaukee. The rewards: Increased knowledge, pleasant company and a chance to relax. The purpose: You!
ELOQUENCE IN WORD AND DEED

"To us, a gift to Wisconsin Architects Foundation comes the closest to making a true contribution to the construction industry at this time. The Foundation's efforts in helping deserving students to further their education and the untiring efforts to establish a School of Architecture in the University of Wisconsin, which would be a contribution to all of the people in the State, seem to symbolize the true Christmas spirit."

This sincere expression is in the words of Mr. Paul F. Bronson, President of Best Block Company, and an accompaniment to the Company's contribution of $1,000, the third annual gift in like amount.

To Best Block Company's customers and friends, Mr. Bronson sent a letter noting: "As we have done in the past, in the spirit of making a contribution to our industry, a donation is being made to Wisconsin Architects Foundation in lieu of Christmas gifts."

The pioneer annual contribution to the Foundation was made by Osborne, Incorporated, of Madison. Since 1962 this organization has favored the Foundation annually with $150. Each year enclosed in a handsome Christmas greeting sent to Wisconsin architects is a little card reading:

"In keeping with our tradition regarding the giving of gifts or favors at Christmas time, we have again decided it would be best to make a contribution this year to your Wisconsin Architects Foundation."

Last year Rollin B. Child, Inc., of Minneapolis began an annual contribution to the Foundation, amounting to $250. In the holiday greeting sent to Wisconsin architects, a small card enclosed reads:

"In lieu of other Christmas remembrances we will make a contribution to Wisconsin Architects Foundation to be used for tuition or scholarship grants and continue our support of the Rollin B. Child, Inc., Education Fund at the University of Minnesota School of Architecture."

It is hoped sincerely that the above quotations will inspire other organizations associated with the architectural profession in the State of Wisconsin to emulate the worthy sentiment and the deed which is so gratefully appreciated by the Foundation and indirectly by the students the Foundation benefits.

"Jeffrey Crowell, De Pere, Wisconsin, most recent student to apply to the Foundation for a Tuition Grant. He attends the University of Detroit where tuition is $1,020./year (in-state in Wisconsin $325.). The University being a private institution, Mr. Crowell is not entitled to Wisconsin Tuition Reimbursement. He is in urgent financial need for his final year of training. His school is on a co-op system whereby each student works in a local architectural office for one-third of school time. Upon graduation he will be obliged to work one additional year in Detroit. Question: Will he return to Wisconsin?"

WISCONSIN TUITION REIMBURSEMENT PROGRAM

It was of considerable interest to the Foundation to learn that 126 Wisconsin students of architecture, receiving their training of necessity out-of-state, obtained a maximum of $500 tuition aid from the State of Wisconsin under the new Tuition Reimbursement program begun with the first semester of the academic year 1966-67. This aid, however, applies ONLY to Wisconsin students attending Public (state-supported) institutions. Those attending Private (non-state-supported) institutions, and who have to pay far greater tuition costs, are NOT included in the new program.

This leads to a number of hypothetical questions: How many students attending public institutions have not as yet heard about this opportunity? How many more will apply beginning with the second semester? What of the students attending Private schools, many of necessity because of student quotas and other restrictions and who actually pay higher tuition, who receive no consideration from the State of Wisconsin?

Above is evidence of the beginning of the cost to the State in the hit-and-miss stop-gap program that in six months has cost the taxpayers over $60,000 and which will grow increasingly greater. Think what that money could mean over a period of years were it directly applied to the School of Architecture!

The Foundation has gone on record with a safe estimate that less than 10% of the architectural graduates return to Wisconsin to practice. To this then, the State of Wisconsin can add the expense of public grade school and high school training, in relation to these students, which also goes down the drain.

Tuition costs to Wisconsin students training out-of-state increase every year, as do the restrictions which prevent many from attending less expensive public institutions, these schools having to accommodate their own students first.

That the State of Wisconsin is taking so many years to realize the necessity of providing academic training for the profession of Architecture, which is the backbone of the largest national industry, the construction industry, is beyond comprehension.

The Foundation's role in aiding in the establishment of a School of Architecture in the University of Wisconsin will continue unabated.

WHAT ARE YOU DOING TO HELP IN THIS UNFORTUNATE SITUATION?

(Note: The above was written in early January with a small glowing hope that the State Coordinating Committee would act favorably early in the New Year.) Consider him, the Wisconsin Architectural student.*
A-201 GENERAL CONDITIONS
from page 11

changes, change orders, etc., which the Architect originates. This is entirely consistent with the original principles underlying the indemnification provision. It does not dilute the protection from unfair claims arising out of the construction operations which are the Contractor’s basic responsibility. The wording was acceptable to the insurance industry representatives at the joint meeting, and, in fact, was prepared with their advice and assistance.

The next printing of Document A-201 will contain the new wording of Subparagraph 4.18.3, and a revision notice to this effect will be added at the bottom of Page 1. Meanwhile, the remaining AIA stock of A-201 will be sent out with an insert sheet enclosed setting forth the change in wording of Subparagraph 4.18.3.

It is recommended that so long as the first printing is used, the new wording of Subparagraph 4.18.3 be incorporated in the document by Addendum, Supplementary Condition, Change Order, or other appropriate method. As soon as the revised printing is available, no such changes will be required.

NOTES OF THE MONTH
from page 7

Carl J. Schubert, A.I.A., architect from La Crosse, was presented with an engraved stone plaque by the ASI at its October meeting. Mr. Schubert, now an honorary life member of ASI, was cited for his pioneering in stone welding with epoxies. The award was presented by Bill Biesanz of Biesanz Stone Co., of Winona, Minn. The citation pointed out the great advances made possible by Schubert’s techniques, such as curtain walls with stone as the structural material.

Lawrence E. Bray, A.I.A. Vice-President of the Wisconsin Chapter, A.I.A. urges all Corporate and Professional Associates to consider individual membership in the Wisconsin Association of Professions. Here is what he has to say:

The Wisconsin chapter, A.I.A. is one of nine professional organizations which has chartered the new Wisconsin Association of Professions. W.A.P.’s purpose is “the promotion of better understanding between and among the professions.”

And you, as a member of Wisconsin chapter, A.I.A., have the opportunity to hold an individual membership in this worthwhile Association.

And of great importance, these professional associations have proved to foster higher standards of ethics and conduct among their members.

We all appreciate the need to prepare young architects for the demands our field will place upon them. And there’s a fact that’s as old as formal education itself: you don’t learn everything from books! One of our activities will be to help develop programs aimed at giving pre-architectural and architectural students a more adequate preparation for the facts of architectural life.

In short, through membership in W.A.P. you and I, as individuals, can do more for those who will come into our field after us, and we can do something for our colleagues and ourselves as well, through common association with and learning from our neighbors in professional life here in Wisconsin.

Who are those neighbors? As of now, the State Bar Association of Wisconsin, State Medical Society of Wisconsin, the Wisconsin Chapter of the American Institute of Architects, Wisconsin Education Association, Wisconsin Pharmaceutical Association, Wisconsin Society of Certified Public Accountants, Wisconsin Society of Professional Engineers, Wisconsin State Dental Society, and the Wisconsin Veterinary Medical Association are co-charter members of W.A.P.

Our officers are: President, attorney Frank A. Ross, Jr., of Madison; Vice President, Frank F. Shuler, D.D.S. of Clinton; Secretary, engineer V. L. Fiedler of Madison; and Treasurer, architect Lawrence E. Bray of Sheboygan.

You, as an individual member, will pay $10.00 dues annually. W.A.P. needs you and me now, in its formative stages, when we can help greatly in giving support and direction. Your professional society is already a member. Won’t you join us?
The word "research" is commonly and widely applied today in all phases of our lives. It more often than not is considered a basic necessity in industry but seldom do we understand specifically what "research" involves or consists of. We know that research has performed wonders in this world, and we are grateful to the Portland Cement Association Research and Development Laboratories for the opportunity to personally witness the extent and impact of the research gone into concrete for the past 50 years. The same opportunity we enjoyed is offered everyone (single persons as well as groups of people) who wish to solve specific problems pertaining to concrete or want to become inspired with new ideas. To encourage the widest possible dissemination of research results, the laboratories maintain a strict "open door" policy. Many thousands of visitors in the United States, Canada and other countries are welcomed here each year. Through the work of its research and development division, the Portland Cement Association has constantly improved and expanded the uses of cement and concrete, and the concept of concrete as a construction material has undergone drastic changes in the past half century. It all started just 50 years ago.
Architectural concrete wall panels in varying patterns are displayed at this outdoor exposure site in Skokie. Panels demonstrate the varied uses of exposed aggregate, plastic form liners, rubber form liners, and color treatment. Decorative panels such as these are becoming increasingly popular for facing exterior walls of both old and new buildings.

The year — 1916. The place — Chicago. There was a problem that sorely needed solving and cement manufacturers from all over the country had come to the Windy City to solve it.

At the time there were no uniform test methods and standards for portland cement and no uniform standards for concrete construction.

The industry leaders meeting in Chicago knew the time had come to tackle these problems. They founded the Portland Cement Association, a non-profit organization to improve and extend the uses of portland cement and concrete.

The Research and Development Laboratories of the Portland Cement Association grew since that time into the largest and most completely equipped in the world devoted to research on cement and concrete.

The $12,000,000 Center is located on a 37-acre site in Skokie, Ill., 16 miles northwest of downtown Chicago. It consists of five architectural concrete buildings containing 150,000 sq. ft. of floor space, nearly three and one-half acres. The first laboratory buildings at this site were occupied in 1949, the newest in 1958.

Experiments and physical testing are carried out with one objective — to develop scientific and technical information. In pursuit of this goal, engineers, physicists, chemists, geologists, mathematicians and technicians delve into vital technical subjects. These include such things as the manufacture of cement, properties of cement and concrete, resistance of reinforced concrete to fire, development and verification of improved structural design concepts for buildings and highways, development of concrete with greater durability in severe exposures, performance of masonry walls, decorated concrete surfaces, extra-heavy concrete
Here the effects of base thickness, type of material, and cement content are evaluated by testing a soil-cement pavement specimen for load capacity. As the load is applied, deflections are sensed with dial indicators and pressures on the subgrade are measured by pressure cells. Many such tests are necessary to establish design criteria for the large variety of soils encountered in the United States and Canada.

for radiation shielding, ultra-lightweight concrete for thermal insulation, and many others.

The entire Association is charged with translating laboratory data into more efficient concrete construction as quickly as possible.

To provide its researchers with the tools necessary to carry out their work, the Association has invested millions of dollars in special physical equipment, ranging from the delicate and intricate apparatus necessary for the intimate study of molecular and crystal structures of cement paste to a testing floor where reinforced concrete members and structures may be subjected to loads of more than 20 million pounds.

Precision instruments in the laboratory can measure to one millionth of an inch or weigh 1/10,000 of a gram. An electronic computer, x-ray equipment, electron microscope, infrared spectrophotometer, and many other physical resources are at the command of the research staff.

Not only forces, but environments are simulated in the laboratories. Special rooms provide a wide range of climatic conditions, from −30°F to 150°F and from bone-dry to continual rain.

The water-cement ratio theory of proportioning concrete mixtures was among the earliest and most far-reaching developments of Association research. Also of major consequence was the development of air-entrained concrete to resist severe freezing exposure and to eliminate pavement scaling caused by the application of chemicals to melt pavement ice.

The development of soil-cement for low-cost paving is a typical example of a new product born in the laboratory.

Major contributions have been made to engineering design of pavements, to precasting and prestressing reinforced concrete, to the use of high strength reinforcing steel, and in improved design concepts for shell and high-rise buildings.

Research findings, new developments and technical progress in respect to portland cement and concrete are quickly made available through the Association’s field service as well as through technical literature and educational activities — thus greatly shortening the lag between research and actual concrete construction practices. Patentable inventions and scientific findings resulting from Association research are dedicated free to the public.

The laboratories publish results of investigations in technical and scientific journals and in laboratory bulletins throughout the entire world.

The Research and Development Library provides another essential medium for communication of information because of its outstanding collection of cement and concrete literature.

The Library contains more than 7,000 highly specialized bound volumes, 300 current periodicals and 725 serial titles. Much of the collection of foreign pamphlet material is received on an exchange basis and includes many rare books and magazines.

Services of the library include continuous review of all literature received, abstracts, translations, bibliographies and reference assistance to member companies, technical committees, the public, and members.
A nine-panel 45-ft.-square flat plate floor structure is being subjected to progressively heavy loads. Action of the slab in resisting the loads was determined from reading of 240 strain gages on the concrete and reinforcing bars.

of the laboratory staff. The staff includes trained librarians, chemists and engineers to scan and evaluate items pertinent to research and development work.

Work at the laboratory is divided into three divisions — research, development, and technical information. Research is concerned primarily with the properties of cement and concrete as materials. Development is more concerned with the structural and engineering aspects of concrete.

The Research Department is divided into five principal activities; Basic Research, Applied Research, Field Research, Fire Research and Manufacturing Process Research. In addition a separate group is maintained for Analytical Chemistry Research.

The Development Department is divided into three principal phases of activity: Structural, Paving, and Products and Applications.

The Department of Technical Information directs effective flow of technical information within the Association, assists in the appraisal of laboratory programs, and studies application of advanced methods of information retrieval.

RESEARCH DEPARTMENT

Basic Research

Scientists in this section conduct research leading to an improved understanding of the chemical processes that harden cement paste and concrete. They investigate the basic physical and chemical properties of the hydration products. They study the sizes, shapes, constitution, and structure of the hydration products and the forces of interaction between them. They investigate the effects of various factors such as temperature, relative humidity and carbonation on these basic properties. The main goal is to achieve a basic understanding of strength and of dimensional changes. An electron microscope and X-ray equipment allow them to inspect the molecular arrangements and intricate array of interlocking structures that give rigidity to the hardened paste.

Applied Research

Engineers and scientists in this section link research to everyday concrete practice. They study the interaction of cement paste with the wide variety of aggregates used in concrete. They conduct tests to determine the resistance of concrete to freezing and thawing, de-icing salts, acids in food processing plants and other severe exposure conditions and seek methods of improving performance of concrete under these conditions. Rapid freezing and thawing tests yield in a few weeks results that would require many winters of observation in actual use. They investigate means of obtaining the best concrete for various climatic conditions ranging from \(-20^\circ\) F. to \(+120^\circ\) F. Indeed, storage of liquid gases in concrete tanks has required studies into the properties of concrete at temperatures as low as \(-250^\circ\) F.

They also study a wide variety of other subjects, such as, masonry mortar, efflorescence, admixtures, protective coatings and other surface treatments, expanding cements, and physical and chemical properties of aggregates.

Field Research

Engineers and geologists study the performance of a variety of existing concrete structures and are asso-
Engineers test a half-scale prestressed concrete bridge girder to develop design criteria for resistance to bending movements and shear forces.

Associated with one of the most far-reaching projects undertaken by the Association — The Long-Time Study of the Performance of Cement in Concrete. This study was inaugurated by the PCA in 1940 under auspices of an advisory committee representing government agencies, consumer organizations and cement producers.

The primary purpose of this project is to determine the nature of factors responsible for differences in cement performance when differences are noted. To carry out the long-time study 15 field projects are located in widely separated sections of the country — in low and high altitudes, in states with severe winter climates and in semi-tropical areas, and in various sea-water exposures.

One phase of the study was the construction of four concrete pavement test roads in contrasting climates. Nearly 400 test sections were built with various materials used in rotation on different sections.

Other phases of the project included the testing of large concrete pilings in salt and fresh waters; observation of concrete beams exposed to sulfate bearing soils in California, and the establishment of three experimental test plots, two in Illinois and one in Georgia, where some 2,000 specimens are exposed to varying weather and soil conditions. All of this involved the making of more than 9,000 laboratory specimens and 3,000 field specimens.

The findings of this important study will result in improving durability, that is, lengthening the service life of concrete structures under the various conditions of exposure.

Fire Research

Research has contributed many advancements in the uses of concrete and in structural concrete engineering during the building surge following World War II. To meet the increasing needs for research with respect to fire and other high temperature exposure of concrete, the new Fire Research Laboratory was established by the PCA in 1958. The major purposes of this work are: 1) to develop a complete fund of information on the physical properties of concrete materials and steel reinforcement at elevated temperatures, 2) to contribute to the orderly evolution of new structural systems and new applications of concrete where fire exposure must be considered and 3) to assist in development of fire resistance data on existing structures where such data are now lacking.

To accomplish these ends, full scale prestressed beams and other structural members are fabricated in the laboratory under carefully controlled conditions and subjected to fire tests under load. The object of this research is to find out how concrete reacts under structural loads at extremely high temperatures and to apply this knowledge to new designs. By means of this work, code-making groups are assisted in formulating realistic fire ratings and in determining the real nature of time-temperature relationships.

Manufacturing Process

Manufacturing Process studies the technology of cement manufacture, raw materials, size reduction, beneficiation, pyro-processing, materials handling, control methods, and economics in the consumption of power, fuel and labor.
DEVELOPMENT DEPARTMENT

Structural Development

The structural laboratory was designed specifically to implement many of the long-range objectives of the PCA. Five approaches to these objectives were evolved:

1. To support new and improved structural applications, such as precast frames and bridges, shell structures, folded plates and space frames, through the science and art of structural engineering.

2. To extend knowledge of the structural performance of concrete, with particular emphasis on precasting, prestressing, and the use of high-strength deformed bar reinforcement.

3. To advance structural concrete design through improved methods and concepts such as ultimate strength design, yield line theory, limit design theory, and shell theory.

4. To improve structural details in order to facilitate mechanized construction and to reduce costs.

5. To pursue the science of model testing and to perfect analytical approaches for predicting the behavior of structural concrete assemblies. This effect has as its ultimate goal a method by which the safety of building construction may be confidently anticipated without recourse to large-scale tests.

Instead of housing conventional testing machines, the laboratory is a giant testing machine in itself, capable of exerting forces of more than 20 million pounds. Facilities are so adaptable that a variety of specimens from small beams to large structural assemblies can be accommodated by a single set of equipment components. It is possible to apply forces to test structures in any direction of space. Equipment permits static short-time tests as well as repeated load and sustained load tests.

Paving Development

Since its first laboratories were organized, the Portland Cement Association has made many significant contributions to America's changing profile. Probably none has benefited so many people as research in the field of transportation.

The Association long ago realized the ever increasing need for new and better highways. During the past decade the Paving Development Section has added measurably to the knowledge of adequate and economical foundations, effective granular subbases, sawed joints, jointing systems, more economical maintenance procedures, plus longer-lasting, safer and smoother riding pavement surfaces. Through new knowledge gained in the laboratory and in the field, concrete pavements properly designed for present and future load can be expected to last for 50 years or more.

Laboratory facilities permit testing of concrete and soil-cement pavements under a variety of conditions. Small sections of full-scale roadways can be built in which the subgrade, subbase and pavement slab can be selected, instrumented and tested as desired. Outdoor test areas subjected to normal variations in temperature and weather as well as indoor facilities with temperature and moisture control are available.

The Paving Development Section also has in progress a continuing investigation to supply engineering data needed for the rapidly expanding field of soil-cement. In the laboratory itself, data are assembled on durability, strength, volume change and elastic properties of many different soil-cements.

A mobile laboratory equipped with loading and testing devices is used for studying soils and pavements under actual site conditions. With this equipment, scientists can now test both soil-cement and concrete pavements, built under typical construction conditions, that have been subjected to actual traffic loads and that have undergone natural cycles of weather in any part of the country.

Products and Applications Development

Engineers in this section develop technical information covering a wide range of studies not specifically assigned to the other two Development Department sections. Typical projects relate to structural quality lightweight aggregate concrete, insulating concrete, pumped and gunned concrete, precast wall panels, concrete masonry, decorative concrete surfaces, and concrete for residential and farm construction. A pilot concrete block plant complete with mixer, block machine, low pressure steam kiln, and an autoclave provide complete facilities for investigations relating to manufacture, curing and properties of concrete block.
GEBHARD-BERGHAMMER, INC.

ANNOUNCES

THE CHANGE OF THE FIRM NAME

TO

BERGHAMMER CORPORATION

GENERAL CONTRACTORS

No other change has been made, or is intended, financially or in present personnel.

The name change reflects only the retirement of Jerome P. Gebhard from the firm as of January, 1964. At that time Mr. Gebhard retired as an officer and a director and his stock was acquired by the corporation.

The firm was originally incorporated in December of 1929.

5420 WEST STATE STREET
MILWAUKEE, WISCONSIN
(414) 258-1818

producers' council

Murry Kinnich, your AIA-PC liaison officer, has been attending meetings with our group, regularly, and from these meetings an idea was born. We in the council, along with our architect friends, are aware of the building activity in the fields of new construction and remodeling. To borrow from another writer, we are aware that “excitement is bubbling” in downtown Milwaukee and elsewhere in our state. There is no question that Milwaukee and Wisconsin have re-asserted themselves as being leaders in our great construction industry.

It is indeed gratifying to observe the sparkling new buildings, new expressways and new housing developments, but these are only part of things yet to come. Along with this new construction, remodeling appears to be of great importance. Many areas have been razed to make way for the new, and many

(Continued on page 36)
PATTERN BLOCK
for BEAUTIFUL BLOCK WALLS
for
• CHURCHES
• SCHOOLS
• HOMES
• COMMERCIAL BLDGS.
• INDUSTRIAL BLDGS.
• APARTMENTS

Available From
BERTHELET FUEL & SUPPLY CO.
820 W. Montana St.
Milwaukee, Wis.
PHONE 744-0900

J. W. PETERS & SONS, INC.
McHenry and Market Streets — Burlington, Wisconsin 53105
Phone 763-2401

MANUFACTURERS OF PRECAST AND PRESTRESSED CONCRETE STRUCTURAL SYSTEMS

90-ft. Clear Span Main Garage Space

Overall View

Racine County Office Building and Highway Department Garage,
Racine County, Wis.

General Contractor: Korndoerter Construction Co., Racine, Wis.
Prestressed Concrete: J. W. Peters & Sons, Inc., Burlington, Wis.
older structures have been given a "facelifting." The extent of the "facelifting" is in wide variation. Some remodeling has been complete and some only in part, sometimes down to a mere cleaning of the exterior. Whatever the extent, however, remodeling opportunities are here.

The Producers' Council is happy to announce that it will sponsor a "Remodeling Seminar" on Friday, February 10, 1967, at the Arena in Milwaukee. The seminar will be of one day duration, starting with the subject of "Minor Remodeling" in the morning and an afternoon session on "Major Remodeling." Between sessions, there will be a viewing of building materials, presented by the members of the Producers’ Council and a luncheon.

There will be in attendance architects, engineers, real estate developers and consultants, building management representatives, public, private and parochial building planning and maintenance personnel, building owners, contractors, and finance specialists.

In the morning and afternoon sessions we will discuss the elements of design, materials, construction and economics. We feel that in bringing together the people who are involved in a remodeling program, we can exchange knowledge about the subject.

Mark your calendars now for February 10, 1967. This date can mean much to all of us as individuals if we unite our forces to fight the "War on Community Ugliness." Remodel is our theme.

Harry Wittwer
Pete Alexander
Co-Chairmen

---

Years of cooperative effort between architects and Duwe personnel have proven to us that it is not necessary to make startling claims, nor embellished promises. Nor is it necessary to provide glamorous photos of completed structures (we can, of course, supply an accurate list, or photos of the buildings for which we have supplied roof systems).

In an advertisement, a simple statement of the distinct, honest advantages is all that need be given. With the DUWE SYSTEM—DULITE Roof Deck and Duwe Joist—these are:

- 2-hour Underwriters' rating.
- Exceptional insulating value.
- High acoustical rating—a .75 noise reduction value
- Permanence—resists damage from fumes, moisture
- Low maintenance
- Lightweight with structural strength
- Construction is less complicated.

There's more to the story of the Duwe System. This catalog gives the details you want. It's yours for the writing.
The joints of all exterior walls are generally subject to the same forces and considerations and have certain specific prerequisites. Two important considerations for joints in concrete curtain walls are (1) understanding the volume changes which occur before and after the erection of concrete units and (2) establishing functions for the joint.

Like most materials, concrete expands as temperature rises and contracts as temperature falls. Concrete also expands and contracts with gain or loss in moisture. However, the contraction of concrete due to moisture loss while drying is usually greater than any subsequent expansion. Since concrete exposed to the atmosphere loses some of its original water, it normally exists in a somewhat contracted state compared to its original dimensions.

This is an important consideration when designing joints for concrete components. If the joint design relies entirely on a positive bond between panels to waterproof the wall, then the joint sealer must be capable of expansion and contraction as well. For this reason, the elastic sealants such as polysulfide and silicone rubber have been satisfactory for panels of all sizes. Such flexible sealants (even if applied over mortar joints which act as setting beds) can absorb movement in a joint due to volume changes of panels.

To minimize volume changes in concrete wall panels, the following construction methods are effective:

1. Limit the water content of concrete to the minimum required for proper placement.
2. Avoid conditions that increase the water demand of concrete such as high slumps and high concrete temperatures.
3. Use the largest total amount of aggregate in the mix that is practical.
4. Use the largest maximum size coarse aggregate to fit the job conditions.
5. Use fine and coarse aggregates that exhibit low shrinkage characteristics when used in concrete.
6. Avoid use of aggregates that contain an excessive amount of clay.
7. Provide a period of air drying before placing units in a wall.

The production of concrete panels should always be scheduled well ahead of erection and should include ample time for thorough curing, air drying and inspection.

For additional technical data, write for free literature.
NOW AVAILABLE IN WISCONSIN — a new, distinctively different four-faced building block for walls of enduring beauty . . . inside, outside, all around the house . . . 8" and 12" walls for ornamental and structural use . . . 4" ornamental units for veneered walls.

ADOBE BLOCK provides a happy combination of practical structural features architects and builders look for with the esthetic beauty and easy-to-care-for qualities that please people. It's warm, natural charm 'n' beauty requires no finish and "weather" beautifully. On the other hand, if accent colors are called for . . . use of colored mortar achieves distinctive effects . . . and, application of other standard finishes presents no problem.

We invite you to find out about new ADOBE BLOCK . . . write or call today!
EXCELLENCE AND ECONOMY IN PRECAST CONCRETE FORMS AND SPLIT ROCK MASONRY VENEER UNITS

CATHEDRAL SQUARE BUILDING
525 East Wells St., Milwaukee, Wisconsin
Grassold Johnson Wagner & Isley Inc. — Architects

Precast columns forty-five feet high attached to existing concrete columns lend beauty and dignity to this elegant structure. The precast concrete canopies at the top of the parapet wall are supported by the column facings.

FORT ATKINSON SAVINGS AND LOAN
Fort Atkinson, Wisconsin
Waterman, Fuge & Krauss Inc. — Architects and Engineers

This unique textured split concrete brick which is available in many permanent colors and sizes presents the most pleasing appearance coupled with time proven enduring quality. Combined with exposed aggregate panels, the exterior presents a perfect image of the architect’s design and imagination.

We would be pleased to show you our new special architect oriented Split Masonry Units.

Split-Rock Products Company is the originator of quality split concrete brick.

Quality always comes first at Split-Rock.

split-rock PRODUCTS COMPANY
13160 West Burleigh Street Brookfield, Wisconsin Phone (414) 781-4330
This is the mark of MARATHON

...a Company that looks to your future

The Marathon lumberjack is a man with a mission, a man determined to be best for you. He carries the big millwork line, the largest, most complete in Wisconsin. He originates and holds the big new ideas, like Tilt-A-Matic windows, with more new products to come. And he has the flexible muscle to co-ordinate big production runs with special order work. He can and does do both.

So use the big man from Marathon to your advantage. He is the image of a company that has the ability to think ahead of the situation — your situation — and to be ready for it when it occurs. Your inquiry is invited and wanted. Call or write.

MARATHON MILLWORK COMPANY
A Division of Marathon Industries, Inc.
1009 Third Street • Wausau, Wisconsin 54401
Phone: 715-842-2036

P.O. Box 7 • Pewaukee, Wisconsin 53072
Phone: 414-691-0330
CREATE DIMENSIONAL WALLS OUT OF NOTHING FLAT

Falls Block & Supply Co. now gives you FLUTED DECORATIVE BLOCK. With this newest of design block you can create endless media of expressions to further your designs. FLUTED DECORATIVE BLOCK adapts to most any vertical lines. You can now take advantage of the widest varieties of shapes and sizes and come up with renditions that will literally stagger the imagination. Lush and lively dimensional patterns of concrete block can now be easy to come by and so easy to go by.

FLUTED DECORATIVE BLOCK
Available in 8” and 12” sizes

FLUTED-REVERSE DECORATIVE BLOCK
Available in 8” and 12” sizes

HALF FLUTED-REVERSE DECORATIVE BLOCK
Available in 8” and 12” sizes

HALF FLUTED DECORATIVE BLOCK
Available in 8” and 12” sizes

THERMO-LITE BLOCK

Now let your imagination soar with this newest of ornamental block . . . available only at

FALLS BLOCK & SUPPLY CO.
N91 W17174 APPLETON AVENUE MENOMONEE FALLS, WISCONSIN
PHONE: 251-8330
MANUFACTURERS OF CONCRETE PRODUCTS
SAVE WITH...

U. L. APPROVED FIRE RETARDANT

SPANCRETE

Prestressed, Precast Concrete Floor and Roof Systems

The nationally known CRUM & FOSTER GROUP of insurance companies has prepared this list of comparative insurance premiums. They are, in each instance, based on fire and extended coverage with 80% coinsurance using the amounts indicated. Metropolitan is based on class 2; suburban, class 8, and rural, class 9. Assumptions were made when calculating rates for each situation. For example, the Die Casting Plant premiums were based on one having a combustible contents classification (business interruption was not considered). The contents of the apartment house were assumed to be owned by the building owner (coinsurance credits applied). The rates shown are based on typical situations and are for comparative purposes. Actual rates on specific buildings may vary from those shown.

The two hour classification can be obtained using Spancrete in 10", 8", or 6" depths. Consult your Spancrete representative for full details of Underwriters' Laboratories approvals for 2 and 4 hour ratings.

<table>
<thead>
<tr>
<th>Two-Hour</th>
<th>One-Hour</th>
<th>Metal Deck Incomb. Clg.</th>
<th>Metal Deck Comb. Cellig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan Suburban Rural</td>
<td>Elementary School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metro.</td>
<td>Suburban</td>
<td>Rural</td>
<td>Metro.</td>
</tr>
<tr>
<td>159</td>
<td>187</td>
<td>285</td>
<td>354</td>
</tr>
<tr>
<td>149</td>
<td>156</td>
<td>260</td>
<td>272</td>
</tr>
<tr>
<td>Wood Frame</td>
<td>Masonry-Wood Joist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1912</td>
<td>2591</td>
<td>2618</td>
<td>2191</td>
</tr>
<tr>
<td>Shopping Center</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>149</td>
<td>156</td>
<td>260</td>
<td>272</td>
</tr>
<tr>
<td>Wood Frame</td>
<td>Masonry-Wood Joist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1232</td>
<td>1521</td>
<td>2273</td>
<td>2191</td>
</tr>
</tbody>
</table>

SPANCRETE INDUSTRIES, INC.
10919 W. Bluemound Rd. • Milwaukee, Wisconsin 53226 • Area 414 Ph. 258-4110
THE SELECTION OF A SPECIALTY CONTRACTOR IS IMPORTANT

A satisfactory contractor must provide competent workmanship, a cooperative spirit under competition.

But today's Age of Technology demands more than the ability to form in place a system of pipes, wires and air ducts.

Today's owner of buildings demands this service. WE CAN PROVIDE IT.

HYLAND, HALL AND CO.
H & H ELECTRIC CO., INC.
Madison, Wisconsin
COMPLETE MECHANICAL & ELECTRICAL SERVICE

precast prestressed concrete

HURLBUT Concrete Products GREEN BAY, WISCONSIN

"Compatible Use of Structural Concrete"

F. HURLBUT CO. — CONCRETE PRODUCERS  •  GREEN BAY, WISCONSIN

Project:
Green Bay Fire Station

Owner:
City of Green Bay

Architects:
Nichols & Brummel
Green Bay, Wisconsin

Contractor:
F. O. Zeise Construction Company
Green Bay, Wisconsin
"...And you'll like the quiet and privacy this apartment gives you. These are all plaster walls!"

PLASTER — A WISE INVESTMENT

Smart builders and investors recognize the value of plaster walls in new apartment buildings. After all, once you build 'em, they must be rented. And what a selling tool plaster walls become for your client when it's time to rent.

First of all, genuine plaster walls provide quiet and privacy, eliminate annoying apartment to apartment noises. Add to this the fact that plaster walls decorate more easily with paint or wallpaper and maintain more economically than touchy thin-skinned substitutes. It's quite evident that in the long run, plaster walls are your client's best investment.

Specify genuine lath and plaster walls and ceilings for quality, beauty and endurance.

Specify genuine lath and plaster.