indiana architect

concrete masonry

now broadens your home design opportunities!

Across the country, homes of fresh interest evidence the special character and charm that can be created with today's new forms of concrete masonry.

The array of modern masonry units in concrete stimulate the imaginative designer. New styles, sizes and shapes, new textures and colors! Individually and in combination, they provide an almost limitless fund for personal expression of wall treatments, both exterior and interior . . . even within the traditional styles of architecture.

Acceptance grows for concrete masonry . . . with buyers, with financers of quality homes. This is truly *living* concrete for it matches people's mood for modern, gracious living. Write for free copy: *Gracious Homes of Living Concrete.* (U.S. and Canada only.)

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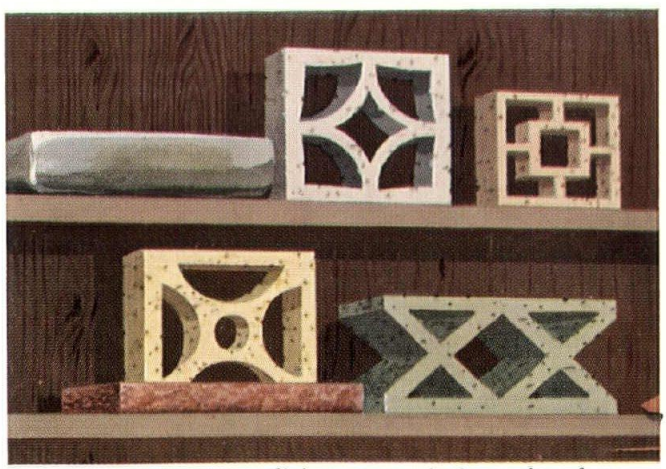
A national organization to improve and extend the uses of concrete



Scores of styles! *New-type living concrete in just a few of the shapes, sizes, textures and colors now available.*

indiana architect/

Official Journal, The Indiana Society of Architects, The Northern Indiana Chapter, The Central-Southern Indiana Chapter, and the Indianapolis Chapter of The American Institute of Architects.

JANUARY / 1967 VOLUME X / NUMBER 7

A Special Issue on Concrete Masonry

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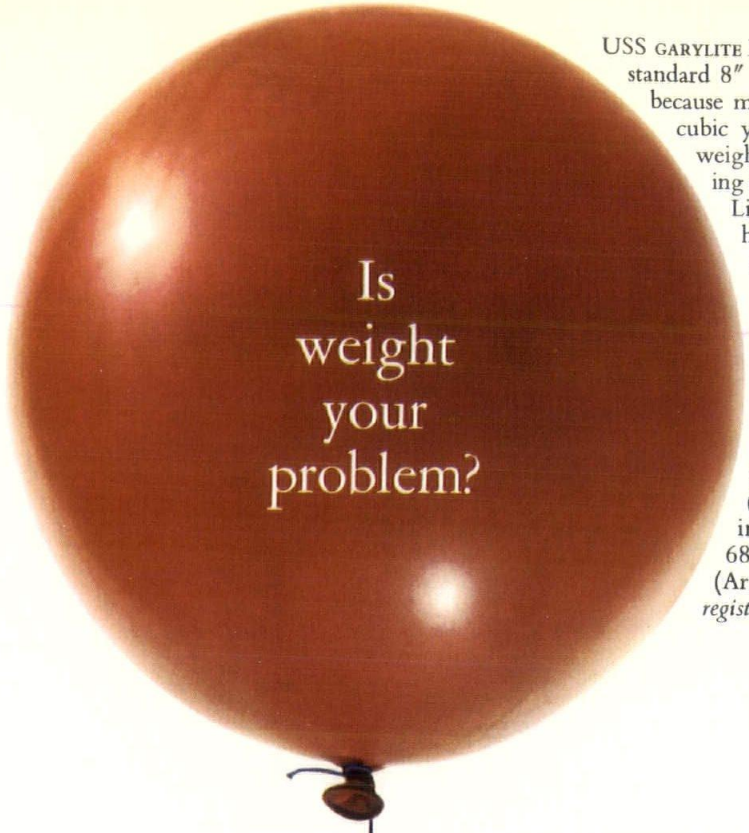
The INDIANA ARCHITECT is the sole property of the Indiana Society of Architects, a state association of The American Institute of Architects, and is edited and published every other month in Indianapolis, Indiana (editorial-advertising office address 300 East Fall Creek Parkway, N. Drive, Indianapolis, Indiana 46205; phone 925-4484). Current average circulation per issue, 3,200, including all resident registered Indiana architects, school officials, churches and hospitals, libraries, public officials, and members of the construction industry. Detailed information available on request.

Cover Design by Larry Roesler salutes both the happy new year and the special masonry issue.



USS GARYLITE Expanded Slag aggregate can cut the weight of a standard 8″ x 8″ x 16″ concrete block by 12 pounds. That's because many other aggregates weigh up to 50% *more* per cubic yard. And because concrete made with GARYLITE weighs less, structural steel framework and other building materials can often be lighter and more economical. Lightweight blocks cost less to ship, are easier to handle, go up faster. Besides cutting dead weight, USS GARYLITE aggregate gives concrete units excellent fire-resistance, long-lasting beauty, compatability with other building materials, proven durability, better thermal insulation, and nailability. For more information on the best coarse or fine lightweight aggregate—USS GARYLITE Expanded Slag—call or write United States Steel, Raw Materials Sales at any of the following offices: 208 South LaSalle Street, Chicago, Illinois 60690 (Area Code 312) 236-9200; 209 Broadway Building, Lorain, Ohio 44052 (Area Code 216) 245-6897; 525 William Penn Place, Pittsburgh, Pa. 15230 (Area Code 412) 391-2345. *USS and GARYLITE are registered trademarks.*

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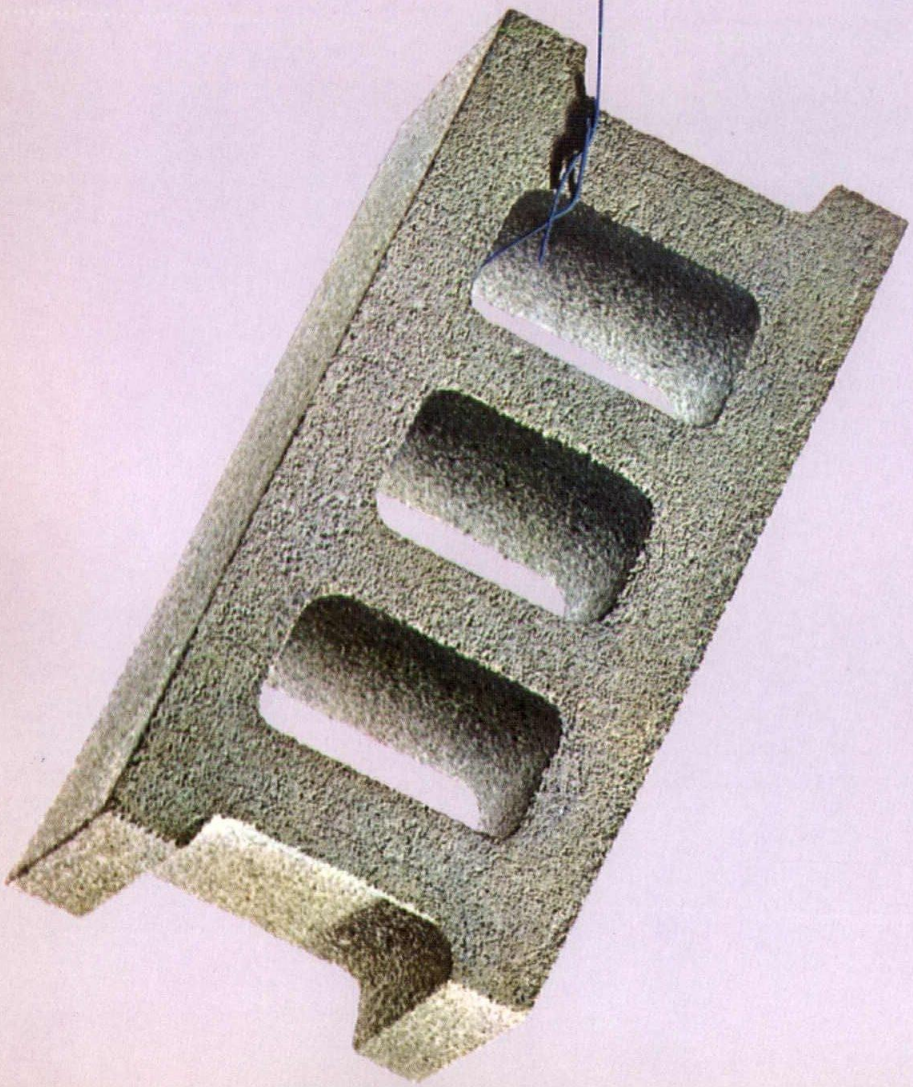

Changing of the Guard: 1967

WITH THE BEGINNING of each new year, the officers and directors of each of the three AIA Chapters in Indiana and the Indiana Society of Architects officially accept the obligations of their offices. All officers in all organizations are elected for one year terms, all ISA directors are elected for two year terms, and all Chapter directors are elected for three year terms.

The following listings by organizations are as accurate as can be determined from the records of each organization.

INDIANA SOCIETY OF ARCHITECTS

CARL L. BRADLEY AIA, Fort Wayne (C-SIC)
President

ROBERT J. SCHULTZ AIA, South Bend (NIC)
Vice-President

HENRY G. MEIER AIA, Indianapolis (IC)
Secretary

JOHN C. FLECK AIA, Indianapolis (IC)
Treasurer

G. A. HUBER AIA, Evansville (C-SIC)
Director, 1967-68

DAVE NICE AIA, Indianapolis (IC)
Director, 1966-67

RICHARD K. LENNOX AIA, Indianapolis (IC)
Director, 1967-68

DAVID MEEKER AIA, Indianapolis (IC)
Director, 1967-68

GEORGE N. HALL AIA, Gary (NIC)
Director, 1966-67

COURTNEY E. ROBINSON AIA, Indianapolis (NIC) Director, 1967-68

(NOTE: One vacancy for Director from the Central Southern Indiana Chapter, 1966-67, exists due to the death of Father Barnabas Harrington OSB AIA)

NORTHERN INDIANA CHAPTER

THOMAS R. KEENE AIA, Elkhart
President*

RICHARD BARTON AIA, Fort Wayne
Vice-President*

*All Chapter Presidents and Vice-Presidents automatically are members of the ISA Board of Directors by virtue of their office.

Put a Gas specialist on your team . . . at no cost to you

Your local gas utility has gas industry engineers and gas specialists standing by to work with you. These men will prepare cost analyses, heat loss figures, estimated annual costs of gas fuel for any use; they can assist you with code specifications as they relate to gas applications in commercial, industrial, institutional and dwelling structures; they can provide data on fuel efficiencies.

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Secretary
DONALD SMITH AIA, South Bend
Treasurer
MALCOLM MEEK AIA, Fort Wayne
Director, 1965-67
NATHAN KARRAS AIA, Hammond
Director, 1966-68
RAYMOND S. KASTENDIECK FAIA, Gary
Director, 1967-69
ROBERT J. SCHULTZ AIA, South Bend
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CENTRAL-SOUTHERN INDIANA CHAPTER

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ROBERT EBY AIA, New Albany
Director, 1966-68
CARLTON WILSON AIA, Richmond
Director, 1965-67
RUPERT CONDICT AIA, Evansville
Director, 1967-69
WALLACE W. GIVEN AIA, Evansville
Past President

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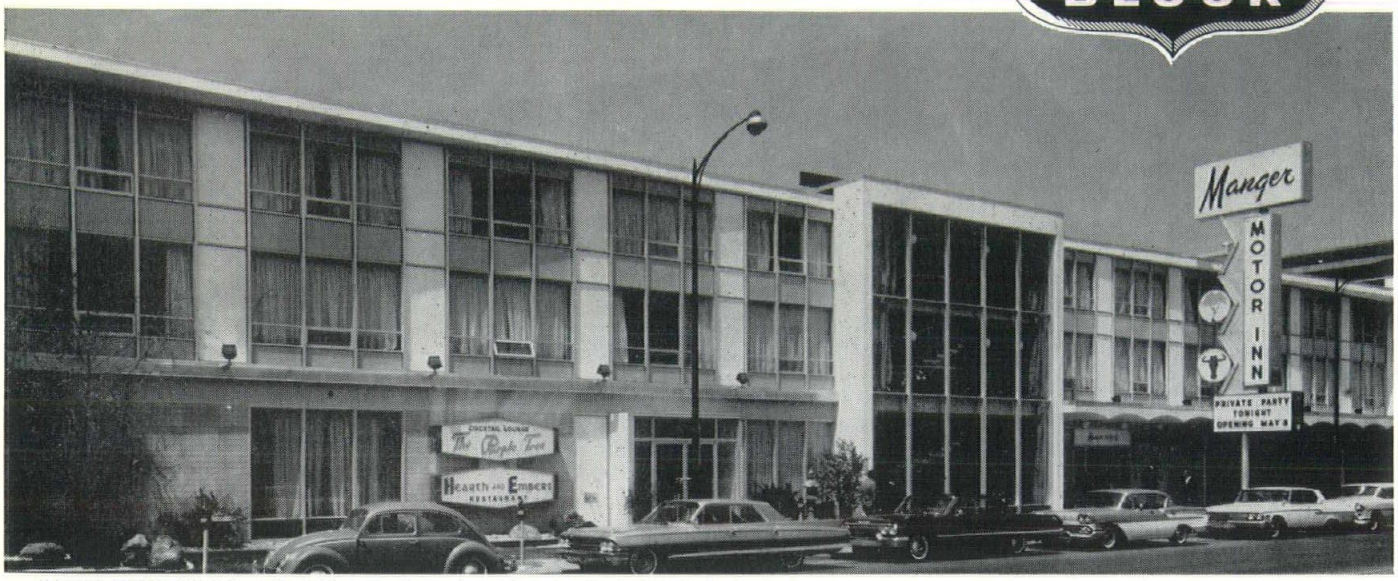
BUILD WITH ABC AMERLITE BLOCK



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Combines Structural Strength, Economy, Beauty and Uniformity

ARCHITECTS, contractors and builders have been specifying AMERLITE Block (American's lightweight cinder block) for many central Indiana motels. Among the most recent are the Ben Hur, Executive Inn, Holiday Inn of America, Howard Johnson, Manger Motor Inn and Mayfair.

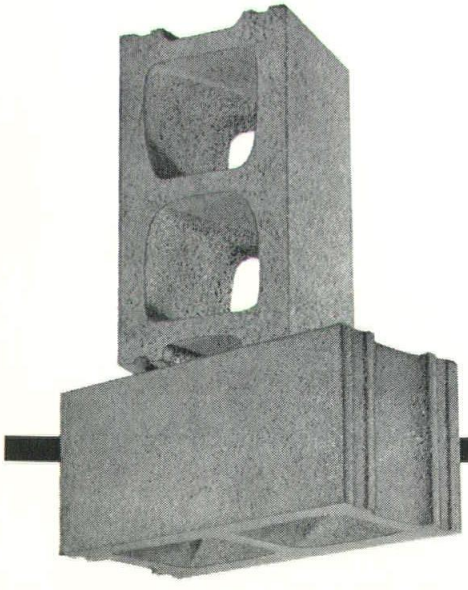
Why is AMERLITE Block being demanded more and more?

IT'S ECONOMICAL—the finest quality lightweight block available at no extra cost. And, because it's lightweight, it is easier to handle and goes up faster which means a saving in labor costs.

IT HAS STRUCTURAL STRENGTH—all the strength necessary to be used for load bearing walls.

IT HAS BEAUTY AND UNIFORMITY—gives a clean, modern, pleasing appearance. Manufactured from *completely* processed cinder aggregate, every block has uniform texture and size.

Specify AMERLITE Block on your next project and get the finest quality lightweight cinder block made . . . and remember IT COSTS NO MORE!



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AIA Committee Appointments Announced

APPOINTMENTS OF ARCHITECTS from Indiana and Kentucky to various national committees of the American Institute of Architects have been announced by Walter Scholer, Jr. AIA, East Central Regional Director. These include seven regular committee appointments, eleven corresponding member appointments and one commission chairman.

From the Northern Indiana Chapter, William G. Rammel AIA, Fort Wayne, was appointed a corresponding member of the AIA Committee on Licensing; Raymond S. Kastendieck FAIA, Gary, re-appointed to the National Judicial Board, and Donald E. Sporleder AIA, South Bend, appointed a corresponding member of the Committee on Student Affairs.

Indianapolis Chapter members appointed include Evans Wollen AIA, Indianapolis, appointed

A Code of Ethics for Manufacturers of Concrete Products

1. To build, expand and promote the concrete masonry industry.
2. To so conduct my business that I will become and remain a credit to the industry and to my community.
3. To remember that I am "my brother's keeper" - and that I will attempt to preserve his welfare as well as my own.
4. To guard and protect my customers as I would guard and protect myself - to look always to his satisfaction.
5. To strive, through education of myself, my staff and my neighbor, to better the techniques and practices within this vital, important industry.
6. To eliminate from my own practices - and to work to drive from the practices of others - all fraudulent, unethical devices, untruthful advertising, misleading statements or other methods of operation which might bring this industry or my business into disfavor with my associates or the public.
7. To keep in close touch with all other branches of this industry; to cooperate with them in the broadening of our market; to work for their benefit as well as my own.
8. To help guard the industry against encroachments by or from all other industries and any and all forces which would try to hamper our ethical and proper activities.
9. To work with all properly authorized governmental agencies and officers toward the protection of the public and the preservation of this industry.
10. To manufacture, sell and deliver quality products.

This Code of Ethics
prepared by

INDIANA CONCRETE MASONRY ASSOCIATION

Affiliated with

National Concrete Masonry Association

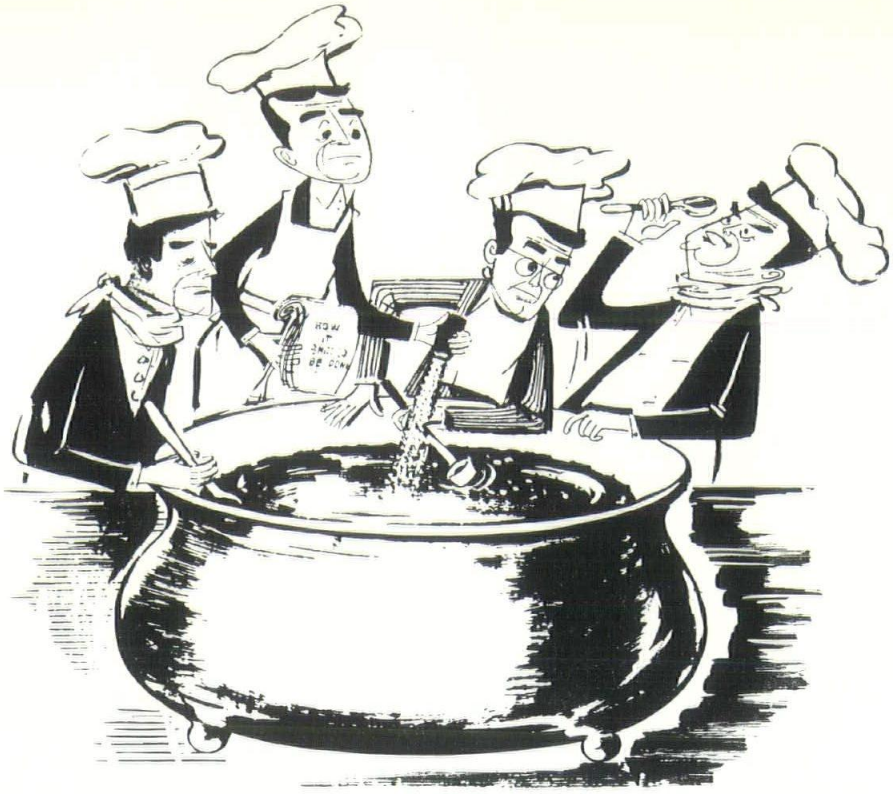
to the Committee on Aesthetics; H. Roll McLaughlin AIA, Indianapolis, to the Committee on Historic Buildings; Raymond S. Thompson AIA, Indianapolis, appointed a corresponding member of the Committee on Urban Design; Alfred J. Porteous AIA, Indianapolis, appointed to the AIA Scholarship Committee, and John C. Fleck AIA, re-appointed a corresponding member of the Committee on Office Procedures.

Appointments from the Central-Southern Indiana Chapter include Wayne M. Weber FAIA, Lafayette, appointed as a corresponding member of the AIA Committee on Specifications; Wallace W. Given AIA, Evansville, appointed a corresponding member of the Committee on Housing; Wallace O. Jobusch AIA, West Lafayette, corresponding member of the School and College Architecture Committee, and Walter Scholar Jr. AIA, Lafayette, chairman of the AIA Commission on Education and a member of the Council of Commissioners.

East Kentucky Chapter appointments include Charles P. Graves AIA, Lexington, to the Committee on the AIA-ACSA Teachers' Seminar and the Committee on Internship and Continuing Education, and James A. Clark FAIA, Lexington, reappointed to the Government Liaison Committee. West Kentucky Chapter appointments include Arnold M. Judd AIA, Louisville, a corresponding member of the Committee on Health Environment; J. H. Bickel AIA, Louisville, a corresponding member of the Committee on Institute Honors; Donald E. Schnell AIA, Louisville, a corresponding member of the Committee on Building Materials and Systems, and A. B. Ryan AIA, Louisville, a corresponding member of the Committee on Religious Architecture and a regular member of the Headquarters Fund Drive Committee.

In addition, all Chapter and State Association presidents are members of the State and Chapter Affairs Committee. These are: Carl Bradley AIA, Fort Wayne, Indiana Society of Architects; J. H. Bickel AIA, Louisville, Kentucky Society of Architects; Thomas Keene AIA, Elkhart, Northern Indiana Chapter; Ewing Miller AIA, Terre Haute, Central-Southern Indiana Chapter; Raymond S. Thompson AIA, Indianapolis, Indianapolis Chapter; Donald E. Schnell AIA, Louisville, West Kentucky Chapter; Norman Christman AIA, Lexington, East Kentucky Chapter; Harley Fisk AIA, Covington, Northern Section, East Kentucky Chapter, and A. B. Ryan AIA, East-Central Regional Director Elect.

All appointments are for the 1967 calendar year.



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. . . properly installed by competent masonry contractors

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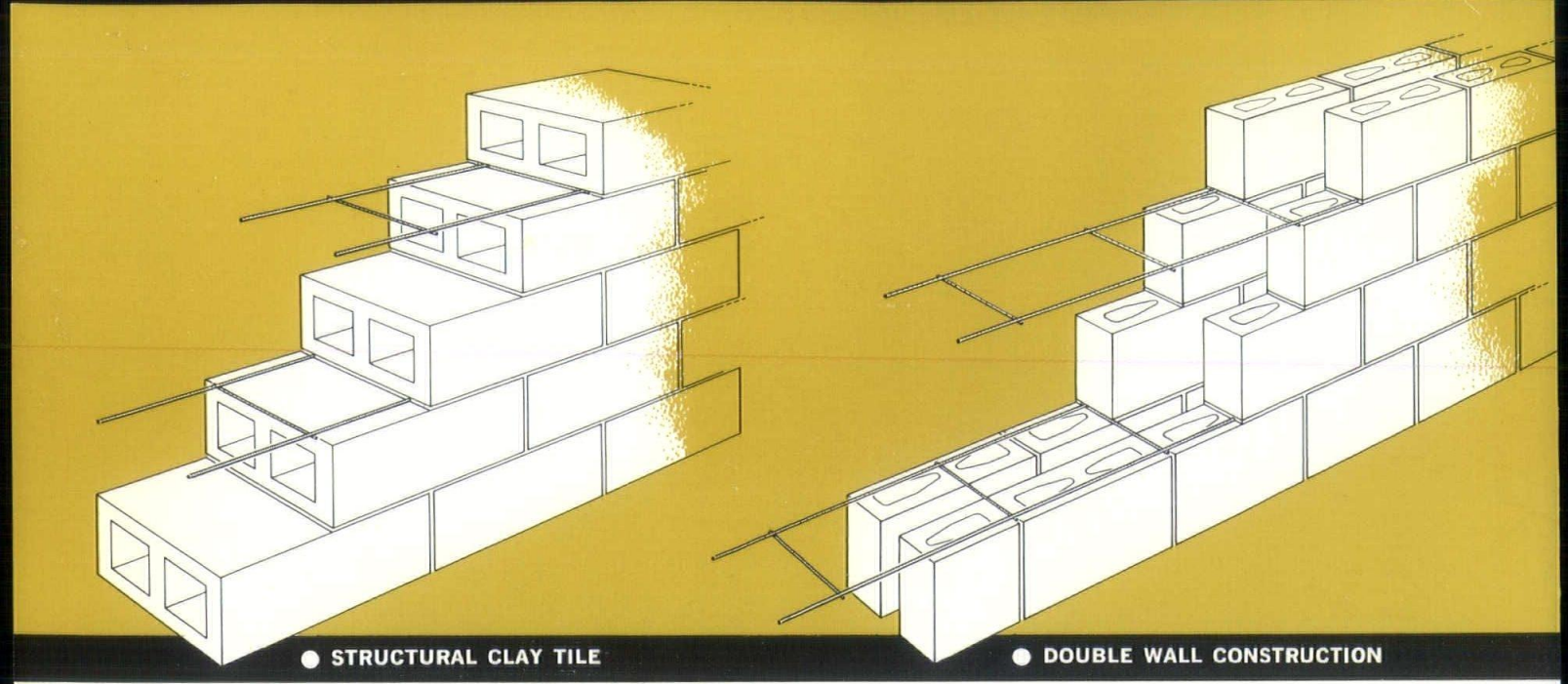


● STRUCTURAL CLAY TILE

● DOUBLE WALL CONSTRUCTION

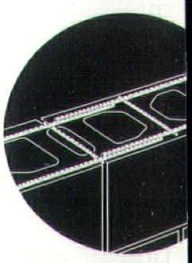
ADVANTAGES OF DUO-WIRE • In order for a building material to excel, it must be durable, simple, versatile, economical and readily available. Duo-Wire encompasses all these advantages to better serve all four members of the building team, architect, engineer, contractor and building owner. **SIMPLICITY** • Duo-Wire is basic in concept, using the straight cross-rod rectangular design, which yields greater economy and increased strength. **DURABILITY** • Fabricated in three gauges of th highest quality domestic steel, available in either galvanized o bright finish. Side tension wires and cross-rods are especi ally deformed for positive grip and uniform bond. **ECONOMICA** • Galvanized cross-rods are standard on all models at no extr cost and cross-wire welded for absolute fusion. This assure permanence to withstand the maximum stress and bond tha

Why more and more

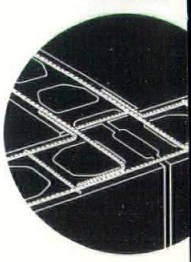
• Masons praise Duo-Wire for ease of handling, positions conveniently, lies flat, follows course, easy to "corner".

• Duo-Wire is constructed of two parallel side tension wires positioned by cross-rods to permit full embedding in the mortar. Always place reinforcing with cross-rods down. Cross-rods are spaced every 16″ to allow full excess of core area, subject to other uses. Cross-rod design functions as a saddle to uniformily elevate side tension wires for positive bond.

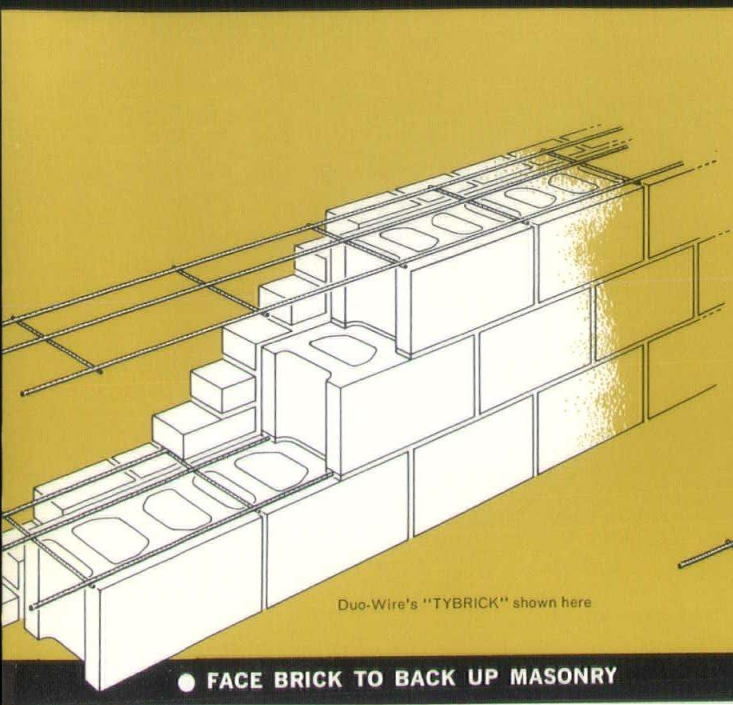
• In order for Duo-Wire mortar joint reinforcing to be most effective, it should be placed in every second course, or at a vertical spacing of 16″ minimum between reinforcing joints for lasting strength.



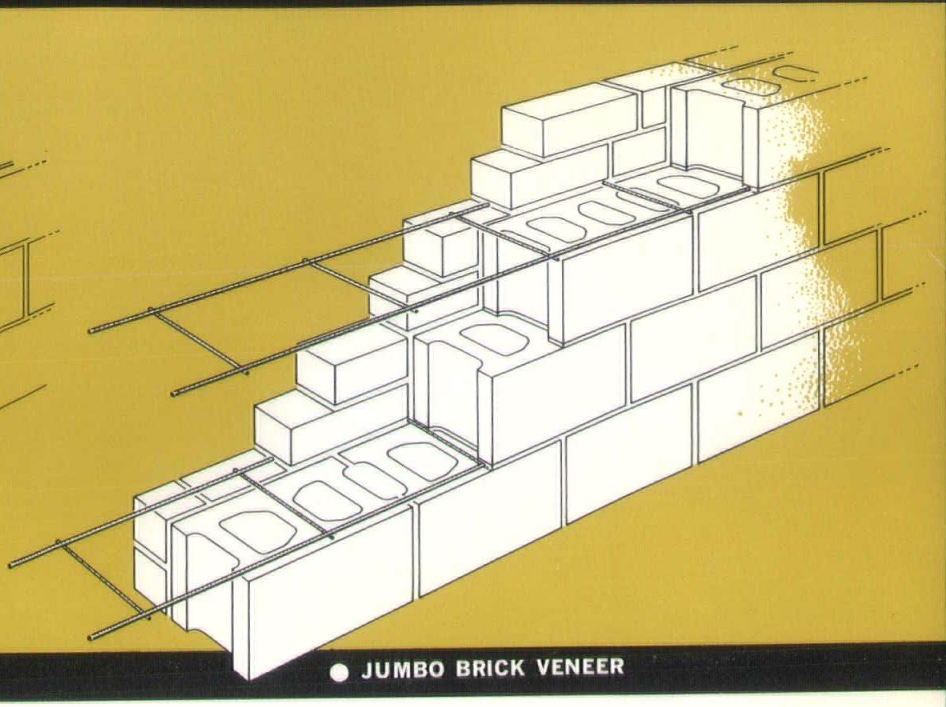
• Duo-Wire being rigid, yet pliant — permits easy forming at the job site, requires no special members. Mason simply snaps inside rod and bends. Continuity is important, always lap joint splices at least 6″ as shown in the diagrams at the right.



Duo-Wire . . . *dedicated to*



● FACE BRICK TO BACK UP MASONRY



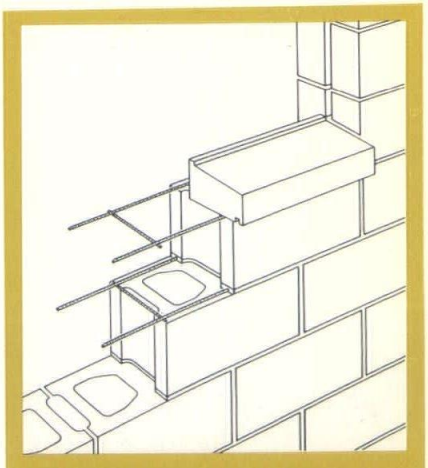
● JUMBO BRICK VENEER

ccurs at the cross-rod weld joints. **STRENGTH** • Duo-Wire's ross-rod design automatically elevates side tension wires a ll one eighth inch when properly installed with the cross-rods own. This assures complete encasement of mortar, resulting a firm bond around the entire periphery of the side tension ires for positive joint reinforcement. **PERMANENCE** • Cross-ds are arched for additional bond, spaced at 16″ modular intervals, to avoid obstructing core areas subject to other uses. **VERSATILE** • Duo-Wire permits easy forming at the job site, requires no special members for corners, tees and/or splices. Designed for mortar joint reinforcement and veener tie-in construction where masonry walls are specified. **AVAILABILITY** • Duo-Wire is sold and distributed exclusively through your local masonry products manufacturers.

hen in building construction are turning to versatile **Duo-Wire**

Knowing the value of horizontal joint reinforcing and recognizing the need for versatility as well as simplicity of design in this product . . . Duo-Wire today, is the core of better mortar joint reinforcement where strength, permanence and appearance are an essential in quality masonry construction.

Duo-Wire offers architects and engineers a durable, single self-contained cross-wire welded unit for reinforcing all types of masonry construction. Fabricated in three gauges, five widths and two finishes of the highest quality domestic steel with tensile strengths that exceed all existing requirements for reinforcing masonry walls. To the contractor, Duo-Wire means rapid installation because it is light weight, rigid, yet easy to form on the job site. It is packaged for convenient one man handling and sold and distributed through your local masonry products manufacturer. The building owner gains, because the use of Duo-Wire minimizes cracking, therefore maintaining the value and beauty of his building . . . Always specify Duo-Wire for better masonry wall reinforcement. There is a gauge, width and finish for every form of masonry construction. Weather-free warehoused . . . kept clean and ready for delivery.



• Horizontal mortar joint reinforcement is necessary two courses above and below all openings, extending a minimum of 24″ each side of opening to control the results of stresses.

ity masonry walls for permanence, economy and beauty

QUALITY CONTROL

A prerequisite for reducing to a minimum shrinkage of masonry is contingent upon: • Properly CURED MASONRY units, exceeding required strengths secured through a normal mix, using proper selection of aggregates and ample cement. • Quality MORTAR, used extra moist for its additional bonding quality and properly tooled, produces a lasting watertight mortar joint. • Modular CONTROL JOINTS at least every twenty feet. • Professional WORKMANSHIP and • Versatile DUO-WIRE mortar joint reinforcement installed as recommended.

RECOMMENDED INSTALLATION

1. To assure a positive bond, always place Duo-Wire mortar joint reinforcement with cross-rods DOWN. 2. For greater durability, use Duo-Wire the full length of wall two courses above and below all openings. 3. For heavy duty load bearing walls, placement of Duo-Wire between every course is recommended. 4. For normal walls, Duo-Wire reinforcing should be placed in every second course, or at a vertical spacing of 16″ minimum between reinforcing joints for lasting strength.

DUO-WIRE EXCEEDS SPECIFICATIONS

A.S.T.M. specification A82-61T (high tensile), A.S.T.M. specification A116-57 (galvanized), National bureau of Standards (report #3079), U.S. Corps of Engineers, Federal Housing Administration, Federal Specifications Code QQ-W-461e, and the Concrete Products Association of Michigan. Technical Series index number 4.08.55. Specification numbers 403.1—403.2—403.3.

GAUGES, WIDTHS AND FINISHES

Duo-Wire is fabricated in THREE gauges, FIVE model widths and TWO finishes of the highest quality domestic steel. Other gauges and widths furnished on request. Duo-Wire TYBRICK data is not listed.

DIMENSIONS		STANDARD #9 GAUGE (.148)		MEDIUM #8 GAUGE (.162)		HEAVY 3/16″ (.187)	
NOMINAL WALL THICKNESS	DUO-WIRE OVERALL WIDTH	MODEL NUMBER BRIGHT	MODEL NUMBER GALVANIZED	MODEL NUMBER BRIGHT	MODEL NUMBER GALVANIZED	MODEL NUMBER BRIGHT	MODEL NUMBER GALVANIZED
4″	2½″	4 S	4 SG	4 M	4 MG	4 H	4 HG
6″	4″	6 S	6 SG	6 M	6 MG	6 H	6 HG
8″	6″	8 S	8 SG	8 M	8 MG	8 H	8 HG
10″	8″	10 S	10 SG	10 M	10 MG	10 H	10 HG
12″	10″	12 S	12 SG	12 M	12 MG	12 H	12 HG

PACKAGING and AVAILABILITY

Duo-Wire wall reinforcement sections are bundled for convenient one man handling. 25 units to the bundle, 12′ long, 300′ each bundle. Weather-free warehoused . . . kept clean and dry, ready for delivery. Duo-Wire is sold and distributed exclusively by your local masonry products manufacturer.

SHORT FORM ARCHITECTURAL SPECIFICATIONS

Duo-Wire, as manufactured by Light Weight Aggregate Corporation, Livonia, Michigan or an approved equal, laid with the cross-rods down. Fabricated from domestic steel wire meeting A.S.T.M. specifications for concrete reinforcing, also N.B.S. (report #3079).

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MEMORIAL

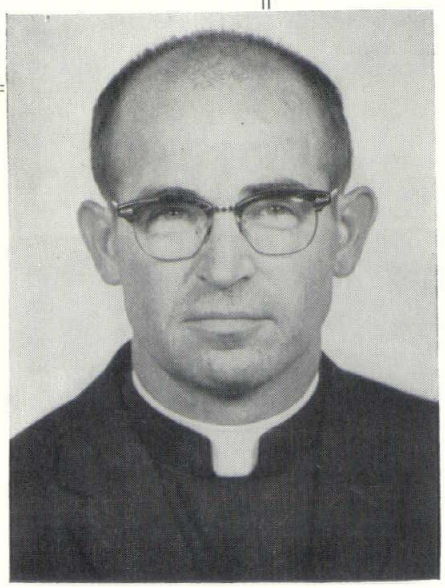
FATHER BARNABAS HARRINGTON, OSB, AIA, died in an automobile accident on Friday, November 25th, not far from his St. Meinrad Archabbey home.

Ordained priest and registered architect, Father Barnabas had been an AIA Corporate Member since 1964 and a Central-Southern and Indiana Society Director for two years.

Born in Humboldt, Illinois, May 12, 1922, he served as an Air Force pilot in World War II, received a Bachelor's Degree in Industrial Design from the University of Illinois in 1948, and entered the Benedictine Seminary at St. Meinrad's that same year. He was ordained a Catholic priest in 1956, received his Master's Degree in Physics from Notre Dame in 1960, then returned to Illinois to earn his architectural degree.

His practical training was with Richardson, Severens & Scheeler and with Hellmut, Obata & Kassabaum; he had planned to spend the coming summer with Nolen & Swinburne.

His plain, black wooden coffin was interred in the Abbey cemetery on a snowy, windy November 28th. He is survived by his father and several sisters and brothers.



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Boyd E. Phelps, Architect
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CONCRETE MASONRY: The MODERN BUILDING MATERIAL

Masonry construction, as a building technique, goes back in time some 6,000 years. Yet, as a technique, it continues to find favor because of its beauty, its adaptability to form an architectural treatment, and its ability to perform structurally. Current studies indicate that concrete masonry accounts for some 75% of the total masonry wall volume presently being constructed in the United States.

Early in the development of concrete masonry, the block plant was a one-man backyard operation. Concrete masonry was an "acceptable" material; it had been used primarily as backup (usually causing it to be hidden) and, therefore, performing strictly a utility function. Today, however, in our dynamic, ever-changing construction industry, concrete masonry has become a new and exciting material and is being used more and more as **the** finished wall—both exterior and interior.

Block manufacturers have kept pace with the rapid progress of our twentieth century. What used to be the one-man backyard operation has grown, in many cases, to a highly mechanized manufacturing plant. Today's manufacturing plant includes high production machines, overhead storage of materials, automatic weight batching and instant moisture control. Handling block in the plant is accomplished by power offbearers which take the block from the block machine and load them on racks, power cubers and high speed lift trucks. Curing operations now include the more elaborate methods of steam curing.

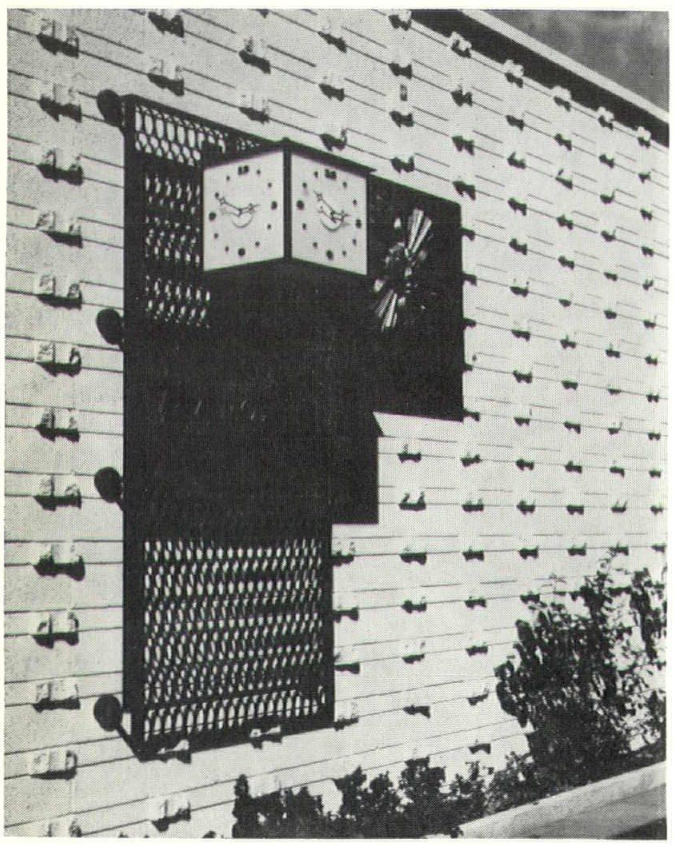
Comprehensive tests have been conducted by colleges and commercial testing laboratories all over the country, and have provided data necessary to establish concrete masonry as an acceptable building material. Further tests by the Portland Cement Association have shown patterned concrete masonry walls to conform to code requirements both for axial and flexural loads. Other tests have been made to establish the sound transmission and absorption properties as well

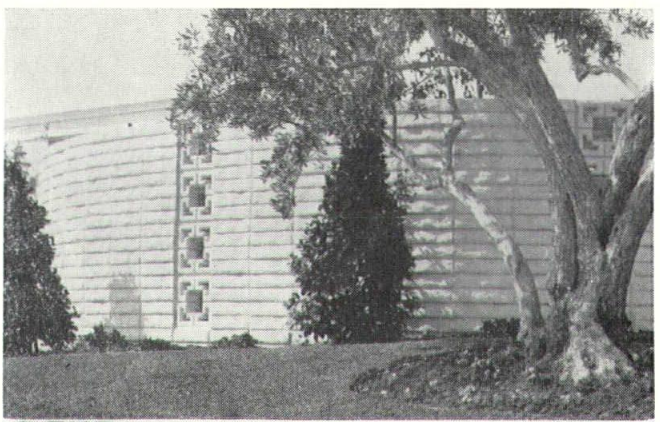
as the thermal insulation value and fire resistance of concrete masonry.

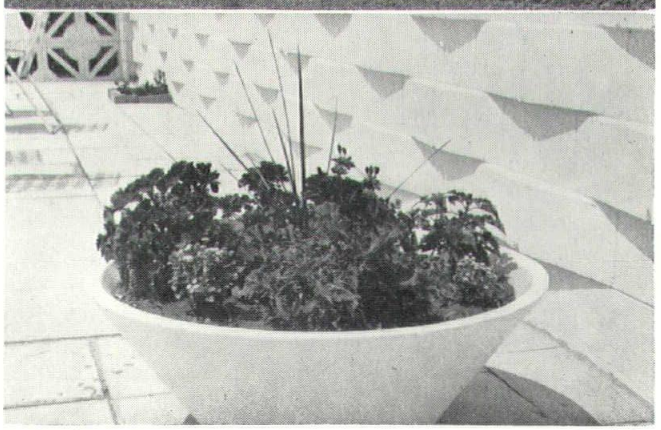
The tremendous volume of concrete block being used today makes it increasingly important that proper design and construction procedures be used to insure satisfactory performance. Each building material has its own characteristic and because of this, design and construction practices peculiar to the material must be observed. The Indiana Concrete Masonry Association, in cooperation with the Portland Cement Association, recognizing the need for this technical information assembled a manual on specifications and control joints. The third edition of the manual has been revised (January 1966) to maintain pace with our forward-moving construction industry.

Our society, generally having satisfied itself with the engineering properties of concrete masonry in meeting the demands of our present-day building technology, has caused man to turn his attention to the area of aesthetics and now is making demands on the material to be pleasing to his naked eye. In the language of our teenage sons and daughters, beauty today is the "in thing." Any building material, to be generally accepted and used today, must meet the requirement of being attractive and pleasing to the occupant.

"Concrete Masonry—The **Modern** Building Material" fits very comfortably and performs well in the functions requiring engineering properties—it likewise fits very comfortably in serving the architectural function as it too can be pleasing and attractive The accompanying photographs are examples illustrative in the use of concrete masonry within the framework of the elements of the architectural function—the elements of SPACE. . . ., TEXTURE. . . ., FORM . . . ., SHADOW. . . ., SOLID. . . . and VOID . . . . a few of the many fine examples of the use of concrete masonry; examples which reveal concrete masonry as an eye-pleasing material in addition to serving well in our modern day demands of weathertightness, sound conditioning, fire resistance and strength.







The suburban Elkhart home of Mr. and Mrs. Henry Cohen, designed by Elkhart architects Wiley and Miller, is the first of two masonry homes featured in this month's special issue. Constructed completely of concrete and concrete masonry, the delightful home is a showplace for materials from Mr. Cohen's firm, Cone-Crete Products.

Overlooking the St. Joseph River, the large

home (six bedrooms, three floors) commands a delightful view of the river from almost every room. The home is isolated from the street by the colorful stone walls of the three-car garage and the livingroom, accentuating the pure white of the quartz aggregate splitblock used elsewhere on the exterior.

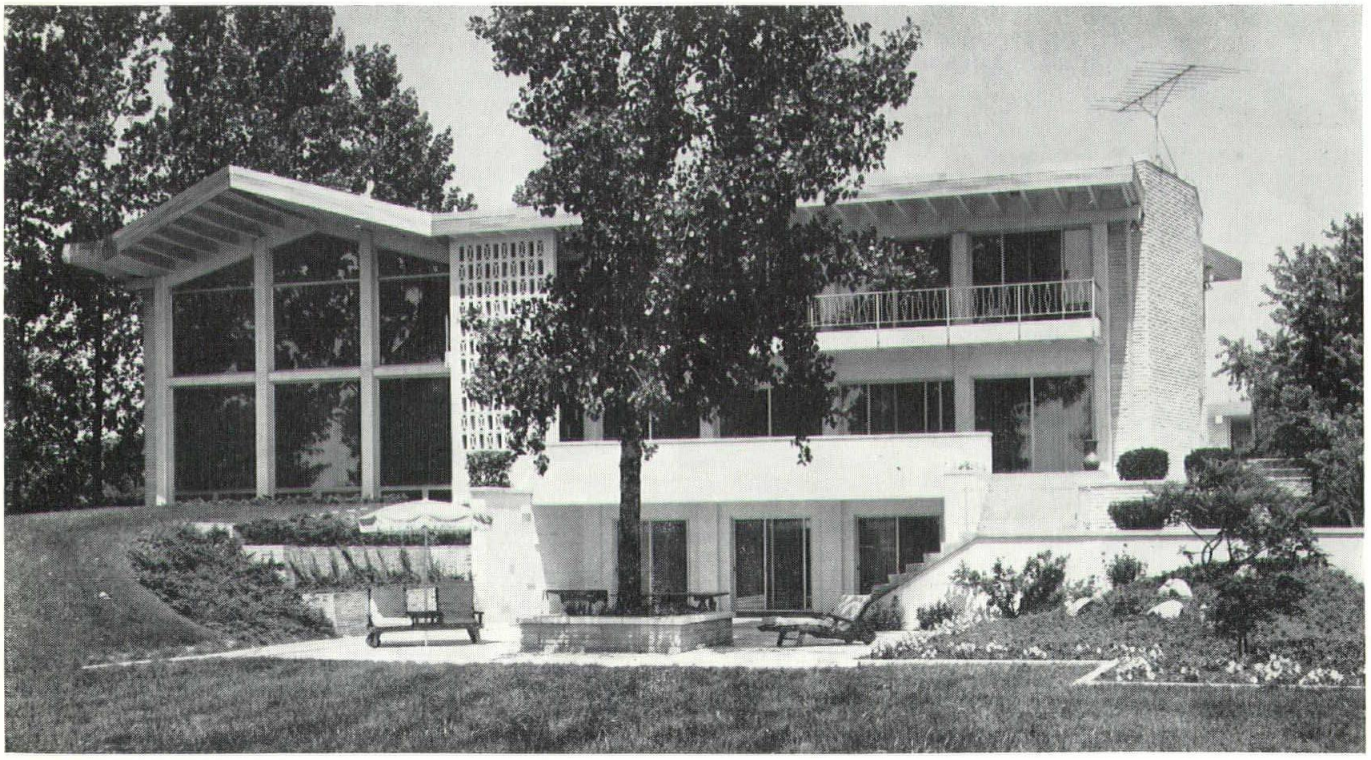
Some twelve different shapes of concrete blocks have been used in the interior of the home, including several different patterns of shadow block, screen block and curved block. The roof and floor structure throughout are formed with precast double tee concrete beams, with painted stems exposed to simulate beamed ceilings.

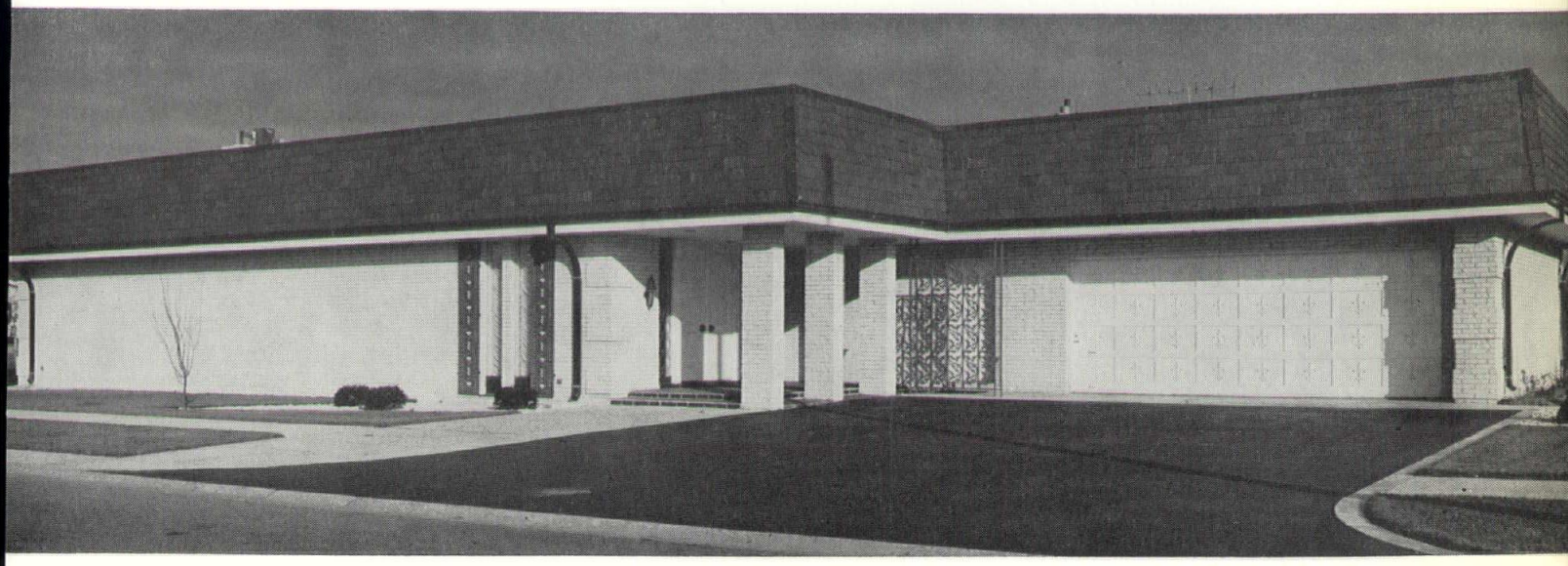
The dramatic living room boasts a twenty-six foot high ceiling and one entire wall of glass, with floor-to-ceiling panneling on one wall to compliment the exposed masonry used elsewhere.

The white split block is carried into the entranceway of the home, forming the setting for a lush planting area encircling a waterfall crowned by a statue of Rebekah. Slabs of exposed aggregate in an epozy resin balanced on a single precast stringer produce a light and colorful stairway.

Naturally oriented to the river, three of the bedrooms on the upper level open to a precast balcony, as do the dining room and family room on the main level. The basement recreation room has direct access to the private patio framed by landscaped knolls on either side.

Furnishings throughout the home were selected by Mrs. Cohen, except that each of the Cohen children chose furnishings and the color scheme for his or her own room and private bath, and reflect the contemporary and airy character of the home. Several items, including an olympic size, free-form dining table, were custom-built to the Cohen's specifications.

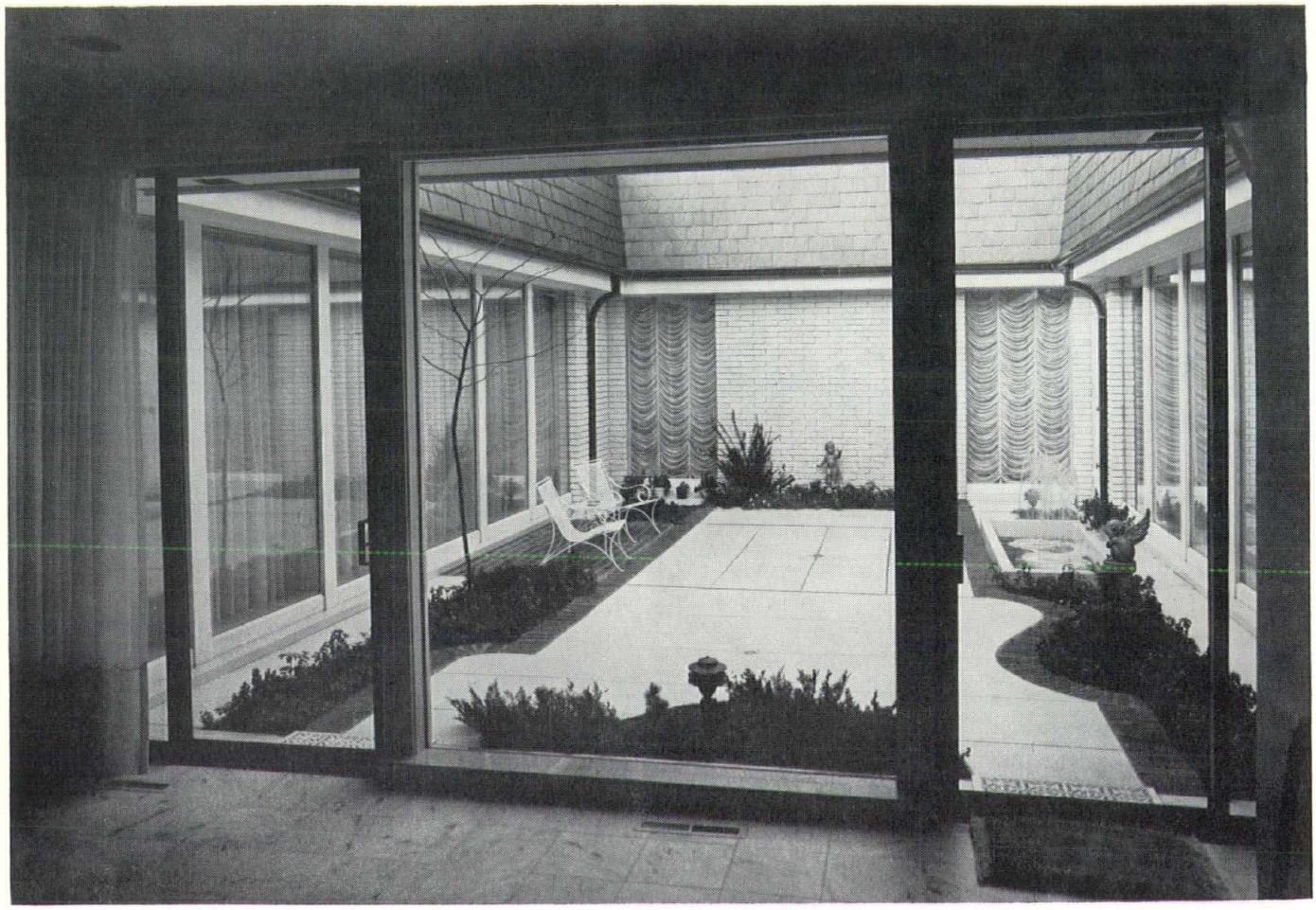




Mansard roof of grey slate and vibrantly white walls of quartz aggregate split block, wrought iron shutters and leaded glass windows eloquently convey the reserved architectural expression of taste in this Munster, Indiana, home of Hammond Architect and Mrs. James McClure Turner. An urban home on a corner lot, the exterior is warm and inviting, yet forms a visual screen between the world outside and the home-life within.

Magnificent double doors open into the formal entrance foyer to introduce a visitor to the character of the inner home; white Italian marble flooring, French wallpaper, a Florentine chandelier and an English couch exemplify the highly cosmopolitan nature of both the home and its well-traveled owners, with most of the furnishings and many of the materials selected by the Turners from various points around the world.

The formal living room, dining room and family room form a glass-enclosed U around the delightful inner court, landscaped perfectly and



complete with a year-around fountain. The fourth wall of the court repeats the white aggregate split block of the exterior in shielding the bedroom wing, pierced only by two draped windows which can permit a glimpse of the court from the bedrooms.

Dedicated attention to architectural detail, comfort and taste in decorating and furnishing is evident throughout the one-story home; floor-to-ceiling and wall-to-wall panneling in the family room totally concealing two doors in the wall, hand-forged brass locksets, an abundance of architectural lighting to lend importance to valued art objects, integration of mechanical ingredients (air diffusers, light switches, etc.) with overall design so that they blend and do not confuse the eye, and a most pleasing composition of furnishings, traditional, antique and contemporary.

Three completely separate heating-cooling systems maintain zoned comfort control, each with its own humidifier and electronic filter, electric cables beneath the garage approach and the front entrance facilitate snow removal, and electrically heated floors in the bathrooms represent a few of the more luxurious mechanical features incorporated in this beautiful and tangible example of an architect's creativity.

CONCRETE MASONRY FIRE-RESISTANCE RATINGS

It is standard practice in building codes to specify degree of fire protection required in various parts of a building according to fire resistance developed under conditions prescribed in ASTM E 119 "Standard Method of Fire Tests of Building Construction and Materials." Choice of concrete masonry wall section best suited for a given wall requires knowledge of local building regulations, and knowledge of the fire-resistance rating of the various wall sections.

Fire-resistance ratings of concrete masonry walls are based on fire tests made at Underwriters' Laboratories, Inc., National Bureau of Standards, Portland Cement Association, and other recognized laboratories. In the test, one face of the wall is exposed to a fire of controlled severity for a time period equal to or greater than its rated fire-resistance time. Immediately following, the hot face of the wall is subjected to a fire-hose stream.* Bearing walls also carry a load during the test equal to 80 psi based on gross wall area. Walls must withstand the fire test without passage of flame or gasses, must limit heat transmission to less than 250° F gain in temperature, and must withstand the thermal impact of a fire-hose stream immediately following the test.

It is not economically feasible to conduct a fire test on every assembly of concrete masonry materials an architect might design for each project. Therefore, it is desirable to have a rational method of design which agrees with existing data. Two alternatives are available.

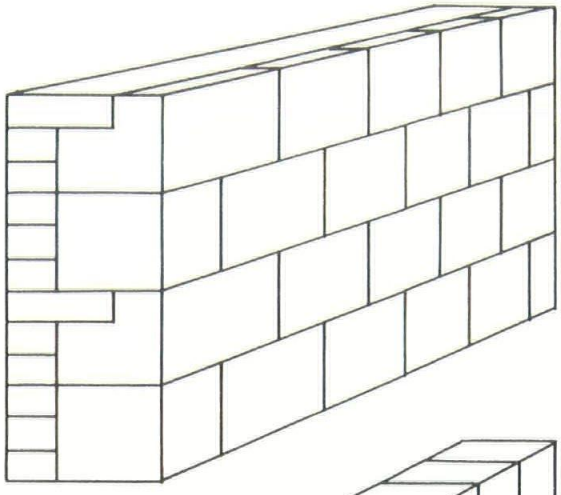
Estimated Fire-Resistance Ratings

The fire-resistance rating of most concrete masonry walls is determined by heat transmission measured by temperature rise on the cold side; few fail due to load during the fire test or during subsequent cooling by fire hose. Fire endurance, is a function of aggregate type used in concrete unit, wall thickness, and percentage of solid material when units are hollow type. Aggregate materials are grouped as to their fire-resistance characteristics as follows:

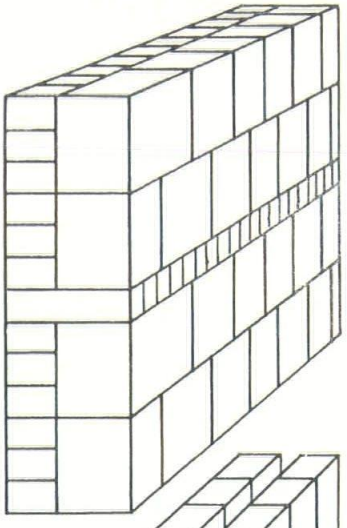
I Pumice and expanded slag
II Expanded clay, shale and slate
III Cinders, limestone and unexpanded slag
IV Calcareous gravel
V Siliceous gravel

**Actually, ASTM E 119 requires only that a duplicate specimen be subjected to fire exposure for a period equal to one half of that indicated as the resistance period in the fire endurance test (but not for more than one hour) prior to the fire-hose test. Due to the excellent stability of concrete masonry walls, the fire-hose stream test ordinarily is made on same specimen immediately after it has been subjected to the full fire endurance test, thus eliminating need for duplicate wall.*

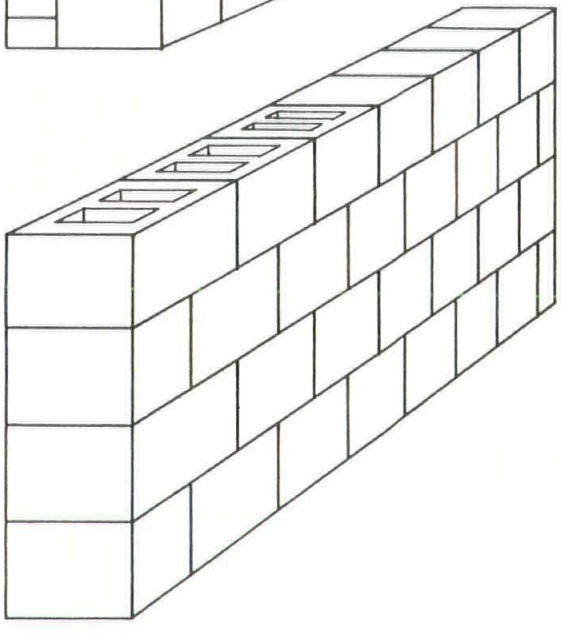
CONCRETE MASONRY FIRE RESISTANCE:



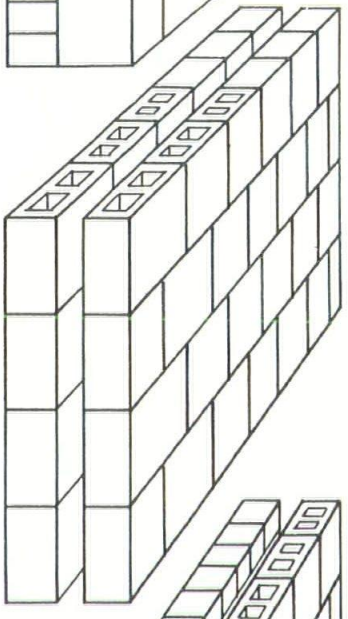
12-in.
Brick-Block
Eq Th=7.4"-8.2"



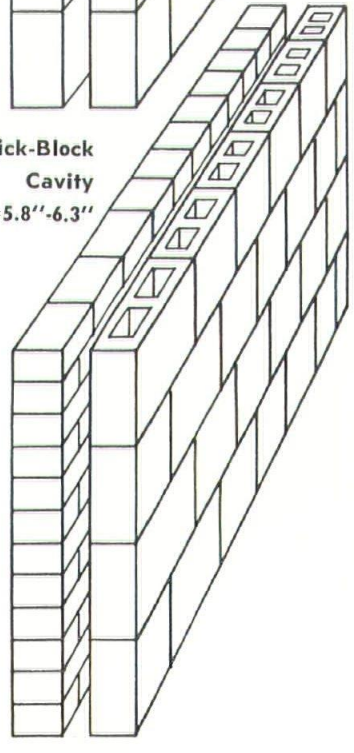
10-in.
Brick-Block
Eq Th=6.7"-7.6"



10-in Hollow
50-60% Solid
Eq Th=4.8"-5.8"



10-in.
Cavity
Eq Th=4.4"-5.8"



10-in. Brick-Block
Cavity
Eq Th=5.8"-6.3"

Estimated Fire-Resistance Ratings (continued)

Wall thickness and percentage of solid material in hollow units is expressed by equivalent solid thickness, product of gross thickness times percentage of solid material. When walls are plastered, or otherwise faced with fire-resistant materials, thickness of these materials is included in calculating equivalent solid thickness.

Fire-resistant ratings shown here are for fully protected construction in which all structural members are of incombustible materials. Where combustible members are framed into walls, equivalent solid thickness protecting each such member should be not less than 93 percent of the thickness shown. Plaster is effective in increasing fire resistance when combustible members are framed in a concrete masonry wall if it is applied on the fire side of the wall, opposite the combustible member. Fire resistance of hollow unit concrete masonry walls can be increased by filling core spaces with various fire-resistant materials.

EXAMPLE: An 8-in. hollow concrete masonry wall is constructed of expanded slag units reported to be 55%* solid. What is the estimated fire resistance of the wall?

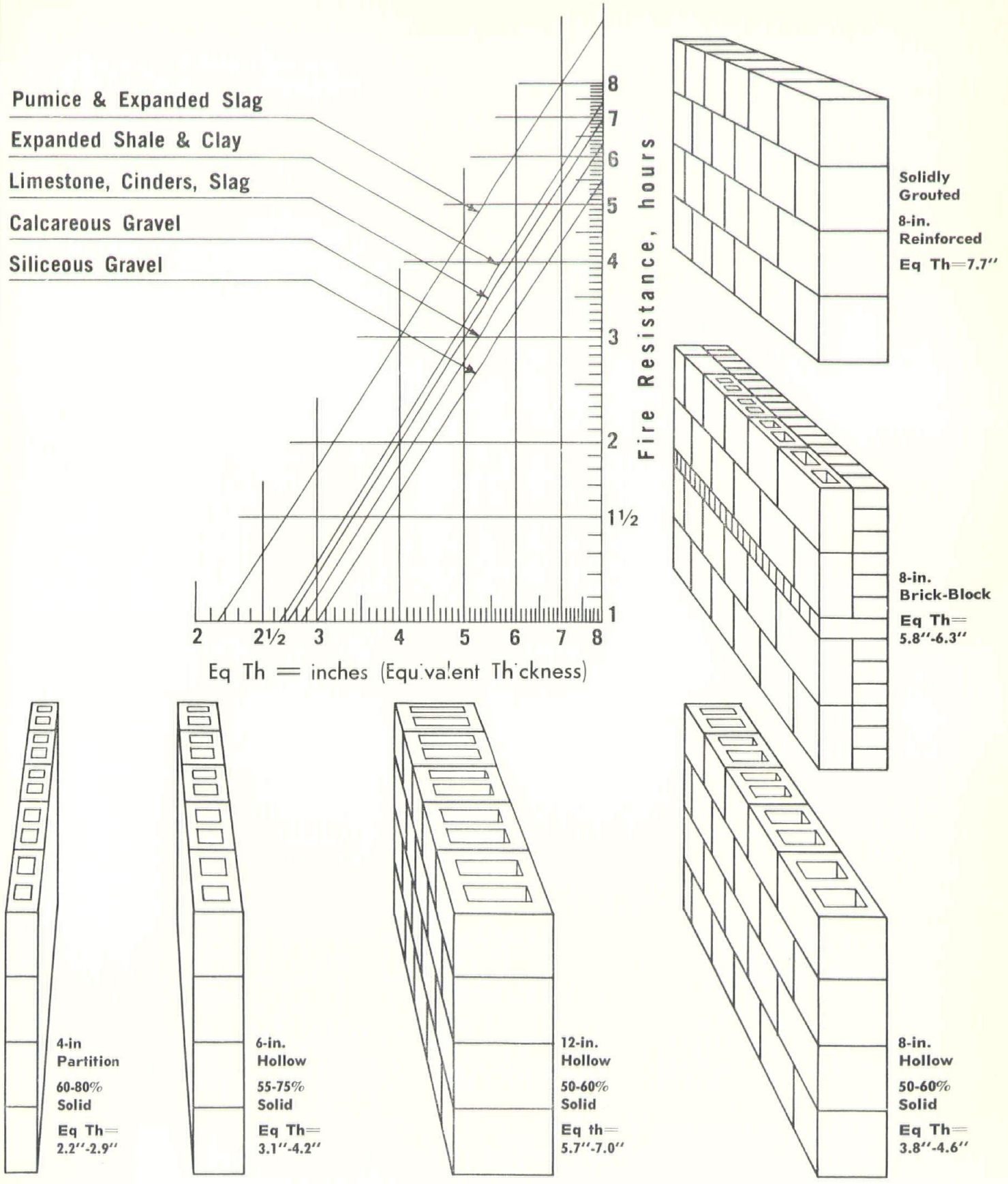
(MODULAR UNITS)

Eq Th = 0.55 x 7.625 in. = 4.19 inches

From diagram: Fire resistance = 3 + hrs.

use: 3 hr. est. resistance

*Percentage solid can be calculated from net area or net volume values as determined by ASTM C 140 "Methods of Testing Concrete Masonry Units."



IS TEAMWORK OVERWORKED?

MECHANICAL CONTRACTORS PROGRESS
mcpc
COUNCIL OF CENTRAL INDIANA

Teamwork may be overworked as an expression implying intelligent, warm-hearted cooperation among members of a group acting together in common cause. Yet (perhaps because we're MECHANICAL CONTRACTORS, and not poets), we can't think of a better term to describe what is fundamentally necessary when — working with you — we set out to create a building. ■ You, the architect and engineer, create the design, shape it for an intended use. Your genius gives it dimension, line and color, grace and the distinction of your individual touch. ■ We, among the essential members of your team, supply the veins and arteries, the temperatures and pressures, the very heartbeat of your creation. Together, we make it live. ■ We take unabashable pride in the skills and accomplishments of our team. We want only to help reproduce in reality — as perfectly as possible — your original vision of the building. ■ Like all teammates, we are interdependent. You need our skills to attain your vision. We need your understanding if we are to perform well, to carry out our responsibilities to your satisfaction. ■ In this series of messages, we'd like to discuss with you a number of subjects bearing on better teamwork. While teamwork may be overworked as a cliche, we know you'll agree it has no substitute in getting tough jobs done well.

MECHANICAL CONTRACTOR'S PROGRESS COUNCIL OF CENTRAL INDIANA

5365 North Tacoma Indianapolis, Indiana 46220

Architectural Education

A LITTLE OVER A YEAR AGO the AIA contracted with the trustees of Princeton University to undertake an initial phase of a program of research in architectural education. The research unit, under the guidance of Dean Robert Geddes and with a grant of $100,000, was charged with developing a set of specific educational programs concerned with the key problems of architectural education, including but not limited to:

(1) How can we improve competence in environmental programming?
(2) How can we improve the competence of architects to play a central role in the creation of the "Built Environment"?
(3) How can we improve the innovative, creative work of the architect?

(4) How can we improve the recruitment and selection of students?
(5) How can we improve the relationship between education and practice?
(6) How can we foster continuing research programs that will feed back vital knowledge to the schools and the profession?

The end result of this research is to improve architectural education; this goal will only be achieved when changes in architectural education are accepted and adopted by the schools. Therefore, this must be kept in mind in all phases of the study so that realistic proposals will result. The research unit is also charged with developing lines of communication that will encourage the cooperation and support of accrediting boards, registration boards and professional societies.

In a recent progress report, Dean Geddes pointed out that much of the research has been developed around five probes:

(1) WITH THE ARCHITECTURAL SCHOOLS: 70 schools have participated in conferences and questionnaires, to discuss changes currently in progress or to be initiated. In addition, several schools have received grants for special studies.
(2) WITH ARCHITECTURAL STUDENTS: 12 group interviews have been held to discuss students' evaluation of the educational process.
(3) WITH PRACTIONERS: A cross section of practioners attended a conference in June to discuss educational goals. Several members of this group will participate in the writing of educational goal statements. Several other conferences with practicioners are planned on a geographical basis.
(4) WITH CLIENTS: A meeting or meetings will be held this fall with a selected cross section of clients.
(5) WITH POSSIBLE FUTURE INTERESTS THE FIELD OF ENVIRONMENTAL DESIGN, such as behavioral scientists.

Preliminary statements of educational objectives and goals as submitted by schools, individuals, and AIA chapters are being assembled. Many of these statements are specific and operational in a way that allows them to be used directly for the construction of new curricula. Many goal statements can be used as guidelines in the development of more specific objectives for curriculum construction. All of these statements

are being classified and analyzed by the research staff. The charting of 113 curricula (both existing and proposed) from 79 schools which offer programs in architecture and environmental design are also being compiled by the research staff and copies of all of this data will be forwarded to each school. This may already have been done or will be soon. Of the 79 schools, four-fifths are planning or have instituted significant changes in their curricula.

Grants in varying amounts and totaling $15,000 have been offered to 9 schools of architecture to help finance special studies. These studies are aimed at the crystallization of educational objectives in specific areas of education. To date, 7 of the 9 schools have accepted these grants and have begun their work. These are:

(1) WASHINGTON UNIVERSITY, St. Louis: To support the study of education for architectural technology.

(2) V.P.I.: To prepare detailed descriptions of educational objectives, teaching methods and courses for an introductory two-year sequence for students of architecture.

(3) OKLAHOMA STATE UNIVERSITY: To support the studies of Dr. Thomas S. Dean, a member of the faculty, in writing detailed specifications for a new sequence of courses that will integrate the teaching of structures, building construction, and environmental technology. This will include a core curriculum for all students as well as advanced options in structures and environmental control.

(4) THE UNIVERSITY OF KENTUCKY: To support the study of a curriculum in environmental design by civil engineering and architecture.

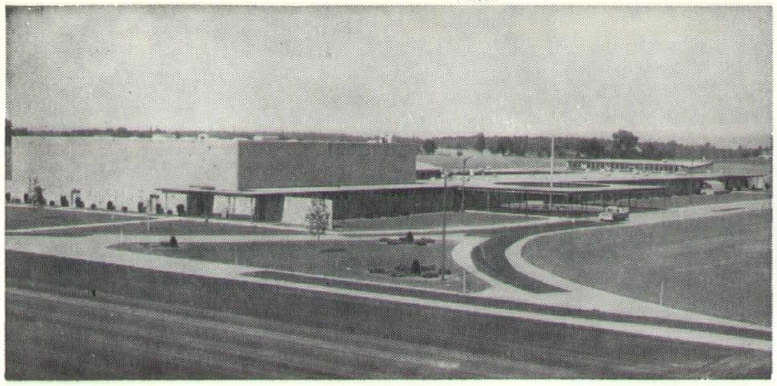
(5) THE UNIVERSITY OF NEW MEXICO: To support a study to develop a set of architectural objectives that specify the architects function as a specialist in the manipulation of three dimensional form as related to its symbolic and semantic content.

(6) THE UNIVERSITY OF OREGON: To support the work of Murry Milne at Oregon and Charles Rusch of University of California, Berkely. They will analyse an experimental program carried on by the two schools during the past year in the use of the rigorous method of programming and problem solving developed by Christopher Alexander.

(7) THE UNIVERSITY OF VIRGINIA: To support the work of 3 faculty members who are working on the definition of the use of research in architecture.

Discussions are in progress with M.I.T. to

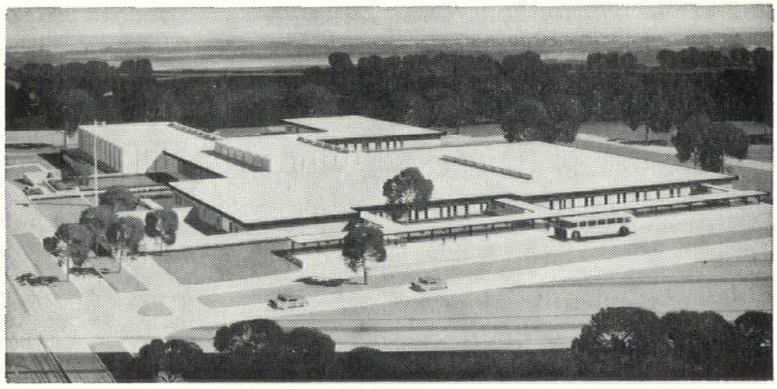
Rural schools go ALL ELECTRIC ...backed by dependable REMC service



North Miami High School

. . . electric service provided by Miami-Cass County REMC

This beautiful new consolidated junior-senior high school is located on the 900 North Road, 9 miles north of Peru. Dedicated in November, 1961, it is designed with classrooms, laboratories, cafeteria, auditorium and athletic facilities for an enrollment of 750. During the planning period a special committee of 15 people visited schools heated by coal, fuel oil and electricity. They discussed various types of heating with architects, and discussed electric heat with school officials. They also talked about heating electrically with individuals who have electric heat in their home and churches. Result: the committee recommended electric heat. Architects were Hamilton and Graham.



South Knox Junior– Senior High School

. . . electric service provided by Knox County REMC

This beautiful new school now under construction is located on a 51 acre site near Verne, on State Highway 61 southeast of Vincennes. Designed to handle 800 students in grades 7 through 12, the building contains 15 academic classrooms, 10 laboratories, a library, and 13 additional rooms for music, shop, art and supporting educational facilities . . . plus a 3,500 capacity gymnasium, and auditorium seating 600, a cafeteria and administrative office. All of the inside spaces are air conditioned. Heating space will total 140,000 square feet. James Associates, architects, say this may be the largest school in Indiana using electric heat.

There is a significant school building program underway in rural Indiana today. Big, modern and efficient consolidated schools are springing up all over the state . . . making an excellent educational environment available to rural youth.

■

School boards, trustees, teachers and architects all feel free to plan their new schools all-electric. They know that they can depend upon the electric service provided by the 42 REMCs in rural Indiana.

Plan your new rural school . . . all electric!

REMC

 RURAL ELECTRIC MEMBERSHIP CORPORATION

provide partial support for a conference to bring together noted men in the physical and social sciences who have made important contributions toward a definition of the changes that can be expected to occur in our society over the next 20 or 30 years. These men will be asked to help architects to define the kinds of environmental planning tasks they may be called upon to perform in the future.

Discussions are also in progress with CORNELL UNIVERSITY to support a pilot study by Dean Burnham Kelly and members of his staff to lay the groundwork for a large scale study of graduate education leading to specialization. Dean Kelly has asked the National Science Foundation to support an extensive effort to encourage the institution of new kinds of graduate study designed to train specialists who would be able to give valuable support to the practicioner.

A first draft has been prepared of a projection for the overall general **structure** of environmental design education. This draft is intended as the basis for continuing discussion and analysis during the coming year of work by the research unit. The projected structure visualizes a coordinated series of academic programs for 1) **technicians** (2 years), 2) **technologists** (4 years), 3) **professionals** (6 years), and 4) **specialists** (8 years). It is designed to encourage the training of a board spectrum of skills to graduated levels of professional responsibility without restricting the diversity of the approach to education among the schools. This approach will allow people to enter the field from a number of diversified preparatory paths; to change direction and emphasis during their academic careers without severe penalties; and to reach many different kinds of stopping points in their education before employment.

Future work of the research unit will be directed to the following areas:

(1) Development of educational objectives.
(2) Development of a wider range of teaching tools.
(3) Development of prototype curricula. (It is emphasized that no absolute curriculum or structure can be established; there is a need for flexibility because of the differing needs of individual schools, and to provide an opportunity for changes as they are felt necessary through evaluation of programs.)
(4) Development of strategy for establishing a method of evaluation.
(5) Development of outlines of continuing

work in educational research in terms of—

a) Program development
b) Evaluation of educational programs
c) Substantive course material
d) Teacher training programs
e) Continuing education programs
f) General education programs

Several liaison activities are also in process together with AIA representatives. These include:

(1) Conferences with architectural groups, ACSA, NAAB, NCARB
(2) Conferences with other professionals, planners, engineers, etc.
(3) Conferences with government and foundations.

It is expected that the work of the research unit will be substantially completed in time for a report to the AIA membership at the New York convention next May and that a final written report will be available in September 1967. No full scale tests can be expected from this first phase of the research program; however, specific recommendations and proposals for further research are to be included in the final report.

—WALTER SCHOLER, JR. AIA
Chairman AIA Commission on
Education and Research

NEWS BRIEFS

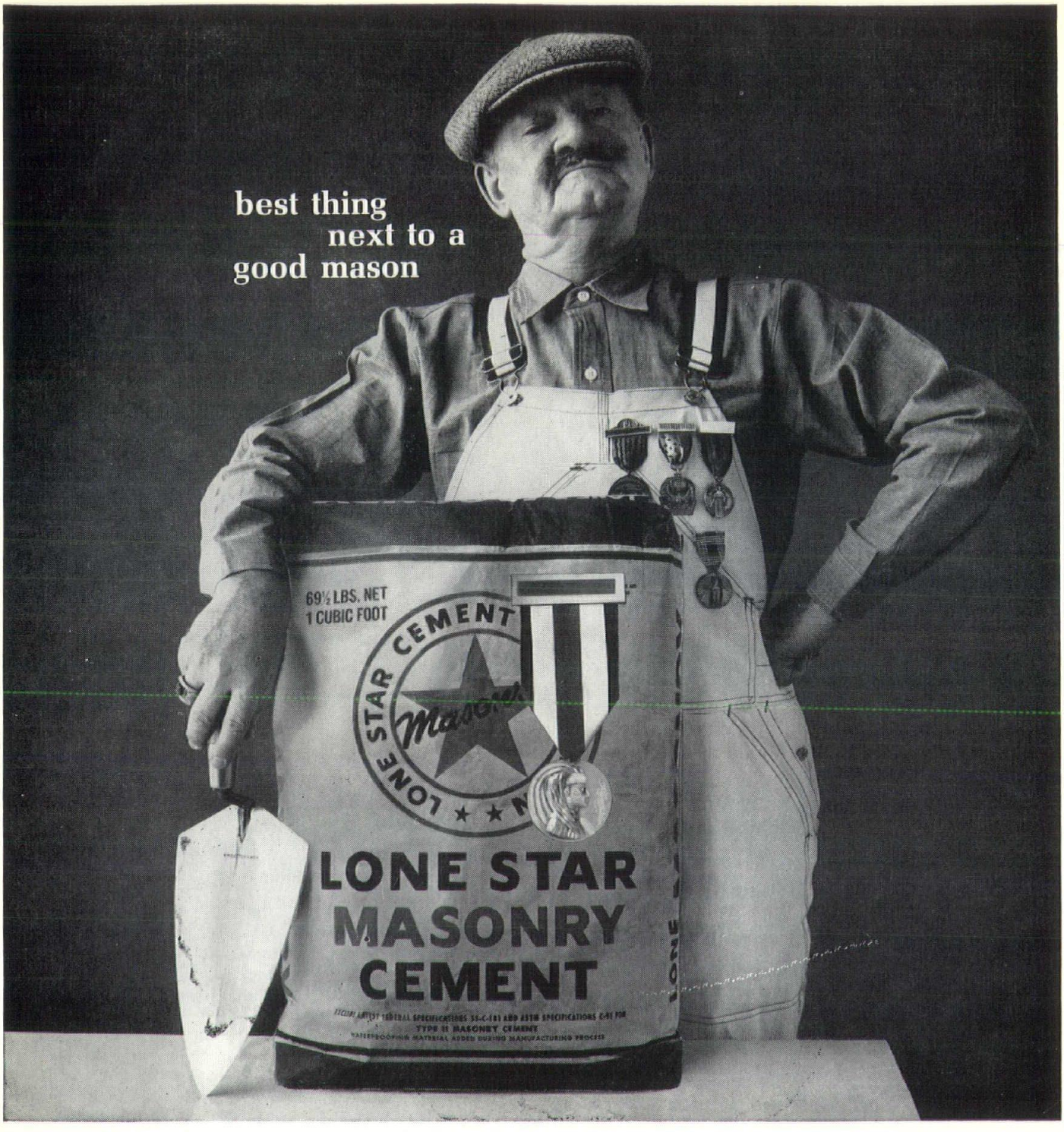
INDIANA LIMESTONE INSTITUTE of America, Inc. announces the appointment of Richard L. Hartung, AIA, as Educational Director. Mr. Hartung, a Bloomington architect, will act in the capacity of consultant on a program of research and development for the Institute, and will be responsible for initiating the various studies which will make up the research program. Mr. Hartung will continue to maintain his practice and offices at 116½ South College Avenue.

—AIA—

THE ARCHITECTURAL PROFESSION lost two very close friends by death in the past month.

Mr. Wilbur Peat, former director of the John Herron Art Museum in Indianapolis, who passed away early in December, had been an Honorary Associate Member of the Indianapolis Chapter and the Indiana Society of Architects for many years. He had a deep interest in architecture and architectural history and was a leading authority on historic homes.

Mr. A. W. Rohlwing, retired District Engineer of the Indiana District, Portland Cement Association, died just after Christmas. A registered en-



Good masons do finer work with greater precision when they use the best materials. That is why more architects are specifying Lone Star Masonry Cement. It combines all the necessary ingredients, except sand and water, in exactly the right proportion. Lone Star Masonry Cement provides *all* the properties of top-quality mortar plus complete uniformity from sack to sack. That's not all! It saves time, trouble and money... cuts mixing time, makes clean-up easier, assures more lasting beauty. For the finest quality mortar at the lowest possible cost, specify Lone Star Masonry Cement. Lone Star Cement Corporation, 1800 N. Meridian Street, Indianapolis 2, Indiana.

LONE STAR CEMENT CORPORATION

LONE STAR MASONRY CEMENT

gineer, Mr. Rohlwing was well-known in both engineering and architectural professions throughout the state prior to his retirement one year ago.

—AIA—

DONALD E. COMPTON AIA, senior principal in the Indianapolis architectural firm of McGuire, Shook, Compton, Richey, Inc., has announced his retirement effective January 1st, concluding forty-five years of service to the same firm which was founded in 1916.

A native of Greensboro, Indiana, Mr. Compton received his architectural training at the University of Illinois and the University of Wisconsin, and joined the McGuire & Shook firm in 1921 at age twenty-four. He was named chief draftsman and superintendent in 1935, and his name was added in the firm title in 1963. He has never been associated with any other firm.

Mr. Compton maintained his membership in the old Indiana Society of Architects since 1935, and has been a Corporate member of the American Institute of Architects and the local Chapters since 1945, and has held a variety of offices locally and state-wide.

Some of the major works created by the firm during his career were the new Marion County Jail, the Marion County General Hospital, Indiana Retired Teachers' Community (Greenwood), ISTA Center, Second Presbyterian Church, Arlington High School, Howe High School, St. Paul's Episcopal Church, Helenic Greek Orthodox Church, Beth-el Zedeck Temple, American States Insurance Co. and American United Life Insurance Company buildings (all in Indianapolis), hospitals and schools throughout Indiana, and considerable work at Butler University, DePauw University, Hanover College, Manchester College, Huntington College, Rose Polytechnic Institute and Evansville College.

—AIA—

BOHLEN AND BURNS, Indianapolis architectural firm, has announced its reorganization (effective January 1) and the naming of two employees as additional principals. The new firm will be known as Bohlen, Burns and Associates, Inc., and joining August Bohlen AIA and David Burns AIA as principals in the new corporation are Melvin B. G. Meyer AIA and John M. Gibson, both registered architects. Offices of the firm will remain at 1308 North Meridian Street, Indianapolis.

—AIA—

KEN FRYAR ASSOCIATES of Michigan City has announced both a reorganization and a relocation. The new firm will be known as Ken Fryar Associates and Ronald Goodfellow, Architects, and will be located at 114 York Street, Michigan City.

—AIA—

THE TALBOT GALLERY exhibition of contemporary art in the ISA offices currently includes the following paintings and sculptures:

ENCOUNTER, sculpture by John Chase Lewis, $135.00

THINGS, painting by Beverly Snodgrass, $85.00

FIGURE: ARICEBO, oil painting by Ben Mahmoud, $125.00

PROVINCETOWN DAWN, chalk study by Loren Dunlap, $275.00

BLUE ABSTRACT, oil painting by Robert Berkshire, $300.00

CITY VECCHIA, etching by Rudy Pozzatti, $100.00

SPRING, oil painting by Mary Beth Edelson, $100.00

COLLAGE, by Morris Barazani, $175.00

This rotating exhibit of work by contemporary Indiana artists is maintained by the Talbot Gallery, 115 East 21st Street, Indianapois.

Letters

To The Editor:

The sesquicentennial issue of the Indiana Architect was quite an achievement and the vast amount of study, sweat nd sincerity that it took to produce it was apparent, no doubt, to all who slowly turned each page.

I have just read the November issue which was received today, and momentarily dwelling upon its contents, its beautiful format and typography, I can't help but feel that you have raised the stature of our magazine to a tall "sun-crowned" height. Congratulations to all who helped elevate it, with particular credos to Don Gibson, Elliot Brenner as well as Larry Roesler. All members and friends of the ISA should be duly proud of our magazine, and grateful to you for the accomplishment.

Sincerely,
William G. Rammel AIA
Fort Wayne

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