Engineering design procedure for concrete hyperbolic paraboloid shells

Of special interest to engineers is PCA's new booklet, "Elementary Analysis of Hyperbolic Paraboloid Shells." It's an authoritative presentation of design fundamentals and HP geometry.

Design data are included for standard, skewed, groined and sloping HP's. For your free copy, fill out coupon and mail to nearest PCA district office listed below.

PORTLAND CEMENT ASSOCIATION

612 Merchants Bank Bldg., Indianapolis 4, Ind.

A national organization to improve and extend the uses of concrete.
Tebco is the medium for masterpieces

Complete freedom of creative expression — exterior and interior — is possible with Tebco Face Brick. You can choose from 37 colors, four textures, four sizes — a total of 592 possible combinations. Whichever you select, you never have to worry about tones or textures, because Tebco's million-brick-a-week production insures absolute uniformity as well as dependable supply. Write today for full color Tebco Catalog.

Residence Hall for Women, Flora Stone Mather College of Western Reserve University. A college home for 440 women students. Four residential units and dining hall are linked by open garden courts and glass-enclosed galleries.

Face Brick — Tebco 51 Wire Cut Velour, Standard, Imperial Gray
Architects — Outcalt, Guenther, Rode, Toguchi, and Bonebrake, Cleveland, Ohio
General Contractor — Roediger Construction Inc., Cleveland, Ohio
Supplier — Ideal Builders Supply & Fuel Co., Cleveland, Ohio

THE EVANS BRICK COMPANY

General Offices: Uhrichsville, Ohio • Telephone: WALnut 2-4210
Sales Representatives: Cleveland, Ohio • Detroit, Mich. • Philadelphia, Pa.
Pittsburgh, Pa. • Columbus, Ohio • Toledo, Ohio • Bay City, Mich. • Fairmont, West Va.

Tebco
Now in New Jumbo Size, as well as Standard, Roman and Norman
Specify TROUBLE-FREE COMFORT!
Specify LOW-COST OPERATION!
Specify GAS AIR CONDITIONING!

In addition to a wide choice of equipment (3 to 1000 ton sizes), GAS Air Conditioning offers other important advantages.

Flexibility of Location
Minimum vibration and low noise level of Gas equipment permits installation from basement to roof top.

Structural Savings
Dead loading can be used with Gas equipment as opposed to live loadings required by large, high speed equipment.

Year-Round Use of Boiler
Using Gas-fired heating boiler to supply steam or high temperature hot water to summer air conditioning equipment improves annual load factor of boiler.

For specific information regarding types and sizes of equipment, gas rates, and engineering data, call or write

AIR CONDITIONING DIVISION

INDIANA GAS & WATER CO., INC. 1630 N. MERIDIAN STREET INDIANAPOLIS 2, INDIANA

IF YOUR OFFICE ISN'T BECOMING TO YOU . . . YOU SHOULD BE COMING TO US!

BUSINESS FURNITURE CORPORATION • 1922–1962
ONE HUNDRED ONE SOUTH PENNSYLVANIA STREET, INDIANAPOLIS, INDIANA
TELEPHONE • MELROSE 2-1474
The Indiana Architect is the sole property of the Indiana Society of Architects, AIA, and is edited and published monthly in Indianapolis by Don E. Gibson & Associates, 3637 N. Meridian Street, P. O. Box 55594, Indianapolis 5, Indiana.

Current average monthly circulation, 3,400, including all resident Indiana architects, school officials, churches and hospitals, libraries, selected public officials, and members of the Indiana construction industry. Further information available on request.

Member, Publishers Architectural Components


Editor and Publisher
Don E. Gibson

Director of Advertising
William E. Stineburg

Officers and Directors, Indiana Society of Architects

President
WAYNE M. WEBER, AIA
Terre Haute

Vice-President
WALTER SCHOLER, JR., AIA
Lafayette

Secretary
FRAN E. SCHROEDER, AIA
Indianapolis

Treasurer
JOHN P. GUYER, AIA
New Castle

Directors
EDWIN C. BERENDES, AIA
Evansville

ALFRED J. PORTEOUS, AIA
Indianapolis

JAMES L. WALKER, AIA
New Albany

CARL L. BRADLEY, AIA
Fort Wayne

DONALD E. CLARK, AIA
Indianapolis

HARRY E. HUNTER, AIA
Indianapolis

ROBERT KNAPP, AIA
Evansville

WALTER SCHOLER, JR., AIA
Lafayette

WAYNE M. WEBER, AIA
Terre Haute

Executive Secretary
DON E. GIBSON
Indianapolis

Officers and Directors, Northern Indiana Chapter

President
N. HAL L. AIA

Vice-President
RAMMEL, AIA

Directors
COURTNEY E. ROBINSON, AIA
Fort Wayne

ROBERT J. SCHULTZ, AIA
South Bend

JAMES M. TURNER, AIA
Hammond

DIRECTOR OF ADVERTISING

SHUTE CONCRETE PRODUCTS, INC.
Richmond, Indiana

LOUISVILLE LAMP CO., INC.
LOUISVILLE 3, KENTUCKY
FOR QUICK SERVICE
CALL JU 7-6094
INDIANA REPRESENTATIVE
THE H. H. HOMAN CO.
JOHN G. LEWE
H. H. (SANDY) HOMAN
COLUMBIA WOOSTER BLDG.
ROOM 107
CINCINNATI, 27, OHIO
TO THE POINT

SOME STEPS IN TIME
SAVE MORE THAN NINE

We’re Going To Needle a few of those people who have serious misconceptions on fire doors with U/L labels. Fire doors are not installed to get by a local building code. And even if a particular opening does not technically require labeled fire doors, or cannot carry the U/L label because of frames or hardware arrangements, it still may be extremely important to install a labeled fire door.

Why? Because the purpose behind all U/L fire testing and labeling is fire safety and life safety. And architects should look upon a labeled fire door as a safer door, protecting their building and its inhabitants.

The installation of a labeled fire door in public buildings—schools, hospitals, institutions, office buildings—is a small step, but the savings can be phenomenal, especially in lives.

** * *

The World’s Largest Atomic Dome is being built by Overly for Brookhaven Laboratories, New York City. The new Brookhaven dome will use Overly Batten “B” type construction, will be completely fabricated in stainless steel and will measure 176 feet in diameter. Probably no more exacting hemispheric structure is produced than this, where tolerances must be microscopically accurate.

** * *

Did You Realize that Overly is one of the nation’s foremost manufacturers of convector enclosures? Overly crafts six different basic designs, styled to suit the architecture of every type of building. For more information, write for the new Overly Convector Enclosures Catalog.

Overly Representative In Your Area:
HUGH J. BAKER & COMPANY
602 West McCarty Street
Indianapolis 6, Indiana

Overly
Greensburg, Pennsylvania • Los Angeles 39, California

SOLLITT CONSTRUCTION CO., INC.
GENERAL CONTRACTORS
SOUTH BEND, INDIANA

General Contractor
For the
FIRST PRESBYTERIAN CHURCH
Elkhart, Indiana

General Contractor
For the
Southminster United Presbyterian Church
Greenwood, Ind.

General Contractor
Company
90 NORTH MCKINLEY ST.
GREENWOOD, INDIANA
TU 1-2006
A Competition for Awards in Indiana Architecture
1959-1962

ELIGIBILITY:
All entries shall be buildings constructed in Indiana, designed by architects registered in and residents of the State of Indiana. To be eligible, a building must be completed within the three-year period of June 1, 1959, and the date of entry in this competition.

GROUP I Residential (single family dwelling)
A. Cost $25,000 or under
B. Cost over $25,000

GROUP II Public Buildings
A. Schools
B. Churches
C. Community Buildings (Firehouses, country clubs, courthouses, jails, motion picture houses, hospitals, etc.)

GROUP III Commercial Buildings (Stores, office buildings, hotels, shopping centers, etc.)

GROUP IV Apartments and group housing, including homes for the aged.

GROUP V Industrial (warehouses, manufacturing plants, research centers, etc.)

PRESENTATION:
1. Mounts: All entries shall be on 40" x 40" rigid board, with eyelets secured in the top to facilitate hanging. One building only to a mount.
2. Plans: Site plan and major or typical floor plan drawn to scale and with numerical or graphic indication of scale. Medium (ink, photo technique, pencil, water color, etc.) at discretion of entrant.
3. Photographs: Shall be glossy black and white or color, a minimum of 8" x 10" in size. Two exterior and one interior view minimum will be required.
4. Descriptive Data: The following information shall be included on a card attached to the back of each entry:
   A. Group classification by name and division number (e.g., Public School, II-A)
   B. Name of Architect (concealed by appropriate means; failure to conceal name will result in entry being banned from competition)
   C. Name and location of building
   D. Name and address of owner
   E. Name and address of general contractor
   F. Date of completion
   G. Any statement of requirement, program, etc., deemed appropriate

JURY:
The jury will be composed of three individuals, at least two of whom will be corporate members of the AIA, all resident outside the State of Indiana. Names of jurors to be announced.

AWARDS:
First, second and third awards may be made in each category. The jury may also award honorable mentions at their discretion.

ANNOUNCEMENT OF AWARDS:
The announcement of the award winners, and presentation of certificates, shall be made at the dinner meeting of the I.S.A. Annual Convention to be held on May 25, 1962.

EXHIBITION:
The entries shall form an exhibit at the I.S.A. Annual Convention, and afterwards shall be displayed, in whole or in part, wherever deemed feasible and desirable by the Board of Directors of the Indiana Society of Architects. One such display already established will be at the John Herron Art Museum during the month of September, 1962.

CLOSING DATE:
A post card or letter indicating intention to submit must be mailed to the Committee on Honor Awards, Indiana Society of Architects, 3637 N. Meridian Street, Indianapolis, Indiana, no later than May 10, 1962, and must be accompanied by a check in the amount of $10.00 per mount, made payable to the Indiana Society of Architects. Entries must be submitted to the same address no later than May 15, 1962.

CLEARANCE:
Each entrant must assume responsibility for obtaining all necessary clearances and permissions to submit his project in this competition, and for permission to have all or any portion of his submission reproduced in any publication or news media. Photographs requiring credit lines must be so marked, along with the appropriate credit line.

DISPOSITION OF SUBMISSIONS:
The Indiana Society of Architects reserves the right to make such use of the submissions in promoting the aims and objectives of the profession as is ethically proper. Submissions will be returned to entrants at the completion of such usage provided a $2.00 return fee has been paid in advance. Unless further disposition is requested by entrants, all submissions not covered by the $2.00 return fee, will be held at the offices of the Indiana Society of Architects, 3637 N. Meridian Street, Indianapolis, for a period of one year and then destroyed. Entrants desiring to pick up their submissions may do so after notification of availability and within the one year.
Best for Churches! Specify the Soundmaster 240 . . . Modernfold's new folding partition that shuts out sounds other makes let through. For details, specification and quotations, call

Wilson-Partenheimer, Inc. or Old Fort Supply Company, Inc.

1107 E. 54th St. Indianapolis CL 1-4541 2013 S. Anthony Fort Wayne AN 6425

Distributors for Modernfold partitions • Modern-Cote vinyl wall covering • Dwyer Kitchenettes

SPECIFY

INSULROCK
ROOF DECKS

New Beauty —
• AVAILABLE IN 5 PASTEL COLORS

Quiet —
• HIGH ACOUSTICAL ABSORPTION

Insulative — Economical
• EXCELLENT THERMAL RESISTANCE

Functional —
• SPECIAL EDGES & JOINTS

Water Resistant & Non Combustible —
• PORTLAND CEMENT BINDER

Service & Erection by —

ANNING-JOHNSON Company

1720 ALVORD STREET  WALnut 3-2461
INDIANAPOLIS 2, INDIANA

Branch Office: 1272 Maxwell Ave. Evansville HA 3-4469

Lower Maintenance
Greater Durability
Positive Decorative

Specify

PLEXTONE® PAINT
COLOR-FLECKED ENAMEL

Distributed By

PERFECTION PAINT & COLOR
715 E. MARYLAND
INDIANAPOLIS, IND.
ME. 2-4312
The New Role of the Architect

Architects of today seem destined to practice their profession in a kind of world that has no parallel in history. It is a world composed of revolutionary advances in technology, of exploding population, of a degree of complexity never dreamed of before now. A world of speed, of great leaps ahead in knowledge and know-how. A world of expanding social problems and lagging social answers. A world in which the scientist is accepted and esteemed, but the artist has become estranged from his fellow man. A world in need of order, but seemingly doomed to fragmentation.

In all the seeming confusion of the world of today, there are signs of hope and light. One of the brightest signs is the growing demand of society for someone who can bring order into human environment, who can fill it with beauty, who can cause it to function better, who can create an environment that will contribute to the well-being and advancement of the human race. The most eligible candidate for such a role is the architect. Imperfect though his preparation for the role may be, the architect is a member of the only profession concerned with total human environment. The architect is the only individual who, in any useful degree, possesses all of the elements of such a role—the education, the will, the orientation, the desire, and the knowledge. Of course, it would be less than truthful to say that the architect is completely prepared for such a role. But the rudiments are in him, as in no other, if he only cares enough to develop them.

Society presents the challenge. Someone is needed who will take the responsibility for the design of human environment. Clients are demanding broader and more complete services for buildings and their environment. The opportunity for service exists. The challenges are directed first to the architect and his group of skilled and creative specialists. The opportunities are his, if he will accept them with the attendant responsibilities. If not, society will look elsewhere for the answers, for it will be served. There is an alternative for the architect. If he chooses not to involve himself in the creation of total human environment, the architect can retreat to some position of security from which he performs limited services, while others assume control of the over-all problems. Such a course is possible, but unlikely. Too many architects are deeply concerned with the entire show; too many firms have already begun working with the biggest problems.

Just what is architecture? A definition is desperately needed for registration, legal and other reasons. It is equally important to any discussion of great and expanded roles for the architect in our time. Since everyone seems to be attempting it, perhaps one more try might do no harm.

The practice of architecture consists of the professional activities of architects required for the creation and construction of buildings and their environment. These activities include the consultation, analysis, and design necessary for the creation of buildings and their environment, the preparation of graphic and written documents that clearly show the intent of the design, and supervision of the construction to ensure that the intent of the design is fulfilled. The architect is responsible for the selection of the materials, equipment, and systems for buildings and their environment. The architect's services include the direction or coordination of the other professions and disciplines necessary for the accomplishment of the intended result—buildings and their environment that fulfill the needs they are intended to fulfill and contribute to health, welfare, safety, order and beauty in the community of men.

Individual architects are now performing, in greater or lesser degree, all of the services outlined in the definition. What may not be immediately apparent in the definition is that the accomplishment of buildings and their environment is a much more complex problem today than it was a few years ago. It is not enough, today, to conceive of a design, produce working drawings and specifications for it, and see it through construction. No longer does the client walk through the architect's office door, with a piece of land, a building problem, and money to finance its solving. The more likely situation today is a client with a problem but with no land and little money. Or he is the owner of land and would like to see it developed. Or he is an investor or speculator. The architect's current role in the case of the
client with a problem is likely to be (1) investigation of the client's problem, and as indicated by the research, advice on whether he should build or not and (2) if the decision is to build, the architect's next role will probably be that of getting the client and his problem together with land and money. If this sounds as if the architect is going to have to become involved with the client's problems before they become architectural problems, that is exactly the case. If it appears that the architect is going to have to become concerned with real estate and money, that also is so. And the architect is going to have to get involved in the programming and planning of the operation that goes into the building.

If the architect refuses to accept the role as described here, there are lots of others waiting for the chance. Some of these are already in serious competition with the architect. The package dealer. The industrial designer. Even people on whom the architect is dependent, if he is to offer complete services, such as the engineers and other consultants. It would be folly for the architect to consider that the competition offers only poor substitutes for the architect's own services. A few package dealers are very good indeed in their way. However, the architect possesses some valuable and necessary characteristics that no other can equal. The architect, as a professional acting as his client's agent, receiving compensation only from his client, effectively removes himself from any conflict of interest and can act purely in his client's behalf. This is a claim none of his competitors can substantiate. And the architect's historic role has been to take hold of a problem, organize it, bring the parts together into a unified whole, and cause the resulting structure and their surroundings to fulfill their purpose. No other can claim more than a specialized portion of this total process.

If the architectural profession accepts the big role being offered to it, certain additional services will have to be added to the basic or standard service. The profession must then develop, within itself, with the help of related professions and others, methods of handling the entire process of creation and construction. To put it another way, the profession will have to prepare itself for comprehensive practice in the area of buildings and their environment. One of the important elements of such a practice would be architectural analysis of feasibility, land, location, finance, and the like. The architect's work would involve him with promotional activities since many projects today are speculative or entrepreneurial in nature and public relations is a necessary tool for success in many others. The architect would find himself concerned with the nature of the operations to be performed in buildings, and would interest himself in operations programming and planning. He would play an increasingly important role in the construction industry as a consultant to manufacturers of building products. He would have much to do with architectural graphics, fine arts, crafts and a long list of other pursuits.

Of course, there are many ways to practice architecture under the comprehensive services concept, just as in the past. Some architects might choose to offer a wide variety of services with their own staff. Others might offer similar services with a smaller staff and outside consultants. Still others might specialize in limited building types, or in one or more phases of architecture such as building design or programming, offering their services as consultants to other firms. For many clients, particularly those with smaller or less complex projects, the basic or standard services might suffice. The small architectural office will survive under the comprehensive system. It will continue to perform services on many of the buildings it now handles. At the same time, the small office will find its vistas opening up toward more complex and bigger work; if it prepares for it and builds a consulting force outside the firm. Or it can grow larger if that is indicated.

Ethically, comprehensive services are possible for architects under the principle of agency, the principle which makes it possible for one person, the client in this case, to vest authority in another, the architect, to represent him in business transactions with a third party, e.g. a real estate broker or banker. Agency is based on a principle of the law of contracts. There are two legal maxims in this: "He who acts through another acts in person," and "A person who has the power in his own right to do a thing may do it through another."

Every facility available to the profession must be put to work toward the goal of educating practitioners now. And it will take many years and much work to evolve a type of architectural education leading to master planners and architectural specialists in the science, art, and administration of architecture. Similarly, there is much to be done in the fields of internship, continuing education, and cross-fertilization between architecture and the related fields.

Finally, if the architectural profession is to perform the great role sketched here, it must first determine what image it chooses to project for itself. Then, every effort must be expended to impress this image on the public. If architects are to fulfill the great role being offered to them as the creators of better human environment, the profession must make its choice now. Otherwise it inevitable will retreat to a lesser position. And if the larger role is chosen, it will be mandatory on the profession to prepare itself to perform the required comprehensive services with high skill, or at the very least, with competence.

It would be foolhardy to underestimate the task that lies before the profession if it is to assume a position of leadership in the area of design for human environment. The problems are complex and interwoven. They cut across every level of the profession, affect every activity of the members of the profession. Many of the problems are related to the work of other professions and businesses, and will require close coordination of effort with them. Every individual concerned with human environment is touched by the problems in some manner, in some degree. Each architect, of course, must have a vital concern in the program because each will be affected closely by the developments. The related professions will be affected, as will the draftsmen, detailers, and other employees of the architect. Without the support of such people, the program will have trouble succeeding.

(Reprinted from the AIA JOURNAL, April, 1962)
Only the Best are Good Enough

Our profession today faces its brightest future and greatest challenges. If we are prepared, we will be ready for these challenges. They come from many sides and will be met only as architects are the leaders of the planning teams. We all know of important projects which an architect served in a secondary way. Each of us probably has strong personal thoughts on this problem.

Architects should be always striving to achieve and retain their key position. Our profession should be unified as it works together to achieve this goal. An obvious step leading toward this end is the recruitment of the best of our young people for a career in architecture. To those who say that we can be silent at this point I cite that other professions are active. Banking, medicine, dentistry, engineering and are all actively recruiting to fulfill a prime commitment of all professions, to insure uninterrupted service to the public. Much is being done in the area of vocational exploration through Explorer Scouts, mainly in the areas of the professions. I recently experienced some of the effectiveness of this program when a surgeon examined my boy. He had a deep cut over his eye, which was taken care of by the doctor. Two Explorer Scouts were present for this examination while the surgeon explained the case to them, as part of an introduction to the wonderful world of medicine.

Are we attracting enough young men into architecture? This interesting and provoking question will be answered “yes” by some and “no” by others. The answer usually reflects the amount of competition encountered in recent competition for commissions. The complete answer is also related to such questions as, “What percentage of all building construction projects is designed by Architects?”; “In what fields should Architects be striving for greater use of their services?”

In Indiana, some recent figures indicate we are presently short of architects. We do 2.36% of the nation’s building with only 1.49% of its architects. Also, for each 100,000 urban population, we have only 12 architects, as compared with 21.5 nationally; 22 for Illinois; 19 for Ohio; and 15 for Michigan. This situation is probably due, to a great extent, to activities within Indiana of architectural firms from Chicago, Cincinnati and other cities. Are they firms better equipped, or are they better salesmen than Hoosiers?

Whether or not enough new people are entering the architectural profession, we must be sure those we are attracting are good enough. They are good enough only if they are the best available. Our profession must be active in its relations with young people to be living up to this high requirement. Only by bringing the best of our young people into the profession do we fully meet our obligation to the public.

Our situation in Indiana presents special problems and opportunities as we try to attract the best possible candidates to enter architecture. Our only accredited architectural school is The University of Notre Dame. Its Department of Architecture usually has between ten and fifteen students from Indiana, attracting about 90% of its students from outside this state. At the present time a hundred and fifty students live in Indiana but leave the state for their architectural training.

Your I.S.A. Architectural Scholarship is being offered for the first time this year. Through it the Society covers, for one selected applicant, the extra financial load involved. This extra amount is the difference in cost if a student were to go to a state university in another state (or to Notre Dame) for his training instead of attending Purdue or Indiana University. This amounts to about $500.00 per year, or a total of $2,500.00 for the usual 5-year course.

This $500.00 is to be given to one student each year—the most promising and deserving he can discover. At the same time, as the Scholarship Program is publicized to the high schools, we may help others seriously consider architecture as a career. Perhaps they will not enter architecture but will receive a favorable impression of how architects can serve society today. Your Scholarship Committee has received many comments on this new endeavor. All ideas are most welcome, pro or con, regarding the scholarship, the way it is administered, and its objectives.

Recruitment is a continuing endeavor. The A.I.A. has, of course, had programs in this area and many individual architects have given of their time to tell young people of the opportunities and severe demands of being an architect. This area of activity is seeing a definite change, as has so much of our life today. We must vigorously, and with fixed purpose, guide the most promising of our young people into being part of the bright future of our profession.
Announcing!
SEWARD SALES CORPORATION
AND
THE DOW CHEMICAL COMPANY
Are Pleased to Announce the Appointment of
ARMSTRONG CONTRACTING & SUPPLY CO.
1120 N. CENTRAL AVE. ME 5-2341 INDIANAPOLIS, INDIANA
As Approved Insulation Contractors for Styrofoam
Styrofoam Distributor
SEWARD SALES CORPORATION
ELKHART, INDIANA
740 South Main Street
INDIANAPOLIS, IND.
1101 East 46th Street
CINCINNATI 8, OHIO
3660 Michigan Street

Again, Architects Specify Flameless ELECTRIC HEATING

Here is another example. Architects are specifying safer, cleaner, more dependable electric heating in modern schools, churches, hospitals and commercial buildings. Flameless electric heating is practical for home use, too. See us today for complete details!

Central Elementary School, Clinton, Indiana. Architect: Miller, Vrydag & Miller, Terre Haute. Completed in 1959, this modern school is heated entirely with flameless electricity. Operating costs have been most satisfactory with safer, cleaner electric heat.

MEMBRANE FIREPROOFING—GIVES FIRE SAFETY TO A LIGHTENED STRUCTURAL FRAME WITH GENUINE...

Lath and plaster
MEMBRANE FIREPROOFING—
• REDUCES COSTLY UNNEEDED STRUCTURAL WEIGHT
• PROVIDES ARCHITECTURAL VERSATILITY WITH ECONOMY
INVESTIGATE—SPECIFY—DEMAND
THE FIRE SAFETY AND ECONOMY OF LATH AND PLASTER
Lathing & Plastering Bureau of Indianapolis, Inc.
SECRETARY-TREASURER: WILLIAM F. BOYCE, P.O. BOX 572, INDIANAPOLIS 6, INDIANA
European Church Architecture Today

The Christian Church in Europe has been in the throes of a liturgical revival for over 40 years and the results of the union of theology, philosophy and art can be seen on all sides. The tremendous growth and richness of the Swiss and German church architecture during this period can be clearly traced to the efforts of the groups of architects, artists, theologians, philosophers and inspired laymen who first started meeting together in the 1920's. These were not international church building conferences but rather were researches into the content and philosophy of religion. While they often started as purely sectarian gatherings, on occasion they expanded across all of the sects and denominations to attempt a clear view of the relationship of Christianity to the modern world.

These researches were motivated by the thought that somewhere in the 4th century the thread of development of the total church was broken. In its clearest aspects the revival became an attempt to re-establish the intimate relationship of the laity—laymen—to God during the service. Thus the term liturgical—public worship.

Again, in its broadest sense this was the removal of the clergy, choir, screens, rails, rites and processions which had been adopted during the rise of the clergy-centered worship of the Church. The presence of the laity in the service was to be re-established. It was not a return to medievalism, although in plan many of the churches returned to the Early Christian period, but an agreement with some of the precepts which led to the Reformation.

It might seem that this would present few problems for the Protestant Churches and many hard tasks for the Catholic Church but in reality the problem was equally difficult. Many of the Protestant Churches, consciously or unconsciously, had modified their worship away from the ideals of the Reformation back into the clergy and altar centered forms of the pre-Reformation period.

In America, the influence of the Colonial Anglican churches, adhering closely to the altar centered churches of Rome, except in allegiance, and the Classic Revival periods of the late 19th century caused a great breakdown in the Protestant ideas of Man and God as expressed by liturgy and architecture. The Akron plan of the 1900's, with which Indiana abounds, was an early attempt to break out of the architectural and liturgical restrictions of the Revival periods.
The best expressions of the liturgical revival and modern church architecture are found in Germany and Switzerland. This is not to say that there is not a great deal of good modern work throughout Europe. It is just that these two countries represent the best in both numbers and maturity.

Although Europe is a relatively small place, the regional and national aspects are clearly identifiable in architecture from place to place. Even when only a few miles apart, the presence of a border will completely change the character of a structure.

The practical expression of the liturgical revival has reached its height in Germany due to the war and two really outstanding architects. The war created a requirement for thousands of new churches and the opportunity to begin again in planning. It also shattered the very self-centered, confident nation heavy in the trappings of worship but light in the application of the thoughts of its fine theologians and philosophers.

The German liturgical movement attracted a few really articulate architects to its efforts but these efforts could not fully flourish in pre-war Germany. A few fine churches were built but the emphasis was on intense nationalism which was better expressed in the pseudo-Roman structures always dear to a dictator's heart. Despite this, Dominicus Bohm and Rudolph Schwartz, two creative giants in modern church architecture, involved themselves deeply in the liturgical movement and made their influence felt even in pre-war Germany.

In practical application the Germans were faced with three choices in their church building after the war; restoration of the destroyed or damaged masterpieces; reconstruction and/or remodeling of the damaged parish churches; and finally, the building of new churches. Somehow, the Germans managed to successfully attempt all three of the choices. The masterpieces, such as the Cologne Cathedral, have been restored to their pre-war state. It is interesting though that this restoration was given the lowest priority and is still going on.

The reconstruction and/or remodeling of the damaged churches has presented the Germans with a unique opportunity to constantly remind future generations of the effects of the war on the nation, as well as to implement the ideas of the liturgical revival. Often only the walls of an old parish church remained. Within the shell the new relationships between Man and God during worship were laid out. Often extremely interesting roofing systems were used to enclose the weakened walls so that the finished building is a spatial expression of modern techniques and worship.

The most common and dramatic expression of the effects of war has been the use of the old damaged towers with new churches. The dark, guilt aspect of the German character is expressed in many stirring churches through this device. All that remains of the Memorial Church at the head of Kurfurstendamm in Berlin is the 400 foot tower. Scarred, held together by clearly expressed ties, the tower looms high over the Tiergarten between two pristine hexagons. The larger hexagon is the new church and the taller but smaller is the baptistry. Professor Egon Eiermann has given his forms very little surface relief, contenting himself with the brutal contrast of the battered tower and the pure white geometric forms. The futility of the war for the Germans cannot be expressed more than here, but functionally the structures meet their needs.

In the new churches the Germans reach their highest expression. Sankt Anna in Duren by Rudolph Schwartz is without a doubt one of the finest modern churches in the Christian World. Built of rubble from the old church, in the market place of a demolished town near Aachen, in form and materials it expressed a strength and majesty rarely achieved in modern churches. The "L" shaped plan, harking back to the 1608 Marktkirche in Freudenstadt, with the chancel in the heel of the "L" and the congregation in the two legs, solves the dual need for worship of the individual and the corporate body of the church. The single altar, free-standing on a broad chancel, may be served from any side presenting the focal point of worship to the laity without barrier.

The rubble stone walls, stone floor and exposed concrete grid ceiling provide, with majestic scale, a room for organ music rare in modern churches. The choir, organ consol and main pipes are located at the back of the long leg of the "L" with a small responsive bank of pipes in the small leg. The responsive pipes in the chapel leg may be played individually, simultaneously with, or responsively with the full bank thereby providing a range of instrumentation fully suited to the tasks of the church.

The great stone mass of the building, not yet fully completed, sits on the side of the market square in an extremely strong, and possibly to American tastes, "unchurchlike" form. With further study the "in the world but not of the world" mass of the building can be nothing other than a church. The lack of compromise with the interior-exterior relationship and the apparently small attention payed to the idea of making it "look" like a church, which troubles so many American architects, produces a building clearly identified as a church without the usual religious symbols.

Modern church architecture and the liturgical movement found their earliest and, until recently, best efforts in Switzerland. The Swiss for many years have been recognized as the leading architectural country of Europe, possibly of the world.

The first modern church in Switzerland, Saint Antonius in Basel, by the late Karl Moser, with its gigantic exposed concrete tower soaring above Kantenfeldstrasse, is still startling to see after 34 years. Although Gothic in plan, the strong use of concrete and contemporary detail have produced a church in no way an imitation of the past. This church is of the family of first modern churches typified by the efforts of August Perret in France and Otto Bartning in Germany.

The massive stained glass side walls in color and composition were the forerunners of the stained glass techniques so common in today's churches.

Moser led the Swiss architects along the path of modern architecture in other areas as well and the result is a country full of clean-cut expressive modern buildings lying side-by-side with older structures in fine clear relationships.

The relationships of buildings to the surroundings are
no-where better illustrated than in the Swiss use of intelligent site planning and the use of towers to make each church not only easily identified but also an important part of the city composition. The Reformed Church in Basel, by Benedict Huber and Saint Francis in Basel-Rehein, by Fritz Metzger both illustrate the use of foreground and towers in Swiss church planning. In the Reformed Church particularly, the placing of the building well back from a busy traffic intersection with a broad triangular front park and a green background present the church in the best possible fashion. In all Swiss churches, cars are kept at a great distance from the building so that the “parking lot look” common to far too many churches is avoided.

To the practical Swiss the tower is not something symbolic, as in the finger pointed to God, but is the vertical singboard of the church. The towers all contain bells, simple or complicated, according to budget, and most important, the bells are used day and night for announcements, prayer calls and the time. The idea of a loudspeaker with bell recordings is shocking to a Swiss and even the poorest, smallest country church has at least one bell.

Time is the other practical aspect of the Swiss tower. No doubt because of the historic and economic importance of time keeping in Switzerland, a clock is extremely important. Generally two faces of the tower will have a large clock, easily seen from anywhere within the parish and the bells to call attention to Man’s use of God’s day. These, with the careful placement of churches within the total community plan make the importance of the church to the congregation and the community known to even the most casual observer. These very strong visual relationships make it very hard to escape the feeling that every person in Switzerland goes to church at every opportunity.

The influence of Le Corbusier’s pilgrimage church at Ronchamp, France, has been very large. There are many variations of the free space concept of Ronchamp springing up through Europe. Among the better, as far as interior space is concerned, is the Bruder Klaus Church by Ernest Brantschen in Saint Gallen-Winkeln. Here in a little northern Swiss village is a powerful spatial concept expressive of the liturgical revival. A rolling hyperbolic paraboloid ceiling rising up as it moves toward the altar with its highest point nicely balanced between the altar and the wall mounted pulpit. This visual balance is expressive of the functional balance that the liturgical movement is bringing to the Catholic Church in Switzerland, Germany and particularly in France. The Word is now becoming increasingly important in the service with the increasing expression of the pulpit in the chancel arrangement.

In summary the new church architecture can probably be reduced to a few significant aspects outside of those contributed by the artistic ability of the individual architects. Simplicity in concept, materials and details; restraint in the use of religious symbols, particularly the cross; careful attention to site and city planning in placement; lack of rigidity in plan concept with great emphasis on the laity; constant evolution of art and architecture without pseudo-Traditional hindrance; and finally, an informed, creative group of architects, artists, clergy and church au-

thorities working together to develop the best for the Church.

In comparing American and European church building techniques there are some outstanding differences which contribute to the difference in overall church architectural excellence. In most European countries there are often at most two denominations where we have in excess of 300 in America. The European concentration of the financial and decision making processes in community-wide, aesthetically sensitive authorities rather than in individual churches and building committees as in America, raises the level of church architecture immensely. The use of one and two stage competitions for churches with sufficient financial rewards and contracts to attract the best architects, and judged by the most competent people in the country make many European churches national projects and keeps the design standards high. Finally, the economic conditions in many European countries cause the architects to become particularly able in a few basic materials rather than having the vast source of materials that are available to the American architect. This very limitation has produced a constant requirement for simplicity and ingenuity which is particularly suited to church architecture.

In training, background, money and opportunity to build, the American architect is far ahead. What seems to be needed is a meeting of the minds of architects, artists, theologians, philosophers, clergymen and church laymen about what the church means and needs today and the encouragement of the community to proceed with the job.

**AIA Honor Awards**

The American Institute of Architects has announced selection of eight buildings to receive its 1962 Honor Awards, the nation’s highest professional recognition for architectural merit.

The lone First Honor Award went to Foothill College in Los Altos, California. Architects were the office of Ernest J. Kump of Palo Alto, in association with Masten & Hurd, San Francisco.

Award of Merit winners were: Housing Group of single family residences by Roger Lee Associates of California; a Residence in Connecticut by Ulrich Franzen of New York; a Development house in La Jolla by architects Killingsworth, Brady, Smith of Long Beach, California; Tennis Pavilion at Princeton University by Ballard, Todd and Snibbe of New York; St. John’s Abbey Church in Collegeville, Minnesota, by Marcel Breuer and Associates of New York; Convent of the Immaculate Conception in Washington, Pennsylvania, by Deeter & Ritchey of Pittsburgh; and a High School in Sarasota, Florida, by Paul M. Rudolph of New Haven, Connecticut.

Selections were made by a jury including architects Arthur Gould Odell, Jr., FAIA, Chairman, of Charlotte, North Carolina; Charles R. Colbert, AIA, New York; Paul M. Heffernan, AIA, Atlanta, Georgia; Karl Kamrath, FAIA, Houston, Texas, and Paul Hayden Kirk, FAIA, of Seattle, Washington.
The cross is surely one of the oldest and most widely used symbols known to man. Its origins have been traced back to several millenniums before the birth of Christ. The simplicity of cruciform shapes and their ease of reproduction prompted the use of this figure among even the most ancient peoples.

As part of our annual issue devoted to religious architecture, THE INDIANA ARCHITECT is pleased to present a few examples of crosses, from the ancients, from the early Christians, and from heraldry. The samples presented were selected from the Overly Manufacturing Company's brochure, “THE CROSS,” which contains more than 140 such examples.

We are indebted to the Overly Company for making this material available to the magazine, and for the information taken from their brochure. Copies of the brochure are available from the Architectural Metals Department, Overly Manufacturing Company, Greensburg, Pennsylvania.

1. ANCHORED CROSS: This form is traced back to the catacombs, where many of the early Christians were forced to dwell to escape persecution. Many variants reveal the disguised forms of the Tau Cross, concealed beneath the common symbol of the anchor. Known as the symbol of Christian hope, a number of its variations have seen wide heraldic usage.

2. CHRISMON: or Monogram of Christ. The number of early designs for the Chrismon is boundless. Most of them are based on a monogram for the ancient Greek characters—Chi (X) and Rho (P). The circle represents a very ancient pagan sun wheel; other forms are variations of the Double Cross. They consist of the Greek Chi (X) and the Cross.

3. GREEK CROSS: or Cross of St. George. History records very ancient pre-Christian examples of this cross. It has been discovered on Assyrian tablets, Egyptian monuments, and Etruscan pottery of pre-Roman days. Perfectly symmetrical, all arms are of equal length. On the Christian altar, five Greek Crosses, symbolizing the Five Wounds of our Lord, are used on the top slab, or mensa. Four of them are incised or inlaid near the corners of the mensa, and a larger duplicate is cut into its exact center.

4. CROSS TAU: also predominately St. Anthony’s Cross. Traced beyond the Babylonian civilization, this is a cross of many names. Numerous scholars believe it to be the original cross form devised by man. Christ was crucified presumably upon a Tau form with a slight extension above the horizontal bar, or patibulum. It is said to be a Tau Cross that Moses raised in the wilderness. It is a martyr’s cross in that both St. Anthony and St. Matthew are said to have died on this form.

5. CROSS REBATED: Known to such widely scattered peoples as the ancient Persians, Cypriots, Britons, Scandinavians, and the early inhabitants of the Americas, the Cross Rebated is rich in ancient tradition. Early Christians used it as a disguised cross. Often thought of as a symbol of motion, longevity, and good fortune, the Cross Rebated is believed to symbolize the four cardinal points of the compass.

6. ANCHORED CROSS: The Anchored Cross, one of the oldest forms known, was also a common heraldic design. In this variant, the ends of the extremities curve outward, resembling the flukes of an anchor.
7. CROSS ANNULED: A rebated variant of the Cross Annuleted, this symbol displays very short arms. Each arm terminates in a single annulet.

8. CROSS AVELLAINE: or Cross of Four Filberts. This heraldic form takes its name from its close resemblance to four husks of the *nux avellana*. A cross of this design can be seen in London, atop St. Paul's Cathedral. A variation of the Cross Avellaine is composed of a four members after the Greek form, each consisting of two such husks. This cross is known as the Cross Double Avellaine.

9. CROSS CORDEE: or Corded Cross. Of certain heraldic origin, this cross is used in Christian symbolism to recall the rope which bound our Lord prior to the Crucifixion. It is here shown in Latin form, although the Greek may be used.

10. CROSS OF CHAIN: Links of a chain comprise the two members of this cross. It originated in heraldic times and is illustrated in the more familiar Latin form. Today it expresses the belief that the bondage of sin was broken through the power of Calvary.

11. CROSS DOUBLE-CLAVED: This cross is formed of three double-warded keys, with the vertical member consisting of a complete key, including the ring, or bow.

12. CROSS ETOILE: There are many symbolic representations of the Cross in star-like form, and the Cross Etoile is the simplest of the stellar variants. Its obvious similarity to cruciform symbols has given rise to its religious association.

13. CROSS FOUR PHEONS: This is a very unusual heraldic cross composed of four dart heads touching at a common point. The inner edges of the dart heads are serrated. It symbolizes the "fiery darts of the wicked" and the Christian's duty to resist them through the power of the Cross of Christ.

14. CANTERBURY CROSS: The Archepiscopal See of the Archbishop of Canterbury is signified by this cross form. Four hammer-like appendages extend from a beveled square to form the Canterbury Cross.

15. CROSS AND KINGLY CROWN: A Latin Cross, usually with the arms terminating in trefoils, symbolic of the Trinity, thrust through the center of the Crown of Eternal Life. It is properly displayed erect rather than canted.

16. NESTORIAN CROSS: Generally attributed to the Nestorian Christians, this cross finds limited usage today. The Nestorians, a Christian sect declared heretical by the Church in the fifth century, gained prominence in Eastern Syria and Mesopotamia. Especially noted for its zealous and sustained missionary work, the Nestorian Church derived its name from Nestorius, an early patriarch of Constantinople.

17. CROSS GRADED: also the Calvary Cross. A Latin Cross whose lower arm is based upon the three steps is called a Cross Graded. The three graduated steps represent, in descending order, Faith, Hope and Charity. One variant displays two spears resting on the horizontal arm is found in the Church of the Holy Sepulcher, Jerusalem.

18. PASSION CROSS: also the Cross Champain or the Cross Pointed. The pointed extremities represent the sufferings of Christ, hence this form is also known as the Cross of Suffering. Symbolic of Maundy Thursday or Good Friday, the Passion Cross is frequently encountered in heraldry.
Overly Spires

...distinctive steeples for all architectural styles

Southminster Presbyterian Church
Architect: Tislow, Hunter & Associates, Indianapolis, Indiana
General Contractors: Stevens Construction Company, Greenwood, Indiana

Years of experience in the fabrication of metal products for architectural application are available to you through Overly's expert craftsmanship.

Employing this highly specialized knowledge, the designer's conception is created to preserve the form and proportion so important to finished beauty. Overly's unique, cost saving prefabrication techniques bring the cost of these carefully crafted spires within the means of the most modest budget.

Overly Spires are fabricated in a wide selection of metals and finishes to meet our specifications.

Hugh J. Baker & Company, Indiana representative for Overly can supply you with complete information on the unique, cost saving craftsmanship of Overly. Why not call us today?

Hugh J. Baker & Company
02 West McCarty Street • MIImine 6-2301
INDIANAPOLIS 6, INDIANA

Sprayed Fibers
Fire Proofing
Acoustical Treatment
Metal Building Insulation
Underwriters rated materials pneumatically applied directly to steel and masonry surfaces.

COMMERCIAL INSULATION AND ACOUSTICS
Phone JA 2-4008 — JA 2-1417
ELKHART, IND.
COLLECT PHONE INQUIRIES WELCOME

Hugh J. Baker & Company
02 West McCarty Street • MIImine 6-2301
INDIANAPOLIS 6, INDIANA

Furnishing
Concrete Block and Masonry Materials for the
FIRST PRESBYTERIAN CHURCH
ELKHART, IND.

Cone-Crete Products, Div.
MASONRY BUILDING PRODUCTS, INC.
1500 W. BRISTOL ST.
ELKHART, INDIANA
A wide-ranging discussion of "New Dimensions of Architectural Practice" will be subject of The American Institute of Architects' 1962 Convention, May 7-11 in Dallas.

"The nature and needs of our society are rapidly changing," AIA President Phillip Will said. "New problems and new and broader opportunities for service are being created for the architectural profession.

"Architects across the country are being called upon to expand the scope of their day-to-day practice, and with it their knowledge," he said. "This expansion will be theme of the Dallas Convention and a matter of continuing study for the architectural profession throughout 1962 and beyond."

Keynote speaker Tuesday morning, May 8, will be Dean Charles R. Colbert of the Columbia University school of architecture, whose topic will be social dimensions of design. Following Dean Colbert will be Jane Jacobs, associate editor of Architectural Forum and author of the widely discussed book "The Death and Life of Great American Cities," and Mayor Ben West of Nashville, Tenn.

The three other general sessions will be led by the editors of America's leading architectural journals: Douglas Haskell of Architectural Forum, Emerson Goble of Architectural Record, and Thomas Creighton of Progressive Architecture.

Haskell’s topic Wednesday afternoon will be new dimensions of architectural knowledge. Speakers will include Karl Falk, economist and president of the National Association of Housing and Redevelopment Officials; internationally known Los Angeles architect William Pereira, and Paul Opperman, executive director of the Northeastern Illinois Metropolitan Area Planning Commission.

Thursday morning a panel on the dimension of development, headed by Goble, will tell how voluntary cooperative effort by architects has improved the face of three small American cities. Creighton's session Thursday afternoon will concern the dimension of quality, exploring in depth an individual building project involving expanded architectural services.

Other Convention events will include an awards luncheon when AIA's 1962 honors for professional and artistic achievement will be presented; the traditional investiture of new AIA Fellows; a full calendar of social events, and the largest exhibition of architectural products ever assembled.

CONCERNING THE COVER: In celebration of our fifth anniversary, and in conjunction with our annual Easter issue devoted largely to religious architecture, THE INDIANA ARCHITECT is very proud to be able to feature on this month's cover a reproduction of an original painting by Mr. Walter Scholer, Sr., FAIA, of Lafayette.

"THE LITTLE CHURCH ON THE CIRCLE" is one of Indianapolis' most beautiful landmarks, and this painting is one of a series of famous churches painted by Mr. Scholer.

Reproduction of "THE LITTLE CHURCH ON THE CIRCLE" is by permission and courtesy of its owner, Mr. William A. Shearer, and artist-architect Scholer.

A structural Steel Design and Specification Conference will be held Friday, May 11th, at the Athenaeum Supper Club in Indianapolis. The Conference is sponsored by the Structural Steel Fabricators of Central and Southern Indiana, and will be an all-day affair, starting at 9:00 A.M., EST.

Speakers will include Mr. George Trainer of Bethlehem Steel, Mr. John B. Scalazi, United States Steel, and Mr. E. H. Gaylord, Jr., of the American Institute of Steel Construction.

The recently revised and completed AISC Specifications covering the full utilization of the structural strength of steel will be discussed.

One of the most successful social events ever staged by the architectural profession in Indiana was the benefit performance at the Civic Theatre, sponsored by the Women's Architectural League for the benefit of the ISA Scholarship Fund. The event (held April 11th) not only raised a very tidy sum for the Scholarship Fund, it also brought together a great many architects (and their ladies) who hadn't seen each other for years. As one architect remarked, "I haven't seen this many architects in one room at the same time in thirty years."

Hats off to the Women's Architectural League; a good job, very well done!

Speaking of the Scholarship, over one hundred architects, architectural students from all over Indiana, and scholarship applicants enjoyed the second annual Indianapolis District Architectural Student Banquet at the I. U. Medical Center. Main speaker for the banquet, which was held April 21st, was William H. Scheick, AIA, executive director of The American Institute of Architects.

DON'T FORGET!! The I.S.A. Annual Convention will be May 24th, 25th and 26th at the Marott Hotel in Indianapolis. Programs will be mailed to you soon, but mark your calendar now, and plan to attend.
BECK MEMORIAL CHAPEL, INDIANA UNIVERSITY, Bloomington,
Architects: James Associates, Inc.
Gen. Contr.: Superior Lumber Company

EARLAM HEIGHTS PRESBYTERIAN CHURCH, Richmond
Architects: Tislow, Hunter & Associates

HOPE UNITED PRESBYTERIAN CHURCH, Plainfield
Architects: Tislow, Hunter & Associates

EMMANUEL METHODIST CHURCH, Anderson
Architects: James Associates, Inc.
Gen. Contr.: Bennitt Lamb

BLOOMINGTON CHURCH OF GOD, Bloomington
Architects: Johnson, Ritchart & Associates
FAITH LUTHERAN CHURCH, Evansville
Architect: Hironimus, Knapp, Given & Assocs.

WORLD GOSPEL CHURCH, Terre Haute
Architects: Miller & Miller and Associates

ST. PAUL'S UNITED CHURCH OF CHRIST, Evansville
Architects: Hironimus, Knapp, Given & Associates

ST. PAUL'S EPISCOPAL CHURCH, Columbus
Architects: Hill & Wupper, Inc.
FIRST PRESBYTERIAN CHURCH, Elkhart
Architects: Wiley & Miller, Inc., and Harold E. Wagoner,
Associated Architects

PRINCE OF PEACE EVANGELICAL LUTHERAN
CHURCH, Indianapolis
Architects: James Associates, Inc.

FIRST METHODIST CHURCH, Anderson
Architect: Arthur B. Henning, AIA
Cons. Arch.: Harold E. Wagoner

CENTENARY METHODIST CHURCH, Inglefield
Architects: Hironimus, Knapp, Given & Assoc.

SOUTHMINSTER UNITED PRESBYTERIAN
CHURCH, Acton
Architects: Tidlow, Hunter & Associates
Gen. Cont.: Stevens Construction Co.
The Return of the Pulpit

In the arrangement of our churches we travel in a spiral. Although it may seem that we are getting back to where we started from, it is actually at a higher level. This has happened in two areas and is beginning in a third.

Twenty years ago a mighty battle was fought to get rid of the gaudy organ pipes which assailed the eyes of the congregation and invited endless mathematical calculations. They vanished from sight, but are now sneaking back, but without benefit of decoration. The actual, functioning pipes come in a silvery gray color and in fascinating gradations in size. They are easy to look at, entirely honest; and the more they are exposed, the better they are heard and the better the instrument stays in tune.

We also struggled to get rid of the wide, circular church where the congregation sat admiring one another’s millinery and the preacher operated on a central swivel. We have since found that the long narrow church puts too many of the people too far from the minister for the most effective worship. The wide church is coming back, but with a center of interest which commands the attention in such a way that the people in the pews no longer think about themselves, at least not as individuals.

And now the same thing is beginning to happen to the pulpit. For some years it has been almost the universal practice to put it at one side. Behind this lay some excellent reasons.

We wanted to get away from the pulpit-throne idea with the preacher sitting high and lifted up above the people. At the same time, the microphone was tying him down in one spot so that he could no longer prance up and down the platform.

On the positive side, we desired to get the communion table out from the shadow of the pulpit, where it often served as a sort of prow on the preacher’s ship; instead we sought to make it the center of our worship as a symbol of the fellowship which is the church.

In most old churches where the pulpit is at the center of the platform, with the choir and organ immediately behind the minister, there is nothing to support the voice of the preacher, and it is difficult for him to be heard. Moving the pulpit to one side usually gets it close to a hard, plastered wall which gives resonance to the preacher’s words.

Psychologically it is easier to preach from the side rather than the center. One does not look down an aisle which divides the sheep and the goats; rather one can take a stance and see all the people without being tempted to turn to the right and left. On the stage the big scenes are never at the center.

The side pulpit commonly gets the preacher closer to the congregation. The worship center leads both the eyes and the feet of the people forward, while placing the choir in the chancel eliminates an embarrassing meeting of stares. People do not like to be looked at.

However, recent theological trends are emphasizing the Bible as the Word of God and the proclamation of that Word as the prime function of the church. Today there is a strong desire to make the Bible and preaching more central in our worship. Ways are being sought to achieve this without sacrificing the indubitable gains which the side pulpit has brought.

This is being made possible by current developments with reference to the position of the choir. Many people are finding the choir up in front a distraction from worship, even though it be seated sideways to the congregation. On this basis, St. Paul’s Cathedral (Episcopal) on Tremont Street in Boston some years ago moved the organ and choir to the balcony, thus opening up more space for worship. The singers, on their part, object to being divided in two parts. If they are close enough so that they can sing well together, they are also narrowing the chancel so that many people cannot see the communion table, which should be the center of their attention. If the two parts of the choir are far enough apart so that the table has “room in which to breathe,” they are too far apart to sing as a unit. Two solutions have been found for this problem: Choir and organ are either being moved to the rear balcony or they are being placed all on one side, either in the chancel or in the transept. The result, in any case, is to give more room at the front of the church.

In the remodeling of old churches the balconies may be a complicating factor. If these extend around three sides of the room, and if they are (Continued on page 27)
Every Church Can Now Afford True Bell Carillon Music

Memorial Chimes is the revolutionary new reproduction system that broadcasts the full majestic notes of true bell carillon music. The only such system approved by carillonneurs themselves, it offers a library of selections by the world's foremost bellmasters — all on cartridge tape. Average cost installed is only $5,000. May we send details, or arrange a demonstration?

The golden tones of the cast bells sound the difference.

Memorial Chimes, Inc.
905 N. LEBANON ST. * LEBANON, INDIANA
Observation of Light: A Check List

Long before modern instrumentation, Leonardo Da Vinci wrote:

"Every concave place will appear darker if seen from the outside than from within and this comes about because the eye that is outside in the air has the pupil much diminished, and that which is situated in a dark place has the pupil enlarged . . ."

Observations and analysis of this type, related to corollary light meter* measurements, is the first and most important step towards achieving good lighting design. If you make the observations in this checklist; and are able to explain the phenomena, then you will be on your way to being able to program lighting realistically and specifically . . . and by being able to disprove unjustified claims and code restrictions to prevent others from restricting your design freedom.

Group 1—Illumination Level vs. Visibility

1. Note your ability to see objects within the shade of a building from within the shadow, then from a distance outside of it.
2. Observe your ability to see a dark country road, and compare with seeing under daytime conditions with the sun in your eye or when driving westward at dusk.
3. Compare the visibility of the most brightly lighted store windows during the day with the most dimly lighted windows of your house at night.
4. Measure the illumination level and your ability to read in various locations throughout your home, school, or office. Repeat daytime and at night. Try candlelight.
5. To judge minimum conditions necessary for safety in circulation, test your ability to see on the sidewalk under typical suburban street lighting. Judge safety conditions under candlelight. (Since most meters cannot measure at candlelight levels . . . assume 1 foot-candles at distance of 3 feet, 1/00 foot-candles at 10 feet).
6. Look at any object in the middle of a room silhouetted against window or bright lighting fixture . . . look at same object from other directions. Try in a room with light colored walls, and with dark walls.
7. Note your ability to see under changing light levels: from sun to shade outdoors, in and out of building lobbies, in and out of tunnels at driving speed. (Note middle of tunnel compared to the ends).
8. Observe working in rooms with uniform footcandle level throughout room and in those with non-uniform illumination. Observe your ability to see at various parts of desks receiving daylight. Note the footcandle variations, try one with 300% variation across the desk.
9. Place reading material on window sill and observe visibility. Observe same material with your back to window at various distances from the window. Note relation between footcandles and visibility.

Group 2—Apparent Brightness vs. Measured Brightness (Brightness-footcandles x % Reflect)

10. Observe rooms under various conditions: sunny day, overcast day with and without supplementary lighting, and at night. Note when room appeared bright or dark, and if supplementary illumination "required" to see formal "tasks" or because room felt dark.
11. At night, find a room with glaring lighting fixtures. Observe apparent brightness of same fixture during day.
12. In a room containing several lighting fixtures, note apparent brightness of a fixture when it alone is turned on, and when all are on.
13. Observe apparent brightness of various outdoor scenes . . . narrow street, open fields, sunny days, overcast days. Note apparent brightness comparative to night conditions indoors, including at light levels 1/1000 as high.

Group 3—Orientation

Beyond the commonly stated lighting objectives, it is usually desirable to provide a lighting environment in which the occupant is unaware of the light source, or in which the light pattern seems desirable. Test this "theory of orientation" . . . "Comfort and pleasure in the informal task of orientation is largely related to the clarity of orientation facts, the consistency of those facts with what you expect . . . (Continued on page 28)
The Original TENNESSEE QUARTZITE
From
CRAB ORCHARD DISTRICT
Since 1931
FURNISHED ON
FIRST PRESBYTERIAN CHURCH
ELKHART, INDIANA
USED AS
INTERIOR, EXTERIOR, FLOORS
AND VENEER STONE
FURNISHED THRU
KAUFFMAN CONSUMERS COAL & SUPPLY
CO., INC.
738 So. MAIN ST.
ELKHART, INDIANA
PRODUCED BY
TENNQUARTZ
FURNISHED THRU
KAUFFMAN CONSUMERS COAL & SUPPLY
CO., INC.
738 So. MAIN ST.
ELKHART, INDIANA
PRODUCED BY
TENNQUARTZ

A few of “OUR” Churches, using laminated wood arches and carved wood by STRUCTURAL TIMBERS:

First Church of the Nazarene, Shelbyville
Earlham Heights Presbyterian Church, Richmond
Trinity Lutheran Church, Muncie
Gethsemane Methodist Church, Muncie
First General Baptist Church, Marion
Good Shepherd Methodist Church, Indianapolis
Emmaus Lutheran Church, Indianapolis
South Street Methodist Church, Greenfield
Greenfield Friends Church, Greenfield
Carmel Friends Church, Carmel
St. Simon Church Indianapolis

Structural Timbers, Inc.
5340 East 75th St., Indianapolis, Ind.
TI 9-3431

it pays to specify SARGENT® PAINTS
See for yourself . . . how Sargent paint products more than fill the bill for consistent quality . . . for commercial or private application.

60 years of paint making experience makes you sure
New Anchoring System

Many of the problems of securely anchoring metal railings to concrete stairs have been overcome by an adjustable anchoring system developed by Blumcraft of Pittsburgh. Heretofore, two conventional methods have frequently been used to fasten metal railings to concrete: 1) Drill into the concrete and insert expansion shields; or 2) Build steel anchors into the concrete, drill and tap the steel anchors for fastening the posts.

Both methods obviously require expensive field labor, and if the drilling is not perfect, vertical alignment of the posts is not possible.

Blumcraft’s new adjustable anchoring system provides these advantages:

- Reduces costly field labor.
- Permits adjustability for post alignment.
- Eliminates breakage in masonry when drilling for expansion bolts.
- Provides extreme rigidity through sound structural supports.
- Prongs can be welded to reinforced steel in the concrete, so that the anchors form an integral part of the stair.
- Built-in anchors will not work loose, as may happen to applied expansion shields.
- Posts can be mounted at extreme edge of stair, permitting use of the full width of the stair.
- Permits side-mounting of posts to thin precast treads as narrow as 2”, as well as to wood plank stairs and conventional concrete stairs.
- Decorative trim can be applied to the anchor at the edge of the tread.
- For through-tread mountings, Blumcraft provides sleeves for building into the precast treads.

The Return of the Pulpit

(from page 23) used at all frequently, the pulpit cannot be moved very far to either side without getting the preacher out of sight of those on one side of the balcony. Some of our old churches were so designed that the pulpit can be moved forward and backwards but not sideways. Although it is a relatively new building, this is particularly true of the Lakewood Congregational Church of Cleveland. It is also true that balconies are being occupied more than formerly.

In recent months three churches have attacked the problem of the location of the pulpit in interesting ways.

The First Church of Christ in Milford, Connecticut, an old colonial-style structure, is moving the organ from the front to the rear balcony, which extends along both sides. The congregation is determined to retain the central pulpit, for historical, theological, and practical reasons. However, it thinks of the pulpit as the place for just two things: the reading of the Scripture and the preaching of the sermon. The rest of the service will be conducted from the floor of the chancel. It is also desired that there be a large communion table about which the deacons can sit, and a dominant cross.

The Community Church of Manchester, Iowa, has been remodeled, with the organ console on one side of the chancel, the entire choir on the other.
The Return of the Pulpit

but facing towards it. There is a large communion table at the front of the platform, with a cross behind it which reaches from the floor almost to the ceiling. The pulpit is behind the communion table between the cross and the organ console, two steps up from the floor of the platform. It is against the back wall. It has a winged stand holding a large open Bible.

The newly completed First Church of Christ in New Britain, Connecticut, of which Arland Dirlam is the architect, combines the communion table, the pulpit, and the cross in one composition. The table is large, movable, and on a platform a step above the congregation. The ministers and deacons can sit about it. The pulpit is central, directly behind the table, but reached by several steps on either side. It emphasizes the open Bible. Behind it is a large sounding board which serves as a background for a large wooden cross.

Is the preacher too far from the people? Is the question naturally raised with the Manchester and New Britain churches. Neither pastor feels this is to be the case. Apparently it is one thing to have empty pews between you and the people, and another thing to have an open platform and communion table. Also, as the pulpit is moved away from the pews it is possible to elevate it without compelling the congregation to crane their necks to see the minister. This also places him at the focal center of the room.

This renewed emphasis on the pulpit is bringing two interesting corollaries. The lectern is made incidental or eliminated altogether. If the pulpit is on the opposite side from the choir, which it should be, the lectern is in the way of the choir. Historically, it has little justification. It appears to have been an Anglican invention. It has little meaning, and often complicates the picture. People object to the minister’s “running back and forth.” In the liturgical churches, much of the service is conducted in front of the communion table. Aside from the Scripture and preaching, the minister should be a worshiper together with the people rather than someone exalted above them. He should pray with them rather than over them. In general, the less conspicuous he is during the worship, the better.

The justification for the lectern has commonly been that it “balanced the pulpit.” In some instances it has been simply another pulpit. If the large pulpit is to one side, it is often balanced by the choir on the other. Another development is the elevation of the baptismal font from the floor of the church to the chancel, placing it opposite the pulpit, as has been done in the First Methodist Church of Niles, Ohio. This is good symbolism, especially when baptism is regarded as a rite in which the congregation participates rather than something which is done privately.

What is happening is that the irrelevant is being eliminated from the front of our churches, with increasing emphasis placed on that which has meaning for the congregation. This is fundamentally a movement towards greater simplicity.

Observation of Light

for that space and activity, and freedom to view unconsciously the meaningful visual facts without distraction. This condition is achieved when the illumination comes from a luminous environment which gives the desired orientation.”

14. On an overcast day with snow on the ground, look at a horizonless expanse, then compare with views containing definition of horizon by trees or snow fences.

15. Look at view through window from a distance, then standing at window. Look at view through venetian blinds or sun screens.

16. Look out an (upper floor) window so that an overcast sky alone is visible. Compare comfort when your view is lowered so that trees, buildings or other orientation facts are also visible.

17. Compare, during day and night, viewing of signs with dark letters on luminous white background vs. those with luminous white letters against dark background or sky.

18. Compare your reaction to street lights arranged in a pattern to clearly define curves with similar lights when the pattern is confusing.

19. Compare your reactions to a windowless candle-lit restaurant at noon and at night.

20. At an airport or railroad station, compare your reaction to brightness of signs at counter area, with that to busy pattern of florescent fixtures overhead.

21. To predict “distraction,” study means of getting “attention.” Compare the use of dramatic patterns such as black and white (or yellow) stripes or checkerboards to call attention to dangerous road obstructions with the distracting effect of similar patterns created by light fixtures or windows in some buildings.

22. Note comparative attention drawing power of “dark windows” of a white building during the day vs. illuminated windows at night.

23. Note your reaction to the solid “cheeks” of a skylight, compared to seeing a luminous fixture panel of similar brightness.

24. Note your reaction to the view through a window, compared to a glass block wall or luminous panel of same average brightness.

Group 4—Specific Conditions for Visibility

25. Note carefully when cast shadows help or hinder your understanding what you see.

26. Note when non-uniform gradients define three-dimensional object.

27. Note when grazing light is help or hindrance.

28. etc., etc., for various specific conditions.

* Lightmeter recommended: New General Electric #213 priced at about $20.00 and available through G.E. district offices or through electrical distributors. This meter has a semi-logarithmic scale (rather than linear), and will measure from 1 to 5,000 footcandles, therefore is suitable for measuring both indoor and outdoor conditions.
NEW ILLUMINATED WALL BRACKET spotlights handrails in corridors and stairways • Incandescent recessed lighting provides added safety and decorative night lighting for:

HOSPITALS • HOMES FOR AGED • THEATRES • HOTELS • SHIPS

Blumcraft OF PITTSBURGH

GENERAL CATALOG OF COMPLETE BLUMCRAFT LINE AVAILABLE ON REQUEST

COPYRIGHT 1961 BY BLUMCRAFT OF PITTSBURGH • 460 MELWOOD STREET, PITTSBURGH 13, PENNSYLVANIA
masonry
the imaginative material...

TIMKEN MERCY HOSPITAL

ARCHITECT — Schmidt, Garden & Erickson
Photo by Sterling

Protruding headers in simple design lends interesting shadow effects ... creating an effective contrast between the building levels.

UNIT MASONRY ASSOCIATION, Inc.
5420 North College    Clifford 5-3114    Indianapolis, Indiana

Buildings with a Future...Through Masonry