Public Construction Lags Behind

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Checking Church Building Plans

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PUBLIC CONSTRUCTION LAGS BEHIND

While indicators such as gross national product, total persons employed, home building and industrial construction climb toward new highs, public construction lags conspicuously behind.

The McGraw-Hill Department of Economics points out that industry is spending about 113 billion dollars between now and December 31, 1958 on expansion and modernization of plants and equipment. This will give us almost double the manufacturing capacity with which the nation entered the period immediately after World War II.

In sharp contrast, public construction falls ever more rapidly behind the need for roads, water supplies, schools, hospitals and similar facilities. The Twentieth Century Fund estimates that one hundred billion dollars must be spent by 1960 for minimum public works requirements.

The reasons for this situation are apparent: falling behind during World War II and Korea, increasing costs and budgetary problems, and the enormous and unpredicted increase in population. The problem remains, however, one of the utmost importance which must be faced at once if the nation is to avert the increasing menace to comfort, education, health and safety represented by the great lag in public construction.
Officials List Basic Principles For Checking Church Building Plans

J. W. Caldwell of the Department of Direct Missions; R. H. Dilday, Sunday School Department; and Darwin Farmer, Training Union Department of the Executive Board of the Baptist General Convention of Texas, have recently collaborated on a list of basic principles to be used in checking church building plans. The same men have also prepared a church organizational chart for the use of architects.

A further discussion of these basic principles is contained in “Church Architectural Data Sheets,” a booklet prepared by the Department of Church Architecture of the Baptist Sunday School Board, Nashville, Tennessee for improved collaboration between architects and church officials in designing new buildings or remodelling existing structures.

The basic principles suggested by Mr. Caldwell, Mr. Dilday and Mr. Farmer, which are primarily a digest of “Church Architectural Data Sheets” put in layman’s language for the use of church building committees, follow:

1. The construction: Sound but not necessarily expensive. One who does not know materials and how to engineer them may make some tragic mistakes here. You cannot always depend on the building codes of your city to be strict enough to protect your structure. We would suggest that you depend on the judgment of a registered architect and engineer.

2. Every department cared for on a well thought-out proportionate basis.

3. The ratio of classroom and Training Union space to department assembly space should be in the right proportion. In departments where classrooms are used, ten to fifteen percent more space should be provided in the combined classroom area than in the assembly.

4. Every classroom and Training Union with outside light and ventilation. This is desirable but not necessary if the building is to be completely airconditioned. A sufficient number of electric outlets should be planned for adequate lighting at night for the Training Union.

5. Every department easily accessible without going through another department.

6. Each classroom and Training Union accessible without going through another classroom.

7. The hallways adequate to take care of the traffic but not wide enough to be wasteful. Forty-four inches is the minimum width suggested for any public hallway as recommended by the National Board of Fire Underwriters; the traffic to be carried determines the width.

8. Departments should be grouped in logical order.

9. Sufficient sanitary facilities: Provide one commode for every fifty to seventy-five people to be served by the building. Provide special restroom facilities for the Nursery and if possible for the Beginners. Provide restrooms on each floor.

10. The building should take advantage of the physical conditions of the property and the locality.

11. The rooms should be properly proportioned. Assembly rooms for Juniors and Intermediates should not be less than 16 feet wide; 14-foot width minimum for Primary; 12-foot width minimum for Beginners. Assembly rooms should never be more than twice as long as the width. Classrooms should not be more than fifty percent longer than the width.

12. In the auditorium the arrangement should be so that every person can see and hear easily in comfort. The width should not be more than 70 to 80 percent of the length.

13. In order to provide adequately for Training Union install some good type of insulated folding door between each two classrooms in the Junior, Intermediate, Young People and Adult departments.

14. Provide for at least the same number in the educational program as in the worship service. It requires twice the number of square feet to care for a person in the educational program as it does in the worship service.

(Continued on Page 6)

Wins Church Architectural Guild Award

The Chapelwood Methodist Church in Houston received a national award of merit in the 1955 church competition sponsored by the Church Architectural Guild. The Guild, an organization composed of architects across the U.S., stages the annual competition in accordance with American Institute of Architects competitive rules. The architect for the project was Hamilton Brown TSA-AIA of Houston.
One sure way to make people dissatisfied with their old homes

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The bathroom (like the kitchen) has become one of the most important "show places" in the home. Also, it is often in the bathroom that an old home shows its age most.

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Texas Civil Defense Experts Learn From Latest "A" Blast

By State Division of Defense And Disaster Relief

At the end of April, civil defense experts from over the state of Texas traveled to Nevada to watch an explosion which may eventually affect the way every house and industrial structure in this nation is built.

After nine days of delays caused by faulty weather, a nuclear device of 35-kiloton force was finally exploded from atop a 500-foot tower. At varying distances from the center of the explosion were structures of many types.

Part of the test, as might be expected, was aimed at discovering what would happen to those buildings. Now that building experts have had time to inspect the results, they are generally agreed that while typical types of American structures held up fairly well, improvements in some phases can certainly be made.

Twice Hiroshima Force

The explosion was twice as powerful as the one over Hiroshima. That's also much larger than the blast of 1953 which was confined to testing a single type American two-story wooden frame residence, together with family shelters and automobiles in the open.

The test this spring was much more extensive. It covered residences, industrial structures, shelters, food supplies, trailer homes, communications equipment and a large number of other items never before tested.

Industrial Information Needed

Some 150 industrial associations, institutes and companies supplies some or all of the cost of the projects, construction, equipment and personnel. The purpose, naturally, was to get information which industry needs for its own protection and for the development of production for civil defense. They found out a lot, and will find out much more as results of the mammoth explosion continue to be summarized.

Much is already obvious simply by comparing various types of structures.

For instance, the above ground portion of a two-story brick and cinder block house located 4,700 feet from the center of explosion was almost completely destroyed. The first floor system was partially collapsed into the basement, and none of the brick work remained standing. The structure as a whole was beyond repair even for emergency shelter from the elements.

Reinforced Concrete Withstands "A" Blast

Automatic cameras of the Atomic Energy Commission record effects of the heat and blast pressure of an atomic bomb with the energy equivalent of 35,000 tons of exploding TNT on a reinforced concrete masonry house located just 4,700 feet from "Ground Zero" during "Operation Cue" tests at Yucca Flat in May, 1955. House was one of four located this distance from the blast, and one of two which survived. Other surviving house was of precast reinforced concrete.

Top picture was taken at instant of explosion. Center photo shows effect of thermal wave which charred telephone poles. Bottom picture was taken as blast struck. Television antenna was crumpled, windows broken and clouds of sand driven against walls. But the house suffered only slight structural damage. (United Press Photo).

Frame Houses Heavily Damaged

At 5,500 feet from the explosion, a two-story redesigned frame house suffered severe damage which made it unsuitable for occupancy without extensive major repairs. A one-story precast light aggregate concrete house and a one-story reinforced masonry block house, both located 10,500 feet from the explosion, suffered relative minor damage. Only minor repairs would be required to make them suitable for reoccupancy.

However, a one-story frame house, also located 10,500 feet from the explosion, suffered relative heavy damage. It could, however, be restored at a moderate cost.

(Continued on Page 9)
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AUGUST, 1955
The TSA executive board, holding its summer meeting at the Commodore Perry Hotel in Austin July 16, set the 1956 TSA convention at Corpus Christi for November 7, 8 and 9, 1956.

Appearing before the board to outline preliminary plans for the convention were a group of Corpus Christi architects, headed by Coastal Bend Chapter president Walter Wilde. With Mr. Wilde were Sam Pennington, Joe Smyth, Walter Anderson, Ben Christian, Needham Smyth, John Oatman, Lloyd Olington, and Ben Skellett.

Cooperation Assured
The group said that they had received maximum cooperation from the Corpus Christi Chamber of Commerce and other groups in the city in preparing plans for the convention. The Lower Rio Grande Valley Chapter, represented by Walter Bowman of Harlingen and Warren Suter of Mission, will assist the Coastal Bend group in staging the 1956 convention.

During its meeting the board heard reports from nine committee chairmen, including Baldwin Young, Houston, state 1955 convention; Herbert Tatum, Dallas, by-laws and urban design and housing; Max Brooks, Austin, legislative; Karl Kamrath, Houston, Capital Plan; George F. Pierce, Jr., Houston, chapter affairs; Harry D. Payne, Houston, insurance; Professor Ernest Longford, College Station, education; and David C. Baer, Houston, office practice.

Special Reports Given
Special reports were received from John G. Flowers, Jr. of Austin, TSA executive director; from Mr. Baer for the Publication Board; from Edward L. Wilson, Fort Worth, for the Texas Architectural Foundation; from the TSA legal counsel, Carl Hardin, Jr. of Austin, and the TSA public relations counsel, Patrick J. Nicholson, III of Houston.

A meeting of the Publication Board of the Texas Architect, with Mr. Baer presiding, was also held at Austin on July 16.

Church Building Plans . . .
Remember also that the auditorium space can be used more efficiently than can the education space. A Junior boy coming to Sunday school must go to a class for his age. However, in the worship service he can occupy any seat in the auditorium. Because of this the education space cannot be used to the maximum.

15. The size of departments and classrooms should be:
A. Nursery: No classrooms recommended. However, provide from 14 to 18 square feet of usable floor space in the department for each one expected in attendance. Not more than 25 to 28 enrolled in each department. One table should be provided for each six children enrolled in the two and three year old nursery departments.
B. Beginner: No classrooms. But provide for 14 to 18 square feet of usable space in each department for each person expected in attendance. Provide one department for every 25 to 35 enrolled. Provide one table for each six children enrolled.
C. Primary: No classrooms recommended. Provide from 14 to 18 square feet of usable space in each department for each one expected in attendance. Provide one department for each 35 to 45 enrolled. Provide one table for each six children enrolled.
D. Junior and Intermediate departments: Classroom sizes 7x9 minimum or 8x10 maximum. One classroom for every seven to nine pupils enrolled; never more than eight classes to a department. Provide folding doors between each two classrooms for Training Union use.
E. Young People: Classroom sizes 8x10 minimum and 10x12 maximum. One classroom for each 10 to 15 enrolled. Provide folding doors between each two classrooms in Training Union.
F. Adult: Provide one classroom for each 20 to 30 enrolled. Provide folding doors between each two classrooms to provide for Training Union space if classrooms are too small. The minimum space recommended for an Adult Training Union is 340 square feet.

1956 Convention TSA
In Corpus Christi, November 7-9

President's Letter . . .
(Continued from Page 1)

After hearing all the speakers discuss city planning from the several points of view represented at the seminars, however, it is probable that an unbiased conclusion would include the following: (1) the architect's training and experience in the application of planning principles make him specially fitted for the related profession of city planning and (2) those architects who prepare themselves by a well-planned apprenticeship and by experience acquired through the progressively increasing importance of commissions assumed, become our best city planners.

It should be a matter of interest and satisfaction to our profession that the role of the architect in planning the environment of his buildings is recognized by authoritative speakers representing practically every facet of urban development, as was evidenced by the discussions at the Minneapolis convention of the Institute.

James L. Neal Of Dallas Regional Sales Manager
For Owens-Corning
James L. Neal, Dallas sales manager for Owens-Corning Fiberglas Corporation has been named the company's Southern regional sales manager.

In his new post, Mr. Neal will coordinate marketing, distribution, technical services and personnel training for the company's branch sales offices in Dallas, Atlanta, Florida, New Orleans and Houston.

With Owens-Corning since 1943, Mr. Neal was appointed Dallas sales manager in 1946. In the past four years, Mr. Neal has won membership to the Fiberglas President's Sales Club, composed annually of the company's 10 leading branch sales managers in the nation.

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SEPTEMBER 1955
PAGE 7
Six Billions To Be Spent on 70,000 Churches, Synagogues

Some 70,000 churches and synagogues will be constructed or substantially altered in the United States in the next ten years at a cost of nearly six billion dollars, in the opinion of George Cline Smith, economist of F. W. Dodge Corporation, writing in Architectural Record.

In addition, he estimates, there will be about 12,500 parish houses, Sunday school buildings and related buildings costing about one and a quarter billion dollars. Parochial educational buildings are not included.

The combined totals are 82,500 projects costing about seven and a quarter billion dollars. Mr. Smith's prediction is based on three assumptions: That there will be no severe depression, no major war, and no major change in the value of the dollar.

Highest Rate in History

Mr. Smith said all of his figures and estimates are based on F. W. Dodge Corporation's Dodge Reports of contract awards for future construction in the 37 eastern states, with an adjustment to take care of the estimated volume in the other 11 states. The Dodge figures are the only ones available to indicate the total future volume of church construction.

"Current activity in church construction," Mr. Smith says, "is running at the highest rate in history. Contract awards for religious buildings in the 37 eastern states during the first three months of 1955 totaled $128 million. That's an increase of 60 per cent above the previous first-quarter record set in 1951, and 61 per cent above the first quarter of last year.

Enormous Postwar Growth

"The religious category in the first quarter of 1955 accounted for about seven per cent of all non-residential building awards. This represents an enormous growth, not only in dollars but in share of the market, during the postwar period.

"In the corresponding quarter of 1946, the first postwar year, religious buildings totaled only $17 million and represented just 2 per cent of non-residential building.

Outlook Is Bright

"The spiritual significance of this trend should be obvious," he says. "The current upsurge of interest in religion is actually part of a long-time trend which has been expressed in rising membership of churches, both absolutely and in proportion to the population, through several decades. The outlook for church building is bright."

Mr. Smith says his estimates contemplate an average yearly level of activity over the ten-year period, lower than the current level. "It is entirely possible, therefore," he says, "that the estimate may be on the low side, in view of our rapid population growth, current prosperity and the increasing emphasis on church-going."

Cushman Represents Featherlite Corporation

Ralph Cushman of 7806 Kimble, Houston, is Gulf Coast sales representative for the Featherlite Corporation, South's largest producer of expanded shale aggregate.
"BUSINESS WEEK" Says Architect Is "Most Important Single Choice"

A recent article in Business Week, the McGraw-Hill publication, states that the choice of an architect is the single most important choice that a building committee must make. Following is a reprint of the article, through courtesy of Business Week and McGraw-Hill:

Don't underrate your responsibility if you are a member of a committee in charge of a community building project. With few exceptions, the board you are on will be composed of amateurs at architecture and construction. Nevertheless, your amateur decision is final.

How can an amateur decision bring professional results?

There's only one answer: The committee must draw on the services of experts in all fields pertinent to the project. Independent research won't get any layman far; even study of technical journals will help only to give information on new trends.

Other Committees Can Help

A good starting point is committees in neighboring communities that have faced similar problems. The building programs of these and other cities can provide invaluable clues on how to find specialists.

But the kind and number of experts you'll need will depend on your peculiar problems. Basically, they will include competent specialists in financial and political matters, a lawyer to go over contracts and give general advice, and an architect. (In the case of a new school, you may want to call in a consulting psychiatrist. His knowledge can pinpoint the effect of certain surroundings on children.)

Most Important Single Choice

The committee's most important single choice is an architect. And the most important attribute to look for is his good judgment.

Best guide to his judgment is an examination of his past work—but only from the point of view of your particular plans and problems. In other words, don't make a quick choice simply because the man has a solid reputation or is highly specialized. An architect's practical experience is important, of course. But it should not be your sole criterion. The character, or "feel" of the architect's work—even if he's never done a building like yours—should weigh your decision most heavily.

AIA Has Strict Standards

There's little chance of your getting a downright incompetent; the American Institute of Architects has strict professional standards to protect you. But even the most distinguished architect may lack the attitude you feel your building plans require. Keep this in mind when deciding finally.

(Incidentally, don't be scared off by a "name" architect on the theory that he will cost you more than an unknown. Architects work on a straight percentage basis; the best will be no more expensive than the worst.)

The main thing to keep in mind is that getting a public building up and operating takes more than the ability to draft up an impressive-looking plan. Two New York architects who are old hands at public buildings—Allmon Fordyce and William Hamby—sum up the main things to look for in an architect:

• A sound head for business as well as for design.
• A solid knowledge of engineering.
• An organization and contacts that are broad enough to handle the job. For example: Your project may need seven or eight engineering specialists to cover structural and mechanical requirements. You'll have to depend on your architect to hire them.

Don't insist on a conventional, tried-and-true building design.

In most cases, older designs don't meet modern requirements or usages. And it can mean missing out on valuable innovations.

On the other hand, depart from the standard only with great care. Rely on your architect's ability and integrity.

"A" Blast Results . . .

(Continued from Page 4)

Danger From Missiles

Of the 10 houses included in the test, the condition of seven was such that they could be made habitable for emergency occupancy by shoring and repairs. In practically all of the houses the windows and exterior doors were destroyed. And in all except the two collapsed houses, the greatest danger to the occupants would appear to have been from missiles of glass, Venetian blinds, furniture and other fragments.
Who Buys Houses And Why?
Subject of University Survey

The University of Michigan recently conducted a survey among 1,000 families, representing a cross section of the nation's new home owners, in an effort to determine who buys houses and why.

It was found that the buyers belong to a relatively young group, with about one-third less than 35 years old, and another third in the 35 to 44-year bracket. Most of the families had children. Out of every seven home buying families, two had one child, another two had one child each, and one family had three or more children. Approximately two out of the seven families were childless.

Most Incomes Around $4,000
The 1950 income of half the home buyers was between $3,000 and $5,000. A third had more, with the highest earnings reported in the over-40 age group. It was found that only a sixth of the buying families had incomes below $3,000.

Reasons for home buying were varied. Many buyers said that former quarters were inadequate, that additions to the family created a necessity for additional space, that it had been necessary to move from one locality to another for business reasons.

Many Reasons Listed
The survey points out the reasons for buying as against renting were

- Rents too high, owning cheaper... 24%
- Buying is an investment... 24%
- Ideal of home ownership... 22%
- Forced to buy, no place to rent... 19%
- Desire for independence, security... 11%
- Found just the right place... 4%
- Reasons of location... 2%
- Other reasons... 7%

Fulbright Scholarships Available To Architects For 1956-57 Study Abroad

Young American architects have a chance to study abroad during 1956-57 under the U.S. Government international educational exchange program.

Candidates in the field of architecture may enter the general competition for Fulbright scholarships. Closing date for application is October 31, 1955. Application blanks and a brochure describing the Fulbright program are available from the Institute of International Education, 1 East 67th Street, New York City.

A chance to compare American and foreign design and to study foreign architectural developments is given to qualified candidates under the program authorized by the Fulbright Act. Participating countries of interest to architects are Austria, Belgium and Luxembourg, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, and the United Kingdom.

Eligibility Requirements Listed
Eligibility requirements for the foreign study fellowships are: (1) United States citizenship; (2) A college degree or its equivalent at the time the award is taken up; (3) Knowledge of the language of the country sufficient to carry on the proposed study; (4) Age 35 years or under; and (5) Good health.

Final selection of Fulbright grantees is made by the Board of Foreign Scholars appointed by the President of the United States. The Institute of International Education is the agency designated by the Board of Foreign Scholarships and the Department of State to screen applications for study abroad.
REINFORCED CONCRETE HOUSES
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Two houses on Yucca Flats within the critical danger zone of the atomic blasts withstood the explosions. Houses of less durability than those reinforced with steel bars crumbled when the horizontal thrust hit them.

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