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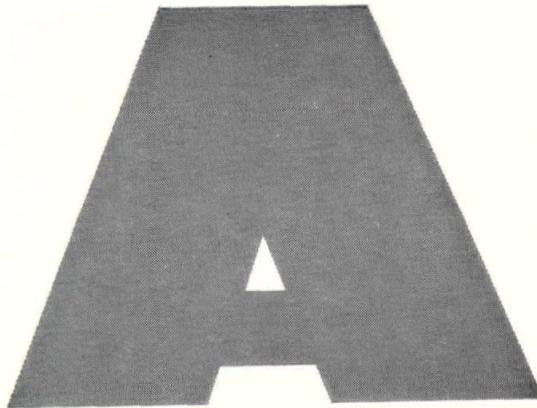
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- ▶ Conservation Societies
Protect Our Heritage
- ▶ Representative Selection,
Coastal Bend Chapter, AIA
- ▶ Importance of Surety Bonds
Should Be Recognized

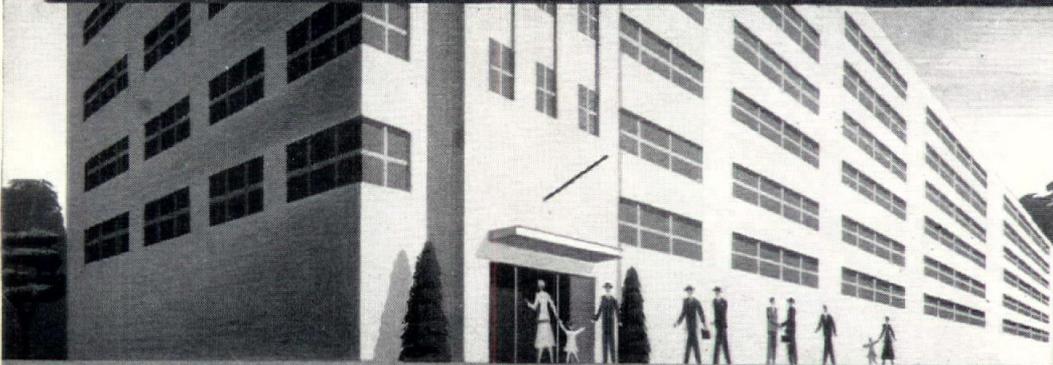
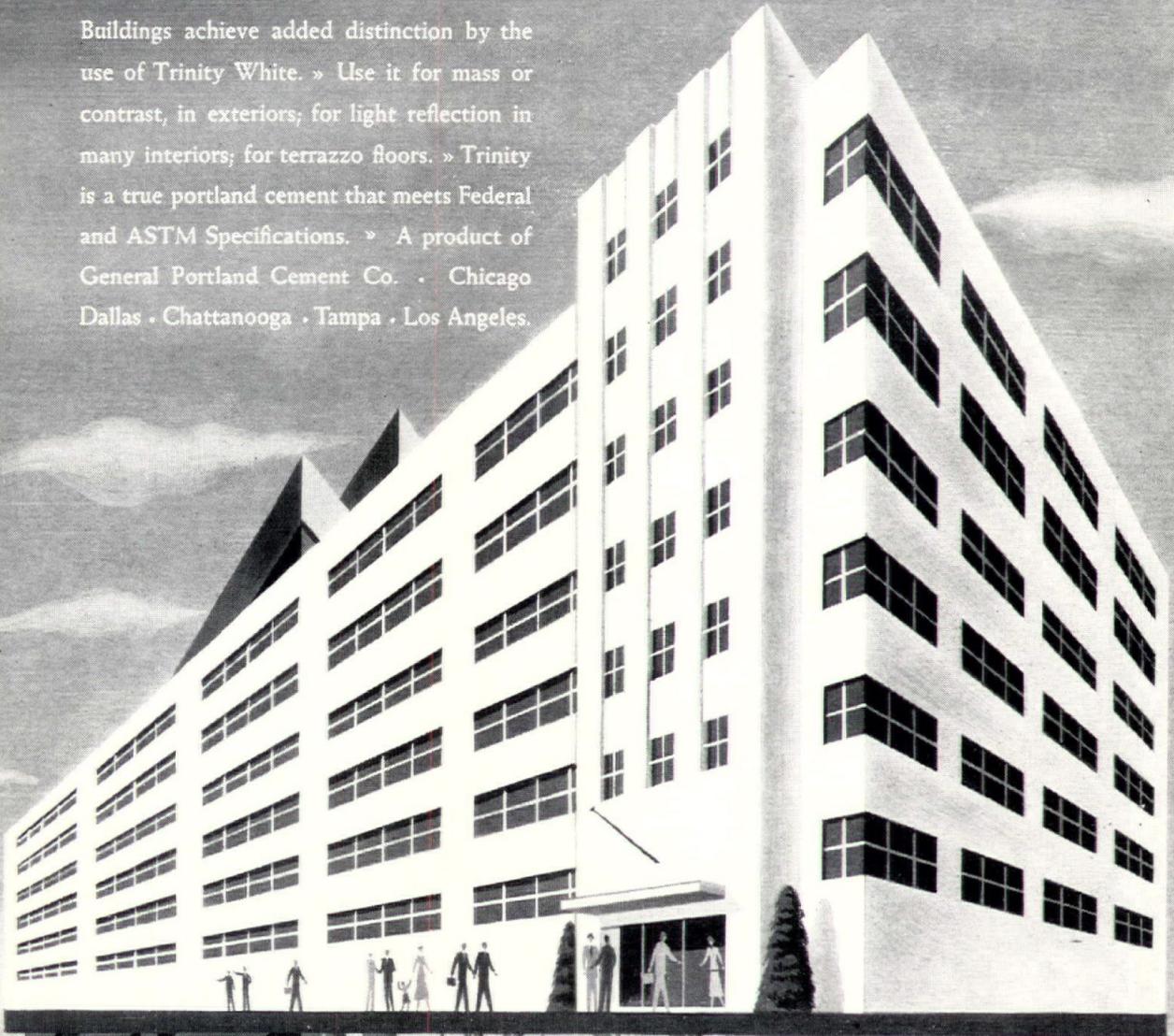


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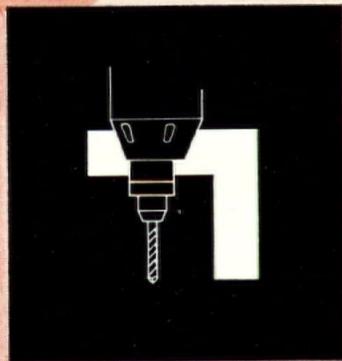
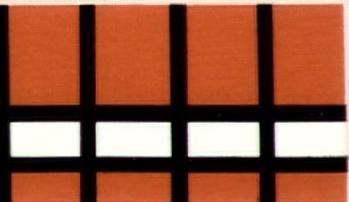
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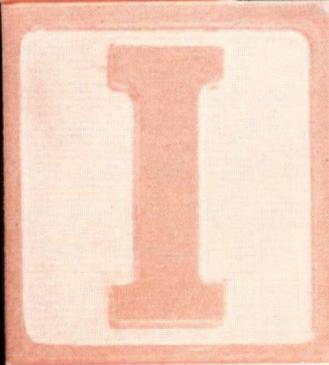
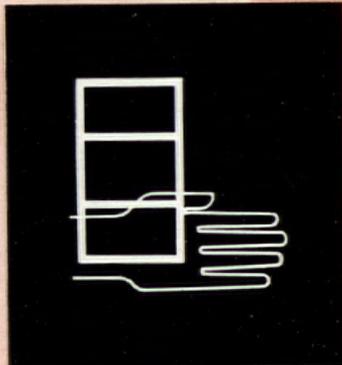
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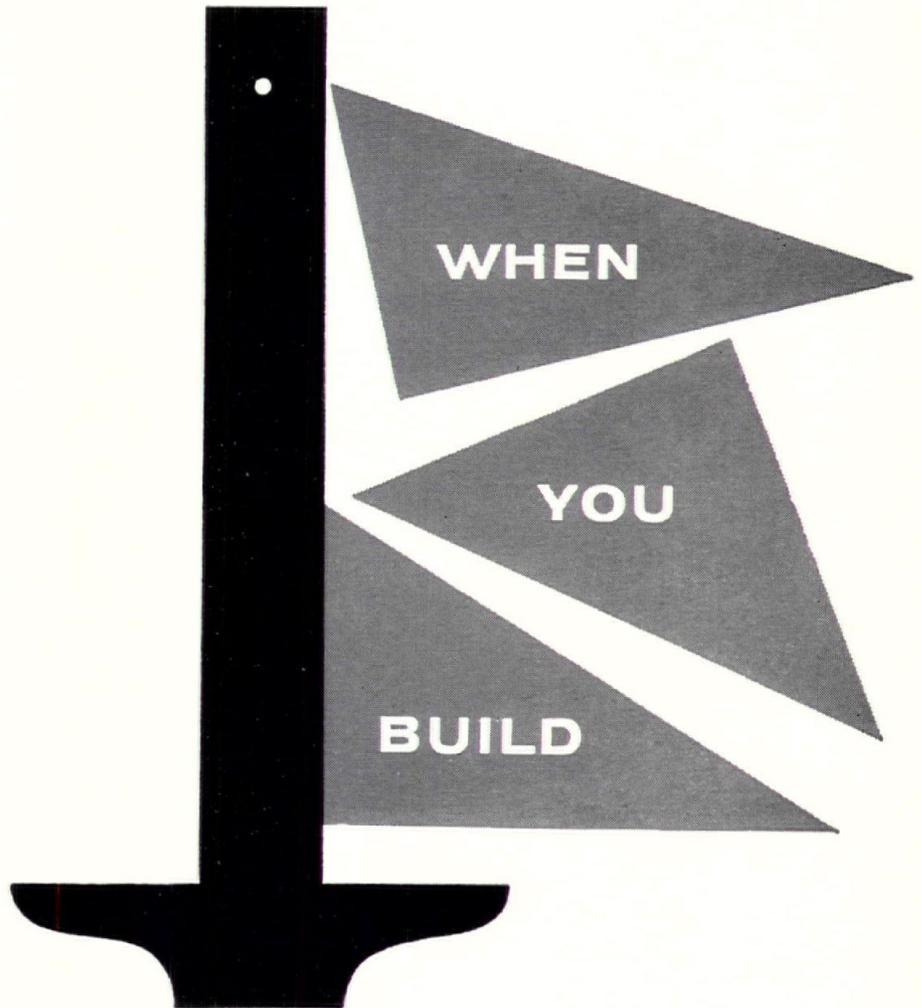
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Importance Of Surety Bonds

Each of the states, as well as the Federal Government, have long recognized the need for contractors on certain public works to furnish bonds for the protection of laborers and material men. Among the advantages of such bonds are also lower prices for materials and labor, since the risks of non-payment which would make for higher costs are eliminated; and protection against contractors without adequate finances or experience. Surety bonds can also be of great value in private construction.

Recently, there has been increasing emphasis upon proper bond protection on private contracts, through groups such as the National Association of Surety Bond Producers. Individual architects, as well as TSA, the American Institute of Architects, the Producers' Council, and related organizations, have been prominent in pointing out the strong points of the NASBP program, and the overall advantages of surety bonds. This is natural, for a surety bond, properly executed, benefits owner and architect alike. In one key area, bonding relieves the architect of many burdensome details in investigating the reputation, credit, financial responsibility and performance record of individual contractors, freeing him for the more professional services which make the architect invaluable to the owner and to the contractor as well.

Architects, through their specialized knowledge and experience, have also been able to offer constructive criticism on some of the many details regarding surety bonds which has been of real value to NASBP members and others who are always seeking to improve their service and value to owners, contractors, architects and the public.

The President's Letter

By
Reginald
H.
Roberts

President,
Texas Society
of Architects



Conservation societies such as those now active in San Antonio, Austin, Houston and other Texas cities perform a most valuable civic duty. They emphasize the need to preserve, restore and protect outstanding and historic structures, places and areas which constitute a vital part of our heritage.

Too often, these organizations come into being after much of historic value has already been irretrievably lost. Many things of great worth, too often irreplaceable, have vanished from the Texas scene before their true value was fully appreciated in terms of history and tradition. The state and its people are the poorer for the loss.

Because of their training, experience and interests, architects have often been prominent in the formation of conservation or heritage societies, and in the worthwhile programs carried on by these groups. Both TSA and the American Institute of Architects have long recognized the merit of such activities, and the TSA-AIA Committee on the Preservation of Historic Buildings is one of the permanent groups within the Society's committee structure, headed for the past several years by Marvin Eickenroht, TSA-AIA of San Antonio. Each of the 14 TSA Chapters has a Preservation Officer on this committee, which cooperates fully with state and local groups in its year-round program.

In addition, TSA members across Texas have been quite active in laudable local conservation projects carried out in many parts of the state.

Does your community have a heritage or conservation society? If so, we urge you to acquaint yourself with its program and to participate therein. If not, why not take the initiative to organize such a group. Your community and state, your friends and neighbors, and particularly your children and their descendants, will be the richer for it, in the intangible but very real wealth of history, pride, and heritage.

Representative Selection, Coastal Bend Chapter, AIA

PROJECT: Parkdale State Bank, Corpus Christi

ARCHITECT: Walter Wisznia, TSA-AIA, Corpus Christi

The Parkdale State Bank of Corpus Christi is located in the Parkdale Plaza Shopping Center which consists of some 30 stores in suburban Corpus Christi. The bank not only serves the personnel of the shopping center, but a surrounding residential area of approximately 60,000 people.

The aim of the suburban bank was to create a distinctive atmosphere for the casually-dressed shopper to transact bank business. Facing several malls in the shopping center, the bank, with an all-glass front, suggests an inviting atmosphere to the pedestrian on the mall.

The architect was called in at the inception of the bank, and was present at the earliest meetings with the Board of Directors. Together they formulated the plans.

The front of the bank is mainly Italian travertine unfilled marble, walnut and plate glass. The travertine marble carries to the interior and be-

comes an integral part of the customers' lounge and waiting area.

Continuous Counter

Immediately adjoining the customers' lounge is the tellers' area. The tellers' counter is a continuous counter which will accommodate from four to twelve tellers, by the use of a continuous tellers' counter and tellers' buses which are rolled into the safe at closing time. The counter is of formica and precast terrazzo. The superstructure of the terrazzo is a reverse "S" shape, to form both an upper and lower ledge. The upper ledge is extended by $\frac{3}{4}$ " plate glass so that the customer can watch the tellers transact their business.

The wall behind the tellers is walnut and aluminum channels. The ceiling is acoustical plaster. 1" x 2" walnut strips set the plaster ceiling into panels. At each of the air conditioning registers, there is a walnut strip two feet apart. The plaster between the

walnut strips and the registers is painted Keene cement, which can easily be repainted when the dust and dirt around the air conditioning register demands it without touching the acoustical plaster ceiling. The walnut strip pattern is repeated around the four-foot-square recessed plexiglas light fixtures.

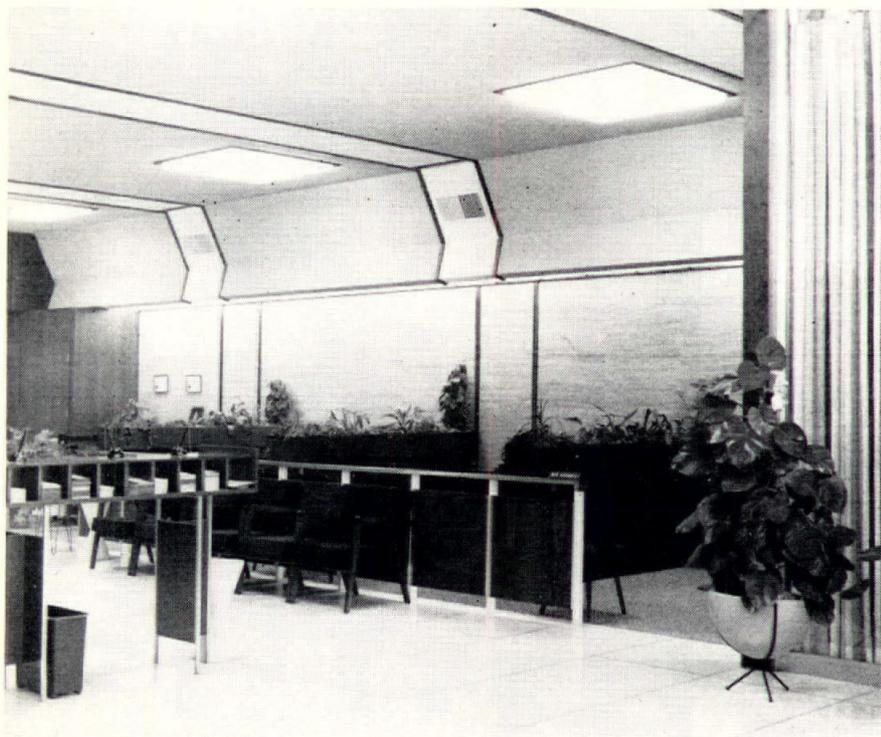
Grass Cloth Used

The officers' area again has a combination of walnut and aluminum, and the wall next to the desks is covered by brown Japanese grass cloth. (The floor is white terrazzo to offset the richness of the walnut woods.)

The bank reflects the warmth and dignity sought as principal objectives. The tellers enjoy working at the flexible counter which is well lighted and at a working level to suit the many women tellers employed in a suburban bank.

The bookkeeping area behind the tellers' counter has acoustically-treated walls to combat the noise of the machines, and the walls have fiberglass blankets and masonite panels with perforations $\frac{1}{2}$ " on center, instead of the usual 1" on center. The Directors' Room also doubles as a public meeting room for community functions and meetings of the general public.

Interior View of Corpus Christi Bank



An interior view of the Parkdale State Bank of Corpus Christi, chosen by the Coastal Bend Chapter, AIA as representative of recent architectural work in the area. Architect for the bank, which emphasizes warmth and dignity, was Walter Wisznia, TSA-AIA, of Corpus Christi.

Wilson Relected Secretary Of AIA As Golemon Defeated By Margin of Only 18 Votes

Edward L. Wilson, TSA-FAIA of Fort Worth, was reelected treasurer of the American Institute of Architects in Cleveland July 10 as another widely-known member of TSA, Albert S. Golemon of Houston, lost the race for first vice president of the AIA by only 18 votes. Both men had been nominated by many AIA Chapters across the U.S.

Mr. Wilson served as president of TSA in 1950, and has been very active in TSA and AIA affairs. He was elected secretary of the national organization in 1955 and has been chosen for the same post the past three years.

Mr. Goleman, also a past president of TSA, which he headed in 1953, lost one of the most closely-contested elections in recent AIA history to Philip Will of Chicago, who had been serving as second vice president of the AIA. Other officers elected at the Cleveland convention were John Richards, Toldo, Ohio, president; Henry Wright, Los Angeles, second vice president; and Raymond Kastendieck, Gary, Indiana, treasurer.

Architect-Designed Community For Scholars At Princeton

It's said that "scholars often live in a world of their own." This is especially true at the Institute of Advanced Study, Princeton, N. J., where Institute members live in a small community designed by architect Marcel Breuer.

The community's housing is featured in an eight-page pictorial spread in F. W. Dodge Corporation's professional magazine for architects and engineers, *Architectural Record*.

In his planning, architect Breuer considered that the members of the Institute are selected for their attainments in mathematics, physics, or historical study; that although their ages vary and most have families, all have in common an ardent devotion to the pursuit of learning, and all are situated in a semi-retreat away from the town.

The article added "In designing housing for such a group, individual comforts and amenities were, of course, a basic requirement for the units and their siting. But the provision of an environment and facilities for the community spirit of the membership was the factor that weighed heavily in planning the arrangement of the plot."

Series of Courts

The housing for the scholars features dwelling units grouped to form a series of courts — courts that are not closed quadrangles, but are suggested enclosures free at their corners and visually open where carports cut through the buildings.

There are five types of units ranging from bachelor singles to three bedroom plus study units. All dining-kitchen and living rooms face the courts for favorable outlook upon no traffic areas and so children at play may be watched.

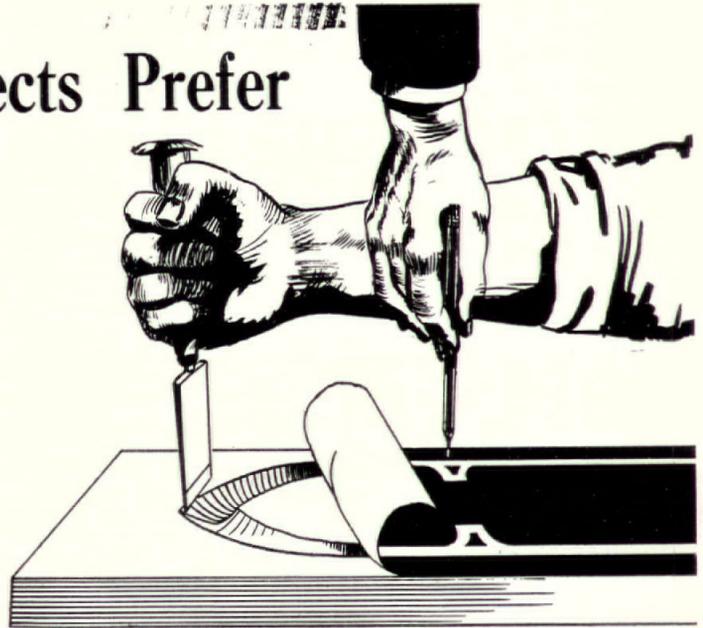
The bachelor units are placed on the periphery, closing the courts at these points and providing convenient access to the Institute's dining facilities across the road.

Einstein Drive

According to *Architectural Record* "the focus of the plan is the common, or 'village green,' dedicated to adult and community affairs. It is ringed by the main access road called Einstein Drive. Through traffic is discouraged by bending, or narrowing through roads; service traffic is kept away from the courts."

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Belief Multi-Story Schools Cheaper Termed "Unsafe Generalization"

The belief that multi-story school buildings are much cheaper to construct than one-story buildings is an "unsafe generalization," according to a leading school architect.

Lester W. Smith, AIA, partner in the architectural firm of Sherwood, Mills and Smith, Stamford, Conn., said in a recent issue of SCHOOL MANAGEMENT Magazine, that many laymen and educators frequently try to draw a parallel between home construction and school design. The analogy they use, Mr. Smith noted, is that two-story homes can be built more cheaply than the sprawling ranch house.

"This is an unsafe generalization — one that cannot be applied to school design," Mr. Smith declared. "Though cost is the final and not the least important factor in school design, it is the aggregate of many other factors that have to be studied before one can decide whether to build vertically or horizontally."

Major Factors Cited

Mr. Smith cited as the major factors determining the type of building, the educational requirements, site size, climate, safety, and construction costs.

He maintained that the one level school can be scaled more readily to the physical size of young children and is therefore more desirable than the multi-level building from the standpoint of meeting elementary school needs.

Site factors may favor one or the other type school, Mr. Smith said. However, he labelled as a "fallacy" the idea that multi-level schools save land space.

Mr. Smith noted that colder climates tend to favor the multi-story school and warmer climates, the single level schoolhouse. The multi-level school is easier and less expensive to heat while the one-story building lends itself better to integration with outdoor spaces.

Mr. Smith rated the one-story school over the multi-level building from the safety standpoint. He explained that it can be evacuated more quickly in emergencies and its elimination of stairs reduces the number of accidents.

The controversial question of construction costs favors the multi-level school in evacuation, roofing and

heating, Mr. Smith said. He added that one-story schools involve cheaper costs for framing, flooring, stairs (they have none), exterior walls and plumbing. Cost of foundations and electrical work are about the same, Mr. Smith observed.

Square-Foot Costs Misleading

Citing the work of his own firm, which has designed some forty schools, Mr. Smith asserted that square foot costs and even per pupil costs can be misleading. He noted that a two-story high school his firm built in Naugatuck, Conn., had a square foot cost of \$15.40 and a per pupil cost of \$1,540. Another high school it designed in Westport showed costs of \$18.10 a sq. ft. and \$1,800 per pupil.

Mr. Smith explained that the steep irregular site in Naugatuck dictated a multi-level approach, while the departmentalized educational program in Westport, the site, and the intent to expand the school led to the adoption of a single-level campus plan.

He added, however, that the underlying "theme" of the Naugatuck School was economy, as illustrated by the use of standardized modular units to meet the close budget, whereas expansion was the "theme" at Westport, where provision was made to expand

the number of teaching stations from 63 to 75.

"This built-in expansion factor at Westport necessarily involved an extra expense," Mr. Smith stated. "Add to it, differences in such cost factors as time of bid and the higher area labor and materials cost in the Westport area, and you get a clearer understanding of the differences in square foot and per pupil costs. The best way to summarize it, really, is that you get what you pay for."

Kelley Manufacturing Will Distribute New ALCOA Aluminum Gutters

Kelley Manufacturing Company of Houston and San Antonio is distributor of the new aluminum rain-carrying units manufactured by Aluminum Company of America.

George Reese, of Houston, vice president and warehouse sales manager for Kelley, describes the new gutter as the first ever put on the market with the "perfect hanger."

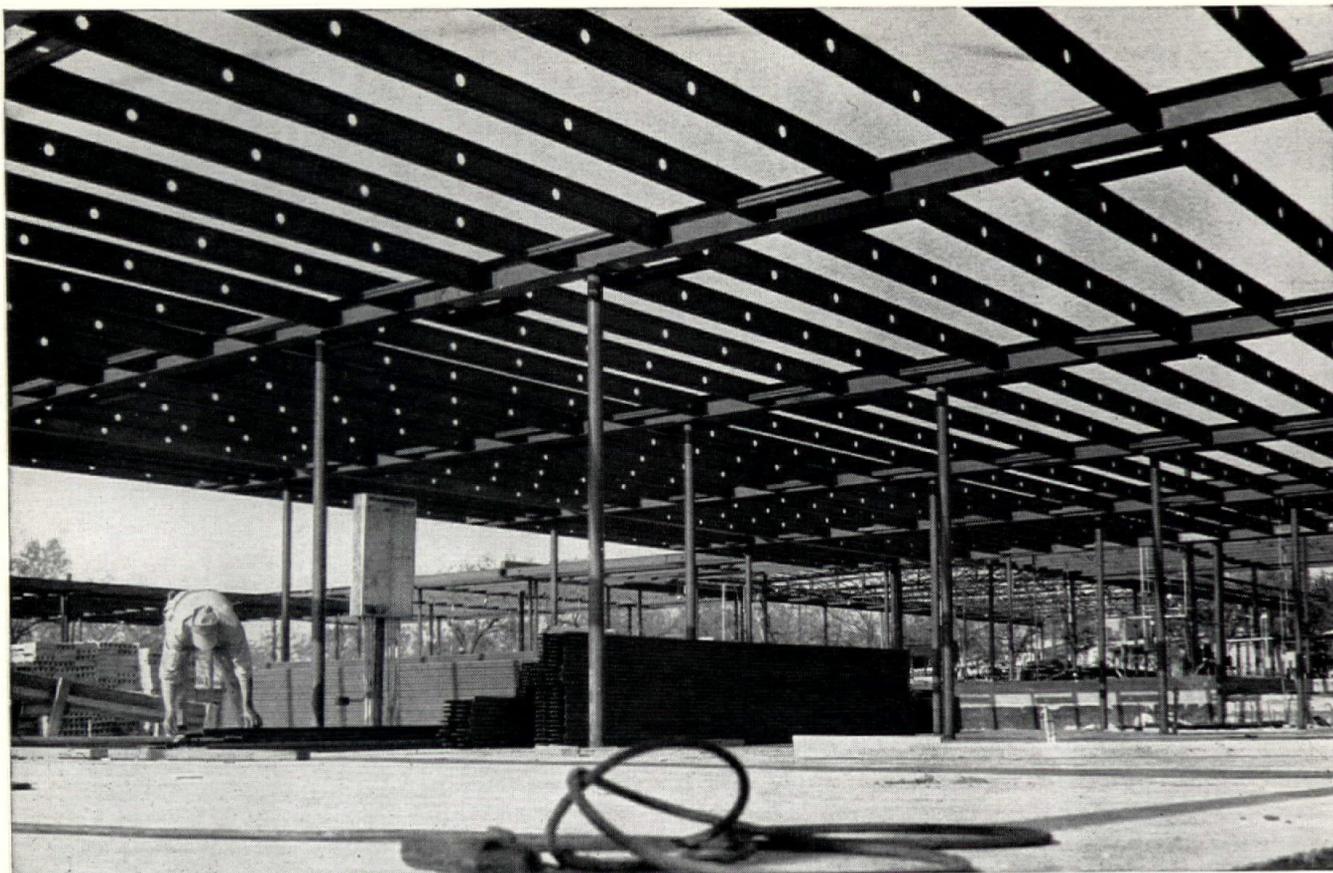
"Alcoa's newest residential building product contains the first major changes in rain-carrying devices in over 25 years," Mr. Reese said.

The new product line features eye-appealing contours, simplicity of installation, high strength, and long-term freedom from maintenance.



Winners In Draftsmen's Competition

A Texas Architects' Week draftsmen's competition, sponsored by the San Antonio Chapter, AIA and designed to stimulate high quality work, yielded 18 entries and resulted in awards to Gilbert Garza, first prize; Robert Morgan, second, and Tom Vargas, third. Left to right at the awards dinner are Harold L. Eiserloh, member of the judges' panel; Mr. Morgan, Mr. Garza and E. W. Engelhardt, judge and representative of the blueprint and reproducing companies in San Antonio.



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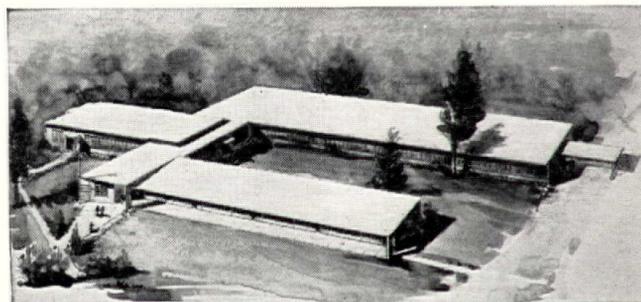
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Study Shows Building Industry Productivity Deserves Praise—Not Apologies

Productivity in the U.S. building industry is much better than commonly supposed, and it is time for the industry to stop apologizing for its undeserved reputation as an awkward and laggard stepchild of the otherwise brilliant American economy.

Contrary to popular belief, the efficiency of construction workers "has improved significantly" in the decade since World War II, according to a special study of building productivity trends in *Architectural Forum*.

"Average new building output per contract construction worker in constant (1947-49) prices was 12.7% greater last year than in 1948," says *FORUM*. "In comparison, last year's average Gross National Product per worker in the economy as a whole was 22.9 per cent above 1948."

"Building productivity has been advancing in rolling surges," it adds. "In roughly matching the steady, more even-paced gains in GNP productivity, new building has scored better than GNP in five out of the nine years since 1948." In a chart, based on the limited data on building output and building employment compiled by the federal government, the magazine shows that output per worker in new building contract construction reached peaks roughly 20% and 30% above 1948 output in 1950 and 1955, but then slipped back part way after the outbreak of the Korean War and during the record-spending and record-employment years of 1956 and 1957.

Construction Wages In Line

Nor have wage increases in construction been out of line with those in industry generally since World War II, *FORUM* reports. "From 1948 to 1957," it points out, government statistics show that "average hourly earnings of building construction workers rose from \$1.85 to \$2.96 — or 60 per cent. In the same period, average hourly earnings for manufacturing workers advanced from \$1.35 to \$2.07 — or 53.3 per cent. But if the wage increases in both fields are compared with 1939, construction wages rose only 217 per cent as compared with 227 per cent for wages in manufacturing."

Many Gains Concealed By Quality Changes

Real gains in construction productivity have often been obscured or concealed by price increases that accompanied the introduction of new materials and equipment, according to *FORUM*. "These new materials," it explains, "may raise the quality of new buildings substantially, or even change their character so much that they are no longer truly comparable to older buildings. Some examples: air conditioning, operatorless elevators, major upgrading in lighting and electrical standards."

Although building labor "gets lambasted regularly" for lack of productivity, says the magazine, labor productivity is only one factor affecting output per manhour in the construction field, and individual effort may influence productivity much less, for example, than increased mechanization. Many construction workers, in fact, have been working assiduously in recent months, and thus increasing their productivity, it adds. "Builders regard this as an incidental benefit of the current economic dip," it explains, and a reflection of the efforts of each worker to demonstrate his individual skill and value, and thus minimize his chances of being laid off if construction work suffers any marked decline in volume.

Home Building Productivity Up 20%

"The most important reason for feeling sanguine about the trend of construction productivity is the fact that there is a whole series of advances in building techniques and practices that are contributing forcefully to increased productivity," *FORUM* declares. "All in all, it is reasonable to conclude that these innovations in design, materials and building technique have boosted productivity considerably more than the 12.7 per cent that the government's crude statistical series indicate. In mass home building, in fact, which has more repetitive processes and standardization than any other segment of construction, *FORUM* believes that the most efficient big builders have probably increased their productivity about 20 per cent since the war."

Some of the additional, more specific examples of significant increases in productivity in various building operations that are summarized by the magazine follow:

Excavations. Over the past 20 years, the dollar costs of removing a cubic yard of earth have hardly changed. The reason: Bigger and better excavating equipment has offset the increased cost of wages and materials. The major improvements in productivity have come from the use of power shovels with capacities of up to 2½ cubic yards of earth compared with only ¾ to 1 yard in older machines; huge trucks that now carry away 12 to 14 cubic-yard loads, rather than 6 to 8-yard loads; trimming up loose material for the big shovels with small bulldozers instead of by hand shovels; better compressors, faster drills, and better drill tips for rocky excavation work.

Steel frames. A degree of increased productivity has been achieved by the use of large cranes instead of derricks to lift steel into place, and by the use of high strength bolts, instead of rivets. (Bolting crews consist of only two men each, whereas riveting requires four-man crews.) One large structural fabricating firm reports that use of a crane resulted in a saving of about 10 per cent in steel erection costs recently, compared with a similar job a year earlier. The newest electric generators can operate up to 10 welding machines at once, cutting fuel costs in half.

Metal floors. The cellular metal floor that has come into widespread use since World War II helps speed up construction because it can be installed in any weather. It also has the advantage of cutting down weight loads, thereby trimming structural steel requirements and expenses. This weight saving can be of immense value in buildings for sites that have poor foundation conditions. Says a spokesman for one of the largest floor makers, "We know we can produce a metal floor with full electrical raceway flexibility and future maintenance savings advantages for no greater cost than a concrete floor that would lack these advantages." The tremendous potential in these floors is the introduction of forms that include ducts suitable for both heating and air conditioning. This promises major savings on both metal and metal-working labor by eliminating separate air conditioning ducts.

Structural concrete. Use of long-boom cranes instead of elevator-hoists saves up to 50 per cent on concrete placing costs under optimum conditions. These cranes were introduced in the late 1930's; by 1948 they could be used on buildings 12 to 14 stories high. Today, the latest models service structures of 20 stories and higher.

Electrical work. Opinions are divided on the trend of productivity in this field, FORUM observes. Critics speak unkindly of the output of electrical workers. But lighting standards have virtually doubled in the postwar building boom; office lighting of 50 to 80 instead of 20 foot-candles is now commonplace. Low-power fluorescent lighting provides three times as much light as incandescent lighting for the same current cost, and requires smaller wires. Higher voltage circuits allow the use of 30 instead of 15 fixtures per circuit, with a further reduction in wiring requirements. Stud guns and power tools have been introduced that have boosted both wiring and fixture installation productivity. Rolling scaffolds in place of ladders have increased ceiling work efficiency, and a concrete floor trenching machine is eight times faster than hand chiseling.

Tile. With new adhesives and new space-lug tiles that have come into widespread use in the past seven years, Lee Crowner, president of the Tile Contractors Association, estimates that tile installation manhour requirements have been reduced about 33 per cent. In his own building operations, Crowner reports, his tiling costs have advanced only about 10 per cent since 1952, although his material costs have risen about 10 per cent, his tile mechanics' wage rate 23 per cent, and tile laborers' wage rate 40 per cent.

Dramatic new gains in tiling productivity are promised through a "thin-setting" mortar bed process now being promoted by the Tile Council of America, which holds patent rights for special mortar compounds that are used in the process. Thin-setting reportedly permits a tile setter to do three times as much work in a day as he can by conventional methods. Describing a tiling contract on a new

Junior High School in Waco, tiler C. O. Montgomery told the FORUM: "This school has 36,000 square feet of wainscot. Normally tile labor on it would run about 80 cents per square foot. We did the job at 23 1/2 cents per square foot."

Marked Increase At Fort Worth

Montgomery also recalled that in 1950 his organization put up 45,000 square feet of tile in a new hospital in Waco by the conventional method, and it took a crew of ten men about four months to do the job at an overall cost for materials and labor of \$2.25 per square foot. Early this year his firm completed a 90,00 square foot installation in another new hospital at Fort Worth using the thin-set process, and it only took five men about five months to do the work, at an overall cost, materials and labor, of only \$1.50 per square foot. Productivity improvement: roughly 33 per cent.

"A lengthy list of similar time-saving, cost-reduction innovations and improvements that have quietly helped raise construction productivity in recent years could be compiled," says FORUM. "It would include: self-powered work scaffolds that can reduce staging expenses about 30 per cent; cement-finishing machines that can trim finishing costs up to 25 per cent; pumps that lift hot liquid pitch up to built-up roofing jobs; powered pipe-threading machines; double-glazed windows; modern demountable partitioning; paints suitable for effective two-coat, rather than three-coat applications — and the prospect of effective one-coat paints etc.

"Everything considered — the construction industry can view its record of increasing productivity with justifiable pride. But it cannot afford complacency. For it cannot be denied that the building industry is still confronted with great challenges and opportunities to further accelerate its gains through the development and utilization of still more improved materials, tools, methods and design techniques that will enable it to build still faster, better and less expensively."

Unique Seminar-Tour Jointly Sponsored By Society of Mexican Architects

In cooperation with the Sociedad Arquitectos Mexicanos, a 13-day seminar tour for architects, and wives, will leave San Antonio on September 21. While contemporary work is stressed, tour members will also see some of the impressive Colonial and Pre-Columbian examples which date back as far as 2,000 B. C.

The importance of the seminar tour to the architects, according to Paul Elliott, TSA-AIA of Houston, is that they will see as invited guests many outstanding things that would be closed to them were they to visit Mexico any other way. A special committee made an advance trip to confer with officers of the Sociedad Arquitectos Mexicanos and to inspect the most interesting commercial buildings, homes and offices. From this large number, the very finest examples were chosen; these are visited by members of this seminar tour. Among the offices visited are those of Arquitectos Felix Candela, Mario Pani and Alvarez, Carral, Martinez-Paez, in Mexico City. Among the six exciting homes visited are those of Arquitectos Juan Sordo Madaleno and Santiago Greenham. The visiting architects are entertained at a cocktail party at the CASA DEL ARQUITECTO, headquarters of the Mexican Architect's Society, where they will meet some of Mexico's leading architects and their wives.

The group travels by private Pullman car. The itinerary includes San Miguel Allenda, Oaxaca, Taxco and five days in Mexico City, from which members may fly directly home.

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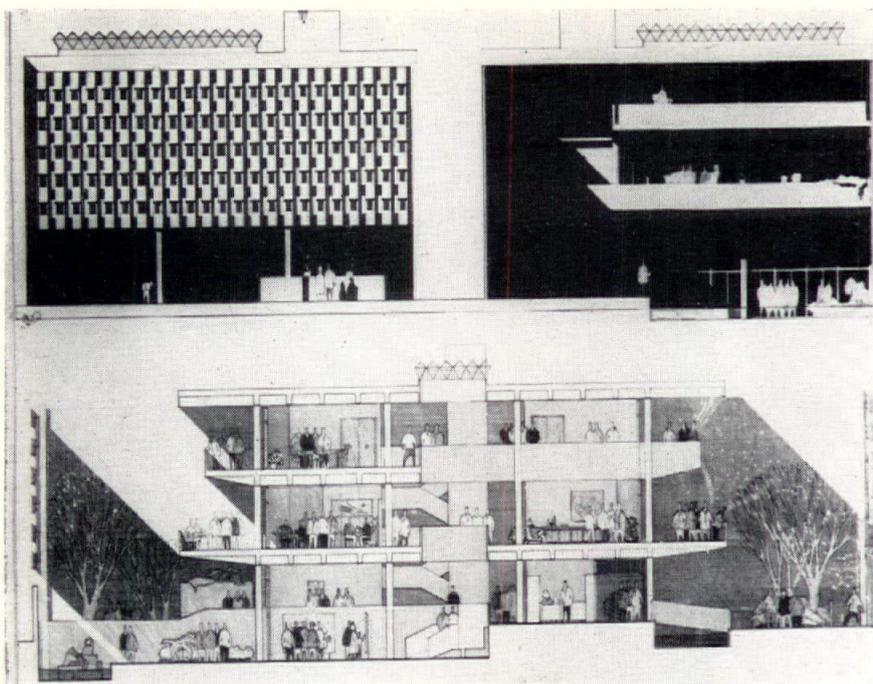
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Student Design For AIA Chapter Building

Above is a proposed "Chapter Building for the American Institute of Architects", a problem submitted to third-year architectural students at the University of Texas School of Architecture. The structure was programmed to include needed elements on an interior lot 60 feet wide by 130 feet deep, in an imaginary Texas city.

University Students Design Institute Chapter Building

During the spring semester third-year students in the School of Architecture of the University of Texas completed a four-weeks project for the design of "A Chapter Building for the American Institute of Architects." The program was written by Professor Hugh L. McMath, TSA-AIA, and it had a twofold objective. First was the design of a building commensurate with the ideals of the profession, and secondly the development of an awareness on the part of the student of his rela-

tionship to the Institute.

The program included the disposition of the following elements and their dependencies within an interior lot 60 feet wide by 130 feet deep, in a city in Texas: exhibition area, committee-conference room, lounge-assembly room, general office, secretary's office, library, dining room and terrace, and custodian's quarters. Eighteen students presented solutions to the problem. Jack S. Crier of Austin was ranked first for the project.

Avoid Cheap Materials, Booklet on Schools Warns

Architects and engineers will find added support in their battle against charges of excessive educational construction costs in a new booklet, "Wrought Iron Pipe for Modern School Building," recently made available by A. M. Byers Co., Pittsburgh, Pa.

Besides highlighting wrought iron piping applications in some 140 schools throughout the United States, the eight-page booklet emphasizes the need for quality design and construction, arguing that the controversial classroom shortage is "no excuse for substituting second-rate materials on a penny-wise, repair-foolish basis."

The Byers booklet points out that jerry-built schools can lead to higher

tax rates especially when increased maintenance and replacement result in soaring operating costs.

"Despite the existing emergency," say Byers, "schools remain long-term investments. Therefore, construction economies, or lack of them, can hardly be based on initial building costs alone."

The booklet also contains brief descriptions of typical wrought iron school applications, including radiant heating, air conditioning, snow melting, and condensate return lines.

Copies of "Wrought Iron for Modern School Building," may be obtained by writing, A. M. Byers Company, P. O. Box 1076, Pittsburgh 30, Pa.

New Booklet Available On Specifications for Special Electric Cables

To help architects in the heavy construction and building fields prepare their specifications for special electric cable installations, a new, comprehensive book on "NEPCO-SIL" Silicone Rubber Insulated Cables has just been published by National Electric Products Corporation, Pittsburgh.

Special properties of NEPCO-SIL are described as particularly suited to extreme temperature applications (to 200 degrees Centigrade) and to conduit installations where load facilities make it impractical to increase copper sizes.

It is also suggested for general re-wiring to achieve greater electrical capacity and for power installations where reduced weight and flame resistance are known requirements.

Discussed in separate sections of the new book are individual specifying factors including performance data, service life and physical properties, electrical characteristics, suggested applications, and test results.

Charts and photographs illustrate comparative service life and performance of organic and silicone rubbers within a temperature range of —55 degrees Centigrade and 200 degrees Centigrade.

Tabled Characteristics

Electrical characteristics are reflected in table form. The table provides comparison with other insulating materials according to the per cent of power factor, specific inductive capacitance and constant versus water soak at 70 degrees Centigrade.

Included in the discussion of physical characteristics are paragraphs on chemical structure, temperature range, weathering properties, electrical performance, chemical resistance, combustion level, aging and water resistance.

Table listings give appropriate specifying data on NEPCO-SIL for insulated lead wire, 600 volts; insulated power cable, 0 to 1,000 volts; and insulated control cable, 600 volts.

Data includes: conductor size, number of strands, insulation thickness, nominal overall diameter, and approximate net weight per thousand feet.

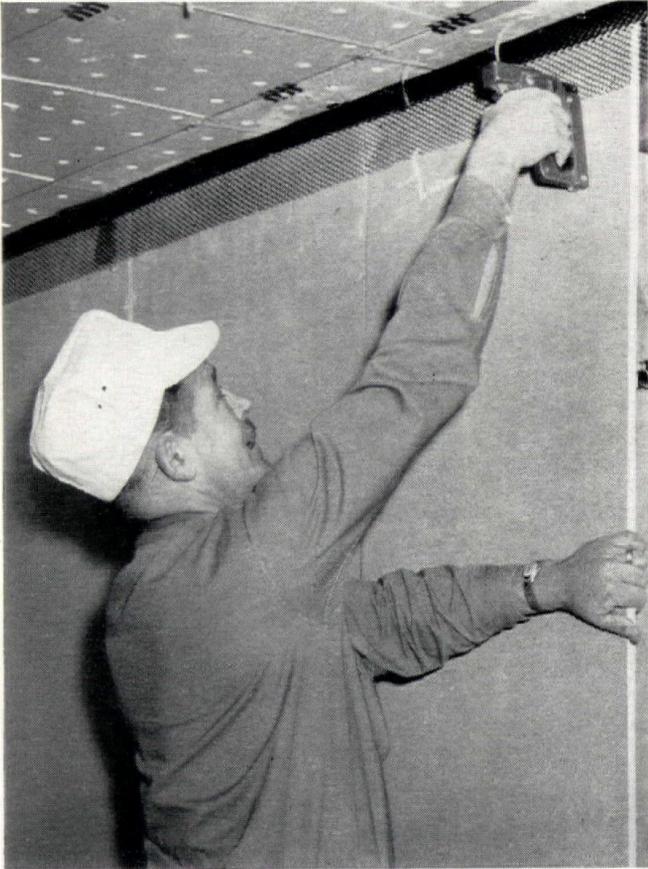
The new "National Electric NEPCO-SIL Silicone Rubber Insulated Cables" book can be obtained by writing to the Advertising Department, National Electric Products Corporation, 2 Gateway Center, Pittsburgh 22, Pa.

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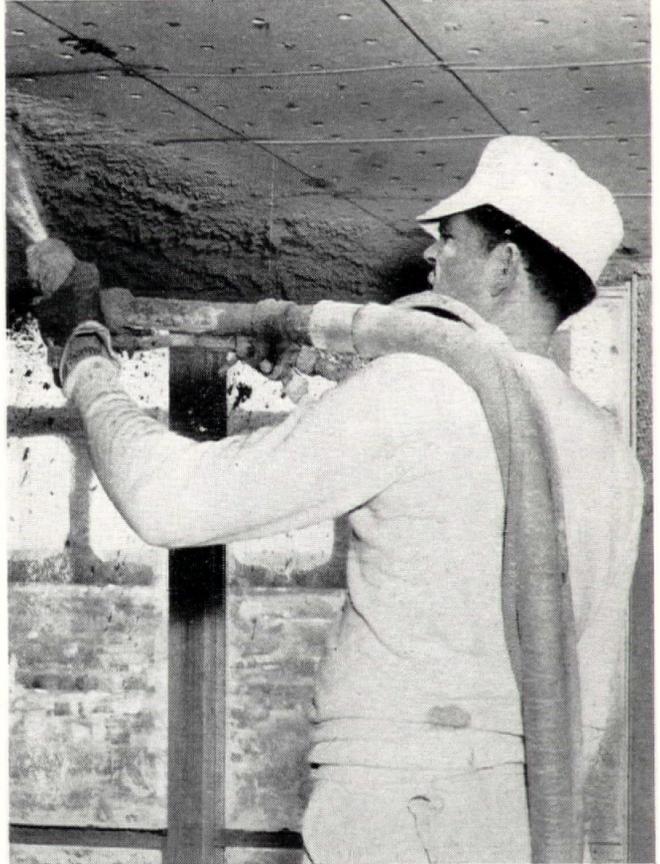
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Journeyman Al Droz, erecting Flintrock long-length Gypsum Lath preparatory to applying Flintrock Gypsum Plaster on 2" solid partition system on multi-story luxury type apartments. Lathing and plastering by E. K. Roemisch.



Journeyman J. W. McGinty, machine-applying Flintrock Gypsum Plaster to perforated Gypsum Lath suspended ceiling. This economical lath and plaster system is used on new large luxury type multi-story apartment building in Dallas.

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me a good hard wall. It pumps good through my machines, rods good, has excellent yield and high compressive strengths. I wish to offer The Flintkote Company a warm welcome to the Gypsum Plastering Industry."

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"Campus Scheme" Preserves "Little Red Schoolhouse" in Webster

The Webster Elementary School, Webster, Texas, shown in a recent issue of the TEXAS ARCHITECT as one of the "Texas Architecture-57" winners, is now also one of the schools selected for presentation by *Architectural Record*.

The school rates high from the viewpoint of "what good design can contribute at virtually no added cost", according to the RECORD.

Separation of the educational-community use from the classroom group was achieved by placing the two main groups on opposite sides of an enclosed patio-courtyard. The two groups are connected by covered walkways screened by masonry walls which complete the enclosure of the court spaces.

The courtyard serves first as a controlled outdoor activity area for the first and second grades; it is also planned for outdoor assemblies and programs. Near the gym-auditorium

the yard level is somewhat higher and serves as an outdoor stage; it has convenient access to the dressing rooms.

For Community Use Only

Community use also suggested the small kitchen off the gym floor. This is used strictly for community functions, not for school use. The children are fed from heated food carts from the junior high school nearby.

Some of the other budget values of the new school are: large amounts of counter and cabinet storage space; skylights with metal jalousie light control in classrooms and library; aluminum double-hung floor-to-ceiling window walls to keep down maintenance costs while giving good light and ventilation.

Architects for the school were George Pierce and Abel B. Pierce, TSA-AIA of Houston, associate architect: E. J. Goodwin.

Field Service Engineers Assigned To Houston By A. M. Byers Company

Two new field service engineers have been assigned to A. M. Byers Company's Houston, Texas, Division Office, it was announced by A. S. Chalfant, vice president of sales.

They are G. F. Grey of New Orleans, La., and W. O. Williams of Houston.

Mr. Grey was formerly associated with Diamond Match Company, both in Springfield, Mass., and New York City, also the Dictaphone Corp. He was graduated from the University of Indiana.

Mr. Williams was employed by the Southern States Life Insurance Company, National Supply Company, and Standco Brake Lining Company, all of Houston. He received his Bachelor of Business Administration degree from the University of Houston.

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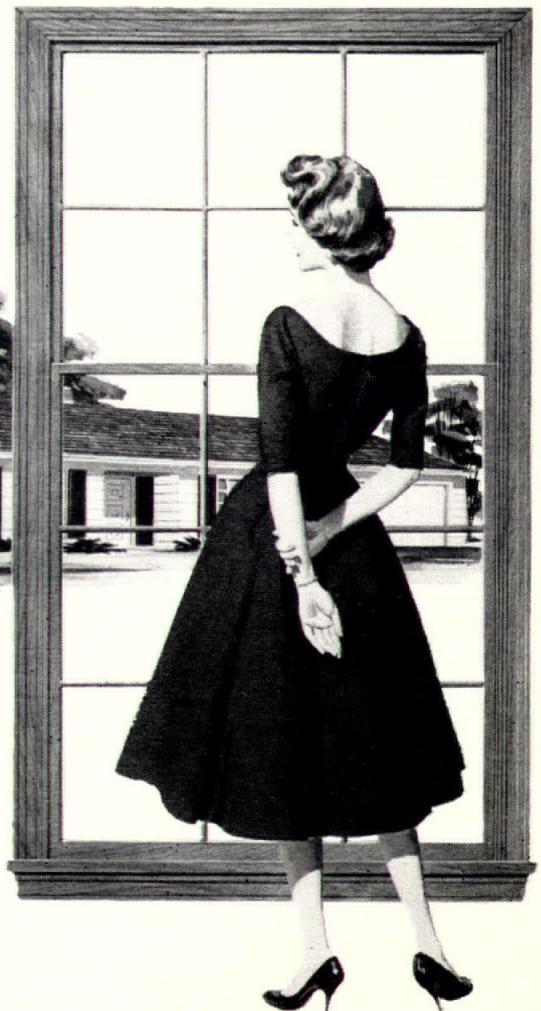
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Descriptions of Winners in "Texas Architecture, '57"

Editor's Note: We continue a series of nine winners in the annual statewide competition sponsored by TSA and the Dallas Chapter, AIA—"Texas Architecture—'57." We asked that the winning architects briefly describe the problem which they met and solved in conjunction with each winning project.

Five Primary Schools

Andrews, Texas

Award of Merit,
Schools Category

Architects:

Caudill, Rowlett, Scott
& Associates, TSA-AIA
Bryan, Texas



Mexican Student Architects Visit Austin Offices, Projects And University of Texas School

Ten students from the Department of Architecture of the Instituto Tecnológico de Monterrey, Mexico, accompanied by Professor Rodolfo Barragan and Mrs. Barragan visited in Austin recently.

The schedule for the visit was arranged by Professor Hugh L. McMath, TSA-AIA of the University of Texas School of Architecture. Members of the Student Chapter of the AIA at the University acted as hosts and guides for the group.

Morning visits were made to several Austin architectural offices and to projects under construction. These included the office of Fehr and Granger to view drawings and model of the Austin Municipal Airport; the Municipal Auditorium and Convention Center, Page, Southerland and Page; Jessen, Jessen, Millhouse and Greeven, Associated Architects; the office of Kuehne, Brooks and Barr to view drawings for the American Embassy, Mexico, D. F.; and the Pearce Junior High School, Ludgren and Maurer, architects. All firms mentioned are TSA-AIA.

The afternoon included visits to the several design classes at the University and was concluded by a coffee in the International House.

The Department of Architecture of the Instituto Tecnológico de Monterrey is the only Mexican institution to be a member of the Association of Collegiate Schools of Architecture, which is composed of some 60 schools in the United States, Canada and Mexico.

PROJECT: Five Primary Schools

NAMES: Peter Pan, Cinderella, Jack and Jill, Little Bo Peep, Jack Horner

LOCATION: Andrews, Texas

OWNER: Andrews Independent School District

ARCHITECTS: Caudill, Rowlett, and Scott, TSA-AIA, Architects

MECHANICAL ENGINEER: J. W. Hall, Jr.

STRUCTURAL ENGINEER: A. M. Martin
LANDSCAPE ARCHITECT: Robert F. White

GENERAL CONTRACTOR: Charles Ramsey Company, Lubbock

The program called for the design of five two-classroom schools for five different sites, each with different orientation and accessibility, yet each to fulfill the same basic requirements.

"Make this a playhouse," said Superintendent T. A. Roach, "little people draw no lines between work and play. Create a 'home' away from home."

Each classroom has three main areas: (1) an academic area with movable furniture and storage units, (2) a work area which is part of the enclosed classroom but on a higher level, and (3) an outdoor area partially protected from the sun and wind.

For semi-annual dramatizations the two classroom units can be converted into one space by the removal of a teaching space divider.

The classrooms feature (1) hooks in the ceiling for hanging varied weights, i.e., displays, climbing ropes, etc.; (2) a split-level floor arrangement to separate academic and work areas and to form a stage for classroom theatrics; and (3) an experimental carpet installation in the academic area.

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Architecture One of Important U.S. "Exports"

"Architecture for export" — a diplomatic design for buildings to fit the locale — motivates the State Department's Foreign Building operation.

The recently completed U.S. Consulate in Kobe, Japan, featured in *Architectural Record*, fits nicely into this design pattern.

DOUBLE COMPLIMENT

According to the editors "... the Japanese have been tendered a gracious double compliment. The State Department selected as architect Minoru Yamasaki, a native-born American of direct Japanese descent. Yamasaki then acknowledged — and indeed the building itself makes clear — the strong influence traditional Japanese ethos and architecture have played in both his philosophy and design for the project."

TRADITIONAL FEATURES

A-R, F. W. Dodge Corporation's magazine for architects and engineers, highlighted some of the features reminiscent of traditional Japanese architecture which included:

- * an exterior screen of plastic and white bronze suspended from the overhanging slab edges to reduce sun glare; from the interior it reminds one of the shoji.

- * the walled compound for protection and the platform raised above grade for flood protection; wooden gates form part of the compound wall.

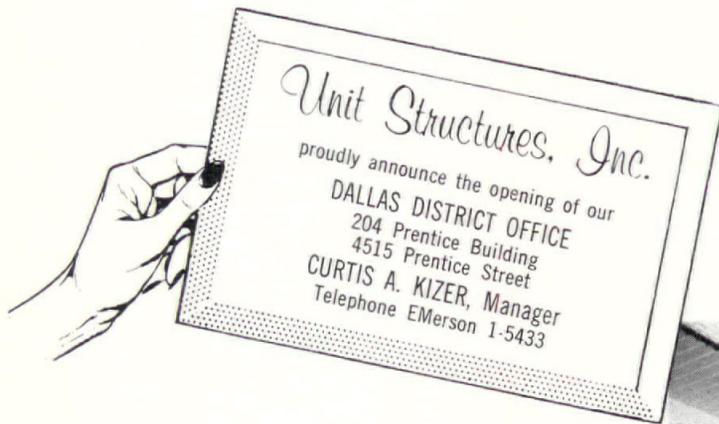
- * gardens featuring the three necessary elements of a Japanese garden, namely, earth, sky and water — the gardens are designed to be viewed from above since the loveliest parts of the plants and flowers are those reaching upward to the sun and sky.

Educational Opportunities For Graduate Students in Architecture Available

Opportunities are open to American students in architecture for graduate study or research under the Fulbright Scholarship Program. The Institute of International Education, the preliminary selection agency for graduate student awards, is again hoping to receive applications from well qualified students.

The following participating countries have facilities for the study of architecture: *Australia, Austria, Chile, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, and the United Kingdom.* In both Australia and in Chile there are opportunities for candidates in town and country planning. Candidates for Japan must know the language. For the non-English speaking European countries it is desirable that some knowledge of the language be demonstrated.

More specific information about the requirements of the program may be obtained from the Institute of International Education 1 East 67th, New York 21, N. Y.



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What Do You Know About Silicones?

Do silicones protect a masonry wall from the elements?

If you answer — correctly — yes, then you are one of a very small minority who are acquainted with this fact.

Sampling surveys made in various parts of the country, from the Atlantic to the Pacific, showed that hardly anybody questioned knew that silicones can provide a protective coating to a masonry building. This is despite the fact that hundreds of formulators, water proofers, paint and hardware stores have been selling this product for about 10 years.

Before World War II there was no effective, colorless long-lasting, easy-to-apply material which could give a masonry home the extra protection from water which it so often needs.

Now Readily Available

Today, silicone water repellents are readily available. They are applied with a low-pressure spray or a good five-inch house paint brush and a step-ladder.

Although silicones are new commercially, one need not be ashamed if he is not already acquainted with them. Actually research on organo-silicon chemicals was going on in England and Germany as long as 100 years ago, and in the United States since the 1930's.

The classical study on the subject was that carried out by a great English chemist, Dr. Frederic Stanley Kipping of University College, Nottingham, who died in 1949 at the age of 85. He was more interested in working in the laboratory for the pure advancement of science, than finding something which would give added protection to a brick house or building. Kipping produced hundreds of compounds which he called "messy" materials, thus foreshadowing the name of "silly putty" which came along after World War II.

Entirely Man-Made

Silicones are entirely man-made, and the principal raw materials used by Union Carbide Corporation in producing them at its modern plant in Long Reach, W. Va., are silicon and chlorine and organic chemicals. Silicones have many interesting characteristics. One of them is the inherent tendency to be "hydrophobic," which simply means that they hate water.

Since they dislike water so much, the next step was to see if they could not be made into water repellents. Research chemists at the laboratories of Union Carbide Corporation went to work on the problem. After years of work, they developed a special silicone resin which is particularly well suited as the basic ingredient for the formulation of above-grade water repellents. It has stood the test of many experiments and actual service in the United States and abroad.

Essential Differences

The essential differences between silicone water repellents and earlier waterproofing materials are:

1. Silicones cause no change in the appearance of the structure when applied.
2. Silicones allow the masonry wall to "breathe," so that any moisture which is inside the building at the time of application can later escape.
3. Because of the chemical nature of the special "Union Carbide" silicone resin developed for this purpose, the useful life of a properly applied silicone water repellent runs up to 10 years.

Masonry is one of the finest materials for structures of all types—homes, schools, hotels, hospitals, public buildings, factories, clubs, etc. Stone, bricks, concrete, concrete blocks, cinder blocks and other masonry materials are widely used because each has many attractive features. All forms of masonry, however, have one common characteristic that has caused untold amount of damage and discomfort: Namely, the fact that masonry is porous and can absorb large quantities of water.

Here are some of the things that happen!

Masonry Is Porous

Water creeps into the masonry pores in cold weather and freezes. Expansion of freezing water causes little pieces to crack off. This is the process of weathering and spalling.

Water seeps in through the pores from the outside to the inside of a structure, causing paint to peel, woodwork to crack and warp, plaster to stain and fall apart.

Water carries dirt into the pores where it lodges and defaces the outside walls, often in streaks.

On brick walls especially, efflorescence, with its ugly white streaks, appears as water leeches salts out of the masonry material.

Since experience over the years indicates so plainly that masonry walls do need protection against water, all concerned are fortunate that the work of men of wisdom as well as men with practical knowledge of the problems of everyday life have joined to provide a form of insurance against water damage.

Brochure Describes Solution Standard Calcium Chloride In Ready-Mixed Concrete

An interesting four page brochure is available "How to Prepare Standard Calcium Chloride Solution" either for large or small quantity usage. Prepared especially for ready-mixed concrete producers, it also contains a chart on recommended gallons of standard solution per batch, depending on the percentage of calcium chloride desired and cement per cubic yard of concrete.

Noting the use of automatic dispensers, the brochure also contains information on commercial and shop-made automatic dispensers which have proved successful in field practice. A schematic is included for a shop-made unit which can be made easily.

Copies of "Standard Calcium Chloride Solution in Ready-Mixed Concrete" are available free by writing directly to Calcium Chloride Institute, 909 Ring Building, Washington 6, D. C.

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NEW PRODUCTS

A new automatic home water softener with pinpoint controls to assure an uninterrupted flow of completely soft water is being introduced by Culligan, Inc., Northbrook, Ill.

Featuring the new "square look," the 1958 Culligan automatic has an especially designed electric timer which automatically controls regeneration of the softener to suit individual soft water requirements, regardless of the size of the family or the home.

The new Culligan timer operates on a six-day cycle. It can be regulated to regenerate every sixth day, every third day, every other day, daily or more than once a day. The 24-hour electric clock which operates the timer can be set so that regeneration takes place at any pre-selected hour, day or night.

Another exclusive feature on the 1958 softener is an automatic switch which provides an extra regeneration without interfering with the regularly scheduled operations if there is an unusual demand on the home's soft water supply.

Connected to the solenoid valve which activates the regeneration process, the timer can be unplugged if the family goes away to prevent wasted regeneration when the home's water supply is not in use. When the family returns, the timer can be plugged in and the regular regeneration schedule will resume automatically.

Standard construction of building-type wires and cables has been improved through research and development by National Electric Products Corporation, Pittsburgh. The new construction incorporates a "Mylar" polyester tape and is the first to be marketed with Underwriters' Laboratory, Inc. listing.

"Mylar" a polyester film manufactured by DuPont is being used by National Electric as a replacement for the inner cotton braid on cable sizes No. 6 AWG through No. 2 AWG and the rubber-filled cotton tape on size No. 1 AWG and larger of types RHRW, RHW and RHH building wires and cables.

All laboratory tests prove cables utilizing a tape of "Mylar" to be equal, and in most respects superior, to those having rubber-filled cotton tape or inner cotton braid.

Several important mechanical and electrical characteristics of the material make it desirable as a component part of the protective covering. It has high resistance to abrasion and moisture, high dielectric and tensile strength, and normally reduces the overall cable diameter which results in lighter weight.

The results of specific tests prove that cables produced with a tape of "Mylar" and braid have approximately four times the abrasion resistance of cables with rubber-filled tape and braid. The construction containing a tape of "Mylar" and braid also has greater resistance to the effects of crushing. "Mylar" has the additional advantage of being resistant to acids and alkalis as well as outstanding long-term resistance to normal atmospheric oxidation.

Although the use of a tape of "Mylar" in building wire construction is considered a protective covering, it has high insulating values due to the high dielectric strength of the film. When tested according to ASTM-D-149, "Mylar" was found to have a dielectric strength of approximately 3150 volts per mil.

A new heat-shielding decorative plastic panel has been developed that reflects better than 80 per cent of the sun's heat, but at the same time permits light to pass through in soft, diffused form.

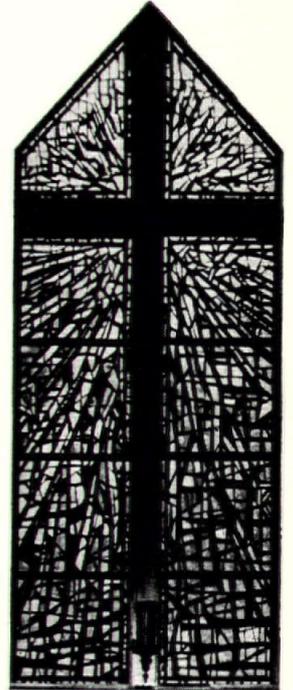
Called Foil-Glass, the new structural plastic panel employs aluminum foil as an effective heat barrier. It is manufactured by the Resolite Corporation, Zelienople, Pa.

The panel was developed by Resolite research primarily to answer the most common complaint voiced against plastic patios — the high heat level built up in bright sunlight.

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The Donald Sharp Memorial Hospital, San Diego, Calif. Architects: Stone & Mulloy and S. P. Marraccini, San Francisco. Structural engineer: George Washington, San Francisco. Contractor: Trepte Construction Co., San Diego.

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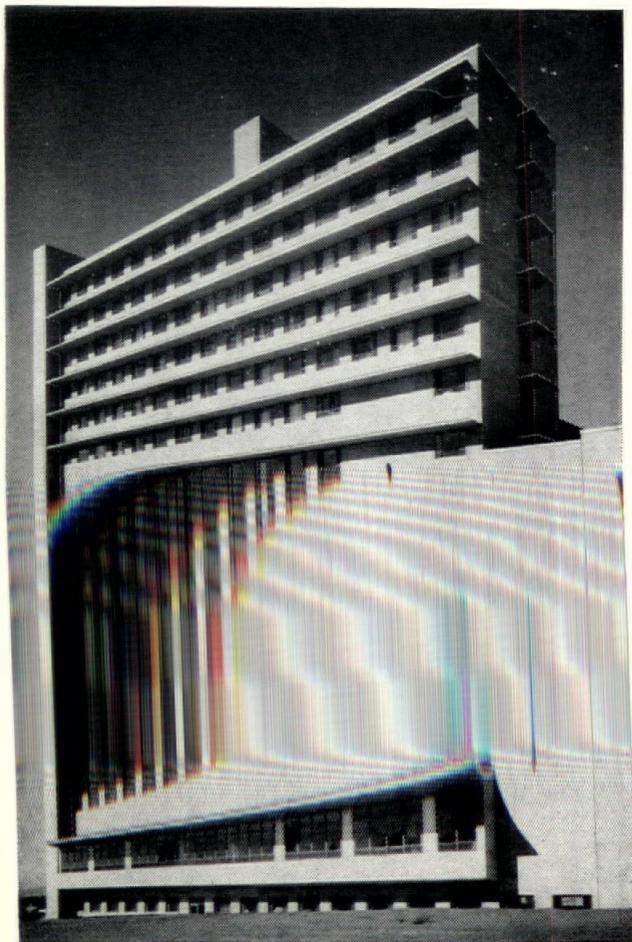
These two views of the Donald Sharp Memorial Hospital in San Diego, Calif. show the possibilities of architectural concrete in designing modern hospitals.

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