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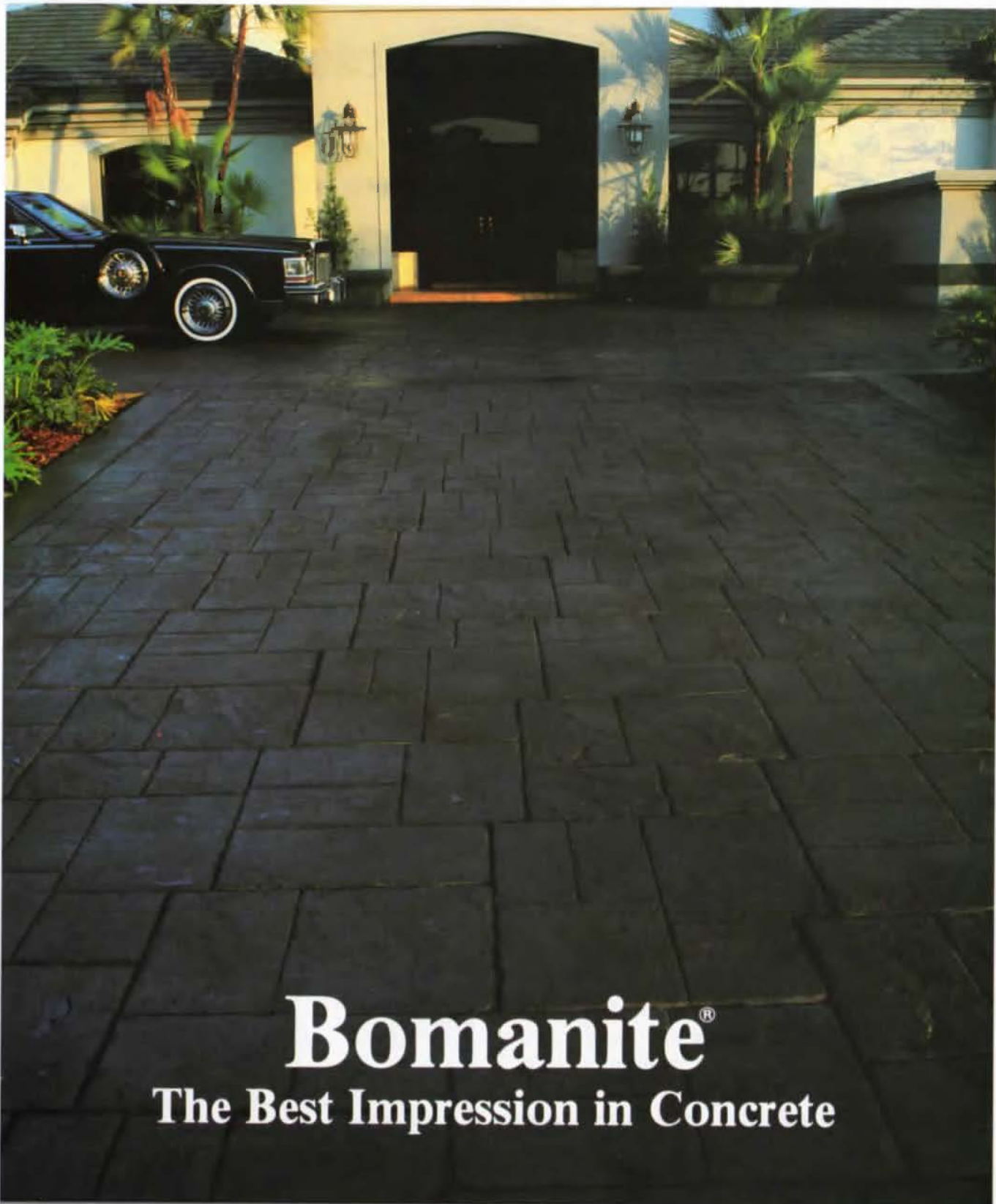
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ON THE COVER: Interior of Christ the King Lutheran Church, Houston, by Charles Tapley Associates. Photograph by Richard Payne of Houston.



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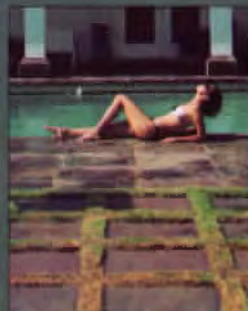
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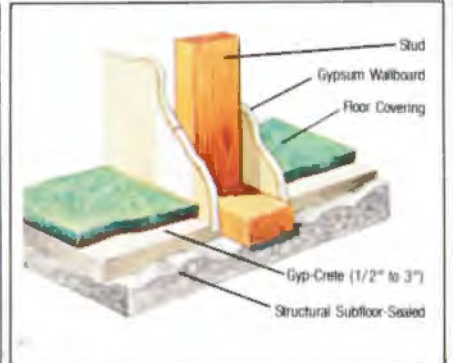
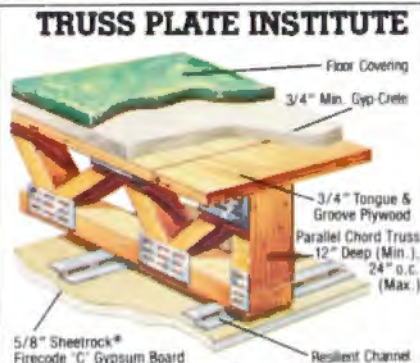
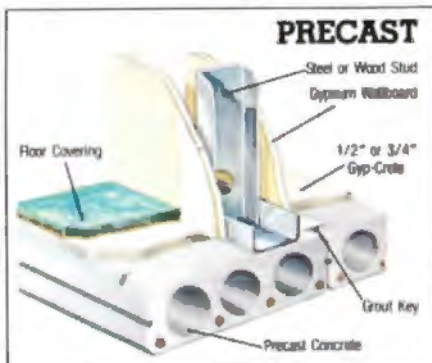
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EDITOR: I was most pleased to read the article in the May/June *TA* by our former friend and colleague Bill Caudill entitled "Paper Architecture."

Bill's recent and untimely passing was a definite shock to all who knew him, and our profession's loss is great. As Bill was essentially a teacher, his last article is full of fundamental good sense.

While Bill was teaching at A&M and before CRS came into being, he used to have me talk to his students on many occasions. Although our philosophies of architecture were not the same, we always respected each other's work. Organic architecture was not Bill's or CRS's cup of tea, but Bill was always most generous and sincere in his comments on our work, which made me respect him even more.

"Paper Architecture" is a timely article and a fitting conclusion to a distinguished career. Thank you for publishing it.

Karl Kamrath, FAIA
MacKie and Kamrath Architects
Houston

EDITOR: As the architect of the David-Peese House featured in the May/June 1983 issue, I would like to remark how satisfying it was for me to work with part owner Jim David, an accomplished landscape architect who insured that the house would be more than a mere building. It is, instead, part of an evolving environment where landscape and building are mutually enhancing.

I also was pleased that Gerald Allen, in his introduction to the issue, emphasized the relationship and responsibilities that a single-family, custom-designed house has to the larger environment. However, his cursory treatment of those "sitting ducks" featured in the issue missed the mark, intent as it was on the

pursuit of lovely allegorical instruction. Closer inspection of the houses in the subsequent features reveals real attempts to make their designs responsive to their diverse locales as well as suitable to their clients.

James Coote
Austin

EDITOR: I read the article on the Laguna Gloria Art Museum project in the May/June issue of *Texas Architect* and wanted to tell you how much I liked it. It was highly enjoyable reading as well as true to the facts. I wholeheartedly agree with your bottom line that the chemistries and egos involved are potent and various, and will indeed create a dynamic museum.

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EDITOR: Post-Modernism may well be coming to Austin in the form of Venturi, Rauch and Scott Brown's design for the Laguna Gloria Art Museum (*Texas Architect*, May/June 1983), but apparently the excitement was too much for your correspondent. How else to explain the statement that Mr. Venturi is "the biggest name to enter the Austin architectural scene since Edward Durrell Stone worked on the Westgate Apartments near the Capitol in the early '60s"? Gordon Bunshaft, FAIA, a most distinguished American architect, designed the LBJ Library and Museum, 1967-71. Fleeting is the fame of a Modernist in this Post-Modern age.

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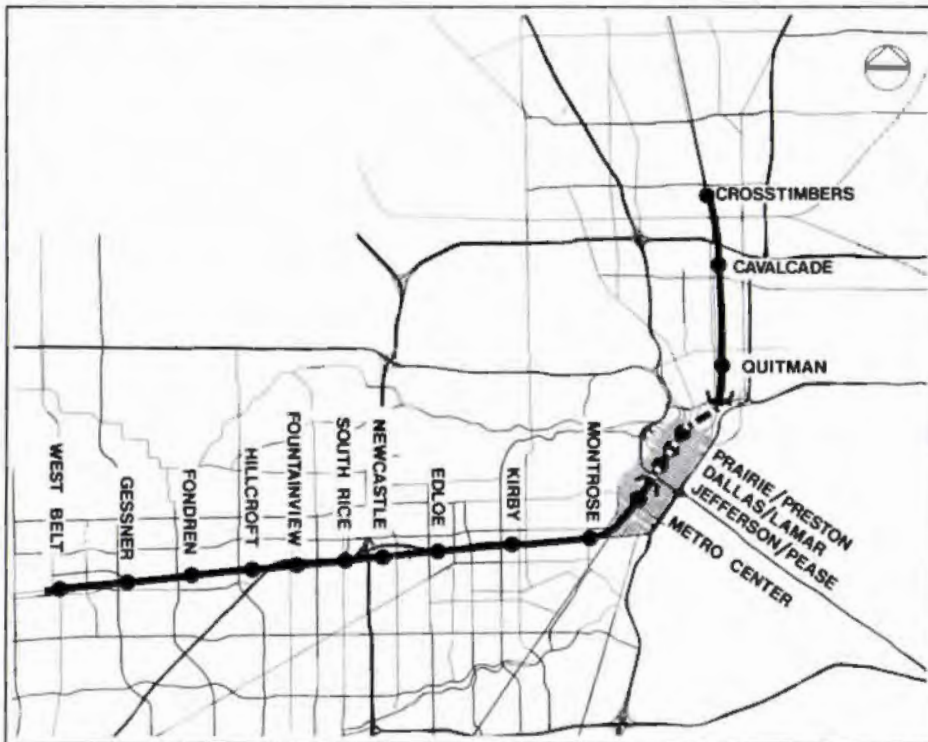
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Edited by Michael McCullar



Proposed route and station locations for first leg of Houston's ill-fated rapid rail transit system.

HOUSTON VOTERS DEFEAT RAPID RAIL TRANSIT SYSTEM

The development of a fully integrated transportation system for Houston was dealt a major blow June 11 when voters defeated a referendum that would have allowed METRO (the Metropolitan Transit Authority of Harris County) to issue bonds for construction of the first leg of a regional rapid rail transit system (see *Texas Architect*, November/December 1982). The loss stunned METRO, which had been planning a rail system for almost four years. The full impact of the defeat cannot yet be assessed, but the rapid rail program, which had been proceeding at a rapid pace, has indeed been derailed, at least for the moment.

The referendum proposed granting METRO the authority to issue bonds for

over \$2 billion to be paid off from future sales tax revenues. These bonds were to pay for a program of bus transitways, park-and-ride lots, maintenance facilities and the first 18 miles of rail. The rail portion of the program would have accounted for about 80 percent of the total expenditures.

The most important reason for the loss may have been METRO's failure to educate the voters about the specifics of the program. There was a widespread, but mistaken, impression that taxes would be raised to fund it. Some voters apparently thought the system was all elevated while others thought it was all subway. There were no renderings to show people what the money would buy. METRO failed to counter arguments that only three percent of the people of Harris County would benefit from it. In all, METRO apparently won the civic

leadership of Houston, but lost at the grassroots.

As a result of the loss, the Federal government reallocated \$110 million that had been slated for the METRO rail project. The monies will now go to other cities, such as Los Angeles, Atlanta, Miami and St. Louis. Houston Transit Consultants, METRO's general architect/engineering consultant, has laid off almost 200 rail-related personnel, and contracts with many local architect and engineering firms for the final design have been terminated. METRO has estimated that the rail system would generate over 9,000 construction jobs starting in 1984. Now the construction picture in Houston looks bleak for many large contractors as other construction lags.

METRO has announced that it will, in the aftermath of the defeat, accelerate bus-related improvements and seek citizen input to determine what triad of a public transit system to build. It has been suggested that METRO reconsider alternative technologies such as light rail or monorail. Given METRO's four years of comparative study, however, and the known transportation requirements in southwest Houston, it is hard to see how any technology other than rapid rail can meet the demand.

Meanwhile, the Federal withdrawal of funding reflects the national perception of Houston as a result of the vote. On June 19, the *Washington Post* titled its article on the loss "Thinking Small Derails Big Bucks for Houston," and quoted one Texan on Capitol Hill as saying, "I think we just got shot in the foot by our constituents." Houston, which has been at a competitive disadvantage for years in attracting new businesses because of its transportation problems, must now wait for a new transit plan and another referendum before it can claim to be making any progress.

The competitive disadvantage may

grow even worse if Dallas succeeds in passing the DART referendum August 13. This referendum would create a Dallas Area Rapid Transit (DART) authority similar to Houston's METRO. The referendum would fund the program by a similar one-cent sales tax, but it would also approve a long-range plan for 160 miles of light rail and would allow DART to issue about \$3 billion in bonds to begin construction of the first phase of the system. Should the DART referendum pass, Dallas could become the leader in public transit in the Southwest.

It is worth noting that the WMATA system in Washington, D.C., lost one referendum before it was approved by the voters, and the MARTA system in Atlanta lost twice before it was finally approved. Today these are both successful rail systems and are viewed with pride by the citizens of those cities.

VENTURI SHARES APPROACH, PREDILECTIONS FOR NEW LAGUNA GLORIA IN AUSTIN

There are few better places in which to introduce an "outsider" to the essence of Austin. In town to reconnoiter the area for imagery to use in designing the new Laguna Gloria Art Museum downtown (see *Texas Architect*, May/June 1983), Philadelphia architect Robert Venturi, FAIA, met with the press June 18 on the grounds of the existing museum in West Austin (the old Clara Driskill Sevier estate). Conferees sat informally in a circle of folding chairs on a deck behind the new Laguna Gloria Art School (designed by the Austin firm Renfro, Steinbomer & Petty), overlooking Lake Austin and shaded by a canopy of live-oak. Squirrels rustled in the leaves overhead and hopped across the spongy St. Augustine lawn. The Saturday morning session was casual and laid-back in the traditional Austin sense, with just enough fine coffee, croissants and banter to make it innervating. A boatfull of people passed and waved from below, and Robert Venturi—in tie and rumpled seersucker coat—smiled and turned and warmly waved back.

In spite of their fame and influence on the cutting edge of contemporary archi-



Laguna Gloria Art School.

tectural thought, Robert Venturi and his wife and partner, urban planner Denise Scott Brown, are very nice folks, and they have not stormed into Austin with rolls of preconceived museum plans under their arms. Regularly reminding their interrogators that it is much too early to talk about the design—which they hope to unveil by Christmas—Venturi emphasized that their immediate objective this trip was to "connect with the local ethos of this place," and to do so in a "profound manner."

To those ends, Venturi and Scott Brown were taken on long tours of Austin and its environs during their four-day visit, paying particular attention to activity areas of the central city, Sixth Street, the University of Texas, govern-

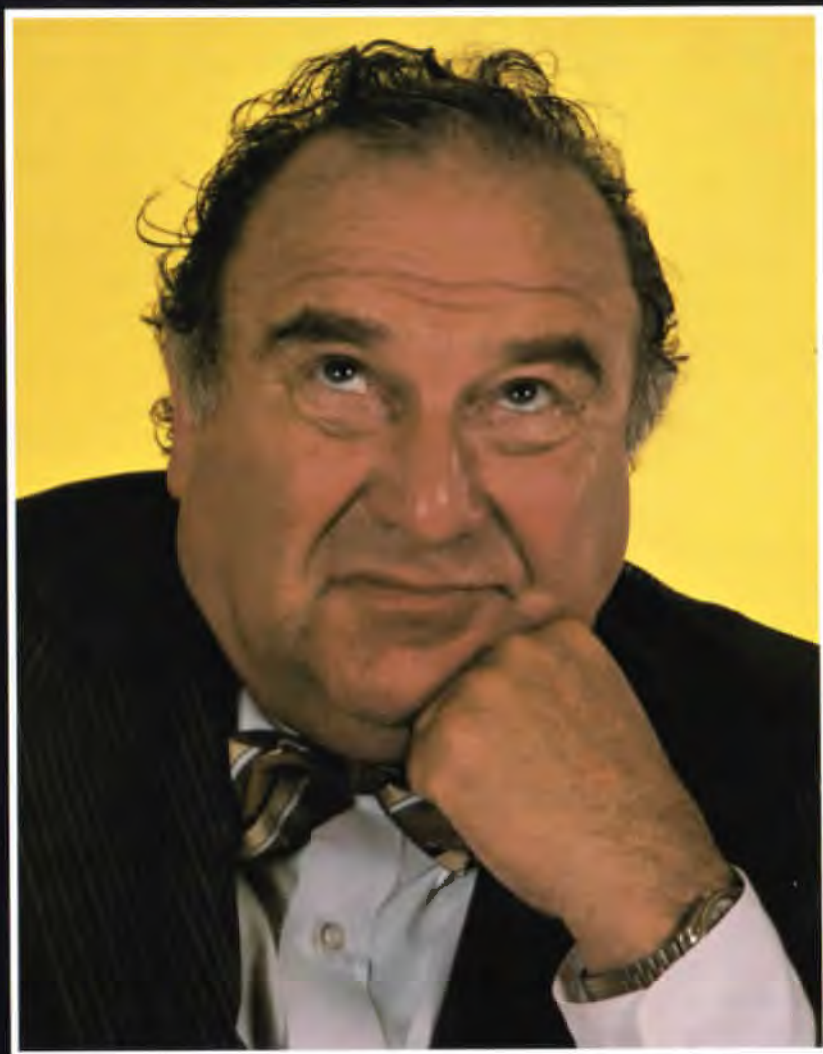
ment buildings, Town Lake, landscaping and foliage, public sculpture, the "ordinary" vernacular of the commercial strip. What has impressed them so far, they said, are the trees and carpet grass—and the "high, cool light palette" of the limestone and buff brick that make up so much of Austin's old commercial architecture and that so directly reflect the unique condition of the earth and the light in this part of Texas. "An outsider will miss a lot," Venturi said, "since the place is not in his blood. But he will also see things that residents don't."

Since it was agreed that discussion of the museum design would be rather premature at this stage, questions were asked mainly about the programming and master-planning of the project, which will be the centerpiece of a multi-block mixed-use development in Austin's old warehouse district. Project architect David Vaughn said that museum representatives and architects are now talking about the existing qualities of the Laguna Gloria Art Museum as an Austin institution and how those qualities can be maintained—and enhanced—in a different locale. The 77-year-old Italianate villa, home for the museum since its founding in 1943, may have been out-



Old Clara Driskill Sevier estate, present home of Austin's Laguna Gloria Art Museum.

CHARLIE'S ROASTING



Actually, Charlie roasts every sunny afternoon. In fact, during July and August he's well done at about 5:00 P.M.

You see, Charlie's desk is next to a south facing window-wall in a nifty, new office building in Virginia. The architect's idea of collecting passive solar energy was great last winter. But this summer Charlie needs help and neither the building's air conditioning nor solar tint glazing are quite up to the task. Sure he could close the blinds. But Mildred over in accounting would complain that she couldn't see the Blue Ridge Mountains just over his left shoulder. And Agnes in sales service would say she can't work in the dark.

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grown by the museum's holdings and programs in recent years, but it still has an open, airy, homey atmosphere that museum staffers would hate to see lost in the move. Their greatest concern, says Laguna Gloria publicist Sherry Smith (though they don't expect it to happen), is that they will be "hermetically closed in" in the new building, with hardly any contact with the outside. "Laguna Gloria thinks of itself less as a museum of objects and more as a place for human activity," said Vaughn, aware of the museum's special needs.

Such concern brings to light a "contradiction" inherent in museum design, said Venturi, author of the book that many believe blazed the trail for the Post-Modern "movement," *Complexity and Contradiction in Architecture* (Museum of Modern Art, New York, 1966). "To what extent is the architecture inside a museum to be positive and to what extent is it to be neutral—like a stage set?" Traditionally, museum design has leaned toward either of two extremes: the museum as a monumental, palatial work of art itself; or the museum as a place that is flexible and subordinate to the art it contains. Venturi said they are going for both: a Laguna Gloria that will satisfy programmatic requirements to a tee as well as make a meaningful artistic statement. And, as in their addition to the Allen Memorial Art Museum at Oberlin College in Oberlin, Ohio, they will insure that museum visitors are not swallowed up in a spatial vacuum when they come to see the art or to take part in museum activities. At Oberlin, Venturi said, "there are occasional windows that you can look out of from time to time and say, 'Ah, I'm at Oberlin.'" The main thing, he said, is that you shouldn't try "to take art away from the world."

The master plan of the museum's context, said Scott Brown, calls for the new Laguna Gloria to be an important "civic anchor" in the revitalization of the warehouse district just north of Town Lake. But the presence of the museum, contrary to its community-wise intent, will probably contribute to the commercial "gentrification" of the area. Like the emerging Dallas Arts District, which features Edward Larabee Barnes' new Dallas Museum of Art, the Austin com-

plex may become too high-dollar for the kind of small arts groups and "Mom-and-Pop" enterprises that contribute so much to the cultural richness and diversity of a truly vibrant downtown. Hard economic reality has done as much to Austin's celebrated Sixth Street, which started out as a nice Bourbon-Street mix of ethnic cantinas and chic fern bars but which is now made up almost exclusively of the latter. Nevertheless, Scott Brown, who characterizes their Philadelphia architecture firm as a Mom-and-Pop enterprise in its own right, said that such traditional elements of the central

city have a way of going down in one place and springing up in another, and that construction and operation of the complex will increase employment in downtown Austin, which will be good for everyone.

In any event, Venturi and Scott Brown have a wealth of indigenous imagery at their disposal for designing the new Laguna Gloria—not the least of which, even this far north, is the occasional palm tree, offering a kind of contradiction of which Venturi is especially fond. "What Bob really likes," said Scott Brown, "is Gothic with palm trees."



"Reconstruction" by Victor Blavette of Telesterion in Eleusis, Greece (1884).

'PARIS-ROME-ATHENS,' MUSEUM OF FINE ARTS EXHIBITION, IS A TESTIMONY TO TASTE OF AN ERA

The vagaries of architectural fashion condition the interpretation of historical "fact," and cultural values are projected through point of view. Current taste shows an affinity for ornament, axial composition, and the expression of mass over volume—in short, all those elements denounced in Hitchcock and Johnson's *The International Style* or Barr's *What is Modern Architecture?* An inversion, in other words, of the reactionary to the *avant-garde*.

It was the tempestuous times of *les événements de mai 1968* that resulted in the dropping of the architecture curriculum from the Ecole des Beaux Arts in Paris, and the competition which had been at the core of its educational expe-

rience. In recent years, however, the French have been discovering their own history, and the great collection of drawings produced by the student winners of the *Prix de Rome* have at last been brought forth with a new respectability.

The architectural drawing, today the subject of increased aesthetic and commercial interest, was the only medium used by these students. Studies at the Ecole included an integrated education in sculpture and painting as well as the principles of architecture; the study of technique was thereby synthesized in the architectural drawing. Representation of texture, surface, material, light, shadow and depth were rendered through impressive and skilled manipulations of graded washes, combinations of inks and so forth. These renditions, in effect, were works of art themselves.

The recipients of the *Prix de Rome* were expected to spend five years at the

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French Academy in Rome as a *pensionnaire*, as a means to draw directly from classical antiquity. As a fulfillment of this honor, drawings were shipped back to Paris for exhibition. These *envois* consisted of two parts: first, the documentation of a classical site, and second, a "reconstruction" of the subject. In this process, two valuable products were the result.

The documentation was based on hands-on encounter with antiquity, involving direct archeological activity. Before the advent of modern photographic technology, these surveys represented a valuable inventory of key monuments and their basic accuracy has held up all the years since.

It was in the reconstructions that the theoretical and aesthetic interests of the late 18th, 19th and early 20th Centuries find their record. Seen in the work of the *envois*, the tastes and process of professional recognition are progressively and clearly manifested. One aspect, clearly seen in the chronology of the collection, is the dramatic proposition of the uses of polychromy in antiquity. It was to Greece in the 19th Century that attention turned as the great source of Western aesthetic culture, and after 1845 Athens began receiving the *pensionnaires* on a regular basis. The discovery of Pompeii had been a first step on the road to polychromy, and the blood-red wall colors soon found their way to restorations of the Parthenon. This was in sharp contrast to the chaste classicism interpreted in the architecture of Etienne Louis Boullée, and reflected the evolving tastes of the 19th Century.

Exoticism and the free eclectic mix of elements and motifs characterized the restorations of this period. The Second Empire and the evolution of a *bourgeoisie* class conditioned the perceptions and fantasies in which antiquity was interpreted.

In the *envois*, the architects could actually reach a broader public. These series became, in effect, exemplars of the creative talent of the architects, and a means to fit an image to the aspirations of potential clients. As such, the drawings document a complex process of taste-making.

Beyond this, the drawings themselves are simply impressive. For our own

time, they fit and also challenge the sensibilities of Post-Modernism. As technique, they overwhelm the production of recent years.

Originally shown in May 1982 at the Ecole des Beaux Arts itself, the exhibition *Paris-Rome-Athens* travelled to the National Gallery in Athens in October 1982, and opened at the Museum of Fine Arts in Houston on July 1, 1983. The Museum's first architecture show, it creates a credibility for material of this sort in a museum context. The resonance of classicism still reaches the public audience, and the pure technique of the drawings, some as large as 15 feet, impress in their richness and precision. As a testimony to the taste of an era, the *envois* are a cultural document, and a collection that makes us ask how it is that we view our past and project our future.

—Peter Papademetriou



L. D. Morrison Police Academy, Houston.

HOUSTON POLICE ACADEMY CITED IN JUSTICE FACILITY EXHIBIT

The L. D. Morrison Sr. Police Training Academy in Houston, designed by the Houston firm The McGinty Partnership, was one of six projects cited for "special design features" in the 1983 Exhibition of Architecture for Justice.

This year's 36-project exhibition, sponsored jointly by the American Institute of Architects and the American Correctional Association, will be held Aug. 7-11 at the ACA Congress of Correction in Chicago and Nov. 10-12 at the AIA Committee on Architecture for Justice Conference in Washington, D.C.

The \$10-million, 100,000-square-foot Houston police academy is a five-build-

ing complex near the Intercontinental Airport containing such facilities as classrooms, offices, a museum, an indoor pistol range, driving tracks and a mock combat village. The academy "embodies the vigor and importance of law-enforcement training," judges said. "Both aesthetically pleasing and functional in design, it reflects the high expectations placed upon those charged with protecting the public." Jurors also noted among exhibition projects in general the use of "softer, more humane architectural designs" and a greater concern for energy.

Also featured in the exhibition is an addition to and alteration of the Jefferson County Courthouse in Beaumont by the White Budd Van Ness Partnership of Houston and Beaumont.

Serving on the exhibition jury was Houston architect W. Gene Williams, chairman of the Texas Society of Architects' Architecture for Justice Committee. Other jurors were Aaron A. Brown, of the National Institute of Corrections in Washington; J. Stuart Cauley, Toronto; Mary S. Galey, Washington; and T. Don Hutto, ACA president-elect, of Richmond, Va.

TEXAS CONSTRUCTION ACTIVITY SHOWS 22 PERCENT INCREASE FOR FIRST FIVE MONTHS OF 1983

Construction contracts in Texas for the first five months of 1983 reflect a 22 percent increase compared to the same five-month period in 1982, according to McGraw-Hill's F. W. Dodge Division.

Dodge Vice President and Chief Economist George Christie reports that contracts for residential and non-residential building statewide totalled \$7,736,343,000 for January through May 1983, up from a total of \$6,033,026,000 for the same period last year.

In the Houston metropolitan area, however, residential and non-residential building contracts show a three percent decrease for the first five months of 1983. In Brazoria, Fort Bend, Harris, Liberty, Montgomery and Waller Counties, contracts for January through May

NEWS, continued on page 77.

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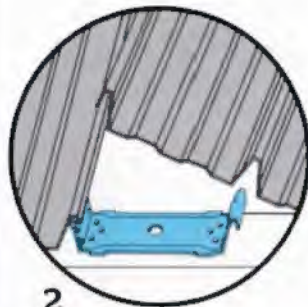
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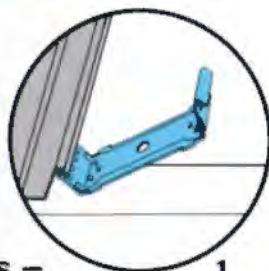
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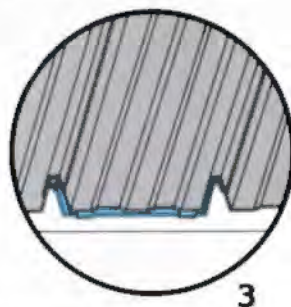
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St. Cecilia Church, Houston, by Charles Tapley Associates.

For a large segment of the population, the design of churches is hardly a burning issue. Yet it is probable that even the most irreligious of our lot have had meaningful experiences in the context of religious architecture. Even when the building is totally uninspired (as is often the case), the experience can be moving because the church or the cathedral or the synagogue is the setting for those rites that occasion the extremes of human emotion. This reality, coupled with the capacity for architecture itself to lift the human spirit, accounts for the appeal and the potential that architects find in the design of religious buildings.

The allure of church design commissions has been further enhanced recently by a trend documented, even in the popular press, as a kind of "counter-revolution" in religious architecture. The new movement marks the end of the secularizing trend of the '60s and '70s that, coupled with vestiges of Modernism, produced churches that did not *look* like churches and that, furthermore, offered too few redeeming architectural qualities to compensate for the rejection of traditional forms. Just as in other building types, but even more decidedly, the Postmodern predilections for color, tradition, allusion and meaning are appearing in the architecture of religion. Today's places for worship are more spirited than those of recent memory.

Even with the force of change behind church design today, the difficulties—albeit the challenges—are significant. By and large, churches have felt the same, if not more serious, monetary constraints that have dampened the general economy. Therefore, high aesthetic aspirations often conflict with low budgets when a new building is being conceived. In addition, it generally has not been easy to make money in church design, partly because of the well-known

difficulties in working with building committees. And in hard times, profits come even harder. So it is that the incentives for the church designer are often aesthetic rather than monetary, and even the aesthetic rewards can be jeopardized by the budget or by the extent to which the congregation seeks architectural inspiration.

Despite a move away from mere blandness in church design, there still are those who question the concept of a building that attempts to express in rather tangible ways the ultimately inexpressible glory of God. This view calls for a more practical, less monumental approach that allows for creative solutions while broadening the concept of worship to include an emphasis on the totality of life. Regardless of the particular approach, it is clear that, like any good house, a house of God should be a direct reflection of the life of the family it shelters. And the accommodation of a broad range of activities need not preclude architectural excellence.

A church may or may not represent the idealized union of the physical and the metaphysical. But, as a building type, it is set apart by one awesome distinction: the very erection of a church is an act of faith—the substance of things hoped for, the evidence of things not seen.

—Larry Paul Fuller

ARCHITECTURE AS A METAPHOR FOR FAITH

By Clovis Heimsath, FAIA

The church is unique as a building type, for its very program requires that it transcend the normal functional requirements of assembly, teaching and recreation to become a metaphor of faith. The metaphor of faith is achieved by the building's being "read" for its meaning. Since the Judeo-Christian traditions are thousands of years old, the metaphors developed today must be linked with centuries of expressive art and architecture. So it is that the church building program requires meaning and historic reference—the very issues currently raised by the Postmodern dialectic.

During the Modern era, the church was rather out of favor as a building type, for it seemed to cling to meaning and historic reference while architects were exploring new building materials, systems design and industrial components. The profession surely was not very interested in the continuity of crafts and the symbolism of building forms.

But the church miraculously has been transformed from the ugly duckling of the building community to the swan and is now swimming majestically ahead in significance.

MEANING AND THE MODERN MOVEMENT

If the church requires meaning, how was meaning manifest in the Modern Movement? (It is clear how the church manifested meaning up to the Modern Movement, for the church is the mainstay of architectural history.) Restatement of form in new materials was a technique used by masters for transposing spiritual meaning into building form. The Church of Notre Dame, Le Raincy (1922), by Auguste Perret, manifested the first direct expression of reinforced concrete, but the space remained the nave space of Gothic. Felix Candela in Mexico made similar curved-form transformations in reinforced concrete in the Church of La Virgen Milagrosa, Mexico City (1955), but the intent was a restatement of vaults. Le Corbusier at the Chapel of Notre Dame, Ronchamp (1955), continued the trans-

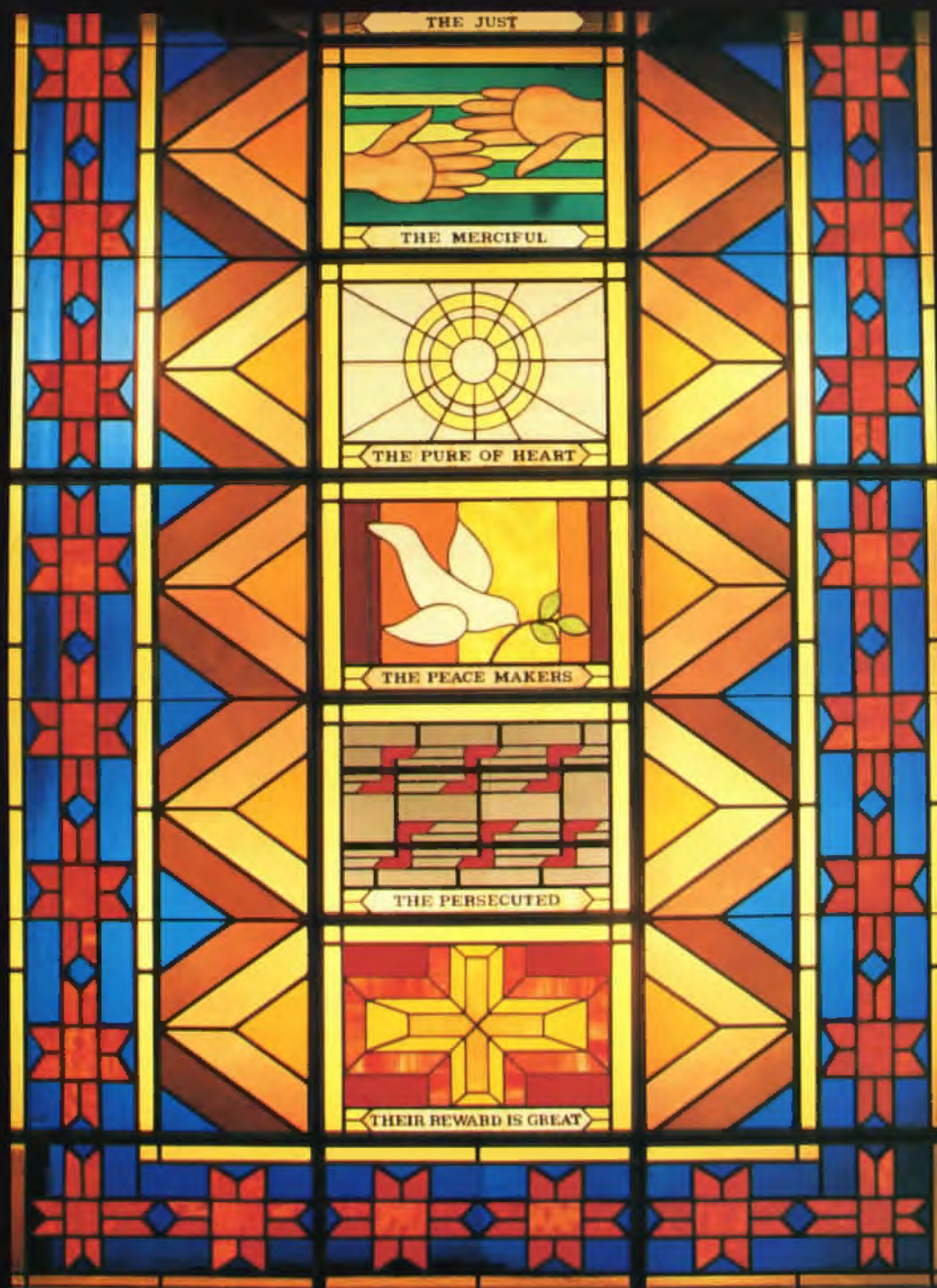
formation process by reinterpreting space, form and light and, in so doing, created a unique masterpiece by restating the sequence of worship. But the vast majority of churches built in the last 40 years have made very little attempt to create new metaphors for faith. Rather, a tepid catechism of acceptable design motifs seemed to take the place of vivid, spiritually committed design. Honest materials seemed a good idea. But that honest materials were also being used to frame the new family room of the same period did not seem to upset the church designer or building committee.

In liturgical art, it seems surprising that the bold colors and vivid human iconography of the works of Henri Matisse (Chapel of the Rosary, Venice, 1950) and Jean Cocteau (Chapel of St. Pierre, Villefranche-sur-Mer, 1955) have had so little influence in church art over the last 30 years. Liturgical art, like liturgical architecture, seemed to rely on works of the lowest common denominator rather than works of art that express the spirit. So any somewhat cubistic figure of whatever artistic merit seemed acceptable as a watered-down transformation from sculpted, cast pieces. The iconography of the least objectionable became the norm. Stations of the Cross, for example, became decorative crosses (of natural materials, of course) rather than images recalling the Passion.

THE DILEMMA OF CHURCH DESIGN

Can the lack of enthusiasm of liturgical architecture and art be placed at the door of Modernism? Probably not. If art reflects the culture of its time, then the tepid design of churches in the last 50 years reflects the hesitancy of believers to insist on meaning and historic reference in their buildings. Building committees were stressing the social commitment of the church and, in so doing, were developing the design dilemma of the modern age, the dilemma that haunts church design today. Simply stated, the dilemma is this: *if the church*

Can the lack of enthusiasm of liturgical architecture and art be placed at the door of Modernism? Probably not. If art reflects the culture of its time, then the tepid design of churches in the last 50 years reflects the hesitancy of believers to insist on meaning and historic reference in their buildings.



Window of new sanctuary, Clear Lake Presbyterian Church, Clovis Heimsath Associates, 1983. Window design and photo by Maryann Heimsath.

has a social commitment to perform good works in the world, how can it justify a) the extra cost of ornament which broadcasts a spiritual dimension and b) any space set aside exclusively for worship (occurring only once or twice weekly)?

The re-emphasis on meaning and historic reference in all churches today comes from their realization that social commitment is not enough. As the world at large was sobered to discover that good housing doesn't make good people, that simplistic architectural/social answers often do as much damage as good, so churches, however committed to good works, realize anew that there is more to the environment of faith than the functional place for assembly.

CUES AND SEQUENCE

How is a building translated into a metaphor? I propose two fundamentals, two that work together reinforcing one another: cues and sequence. Cues are the symbols one recognizes, consciously or unconsciously, that reveal the context of the place. Sequence is the choreography of movement through architecture, determining the order in which the cues will unfold. Experiencing a building is not a start-stop affair; one moves smoothly through the spaces. But in analyzing how buildings are created, it is effective to differentiate four rather distinct sequence steps: community, entry, interior and activity.

Community

The church is recognized as a place set apart. Therefore, the context becomes a cue to the message of the building. Sequence implies hierarchy and this is never more apparent than at the community level. One day we will return to the drama of baroque planning, with boulevards that have hierarchical buildings at the end of an axis (the church is a good candidate today, even as it was yesterday) and that convey a recognizable degree of meaning the viewer can experience without even entering the building. When you visit Copley Square in Boston, which do you remember, the Richardson church or the Pei skyscraper? Admittedly, context, as at Copley Square, is a complex phenomenon, suggesting the broad question of reuse of churches in changed neighborhoods. But through the complexity the fact must be acknowledged that successful churches begin from a distance.

Entry

Today the architect may find it difficult to sell a cast-bronze door pull on the front doors of a church. How far we've slipped from the traditional plaza that made the church a part of the city, the forecourt or atrium that became a place for spiritual reorientation prior to entry, the Romanesque or Gothic porch enriched with images reflecting the special place to be entered! The church must restore the hierarchy of entering if the full power of architecture is to serve the community of believers.

Interior Ordering

If the moment of entering a building is a great architectural event each time it occurs (the structure changes from object to enveloper), then the reorientation after entering is equally significant. In the traditional church, the first interior space has been a foyer, usually low in volume to emphasize the contrast from foyer to sanctuary. Or the forecourt may be considered the entry, creating a certain indoor/outdoor ambiguity. But the cues upon entry must establish a lot of things: the quality of the space, the liturgical symbolism and the hierarchy of sequence. Simply stated, upon entering a church, one must have the answer to: Where is the sanctuary? The chapel? The church office? The washrooms? But one also must know the answer to a more difficult question: Why is this manifestly a church and not a library or a school?

Activity Area

In office buildings and schools, we call the activity area "work station." In a church, there needs to be another word, for we don't think of our activities in church as "work." This points up, again, the unique, non-functional character of churches. Going to church is a ceremony, a choreography, an adventure (even a bore). Whatever it is, it's not, strictly speaking, work. But the sequence leads to an activity area for worship, for education, for recreation, for fellowship. The cues that seem appropriate to each of these activities are different from cues in a YMCA or a school or a health club, even though similar activities are performed. The church, when successful, creates a symbolic world where each activity experienced is transfigured to symbolize the meaning system of believers. The family night dinner is not just a group of friends eating out—it is an opportunity for a family of believers to share a human experience in the ambience of shared beliefs.



Robert Ameret Cook

Detail, *New Covenant United Methodist Church, Sunnysvale*, by Parkey & Partners and Good, Haas & Fulton, 1983. (See page 42.)

FAITH AND FORM

A key to the richness of church design is that there is more than one faith and more than one way a given faith can be interpreted. To play back in a meaningful way the cues and sequences most appropriate to a particular faith, the architect must be immersed in that meaning system. One need not be of the faith—though it sometimes helps—but one must sense where in the spectrum of Western beliefs the particular congregation falls. (A helpful reference is *Religions of America*, edited by Leo Rosten, Simon & Schuster for Touchstone Books, 1975.)

The architect who studies the faith will find the process fascinating, for each faith suggests the emphasis of the worship place. In some churches, the emphasis is on outreach, recreation, day care, community service. In others, it is on the devotion of worship, the commonly acknowledged viewpoint of the Christian in society.

While the same elements—baptism (sprinkling or total immersion), preaching of the Word, Holy Com-

munion—can be found among Christian churches, each denomination determines which elements are emphasized. Non-worship functions are similar in most churches as well—classrooms, an activity space for meetings, dinner and recreation, a library and church offices. Here again, the faith determines the emphasis. In one church, the sanctuary becomes a multi-use space and is given a new name, a centrum. In others, the church body may be worshipping in a multi-use space while waiting to grow out of it and build a separate sanctuary.

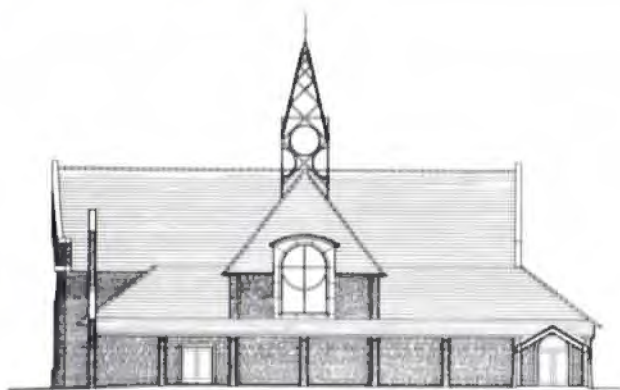
The importance of internalizing the faith is that it gives one the meaning system that needs expression. Translating this meaning is the architectural step, but that step cannot occur unless the internal logic of the meaning to be translated is understood. Thus, for the architect, participating in the adventure of the church choreography can be an important part of the professional, as well as the personal, quest.

The church program is at the center of the new renaissance occurring all around us. We are picking up the great heritage of architecture and merging it with the best of the Modern. The cues and sequences developed will depend on the many facets the church program suggests, and on how the designer addresses design dilemmas of critical importance today. How is meaning translated into form? How is transformation accomplished? Is literal recall an appropriate interpretation of the 1280s for the 1980s? How can crafts be reinstated as a metaphor of personal commitment? There are no easy answers, just a call for more architects in the vineyards, pursuing the hope that Texas churches will become a hallmark of design excellence.

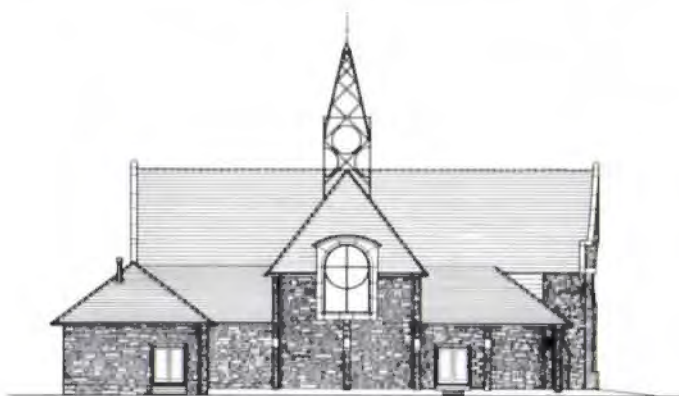
Architect and author Clovis Heimsath, a Texas Architect contributing editor, is principal of Clovis Heimsath Associates in Fayetteville, a firm for which the design of churches has become a major focus.



View to entry and south elevation.



West elevation.



East elevation.



South elevation.

CHRIST THE KING

By Will Cummings

When Christ the King Lutheran Church asked Charles Tapley Associates to design a new worship space, the resulting plan incorporated a fascinating set of varied historical references that, while building upon the themes of the older structure, did more than simply echo them. The structure of the new nave was intended to express growth and progression—appropriate themes, given that a moderate growth in the church's congregation had created a need for additional space. Constructed of similar materials, the nave employs a variety of stylistic elements that are distinct from, yet compatible with, those of the old church.

The earlier building is described by the architects as "a small, Normanesque, Proto-Gothic, stone structure with considerable visual quality." The new addition makes use of this context, complementing the pre-existing building while working with it to compose an interesting synthesis. Crucial to this synthesis is the arcade, an extension of the offices' frontal columniation. The arcade links the old structure with the new one while retaining the established pedestrian scale and forming a court that suggests a cloister.

There is a spatial progression from the earthbound solidity of the old church's low-slung, heavy trusses, to the gently scaled arcade, to the clarity and static simplicity of the porch, which screens a surprisingly light and airy nave. This nearly Gothic progression brings one to the altar, placed in the center of the nave to create a Baroque spatial effect reminiscent of Sir Christopher Wren's experiments in combining the longitudinal

(basilican) with the central plan.

From the porch one's gaze is drawn by the rhythm of the interior columns toward the apsidal bulge of the choir and then is urged heavenward by the steep ceilings to observe the cross formed by the roof.

The porch acts not as an extension of the nave, but rather as an independent space, in much the same manner as the additive porches of England's early Norman and Gothic churches. Those porches were often developed into decorative main entrances unrelated formally or spatially to the interiors they screened. The design of the porch at Christ the King is a Postmodernist borrowing from the Mannerist vocabulary; floating high up on the wall above the entrance to the nave proper is a shallow-arched lintel, embellished with a dropped key-stone. Framed by the lintel, the entrance is supported by a striking pair of green columns. This static, self-conscious facade, with its human scale and its air of stability, harkens back to the Norman attributes of the old nave while offering a sharp contrast to the spatial motion and apparent weightlessness of the new nave's hovering cross.

Christ the King is notable in that it delves into the grab bag of architectural history for a surprising succession of stylistic and spatial effects, integrating them in a way that complements and enhances the existing context while challenging—and inspiring—the observer.

Will Cummings studied architecture in Ontario, Canada, and currently is an architectural intern in Houston.



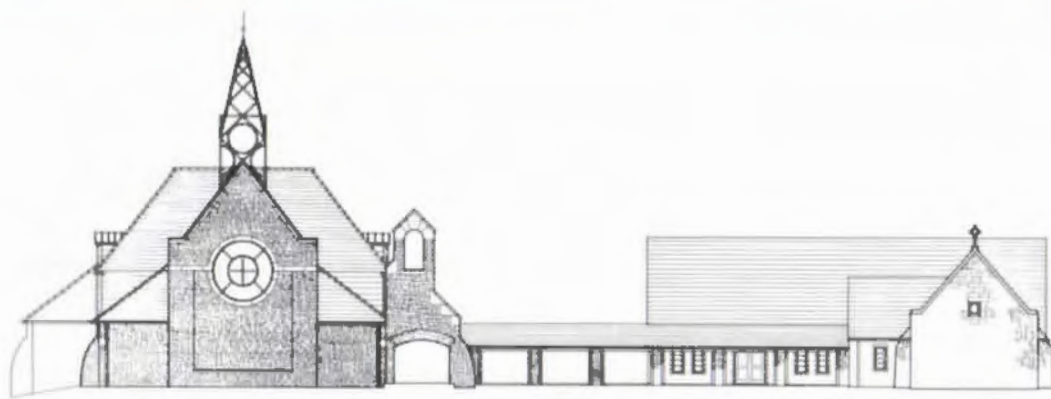
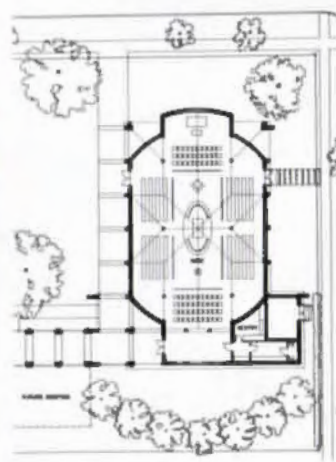
Photographs by Richard Payer



View toward choir.



New at left, old at right.



North elevation.

PROJECT: Christ the King Lutheran Church, Houston
 ARCHITECT: Charles Tapley Associates, Inc.; Project Architect—Gerald Moorhead
 CONSULTANTS: Walter P. Moore & Associates, Inc. (structural); Howard Pieper Associates (MEP); Boner Associates, Austin, (Acoustics).
 LANDSCAPE ARCHITECT: Charles Tapley Associates, Inc.
 CRAFTS: Brochstein's Inc., special chancel furnishings
 CONTRACTOR: W.J. Hessert Construction Co.

MOST BLESSED SACRAMENT

By Larry Good



Photo: Ames Cook

There are at least two design principles popular in this time of "Postmodern" thinking that are particularly valid, and that consistently contribute to the creation of fine architecture. The first is a concern for regional or local context, especially climatic conditions. The second is an educated borrowing from historic forms, images and arrangements that promote delight and understanding. Although Most Blessed Sacrament Catholic Church would rarely be identified as a Postmodern building,

its successful design springs directly from these two principles of Postmodernism. It is a skillful regional interpretation of historic European cathedrals.

Designed by Selzer Associates/Selzer/Volk/Borne of Dallas, the church is located on a wide-open 10-acre site in the northern part of Arlington between Dallas and Fort Worth. The building has five appealing qualities that are traditional and European in derivation:

- It is sited on the axis of an intersecting street.

- The approach is frontal.
- An open, paved plaza has been developed at the entry.
- The plan is axial.
- The form is symmetrical.

At the same time, the architects have made careful decisions that cause Most Blessed Sacrament to feel "just right" in North Texas:

- Locally produced brick and standing-seam galvanized-metal roofing are the major exterior materials.
- The buff-and-soft-gray palette reflects heat but does not reflect harsh light.
- Areas of glass are deeply recessed in shade.
- The simple vocabulary of forms is regionally familiar.

The program for the church was unusual in calling for a large permanent sanctuary as a first unit for the newly-created parish. But because the parishioners had been attending Mass at a well-developed existing church complex, it was felt that a formal worship space was necessary to attract families to the new facility. An additional benefit of this decision is that although the building is only phase one of a master-planned complex, it now feels complete exactly as it is.

The building's plan—a flattened octagonal sanctuary seating 750 surrounded with "servant" spaces such as classrooms and offices—is compact and functional, yet not easily perceived. Since cost was a concern, the classroom functions were accommodated in spaces set aside originally for other functions, such as the cry room and day chapel. This way a dual purpose was served and the area requirement was reduced. Parishioners, while meeting in temporary quarters for a time, exhibited a habit of staying after Mass or between Masses to socialize. Therefore, the program also included an unusually large narthex, which has been incorporated into the plan.

Still, the 22,000-square-foot building, together with its furniture and landscape, was not inexpensive; it cost \$2 million. Much of the cost can be at-

tributed to its muscular and expressive structural system. Cavity walls are of load-bearing brick with both internal and external pilasters and internal beams. This system of reinforced masonry creates what amounts to a reinforced-concrete frame with the brick as an attractive and permanent form. The roof structure features two beautiful long-span trusses of bolted glue-laminated wood beams and diagonal tubular-steel tension struts. These trusses support glu-lam purlins and exposed decking. The light fixtures were designed by the architects to meet the requirements of the committee.

The spatial quality of the sanctuary is uncompromisingly contemporary, mirroring the tastes and spirit of the young and affluent parish. A sculptural ceramic mural was designed and fabricated by Raventos, the Spanish liturgical artists, for the wall behind the altar. The rather literal presentation of the wine cup and bread plate, bordered with grapes and wheat, celebrates Holy Communion, the "most blessed" sacrament, from which the parish took its name.

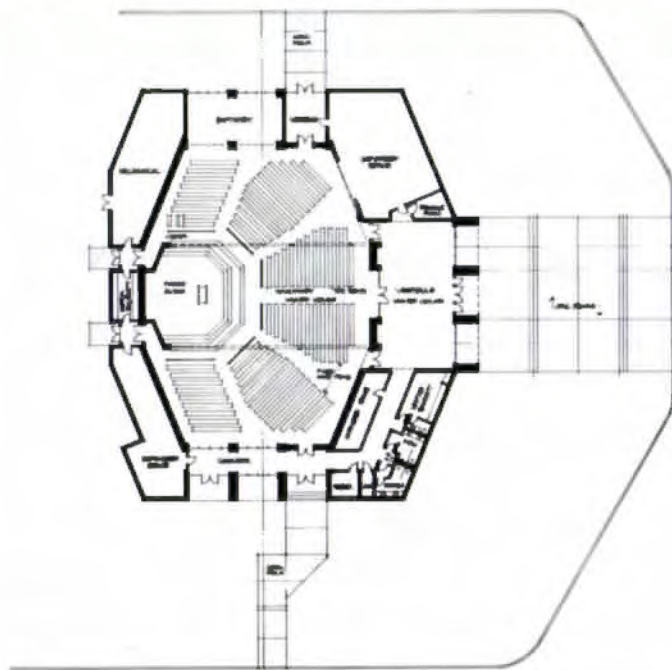
As is often true of good architecture, Most Blessed Sacrament is truly a joint venture of a talented architect and an unusually learned client. A detailed architectural program for the building was prepared by William Petrelli, AIA, an associate principal with JPJ Architects in Dallas, and a member of the parish. During the design process, Petrelli served as the liaison between architect and committee, often cutting through the trivia and helping to avoid committee compromise, which can dilute a strong concept. Selzer's strong concept survived here, was nurtured, and grew. Most Blessed Sacrament is a bold, fresh form, yet one that evokes familiar images.

Larry Good is a partner in the Dallas firm Good, Haas & Fulton and a Texas Architect contributing editor.



Simple forms are combined in a skillful regional interpretation of historic European cathedrals.

Robt. Ames Cook



Dale Selzer



PROJECT: *Most Blessed Sacrament Catholic Church, Arlington.*
ARCHITECT: *Selzer Associates/ Selzer-Volk-Borne, Dallas.*
CONSULTANTS: *Datum Structures Engineering Inc. (structural); Walter Cash & Partners (mechanical/ electrical).*
CONTRACTOR: *Pierce Constructors Inc., Fort Worth.*

CHURCH OF RECONCILIATION

By Lawrence Speck



Trellises reinforce the regional character of the building while affording a pleasant alternative to traditional stained-glass windows.

The Church of Reconciliation in San Antonio both acknowledges and extends a longstanding tradition of centrally planned churches. From Bramante's plan for St. Peter's or Borromini's Sant' Ivo to Eero Saarinen's Christian Church in Columbus, Indiana, or Louis Kahn's Unitarian Church in Rochester, New York, the centralized plan has been called upon, not only to focus attention on a spiritual locus so crucial to Christianity, but also to accommodate, with some intimacy, the functional requirements of congregational assembly. At its best, the type creates an impressive confluence of function, meaning and architectural form which seems particularly appropriate to the practices of contemporary worship.

Like so many of its precedents, Ford, Powell & Carson's Church of Reconciliation begins with a simple geometric shape in plan—in this case a square. Inside the square are inscribed a second, concentric square, a 12-sided polygon and a circle in a manner particularly reminiscent of Kahn's early schemes for his Rochester Church. The inscribed square is capped by a cleanly detailed, eaveless pyramidal roof reiterating in section the elemental and nodal character of the plan.

The interior space of the church essentially echoes its exterior form. Four squat masonry piers anchor the corners of the plan, leaving a residual Greek cross shape which is occupied primarily by the sanctuary. At the broad crossing a shallow drum, polygonal on the outside and cylindrical inside, is hung from the roof. Functionally, the drum houses mechanical systems and a sophisticated audio-visual capacity as well as a cat-walk for systems access and operation. Visually, it focuses all energy in the room on the central altar—a massive square surface supported by a cruciform base and placed on a raised circular platform. Consistent with Episcopal liturgy in general and this congregation's

beliefs in particular, communion is vividly designated as the central act of worship.

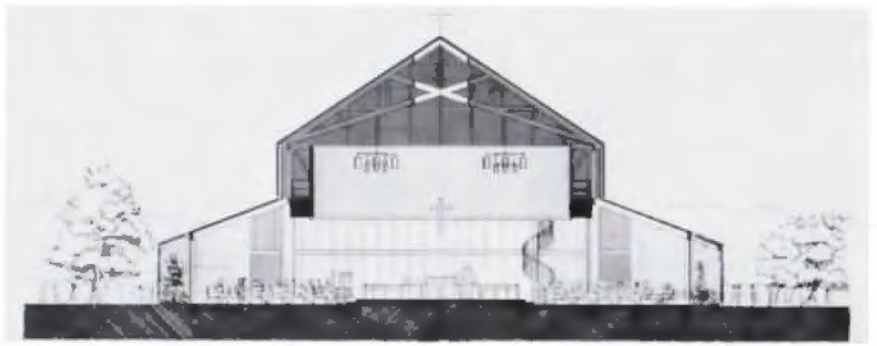
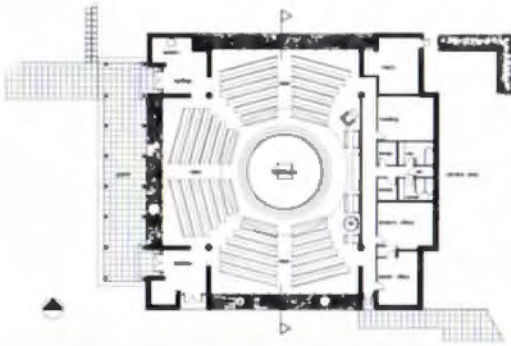
This is, as one member notes, a church "family." The symbolic expression of "communion" in their building easily can be seen to represent more than just the Christian sacrament. There is a desired sharing and participation among members which began at the inception of the congregation and which certainly was evident in the planning and construction of their building.

Members are proud to point to the work of their own hands, reflected in the carefully crafted structure. One parishioner obtained a donation of salvaged stone. Others invested sweat equity to bring the stone to the site. Still other members made the simple, craftsmanlike baptismal font, candle-holders, altar cloths and yards of needlepoint, needed to cover the kneeling cushions around the altar.

All of these contributions of the congregation are beautifully integrated into the design of the church. The stone is prominently displayed in massive, crafty masonry walls. Interior accessories complement and accentuate the architect-designed interior environment, producing an elegant, almost ascetic character.

In its simple, unpretentious way, the Church of Reconciliation expresses the beliefs of its institution. There is an air of spirituality, communion, participation and unaffected sincerity. This modest suburban church elevates its type to admirable and unusual standards of quality and appropriateness.

Austin architect Lawrence Speck is an associate professor at the UT-Austin School of Architecture.



All the energy of the sanctuary is focused on the central altar. Salvaged stone is displayed prominently in massive masonry walls.

Photograph by Rick Gaudin



PROJECT: Church of Reconciliation (Episcopal), San Antonio
ARCHITECT: Ford, Powell & Carson
CONSULTANTS: Feigenspan & Pinnell (structural); Clayton Lutz, P.E. (mechanical)
CONTRACTOR: A. E. Martin Construction Co.

NEW COVENANT

By David Dillon



Simple, straightforward space, enlivened by a lacy network of prefabricated trusses, will serve as a parish hall after a permanent sanctuary is built.

Before New Covenant United Methodist Church was built, the congregation met at a catfish restaurant down the street, a setting that undoubtedly gave the parable of the loaves and fishes a special relevance. While the new quarters are more conducive to prayer and meditation, they're not without the homely democratic touches that marked the church's beginnings.

Designed by Parkey & Partners and Good, Haas & Fulton, New Covenant United Methodist combines the traditional plan of a basilica with some of the forms and detailing of an old-fashioned country barn. Since the church is located in Sunnyvale, a small farming and ranching community 15 miles east of Dallas, these rural associations are entirely appropriate.

The basic form is composed of a high-gabled roof element with a clerestory—the basilica-as-hay-loft, if you like—set atop a broader base. The roof element is covered with gray plywood siding and standard asphalt shingles that look a bit like wood shakes. If the barn analogy had been applied consistently the entire church would have been finished in wood. Instead, it is covered with a dark brown brick that imparts a sense of solidity and permanence, if not necessarily more grace or charm.

The nave consists of a centrum seating 154 and a narthex or vestibule that can accommodate an additional 45. Narrow aisles run the full length of the nave, and are separated from the kitchen, classrooms and other support services by sliding panel doors. A master plan calls for converting this building into a parish hall once a permanent sanctuary is constructed, so the simple layout is at once functional and far-sighted.

The roof of the sanctuary is supported by a lacy network of standard prefabricated wooden trusses, similar to those used by the architects in Trailwood United Methodist Church in Grand Prairie. The trusses have been bolted together to give

them greater rigidity and architectural presence. Some are also backlit with neon lights, so that the lacy pattern can be projected even more intensely into the high, simple space.

The strength of New Covenant is the number of these sophisticated effects that have been achieved with simple, inexpensive means. The southeast facade, for example, contains three openings—for bell, light well and front doorway. All are slightly offset, and this imbalance establishes a subtle tension with the regular geometry of the rest of the facade.

On the northwest side, behind the dais, is a small outdoor garden with a wall just high enough to block both the sun's glare and the view of hundreds of campers and boat trailers making their way to Lake Ray Hubbard on a sunny Sunday—architecture to ward off temptation. This apse-like element connects visually to the nave by large windows that stack up into the rough outline of a cross. Outside, above the garden, the architects have set lighter-colored bricks into the darker background to form another cross.

Again, there is nothing fancy or pretentious about any of this. It is merely another illustration of the sophisticated use of standard materials and details that characterizes the entire project.

PROJECT: *New Covenant United Methodist Church, Sunnyvale*
ARCHITECT: *Parkey & Partners Architects and Good, Haas & Fulton, Inc., Dallas*
CONSULTANTS: *Hixson & Harris, Inc., Dallas (structural); K-R Engineering, Dallas (MEP)*
CONSTRUCTION MANAGER: *Cecil Thomas, Sunnyvale*

David Dillon is architecture critic of the Dallas Morning News and a Texas Architect contributing editor.



Photography by Robt. Amerz Cook



ABOVE: Northwest elevation. Wall encloses apse-like garden space.
LEFT: The basic form is a high-gabled roof element, with a clerestory, set atop a broader base.



Plan.



Northwest elevation.



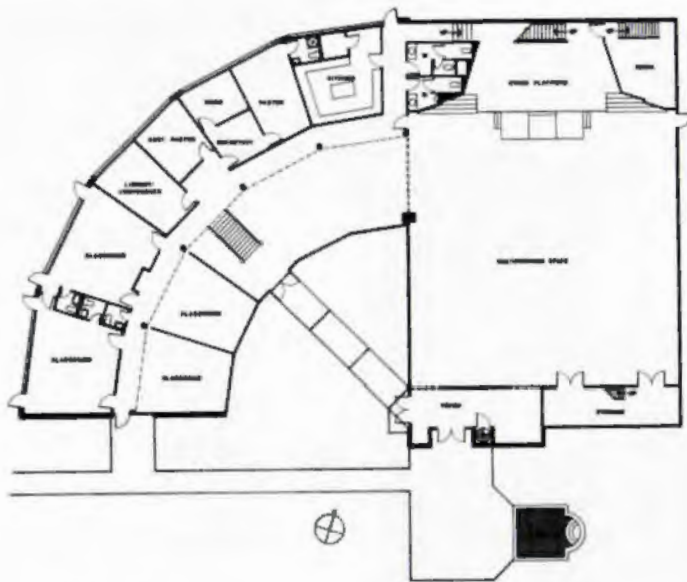
Southeast elevation.



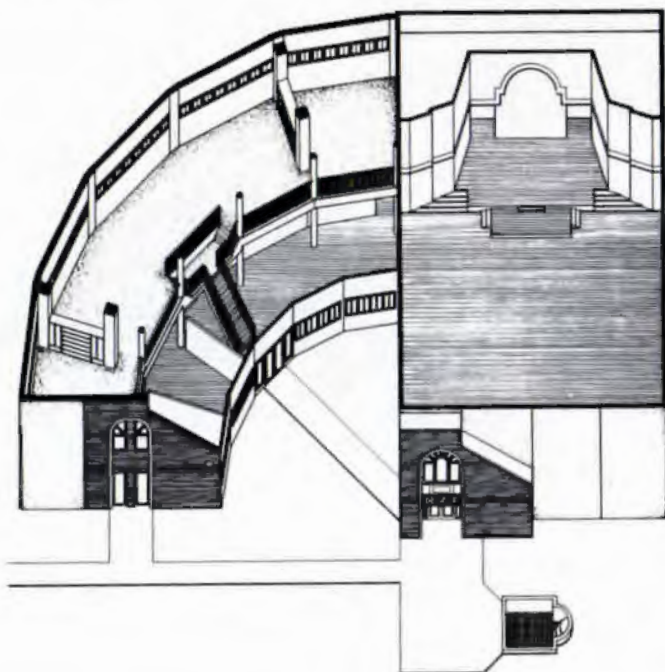
Southwest elevation.

FOUNDRY CHURCH

By Mike Godwin



First-floor plan



In designing Foundry United Methodist Church, Clovis Heimsath clearly adhered to his principle that the architect must create new metaphors for faith; the building does have its historical references, but taken as a whole, it is something new under the sun.

Although Foundry Church incorporates neither the soaring lyrical structure nor the vast symbolic space of traditional (and some Modern) sanctuaries, the rectangular multi-purpose worship space with its curved classroom wing is instantly recognizable as church—more specifically, as an *evangelical* church. Even from a distance, the “billboard” murals on the wing’s convex face reach out to believers and non-believers alike, expressing in a direct, literal way the message of Christ’s uniting the human with the divine . . . and the congregation’s acceptance of that miracle. At night, the murals’ “broadcast” is maintained by electric lighting, enabling the Bible-story images to compete with the secular iconography of Jersey Village, a Houston suburb. (“We have to make a statement at least as powerful as McDonald’s,” says Heimsath, whose original sketches for the ceramic-tile murals were developed and completed by Fayetteville artist Pat Johnson.)

Additional evangelistic elements appear as one nears the entrance of the multi-use space (or “centrum,” as Heimsath terms it). Though buff stucco is the major exterior material for both the centrum and the classroom wing, the entrances to both sections are framed in dark-red, “Methodist” brick that recalls the brick of the cannon foundry where John Wesley first preached indoors, and from which Foundry Church takes its name. On occasion, Wesley spoke from the balcony of that foundry, and Heimsath has provided a similar balcony for the church’s pastor, the Rev. Andy Andrews. Set above the centrum entrance, the balcony overlooks an outdoor fountain that also serves as a baptismal font for

those Methodists who opt for immersive baptism.

Running through the brick frontal elements is a “stripe” of blue ceramic tile that links the exterior both to the blue of the sky and to the centrum interior’s “graphic surround”—a blue, green and orange-red band that traces a series of Roman-arch forms as it encircles the interior, which doubles during the week as a basketball court. “The intent was to make it a more formal room than a gymnasium,” says Maryann Heimsath, who worked with her husband in developing the church’s color scheme. (Another device that suggests the formality of the space is the set of arches that divides the foyer from the centrum proper.) The sky-blue section of the multi-color band also harmonizes with the blue-painted gang-nail trusses that reach across the upper centrum space, while its orange-red section ties the graphic forms to the red-oak chancel furniture.

The thinner, green section of the band foreshadows the deep greens of the classroom-wing interior, which, with the removal of a partition at the left of the chancel, can serve as overflow space for the centrum. The concave side of the wing interior is organized as an interior street, along which the classrooms and offices are arranged like shops. The curvature of the interior street creates a focus on the worship-oriented centrum in much the same way the Main Street of a traditional village might culminate in a church-house—another Heimsathian “cue” to the centrum’s function, as well as a symbol of the importance of worship to this congregation. ■

PROJECT: *Foundry United Methodist Church, Houston*
ARCHITECT: *Clovis Heimsath Associates, Fayetteville*
CONSULTANTS: *Timmerman Engineers (MEP); Pieratt—Stalinsky (structural)*
CONTRACTOR: *Brookstone Construction*



TOP: Bible-story murals broadcast focus of church's ministry. ABOVE: Classroom wing's "interior street."



ABOVE: Brick-framed entrances recall Wesley's cannon-foundry church. BELOW: Roman-arch motif "formalizes" multi-use space.





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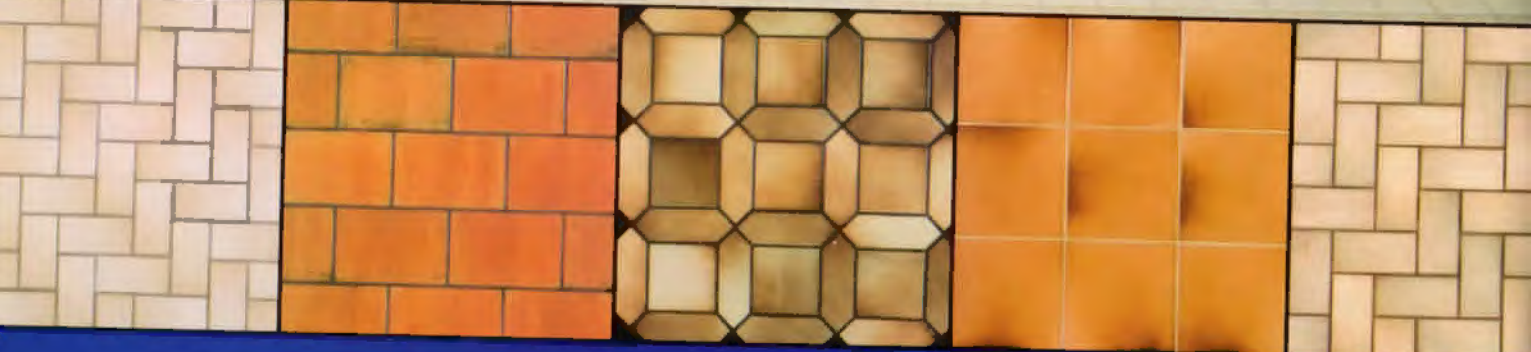
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THE TEXAS CHURCH HOUSE: A GENEALOGY

By Stephan Hoffpauir and
Michael T. Coppinger

Two young Houston architects trace the architectural development of places for worship in Texas—from the sacred caves of the Indians, to the Modern shoe-box form, to Postmodern recollections of classical designs.



ABOVE: Brethren Church, Industry, no longer extant.
FACING PAGE: Detail, Church of the Annunciation, Houston. Nicholas J. Clayton (remodeling and additions), 1889.

Strictly speaking, Texas' first "churches" were natural, rather than man-made, structures; the region's nomadic Indian population had no permanent settlements, no "architecture" to speak of. There were, however, "sacred" sites to which they always returned—often natural formations or caves. With the conquering Spaniards came the priests, and the Indians became Christian. Churches were needed, so the missions were built—San Jose, San Miguel de Aguayo and others of San Antonio; San Ysleta near El Paso, and others now vanished.

At the beginning of the 19th century, American settlers began arriving, bringing with them a rudimentary but effective architecture. The distinguishing features of these plain houses of prayer were often limited to the fenestration form or the tacking-on of a steeple. Many of these Spartan structures still stand vigil in the fields of the Hill Country.

Still later, groups of European settlers founded communities across central Texas. As these ethnic enclaves prospered and outgrew their first rough churches, they built new structures that echoed their European origins. Each town's culture was distinguished by the style of its steeple.

The Victorian Age and the Industrial Revolution fostered a new style that was both exuberant and daring: eclecticism. American architects, who had studied in Europe, returned to design churches that borrowed from the various historical styles. Their exuberant and fertile imaginations sailed on blithely into the 20th century until World War I, technology and modern art triggered a renewed examination of the purpose and origins of church architecture.

The church has always been unique as a building type in that its primary purpose has been to serve as an icon and a ceremonial vessel. Highly emotive, with a building tradition based firmly on models of the past, religious architecture did not fit easily into the Modernist doctrine of what great architecture should be. Great architecture was that which served practical needs, which made no concession to ornament, and which glorified the daily lives of its proletarian inhabitants. There was simply no way to justify the lofty volumes above a triforium. It is no surprise that the Modernists, with their emphasis on functionalism, never quite knew what to do with churches. Modernists were much more comfortable dealing with housing.

When Le Corbusier first started writing his manifestos in the 1920s, the world, and particularly Paris, was reveling in the euphoria of an era that hypothetically would never again see war, an epoch not of the nobility and the bourgeoisie, but of the common man. It was an age in which the notions of dialectical materialism and the dictatorship of the proletariat were on the ascendant.

In America the mood was equally upbeat, but Frank Lloyd Wright, though his doctrine was optimistic, was promoting architectural theories which grew more out of the Arts and Crafts movement and a kind of Jeffersonian contempt for all things urban. A war of words had developed between those calling themselves "Modernist" architects and those calling themselves "organic" architects. Economic depression and a second great war prevented either camp from making a significant impact on the built environment for over two decades. When the war finally ended, the reds got Eastern Europe and we got Italy; the Modernists got corporate architecture and the Wrightians got suburbia.

America, weary of the deprivations of war and economic pestilence, was ready for "la dolce vita." Workers' housing was fine for those who were not working, but the emerging middle class wanted sleek cars, picture windows and a backyard with a barbecue pit. It



Paul Hester



ABOVE: Golemon & Rolfe's St. Vincent de Paul. RIGHT: Saarinen's Tabernacle Church of Christ. BELOW: Koetter and Tharp's Trinity Lutheran.

Heinrich Blessing



was clear that the Usonian house was going to win out over the "machine for living." Since the Modernists and the organicists had staked their claims on everything but religious architecture, young, post-war, non-doctrinaire architects knew the church was up for grabs. Yet they had no strong example to follow when designing for both God and Mammon. Enter Eliel Saarinen.

A NEW PROTOTYPE

Saarinen was the best of both worlds. He was a European, born in Finland, but he practiced architecture in Michigan. Like the Modernists and the organicists, he both disdained the pastiches of historical styles and delighted in the asymmetrical disposition of balanced horizontal and vertical elements. In his Tabernacle Church of Christ (First Christian Church), Columbus, Indiana (1940), his forms and structural systems were reminiscent of those of the Bauhaus, but he used the highly textural materials of the Robie House. Recognizing that ceremonial requirements had remained relatively static over the centuries, he retained the traditional axial planning principles of historic churches and grafted onto them the forms and materials of 20th-century design. Traditional church members, accustomed to seeing moribund Gothicism, were pleased because the building was still recognizable as a church. Those who wanted a building that spoke of the age could relish the distillation of Christian theology into an abstract, simple and mysterious expression. The building was historical without being historicist.

John Rogers



Paul Hester



ABOVE: First Christian Church, Houston, by Hamilton Brown, 1959. ABOVE RIGHT: St. Michael of All Angels, Dallas, by Harwood K. Smith, 1964. RIGHT: First Baptist Church, Longview, by Wilson, Morris, Crain, Anderson — "a sort of 1950s Postmodernism."

Rick Grumbine



R. Michael Hawkins



Saarinen interpreted the religious vernacular in new and innovative ways that strongly influenced Texas architects in the 1950s. His free-standing belltower, looking like an oversized Sputnik-era hi-fi speaker, is virtually identical to that of St. Vincent de Paul Catholic Church in Houston (Golemon & Rolfe, 1953). The rectangular grid of the front facade and the large abstract cross, curiously unknown prior to the Tabernacle Church, appear on the First Christian Church in Houston (Hamilton Brown, 1959) and the Trinity Lutheran Church in Dallas (Koetter and Tharp, 1961).

More important, Saarinen popularized for better or worse the shoebox-shaped church. In addition to the traits already mentioned, this type of church was characterized by a box-like sanctuary whose virtually windowless side walls often sloped inward. It usually had either a flat or a gently pitched roof and a freestanding campanile positioned to one side. The style continued into the 1960s, and St. Michael of

All Angels in Dallas (Harwood K. Smith, 1964) is one of its better, less derivative examples.

The tone was set for a building type that henceforth would be exempted from the rigorous polemical requirements of doctrinaire Modernism. It had been shown that one could design a church incorporating traditional elements—nave, aisle, transept, and spire—and still retain the respect of one's colleagues, provided such a church was done in a Modern idiom. Such was the case of the First Baptist Church in Longview (Wilson, Morris, Crain, Anderson), which represented a sort of 1950s Postmodernism.

WRIGHTIAN INFLUENCE

All of this is not to say, however, that Frank Lloyd Wright's disciples had not made his presence felt in Texas. The Houston firm of MacKie and Kamrath, noted for its organicist designs as well as for its religious buildings, was producing elegant, meticulously studied churches and synagogues. Temple Emanu El (Houston, 1948), and Temple Rodef Shalom (Waco, 1962), were buildings that drew their inspiration more from Wright's domestic architecture than from his Unity Temple.

By the late 1950s, American architects were becoming increasingly aware of Scandinavia as a design resource. It was the era of Danish Modern, Bergman's *Virgin Spring* and smorgasbord restaurants. Eliel's son, Eero, drew upon the vernacular Scandinavian tall stave-church when he designed the Concordia Senior College Chapel (1958) in Fort Wayne, Indiana. Triangular in elevation and steeply pitched with the thinnest possible roof, the virtually wall-less church looked like a piece of paper folded in half and stood on end. It was neither the first nor the last example of the church-as-roof, however. Skidmore, Owings and Merrill's Air Force Academy Chapel (1956) in Colorado Springs, Colorado, and Harry Weese's First Baptist Church (1965) in Columbus, Indiana, were other notable examples.

CHURCH-AS-ROOF

The concept of the church-as-roof became immensely popular. It had historical roots, but its reliance on the new technology of the glue-laminated wood beam appealed to Modernists. Its beautifully abstract simplicity allowed innumerable variations. A stained-glass-filled pointed arch transformed this house of cards into a Gothic chapel. Some careful Wrightian



TOP LEFT: Temple Emanu El, Houston, by MacKie and Kamrath, 1948. TOP RIGHT: Concordia Chapel, Fort Wayne, Indiana, by Eero Saarinen, 1958. ABOVE: Air Force Academy Chapel, Colorado Springs, by SOM, 1956. LEFT: First Baptist Church, Columbus, Indiana, by Harry Weese, 1965.



FROM TOP: *Our Saviour Lutheran, Church of the Epiphany, St. Andrew's Presbyterian, Clear Lake Presbyterian, St. Barnabus Episcopal and, the epitome of "practical spirituality," First Baptist Church parking garage, Dallas (Hatfield Halcomb Architects).*

manipulations produced Our Saviour Lutheran Church in Houston (MacKie and Kamrath, 1961). The syntax of the form also was understood to speak of a new religious vernacular. The roof was so steeply pitched that one knew the volume of space beneath it could not possibly serve any utilitarian purpose and hence must be symbolic space. The form has been repeated so many times, in so many towns and hamlets, that it has become not merely a symbol of religious architecture, but a cliché.

The church-as-roof was to evolve further, however, in the late 1950s and early 1960s. Architects were learning that they could do other things with roofs besides folding them in half. Pier Luigi Nervi had designed the exuberantly roofed Palazzetto del Sport (1958) in Rome and Eero Saarinen the TWA Building (1956) in New York. This is not to mention the bizarre forms Oscar Niemeyer was creating in Brasilia. Since the hyperbolic paraboloid was being used as a cover for column-free buildings of assembly, there was no reason it could not be used for churches.

With the idea of roof as a symbol for church already well-established, the next step was to employ new technology to turn and twist it into eccentric and often free-form shapes. Perhaps the best example of this second-phase version of the church-as-roof is Clovis Heimstath's Church of the Epiphany (1974) in Houston. The wonderfully perplexing forms of this genre came to represent the mystical emotionalism that the great vaulted cathedrals had expressed in the 13th century.

FORSAKING THE AXIAL PLAN

Having freed themselves of the confines of forms based on historic precedent, architects were able to break away from the axial plan. In the late 1960s, churches began to be based on circular, semi-circular, hexagonal, octagonal or square plans. This shift was largely an outgrowth of the spirit of ecumenism, whose emphasis in part was to demystify the ritual, place greater emphasis on the congregation, and encourage participation. This move was paralleled in the 16th century by the rise of humanism and the Renaissance architects' interest in the centralized church plan. The axial plan, with its strong focus on the altar, gave way to a plan which placed the great volume of space above and therefore gave greater importance to the congregation. O'Neil Ford's St. Andrew's Presbyterian Church (1965) in San Antonio is a beautifully pure example of the centrally planned church. The communion

table, a symbol of the congregation's coming together, is placed at the very center of a Greek-cross plan while directly above hovers a jewel-like, flashcube-shaped oculus and lantern.

The 1960s were also the years of great social change, the age of social awareness, the God-is-dead era. Traditional values were questioned, as was the very appropriateness of organized religion. In the age that gave birth to the Great Society, people questioned the morality of building the spectacular St. Mary's Cathedral in San Francisco (Pier Luigi Nervi and Pietro Belluschi). How could the Church justify such an exorbitantly expensive edifice, it was thought, when the money might be better spent on the poor? Religion was faced with the problem of making itself meaningful in a secular age.

FORM FOR A SECULAR AGE

By the late 1960s and early 1970s, the new secularized church began to make its appearance. Church buildings were stripped of all historic associations with religious architecture, and the flexible, multi-purpose sanctuary came into being. No longer permitted to serve only their traditional spiritual purpose, churches also functioned as cafeterias, gymnasiums, meeting rooms, classrooms and temporary shelters for the indigent. Of course, the social services these churches provided had traditionally been offered in the past, but never had they all been provided under one roof. There were certain benefits to this approach. Since so many activities not usually associated with spiritual life were taking place within the sanctuary, the building symbolically sanctified the everyday lives of its community. The basketball game became an expression of fellowship. The more practical benefit was that, having centralized most church-sponsored activities in one building, money saved from constructing a sprawling central plant could be spent providing more social services.

Two of the earliest multi-use churches in Texas were Clear Lake Presbyterian Church (MDRW, 1968) and St. Barnabus Episcopal Church (William Cannady, 1970) in Houston. Though both facilities have won design awards, they face the same problem all such multi-use churches face—they do not look like churches. Without the ubiquitous over-sized, abstract cross, they almost as easily could be clinics or day-care centers. Flatter and squarer, they do not evoke the soaring lyricism of churches in the past; theirs is a quieter, more practical, spirituality.

Jimmy Carter spoke of a personal relationship with God, and the Pope admonished prelates to foresake politics and administer to spiritual needs. People began thinking maybe that old-time religion was not so bad after all.

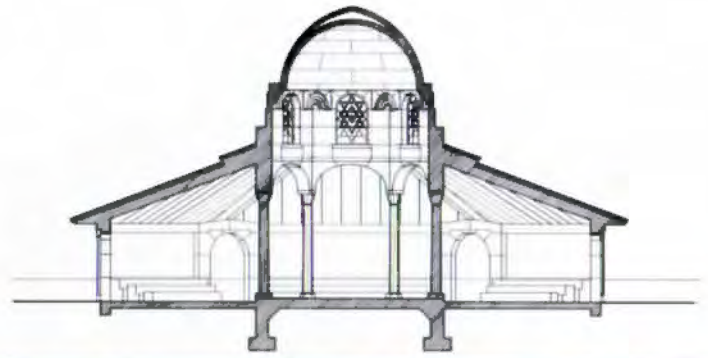
By the late 1970s, the mood of social activism had all but vanished. Religion was no longer an instrument used to change society, but once again had become a means of bringing one closer to God. Jimmy Carter spoke of a personal relationship with God, and the pope admonished prelates to foresake politics and administer to the spiritual needs of their flocks. People began thinking maybe that old-time religion was not so bad after all.

IN SEARCH OF TRADITION

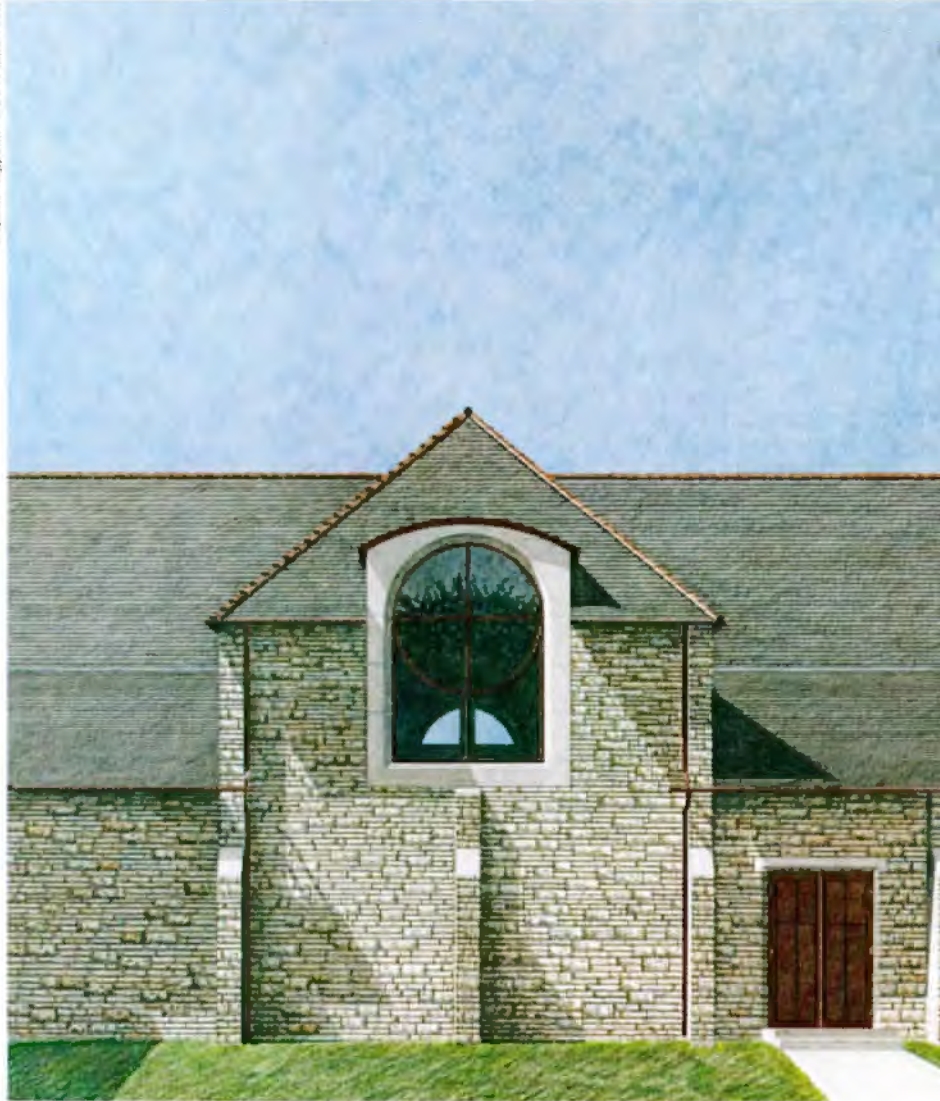
Today, as the faithful seek a return to traditional religious values, so too do architects look to their roots for inspiration. Charles Tapley's Christ the King Lutheran Church, in spite of a few Postmodern flourishes, reminds one of a neo-Gothic German folk church. Clovis Heimsath's Kagan Rudy Chapel is a modern-day Dome of the Rock. Taft Architects' beautifully polychromatic Catholic Student Center at Rice University is a multi-use church with strikingly eclectic overtones in a Modern, or Postmodern, guise. The more things change, the more they remain the same.

Things never really completely change, however. Eclecticism was practiced by "serious" Texas architects well into the 1950s and has survived till today as a vernacular style. Churches as metal buildings, often built by non-architects or fundamentalist congregations with limited resources, have a direct link to their 19th-century counterparts, the pioneer churches. The flexible, multi-use church of the 1970s still has its proponents, even if it only serves temporarily as sanctuary until the grander, permanent church can be built. Like the myriad religions and sects themselves, religious architecture always has had a varied and rich complexion. ■■■■■

Stephan Hoffpauir and Michael Coppinger both work with the Houston office of Skidmore, Owings & Merrill and are members of the religious architecture committee of the Houston Chapter/AIA.



Stephan Hoffpauir and Nicholas Park



TOP: Section, Kagan Rudy Chapel, Houston, by Clovis Heimsath Associates, under construction. MIDDLE: Rendering, Christ the King Lutheran Church, Houston, Charles Tapley Associates, 1983. ABOVE: Proposal for Catholic Student Center, Houston, by Taft Architects.



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ST. MARK'S AND ST. JAMES': THE UPJOHNS IN TEXAS

By John C. Ferguson

An architectural historian points out the vivid contrast between the work in Texas of two prominent 19th-century church architects—Richard Upjohn and his son, Richard Michell Upjohn.

In the 19th century, church architecture in the United States was dominated by a number of highly talented architects, each of whom made distinguished contributions to the nation's architectural heritage. Designers such as Latrobe, Renwick, Richardson and the Upjohns are all familiar to students of American architecture, but only the Upjohns made a direct contribution to church architecture in Texas.

Richard Upjohn (1802–1878) and his son, Richard Michell Upjohn (1828–1903), received commissions for the design of St. Mark's Church in San Antonio and St. James' Episcopal Church in La Grange, respectively. These two churches clearly illustrate the changes that occurred in American ecclesiastical design between 1850 and 1890.

The more noted of the two men, Richard Upjohn was one of the seminal figures in the Gothic Revival in the United States, promoting the design philosophies of the great British theorist and architect, Augustus Welby Northmore Pugin. The elder Upjohn was also closely associated with the New York Ecclesiological Society, which like its counterpart in England, the Cambridge Camden Society, endorsed archeological accuracy in church design in order to restore the appropriate Gothic character to both church buildings and services.

San Antonio in the 1850s was a community of fewer than ten thousand persons, with one Episcopal mission, Trinity, founded in 1850 by the Rev. J. F. Fish, a chaplain in the U.S. Army. Significantly, Fish was a New Yorker and a member of the New York Ecclesiological Society, and therefore was in a position to have heard of Upjohn's work. Although there has been no evidence indicating contact between Fish and Upjohn, correspondence between the architect and the Rev. Lucius Jones, a New Yorker and the first rector of St. Mark's, has been discovered. These letters date from 1859, the year that construction began on the building. This material is fragmentary, but it does indicate that Upjohn not only provided drawings for the new church, but comprehensive specifications for its erection as well. Unfor-

tunately, neither of these important sets of documents has been found; they may have been destroyed in a fire early in this century that consumed many of the old parish records.

The cornerstone of the church was laid in December 1859, but construction was delayed by the Civil War. Its first service was held on Easter of 1875, and consecration took place on April 25, 1881. The church, with its deep chancel emphasized on both the interior and exterior, and the altar raised above the level of the church floor for added visibility, clearly illustrates Upjohn's adherence to the writings and designs of Pugin. Pugin's famous dictum that "all ornament should consist of enrichment of the essential construction of the building" is also obeyed, with the exterior wall surfaces left plain, with the buttresses devoid of added carving. Only the tracery of the windows and the hood moldings above them embellish the walls. The structural ornamentation of the interior exemplifies Upjohn's abilities in the detailing of wood as well as stone; the two ranks of octagonal columns that define the nave serve as the springpoints for the trusses supporting the roof.

While the more ardent British Gothic Revivalists might have argued against such things as wooden tracery in the windows, the cost of executing such work in stone was described in a contemporary newspaper article as "a little beyond the reach of our means." Written by Mrs. Albert Maverick for the *San Antonio Daily Herald* in March of 1875, the article also describes one very significant feature of the church that since has been lost through repainting. The ceilings were painted in ultramarine blue, with the ceiling of the chancel featuring stars (presumably gold) set off against the deep blue background. Combined with the colors of the stained glass, such painted decoration would have brought the interior of St. Mark's into conformity with the Ecclesiologists' desires to produce churches in which color played a major decorative role.



St. Mark's Church, San Antonio, Richard Upjohn, 1875. Above, the structural ornamentation of the interior exemplifies the elder Upjohn's abilities in the detailing of wood as well as stone. At right, an early photograph (circa 1894) shows the original composition, which was obscured somewhat by an expansion, including a bell tower, in 1949.



Although the church was considerably enlarged in 1948–49 by the construction of the present bell tower and extension of the west end according to the designs of the architect Henry Steinbomer, much of the original character of Upjohn's design survives intact. The original east end of the church, with its simple bell cote set above the southeast doorway, is reminiscent of other Upjohn churches of the 1850s in New Jersey. One of the architect's more interesting design elements, the ventilation openings below the stained glass windows that served to cool the church before the advent of air conditioning, have been closed off, although their location is clearly visible in the masonry of the exterior walls. Fortunately, the church undertook to enlarge its facilities in sympathy with Upjohn's work, preserving much of his design for study by architectural historians. The church is currently engaged in the preparation of a comprehensive history of the building and its congregation, a history that may clarify the circumstances surrounding

Upjohn's receiving the commission for its design.

Richard Michell Upjohn, the designer of St. James' Church in La Grange, has received far less critical attention than his father, although his practice was equally successful. The younger Upjohn received his architectural training in his father's office, which he entered at the age of 18. In 1853, after a tour of Europe, he was made a full partner, and upon the retirement of his father in 1872, he assumed the direction of the firm. That same year, Upjohn *files* received his most important commission, the Connecticut State Capitol building in Hartford. One of the foremost monuments of the High Victorian Gothic style in the United States, the Hartford State Capitol was completed in 1878.

The younger Upjohn's practice, like that of his father, focused on the design of churches, with more than 80 church designs and competitions appearing in his office records. While Upjohn followed in his father's footsteps in terms of a strong interest in church design, it is obvious that his stylistic preferences ran toward the Gothicism of John Ruskin as opposed to that of A.W.N. Pugin. These preferences are expressed in the Hartford Capitol, and even more in Upjohn's highly Ruskinian entry in the 1883 competition for the Product Exchange in New York City.

The circumstances surrounding the commissioning of St. James' Episcopal Church in La Grange are not clear; there is no material in the parish records to suggest how contact was made with R.M. Upjohn. It is known that the rector of St. James' at the time of its construction in 1885–86, the Rev. W.G.W. Smith, was a native New Yorker, which raises the possibility that Smith knew of the architect while living there. As was the case with St. Mark's, any original plans that were sent from New York for the construction of the church no longer survive.

The design that Upjohn prepared for St. James' stands in vivid contrast to his father's work in San Antonio. The walls of St. Mark's have the bulk and solidity of masonry; St. James' walls are frame-construction, almost completely covered in wood shingles. Also absent in St. James is the deep chancel of the earlier church, as well as most references to characteristic Gothic Revival details. With its emphasis upon surface texture (combining shingles on the main walls of the church with weatherboarding and mock half-timber work



St. James' Episcopal Church, La Grange, Richard Michel Upjohn, 1886. Above, the Queen Anne style, though best suited to residential design, was often applied to Northeastern churches. But its application in Texas is a rarity. The striking exterior color scheme reflects the 1880s desire for complex decorative painting. At left, the glory of the interior is the spectacular system of wood trusses supporting the nave roof.

on the bell tower), the church represents an American architect's reaction to the work of the highly influential British architect, Richard Norman Shaw. Shaw's designs, which were major features of the Queen Anne movement, were published in both British and American architectural journals, and were widely admired for their use of contrasting materials. The impact of Shaw's work is perhaps most pronounced in the Northeast, where such architects as H.H. Richardson and William Ralph Emerson produced many handsome suburban residences whose plans and details were inspired by those of Shaw.

Although it was most ideally suited to the design of houses, the Queen Anne style also was applied to Northeastern churches, most notably on Long Island, where small frame churches by Richard Morris Hunt and Potter and Robertson harmonized with similarly detailed residences. The similarity of St. James' to these Northeastern designs is quite striking, leading one to speculate that the design was intended originally for a church in one of the new suburban communities on the outskirts of New York City. The vitality of Upjohn's design makes it a standout in Texas and, indeed, the entire South.

Perhaps it is the church's almost residential scale and character that makes St. James' so appealing. The west entrance porch, with its turned columns supporting a steeply gabled roof, would be perfectly suitable for a Queen Anne cottage. The high point of the exterior is undoubtedly the bell tower, which rises above the north entrance. The shingling of the lower stage of the tower is noteworthy for the manner in which it continues over the pent roof of the north porch, unifying the two segments of the design. The textural character of the exterior of the tower is enhanced by the use of weatherboards, recessed panels and mock half-timber work on its middle section. The octagonal spire that caps the tower necessitated the addition of four brackets, one for each side of the tower, so that each of the eight spire corners would have proper support. The great gabled nave roof is broken by six "winker" openings of the sort made famous by H. H. Richardson. The color scheme for the exterior of the church—a dark red for the lower walls, a mustard tan for the upper sections, and red shingles for the great roof and spire—reflects the 1880s desire for complex decorative exterior painting.

The church's interior, built essentially on a

"T" plan, is amply lit by the numerous windows situated at the intersections of the walls of the church and the eaveline of the roof. Each of the transepts has two sets of windows, one set atop the other, permitting a maximum amount of sunlight to enter. The glory of the interior, however, is the spectacular system of wooden trusses that supports the nave roof, a system completely exposed without the thought of adding unnecessary carved detail. In fact, there is no need for such excess ornament, for the framing system is so powerful in itself that it would overwhelm any decorative detailing.

Fortunately, St. James' has survived in a nearly unaltered state; the later addition of the parish hall was made in a fine imitation of the original structure's style. The church was added to the National Register of Historic Places in 1975.

As products of the drawing boards of two of the more significant 19th century American church designers, St. Mark's and St. James' merit the attention of anyone with a serious interest in the history of American architecture. The two churches reflect the changes in architectural taste and design philosophies concerning ecclesiastical building that make this period in American architecture a fascinating field for study by today's architectural historians.

John C. Ferguson is an architectural historian with the National Register Department of the Texas Historical Commission. A native of New Orleans, he co-authored the New Orleans Chapter of the American Institute of Architects' A Guide to New Orleans Architecture. He wishes to acknowledge the assistance of the following in the preparation of this article: Rev. Sudeth Cummings, Rector of St. Mark's Church, San Antonio; Rev. David Puckett, Rector of St. James' Episcopal Church, La Grange; and Carey Rote, researcher and writer of the forthcoming history of St. Mark's Church.

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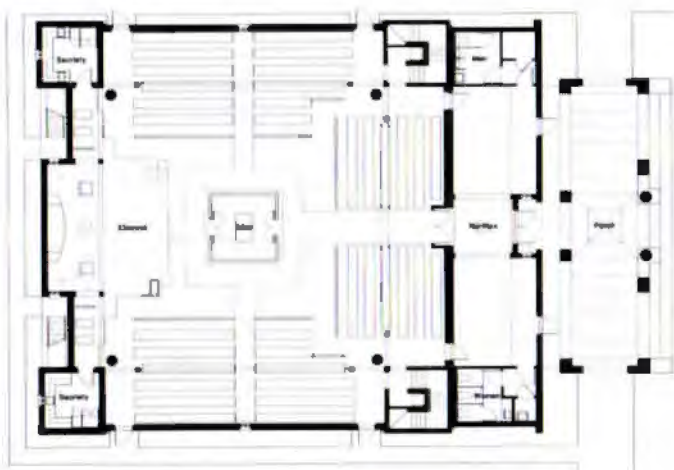
UNDER WAY: SEVEN PLACES FOR WORSHIP



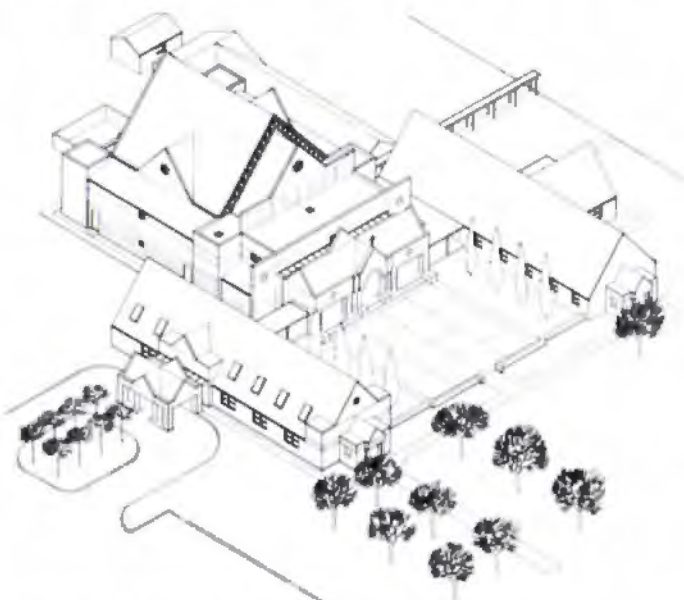
First floor plan (above) and section of St. Barnabas, Houston.



First floor plan (above) and section of Church of the Good Shepherd, Friendswood.



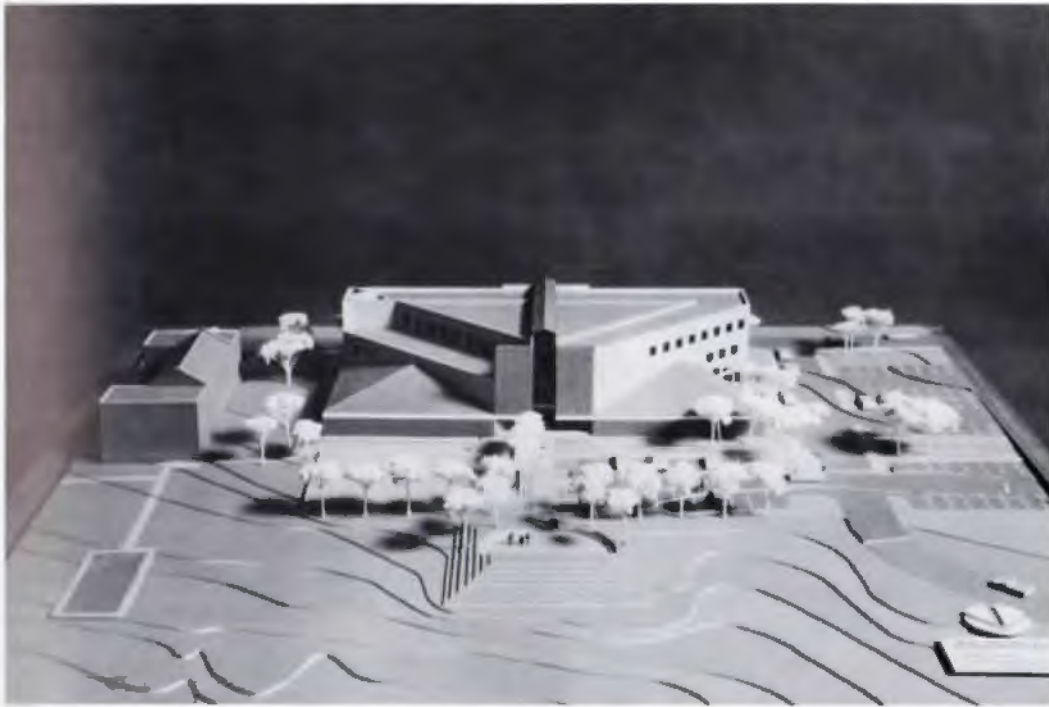
First floor plan (above) and section of Good Shepherd, Tomball.



Phase three, Church of the Good Shepherd, Tomball.

EVOLUTION OF AN IDEA: CHURCHES IN THE ROUND BY WM. T. CANNADY & ASSOCIATES, HOUSTON

Completion of the Episcopal Church of the Good Shepherd in Tomball, scheduled for January 1984, will mark the culmination of a single "church-in-the-round" theme begun in the late '60s. Cannady has continually tested the idea in the design of the St. Barnabas Episcopal Church in Houston (1968) and the Church of the Good Shepherd in Friendswood (1980), successively addressing a host of pros and cons in the process, including the advantage of intimacy and the disadvantage of unnecessarily bright light. The Church of the Good Shepherd in Tomball, with which Cannady has intended to exploit the pros and eliminate the cons of his central plan idea, is a three-phase addition to an existing 1950s parish hall and classroom building. The project includes a 500-seat sanctuary, *porte cochere*, covered walkway, classrooms, meeting rooms and offices, all organized to create a formal front courtyard. Main entry is through the courtyard, front porch and skylit narthex and into the sanctuary. Materials include conventional wood framing; brick (in two colors on the exterior to form a "base"); oak veneer panelling and painted sheetrock for walls; ceilings of stained glulam decking; and floors of stained concrete, with a bit of carpeting.



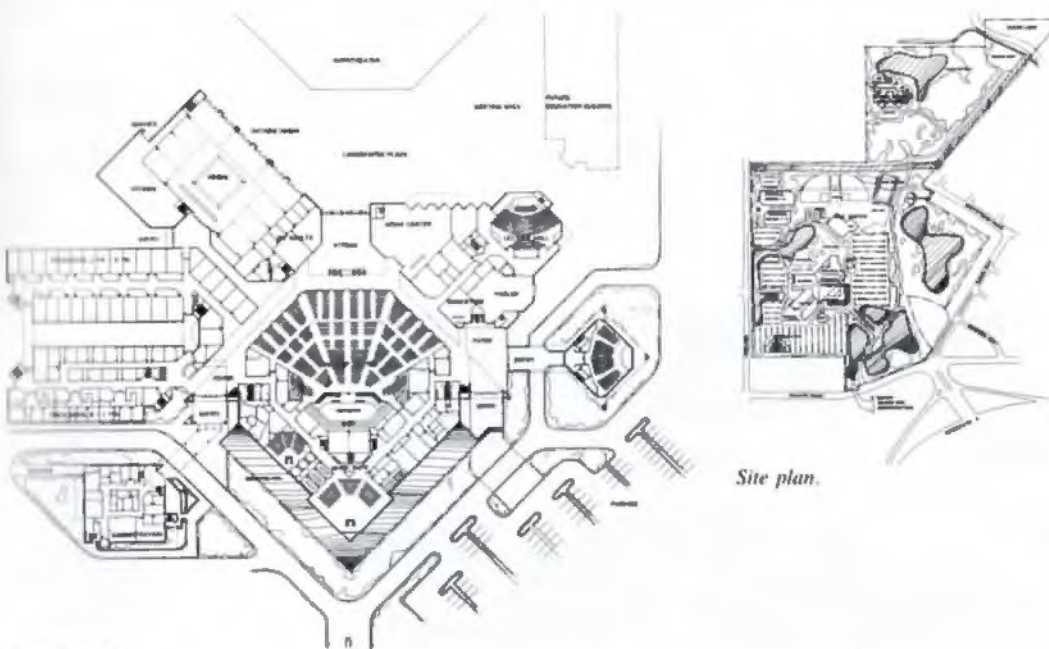
CATHOLIC CHANCERY, SAN ANTONIO, BY JONES AND KELL, SAN ANTONIO

This 50,000-square-foot building, sited on the grounds of Assumption Seminary to take advantage of views of downtown San Antonio, contains offices and support facilities for the local Archdiocese. The three-story structure is triangular in plan, to symbolize the Holy Trinity, and features a cross-shaped front facade. The cross motif is carried on in the configuration of the building's structural column grid as well as in the layout of the site. Facades are clad in alternating bands of dark brown brick, light cast stone and tan brick. Completion of the \$3.1 million project is scheduled for November 1983.



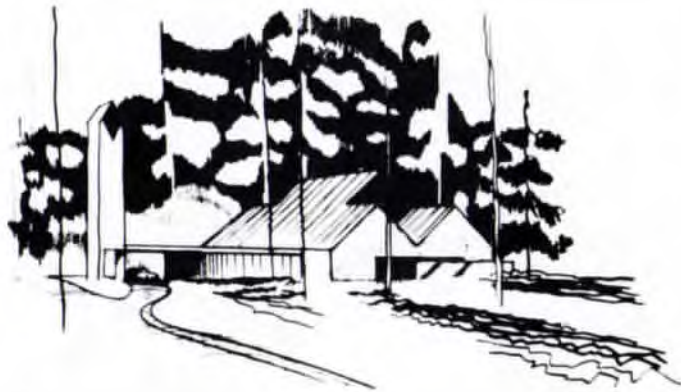
FIRST BAPTIST CHURCH, ORLANDO, FLA., BY HATFIELD HALCOMB ARCHITECTS, DALLAS

This \$15,000,000 fast-track project involves the relocation of a growing downtown congregation to a 156-acre site on the outskirts of town. Now under way on the site is construction of phase one, which includes a 164,000-square-foot worship center, a 67,000-square-foot education building and a 6,800-square-foot chapel. The design emphasizes the 6,000-seat sanctuary as the hub of the complex, attached by a multi-level concourse to the education building on one side and the chapel on the other. The sanctuary is fan-shaped to maximize the number of seats and to minimize the distance from people to pulpit. Symbolizing the importance of baptism in the Baptist Church, the baptistry is centrally situated along with the pulpit and orchestra pit so that the choir loft wraps around it. The first phase is scheduled to be completed by January 1985.



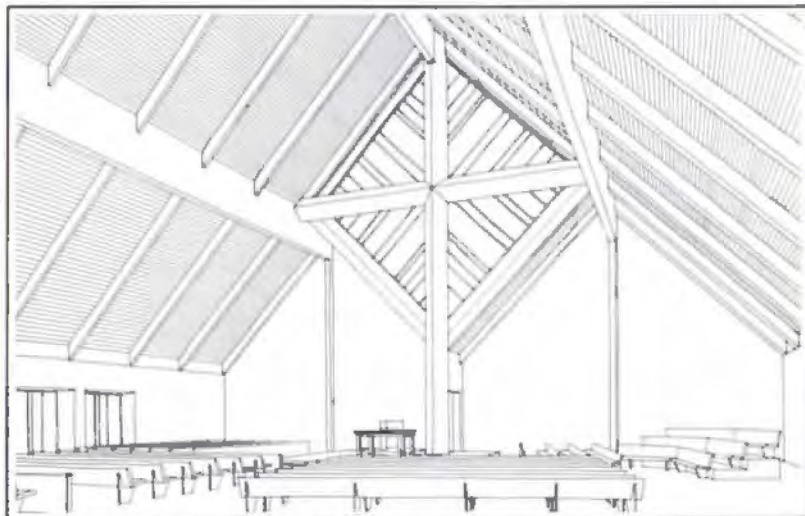
First floor plan.

Site plan.



NORTHWOODS PRESBYTERIAN CHURCH, HOUSTON, BY CHARLES TAPLEY ASSOCIATES, HOUSTON

This new sanctuary is a free-standing addition to an existing classroom and office building and is designed to recall the simple geometry of New England meeting houses. The tall, steeply gabled roof is repeated and overlaid to increase the scale of the 600-seat sanctuary while maintaining a kind of salt-box intimacy. To symbolize the importance of the preached word in Presbyterian worship, the sanctuary focuses on a large structural cross rising from the pulpit into the ceiling and centered on a large, diamond-shaped south window, which radiates various shades and patterns of bronze-gray light onto the cross through tinted and reflective solar glass. Copper roofing and deep-red stucco walls are intended to further associate the church with its northeast Presbyterian origins.



Floor plan.



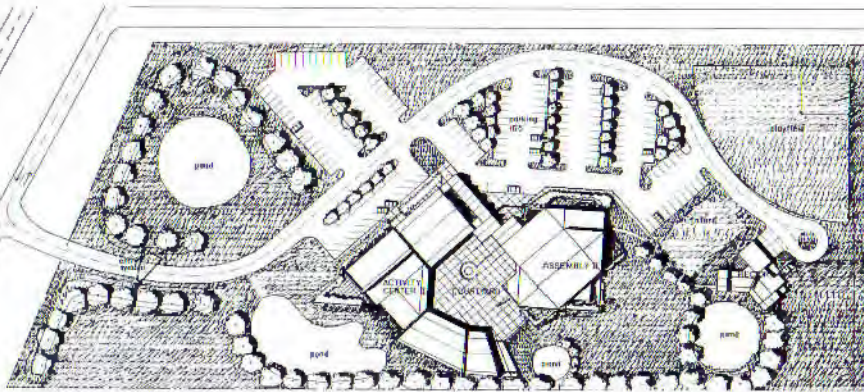
Floor plan with activity room partitioned.

MULTI-USE BUILDING FOR ST. JUDE CATHOLIC PARISH, ALLEN, BY PAUL M. DEELEY, ARCHITECT, FORT WORTH

This \$600,000 multipurpose building for the St. Jude Catholic Parish in Allen is designed to be used for secular as well as religious functions. Facilities include a large gym-like activity room for basketball and volleyball, chapel, six classrooms, kitchen, offices, restrooms and storage area. The 240-seat chapel is designed to be expandable to 500 seats when a folding partition divides the activity room to accommodate the overflow. Chapel and gym are similarly appointed to make them seem like one space when the partition is up. Major building materials are reinforced, tilt-up concrete walls and standing-seam metal roof.



**ST. THOMAS AQUINAS
CATHOLIC CHURCH,
COLLEGE STATION,
BY DAVID EKROTH AND
HOLSTER-ROGERS,
COLLEGE STATION**

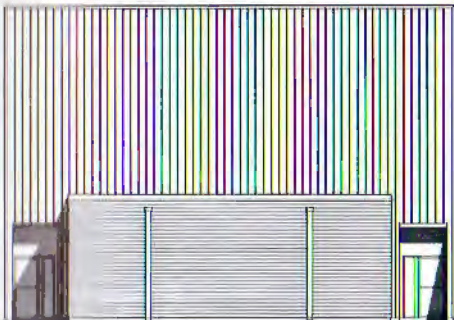


Site plan.

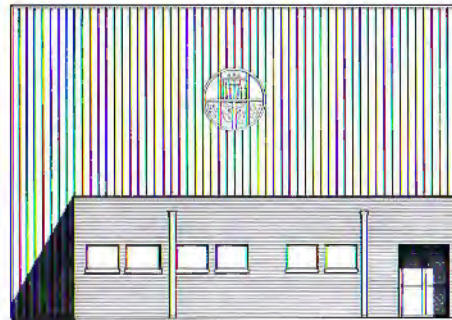
This church was designed to create a "non-monumental, humane environment" for worship and fellowship on 10 acres of featureless Texas prairie. The main complex (phase-one multi-purpose activity center, offices, kitchen and classrooms and the 750-seat assembly area of phase two) is made up in plan of four squares rotated 45 degrees. Roofs are hipped over the main sanctuary-assembly building and gabled with porches and party walls over the rest to create a village-like assortment of buildings wrapped around a landscaped courtyard. Building materials inside and out are wood frame, brick and stone walls, standing-seam metal roof, exposed wood trusses and ceilings and glass placed for optimum passive solar effect.



**HOUSTON CONGREGATION
FOR REFORM JUDAISM,
HOUSTON, BY
JERRY N. GARNER &
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West Elevation



East Elevation

More conventional shapes were tried in designing this 6,000-square-foot synagogue, but none would conform to the \$433,000 building budget. Finally, a simple arrangement of three steel-frame boxes was proposed. By slicing the tallest, middle box into a wedge, about 30 percent of the steel cost was eliminated and the budget maintained. Since this configuration emphasized an exposed roof, architects specified a metal skin for the roof and walls to visually separate it from the two boxes, which are clad in brick. The sanctuary is in the center of this wedge-shaped building, facing east in the Judaic tradition, and can be entered from three points.



South Elevation

BILL CAUDILL: A TRIBUTE

By Larry Paul Fuller

Texas lost one of its most prominent architects of all time with the death of CRS founder William Wayne Caudill, FAIA, in Houston June 25 at age 69. He was a native of Hobart, Oklahoma, but achieved fame in Texas for his contributions to design, research, practice and education. He represented the Texas Society of Architects on the AIA Board from 1980 to 1982, and in 1980 received TSA's highest honor, the Llewelyn W. Pitts Award. Among numerous other honors will be his induction into the Oklahoma Hall of Fame this fall. The following tribute is offered in recognition of his inspiring legacy.

Bill Caudill's death came suddenly and as quite a shock to the architectural community. But then that was his style; he always got right to the point.

"He was the great rifle shooter. When there'd be fuzz around an issue, he liked to just shoot right through it. And he usually hit the mark." —Paul Kennon, FAIA, partner

When his heart failed that Saturday morning, he was at home with Alcen discussing the manuscript for the forthcoming *Memos: Singapore, Indonesia, Hong Kong*, his 12th book. That was typical. He always had something going, was always sharing ideas, always looking ahead.

"The word 'timeless' comes to mind when I think of Bill, in the sense that he prepared us for the future. He was always prodding us onward; never looked back. We miss him, yet in a way he's still around here." —Tom Bullock, FAIA, partner

It was his will that there be no funeral—only a private memorial service—and that there be no time lost at the firm. Paul Kennon assembled the CRS staff the following Monday morning and read a note Caudill had left behind. There was to be no big to-do, or he'd come back to haunt the firm.

"Bill deserved all the acclaim he received, but he was never so uncomfortable as when people tried to make a fuss over him. It made him very ill at ease." —Willie Pena, FAIA, partner

If it was a book that marked the end of Caudill's career, it was also a book that marked its beginning. Straight out of college—bachelor's from Oklahoma State in 1937, master's from MIT in 1939—he joined the architecture faculty of Texas A&M. Drawing upon his master's thesis, having never designed a school, he wrote a little book in 1941 called *Space for Teaching*, which later would be his entrée into school design.

After the War began, Caudill left A&M and spent 1943–44 in the Navy. It was on the Coronado Ferry off San Diego in 1944 that he and fellow serviceman and faculty member John Rowlett decided they should start a firm.

Kennon: "The very next thing Bill proposed, standing there on that ferry, was that they build a practice that would continue long after they were gone. It was typical of his sense of continuity, a mark of his incredible foresight."

The fledgling firm Caudill and Rowlett opened its doors above a grocery store in Austin on March 1, 1946. Caudill commuted from College Station where he had rejoined the faculty and also served as research architect for A&M's Texas Engineering Experiment Station. After two bleak years, the office was moved from Austin to College Station—this time over a drugstore, and later over another grocery. The firm became Caudill, Rowlett and Scott in 1948 when Wallie Scott, one of Caudill's former students, was accepted as a partner. The next year Willie Pena became the fourth partner, although he generously declined to become the fourth name. (It was Pena who requested a prestigious Manhattan supplier to change the CRS address from "Over the Southside Grocery" to "Box 308 College Station" because "the butcher is getting our mail.")

The firm's first big break came in the form of a commission for two elementary schools in Blackwell, Oklahoma, a job landed largely because of the school board's familiarity with Caudill's *Space for Teaching*. The circumstances of that project led to the firm's first "squatter," a concept which would become a CRS hallmark.

"We were commuting back and forth, making one presentation after another, and not getting anywhere. So one day Bill said, in effect, 'Wallie, let's load up our drafting boards and T-squares and pencils and paper. We'll set up shop right there in their boardroom and we'll just squat till we get this thing designed.' That was our first squatter, and we've been using that technique for 35 years." —Wallie Scott, FAIA, partner

The very practical strategy of involving the client in the design process became part of Caudill's concept of "architecture by team." He maintained that the day of the prima donna generalist is past, and the team is a genius; the client/user should be a member of the team; and the team should be an ever-expanding



unit, not limited to the design profession.

In September 1950, *Colliers Magazine* published the Blackwell schools in an article called, "The Little Red Schoolhouse Goes Modern." From that point on, CRS has been part of the national scene.

Caudill left his research post with the Engineering Experiment Station in 1949, but not before producing a number of reports on school lighting and ventilation that received widespread attention. During the next two decades, he developed an international reputation as an authority on school design, and the firm received commissions for schools, colleges and universities in 26 states and eight foreign countries.

Pena: "A lot of people say the main thing Bill did was to found a great big firm. But that was a subsequent thing. You can't found a big firm like that without first establishing your design reputation. Bill set out to be the greatest school architect in the country, and he made it by 1960."

When CRS pulled up stakes and moved 27 families to Houston in 1958, it became the largest architecture firm in the city overnight. By 1961, four more key names had been added to the original list of partners: Tom Bullock, Edward Nye (a structural engineer), Charles Lawrence and Herb Paseur. Under multiple leadership, the firm expanded its scope of work far beyond schools and evolved into CRS Group, Inc., a publicly owned corporation with divisions in architecture, engineering, project management and construction.

CRS received the AIA's Architectural Firm of the Year Award in 1972.

At the time of Caudill's death, the firm employed 1,500 people in offices throughout this country and abroad. He did not live to see the company's acquisition August 4th of the J. E. Sirrine engineering firm in Greenville, S.C., which immediately doubled the size of CRS to over 3,000. But the likelihood of the merger had excited him.

Bullock: "One of the last things Bill said to me was that he wanted to design the new logo. He was delighted that now we were really becoming a quality 'E' firm as well as a quality 'A' firm. He was always for diversity and growth, always thinking big."

While growth and change were important, Caudill steadfastly sought a balance between quantity and quality. Once the firm was well established, he was largely preoccupied with quality as a concept—defining it, controlling it, inspiring its pursuit. He even developed a system of quality quantification for in-house juries. Ever fond of triads, Caudill established a system wherein quality control was achieved through a process headed by a CRS Troika—a panel of three director-level members of the firm representing the three disciplines of management, design and technology. In pursuit of quality, the objective was to equilibrate three forces—function, form and economy (a triad that ultimately was broken with the addition of "time" as a fourth factor).

"During the '70s, Bill characteristically turned leadership in CRS over to the team he had developed and nurtured. However, he remained the uncompromisingly staunch guardian of design quality and human values in the firm. During this period of extreme change, he kept us all together and moving in the same direction."—Herb Paseur, FAIA, partner

Bill Caudill displayed an incessant creative energy. He was so multi-faceted that he defies a holistic view. Routinely he was characterized as researcher, educator, designer and author—a tidy series of labels that seems inadequate.

"He never was one to settle comfortably into a pattern. He wouldn't be happy digging into only one aspect of architecture or anything else. He was a searcher."—Charles Lawrence, FAIA, partner

Caudill started out in research at A&M and, at the time of his death, was Director of CRS Research. As Kennon observes, he had come full circle. His research accomplishments sometimes involved controlled experiments and formal reports. More significant, however, was his research-oriented approach to things, his keenly analytical mind. He was always probing new areas, new ideas, new trends.

"Not many of us reach the last stage of development—professional maturity. It should be our goal. More important than drawings, more important than photographs, more important than experiencing new buildings, this stage carries the architect to a higher humanistic level—the personal commitment that architecture is for people (not for architects), that buildings are to be used, that architecture must transcend art to fulfill human needs physically, emotionally, and intellectually."

—William Caudill, FAIA, in *Texas Architect*, May/June 1983.

"As a member of our board of directors, Bill had this strong drive to always be looking forward, so that he was in a position to measure any proposals, or any ideas, in terms of the future. It was a valuable and rare gift."—Max DePree, Chairman of the Board, Herman Miller Inc.

Caudill's achievements in education began at A&M and later included stints as lecturer or visiting critic at major universities throughout the country. But his most significant accomplishments in the field occurred at the Rice University School of Architecture, where he served as director from 1961 to 1969 and as William Ward Watkin Professor during 1969–71.

"Bill led the School in exploring new ways of teaching, new attitudes about architecture, and new ways of viewing the profession. He left an indelible mark on this place—not the least of which were new definitions of quality in architectural education."

—O. Jack Mitchell, FAIA, Dean

During his tenure as Director, Caudill divided his time between Rice and CRS, "running the school like a firm and the firm like a school." His legacy at Rice includes its successful preceptorship program, the much-heralded Design Fetes, and the Architecture at Rice publishing program—all of which helped turn the School around after a period of decline.

"What Bill brought to Rice was the realization that the academic setting for a professional school needs a profile within the community—whatever that might be. And he chose to define community on the international scale."—Peter Papademetriou, Rice professor

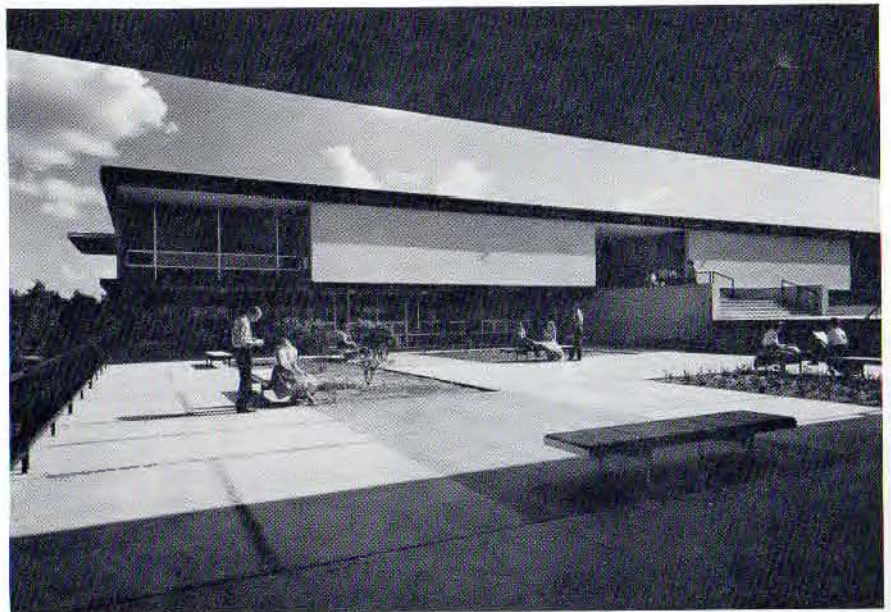
I. M. Pei referred to Caudill as "one of the most important architect educators of today." But "educator" is probably too highfalutin a word. He was a *teacher*—not so much the classroom kind, but rather someone who instinctively helped people to learn.

Lawrence: "He was my graduate degree and beyond. Most of what I know about architecture I learned from him, and from the spirit he brought to the firm."

Part of Caudill's success as teacher revolved around his belief in the free marketplace of ideas.

"Most people want to see a reflection of themselves in the people around them. But Caudill liked to surround himself with diverse people. He always wanted an antithesis."—Charles Schorre, Houston artist and former faculty member at Rice

Perhaps most important in the context of teaching was Caudill's knack for motivating others, inspiring them to do better than they thought possible.



"He had a unique ability to raise your own level of aspiration and, somehow, to help you think beyond yourself."—Roy Lowey-Ball, former employee and student

There is considerable uncertainty regarding Caudill's record as a designer. Particularly after the early schoolhouse years, it was difficult to tell how much of a given design was really his. But of course that tracks perfectly well with his notion of architecture by team.

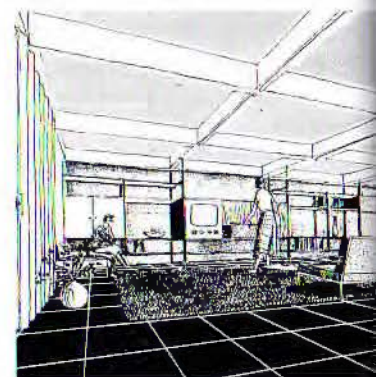
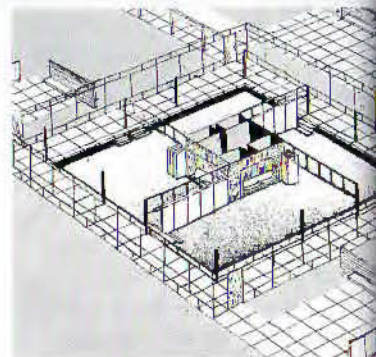
Kennon: "Bill's strength in design was as a conceptual thinker—one of the best I've ever known. He was gifted at conceiving and seeing a concept within an overall parti."

During the last decade, Caudill was reluctant to assume lead roles in design. One exception was the recent work on the U.S. Embassy in Saudi Arabia, which he agreed to take on at the coaxing of his colleagues. But normally he saw his role as helping define and maintain high design standards.

"He was the greatest design critic I've ever known. When you went to him with a design problem, he could get right to the heart of it. Talking with him helped to free your thinking."—Frank Lawyer, FAIA, partner

As an author, Caudill was prolific, having written or co-authored 12 books and hundreds of articles and reports. (His last article was a very cogent and readable piece on "Paper Architecture" in the May/June issue of *Texas Architect*.) His style was like his personality—down-to-earth and a bit folksy. But the content was provocative.

Mitchell: "Sometimes in academic circles he seemed a little naive. But I don't think he really was. He had the capacity to convey, in an almost down-home way, his rather insightful views of the world."



TOP: Caudill led the design of the 13-building campus of Central High School in San Angelo (1955), which won an AIA honor award and wide acclaim for the firm. ABOVE: Caudill's prototype elementary school, commissioned by Life Magazine in 1954, set new directions in school design.

Caudill's *A Bucket of Oil*, written with Frank Lawyer and Tom Bullock, was a timely treatise on energy and buildings, appearing soon after the Arab oil embargo of 1973. *Architecture and You*, written with Willie Pena and Paul Kennon, is important for its clarity in articulating the generic qualities of form as plastic, skeletal and planar. Several of Caudill's other books were prompted by his trips abroad.

Papademetriou: "Caudill was part of the old school of architects who would sit down and put their observations into words. Much of his writing consisted of unabashed personal statements about the way he saw things. It represented a wholesome tradition that not many architects are continuing without being terribly self-conscious about it."

Though they had more limited distribution than his books, Caudill's most influential writings were his TIBs (for This I Believe). He had been TIBing (it was also a verb) for about as long as anyone could remember—jotting down his ideas for in-house consumption, reacting in memo form to design issues of the day, even to news events. The TIBs helped him fulfill his role as the guru of CRS.

Lawyer: "He was our spiritual leader, the guiding light everyone looked up to."

Caudill spoke the way he wrote—using simple words to convey meaningful insights—and sometimes averaged a speech per week. An early stuttering problem, which he substantially overcame, probably contributed to his unembellished verbal communication.

Pena: "Bill said he first became interested in architecture because he wanted to communicate only through drawings, preferably staying at the rear of some drafting room while the principal went out and brought in the work."

When vestiges of his stuttering would reappear in later years, he seemed all the more charming and folksy for it. Some observers actually perceived it as a rather innocent affection. But deliberate or not, he always pulled it off.

Researcher, educator, designer, author—Bill Caudill was all of these. But above all else, he was an admirable human being.

"Bill Caudill was a national treasure, professionally and spiritually. He cared deeply about architecture and people. He was one of the most nurturing human beings I have ever met, and his youthful enthusiasm never ceased to amaze me."—John Naisbitt, author of *Megatrends*, who served with Caudill on the boards of AIA and CRS

Caudill maintained an amazing number of human relationships, often through the mail. His terse but friendly little letters, usually accompanied by some memo or clipping, would



end in a big "Bill" signed in red felt-tip pen to match the CRS logo. To those who knew him, the scale of that signature seemed out of proportion to his ego.

Kennon: "Bill understood human dynamics and the interaction of people and how egos would work. He loved people and needed people around him."

Caudill's interpersonal savvy, and the fact that people almost always liked him, was a secret to his great success.

DePree: "Bill was a person who always gave you the impression that he was dealing with you as a friend. There was never in any sense an adversarial relationship. Even when he disagreed, he was your advocate."

One of Caudill's most admirable qualities was his total lack of condescension and pretension. He related individually to the full range of people around him, and was not above anyone's reach in terms of accessibility. This particular facet of his character is fuel for countless Caudillian anecdotes.

"My reflections on Bill Caudill focus on his humanity and his willingness to stop and share his thoughts and ideas . . . with a young and naive faculty visitor from England . . . or with a 12-year-old daughter who 'interviewed' him on the design of her school and who received the same respect as a Barbara Walters."—David Woodcock, Chairman of the Architecture Department at Texas A&M

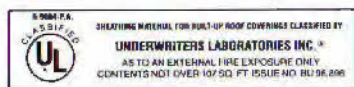
Caudill's success both in human relationships and in architecture relates to one of his favorite lines: "People are more important than buildings." That's a bold and frank admission for an architect. But then that was his style.



TOP: CRS headquarters in Houston (1969), for which Caudill was project architect. ABOVE: Caudill's sketch of the place where CRS had its beginning.

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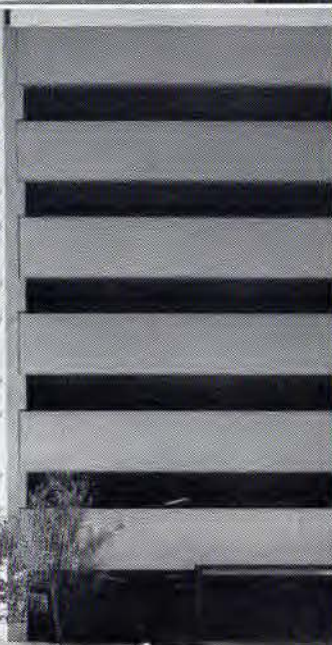
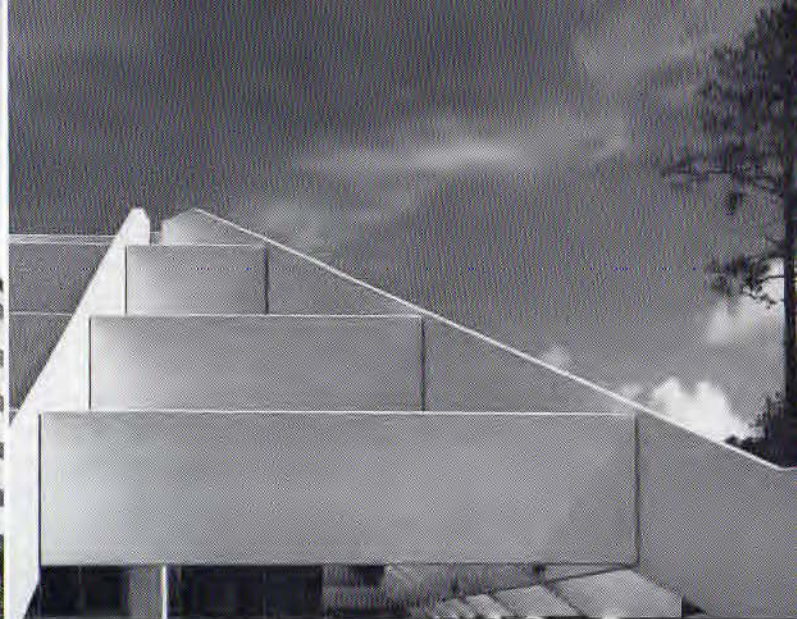


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By James Coote

Traditional Japanese Houses, edited and photographed by Yukio Futagawa, text by Teiji Itoh. Rizzoli International Publications, Inc., New York, N.Y., 365 pages, \$75 (hardcover).

It's a big, deluxe Rizzoli, nearly 12 inches square, a heavy 365 satiny pages long. It is principally a collection of superb, often ravishing photographs of traditional commoners' houses known as "minka," which were built from the mid-12th to the mid-19th centuries within the very severe restraints of feudal law and custom as well of environment and resources.

These modest houses are presented with artistic care for a dying species by Yukio Futagawa, Japan's foremost architectural photographer, and the noted architectural historian and critic Teiji Itoh. Itoh admits, with a note of sad resignation, that these houses of wood, thatch and paper seem dark, inconvenient and unsuited to most contemporary Japanese. In any case, it has been estimated that the cost of rebuilding in an authentic minka style, even without modern utilities, would cost approximately \$3,000 per square meter today. Thus, the remaining minka, apart from those very few in the hands of the rich or the poor, have been collected in outdoor museums. Still, their simplicity, clarity, unornamented natural materials and structure are greatly admired. (The minka were, after all, houses of those of limited privilege who were strictly forbidden by law from designing luxury into their homes. For the nobility and the warrior ruling class there was another world entirely, one of the more elaborate shinden and shoin, with their richly gilded, coffered, lacquered, carved and colored surfaces and later their exquisite and expensive rusticity inspired, ironically, by the lowly minka and perfectly embodied by the Katsura Villa. Such beauties can



Tsubakawa house on northern coast of central Honshu.

be seen in the beautiful small book *Architecture in the Shoin Style* by Fumio Hashimoto of the Japanese Arts Library, Kodansha International Ltd.)

Traditional Japanese Houses affords several dimensions of appreciation. The photographs (12 full-page color and over 275 black and white), each of exceptional technical quality, have been selected and arranged to convey the minka's principal regional variations of form and material. They also wonderfully evoke the changing seasons: the lonely rural minka spotted with snow, or Kurashiki's elegant townhouses screened by the pale spring willows. The photographs explore structure, those intricate forests of roof beams and posts dimly perceived in the smoke-blackened recesses of the high ceilings. They softly illuminate the patinas of old floor boards, the textures of thatch and straw, of stone and plaster, not only as objects of a modern aesthete's pleasure but as evidence of the harsh lives carried out in

these houses and villages. There are pictures of people cloaked against the cold, of farm equipment and of the kettle on the fire. There are aerial photographs of minka huddled together on a cold beach or nearly hidden in the lush cultivated hillside of a sultry rainy summer. Minka are reflected in the still rice ponds. They form a varied quiltwork within the regular square blocks of old China-influenced Kyoto.

Six chapters illustrate the minka geographically, from the cold northern island of Hokkaido down to the main island of Honshu, through districts now known as Tokyo and the ancient capitals of Kyoto and Nara across the Inland Sea to the typhoon-swept island of Shikoku and thence to the southern near-tropical island of Kyushu and the far-flung Okinawa. There is a map that locates each major example. In the course of this pilgrimage, one encounters the wealth of formal invention of the primary wood structure and of the sheathings and infills

that comprise the fabric of the house, a fabric vulnerable to fire and decay but resilient to the tremors so common in these islands. With a Shinto-like respect for the inner spirit of materials, Futagawa's photographs seem to reveal the very souls of the stones, the packed-earth floors, the bundles of reeds, and the infinite variety of wood grain scoured into high-relief by time.

Between the extremes of whole cities, villages, hamlets and farmyards and the close-up detail of a grain of sand, the wide-ranging photographs are perhaps at their most technically brilliant in capturing the quality of the minka interior, which—behind the deep eaves and porches designed to keep off the prevalent rains and winds—were always dimly lit through translucent paper and wooden grills. "A light room would no doubt have been more convenient for us, too, than a dark room," writes Jun'ichiro Tanizaki in *In Praise of Shadows*. "The quality that we call beauty, however, must always grow from the realities of life, and so it has come to us that the beauty of a Japanese room depends on the variation of shadows . . . it has nothing else."

As Futagawa's black-and-white, often full-page, photographs reveal, shadows are enough to move the spirit in spaces adorned only with the homely and most frugal of utensils and virtually no furniture. The pictures have the smells of the earth, the sweet tatami mats, the stables, the smoke and mist, and the sounds of crickets and cicadas.

In addition to the photographs, each chapter is illustrated with exquisitely drawn and rendered plans, sections, elevations and, on occasion, a structural axonometric of not only individual buildings but also streets, neighborhoods and villages. Line drawings are of an almost engraving-like precision and lucidity.

As if the visual richness of this book were not enough, Teiji Itoh's text adds another dimension, a fascinating and often surprising amalgam of political and cultural history, evocative fragments of classical literature, facts of climate, typography and agriculture that somehow turn out to have an important influence on the architecture of the minka. It is writing with the allure of fiction and the authenticity of real lives tied to real

places and times. Mixed in—quite unpredictably—are descriptions of the trade of carpenters and their guilds, of the aspirations of Kyoto merchants to the mansions of the samurai, of the winds that have driven the farmers to the safety of towering hedgerows and high stone-walled compounds, of boats hung from the ceiling to escape floods.

The book has one exceedingly annoying drawback: namely, the exclusion of page numbers from the many photo-

graphic plates. For the sake of graphic purity, one is condemned to constant reference to caption sheets at the end. These are small complaints, however, when weighed against the substantial richness of this book.

James Coote is a professor of architecture at the University of Texas at Austin and a Texas Architect contributing editor.

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this year totalled \$1,970,909,000, down from a total of \$2,023,391,000 for the first five months of 1982.

Building activity in the Dallas/Fort Worth area, as in the state as a whole, shows a healthy increase—55 percent—for the first five months of 1983. Residential and non-residential construction contracts in Collin, Dallas, Denton, Ellis, Hood, Johnson, Kaufman, Parker, Rockwall, Tarrant and Wise Counties totalled \$2,643,566,000 for January through May 1983, up from a total of \$1,704,528,000 for the same period last year.

D'HANIS BRICK AND TILE GOING FULL STEAM AFTER A CENTURY OF OPERATION

Early in his career, a young San Antonio architect named O'Neil Ford came across a line of bricks and tiles manufactured in D'Hanis, a small town just west of San Antonio. He liked the look and feel of the material and, over the years, specified it for many of his projects. As a result, D'Hanis clay building products—particularly the thick, heavy, dusty-red floor tile—became almost as well known as the architect.

Not so with the town, which—as it happens—is a town rich in the history of Texas and in the history of making Texas brick. Some 50 miles west of San Antonio on U.S. 90, D'Hanis today is one mile west of "Old" D'Hanis, the site laid out in 1847 for impresario Henri Castro's westernmost settlement in the Republic of Texas. The town was named after William (Guillaume) D'Hanis, the Belgian manager of Castro's colonization company, and was settled by Alsatian immigrants. A visitor to Saint Dominic's Cemetery can read on the tombstones the surnames of many current residents of new D'Hanis who are still active in the affairs of the brick plant and of the town—Nester, Wolff, Finger, Langfeld, Carle. The settlement became "Old" D'Hanis when the railroad from San Antonio bypassed the town in the 1880s and "New" D'Hanis rose along its tracks.

It was about this time that D'Hanis brick-making began. Charles Wallrath,

an immigrant from Germany, located a deposit of high-quality clay just west of town along Seco (Spanish for dry) Creek, where it wound through tall prairie grass and where low clay hills rose from its western bank. Wallrath was a brick-maker by trade and began supplying hand-made bricks to local builders.

Gus Burtner, a contractor in Lockhart and Luling around the turn of the century, was to have a significant influence upon Wallrath's operations in D'Hanis. Burtner decided to manufacture his own bricks. He sent a sample of clay from a deposit between Lockhart and Luling to a brick press manufacturer for testing. They declared the clay well suited for brick-making and sold Burtner a four-mold press.



D'Hanis school built of D'Hanis brick.

But try as he might, Burtner couldn't make good brick. The clay had too much sand in it, and the bricks crumbled. While in Hondo looking for brick clay once again, Burtner saw a building made of Wallrath's handmade bricks and recognized their high quality. Burtner came to D'Hanis and found Wallrath on Seco Creek up to his elbows in the finest brick clay he had ever seen. A deal was struck. Burtner sold his four-mold L & L press and other equipment to Wallrath and local financial backers Louis and F. J. Carle, owners of the D'Hanis General Store. Burtner wanted no cash as part of the deal—just 10 percent of the ownership of the company and bricks for his buildings. The D'Hanis Brick and Tile Company was thus born in 1905. The first brick produced, on Sept. 24, 1905, rests securely in the company vault. The brick bears the L & L mark of the Lockhart and Luling company, but the color is pure D'Hanis.

A key factor in the longevity of

D'Hanis Clay Products is John B. Nester. Mr. John, as he is known, began work at the plant as a timekeeper in 1914, earning 10 cents an hour for a 10-hour day. For several decades Mr. John managed the plant. Today, at a spry 93, he still lives and breathes bricks, and he is quick to tell you that brick is the finest building material ever produced. Now retired, Mr. John still maintains an office in the plant, which is just down the street from his home.

The brick plant itself is historic. Little has changed since the '20s, from the giant, 70-year-old steam engine—Murray-Corliss Engine Number 3700—that powers the plant to the round periodic kilns in which the bricks and tiles are fired. Although the process takes three and a half days and consumes a staggering amount of natural gas (the company almost went broke in the '70s when a natural gas price increase escalated costs in the middle of a contract), it still produces brick as it used to—strong, indigenous, beautiful because it isn't flawless. According to D'Hanis, it is possible for an architect restoring or adding onto a D'Hanis brick building today to strike a near-perfect match in color and texture between old and new.

Although the plant has produced many a brick in its day (eight million between 1908 and 1913 for San Antonio's Fort Sam Houston alone), D'Hanis is known more for its floor tile, which—like the brick—begins its journey in the clay pit west of town. Eroded by wind and water, tiny volcanic particles were deposited in the delta of some ancient stream, were later overlain by other deposits, then were compressed into the clay known as bentonite (iron oxide in the clay gives D'Hanis bricks and tiles their color). A shallow sea covered the area once more, which accounts for the fossilized shark teeth that are ground with the clay. Compressed by millions of years by overburden, the clay expands about 40 percent in volume after being dug. After a month of airing, the clay is ground even finer before use. A pugmill feeds clay mixed with water into an extruder, a machine that squeezes the wet clay like toothpaste through a mold, or die, onto a conveyor belt. The continuous stream of plastic material is then sliced into individual tiles by a series of rotating wires.

Floor tiles are molded two at a time, with four vertical spacers between the tiles. After firing, the tiles are carried on a conveyor belt past a plunger that strikes the spacer on one side. In an instant, the four spacers collapse, leaving two tiles. The spacers are ground up with other scrap and recycled.

After 100 years of operation, D'Hanis brick and tile manufacturing is going full steam. New ownership and an infusion of capital in 1982 revitalized the company. And there is still more of that high-grade clay than the brick plant would ever know what to do with. The original pit west of town is still surprisingly shallow and covers only a few acres. Present owners estimate there is enough clay in it to operate the plant at its present rate of production for a thousand years. And, after that, there is another, bigger, hill of clay just to the west.

—Larry D. Hodge and Sally S. Victor

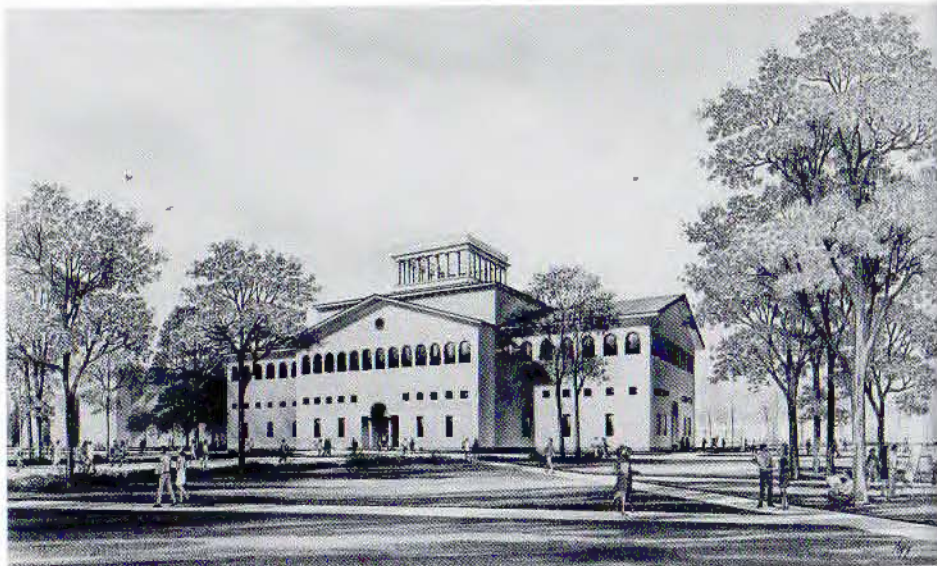
HABS EXHIBITION SET FOR FALL IN SAN ANTONIO

To help commemorate the 50th anniversary of the Depression-born Historic American Buildings Survey, the Texas Society of Architects is co-sponsoring an exhibition of HABS drawings and photographs mid-October through December in the San Antonio Conservation Society's Bolivar Hall.

The exhibition, part of a nationwide celebration of the survey sponsored by the American Institute of Architects and the National Parks Service, will coincide with the annual conference of the National Trust for Historic Preservation Oct. 26–30 and the TSA annual meeting Nov. 17–19, but the precise opening date has yet to be announced.

On view in the HABS exhibition will be drawings and photographs of significant works of historic Texas architecture documented in the survey, which was begun in 1934 to record precisely the dimensions and features of antebellum buildings and to put unemployed architects and draftsmen back to work.

Principal organizers of the exhibition are the TSA Historic Resources Committee, the Texas Historical Commission and the San Antonio Conservation Society.



College of Architecture Building, University of Houston.

IN PROGRESS

NEW ARCHITECTURE BUILDING AT UH: JOHNSON'S GESTURE

University Park, the central campus of the University of Houston, has grown dramatically since the Second World War, largely with no real master plan. As its development has adapted to the demands of growth, discontinuity of the campus fabric has become particularly acute at its edges. Furthering the lack of coherence is much of the campus architecture, modernist "objects" with little relationship to one another or to any sense of an open space plan.

The new home of the UH College of Architecture has been planned to consolidate dispersed activities, and to embellish the program with new facilities, such as a computer center, materials and methods lab, gallery, and combined art and architecture library relating to the Fine Arts Center and Blaffer Gallery directly adjacent.

In addressing the question of creating a new home for the College as well as resolving conditions at the north edge of campus, John Burgee Architects, with Philip Johnson and Morris/Aubry Architects, took a direction that ignored both, and thereby attempted to solve both.

The entire program is housed in a simple block in the form of an elongated cross. Its plan is a direct *parti* of a central volume defined as a vertical open court, capped by a skylight in a rooftop

pergola. Adjacent to this open well are the principal studio spaces, using a vertical hierarchy, symbolic of advancement through the program. Secondary spaces occupy the flanking wings. The arrangement is an interpretative use of a classical precedent, the so-called "House of Education" project by Claude Nicolas Ledoux.

The exterior of the building continues the classical theme, and its jarring presence among its modern neighbors may be seen less as an anomaly than as an indicator of the vagaries of architectural fashion. Its presence, moreover, functions as a "marker" to the north edge of the campus; pedestrians can actually enter from parking lots through the main level of the College, which contains the special functions. Additionally, the siting of the building helps create the sense of a quadrangle open space, implicit in the existing context but at least now given some cohesion. A provocative solution, its directness is confounding in its "dumbness" and will ultimately stand to be evaluated in terms of translating a diagram and a gesture into a real piece of architecture.

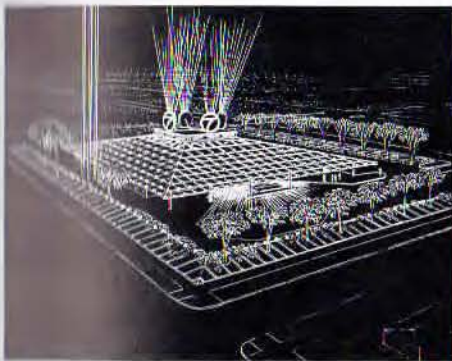
—Peter Papademetriou

KVII-TV BUILDING, AMARILLO, BY PAUL RUDOLPH, NEW YORK

When Paul Rudolph was in Amarillo to work on his Don and Sybil Harrington Cancer Center back in the late '70s,

Amarillo entrepreneur Stanley Marsh commissioned him to design his offices in the 30-story Texas American Bank Building downtown. Rudolph did such a good job with both projects, Marsh thought, that when time came to build a new and larger facility for Marsh's Channel Seven TV station, he wanted Rudolph to design it too.

Now off the drawing boards is Rudolph's scheme for a 19,000-square-foot broadcast facility covered in a pyramidal mesh "shroud" that will be brilliantly illuminated at night. This canopy is designed also to direct natural light into the interior and to shade the building against the relentless Panhandle sun. Signage announcing the station's call let-



KVII-TV Building, Amarillo.

ters will be on a rim around the building's level top. The facility will include a central studio, newsroom, offices, conference room, and production, maintenance and storage areas.

Construction is scheduled to be under way this summer and to take about a year.

INFOMART, DALLAS, BY GROWALD ARCHITECTS, FORT WORTH

Construction is now under way on Trammel Crow's Infomart in the Dallas Market Center, designed by the Fort Worth firm Growald Architects along the lines of the famed Crystal Palace in Victorian London.

The building, which will serve as a computer products mart, is designed to symbolize the computer-age continuation of the Industrial Revolution as the Crystal Palace was designed in 1851 by Joseph Paxton to herald its beginning.



Infomart, Dallas.

This one, however, will be built of fiber glass-reinforced concrete or aluminum and bronze glass instead of cast-iron and clear glass. Based on Paxton's original working drawings, the building skin will be virtually identical in other ways, with hundreds of six-by-14-foot windows and sweeping arches that step back from the facade. The interior will center on a vast atrium and will contain nearly 1.5 million square feet on six floors. The building is scheduled to open in the fall of 1984.

MISSION COUNTRY CLUB, MIDLAND, BY FORD, POWELL & CARSON, SAN ANTONIO

Now under construction off Highway 191 between Midland and Odessa is the Mission Country Club, designed by Ford, Powell & Carson of San Antonio.

The two-story, 39,000-square-foot clubhouse—to serve two 18-hole golf courses—will feature what has become



Mission Country Club, Midland.

something of Ford, Powell & Carson trademark: 18 self-supporting, sky-lighted brick "boveda" domes, hand-crafted without formwork. Interiors will be finished and furnished in Mexican tile flooring, acoustical wood-stick ceilings,

hand-made New Mexican Rugs and a mix of Southwestern antiques and contemporary furniture. The structure will be cast-in-place concrete, with columns exposed. Exterior materials will include whitewashed brick, copper-capped bovedas, light bronze insulating glass and cedar trellises.

The clubhouse, scheduled for completion in July 1984, will house banquet facilities for 250, formal dining room, two informal dining rooms, clubs and locker rooms. A separate pro shop is nearing completion at press time.



American Bank, Austin.

AMERICAN BANK, AUSTIN BY SUMMEY, WEETER & ASSOCIATES, DALLAS

The architects' design intent here was to link a new five-story building to an existing two-story bank so that the whole would be both harmonious and noticeable. Not only is the 78,225-square-foot addition supposed to look like it belongs with the smaller building but it also is to project a "vital image" to motorists passing by on nearby Mopac Freeway.

To those ends, the body of the new building is designed to be "expressive" of the limestone cliffs that abound in the Texas Hill Country, with facades recalling the eight-foot grid of the smaller building in a stepped pattern leading to a broken parapet. The cantilevered entrance canopies and podium planters of the existing building are used again on the addition to tie the two buildings together as well as to strike up yet another Hill Country metaphor, in this case limestone outcroppings.

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SCHOOLS

GRANT INITIATES UT CENTER FOR STUDY OF SOUTHWEST AMERICAN ARCHITECTURE

The University of Texas System Board of Regents accepted at its June meeting a \$200,000 grant from the Meadows Foundation of Dallas to establish the Southwest Center for the Study of American Architecture at the University of Texas at Austin.

Under the direction of the UT-Austin School of Architecture, the new center will bring together scholars and practitioners in architecture and related fields to serve a twofold purpose: researching the history of Southwestern architecture, and studying the directions in which the region's architecture is heading.

Hal Box, FAIA, dean of the School of Architecture, sums up the centers' goals: "We have to look at the old to understand the new, but we are also looking very closely at new concepts in architecture, planning and urban design."

Specific projects for the center will include the definitive recording of the history of Southwestern architecture, the impact of historic preservation on urban planning and development decisions, appropriate urban housing, and the study of architects who have worked in this region.

The Southwest Center is affiliated with the Center for the Study of American Architecture at Columbia University in New York. At present, the only other regional center to be established is the Midwest Center, affiliated with the Art Institute of Chicago.

FIRMS

James K. Wilhelm has succeeded Bill Klotz as president and chief executive officer of the Houston firm **Lockwood, Andrews & Newnam**, which has announced the creation of **LAN Architects** as an architectural services unit. George R. Jumonville has joined LAN Archi-

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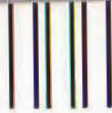
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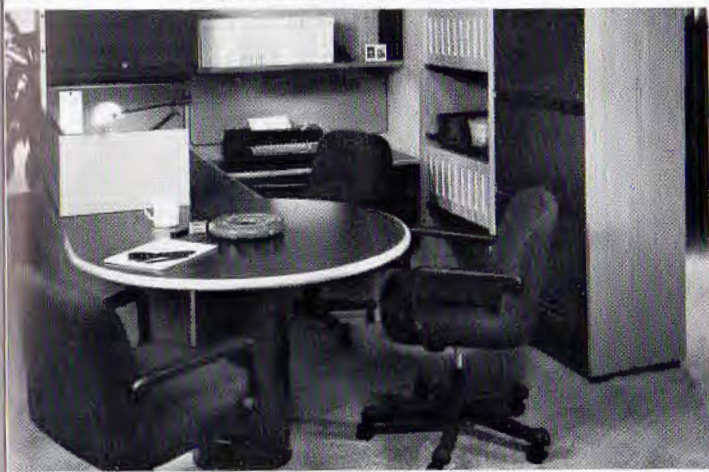
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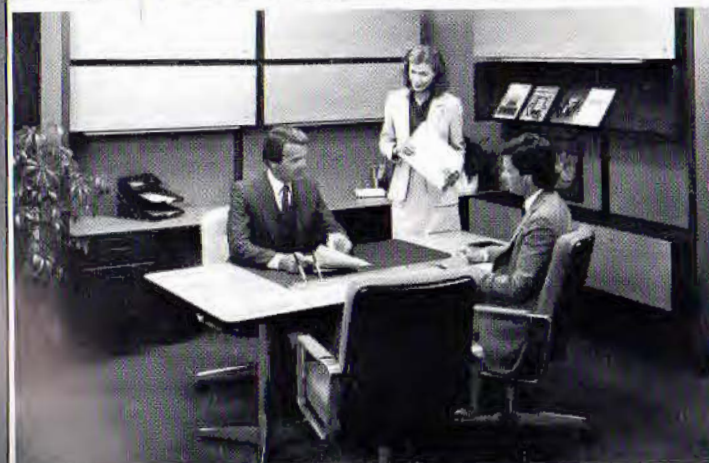
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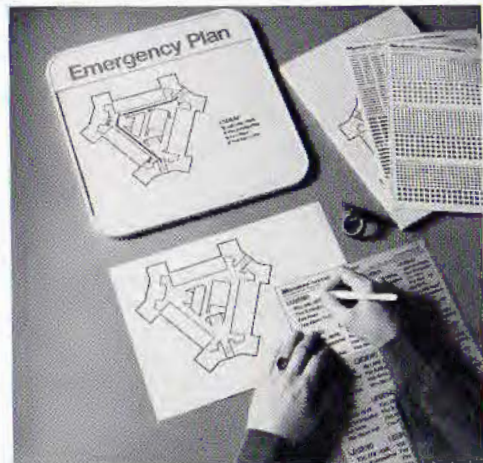
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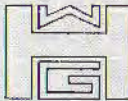



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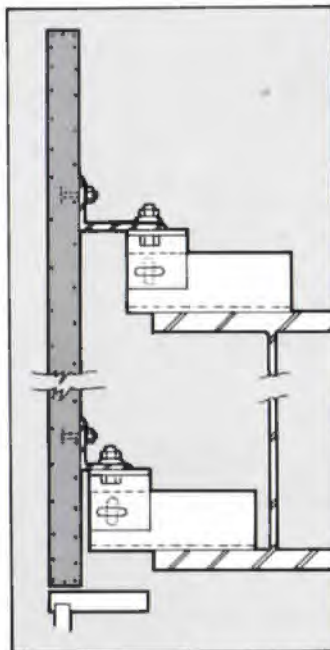
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NEWS, continued from page 80.

teets as managing principal.

The Midland firm **Patterson/Yowell/Architects** has promoted architect Michael Huslage to partner in the firm.

The Dallas firm **SHWC** has moved its offices to 5601 MacArthur Blvd., Irving, 75062. Telephone: (214) 257-0700. Mailing address: P.O. Box 612087, Dallas 75261.

Paul Kinnison Jr., and Thomas R. Sokol have announced the formation of the San Antonio firm **Kinnison Sokol Architects**, naming as associates William A. Hensley and Jackie E. Vinzant.

The San Antonio firm Chumney, Jones and Kell has changed its name to **Jones and Kell**, while former CJ&K chairman Patrick S. Chumney has joined with former CJ&K vice president Judith Urrutia to form the partnership **Chumney/Urrutia**. Jones and Kell will continue to occupy the firm's present offices. Chumney/Urrutia soon will open offices at the Forum Building, 8000 IH 10 West.

Charles F. Hanna has announced a change in the name of his Tyler firm to **Hanna/Medford Associates** following Lel L. Medford's joining the firm as a partner.

Gerald Moorhead has announced the beginning of a new architectural practice in Houston, with offices at 3400 Montrose, #302, Houston 77006. Telephone: (713) 526-3403.

The Dallas firm **Gresham, Smith and Partners** has moved its offices to 1999 Bryan St., Suite 3200, Dallas 75201.

Jeffrey D. Ryan has been named a partner in the Houston firm **Morris/Aubry Architects**, which also has announced a merger with **William M. Burwell Incorporated**, a Houston space planning and graphics firm. The combined firms will operate under the Morris/Aubry Architects name in their new corporate offices at the 3355 West Alabama Building, Houston 77227-2715. Telephone: (713) 622-1180.

The Houston firm Kirksey Associates has changed its name to **Kirksey-Meyers Architects** following the naming of Michael Meyers as managing partner. New telephone: (713) 850-9600.

The Houston firm **Hudson White Carlin** has moved its offices to 11490 Westheimer, Suite 150, Houston 77063.

The San Antonio firm Cochran & Davis Inc. has announced a corporate name change to **Gregory M. Davis Associates Inc.**

Jack M. Porterfield has announced that the Pasadena firm Doughtie and Porterfield, Architects, has been dissolved, and that a new firm, **Porterfield and Associates Inc.**, has been formed, with offices at the same address.

Antony Harbour, managing principal in charge of the Houston office of **Gensler and Associates/Architects**, has been appointed to the firm's newly established board of directors.

The El Paso firm James H. Carr Architects, has changed its name to **Carr/Razloznik Architects, AIA**, and has moved its offices to 1019 E. Yandell Drive, El Paso 79902. Telephone: (915) 532-2121.

The Amarillo firm **Wilson-Doche Architects** has moved its offices to 1201 S. Taylor, Amarillo 79101.

Jeff Potter and Duane Meyers have recently established the Longview firm **Potter + Meyers: Architecture**, with offices in the Norton-Barbee Building, 103 Bank St. Telephone: (214) 753-4209.

Cerna-Garza-Raba Inc., the San Antonio architectural and engineering firm, has named Daniel A. Cerna chairman of the board and Laurence J. Raba president of the firm.

The Dallas firm **Bethel & Williams Architects, Inc.** has relocated its offices to 4300 MacArthur, Suite 214, Dallas 75209. Telephone: (214) 521-4214.

The Houston office of **Daniel, Mann, Johnson & Mendenhall** has announced the following promotions: John Stainback to managing director; Dan R. Stewart to director of architecture; Wayne Cully to director of design; and O.C. Bartholomew to director of architectural technology.

EVENTS

Aug. 25—Oct. 16: The Archer M. Huntington Gallery at the University of Texas at Austin is holding an exhibition entitled "Ornamentalism: The New Decorativeness in Architecture and Design." Gallery officials say the exhibit will include many architectural models and drawings, furniture, fabrics, ceramics,



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Sept. 8—10: Design technology conference, focusing on the newest production tools and techniques of designing and drafting by architects, engineers, draftsmen and graphic artists, at the Albert Thomas Convention Center in Houston. Contact Brad Lee, the Convention Company, 4447 North Central Expressway, Suite 310, Dallas 75205. Telephone: (512) 522-6009.

Sept. 10: Opening of three-part tribute to San Augustine architect Raiford Strippling, the dean of preservation architects in Texas, sponsored by the National Endowment for the Arts and the Texas Committee for the Humanities, at the Institute of Texan Cultures in San Antonio. The retrospective will include a series of videotape interviews with Strippling, a photographic exhibit of his work and a symposium on Texas heritage and historic preservation.

Sept. 10—Oct. 16: Austin's Laguna Gloria Art Museum will sponsor an exhibition entitled "Invention: Designs by Buckminster Fuller" and containing patent drawings, maps and sculptural objects by the late architect/philosopher, who died July 1 at the age of 87. Accompanying the exhibit will be slides of realized projects, a videotaped interview with Fuller, and a special "participatory" gallery exploring Fuller's ideas about technology and natural science.

Sept. 21—Oct. 26: The Rice Design Alliance in Houston is sponsoring a lecture series entitled "Wish You Were Here: The Architecture of America's Great Resorts." Lectures discussing how architecture helped shape the ambiance and history of some of America's best-loved vacation spots will be held at 8 p.m. each Wednesday in the Brown Auditorium at Houston's Museum of Fine Arts. For more information, write: Rice Design Alliance, Rice University, P.O. Box 1892, Houston 77251. Telephone: (713) 524-6297

Sept. 25—Nov. 6: "Scott Burton Chairs," an exhibition of the sculptor's abstract furniture, at the Fort Worth Art Museum, 1309 Montgomery St., Fort Worth 76107. Telephone: (817) 738-9215.

Oct. 4—Dec. 13: The Construction Research Center at the University of

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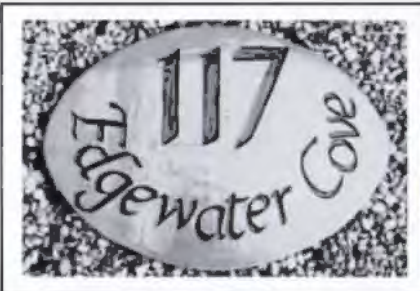
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Texas at Arlington tentatively has scheduled a continuing education course entitled "Advanced Properties of Concrete" for 7-9 p.m. each Tuesday, Oct. 4 through Dec. 13. The center also is conducting a seminar entitled "Basic Soil Stabilization" on Thursday and Friday, Oct. 27-28. For further information about these or others of the center's continuing education courses, write: Construction Research Center, University of Texas at Arlington, Box 19347, UTA Station, Arlington 76019. Telephone: (817) 237-3701.

Oct. 26-30: National Preservation Conference, sponsored by the National Trust for Historic Preservation, in San Antonio. Registration is \$90 for members of the Trust, \$125 for nonmembers. Contact the National Trust for Historic Preservation, 1785 Massachusetts Ave., N.W., Washington, D.C., 20036. Telephone: (202) 673-4136.

Nov. 13-15: "Architectural Research 1983: Priorities, Prospects and Funding," a conference for architectural researchers, practitioners and educators, sponsored by the Architectural Research Centers Consortium and the College of Architecture and Environmental Design, Texas A&M University, College Station 77843. Telephone (713) 845-1260.

Nov. 17-19: Texas Society of Architects 44th Annual Meeting, San Antonio Convention Center, November 17-19, 1983.

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It has been my good fortune to have visited many of the great gothic cathedrals of Europe. I know how the sheer awesomeness of Architecture can reduce man to a puddle of humility in a place where he can feel the presence of his Maker. Somehow the Miesian phrase "less is more" seems a little shallow in the baroque-ness of such hallowed spaces, but American religious architecture seems to believe it.

Worship now relates to suburban living. No longer do people don their Sunday best and go to the city for church. Today we are likely to dress down and leave town. In California, there is a drive-in confessional called "Toot and Tell or go to Hell!"

I have yet to see my first Postmodern house of worship, but I already know the script. It will be a plywood Kleenex box, with a Palladian arch and a round window, trimmed in Day-Glo paint. Inside, Marjoe Gortner (complete with a \$50 platinum blo-dri haircut) will preach by videotape to the multitudes seated on the vinyl-covered pews, as David Bowie waits his turn at the million-watt mike.

The scenario will only be complete when the architectural press writes its "WOW" reviews, and the AIA shouts "groovy" and passes out a Gold Medal. After a period of copy work (by others) in different hues of Day-Glo, some old esthete in a black suit, two-tone shoes, and white socks will come along and channel it into a "new design." The whole process will then be "born again."

If one is to be a successful designer of church houses, it is a good idea to cultivate a non-denominational attitude and appearance. For starters, I suggest you wear a Cross, a St. Christopher's medal, and a Star of David, and have a plastic Jesus on your dash. This will confuse your clients as to your true faith. If anyone really wants to know where you stand, they can always engage the Ku Klux Klan to come over and burn a question mark in your lawn.

In programming a worship facility, prepare yourself for an ordeal. There is nothing more professionally debilitating than the blank stare one receives from an entire church building committee when asked what they believe. There is not space here to delineate my many personal experiences in working with church folk, but here are some axioms you can hang your hat on:

- Never argue theology using Dial-A-Prayer as your base reference.
- Religious beliefs vary on the same subject. Get yourself a loose-leaf Bible.
- Most church building committees regard a church architect who drives a Cadillac Seville with stained glass windows as ostentatious.
- It is okay to recycle an existing building for worship. Remember, Americans can worship almost anywhere. We have a congregation in Dallas that meets in a bowling alley. Last Sunday the preacher got three converts, two strikes, and a spare.
- Those who think the Pope is a liberal are capable of bringing back not only fish on Friday, but the Spanish Inquisition as well.
- There are people on church building committees who regard religion as a bus. They're willing to ride it only when it goes in their direction.
- If you meet a Nun who has become a priest—do not call her "Father."
- Puritanism is the haunting fear that someone, somewhere, may be happy.
- Billy Graham has saved more people than Household Finance. Rejoice!
- Church folk believe there are two kinds of people in the world—the "good" and the "bad." The "good" decide which is which.
- It is in poor taste to refer to Matthew, Mark, Luke, and John as the God Squad.
- In today's society, if you turn the other cheek, it is best to know how to set a broken jaw. This applies especially when working with churches.

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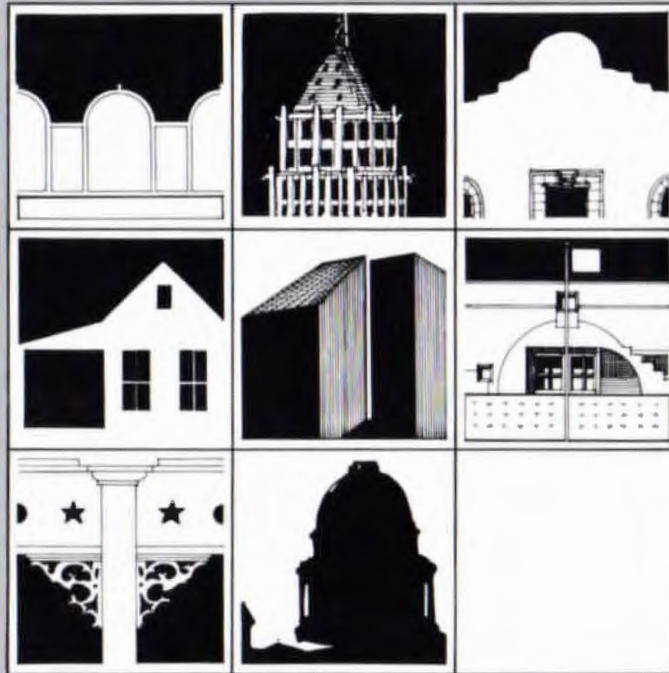
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