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Mil-Com Building
San Antonio, Texas

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Dallas, Texas

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The bottom line: savings from 10% to 20%.

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"That's Reason #1 for wood. Value.

"Second, the neighborhood is mixed commercial and residential. We wanted to blend in. Wood was the best answer aesthetically.

"Third, since we lease space to others, we wanted a good-looking building that would attract tenants. We got it with wood."

King George Drive Building
Dallas, Texas

WOOD SYSTEM SAVES MONEY BUT IT ISN'T AUTOMATIC.

Frank Kemeny, RF Associates, Dallas, agrees that wood systems can save big money.

But, he says, it isn't a gift.

"You have to earn the savings," Kemeny said. "You need a quality framing subcontractor. On the Pecan Crossing Office Building, plywood and wood trusses were selected after an independent estimator compared costs of several systems. The savings were substantial.

Mi-Com Building
San Antonio, Texas

"But a lot of the credit for achieving the efficiencies inherent in the design goes to the subcontractor. They fabricated the wood trusses and installed the plywood floor and roof systems. They're an experienced, reliable company that did quality work on schedule, within budget. The material *permits* cost savings, but the contractor and subs have to *earn* them."

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Dallas Architect Don Williford specified 4½:12 lumber trusses and a plywood roof deck for the King George Drive building for four big reasons. Economy. Speed. Aesthetics. Performance.

King George Drive Building
Dallas, Texas

"We saved a substantial amount by going to a pitched roof with wood trusses instead of steel.

"Insurance costs were virtually unaffected because local codes require a sprinkler system for a building of this size.

King George Drive Building
Dallas, Texas

"We have to be very careful with our client's money. And very effective, as well. The wood roof system is attractive; that makes the building easier to lease. And we know from experience that wood systems perform well over time."

And what about speed?

"You often get custom wood trusses faster than standard steel designs," Williford said.

THE WOOD PRODUCTS PROMOTION COUNCIL

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The Summit, Houston, Texas, installed, 1974.

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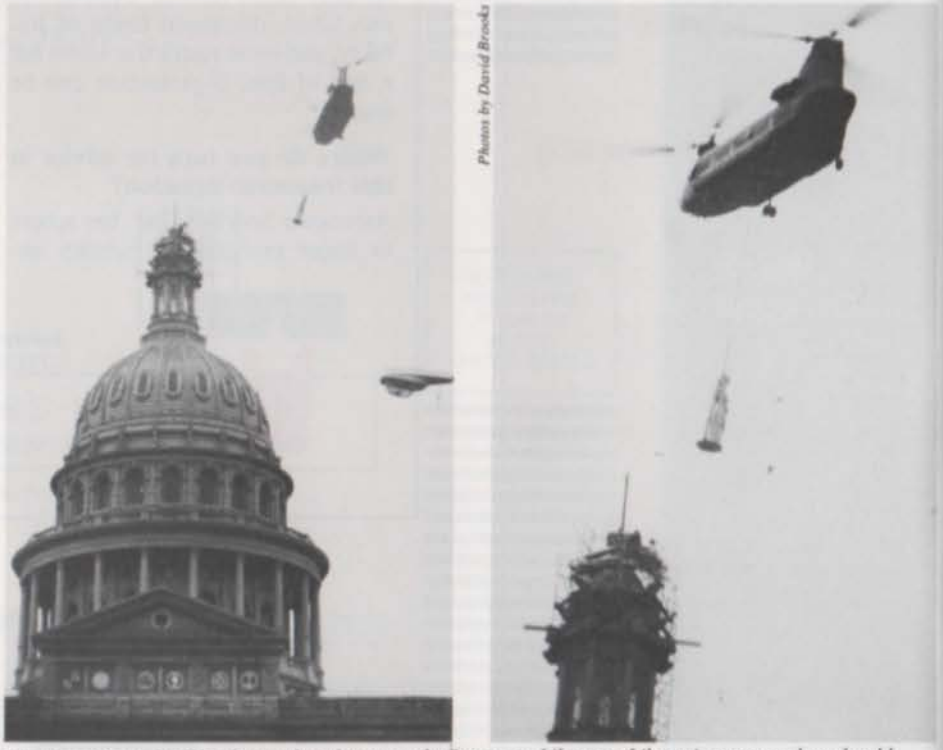
PEOPLE, PROJECTS, & PROCEEDINGS

Edited by Ray Ydoyaga

GRAHAM KEEPS ON MOVING TO PRESERVE CAPITOL



Photos by David Brooks

The Texas Capitol will be shorter than the one on the Potomac while a new Liberty is cast to replace the old one, seen here carried off by helicopter.

Take a mild-mannered preservation architect with outstanding credentials and drop him into the slow-moving currents of state government and what do you get? In the case of Roy Eugene Graham, the Architect of the Texas Capitol, the answer is: not the average bureaucrat.

Since taking over the office of the Architect of the Capitol a year ago, Roy Graham has been amazingly successful despite unusual hardships, even by the red-tape standards of government and politics.

"I've had to be not only an architect," Graham says, "but also a politician, a fundraiser, a bureaucrat, and, most of all, an educator. It feels a little like when I was a tank unit commander in the Army. To test us, they would send an increasing number of tanks in all different directions and then tell us to control their movements. Sometimes this is what I feel I am up against in this job."

Graham was appointed by Governor Mark White at a time when the state was still living fat on oil-tax revenues, bringing in so much money that most legislators finally began to realize something should be done about the deteriorating condition of the state Capitol. But by the time he started to work, Graham faced a state budget that had to be severely cut after the price of oil plummeted.

"I used to go in front of the Legislature," he says, "with my sack of Capitol remnants, trying to get them to realize that a restoration was necessary, not merely cosmetic. I used to pull out a piece of Capitol sewer pipe that is full of holes. That one was particularly effective."

The Legislature voted to fund the $600,000 operation of his office but made no moves to fund the restoration of the Capitol and its grounds. In a conference with a key legislator, the soft-spoken Graham politely asked how much money he would have to raise from the private sector. "All of it," the legislator retorted.

Graham has nevertheless persevered and kept his plans to restore the Capitol alive by remaining in the public eye. Over the past year hundreds of stories about Graham and the Capitol restoration project have been published in scores of newspapers throughout the state. Initially Graham drew media attention by telling reporters he needed their help to let Texans know that he was soliciting photographs, documents, or furniture that would help him restore the Capitol. The dozens of Texans who responded to the call made for interesting feature stories. Now members of the Capitol press corps, who represent all of the state's largest newspapers, regularly seek him out.

"At first I needed to let the people of Texas know that we were here, and that we were serious about restoring the symbol of the state," Graham says. "But I haven't really had to pursue the press, except in the very beginning. Now I get calls from reporters all the time. 'What are you doing next?' they ask me. I do take the press very seriously because all of the restoration money will have to come from private funds and the press gets that message out. It's a continuing process to educate people on a building that should not be taken for granted."

Graham's goal is to establish a master plan for the restoration of the Capitol. But the goal has been difficult to accomplish, not only because funds are lacking, but also because of emergency repairs that had to be made to the Capitol and the statewide Sesquicentennial fever that has side-

tracked him onto a number of other projects. In at least one case Graham has gathered the "problems" together in one room to come up with a joint solution.

"The Texas School Children's Association came into my office one day looking for a Sesquicentennial project they could call their own," he says. "At the same time, I came to the conclusion that Liberty, the statue that crowns the Capitol, was in imminent danger of collapse and I had no funds to do anything about it. The kids decided to take on the fundraising project, they raised money for the operation, and we got the statue down."

Liberty also turned out to be the biggest publicity prize yet. Reporters have been obsessed with the story for months. Writers as far away as St. Louis, Sacramento, and New Orleans have run several pieces about Liberty. It all began when Graham and his consultants, Washington University Technology Associates, examined the statue and found "gaping cracks along the solder seams, stress corrosion of the zinc alloy, widespread hairline cracking, and porosity of the alloy." After much debate, they decided that the statue was structurally unsafe and could not be repaired. The trouble came in how to take it down.

"We still aren't sure how they got it up there in the first place," Graham says. "There are a couple of theories. One says that it was taken up in parts and assembled atop the dome. Another theory says it was winched intact to the top. However they did it, the technology has been lost."

Relying on the advice of experts, Graham conceived of a spectacular method of getting the 15-foot-seven-inch, 3,000-pound Goddess of Liberty down. On a rainy Sunday morning, November 24, a Texas Army National Guard helicopter picked up the statue while hundreds of reporters and spectators watched from outside the fence of the closed Capitol grounds. The helicopter gently set the statue, wrapped like a Christo creation in a protective nylon net, on the Capitol's southwest lawn. By Monday, nearly every paper in the state had run a story, many on the front page.

The real Liberty will be displayed in the Capitol complex. A new goddess, recast in bronze and painted in the original white color, is scheduled to be mounted back atop the dome in time for the state's official Sesquicentennial celebration in March. No doubt the national media covering the state's 150th anniversary of independence from Mexico will pay special attention to the statue's mounting. Once in place, it will put the Texas Capitol back in the record books as three feet taller than the one on the Potomac.

Many stories have been told of complaints from some Capitol observers that Liberty, whose features are exaggerated for viewing from below, is "ugly" and that a handsomer statue should be commissioned. One Austin comedian sarcastically claims that a likeness of Attorney General Jim "Borgnine" Mattox in a dress would make a better-looking goddess. Graham defends the lady's virtues.

"She's not at all ugly," he says. "The face is classic in profile and she has dimples." More importantly, according to Graham, the goddess holds the star from which the Lone Star state designation derives. "It is a very important monument," says Graham.

Graham, right, gives a guided tour of the Senate to a group of visiting architects.

The cost of removal and replacement of the statue is estimated at $450,000; money for the operation came from the Texas School Children's Fund and other private donors.

While all of this was going on, Graham, too, was in the limelight. Graham climbed the scaffolding of the statue to honor the requests of media photographers wanting to shoot him inspecting the statue. "I think the photographers were more scared than I was," Graham says.

Concurrent with the removal and replacement of the statue, Graham's five-person staff is also working on a number of other projects, including: finishing the Lt. Governor's offices, which were fire-damaged two years ago; finishing a portion of the Members' Conference Room in the House chamber; continuing work on the Governor's Reception Room; and several other Sesquicentennial installations. Next year Graham expects to continue with more "interim projects," as he calls them, before getting back to the restoration master plan.

"We could put a moratorium on these interim projects to focus on a comprehensive master plan," he says. "But this is a working building and I understand that things just can't be put on hold for two years. Every time someone wants to make changes in public spaces, we are making sure to do the right thing. I take too much pride in this job to do anything other than what is supported by authentic scientific evidence for the restoration of the Capitol. If I do anything else I'll be letting down the entire state."

Outside the building, Graham has aimed his attention at the romantic allee in the southern half of Capitol Square. Planted in 1903, 36 elms once lined the axial walkway from the Capitol's front door to Congress Avenue. A host of consultants have determined that all the remaining trees are suffering from slime flux, an incurable bacterial infection. The disease, coupled with the trees' normal octogenarian lifespan, means the trees should last no more than five years longer.

Graham has embarked on an ambitious plan to replace the elms with the more "historically correct" native Texas sycamores. His records show that sycamores were in fact the first trees on the Capitol grounds, planted in 1888 or 1889. For unknown reasons, elms were later planted between the sycamores. Later the sycamores disappeared, and more elms were planted. Graham will begin planting three dozen sycamores in February between the existing elms, which will be removed only when they die naturally. The sycamores are expected to be less susceptible to slime flux than the elms. Project Greenscape, a project of the Austin Chamber of Commerce, is leading the fundraising drive to pay for the new trees and planting.

Despite past hardships—the legislature did not appropriate his operating budget until September 1985—Graham is confident that he will accomplish his mission.

NEWS, *continued on page 23*

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LESSONS FROM MEXICO CITY'S DEVASTATING QUAKE

Although many sections of Mexico City have recovered from the devastating earthquake of September 17, scientists and engineers are continuing to flock to the city to study unusual aspects of the destruction—the high number of buildings that collapsed compared to other earthquake-damaged cities, and the pattern of the damage. The worst effects occurred in 25 neighborhoods, leaving most other areas of the city relatively untouched. Even within the affected area the damage was selective. In blocks containing a number of buildings of similar age and construction, sometimes only one collapsed while others remained nearly unscathed.

According to Dr. James O. Jirsa, professor of civil engineering at UT Austin and an expert on structural engineering, some of these effects have readily available answers while others may remain a mystery for some time to come. Jirsa and 11 of his colleagues traveled to Mexico City after the earthquake to study the damage and to gather data for future studies. He says experts already know that Mexico City's soil conditions make earthquake protection extremely difficult.

Photo by James Jirsa

Most of the heaviest earthquake damage occurred in six- to 10-story buildings.

The city was founded on an island, called Tenochtitlan, in the middle of Lake Texcoco in the valley of Mexico. More than 500 years ago the Aztecs, and later the Spaniards, expanded the city by landfilling the lake. Over half the city now occupies a portion of the lake. The soil used in landfilling was mostly volcanic ash mixed with clay. The fact that the soil "contains four parts water for every one part of earth, and the water table is four feet down," adds to the soil's instability, Jirsa says.

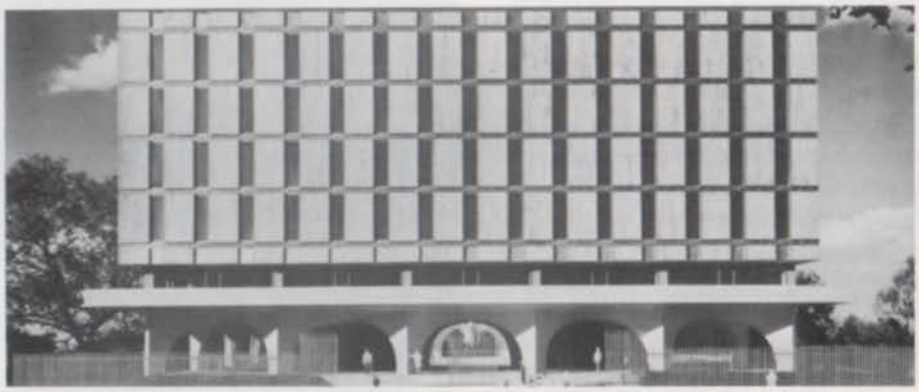
"Mexican authorities have divided the city into three areas—the lake-bed zone, the transitional zone and the hill zone—in establishing building codes," Jirsa says. The requirements for withstanding lateral forces increase significantly from the hill zone to the lake-bed zone.

According to figures from the National University of Mexico, nearly all significant damage from the city's four major 20th-century earthquakes has occurred in the lake-bed zone, with the worst damage in an area just north and west of the old central city of Tenochtitlan.

"We aren't really sure of all the reasons why that area suffers more damage than other parts of the lake-bed zone," Jirsa says, "but there are a couple of contributing factors. One is that there is a high con-

QUAKE, *continued on page 26*

DESIGN BY TEXAS FIRM HELPED U.S. EMBASSY SURVIVE QUAKE



One of the buildings that survived unscarred in the center of the worst-hit area of Mexico City was designed by a group of Texas architects in 1958. Southwestern Architects and Engineers, a joint venture group of Texas architects including the firms Kuettne Brooks & Barr and Page Southerland Page of Austin, Phelps Dewees & Simmons of San Antonio, and Pitts Mebane & Phelps of Beaumont, with R. Max Brooks as head of the design team, was commissioned by the State Department in 1957 to design a new U.S. Embassy building on a one-block site along the Paseo de la Reforma between Chapultepec Park and the old city of Tenochtitlan. The construction background of the building illustrates the difficulty in building in a city with a soil that architects and engineers have compared to "Jello."

At first, the architects conceived of a complex of two buildings, a thin high rise attached to a low rise. But after consulting Leonardo Zeevaert, a Mexican structural engineer educated at the University of Illinois, the architects decided to rethink their preconceptions about building in Mexico.

Zeevaert, widely known for his skills in designing structures to withstand earthquakes, recommended a symmetrical design for the new embassy. An asymmetrical building would settle asymmetrically, he said. Austin architect David Graeber, a member of the Embassy design team, recalls the first time he saw subsurface soil in the city. "It had the consistency of face cream," Graeber says. "You could grab a handful, squeeze it, and water would drip down your hand."

Zeevaert came up with the idea of a floating structure for the new embassy. David Graeber recalls that it was to be "not just a floating slab but a completely enclosed box that would float, much like a boat."

This concept, however, was harder to realize than it was to conceive. The first problem to be solved was subsidence. The site of the Embassy is surrounded by several important structures, including a large luxury hotel, a historic mansion, and the city's Monument to the Mexican Revolution. The surface of the entire area, like that of most of Mexico City, had been subsiding at a rapid rate. The Monument to the Revolution, however, had been mounted on a pylon sunk 90 feet into the earth. It remained stable while the ground sank around it. Today it stands 15 feet higher than when it was first built.

For obvious reasons, the State Department and the architects did not want the same thing to happen to the embassy. The team, following standard practice for unstable soils, considered excavating an amount of earth equal in weight to the building—about four stories deep. But they found the soil so unstable that a ditch that size could rebound, or bulge at the bottom, and even cause nearby buildings to shift and tilt in the direction of the embassy.

Avoiding such a situation took extraordinary precautions. Just outside the periphery of the building, where steel sheet piling had been driven down to a depth of 65 feet to form the walls of the foundation, they dug eight injection wells. Four additional wells were placed in the center of the building. If, while they were excavating the foundation of the embassy, nearby buildings began to shift, the engineers would simply inject or remove water to stabilize the soil.

To further minimize the danger of soil shift, they excavated a little at a time. For each floor slab poured above ground, one six-foot layer of earth between the foundation's structural columns was removed. Once the entire 45-foot-deep excavation was completed, a two-foot slab was poured that served as the base of the floating foundation.

The level closest to the foundation slab was used for emergency water storage. Above that are two basement levels. The four above-ground levels of the embassy are raised on heavy single-column arches that resemble pilotis.

The offices face a central courtyard containing an ingenious central fountain. The injection wells used during construction were left intact in the courtyard, feeding into the fountain. If the foundation "floats" too much and shifts the building, the fountain is designed to act as an automatic leveling device. If the foundation tilts, water from the fountain spills onto the plaza. Gutters in the plaza then lead back to the wells: The water is injected below the foundation slab until the building is again level.

The structure has received high praise, and no wonder. Unlike other buildings in the area, the five-story U.S. Embassy has survived four major earthquakes without any problems. While other buildings may not survive in a future quake, odds are the Embassy will continue to float through.

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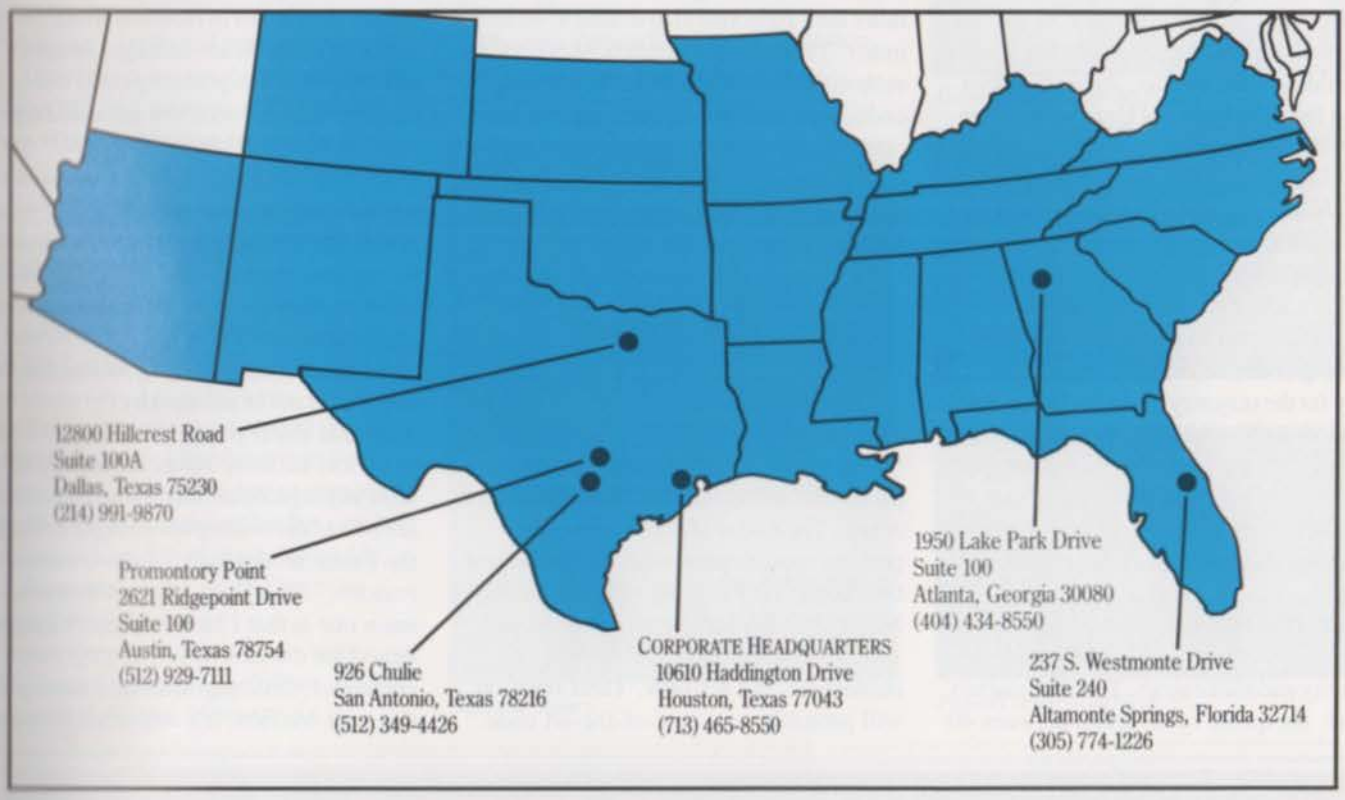

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centration of buildings in the area built before the stringent building codes of 1976 were enacted. The other is that there are a number of six- to 10-story buildings that were particularly vulnerable to this earthquake."

Jirsa explains that after each of the last four earthquakes, Mexico City has made its building code stricter. According to a report from the National University, there were 265 buildings that collapsed or suffered severe damage in the September 1985 quake. Of these buildings, 69 were built prior to 1967; 149 between 1968 and 1976; and 46 built after 1977. "I believe there are fewer damaged buildings built after 1977 because of the tougher 1976 building code," Jirsa says.

By far the majority of the buildings that suffered earthquake damage were between six and 10 stories tall. Jirsa believes the reason for this is that, with one of the longest vibration cycles on record, the earthquake's harmonic vibrations matched the natural flexing period of six- to 10-story buildings. This matchup caused the buildings to vibrate beyond their structural capacity and shake apart. To make matters worse, the quake cycle lasted between 40 and 60 seconds—an extremely long time for the earth to be shaking.

To reinforce this theory, Jirsa points out that almost no one- to two-story buildings built with load-bearing masonry walls sustained heavy damage, and that buildings taller than 10 stories also tended to remain intact. Though Jirsa predicts Mexico City authorities will strengthen the building code, he doubts that all buildings could be made to withstand a quake similar to that of September. "To my knowledge there hasn't been an earthquake like that before." Jirsa also counters those who blame corruption in the Mexican construction industry and lax enforcement of building codes for the damage. Jirsa says he saw nothing to reinforce such charges.

"Mexico has some of the world's greatest experts on earthquakes," he says. "Their building codes are certainly comparable to world standards for earthquake zones. The codes of California offer perhaps more requirements on detailing of buildings. But I would not call the existing Mexican codes lax. Perhaps before the 1957 earthquake their codes were inadequate, but not now. Their revision will probably be a state-of-the-art code."

Although the tremors of the Mexico City earthquake were felt as far north as Houston, Jirsa says Texans have little reason to fear quakes. "Texas is considered one of the least earthquake-prone areas on the planet," he says. "The small tremor people felt in Houston would never cause any significant damage. Many newspaper stories probably came out on it because office workers in tall buildings don't realize that highrises sway all the time. The difference between the small tremor and [vibration caused by the] wind is that the tremor was a rather quick and abrupt movement, while the wind moves a building slowly. In either case the buildings in downtown Houston are designed to sway and withstand strong lateral forces, and would not be affected by the small tremors that could possibly hit it."

If Jirsa believes Texas is unlikely to have any significant seismic activity, why are he and his colleagues so eager to study the quake in Mexico? "There are many reasons," Jirsa says. "But probably the main one is that I have to prepare [students] for the problems that they may encounter. Civil engineers also have good ties with Mexico. It's important to learn

from each other's problems."

Jirsa believes researchers will be studying this earthquake for many years to come. "We will probably learn much more than we know about how to deal with earthquakes in poor soil conditions," he says.

"You can't really tell people where to live. Developers will probably put up housing where a building collapsed before. People will then move into the building because they like the area and don't want to leave it. And guess who has to try and make the building safe in an inherently unsafe area?"

TEXANS WIN NATIONAL LANDSCAPE AWARDS

Four Texas projects were among 34 national winners of the American Society of Landscape Architects design competition. The 19-member jury for the competition was chaired by John J. Reynolds, superintendent of the North Cascades National Park.

Texas Honor Award winners were:

Williams Square at Las Colinas, Irving, by the SWA Group, Houston;

Landscape Architecture in Saudi Arabia, a guidebook by Salman Al-Sedairy and Lewis T. May of CRS Sirrine, Houston;

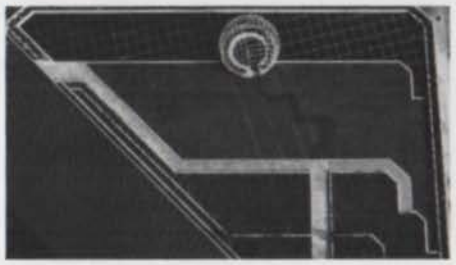
Shell Woodcreek Exploration & Production Headquarters, Houston, by SWA Group, Houston;

Phoenix Tower Roof Deck, Houston, by SWA Group, Houston.

Williams Square

Cover of Landscape Architecture

Shell Woodcreek



Phoenix Tower Roof Deck

HOUSTON CHAPTER WINNERS

The Houston Chapter has announced the winners of the 1985 Design Awards Competition. The architecture jury consisted of Myron Goldsmith, retired, SOM; Dan Solomon, San Francisco; and Elle Posner, *Wall Street Journal*. The interiors jury consisted of Claude Engle, Washington, D.C.; Carol Groh, New York; and Maeve Slavin, New York.

Architecture Honor Awards:

Houston residence, by Ray Bailey Architects;

Four Allen Center, by Lloyd Jones Fillpot; *(see TA* Nov/Dec '85)

LTV Center, Dallas, by Skidmore, Owings & Merrill. (see *TA* Nov/Dec '85)

Architecture Citations:

Frost Office Building, by Ray Bailey Architects; (see *TA* Nov/Dec '85)

Sales and Information Center, by Ray Bailey Architects;

The Christian Life Center, by Denny Ray & Wines;

Vassar Townhouses, by William F. Stern & Associates.

Interior Honor Awards:

Houston Ballet Academy, by Ray Bailey Architects;

Vista International Hotel, Waterford, Oklahoma, by Index, Inc.;

MBank, Austin, by IBD;

Calcasieu Marine National Bank, Lake Charles, Louisiana, by Lloyd Jones Fillpot; (see *TA* Nov/Dec '84)

Rialto, by Kirksey Meyers Architects in association with HDG;

The Gunlocke Showroom, by Morris/Aubry Architects;

Building #1, Office City Park, by Velma Sanford;

LTV Center Retail Spaces, Dallas, by Sikes Jennings Kelly;

Trammell Crow Office in LTV Center, Dallas, by SOM; (see *TA* Nov/Dec '85)

Enstar Corporation, by 3D/International.

Houston Residence

Sales and Information Center

Rialto

Richard Payne

Christian Life Center

Chas McGrath

Gunlocke Showroom

Vista Hotel, Waterford, OK.

Rob Muir

Building #1

Merrick, Heidrich-Blessing

MBank, Austin

Enstar

Houston Ballet Company

LTV Center Retail

Rosenberg Library

Original Saengerfest arches of 1881

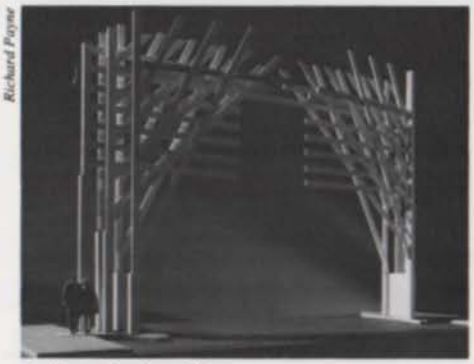
Richard Payne

Arc de Tigerman

Richard Payne

Fish arch by Aubry

Richard Payne



Pelli's arch a la trellis

MITCHELL BRINGS BACK GALVESTON'S FESTIVAL ARCHES

The Post-Modern reprise of a 100-year-old tradition will be seen in Galveston starting in February, 1986. Galveston Arches, fantasy structures designed by seven well-known American architects to span streets in Galveston's historic Strand area, will be constructed as part of the city's 1986 Mardi Gras celebration.

The architects are: Michael Graves, Charles Moore, Cesar Pelli, Helmut Jahn, Stanley Tigerman, Gene Aubry, and Boone Powell. Each arch will cost approximately $25,000 to build.

The exhibition is sponsored by George and Cynthia Mitchell.

Mitchell Interests' representative Danci Perugini Ware, who conceived and directed the project, traces the first triumphal arches in Galveston to 1881. They were used, she says, not for a Mardi Gras celebration but for a Saengerfest. An elaborate biennial German singing-society convention and competition, the Saengerfests began in New Braunfels in 1853. The Salamander Club of Galveston took top honors in 1879 and won the right to host the 1881 convention. Preparations took a year. Galveston architect Nicholas Clayton designed a two-story pavilion capable of holding thousands, the first building in Texas lit with electricity. It burned down in 1883. Four arches, some decked in patriotic symbols and robed statuary, were erected at the intersections in the Strand area, and were the focus of an opening-night torchlight parade.

New designs available at press time showed the festiveness appropriate for a Fat Tuesday ramble. Stanley Tigerman's square-piered masonry structure has all the statuary you could want. Eugene Aubry proposed an arch of pleated and twisted metal sheets, topped by a fish. Only Cesar Pelli's design, strangely skeletal for this master of light volumes, looks like something other than fun.
—*Joel Warren Barna*

THC CATALOGS TEXAS NATIONAL REGISTER PROPERTIES

The Texas Historical Commission has recently produced "A Catalog of Texas Properties in the National Register of Historic Places." A reference guide listing all

NEWS, *continued on page 65*

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A LOOK BACK AND A LOOK FORWARD

I think many people will be surprised by this issue of *Texas Architect*. We have done two issues about health-care architecture in the past 13 years. The first, September/October 1974, came at a time when the health-care industry was expanding rapidly. The tone of the issue was upbeat, centering on developments in medical technology and their impact on specialists in health-care architecture. It showcased a new style of planning for medical and mental-health facilities, brilliantly realized by the group of young architects then at Caudill, Rowlett & Scott in Houston, through which the building of new hospitals was to be democratized, the health-care system was to be opened to the poor and the aged, and a new, more open, more efficient, more humane architectural expression was to be created.

The second issue, from September/October 1980, was much more somber. By this time full-access health care in the United States, only hoped for earlier in the 1970s, was a reality. But health-care planners hadn't anticipated the medical inflation that accompanied the growth of the system. The issue of *Texas Architect* focused not on the system's sucesses, but on the obstacles confronting health-care architects, most of them arising from government attempts to control health-care costs. The issue devoted more attention to the red tape threatening to ensnarl architects than to architecture itself. This was, unfortunately, not a period of consistently good architecture for health care.

The progression from 1974 to 1980 was not a happy one. In the progression one could see the giant health system as an industry that, on reaching the apogee of success, found itself all but paralyzed in balancing the demands made on it from different quarters.

As Kirk Hamilton and Ray Pentecost explain in "Architecture For a Changing Market," which begins on page 34 of this issue, much of the uncertainty in health-care that began in the 1970s has continued into the 1980s. But, as shown in our other stories, the uncertainty about financing faced by health-care providers has had what is surely a paradoxical effect: It has made client firms more conscious of architectural quality in their projects, even more adventurous. The projects presented in this issue, from "unbundled" clinics to full-scale general hospitals, show the evidence of this new—and surprising—spirit. In a state whose economy has been suffering, it's good to bring upbeat news from a previously dismal area.

It is also fitting, in the context of an issue about health, that we feature a story on professional liability insurance, a matter that threatens the health of many architectural practices, if not indeed the whole architectural profession. Larry Paul Fuller, former editor of *Texas Architect*, now a successful freelance writer and consultant in Austin, has written a story that will also surprise many readers. Fuller has little by way of good news to relate—that's no surprise. But he makes this otherwise dry-as-dust topic understandable in way that has eluded other writers. Change has to start from understanding.

—Joel Warren Barna

HEALTH CARE: ARCHITECTURE IN AN EVOLVING MARKET

by Kirk Hamilton and Ray Pentecost

Health-care giant Page Southerland Page's 1946 design for a U.S. naval hospital in Austin, TOP, was never realized. Commissions for the Hill-Burton-financed Mason Hospital, CENTER, and Lockhart Hospital, BOTTOM, followed soon after.

Revolution, on a scale unmatched anywhere else in the American economy, is sweeping the health-care industry. The population is aging rapidly. Medical technology often becomes obsolete shortly after production. Most importantly, changes in the way government programs and insurance companies pay for health-care services are fundamentally restructuring the delivery of care.

Texas architects face a number of challenges in dealing with a market as dynamic as the current health-care system. Hospitals, traditionally taking the lion's share of medical architecture, are decentralizing to keep up with demand for outpatient care. To understand how architects respond to these market forces, consider the recent history of health-specialty architecture.

FUELING THE BOOM

Surveying the country after World War II, federal officials found that more hospitals were needed. Congress responded by enacting the Hill-Burton Act of 1946, which authorized federal funding for construction of community hospitals. In the mid-1960s, Congress created Medicare to provide health insurance for the elderly and Medicaid to provide health-care coverage for the indigent or disabled. At the same time, private health-care insurance coverage became more common as a fringe benefit for wage earners. Such insurance also usually paid on a fee-for-service basis.

Federal construction subsidies and federal coverage for the elderly and indigent combined with increased private insurance coverage to fuel demand for services and stimulated the health-care industry to vigorous expansion.

TEXAS HEALTH CARE AND ITS ARCHITECTS

Texas, with its large and growing population, came to play a major role in the nation's health-care apparatus. One of every 12 hospitals in the country is in Texas, according to O. Ray Hurst, president of the Texas Hospital Association. These hospitals are crucial to the state's economy: altogether they employ more than 220,000 people and account for more than $8 billion in wages and operating expenditures.

Building this massive medical infrastructure has employed thousands of people—including hundreds of architects.

It was not until Hill-Burton funding became widely available that firms began specializing in health-care design. Hill-Burton funding allowed hospitals to be built for the first time in nearly every part of Texas.

An early specialist was the firm of Wyatt C. Hedrick. Along with the Minneapolis firm Ellerbe and Associates, Hedrick designed the notable Scott & White Hospital in Temple.

The biggest story of the 1950s in Texas health-care design was the emergence of the Austin-based firm Page Southerland Page, which now also has offices in Houston and Dallas. The firm's first medical project, a naval hospital for Austin, was not built. Page Southerland Page began designing facilities in Mason, Lockhart, and other small towns around Austin. By the beginning of the 1960s the firm had gained a disproportionately large share of the health-care market statewide, hiring Whit Phillips and Kenneth Nuhn from the Texas Department of Health, and absorbing competitors.

By 1960 health-care construction had become a major growth industry in several larger Texas cities. Dallas's Parkland and Presbyterian Hospitals were greatly expanded. In Houston, the Texas Medical Center was developed, including St. Luke's Episcopal Hospital, designed by Rustay Martin & Vale of Houston, Methodist Hospital, designed by the McGinty Partnership, and MacKie & Kamrath's M.D. Anderson Hospital. Similar developments took place in Waco, El Paso, Lubbock, Fort Worth, and other cities.

In the mid-1960s a competitor to Page Southerland Page's domination of the Texas market developed within the Houston-based Caudill, Rowlett & Scott (now megafirm CRS Sirrine). Several architects, who went on to establish national reputations, formed the nucleus of the group around James Falick, now with the Falick/Klein Partnership in Houston. The early group included Norman Hoover; Henry Winkel-

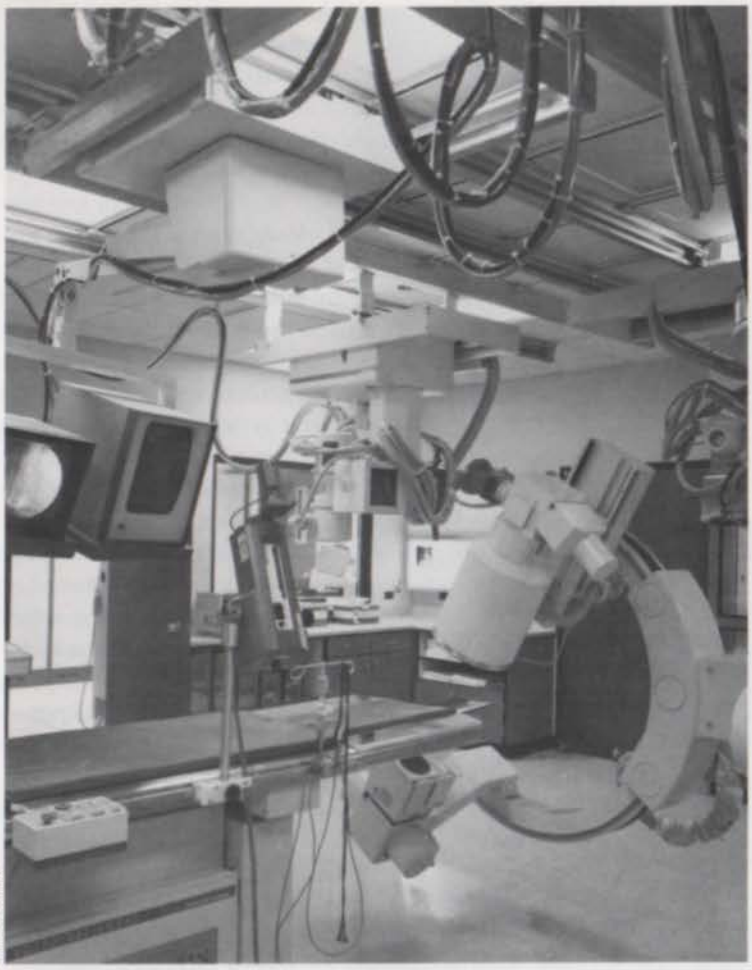
man, now the Project Architect on the General Motors Saturn Plant with Hellmuth, Obata & Kassabaum; Charles Lawrence; John DeBartolo; Robert Douglass; and Ronald Skaggs, now with Harwood K. Smith & Partners in Dallas. These and other architects brought the Caudill, Rowlett & Scott team approach and participatory-design process, using "squatters' sessions," to health-care design. A large number of other health-care architects worked with the CRS team during this period before moving to, or starting up, other firms (please see "The CRS Graduate School," overleaf). Important projects from the early years of the group include the Maimonides Mental Health Center in New York; the Desert Samaritan Hospital in Mesa, Arizona; and the Norton-Children's Hospital in Louisville, Kentucky. In 1975 the CRS health-care group began to break up, as James Falick joined what was to become the Falick/Klein Partnership, taking many co-workers with him.

Also in the 1960s, the School of Architecture at Texas A&M University began its very active master's program in hospital design, headed by George Mann. Graduates of the program include Lawrence Lammers, now with Lammers and Gershon in Reston, Virginia; James Brinkley of the NBBJ Group in Seattle; Greg Hughes of Page Southerland Page in Houston; Douglas Ogilvie of Rees Associates in Dallas; Robert Lundeen, with Rees Associates in Houston; and Craig Beale, Ronald Skaggs, and Joseph Sprague (who worked many years for the American Hospital Association), now all at Harwood K. Smith & Partners in Dallas.

Through the 1970s the forces that sustained the Texas boom in health care continued, helped along by a burst of immigration as energy prices rose and the oil industry expanded. The major development affecting the health-care field in the late 1970s came from federally mandated attempts to improve facilities by setting new standards for hospital design and to regulate rising costs, primarily through the institution of state-sponsored review of all new facilities to make sure they were needed. This "certificate-of-need" review, administered by the (recently abolished) Texas Health Facilities Commission, was considered by many architects to be exceptionally arcane, and it contributed to making health-care design, by the beginning of the 1980s, an even more specialized profession.

THE DAWN OF THE REVOLUTION

The health-care building boom after World War II contributed to increased health and longevity for the American population. But the process had an unexpected effect: severe inflation.



Chuck Williams

Technological advances made the diagnostic imaging center in the addition to St. Luke's Lutheran Hospital in San Antonio, designed by the San Antonio firm Marmon Barclay Souter Foster Hays, TOP, a more complex design challenge than the surgical suite from Page Southerland Page's late-1940s Mason Hospital, ABOVE.

The portion of the gross national product consumed by health-care expenditures grew from 5.3 percent in 1960 to 10.5 percent in 1982. In Texas, health-care inflation outstripped even the national average, rising 155 percent from 1975 to 1982, while the national average rose 122 percent.

Starting with the Reagan administration's tax and budget bills of 1981, a new strategy for controlling health-care inflation was begun, based on a system of fixed payments for treatment of diseases in "diagnostically related groups"—DRGs for short. In general, under the old "fee-for-services" payment system, with private insurance or government funds paying the tab, there had been no *economic* incentive for providers to hold down costs, although there had been government review. Hospitals could count on reimbursement for expansion costs. A doctor could order several tests for a patient where one might do, and the costs would be covered—in fact, the threat of malpractice suits encouraged doctors to order as many diagnostic tests as possible.

DRGs, the payment mechanism for the massive Medicare system since 1983, changed all that by turning the bottom line into the controlling factor. Hospitals and other health-care providers are now paid a fixed fee per patient under Medicare, by many state Medicaid systems, and by an increasing number of insurance companies. To be profitable, providers must control their own costs, and they must compete for patients. Even physicians are being forced into competition.

DRGs have created a number of worries, particularly for hospitals. Occupancy rates have dropped precipitously, as outpatient treatment and home health care have become more common. Doctors worry that the DRG system may lead to pushing sick patients out of hospitals before they are ready for release, and that this will leave physicians as well as hospitals even more exposed to malpractice suits. This, they fear, will mean further increases in the already crushing cost of malpractice insurance.

Another issue of major concern to hospitals is the future of capital-cost reimbursement. Proposed restrictions in the DRG system could limit the availability of funds for construction and equipment after late 1986.

There are a number of other factors with long-range implications for the health-care system. The population is aging. By the middle of the next century, Americans over 65, now 11 percent of the population, may make up 21 percent.

Since the elderly utilize medical services at more than twice the rate of those under 65, this aging population will make unprecedented demands on the health-care system.

The major causes of mortality are changing, too. Heart disease, for years the leading cause of death, may soon be ranked second to cancer, due to improvements in medical knowledge, personal health habits, and emergency care. Accidents, the fourth-leading cause of death, could be greatly diminished by a reduction in alcohol and drug abuse, according to Lawrence Green, director of the University of Texas Center for Health Promotion Research and Development in Houston.

WHAT THIS MEANS FOR TEXAS ARCHITECTS

The upheaval in the industry arising from these factors seemed to spell trouble for architects specializing in health care. In fact, some observers say, opportunities in the field are expanding, not contracting.

Hospitals, faced with unused beds, will need help renovating space to fit a variety of specialty services, including geriatric care. An article by Tim Dunahoo, director of health-care planning at Wright-Rich and Associates in Dallas, suggests further possible uses: unused bed wings can be converted to facilities for treating drug dependency, eating disorders, sexual dependency, or the familial effects of child abuse—even to "hospital inns" providing minimal care for those pushed out of hospitals under DRG requirements. Still other opportunities are developing in the fields of ambulatory care and "unbundled" services.

Several Texas firms are involved with explorations of these new types of facilities. Additionally, many firms continue to design facilities for hospitals eager either to expand into still-viable markets or to develop a new architectural image as part of a newly aggressive marketing strategy.

Page Southerland Page remains a giant. In the 1970s the firm won a number of out-of-state and overseas commissions from the military and the oil-production conglomerate Aramco, giving the firm a ranking at or near the top of health-care architects nationally for the last three years.

Other firms around the state are doing significant health-care work. In Houston these include the Falick/Klein Partnership, Pierce Goodwin Alexander, Morris/Aubry, CRS Sirrine, 3D/International, Watkins Carter Hamilton, Hightower-Alexander, The Burford Group, Jason Frye, Gelsomino-Johnson Architects, and Brooks/Collier. Harwood K. Smith & Partners, Kendall-Heaton Associates, and others are active in Dallas. Phelps Garza Bomberger and Marmon Barclay Souter Foster Hays are designing medical projects in San Antonio. Others include Lubbock's AC Associates, which designed the local

CRS'S GRADUATE SCHOOL

Many architectural firms have specialized in health-care architecture in Texas in the past 30 years, but none has been more important than the Houston-based Caudill, Rowlett & Scott (now CRS Sirrine). Like a windblown dandelion, Caudill, Rowlett & Scott spread the seeds that grew into a major portion of today's health-care-architecture industry in Texas and elsewhere. A partial list of the current whereabouts of the participants in what has been called the "CRS graduate school of hospital design" includes:

At the Falick/Klein Partnership, Houston:
James Falick
Barry Bruce
Charles Short
Kenneth Ross
John Crane
Paul Pedersen

At Watkins Carter Hamilton, Houston:
Kirk Hamilton
Robert McKinney
Brian Riley

At Harwood K. Smith & Partners, Dallas and Houston:
Ronald Skaggs
Karol Kreymer

At Brooks/Collier, Houston:
James Collier
Robert Brooks
Harold Harwood

At Anderson DeBartolo Pan, Tucson, Arizona:
John DeBartolo
Solomon Pan
Steven Sawyer
Charles Davis

At Cox/Croslin and Associates, Austin:
Robert Cox

At Hellmuth, Obata & Kassabaum, St. Louis and Dallas:
Henry Winkelman
Patrick Higgins

At Page Southerland Page:
Craig Kress
Thomas Fannin
Richard Bechtold

At Robert Douglass Associates, Houston:
Robert Douglass
Samuel Catli

Methodist Hospital, BGR Architects-Engineers, architect of Lubbock General Hospital, Harper Perkins Architects of Wichita Falls, designer of the Electra Memorial Hospital, as well as Wilson-Doche Architects and Hannon Daniel & Dickerson of Amarillo. In Austin, where a joint-venture firm is completing a major project at Brackenridge Hospital, medically oriented firms include Polkinghorn Architects, Wilmot Bower + Associates, and Barnes Landes Goodman & Youngblood. The Parker-Croston Partnership of Fort Worth has undertaken a $39-million project at John Peter Smith Hospital and renovations at Fort Worth Osteopathic Hospital.

Even out-of-state firms have come to Texas to get in on the action. The St. Louis-based Hellmuth, Obata & Kassabaum, Nashville's Gresham & Smith, and the giant Henningson-Durham-Richardson from Omaha, have all opened offices in Dallas.

The conclusion to be drawn is that health-care designers are being called on to enter a brave new world. As a recent editorial in *Architectural Record* put it: "The emergence of alternative systems for providing health care implies the invention of new programs, new settings, new images. And that is what architects do." ▬

Kirk Hamilton is an architect specializing in health-care design with Watkins Carter Hamilton in Houston.

Ray Pentecost, an architect and health planner in Houston, works with Gelsomino-Johnson Architects.

R. Greg Hursley

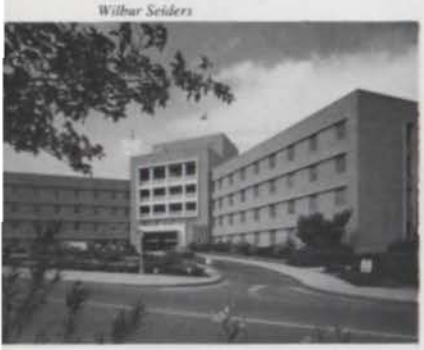
R. Greg Hursley

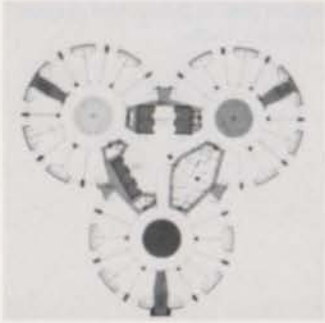
Today's hospital design can range from the Spartan to the epicurean. TOP: additions to Parkland Memorial Hospital and Baylor University Medical Center in Dallas, both designed by Harwood K. Smith & Partners, Dallas

IN HEALTH CARE, FORM FOLLOWS FUNDING

by Joel Warren Barna

Wilbur Seiders





TOP: Providence Memorial Hospital in El Paso, designed by the firm Carroll and Daeuble, now Carroll, Dusang and Rand, shows the rectangular-block plan of the 1950s and 1960s. CENTER AND BOTTOM: Park Plaza Hospital in Houston advertised its circular plan to attract nurses.

Healing the sick has been *the* growth industry of the last three decades. In Texas, billions of dollars have been spent in constructing millions of square feet for health care facilities since the 1950s. Yet how many Texas hospitals have won a national or statewide general-design competition?

More than tall office buildings or apartment towers, more even than factories, health-care facilities are irreducibly 20th-century structures. In what other building type does the up-to-the-minute technology deployed within—from the morgue and the surgical theater of the tomographic scanners, the bed wings, and the food services, down to the bacteriostatic carpeting—so dominate architectural expression? The major medical and service equipment of a typical hospital consume more than 50 percent of the construction funds.

So much equipment, arranged according to rigid life-and-death demands, has often made possible little more than a messy functionalism, crowded and disorienting. And architects interested in exploring possible forms dislike being stuck with the short end of the budget. That may explain why generalist architects, who even in these Post-Modern times love to play with modern technology, so often disparage current health-care design in private conversation.

Other, more complex psychological factors may also affect responses to and practice of health-care architecture. Again, compare hospitals to other building types. Tall office buildings, individually and in aggregate, are almost always seen as positive symbols, standing for the material aspirations of cities and even countries. The Modern movement begins with Louis Sullivan's oracular vision of the office tower as "every inch a proud and soaring thing."

Most of us see in hospitals, however, the nexus of powerful forces, both good and bad. They are places of healing, where miraculous recoveries are brought about; where, in our culture, most new lives enter the world. But they are also places where, for some, crushing financial burdens mix with irreparable loss; dread interlaces the smell of antiseptic. The problem with a lot of hospital design is that its practitioners seem unaware of (or unable to make their clients respond to) these psychological realities.

Building a good-looking hospital is not easy. What hospitals do right—apply technology to healing—is difficult to represent architecturally. The technology itself changes so rapidly that the meaning of the symbolic materials degrades. The green tile that represented modern sanitation in the 1950s looked dirty and depressing less than a decade later. Also, the facilities themselves are constantly expanding. Today's neat box may be engulfed in a decade by haphazard additions.

On the other hand, the architectural representation of what hospitals sometimes do wrong—reduce sick people and their families to anonymity and alienation—is all too easy, judging from the evidence around us.

THE BUYER DETERMINES THE FORM

Since the 1940s, according to James Falick of the Falick/Klein Partnership, one of the country's best-known health-care specialists since the early 1960s, hospital design has conformed to three patterns. These patterns, he says, derive from the types of customers being solicited by the client institutions.

"In the late 1940s and 1950s hospitals were primarily jewel boxes for the doctors," he says. "From the 1960s through recent years they were functional diagrams. Now they are turning into architecture."

In the first phase, Falick says, hospitals were designed primarily for doctors, since *they* were the ones who actually decided if patients would enter the hospital and for how long they would stay.

Hospitals from this era were built as long rectangular forms, 40 or 50 feet wide, combined in T's or X's, with patient rooms facing on double-loaded corridors served by central nursing stations, kitchens, and other services.

The maze-like quality of many facilities derives from modifications made to structures from this period, according to Falick. "Hospitals had to have the latest equipment to attract doctors," he says. "That means they were constantly

being added to, obscuring whatever planning had come before. The hospital circulation and layout didn't have to be clear, since the doctors essentially lived there and knew that what looked like a closet was really the entrance to the new laboratory, or whatever. Patients in such a setup were positioned to be supplicants, not patrons."

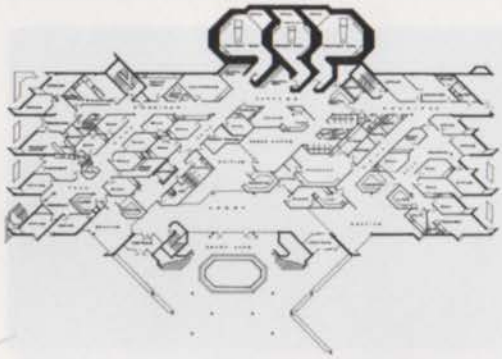
In the 1960s, infusions of government money made more new facilities possible. Along with the money came a legislative mandate to bolster community access to health care, which led, for the first time, to an emphasis on interior planning as a means of making facilities comprehensible and straightforward.

Perhaps the best example from this period is Caudill, Rowlett & Scott's Desert Samaritan Hospital in Mesa, Arizona, designed by Paul Kennon (now head of CRS Sirrine, currently the world's largest architectural firm), with Falick as partner in charge. Desert Samaritan features functionally zoned pods arranged around a horizontal circulation spine. Desert Samaritan fits with what Falick describes as the second era of hospital design—"the age of the hospital as functional diagram." Still, with its strong sculptural presence and its generous views of the surrounding countryside, it remains one of the country's best hospitals. (Desert Samaritan won a TSA design award in 1973, the last hospital to do so.)

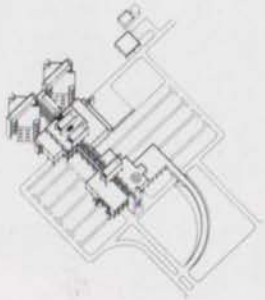
In the late 1970s, government attempts to control rapid inflation drove hospital administrators to squeeze every nickel in construction costs. The functional-diagram style, under these new constraints, often degenerated. Many suburban hospitals turned into uninflected stacks of horizontal brick or stucco slabs. Their circulation may have been exemplary, but they were distinguishable from the parking garages next door only by their windows.

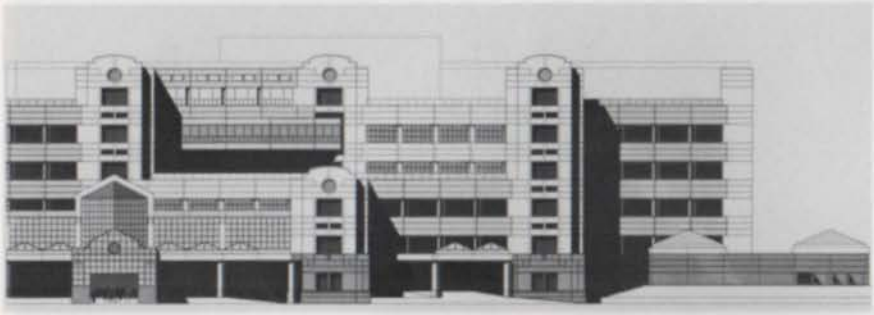
Falick's point, that design responds to the flow of funds, is bolstered by a phenomenon of the late 1960s and early 1970s, when a shortage of nurses developed nationwide. Hospitals were forced to compete to attract nurses. Park Plaza hospital in Houston, designed by Koetter, Tharp & Cowell of Houston (now LAN Architects, Houston) shows how hospital design changed in response. Park Plaza advertised its circular-planned bed towers in the nursing journals as "primary nursing by design," claiming that they made patient care easier, compared to old-fashioned hospitals with long, inefficient corridors. Lessons from this period have carried over, and while circular plans proved too expensive, triangular plans around nursing stations, providing the same benefits, have become the norm.

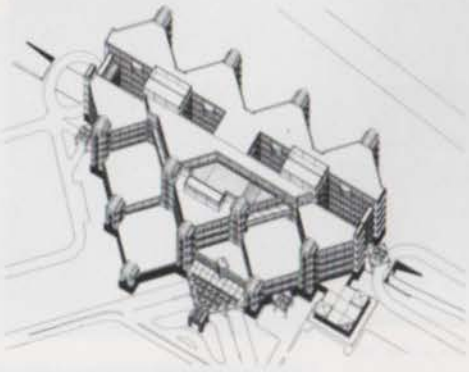
Philip Poole



TOP: Paul Rudolph's Harrington Cancer Treatment Center in Amarillo casts spells with crab imagery at every sharp turn. LEFT: Plan; BELOW: Caudill, Rowlett & Scott's Desert Samaritan Hospital in Arizona, designed by Paul Kennon, combines skillful planning with a strong sculptural presence.







ABOVE: 3D/International's design for the new Veterans Administration Hospital in Houston uses Post-Modern details to break down its giant scale. RIGHT: The Falick/Klein Partnership's Memorial Hospital Southeast in Houston has a lagoon and a low-slung, coastal-plain-hugging profile. BELOW: Ben Taub Replacement Hospital in Houston by CRS Sirrine

BUCKING THE TREND

The Texas facility that went furthest in bucking the trends of the 1970s—it's one of the least-known and most remarkable buildings in the state—is the Don and Sybil Harrington Cancer Treatment Center, adjacent to Baptist Hospital in Amarillo, designed by New York architect Paul Rudolph, with Wilson-Doche Architects of Abilene as associate architects. The Harrington Center looks in part like a crab, the astrological symbol of cancer, and it features brickwork and a jagged floorplan that almost cross over into Expressionism. Patients proceed from the entrance through sharply angled corridors to the heavily walled radiation-treatment rooms in the crab's head. Can this be the same Paul Rudolph who calls Post-Modernist architects too literal-minded? At least this much can be said for the building: it does not ignore the deeper struggles of its program. Fighting cancer takes more than logically conceived treatments. The Harrington Center has its own heavy ritual magic.

CONSUMERISM AND HEALTH-CARE DESIGN IN THE 1980s

The 1980s have brought a new wave of cost-control efforts from government and insurance companies, shifting more of the financial burden and more of the decision-making power to consumers. This, Falick says, has brought about the third phase of hospital design.

"Now the health-care world is consumer-driven," says Falick. "Hospitals have to sell their services not to doctors but to patients. Architecture has become an important part of marketing for the hospitals that want to stay alive. Architects are the people who can make the facilities friendly, or at least acceptable, something that consumers want as part of their lives."

A number of the largest projects underway in Texas provide some evidence to support Falick's contention. The new Veterans Administration Hospital in Houston, designed by a joint venture of 3D/International of Houston and Stone, Marricini & Patterson of San Francisco, has been given scale-moderating Post-Modern details that help break down its massive size. The $93-million Ben Taub Replacement Hospital, by CRS Sirrine of Houston, with its gabled central axis between triangular-plan bed towers and its circular entry court, also uses detail to modulate bulk. It is too early to tell what the $375-million Brooke Army Medical Center in San Antonio (the largest single health-care project in Texas), being designed by a joint venture of Harwood K. Smith & Partners of Dallas and Wingler and Sharp of Wichita Falls, will look like.

The crossover to consumerist orientation, however, shows clearly in other recent works designed by Harwood K. Smith & Partners. The firm's recent addition to Baylor Medical Center in Dallas is like a hotel, with luxury suites that feature kitchens for those who want to bring a chef, and chandelier-lit elevator spaces. Two smaller HKS projects are even more dramatic: the Rockwall Diagnostic and Surgical Center in Rockwall, with its eroded bifurcating wall and red glass-brick bulge, and the All Saints Episcopal Hospital in Fort Worth, with its giant trusses and central blue-glass cylinder, are high-tech Modernism at its most playful. Falick/Klein's Memorial Southeast Hospital in Houston uses glass and siting for the same image-making purposes.

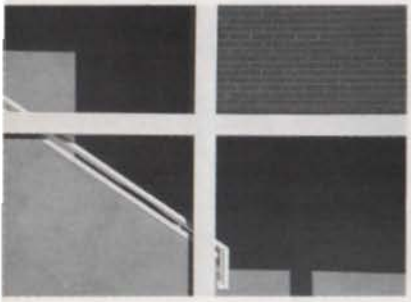
But the pinnacle of the make-the-consumer-feel-at-home movement in health-care design is reached in a number of mall hospitals designed by Texas firms and now under construction, which will rely on the new trend toward outpatient treatment for all but the most serious conditions. Falick/Klein's new facility for American Medical International in California, for example, is centered around an atrium restaurant, and features multi-story health-service "boutiques." Harwood K. Smith & Partners' new mall hospital in Austin, built by the Austin-based firm Health Care International, has iron streetlamps and non-medical retail areas along a central brick walkway that links a medical-office building, a hotel, and a hospital. Customers, figuratively shopping for medical services in the new health-care business world, really get to shop.

Compared with the hospitals and clinics of the past 30 years, such structures show what architects can do to help make health-care facilities less frightening and more welcoming. The 1980s promise architects freedom to explore new forms—and perhaps even an ideal form that encompasses all the meanings of the healing art—for health care.

High-tech playfulness from Harwood K. Smith & Partners, Dallas; ABOVE: All Saints Episcopal Hospital in Fort Worth; LEFT: Rockwall Diagnostic and Surgical Center, in Rockwall; BELOW AND BOTTOM: HKS's mall hospital for Health Care International is now under construction.

UNBUNDLING NEW MEDICAL SERVICES

by Robert Douglass



Until recently, when Americans thought of health-care facilities they thought first of hospitals: large, centralized institutions, where almost every treatment required a stay of several days. Soon, however, that image is likely to be different: health-care facilities will mean surgery centers with hotel-like atmospheres, physical-therapy "spas," homey birthing centers, and more convenient and modest facilities for continuing care.

The health-facilities landscape is rapidly changing. Competition for patients, changes in the way health-care providers are reimbursed for services, and improved technology have altered the delivery system. The major effect is that hospitals are "unbundling" the services they used to provide, spinning off less imposing—and less costly—facilities. Where hospitals once emphasized centralization, new facilities for everything from eye surgery to kidney dialysis to breast-cancer treatment dot our cities. The new facilities are tucked into residential communities, in office buildings, and stand conveniently at major road intersections.

Changes in the health-care market are increasing both the number and type of non-hospital alternative facilities, creating new opportunities for a broad variety of design firms.

Hospitals have always posed complex design problems. In a market dominated by hospitals, consequently, large, specialized architectural firms have had the lion's share of the business, and small, generalist firms have been unable to compete. Hospital construction is declining, however, and trends no longer favor size and specialization. In 1984, surveys show, construction of "ancillary projects"—including medical professional buildings, ambulatory care centers, and rehabilitation and research centers—increased 53.7 percent, and the number of outpatient surgery centers increased 38 percent.

Smaller architectural firms benefit from this trend in several ways. The new projects tend to be smaller and functionally more straightforward, making good solutions well within the resources of nonspecialized firms. Clients, no longer limited to hospitals and doctors (although hospitals are increasingly commissioning "unbundled" facilities for themselves), are dispersed throughout the business world, and are thus easier for small firms to reach. The market orientation of the newer clients favors designs that break with the institutional look. Also, many of the newer clients are committed to systematic growth, offering the opportunity for repeat business.

WHO'S BUILDING?

The clients for alternative health facilities range from hospital chains, to individual private and not-for-profit hospitals, to physicians' groups, to private developers. Each is out to expand the market for its services through creation of an attractive image.

These clients are responding to a new fact of life: health care has become a competitive business, requiring more sophistication from its practitioners. Financial analysis has been integrated into the planning process, and aggressive service- and market-oriented administrators now lead in making decisions. Before undertaking projects, they weigh the potential for profit and other financial considerations.

The trend toward running health-care facilities as businesses, combined with a softening of other markets, has brought more private developers into the field. Sometimes they form joint ventures with hospitals or physicians; sometimes they work independently, often to start up outpatient centers or facilities for the elderly.

OPPORTUNITY FOR DESIGN

Non-hospital health-care projects generally offer designers more flexibility than traditional hospital projects. Building codes are less restrictive and functional requirements are less complex. These projects may, however, house highly sophisticated diagnostic and research equipment, unfamiliar even to hospital specialists. Magnetic Resonance Imagers, which provide advanced diagnostic imaging, and Lithotripters, which use sound waves to cure certain conditions that once required surgery, are two increasingly common high-tech gadgets demanding research on technical issues from architects. Architect

Photography by Philip Poole

THIS AND PRECEDING PAGE: Proof that health care is not synonymous with big and ugly: The recently completed Northeast Health Care Center by Boothe & Associates of Fort Worth is an outpatient facility designed to serve the mid-cities between Dallas and Fort Worth. Doctor-owned and operated, the 34,000-square-foot, two-story center surrounds a skylit atrium.

Designed for the individual not requiring hospitalization, the Northeast Health Care Center combines various functions under one roof: minor emergency clinic, diagnostic center and laboratory, one-day surgical center, rehabilitation/sports-medicine clinic, optical shop, and physician/specialists' offices.

ABOVE: Now under construction, Broadway Plaza, by the Parker-Croston Partnership, will provide continuing-care service for retirees in a village atmosphere. On a 20-acre site in Fort Worth, it contains a 60-bed health facility, 40 assisted-personal-care units, 130 apartments, and 88 cluster homes.

Roy Garza of the San Antonio firm Phelps Garza Bomberger says that before installing an early Magnetic Resonance Imager he had to research basic issues such as "what ferrous metals we could use because of the magnetic field."

Even more important for architects than technical issues has been the trend toward making design an important part of *selling* facilities to patients.

James Falick of Houston's Falick/Klein Partnership says that design has become an increasingly important part of marketing in the last ten years. "Clients are looking for architecture, not just for function. Location, ease of access, how one perceives space—all have become part of the institution's marketing," says Falick.

Although many architects approach the planning and design of "unbundled" projects as if they were traditional hospital projects, there is movement toward development of a new image and a new philosophy even in hospitals. Gone are the days when hospital designers could be content to make things look well-scrubbed and antiseptic. Jack Downing of Wilmot, Bower + Associates in Austin says that architects are using "less-institutional construction materials, wall coverings, and more indirect lighting," since "some hospitals, and even nursing homes, are looking to have a kind of hotel environment."

The development process for "unbundled" projects is often simpler and more straightforward than for hospitals, especially with investor-owned-for-profit companies as clients. Robert Cox of the Austin architecture firm Cox/Croslin and Associates says that hospital design often involves numerous meetings with radiologists, surgeons, nurses, and community representatives as well as administrators. Adds Cox, "When we get into these non-hospital projects,

ARCHITECTS SPEAK OUT
ON THE NEW CLIENTS

"Facilities that used to operate out of their hip pockets were pushed out of the market. Now we're dealing, primarily, with more professional corporate structures. Our rural clients tried to keep the old motherhood, apple pie, good ol' boy image, but they lost out on a prominent position in the marketplace. Now they've had to resort to getting help from proprietary or non-profit chains, and they're definitely becoming more cost-conscious."

James Polkinghorn, Polkinghorn Architects, Austin

"There's no question new clients have their acts together in terms of management. Their philosophy differs from that of hospital people. It has to be rethought and hospital staff retaught for these new facilities."

Wayne Burford, the Burford Group, Houston

"The clients we're seeing are interested in developing an array of choices as money becomes available and services are needed. They want facilities offering a number of services that can be bundled and expanded. Their decisions are being driven by what they can be reimbursed for."

Joseph G. Sprague, Harwood K. Smith and Partners, Dallas

"Because we're a firm that has traditionally worked with developers, our developer clients are now coming to us wanting to enter the health-care field. They see an incredible opportunity there. They work with the hospital as an end user, a tenant. It's a way for hospital administrators to share the risks and work with someone who has financial leverage. These clients are more sophisticated in terms of putting together a building project and more knowledgeable about construction than hospitals."

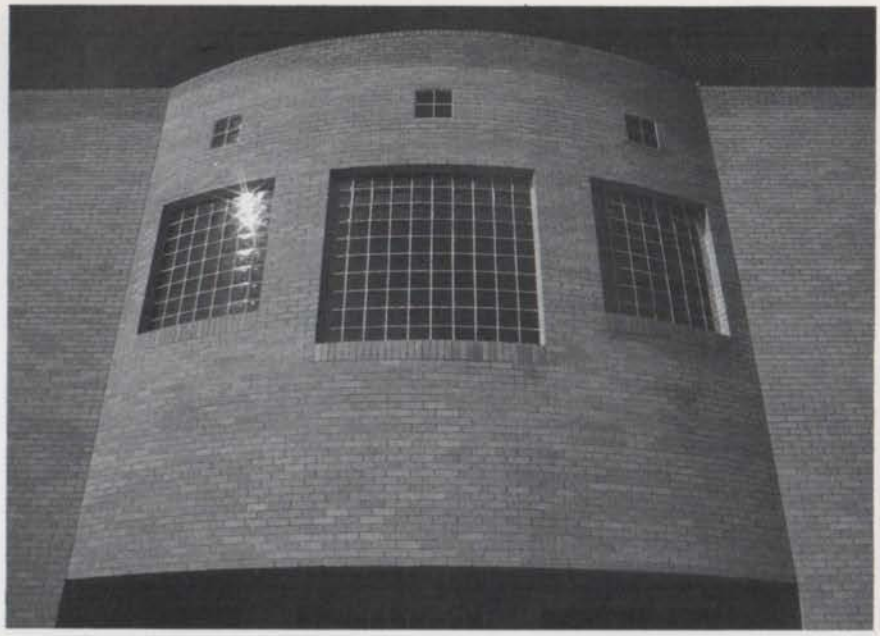
John Rivers, Morris/Aubry, Houston

"We're seeing more of a trend toward not only including proprietary groups, but private developers. The only market which seems to be alive is health care, and the way they can enter it is through low-rise housing for the elderly. They're looking at a cookie cutter design; a prototype approach with quite a bit of flexibility so facilities can be phased in or expanded."

Victor V. Gelsomino Jr., Gelsomino-Johnson, Houston

"The major new client body is the for-profit hospital. Their mentality is entirely different from that of hospital clients ten years ago. They recognize the importance of strategic planning preceding capital investment, and of receiving the maximum asset value for every investment they make. Design becomes more important because to them image and money spent go together."

Jody L. Taylor, 3D/International, Houston



people usually have done a very thorough analysis prior to preliminary planning. It's a much faster process. You have a good solid budget and quicker response on owner reviews."

FREEDOM OR FUNCTION?

The picture is not all rosy, however. While some of the new clients are willing to give designers aesthetic elbow room, others demand function as the overriding priority. Developers and proprietary chains tend to look for architects who can adapt a prototype to different sites and their sense of community taste, while hospitals and physicians offer more opportunities for design freedom and individuality.

Physician Ross Ufberg heads a physicians' group developing a rehabilitation center in a two-story historic building in Wilmington, Delaware. Ufberg wants the architects to meet technical requirements, but otherwise offers plenty of freedom so that the facility can be "bright and attractive, with natural lighting and easy accessibility, and a health-club atmosphere."

In 1977, my firm and Charles Tapley Associates of Houston planned St. Elizabeth Medical Village, a 27-acre site in Kentucky, one of the country's first "unbundled" clusters of health facilities. It includes a freestanding family-practice center, an ambulatory surgery center, a clinical laboratory, an extended-care facility, a hospice, and a center for the developmentally disabled, as well as a satellite hospital. Paul Bellendorf, former president of the organization that built the medical village, says that function and image were equally important to the project. "We didn't want our medical village to look like the typical hospital," Bellendorf says. "We wanted it to be warm and welcoming."

David Rose, project director for First Texas Medical, Inc., a Dallas-based physicians' group of 82 that has built and operates clinics, surgery centers, and a hospital, takes a different view.

St. Elizabeth Medical Village and First Texas Medical represent the low-capital-cost end of the spectrum in health care. The publicly held insurance giant CIGNA represents the high-volume end of the spectrum and is representative of firms that permit less design flexibility to architects.

CIGNA owns and operates 90 health maintenance organization facilities—HMOs—around the country, including six in Dallas and seven in Houston. More are planned. Gaylen Bartlett, vice-president for the CIGNA division operating the HMOs, says his organization designs health centers from a prototype developed in user conferences, "a very efficient and economical [prototype] facility that also creates an identity through location and signage." He looks for architects who can adapt the prototype to local situations, choosing from among five basic interior-design packages. Adds Barlett: "We want someone who can get the job done the way we want it done. We don't need a monument."

John Styles, president of Ambulatory Hospitals of America, a private company with eight outpatient surgical and diagnostic facilities and two centers that combine nursing-home beds and rehabilitation services, voices similar feelings. Says Styles, "I like an architect who will work with our people and our design [prototype] and get the project built at a reasonable cost. What I *don't* like is an architect who puts his priorities ahead of the priorities of the client."

THE FUTURE MARKET

All of these clients plan to build more facilities, and market trends in health-care services suggest that opportunities will continue to expand. There were 1,800 clinics and other "urgent-care" facilities in 1984; by 1990, according to an industry survey, there may be nearly 5,000. Facilities for the elderly, but not conventional nursing homes, will grow most rapidly of all,

TOP LEFT and RIGHT: Designed to provide an outpatient day-surgery facility for the Houston Eye Center, the Gramercy Lane Surgery Center by Rees Associates devotes the first floor to surgery and the second to leased medical space. ABOVE: Near Houston's Museum of Fine Arts, the 14-story Plaza Medical Center by Kendall/Heaton Associates reflects the dominance of Mies's style in the area. The brick, aluminum, and bronze-glass tower features an arcade, lined with mature trees fronting retail businesses, which leads to medical offices in the upper stories.

The new taste in medical interiors: the hotel-like lobbies of Cox/Croslin's Dallas Surgery Center, RIGHT, and Morris/Aubry's Memorial Care System Day Surgery Center in Houston, BELOW

ABOVE AND RIGHT: The Charles B. Key Cataract Surgery Center of Dallas shows the emerging elegance in medical facilities. Its carefully detailed and joined limestone panels in two different textures and green-hued glass have garnered the Oglesby Group a design award from the Dallas AIA Chapter.

according to planners.

"We think that personal-care and assisted-living situations will grow fastest," says Merwyn Croston of Fort Worth's Parker-Croston Partnership, Inc. "These are places for people who are alert and competent, but frail, and who just need some services."

Although private developers will continue to play a role in developing other types of facilities, hospitals are again emerging as clients for outpatient and long-term-care projects. With their established reputations, financial and technical resources, and increasingly sophisticated marketing strategies, they are still well positioned.

The most interesting challenge in the emerging era of unbundled medical services is whether hospitals can develop a competitive service again if they remain wrapped in their old, often intimidating, massive husks, or whether sleek, welcoming, well-designed, and convenient freestanding structures will be so attractive to consumers that a new style will replace health-care habits developed over generations.

Architect and planner Robert Douglass heads Robert Douglass Associates in Houston.

MORRIS/AUBRY's INVENTIVE HMOs

Morris/Aubry Architect was the first firm in Texas to design a health-maintenance organization facility. PruCare, a subsidiary of Prudential Insurance Company, commissioned Morris/Aubry in 1975 to design a facility for the Houston area. Over the past 10 years, PruCare and MacGregor Medical Association have worked closely with Morris/Aubry to develop eight full-service medical centers.

The system currently consists of a large central clinic, laboratory, and supply center, with a series of smaller satellite clinic structures. Subtle program requirements make each clinic unique. Early clinics were built as free standing structures, although PruCare has already begun to include lease space in the newer facilities. Most centers use Primary Care Units, which include examination rooms and doctor's offices, and which share support with other PCUs, allowing for simple expansion.

TOP AND LEFT: The MacGregor Medical Association Service Center separates office space from a warehouse with a linear three-story atrium.

LEFT AND ABOVE: The Louetta Facility is organized around a central axis with a cathedral skylit ceiling.

ABOVE: Now under construction, the PruCare/MacGregor Stafford facility will include reception, support spaces, and primary-care units along an axial spine with a waiting room in the shape of a "silo."

ABOVE: Located in a multi-tenant atrium office building, PruCare/MacGregor North Loop conveys a calm residential ambience with wooden screens and traditional furniture.

LEFT: To reinforce its residential neighborhood, the scale of the Pasadena facility is broken into several pitched-roofed pavilions of stucco, brick, and glass.

HOSPICES: DESIGN FOR THE SOUL

by Stephen Verderber

Unlike more traditional hospitals, hospices provide a community-based alternative to both hospital and home, in many cases combining the best of each.

Medical technology can add days, even years, to the life a terminally ill person, but sometimes the extra time comes at the expense of the person's quality of life. Elizabeth Kubler-Ross has written that modern "heroic" medical treatment often ignores the simple fact that "the dying person, too, has feelings, has wishes and opinions, and has—most important of all—the right to be heard." Her words have not fallen on deaf ears: the phenomenal expansion of the hospice movement in recent years—there are now more than 1,200 hospice-care programs operating in the U.S.—is the most visible indicator of our society's growing sensitivity to the social, personal, and spiritual needs of the terminally ill. Unlike more traditional hospitals, hospices provide a community-based alternative to both hospital and home, in many cases combining the best of each.

The modern hospice's primary function is to provide palliative—as opposed to curative—care for the terminally ill, as well as counseling for family and friends. Though hospices admit patients of all ages, the vast majority are over 65, victims of cancer, and expect to live less than six months.

Photography by Jacqueline McBride

A former apartment complex and two former residences, Casa De Ninos, Inc., Houston, uses a series of canopies and decks to connect a central nursing station to its two-level residential units.

Hospices in America are treated by regulatory agencies as specialty hospitals, with accreditation standards developed by the Joint Commission on the Accreditation of Hospitals (JCAH) and guidelines for Medicare reimbursement for hospice care.

Texas has a national reputation as a leader in developing hospice-care programs. Currently, more than 40 programs are in operation in Texas, with the biggest boom occurring since 1980. The array of program types in the state reflect the national picture, except that in Texas there are somewhat more private-sector, for-profit facilities.

As with any new building type, experimentation is the rule rather than the exception. Codes and occupancy requirements are closely monitored by the Texas Department of Public Health's Hospital Professional Licensure Division in Austin, though the agency is flexible and willing to work closely and patiently with any program either building a freestanding facility or renovating an existing building.

Although many hospital administrators are skeptical about embarking on new projects during the current period of retrenchment and financial uncertainty in the health care industry, a growing number of public and private hospitals are establishing either inpatient or outpatient hospice programs.

Outside hospitals, the number of freestanding hospices is small but growing. These facilities are emerging as a distinct health-care building-type, and they are beginning to receive some attention from the architectural community. The architecture of these facilities calls for a new synthesis of functionalism and a symbolism that reacts, in part, against typical hospital design, producing instead timeless, archetypal forms.

Since the hospice must serve as the final home and care center for terminally ill patients, it draws on a number of seemingly clashing

In the New Age Hospice of Houston, Inc., patient-resident rooms feature artwork, plants, full-length windows, and residential-style furnishings. The non-institutional living room, BELOW, is centrally located at the main entry point to a 10-bed unit.

Photography by Stephen Verderber

The difficulty in trying to find an appropriate architectural design is made more complex by the sheer variety of spaces that may be needed in a hospice.

Photography by Stephen Verderber

New Age Hospice's staff office extends the residential ambience of the adjacent living room.

metaphors, operating as a: *House*, the architectural allegory for the soul, and the image of shelter; *Hotel*, with its lobby and hearth forming a public gathering point for strangers; *Community Center*, uniting its members through common activities; *Refuge*, affording solace and nourishing reflective thought; *Wilderness*, giving a sense of freedom through contact with open spaces; and *Hospital*, providing comprehensive medical services with sensitivity and care.

The difficulty in trying to find an appropriate architectural design with these functions in mind is made more complex by the sheer variety of spaces that may be needed in a hospice: outpatient and inpatient medical facilities; patient rooms; grieving chambers; a chapel; exercise or body-building rooms; communal and reading rooms; staff offices; perhaps even a small convenience grocery store.

To further complicate matters, hospices operate their services in different ways. At least five models of hospice care exist in the state: freestanding autonomous facilities, like the Casa de Ninos in Houston and St. Anthony's Hospice in Amarillo; in-house hospital units, in which a floor or wing has been designated for hospice care, like the New Age Hospice in Houston; the in-house hospital "scatterbed" concept, where no dedicated unit exists and hospice patients are located throughout the hospital, like the Spohn Hospital Program in Corpus Christi; hospital-based home-care programs, like the Southeast Texas Hospice in Orange; and a combination of the other four types, like Dallas Hospice Care Inc.'s program. Although each is different, all these hospice types try to achieve the same goals: providing a waystation and a communal home for the terminally ill.

HOW THEY WORK

A program as a operating freestanding facility, the Casa De Ninos in Houston, illustrates some of the architectural constraints, user constituencies, site contexts, and funding structures affecting hospices.

Casa De Ninos, a freestanding pediatric inpatient/outpatient facility, opened in Houston in September 1985. It is located in a renovated 1960s apartment complex and two adjacent former residences near the Texas Medical Center. A two level, 40-unit (20 single rooms and 20 double-occupancy suites) facility, Casa De Ninos was designed by Loftice Associates, Houston. It is licensed as a specialty hospital, and is seeking JCAH hospice accreditation.

Casa de Ninos provides a for-profit hospice-care program for children from 18 months to 18 years of age, although the program also provides care for persons of all ages. Certain routine

Photography by David Naylor

St. Anthony's Hospice chapel.

check-up services are offered for outpatients, making this facility unusual in the field. It is expected that referrals will be the major source for patients/residents, and that stays will range from one week to six months or more.

Casa De Ninos demonstrates what can be done within an adaptive-use framework in an urban context. The experimental nature of the project and the myriad code issues involved in transforming an apartment complex into a health-care facility—incorporating an elevator, modifying stairways, improving accessibility, and providing fire protection and staff-support spaces—posed major challenges.

Other hospice programs in the state are watching to see how successful these programs are in architectural and in financial terms, and architects are watching to see what lessons can be learned in terms of site planning, imagery, internal organization, and amenity. Twenty-four million Americans are presently over the age of 65, and, as harsh as it sounds, one in four Americans—or 55 million—will develop some form of cancer, ensuring that more programs will require independent facilities in the future.

Outreach, introspection, stamina, sharing, trust, reduction of fear and stress, and spirituality are fundamental to the hospice experience. For the terminally ill, a familiar, personalized, nonthreatening environment is necessary. The hospice is a noninstitutional alternative for a highly specialized patient population. As society grows to accept hospices, architects must respond.

Human-scaled St. Anthony's Hospice, ABOVE, fits within the visual vocabulary of the neighboring St. Anthony's Hospital. Patios adjacent to living suites, LEFT, allow direct contact with the outdoors.

Stephen Verderber is assistant professor of architecture and adjunct assistant professor of public health and tropical medicine at Tulane University.

ARCHITECTURE FOR HEALTH AWARD WINNERS

by L. Annette Bruer

TSA's Architecture for Health committee has initiated a statewide biennial competition, co-sponsored with the Texas Hospital Association, honoring design excellence in a broad range of health facilities. The first Texas Architecture for Health Design Award winners, chosen from a field of 45 entries, were judged by Malcolm M. Cutting, architect-in-residence at the Cleveland Clinic Foundation and executive committee member of the AIA's Committee on Architecture for Health; Richard F. Hansen, FAIA, principal of Hansen, Lind, Meyer in Iowa City; and Wade Mountz, Vice-Chairman of the Board and Chief Executive Officer of NKC in Louisville.

Entries were divided into six categories: hospital design, medical specialty design; long-term care; outpatient care; interiors; and health-and-wellness design. In the long-term category, few entries were submitted, and no prizes were awarded. In the other categories, three levels of recognition—Gold Award, Silver Award, and Honorable Mention—were conferred after examination of the entire scope of entries.

Firms receiving the Gold Award of Excellence were Brooks/Collier of Houston, Coffee, Crier & Schenck of Austin, and Harwood K. Smith & Partners of Dallas.

The Woodlands Community Hospital by Brooks/Collier, submitted in the hospital-design category, impressed the jurors with its well-disciplined plan (particularly its expandability) and the "learned restraint of its architecture." Jurors commended the building's new and inviting image, delightful public spaces, and its environmentally compatible building materials. They also felt that Brooks/Collier sited the building well and, most importantly, designed with patients and families in mind.

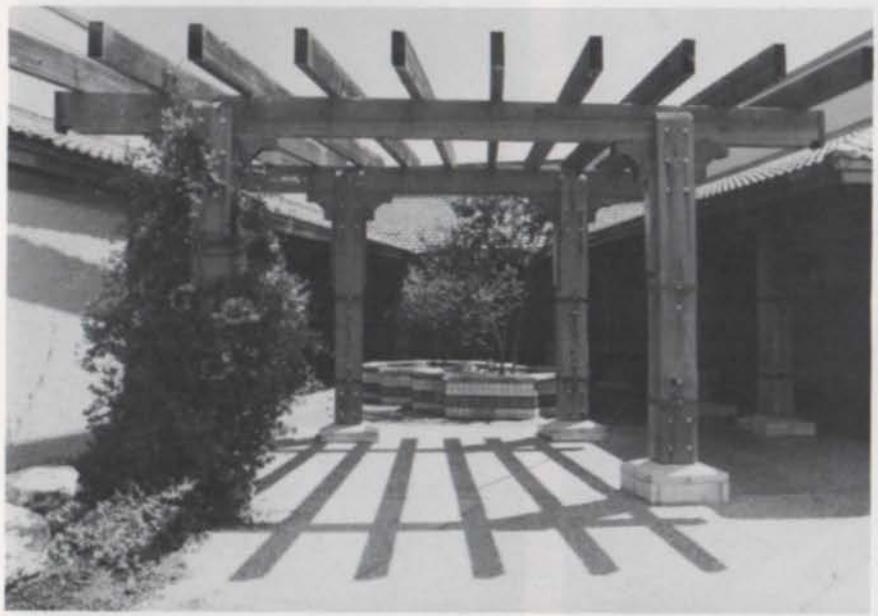
Coffee, Crier & Schenck's East Austin Multi-Purpose Center, submitted in the outpatient-care category, was cited for its responsiveness to neighborhood social needs and reflection of its user in "regionalist" architecture. The center's inviting image, flow of function, design discipline, and careful detailing were recognized with a Gold Award.

The Texas Scottish Rite Hospital for Children, Dallas, by Harwood K. Smith & Partners, received the third Gold Award. In developing truly exciting pediatric interiors relating to various age groups, the project "directly addressed the difficult problem of a specialized environment in a hospital setting," the jurors said.

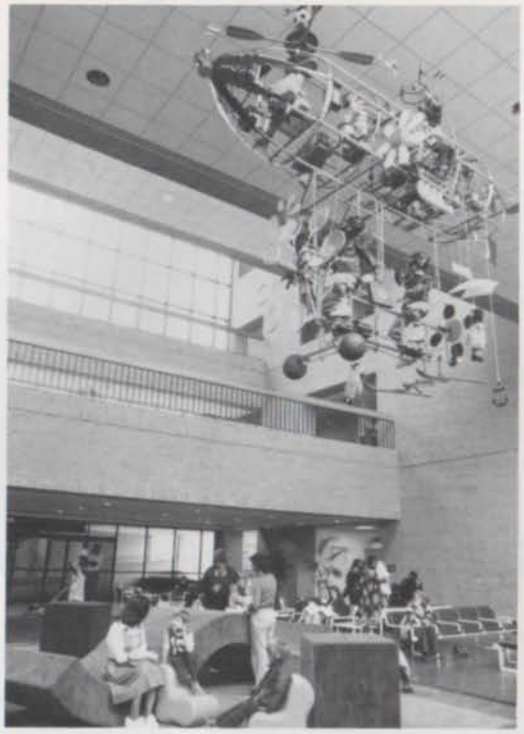
Six projects were selected to receive the Silver Award. In the health-and-wellness category, two projects were recognized for their concern with comprehensive programs of wellness. Though the jurors felt the continuity of functions was weak in Henningson-Durham-Richardson's Health Institute and Wellness Center located in Dallas, they believed using the running track "would prove to be a delightful experience" because it would bring users into contact with many other activities in the center. The Tenneco Employee Center, Houston, by Skidmore, Owings & Merrill, was cited for its utilization of space atop a parking garage, improvement in the structure's outward appearance, and good access from the garage to the center.

Recognized with a Silver Award in the interiors category, for "its discipline and arresting integration of classic architecture and function," was the Sid W. Richardson Institute for Preventive Medicine in Houston's medical center by Wm. T. Cannady & Associates. Harwood K. Smith & Partners received a Silver Award in the hospital-design category for the Parkland Memorial Hospital in Dallas. The hospital's interiors, which the jury said "did not hold together as well as the exterior," were overridden by the sharpness and crispness of the building's massing. The jurors agreed that the firm had accomplished its stated intention of creating a new image for the institution.

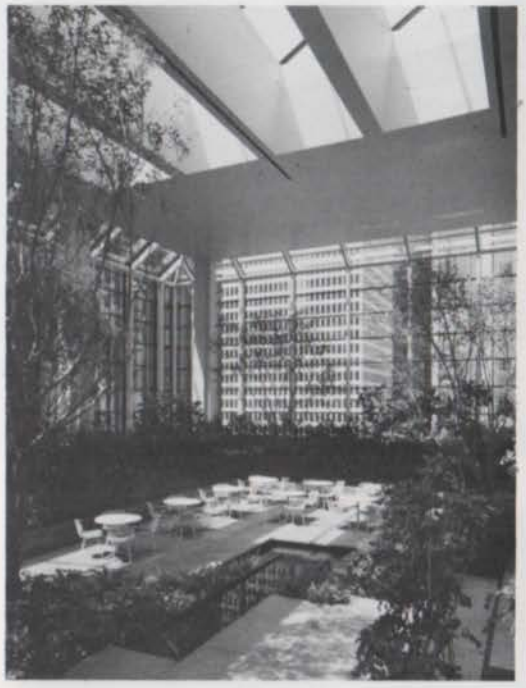
Marmon Barclay Souter Foster Hays' South Texas Regional Blood Bank in San Antonio, and LZT Associates' Tri-County WomanStrength in Peoria, Illinois, were recognized with Silver Awards in the special-medical category. The jurors were "convinced of the appropriateness of the blood bank's renovation," believing that the old and new construction were well integrated without obscuring the identity of the existing building. Though the new construction created a nice volume between spaces, the jurors said that



TOP AND RIGHT: Gold Award: Woodlands Community Hospital by Brooks/Collier of Houston; ABOVE AND LEFT: Gold Award: East Austin Multi-Purpose Center by Coffee, Crier and Schenck of Austin



RIGHT: Gold Award: Texas Scottish Rite Hospital for Children, Dallas, by Harwood K. Smith & Partners of Dallas



ABOVE LEFT: Silver Award: Health Institute and Wellness Center, Dallas, by Henningson-Durham-Richardson of Dallas; ABOVE RIGHT: Silver Award: Tenneco Employee Center, Houston, by Skidmore, Owings & Merrill of Houston (also see TA Jan/Feb 1984, page 40); RIGHT: Silver Award: South Texas Regional Blood Bank, San Antonio, by Marmon Barclay Souter Foster Hays of San Antonio

FAR LEFT: Silver Award: Parkland Memorial Hospital, Dallas, by Harwood K. Smith and Partners of Dallas; LEFT: Silver Award: Sid Richardson Institute for Preventive Medicine, Houston, by Wm. T. Cannady & Associates, Houston (also see TA *Jan/Feb 1984, page 45)*

Honorable Mention: Brookwood Recovery Center, Liverpool, Texas, by Rees Associates, Houston.

the interior layout was not up to the same standard of execution as the exterior. The residential character of WomanStrength by Austin's LZT Associates was thought to be particularly appropriate for the function of the facility, and the handling of the separation of public and private spaces was commended. The jurors had problems with the portico, however, which they said lacked delicacy.

Three projects received Honorable Mentions: Kahi Mohala Psychiatric Hospital, Honolulu, Hawaii, by Harwood K. Smith & Partners, Dallas; the Dube/Seybold Pediatric Dental Clinic, Houston, by Jason Frye and Associates, Houston; and Brookwood Recovery Center in Liverpool, Texas, by Rees Associates, Houston.

While the submissions to this year's Architecture for Health Design Awards Program represent an interesting array of projects, the jurors said they felt that some potentially significant projects were missing, and that the overall quality was not up to their expectations. This was made clear by their decision to award only three Gold Awards across the six categories, and their decision to make no awards in the long-term category. The jurors also suggested that TSA consider broadening the base of design professionals to which the program is open. Jurors Cutting, Hansen, and Mountz say they hope that consistent criteria in the awards program will stimulate an increase of well-designed projects in the future.

ABOVE: Silver Award: Tri-County WomanStrength, Peoria, Ill., by LZT Associates, Austin; LEFT: Honorable Mention: Kahi Mohala Psychiatric Hospital, Honolulu, by Harwood K. Smith and Partners, Dallas; BOTTOM: Dube/Seybold Pediatric Dental Clinic, Houston, by Jason Frye & Associates, Houston.

LIABILITY INSURANCE: TURBULENCE AHEAD

by Larry Paul Fuller

The insurance man didn't come around this year, recalls architect Dave Braden of Dahl Braden PTM in Dallas. "He just sent us one of those 'We're sorry, but…' letters informing us he wouldn't be renewing our policy."

After more than 25 years of successful practice, with no judgments against it, Braden's firm was about to lose the $1 million in professional-liability coverage that met the hiring requirements of the firm's main clients and brought the firm's principals peace of mind. "We were desperate," Braden says.

But Braden's firm was also lucky. After a few weeks of scrambling, it was able to acquire a million dollars of protection from another insurer—although the deductible had now doubled to $50,000 and the annual premium had quadrupled to $80,000. "What a deal!" Braden says, only half in jest. After all, his firm at least had found liability insurance at a time when it is hard to secure at any price.

A CRISIS IS BORN

Braden's experience is neither an isolated nor an extreme example of what is happening in the professional-liability-insurance market—for doctors, lawyers, accountants, architects, engineers, and other licensed professionals—as well as within the realm of property and casualty insurance in general. The plight of professionals is shared by business, industry, municipalities, and institutions, indeed all entities—from airlines to high schools to bowling alleys—that are open to lawsuits brought by the public. It is no exaggeration to call the liability-insurance crunch a crisis. For architects in particular it is a crisis of unprecedented proportions, and one that is not fully comprehended by clients or the public.

The high cost of malpractice insurance for doctors has been widely publicized. But few know that, on average, architects pay a higher percentage of their incomes for liability insurance than doctors do. The continuing escalation of insurance rates for architects keeps them among the lowest-paid professionals, and worse, it may drive many architects out of the profession altogether.

UNRAVELING THE PROBLEM

On one level, the liability crisis has a simple explanation: insurers are spending more for claims than they are getting in from premiums. The American Insurance Association reports that in 1984 property/casualty companies paid out $21 billion more than they collected in premiums. Offset by $17.2 billion in investment income, the pre-tax loss remained a hefty $3.8 billion. That is no way to stay in business, and many insurers are folding up. Those that survive have no alternative but to raise premiums and to decrease claims by reexamining the risks they are willing to assume.

But, of course, nothing is as simple as it seems. A bottom-line analysis of the liability problem leaves many questions unanswered and fails to reveal the complexity of the issue.

How, for example, could the insurance industry, with all its actuarial finesse, be so far off base with its liability rate structure?

In the words of Lyndon Olson, Chairman of the Texas State Board of Insurance, it's a matter of the industry's having "shot itself in the foot." He explains that the insurance world has always operated in a demonstrable boom-bust cycle that reflects a lack of discipline, if not an access of greed. "In boom times, com-

panies compete themselves into the ground," Olson says. "During the prosperous '70s, companies eagerly priced their products at bargain-basement levels to attract more money for investments." The assumption, a valid one until the collapse of the system last year, was that high interest rates from premium income could more than offset losses from underwriting.

"Recovery from the bust end of the cycle, where the industry is today, begins when fear overcomes greed," Olson says. He also acknowledges that the current situation represents no ordinary cycle. Analysts agree that, for a number of intricately related reasons, the current problems surrounding liability insurance are unusually severe; the crisis is not likely to go away any time soon.

The Litigious Society. Compounding current liability problems is the fact that the last decade has been fraught with mega-scale mishaps and disasters—some of them totally unpredictable—resulting in unprecedented claims and new sets of liability issues. Union Carbide's Bhopal disaster, for example, which prompted more than $100 billion in lawsuits, threatens to undo the whole toxic-waste liability-insurance industry. Hundreds of suits seeking damages for victims of asbestosis and other industrial diseases have led to insurer accountability for unforeseen conditions.

The more basic point, some observers contend, is that America's liability insurance dilemma is merely one aspect of society's litigation fever. A recent statement by the American Insurance Association says:

"Current insurance-availability problems are the inevitable outgrowth of an unpredictable and exorbitantly costly litigation system. This system has ceased to provide justice, but instead has . . . rewritten . . . insurance policies to guarantee that someone, regardless of responsibility, will pay. . . . The insurance industry requires a fair and predictable civil justice system that assigns responsibility on the basis of proven fault, not on whim."

From an insurer's point of view, insuring architects' exposure to liability within the American judicial system is particularly risky because architects are routinely made party to any suit originating from a construction site. In 1984, for example, some 44 out of 100 architects faced liability claims (as compared to eight of 100 doctors for the same period). Up until the late 1950s, architects were protected from multi-party—and often frivolous—litigation by the doctrine of privity, which held that the architect's duty of care was confined to those parties to whom he was under contract.

Stephen Sprowls of Assurance Services, administrator of the Texas Society of Architects' commended liability insurance program, has many "horror stories" that reveal just how far the judicial pendulum has swung from the doctrine of privity. In one of the most extreme examples, a nursing-home patient died from burns suffered when she was left alone in a bathtub. Although the incident occurred years after the building was completed and accepted by the owner, the court required the architect to pay $945,000 in damages.

Insurers are spending more for claims than they are getting in premiums. How could the insurance industry, with its actuarial finesse, be so far off base?

"Legal theories of recovery are being stretched to the limit," Sprowls says, "because of our psychology of *entitlement*, which says anyone injured is entitled to some recovery. Ours is a system of compensation rather than a system of justice."

Insuring the Insurer. The further one probes the insurance industry, the easier it is to understand the inevitability of exorbitant liability premiums and scarce coverage under current market conditions. The irony is that, in order to offer large amounts of insurance, an insurer must first insure itself, spreading the risk. The market for insurance-company insurance—called reinsurance—is now as topsy-turvy as the market for primary insurance, leaving insurance companies and their disgruntled clients in the same boat.

The crux of the problem, Texas insurance regulator Lyndon Olson explains, is that some 65 percent of the reinsurance in this country is obtained from underwriters in the London market, and they no longer want our business. "Lloyds of London Chairman Peter Miller has warned that world reinsurance markets are increasingly wary of a 'made in America' label," Olson says. "They are unable to project with any certainty just what they are accepting liability for."

The Capacity Crunch. An insurance company's underwriting capacity is limited—by business prudence and sometimes by statute—to a multiple of three times its net worth. "If the direct insurer could simply charge higher prices to justify providing coverage, we would all be in a better position than we are," Sprowls says. "But in today's market, when they boost the premiums to the levels reinsurers are requiring, their premium writings begin exceeding their net worth." Insurers can't offer coverage because they can't charge enough to cover their costs. The resulting "capacity crunch" explains current low levels of insurance availability.

IN SEARCH OF A CURE

Corporate America is attempting to meet the liability crisis head-on through intense lobbying and public-relations efforts. Yet all the memoranda, position papers, professional alerts, and high-level strategizing generated to date have produced little in the way of even short-term remedies for the ills of the industry. In desperation, some entities are focusing on ways to circumvent the traditional insurance system rather than on ways to cure its basic ills.

Skirting the Issue. The most extreme way of getting around the problem of professional liability insurance is simply to practice without it. Called "going bare"—as in total exposure, or losing one's shirt—practicing without liability insurance is widely regarded as an unacceptable business risk. Many clients require liability coverage. But some practitioners simply can't afford insurance, and they see closing shop as the only alternative to going bare. Measures for decreasing exposure while going bare include: divesting oneself of assets that could be garnered to settle a judgment; performing design services only, as opposed to design and production; or breaking up the firm into insured and non-insured components to reduce premiums.

Some suggest creating limits to liability through the language of contract documents. Even if limitations could be successfully negotiated, however, they would provide no protection from third-party claims, which constitute over half of the

continued on page 64

This story, by architectural historian Jim Steely, is the first in a year-long series on Texas architectural pioneers written for the 150th anniversary of Texas' independence from Mexico.

The drawing of the Capitol, LEFT, is by James Record. Sales of posters and signed prints of the full-scale rendering will help fund restoration of the Capitol. Write Artistic License, P.O. Box 9664, Fort Worth, 76107.

by Jim Steely

FROM I HOUSE TO DOWN-HOME GRECIAN

Studying the building plans and basic elevations of the earliest folk and vernacular buildings in Texas, cultural geographers have demonstrated that Anglo-American settlers brought more to the Texas frontier 150 years ago than a heritage of representative government. Architectural traditions from Britain and the Tidewater region of the southeastern United States were also part of their cultural baggage. Though limited by primitive tools and the dimensions of available materials, and even more by their straitened circumstances, the Anglo-American builders created buildings with formal spatial arrangements based on elite traditions developed by their forebears.

Axial plans, for example: Axial houses with a central hall or passage were chosen again and again by pioneer Anglo-Texan builders. And why not? Such plans draw on Palladian compositions, which were highly admired in 18th-century Britain and were popularized throughout the southeastern colonies by widely circulated architectural pattern books.

Three types of houses survive from the earliest period of Anglo-American settlement in Texas: log cabins; "dogtrot" houses, with two living areas arranged around a central "dogtrot" passageway; and "I houses," a vernacular version of elite colonial Georgian houses, usually two rooms wide, two stories high, and one or two rooms deep, with a central hall and with a three- or five-bay facade—possibly named by scholars because of their uncluttered, narrow plan or their slender gable-end profile. The most interesting question for historians is the evolutionary relationship between these three house types. Clearly, the log cabins came first. Some historians argue that dogtrot houses, although they are more primitive looking than I houses, did not precede the I house style. Instead, historians have concluded, they, like I houses, represent a 19th-century Texas simplification of the 18th-century Greek Revival plan, consciously chosen by settlers in touch with earlier traditions.

Among the oldest Anglo houses in Texas, the Gaines House (or Oliphant House) of Sabine County, c. 1820, is typical of central-hall homes.

Photography courtesy of Texas Historical Commission

LOG CABINS

The first structures built in Texas by these settlers were one-room, or *single-pen*, cabins built of the one material that the forested wilderness of eastern Texas offered in abundance—logs. Terry G. Jordan, in his *Texas Log Buildings, A Folk Architecture*, surveyed the state's surviving log structures and traced the settlement patterns of Anglos and other trans-Atlantic immigrants. Jordan found evidence that professional log-cabin builders came to Texas early on. The proportions of the cabins changed as settlers moved west, because the available trees, from which logs were hewn, were smaller. The cheapest cabins of pine logs were 18 feet square and cost $20 in 1849. Symmetry was not a necessity to the owners of these early dwellings, who were, after all, mostly subsistence farmers. But as soon as they could afford more room, many of them had built either new houses or additions that were arranged symmetrically around an central axis. Jordan found an early writer who noted that a deluxe house of two rooms "separated by an interval [an open central hall] of 12 to 15 feet," and built by three men in three days, could be had for a hard-earned $49. These double-pen structures were dogtrot houses.

Centered entries into each pen divide the facade of the Mitchell House, c. 1856, near Itasca, into seven bays; restored by Eugene George.

DOGTROT HOUSES

Many remaining Texas dogtrot houses have double pens of different dimensions (indicating that the second pen was a later addition) covered by a common roof, which created an open central hall. The hall channels a constant and pleasant natural draft—a blessing in summer but a curse in winter. Historians trace the dogtrot style to antecedents in southern Tennessee, where many early Texas settlers originated, and argue that the style developed in

Texas as much out of a desire to copy the axial plans of pattern-book houses as from the need for ventilation.

Austin architect and historian Eugene George has noted a "commensurability"—consistent relationships among architectural elements—in the proportions of dogtrot houses he has studied. This, he says, explains the apparently unconscious sophistication in vernacular design. In 1961, George documented the William Mitchell House near Itasca (also called the Turner House, after a later owner), which was built around 1856 almost entirely of milled lumber. Though the heaviest—and intentionally hidden—framing members are of hand-sawn oak, the interior and exterior walls are covered with original weatherboard, the exterior of cypress. The flanking pens are both of 17-by-19-foot interior dimensions, separated by a 10-by-17-foot open hallway.

George has calculated that the plan dimensions of the Mitchell house "run," or hall, form a "root-three" rectangle. That is, the width (10 feet) multiplied by the square root of three equals (roughly) the depth (17 feet.) The width of the run, he says, is derived from the interior wall height of 10 feet; therefore, the rectangular block of the gable ends minus the triangular peak—17 feet by 10 feet—also forms a "root-three" rectangle. George sees a universality in such geometrical relationships that contributes to the structure's harmoniousness.

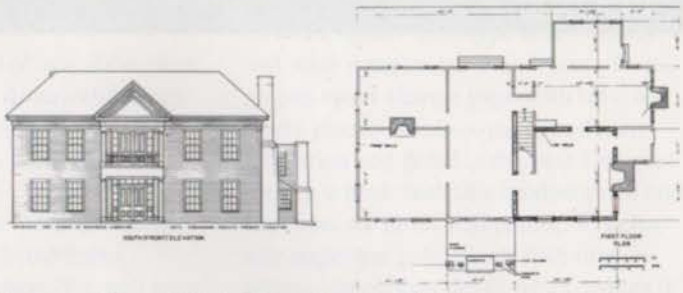
A more studied connection to the eastern origins of the axial-plan house shows in the house built by James Taylor Gaines (also called the Oliphant House after a later owner), begun about 1820 near the Sabine River. It has flanking rooms measuring roughly 14-by-20 feet and 20-by-20 feet in exterior dimensions. Though it is not precisely symmetrical, the division of the final facade into five bays—with the central hall and two windows in each pen—achieved an important symbolic formality.

The Branches Houses, c. 1840, in Gonzales County, had its Georgian I-house configuation transformed into Greek Revival with columns and moldings.

THE I HOUSE

The first sawmills in Texas opened in the late 1830s, making available for the first time clapboards, moldings, and other architectural refinements. This technological leap, combined with a wave of prosperity, led to the confluence of the dogtrot and I house styles in Texas, and even the transformation of many log cabins. General Barnes's Plantation House near Anderson, for example, is a frame structure built around an original single-pen log cabin. With sawmill-made ornamental moldings, dogtrot and unadorned I houses could be dressed up in the elite Grecian style.

Another element of building tradition brought by the Anglo-Americans to Texas is the porch—also known as the veranda, gallery, portico, run-around, et al. A shady retreat for domestic chores by day and for rocking chairs on pleasant evenings, the porch extended the shelter of the open central hall to the full length of the facade. Porches trimmed with strips of molding along their full length, or with details confined to the width of the central hall and topped with a triangular pediment, could change the lowly dogtrot into the envied Greek Revival. In similar fashion, the two-story I house could support a full-length double gallery, or a narrow double portico with pediment, to achieve the same transformation.



The Barnes House, 1842, in Grimes County, evolved from a single-pen log house into an I house with columned porticos and entablatures.

Most studies trace porches to the Caribbean Islands and to the traditional houses of island aborigines and African slaves. Porches are found in Virginia plantations from the early 17th century; French planters, influenced by the styles of Haiti, built porches in Louisiana in the early 18th century.

Early Texas porches may derive from such influences. But even here a distinct Palladian precedent may have been important. Palladio's 16th-century Villa Pisani at Montagnana, Italy, with its central double portico crowned by an elegant triangular pediment, was copied for Drayton Hall in Charleston, North Carolina, built in 1738, introducing a model that many Texans admired.

Certainly not all early Texas structures of Anglo-American origin can be traced to the Palladian-Georgian ideal. Many settlers were content with the simple practicalities of single-pen cabins, or two-room asymmetrical arrangements with ell and lean-to extensions added over the years. Yet surveys of vernacular houses surviving from antebellum Virginia and Tennessee indicate that nearly half are of the central hall type, and the same proportion hold for Texas. Wherever early Anglo craftsmen built or helped others build shelter of lasting utility in Texas, their work exhibited elements of conscious design—long before master builders or architects entered the region.

The Brownlee House, c. 1885, in Fannin County, is an I house with a thin veil of milled detail in Eastlake style.

DILLON DOES DALLAS

Dallas Architecture 1936-1986
by David Dillon
Photography by Doug Tomlinson
Texas Monthly Press
$29.95, hardbound, 213 pages

reviewed by Larry Good

In reviewing David Dillon's new book I must point out that Dillon and I are friends as well as contributing editors of *Texas Architect*. I must also say that it is not the book I wanted on Dallas architecture. The Dallas AIA chapter has published two guidebooks presenting, with varying degrees of success, the broad spectrum of Dallas architecture. *The Prairie's Yield*, from 1962, places Dallas architectural events in relation to a worldwide historical continuum. Nevertheless, neither it nor *Dallasights*, from 1978, satisfied the need for a detailed analysis of the best work in this region. Both lacked suitable plans and sections, as well as commentary on the major architects who were making history with their work. The seven years since *Dallasights* was published have been the most architecturally prolific in the city's history, so it was high time for an update.

Given the credentials of the team involved, I had every reason to hope for a dream book that would cover the things left out by earlier attempts. A collection of Doug Tomlinson's impeccably printed, contrasty, brooding photos would be the perfect complement to the well-researched and spirited text one could expect from David Dillon.

David Dillon is a critic, however, not a historian, and the book is not what I expected. I wanted a book about buildings, and with a few exceptions, this ain't it. The introduction to the new book told me what I didn't want to know: "[This] is a book about trends and attitudes and processes as much as it is about buildings."

The Galleria in David Dillon's Dallas, a city that doesn't know where it is going.

Dillon opens with the story of the Texas Centennial celebration of 1936, including the fascinating account of how Dallas wooed and won the exposition from the more historically deserving cities of San Antonio and Houston. A brief profile of Centennial Architect George Dahl follows. The "profile" device, four to seven pages of text and photographs on each figure, is used to highlight the influence of six men on the architectural scene. In addition to Dahl, we read about architects Charles Dilbeck, Howard Meyer, and O'Neil Ford, and planners Marvin Springer and Weiming Lu.

Two chapters on Dallas in the four decades following 1940 can only afford space for a very general account of the city's growth. Rather than trendsetters, typically, the most visible works of architecture are depicted and given brief mention in the text. Not a single plan or section is used to illustrate a building—a most regrettable fact for architect/readers.

A chapter on historic preservation, a major phenomenon of the last 15 years, is included, affording opportunities to discuss Dallas's finer old buildings, as well as to display some of Tomlinson's very best photographs.

The heart and soul of Dillon's essay is in his message about a city's need to "know where it is going," which in Dallas, according to Dillon, means the need for a much stronger commitment to land-use planning, the preservation of neighbor-

hood quality of life, and the development of a more contextual approach to architectural design. The essay's crusading, needling, sometimes even glib style—sounding occasionally like a collection of columns from the *Dallas Morning News*—will irritate some. I found Dillon too caught up in the enthusiasms of the moment, as when he makes developers the scapegoats for many of the city's ills:

"Developers dismissed [the Dallas 2000 plan] as wimpy utopianism. . . . The [North Dallas corridor] study wasn't even printed before developers started demanding [the planner's] head. . . . Preservationists occasionally win a round or two against developers . . . only to be thwarted by developers, complacent politicians, and . . . indifferent homeowners concerned mainly with the algae level in their swimming pools. . . . And slowly, cautiously, developers are getting the message."

Though the stories related are accurate, this polemical tone unfortunately serves to egg on the parties in the Dallas war between "homeowners" and "developers" which surfaces in the media with every major rezoning request or board-of-adjustment case.

Dallas is in the midst of one of the greatest building booms in American history. The quality of our architecture does not rank with 18th-century Savannah, 19th-century Boston or turn-of-the-century Chicago. Nor does our urban planning compare with that in Philadelphia, Toronto, or San Francisco. We will have to live with today's hastily made decisions for years and hope that mass transit and the patina of age will cover a multitude of sins. Dillon's chapter on "Dallas in the Eighties," devoted primarily to a discussion of land use and downtown building trends in the Arts District, Las Colinas, and North Dallas, tackles some of these issues. The Cityplace zoning case and North Dallas traffic get about as much space as LTV Center and the Dallas Museum of Art, which are, incidentally, the only buildings discussed in much detail. This kind of omission, the lack of a discourse on significant new buildings, is my biggest problem with the book. But perhaps *Dallas Architecture 1936-1986* is the right book with the wrong name.

It *is* beautiful. The 10-inch-square pages are blessed with generous amounts of white space. Text type is set loosely, and wide margins are maintained. Photographs never share a page with text, are rarely placed two-to-a-page, and their resolution and detail is the best I've ever seen in a book with this modest price tag. Captions are never distracting. Chapter title pages are solid black with titles in white—an elegant detail which makes it easy to locate your "spot" in the book.

But somehow the graphic design doesn't match the atmosphere of the text. Although the book looks like the definitive record of a period in Dallas's history, only the photographs deliver on that promise. The relationship between Tomlinson's photos and Dillon's text is too tenuous: rarely do these photos illustrate buildings or ideas stated on the facing page in the text; several depicted buildings are never mentioned in the text. At times I felt that two separate concepts were loosely bound in the same package. On the other hand, mind you, it's a very nice package with a message every Texas architect should grasp.

Architect Larry Good is a partner in the Dallas firm Good, Haas & Fulton.

BOOKS, *continued next page*

Richard Payne captures the spirit of Clayton's Trueheart-Adriance Building.

Historic Galveston
by Geoffrey Leavenworth
photographs by Richard Payne
Herring Press, Houston
$49.95, clothbound, 116 pages

reviewed by R.B. Ferrier

Richard Payne's commanding photography and Geoffrey Leavenworth's informative text make *Historic Galveston* an impressive volume; it rewards the optimistic anticipation that followed Herring Press's entry into the regional publishing market.

The initial impact of this book comes from the brilliant photographic vision. Each building is depicted with a taut composition, close enough to render explicit detail yet inclusive of the primary facade elements. The consistent view is upward, capturing the building profile against the magnificent coastal sky. The printing and color reproduction are exceptional.

Payne offers a new comprehension and vision of a place one might consider familiar. He reveals details not previously noticed, a Galveston that even a careful observer might have overlooked. As always, it is a joy and a revealing experience to see architecture through his eyes.

The text is brief but appropriate. Geoffrey Leavenworth provides an intriguing narrative of the events that influenced and shaped the Island's architecture. He traces Galveston's past, with its long-gone prosperity, its diverse ethnic population, its pirates, its strategic location, its international influence, and its catastrophic handling by the forces of nature. These factors make up the context of a population struggling against forces that threatened to render the place uninhabitable.

The 53 buildings presented in the book are described in detail in a concluding segment, with small black-and-white photographs of more typical views for each building. The name, date, and location of each are noted, along with a brief history and description. This summary provides detailed information concerning the architect, materials, style, influence, and historic references.

Reading *Historic Galveston*, one feels compelled to return to Galveston and to view it more closely, with new wisdom, new vision, and a sense of discovery.

R.B. Ferrier is Professor of Architecture and Associate Dean of the University of Texas at Arlington School of Architecture and Environmental Design.

Presence, The Transco Tower
by Anne Holmes
photographs by Steve Brady
Herring Press, Houston
$50, clothbound, 104 pages

reviewed by Peter Jay Zweig

Presence, The Transco Tower is a tribute to Philip Johnson and John Burgee's Transco Tower, the 64-story modern-day corporate cathedral that stands in splendid isolation near the Galleria in southwestern Houston.

The crisply written text by Houston's long-time preeminent critic, Ann Holmes, does what one would expect, relating the vision of the architects and the story of the building's development by Gerald Hines and W.D. "Jack" Bowen, Chairman and Chief Executive Officer of Transco Energy Company, the building's principal tenant. Extraordinary position, as well as design, Holmes says, gives Transco Tower the monumental presence lacking throughout the rest of Houston. She writes: "Size alone, of course, doesn't make true monumentality—as evidenced by the [75-story downtown] Texas Commerce Building by I.M.Pei."

But *Presence, The Transco Tower* delivers much more than expected.

The photographs by Steve Brady, reproduced beautifully in a massive format, are chosen from some 11,000 35-millimeter shots taken over an eight-month period. They open with a study of the play of light over the tower's glass skin. But then the photographer steps back, and back, and back. We see Transco through the mist of a River Oaks golf course, from porches and sidewalks, from freeways, from a Montrose baseball field, from oil fields, from a horse lot far to the southeast. Gradually the true aim of the book—a celebration of the vibrant life of Houston—emerges. After taking something of a beating in the 1980s, Houston deserves this book.

Peter Jay Zweig is an award-winning architect practicing in Houston and an associate professor of architecture at the University of Houston-University Park, where he directs the Texas Studio.

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actions brought against design professionals.

Some architects have considered specific-project insurance, limiting coverage to those projects for which it is most crucial. Steve Sprowls calls the idea a false hope, however, since specific-project coverage is usually available only for large ($10-million and up) projects, if at all, and seldom covers liability for an adequate time period after building completion.

Contracts limiting ability may be of little help. They would not protect against third-party claims, which account for over half the actions brought against professionals.

Another approach consists of variations on the concept of self-insurance. In its simplest form, the idea is merely to set aside one's own emergency fund and hope for the best. An alternative with broad appeal is the insurance pool, in which entities within a single discipline create a cash reserve from which claims can be paid. This, too, presents difficulties.

"The problem with insurance pools," Sprowls says, "is likely to be the same problem that created the need for pools in the first place: Claims being awarded by the courts are so large that they can quickly wipe out even very substantial reserves."

Similarly, some enthusiasm is being rekindled for captive insurance companies. The captive is a bona fide insurance company, usually located "offshore" (in the Cayman Islands, for example), and is controlled by the corporation or group in whose interest it was created. Until recently, corporations could shelter assets in such companies, but those advantages have been nullified by the courts. Still, the current liability crunch has helped to revive the idea. The biggest drawback lies in the lack of reinsurance that even captives need to spread their risk.

Working Within the System. Some liability-insurance buyers are proceeding in a spirit of cooperation with the industry, which, after all, worked well for many years. The industry has always had its downturns, it is argued, and now that premiums have been pushed to all-time highs, returns on investment income will tend to reverse the trend. As Sprowls says, "One could say that the forecast is changing from dismal to partly cloudy."

Nevertheless, even from within the system, there is still pressure for change. Some suggest accepting high liability premiums as inescapable, but enlisting the aid of the client in paying the tab. "What the client often fails to consider," says architect Dave Braden, "is that, at least indirectly, he is sharing the burden of our liability system anyway by having to pay higher architectural fees as our cost of doing business escalates." Others suggest pushing for standard agreements under which the client agrees to pay insurance costs as a specified line item or reimbursable expense.

Also from within the system comes a radical new insurance concept that the building industry is trying to sell to the insurance industry. Called unified-risk insurance, it involves considering all the entities of a construction team as one company and insuring that entity for all damages resulting from faulty design, construction, or products. In theory, lower premiums would result, since insurers would spend fewer premium dollars in litigation determining which component of the construction team is responsible for damages. The primary proponent of the concept, the International Council on Environmental Design, hopes that once the concept is refined and endorsed by the construction industry at large, the insurance community will also find it palatable.

Tort Reform: The Best Chance for a Real Cure. Most efforts to solve the liability crisis are analogous to fighting cancer with aspirin—they afford some relief without attacking the real problem. Most experts agree that a cure would require total overhaul of the American judicial system in the area of torts (civil wrongs for which the injured party is entitled to compensation). Associations and coalitions representing diverse, even opposing, interests are now looking upon tort reform as a common cause.

Americans have insurance problems not encountered in other countries, reformers contend, because our legal system is uniquely conducive to high claims. Over the years, pro-plaintiff courts have eroded not only the doctrine of privity, but basic principles of fault and negligence, resulting in a "someone must pay" posture with regard to liability. This phenomenon is compounded by a jury system in which sympathy can prevail over reason in setting damages, both actual and punitive. The contingency-fee system, which lawyers stubbornly defend as equitable, also drives up awards, as does the pervasive belief that juries are "going after the defendant's insurance company, not the defendant himself."

But, as Braden points out, everybody suffers when more lawyers, with nothing to lose and a lot to gain, apply ever-broadening theories of recovery and push for higher and higher claims. Braden says. "Even when you win you are out attorneys' fees, liability-premium increases, damaged reputation, tremendous time loss, and anguish, with no way to recover for any of it."

While admitting there is cause for reform, most observers agree that statutory relief will be slow in coming. After all, major reform such as limits to liability or the restructuring of legal fees would have a direct and adverse effect on the bar, which itself wields strong influence in the legislative arena.

Even in the wake of legislative reform, gains could be nullified by the judiciary. For example, the Texas Medical Association several years ago won legislative limits to malpractice awards, only to see the new laws declared unconstitutional by the Texas Supreme Court. Until the liability crisis is fully understood as a public issue of profound significance, such disappointments seem inevitable.

Just before the recent holidays, Braden received a note from Hal Box, dean of the School of Architecture at UT-Austin. With it was a photocopy of two side-by-side classified ads from the Austin newspaper. The first ad read: "USED DRAFTING TABLES, $295-$325 . . . ." The second ad: "LAW SCHOOL? A high LSAT score can open the right doors." Above the ads, Box had written: "This pair of ads seems linked in the destiny of our profession."

As a thoroughgoing humorist, Braden could readily appreciate the wit. But, somehow, he didn't feel like laughing.

Texas Architect *contributing editor Larry Paul Fuller is a writer and consultant who lives in Austin.*

NEWS, *continued from page 30*

individual entries (more than 1,000) of the national register properties in Texas, the catalog is an updated and revised version of the first edition published in 1976.

Introductory chapters explain the purpose and history of the National Register in Texas, and provide guidelines for using the catalog. Organized alphabetically by counties, entries serve as a valuable reference for regional studies. Listings are current through September, 1984, which marks the 15th anniversary of the register.

Copies of the catalog in limited numbers are available free of charge. Send requests to Joe Opperman, National Register Department, Texas Historical Commission, P.O. Box 12276, Austin, 78711.

College of Biblical Studies

ABILENE FIRM TO DESIGN BIBLICAL STUDIES COLLEGE

Abilene Christian University has announced the results of an invited competition for the design of a new complex for the College of Biblical Studies. Tittle, Luther, Loving of Abilene submitted the winning design for the 80,000-square-foot complex that will contain offices, classrooms, a 350-seat chapel, and an amphitheater. A unique component of the design is a 150-foot-high tower with carillon that will house a laser-beam lighting system. Construction will begin in 1986.

AIA CONVENTION SYMPOSIUM TO EXAMINE REGIONAL GROWTH

A symposium titled "The Austin-San Antonio Corridor: An Experiment in Planned Regional Urbanization" will be presented during the upcoming national AIA convention in San Antonio, June 8-11, 1986.

Moderated by planner Robert R. Ashcroft of the San Antonio firm Ralph Bender and Associates, the panel will include: A.C. Gonzales, City Manager of the City of San Marcos; Richard Lilly, formerly with the City of Austin planning department, now with the Austin-based development firm Barnes Connally; Richard Howe, professor of engineering at the University of Texas at San Antonio; and Ralph Bender of Ralph Bender and Associates.

THOMAS DOHONEY BROAD DEAD AT 92

Thomas Dohoney Broad, a Dallas civic activist and architect for almost 40 years, died on September 19. He was 92.

Broad, who spent much of his life involved in the city's civic and cultural affairs, had served on the boards of directors of a number of associations including the Dallas Museum of Art and the Dallas Council on World Affairs.

In the profession, Broad held several powerful posts with the AIA including

Jury Member of the College of Fellows, and Trustee of the AIA Architectural Foundation. Broad also was a past president of the Dallas AIA Chapter.

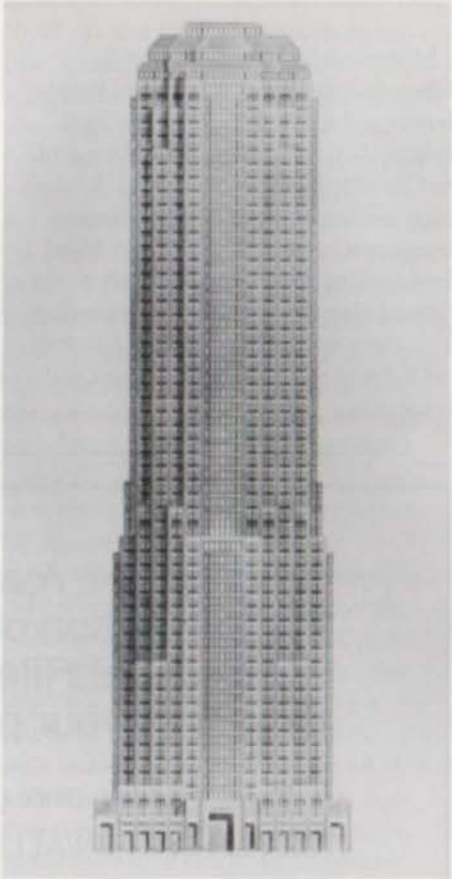
Born in Paris, Texas, he claimed to be the first graduate of the University of Texas at Austin School of Architecture. Broad had the distinction of being the first graduate of the newly created school because he and his classmates received their diplomas in alphabetical order.

Among his numerous projects, he helped design the Love Field Air Terminal and the Dallas Masonic Temple.

IN PROGRESS

REPUBLICBANK CENTER, DALLAS BY SOM, CHICAGO

RepublicBank has announced the design for a 60-story tower as the new headquarters for one of the state's largest banks. Designed by the Chicago office of Skidmore, Owings & Merrill, the building will contain 1.4 million square feet of luxury offices and retail space. A soaring tower of granite and glass topped by a cascading crown, the building at ground level is elaborately planned, with covered arcades and open-air plazas.



RepublicBank Center, Dallas

To provide a transition in scale between the building, its adjoining plaza, and its landscaped courtyards, RepublicBank Center features a two-story arcade with entrances opening on a central rotunda. Lined with three levels of retail shops, the rotunda is the building's central focus leading to elevators and escalators connecting to all areas of the complex.

One level below ground is a concourse connecting existing buildings in the three-block RepublicBank complex, and the underground pedestrian-tunnel system. Provisions have been made so that RepublicBank Center will connect with one of DART's planned stations.

An enormous amount of attention has been paid to the street level. Undoubtedly the perimeter arcades, landscaped courtyards, and gardens will become a coveted haven for downtown workers.

The first 25 floors of office space have a unique superframe structural system that permits multi-floor tenants the option

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Eighteen different lectures at the 1985 annual meeting have been recorded on audio cassette tapes for your use. Tapes are available at $6.00 each (postage and handling included). Just complete the order form to include your name, address, number of tapes you wish to order, and enclose a check, money order or purchase order. Make checks payable to: EDUCATIONAL AUDIO RECORDING SERVICE, P.O. Box 720135, Houston, Texas 77272. Please allow 1–2 weeks for mail delivery.

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Court, RepublicBank Center

of having private atriums up to six stories high. The upper office floors are served by four zones of elevators departing from a two-story skylobby at the 25th floor. At the top, four penthouse floors with setbacks should provide a spectacular panoramic view of downtown. A total of 55 elevators and a seven-level underground garage will serve the building.

The bank will lease 500,000 square feet for its own use. Construction will begin this summer and completion is expected in 1988.

SCHOOLS

Dr. Sandra Rosenbloom has been appointed to the David Bruton, Jr., Centennial Professorship in Urban Design in the **University of Texas at Austin** School of Architecture. Rosenbloom is recognized nationally for her research in urban design and urban transportation, including the travel behavior and needs of the elderly and handicapped, and the role of the private sector in transportation.

The **Texas A&M** College of Architecture and Environmental Design is accepting applications for the position of Dean. Preferred starting date is July, 1986. Address inquiries to Dr. Clinton A. Phillips, Dean of Faculties and Associate Provost, Texas A&M University, College Station 77843.

Funds are being solicited by the **University of Texas** at Austin for an endowed scholarship honoring Houston architect John S. Chase, FAIA. Chase, the first black licensed to practice architecture in Texas and the first to be accepted into the Texas Society of Architects, founded the National Organization of Minority Architects.

The School is honoring him for extraordinary achievements within the profession and for noteworthy contributions to architectural education. He is also commemorated for his status as the first black to enroll in the University of Texas at Austin and the School of Architecture. He earned his Master of Architecture degree in 1952.

For additional information, contact Dawn Lewis at (512) 471-1922.

EVENTS

Through January 26: "Maya—Treasures of an Ancient Civilization," continues at the Dallas Museum of Art.

January 27: Deadline for applications in a national design competition for a $19-million American Heritage Center and Art Museum at the University of Wyoming. From formal applications received, a maximum of four firms will be selected. Each will receive $25,000 to develop and present design proposals. For additional information, contact Design Competition Advisor, c/o Morris C. Jones, University Architect, Merica Hall 210, University of Wyoming, Laramie, WY 82071.

January 29-31: CONDES '86, a product exhibition for the contract design industry, will be held in the Dallas Market

Contract Design Center
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For further information on any of the showrooms listed in the ad, please circle the reader inquiry number. If you would like information from a specific showroom, please indicate so on the reader inquiry card.

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Center. For information, contact Deborah Eschenbacher at (214) 655-6100, ext. 300.

June 8-11: AIA National Convention, San Antonio Convention Center. For registration information, contact the AIA Convention Dept., (202) 626-7396.

FIRMS

Killis P. Almond, Jr., and Graham Luhn have been appointed to the Texas Historical Commission's State Board of Review.

Paul C. Gloriod, David Scott Collins, and R. Wayne Marchand have joined the **Falick/Klein Partnership, Inc.,** Houston, as associates.

Gerald Moorhead, Architect, has relocated to 2138-A Welch, Houston 77019, (713) 526-3403.

Gehm Associates has relocated to 6671 Southwest Freeway, Suite 404, Houston 77074, (713) 988-9500.

Group 4, Inc. has relocated to 121 N. Main St., Suite 200, Bryan 77803, (409) 775-7472.

Dekker Wymer Lewis has relocated to 200 E. Sixth Street, Suite 302, Austin.

Norman Kenney has been named vice president of the Austin firm **White, Dolce & Barr Architects/Planners.**

Hector R. Flores has been promoted to associate in the San Antonio firm **Bradley/McChesney Architects, Inc.**

Lee N. Connerat has been named associate of **Perspecta Interior Planning and Design.** Alexandra R. Singleton has been named project manager.

The Houston firm Melton Henry/Architects has changed its name to **Henry Milton Roberts Tan.**

Three Texas firms have been named winners in a brochure competition sponsored by the Society for Marketing Professional Services. **Compendium/A Design System Corporation,** Houston, won second place; **Brendler/Dove,** San Antonio, won third place; and **Morris/Aubry,** Houston, won honorable mention. In the advertising competition, **Pierce Goodwin Alexander,** Dallas and Houston, won third place.

Robert D. Connors has been elected to the board of directors of the Houston firm **Jason Frye and Associates, Inc.**

Brad Burns, Tom Miller, James Turner, and Carl R. Van Volkenburgh have been named vice presidents of the Austin firm **Richardson Verdoorn, Inc.** Named senior associates are Alexander Boedy, Brian J. Larson, Mary C. Powell, Monica M. Schwanitz, and John A. Worrall. Named associates are Robert G. Chipman, John Gleason, Debra A. Goodman, Sarah A. Pearson, Nancy Riviere, and James E. Scott, III.

The Parker/Croston/Lackey Partnership, Inc. has been formed, with offices in the R&B Corporate Park, 6448 Hwy. 290 East, Bldg. B-112, (512) 459-8500.

F. Brown + Associates has relocated to 100 Two Lincoln Centre/LB 2, 5420 LBJ Frwy., Dallas 75240, (214) 770-2222.

Nancy L. Lindsay has been named senior associate in the Houston firm **ISD, Inc.**

Lara Todorov has been named marketing coordinator of the **White Budd Van Ness Partnership,** Houston.

Ron Clark has been named project manager of the Dallas office of **Richardson Nagy Martin.**

Ferron W. Stowe has been named director of architecture of the Dallas office of **Gresham, Smith and Partners.** Alice K.

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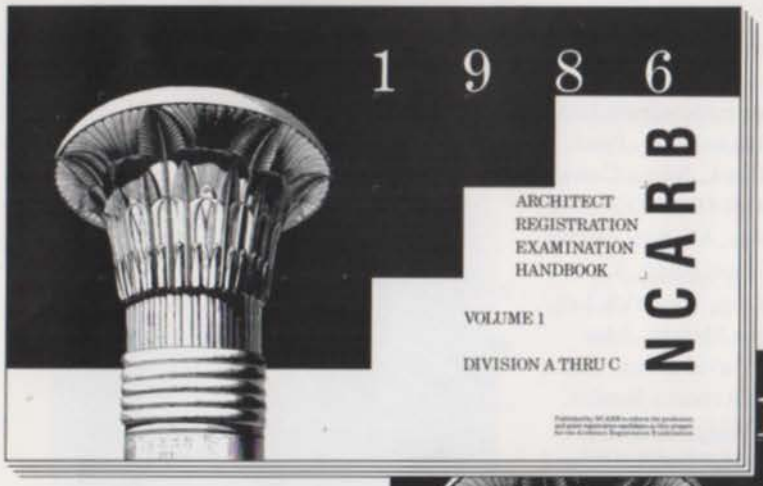

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NCARB

Word has been named director of graphic design and Karen Lamb is now business manager.

Oza Bouchard, Mario Bolullo, and Robert Kester have been named principals of **Goleman & Rolfe Associates, Inc.** Arthur Aiken and Vincent Stasio have been promoted to senior associate and Jamie Dickey was named associate.

Boone Pope Wheeler Pullin has relocated to First State Plaza East, Suite 150, South Fourth & Oak, Abilene.

Duncan G. Hudson, Jr., has been named vice-president of **Hellmuth, Obata & Kassabaum,** Dallas. Carolyn M. Steele has been named director of marketing.

Rebecca M. Renfro has joined **3D/International** as director of communications, succeeding Randle Pollock, who now directs the division's marketing activities. Promoted to associate are James Beck, III, William Boswell, Jr., Peter Brownrigg, Ronald Clark, Susan Cowie, Jeffrey Cruzen, Chesley Gilbert, William Greek, Michael Groves, Michael Freitag, Caesar Ho, Ching-Yuann Hung, Rama Iyengar, Katherine King, Frederick Lee, William Little, Rodger Messer, John Ogden, Mike Onove, David Owen, Susan Perino, James Porter, Rebecca Renfro, Randall Schlichting, Joseph Smith, Michael St. Mary, S. Hill Swift, III, and Timothy Wikowsky.

Patrick Niland has been named principal and secretary-treasurer of **Arcos Corp.,** San Antonio.

Hahnfeld Associates has relocated to 675 N. Henderson, Fort Worth 76107, (817) 335-1303.

Kevin D. Pugsley has joined David L. Voelter to form **Voelter Associates, Inc.,** PO Box 97, Georgetown 78627, (512) 863-9255.

Tony DiNicola has opened an office at 215 S. Jennings, Suite 208, Fort Worth 76104, (817) 332-4760.

Tommy J. Simerly has been named director of traffic engineering of the Dallas firm **DeShazo, Starck & Tang, Inc.**

PRODUCTS

Hunter Douglas, Inc. has introduced "Duette," a dual-pleated fabric shade featuring an air-trapping "honeycomb" construction for increased energy efficiency. Its shape gives the shade more body and stability and makes possible duotone coloring. For more information, contact The Seisel Co., Inc., 845 Third Ave., New York, NY 10022, (212) 759-6500.

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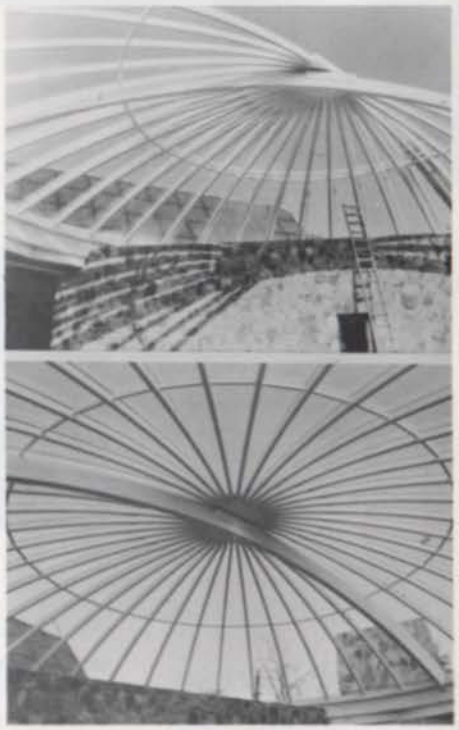

Rolladome, operable skylight

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One opening for Historical Architect, Division of Architecture, Texas Historical Commission. Provide technical preservation assistance, review plans and specifications for certified rehabilitation projects, federal and state historic preservation grant administration, and review of proposed work to state's historic county courthouses. B. A. in architecture with 2 years experience in preservation/rehabilitation or M. A. in architecture with two years experience required. License and non-smoker preferred. $22,128 annually. Resume as soon as possible to Stanley Graves, Division of Architecture, Texas Historical Commission, P. O. Box 12276, Austin, Texas 78711.

LETTER FROM LOS ANGELES

by John Kaliski

Last July my wife and I said goodbye to our Houston friends and moved to Los Angeles, where new jobs awaited us. As an architect interested in urban planning, I hated to leave the debates and decisions about transportation, development controls, and infrastructure that will shape Houston's future. Houston was an ideal place for a student of cities.

Comparing Texas' urbanism with that of Los Angeles is useful, because, like Texas cities, LA is a place where new ideas, and their attendant hot air, surface with intoxicating speed.

Los Angeles has been called the quintessential American garden city. Its suburban strips, automobiles, and single-family houses, with a dash of Hollywood glamor, defined the American dream during the Depression and after World War II. Critics have accused Los Angeles of lacking the quality of *place*—a charge also leveled at Texas, which is where the connection comes in.

As I drive the major streets and zip along the freeways, I have to disagree with such critics. I am constantly amazed at Los Angeles—the panoply of extraordinary buildings, the parade of people, the overload of visual stimuli.

In the last 20 years Los Angeles has grown explosively, like Houston and Dallas. The fallout from the explosion is familiar: Anyone driving to Orange County or the San Fernando Valley can see virtually the same architecture and growth patterns as those in Texas.

But the City of the Angels is more than the sum of its suburbs. The Angeleno urban place is the ghost of a remarkable past. Before the automobile, an interurban streetcar system connected the emerging cities in the basin—Los Angeles, Pasadena, Santa Monica, Hollywood—encouraging the concentration of the critical mass of people, businesses, and buildings that create vibrant urban centers. These cities, a little the worse for wear, still function inside their suburban cloak, much as they did 50 years ago.

Because something of the precar cities remains, the lessons of urban architecture in Los Angeles draw on practical considerations, not just aesthetic games. Architects in Los Angeles design facades that people actually walk by. Public spaces in central-business-district buildings are used by *the public*. Critics rush in to extol or condemn the freeway strips and Disneyland, but they don't often mention that the traditional urban place, a dream in Houston or Dallas, is a fact in Los Angeles.

Though we may love today's Texas cities, it's hard to explain their virtues to the rest of the world. San Antonio has its Riverwalk and its beautifully scaled downtown. In Dallas the Arts District serves as a symbol of the city's aspirations. In Houston I often sensed a structure, if an informal one, in the streets and nodes of activity, which if properly nurtured could emerge as a coherent whole.

Whatever Texas cities will resemble, it probably won't be Los Angeles. For Texas architects this is a fascinating time, presenting the opportunity to exert a decisive influence on the urban forms of the state. From Los Angeles, the responsibility looks both enormous and exciting.

Architect John Kaliski works for Skidmore Owings & Merrill in Los Angeles.

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