

In this issue:
Health Care Design '77-'82
Ten Buildings for Health
Health Planning
Paying the Price
Graphics Under Stress
1977 Design Award Winners

Texas Architect

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On the Cover: Designer and artist for our health issue cover was Robert Bruce, of Kelvin Group Design Office, 4916 Kelvin, Houston 77005. Art director: Jim Glass.

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Coming Up: <i>The January/February issue of Texas Architect will deal with the subject of "Art and Architecture." Art as a complement to architecture, architecture as a complement to art and, indeed, architecture as art in itself.</i>	

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Legislating Health

Traditionally, public debate over health policy has largely been dominated by social questions. Today such debate is increasingly shifting toward a concern with economic issues, especially the issue of cost. Government and private expenditures in the health area have risen significantly in recent years. Reportedly, state, federal and local governments' share of total tax dollars spent for health care has risen to 40 percent. As might be expected, along with increased government expenditures in this area has come greater government control and regulation.

The major federal and state legislative efforts affecting architectural interests in the health area involve legislation concerning comprehensive health planning requirements. In response to a federal mandate, the 64th Texas Legislature passed House Bill 2164, the Texas Health Planning and Development Act. The stated purpose of the act is to insure that health care services and facilities are made available to all citizens in an orderly and economical manner and, further, that such health care services and facilities be provided in a manner that is cost effective and compatible with the health care needs of the people of Texas. The act designated the Texas Department of Health as the state health planning and development agency, created a three-member Texas Health Facilities Commission, and created a state certificate of need program to be administered by the Texas Health Facilities Commission.

Under the legislation, every person or organization who wishes to substantially expand a service offered, construct a new facility, change the bed capacity of an existing facility, modify an existing facility, or organize an HMO which requires a new or modified facility must obtain a certificate of need from the Health Facilities Commission. The grant of a certificate of need represents the Commission's affirmative finding that a proposed project is necessary to meet the health care needs of the community or population to be served. The state law also allows the twelve health systems agencies (HSAs) created in Texas to assist the state agency administering the certificate of need program in carrying out its function by reviewing and making recommendations regarding the applications and need for proposed services.

The twelve HSA s in Texas have now finished their first year of conditional designation and are working on obtaining final designation, which in each case will be at least one year away. The HSAs are still developing procedures for assisting the Health Facilities Commission in certificate of need review and comment. A State Health Coordinating Council should be appointed and operational in the near future to assist the State Health Department with the state health plan and its continuing development.

Legislation affecting health care planning in Texas is both comprehensive and complex. No doubt more legislation and regulation in this field will be forthcoming in the years ahead. The implementation of present and future legislation in this area will affect all economic interests involved in the health care industry. Each profession concerned with delivering a service to some portion of the health care industry should understand the law and policy affecting the field so as to best deliver the service. In addition the HSAs and their sub-area councils or committees provide an opportunity for citizen involvement at the grass roots level. The need for local citizen involvement and interest cannot be overemphasized.



A handwritten signature in cursive script that reads "Tim Von Dohlen".

Tim Von Dohlen
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What is health? It is the physical and emotional well-being of the individual in the context of society and the environment—the *absence* of disease. I present this simple definition at the outset because we would do well to remember that health facilities are not merely for sick people; they are intended to keep people well.

Our present health care delivery system is based on curative concepts, but in the next five years more emphasis will be placed on preventive health care. This is but one example of change that takes place as we learn more about health and how to maintain it, and as the myriad forces at work in our society continue to exert their influence.

The challenge to architects involved in health facility design is great, as is the potential for satisfaction. Nowhere is change more dynamic than in the health industry. Undersandably, architects often fail to keep up with sweeping change within the field. And some efforts are misguided due to a failure to comprehend the real health issues. Effective programming, planning and design can result only from the knowledge, wisdom and understanding that come from staying in touch with the issues. Health facilities must be responsive to health needs and health problems; too often they are not. This article is an attempt to underscore some of the major problems and variables architects must consider in health facility design from 1977 to 1982.

The spiraling cost of health care has become a major issue related to health and hospital facility design. In 1976, we spent \$139.3 billion on health care, an increase of \$17 billion over 1975. The average cost per patient stay in a hospital



By George J. Mann

HEALTH CARE DESIGN 1977-1982

(as measured by the American Hospital Association) was \$311 in 1965. By 1974, the figure had almost tripled to \$873. Since then, it has gone well above \$1,000.

The beginnings of these inflationary trends can be traced back as far as the Hill-Burton Act of 1946, in which the federal govern-

ment assumed its first major role in the health care system by establishing planning procedures and releasing a steady flow of funds for hospital construction. Later, new reimbursement procedures for indigents and the aged in the form of Medicare and Medicaid caused increased utilization of health

facilities. Coupled with factors such as rising labor costs, better overall quality of care, and more extensive diagnostic procedures in the face of malpractice suits, the result has been a highly inflationary economy within the health care industry. And recently, the federal government has pushed to reduce the rapid escalation of health care expenditures.

Part of the push toward cutting back was Public Law 93-641, the National Health Planning and Resources Development Act of 1974. This act divided the country into Health Service Areas, administered by Health Service Agencies, in an attempt to provide equal access to quality health care and to contain spiraling health care costs. It established a new health services review process and appropriateness review requirement. Also, it provided a mandate for certificate of need legislation in the states which would require need for a facility to be proven before the facility could be built. The Texas legislature followed by enacting Article 4418(h), the Texas Health Planning and Resources Development Act of 1975, which created the Texas Health Facilities Commission and gave sanction to the certificate of need requirement.

These attempts to reduce spending (even as this is written, Congress is debating a proposal to place a 9% ceiling on hospital fee increases) and to prevent unwarranted duplication of health facilities obviously have a significant impact on architects involved in health facility design. The current economic climate makes it essential for architects to understand and become involved in the health planning process as legislatively tied together at the national, state and local levels.

In addition, more attention will have to be paid to the total cost of building and operating health facilities. With construction cost being very minor as compared to operating and maintenance expense, total life cycle cost becomes critical. And perhaps the single most important consideration in operating cost is energy efficiency. Many existing facilities will have to be retrofitted for better energy systems, and all new designs must be energy-efficient. It is essential, particularly in the design of health facilities, that the architect become familiar with the whole new body of knowledge now developing with regard to design for energy conservation.

As already implied, being competent in the area of health facilities design requires more than merely developing the technical ability to create a large hospital. Competence demands a broad perspective of the issues and the ability to respond to them. What are today's health issues, and how can architects respond through design? Following are some basic considerations.

Emotional Problems. We live in a highly mobile, high-pressure society. Often the individual is lost in the shuffle of technology in the name of progress. The family is fragmented. The individual becomes alienated from a society that does not have time to care. Since the built environment has a significant impact on the emotional state of people, the architect can help by providing a sense of community and human scale through design, which will help reduce the chaos of our daily lives. Also, good interior design is particularly important in health facilities because of its potentially dramatic

affect on people whose emotions are temporarily unstable. Color, lighting, furniture, acoustics and signage should be creatively utilized to promote emotional well-being.

Environmental Health. The relationship of environment to health will require further and more intensive research. Air, water, noise and land pollution pose enormous health problems and are legitimate design considerations.

Housing. The home is the basic health unit. In too many areas, housing lacks basic health essentials such as adequate toilets, proper water supply, heating and sanitary conditions. So it is that, in some cases, the health needs of a given community are more basic than a lack of adequate medical facilities *per se*.

Transportation and Access. Access—by automobile, helicopter, public transportation—represents a fundamental and critical set of decisions in which the architect should be involved. Wrong location renders even the best health facility ineffective. A related consideration is the issue of emergency medical services. In many cities, the funeral parlor still provides emergency transportation, which constitutes a classic conflict of interests. The ambulance itself also needs further evaluation and study.

Communication. Improved communication will be required, both within health facilities and between them. In fact, with the advent of certain health monitoring devices, the home itself might well become an extension of a centralized health facility through direct communication. (In addition, there will be a growing emphasis on home treatment by home health workers to reduce the inpatient load on health institutions.)

Health Education. Many health problems are related to lack of information and understanding. The new shift in emphasis toward prevention will be accomplished in part through educating the individual—who, in the final analysis, is responsible for prevention of disease. An understanding of nutrition and its impact on health, for example, is critical to preventive programs. Architects can expect more demand for health education facilities in schools, within health care institutions and as separate entities, perhaps in conjunction with airports or shopping centers.

Specialized Facilities. New concepts in diagnosis and treatment will render existing and even planned health facilities and hospitals obsolete. Following are just a few examples of units which require specialized knowledge and design efforts from the outset, or extensive revision in existing structures: renal dialysis, intensive care, burn units, coronary care, open heart surgery, recovery, CAT scanner and radiology.

Varied Building Types. In addition to specialized facilities within hospitals, architects can expect demand to increase for a variety of health-related building types as care concepts change. Centers for physical rehabilitation and for mental and developmental disabilities will have to be built or improved, often at the community level. More ambulatory care facilities and outpatient clinics will be in demand to reduce hospitals' inpatient load, as will surgical centers, which can accommodate minor surgery requiring limited recovery time. Another trend is for physicians to practice in groups, which can support sophisticated spaces and equipment. These facilities will take the form of family

practice clinics or medical office buildings, often located adjacent to hospitals or nursing homes. Rural health care is a pressing need in Texas and constitutes a demand for small, general-purpose centers. Also, the increasing popularity of health maintenance organizations (HMOs), wherein people are entitled to preventive and curative care at a fixed rate, will be another source of new facilities.

Recycling and Renovation. It should be remembered that, despite the need for new and varied facilities, escalating costs and growing restrictions on new construction will bring about more recycling and renovation of existing facilities. Architects should face this reality as one of the challenges in health care design.

The basic, underlying challenge, however, is to develop a more complete understanding of what health is, and how it can be preserved. It is this understanding that will lead to better health facilities for people.



Architect George J. Mann is associate professor of architecture and environmental design at Texas A&M University; a board of directors member of RPD—Resource Planning and Development, New York City and College Station; and principal of George J. Mann & Associates, Planners and Architects, New York City and College Station.



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BUILDINGS FOR HEALTH: A SAMPLING FROM TEXAS FIRMS

The 48th Annual Convention of the Texas Hospital Association held in Houston last May featured an "Exhibition of Architecture for Health," a display of health care projects—proposed, completed or in the works—submitted by architects nationwide in an effort to update hospital administrators, trustees, planning agency officials and other hospital staff on the current form and trend of health facility design.

Projects eligible for submission included hospitals, long-term care facilities, health centers, diagnostic and treatment centers, and medical offices, laboratories and research facilities. To qualify for display, projects may have been constructed or designed for construction in any country, although the firms submitting the projects had to be American or Canadian.

Some 40 projects were displayed during the three-day exhibition, projects representing a full range of health care needs, problems and solutions. From the complete replacement of outdated facilities to the renovation and expansion of inadequate ones, the projects all had one thing in common—the purpose of providing the highest quality of health care within the common bounds of site and code restrictions and construction and operating costs.

On the following pages are ten display projects in which Texas architects have confronted these common bounds, responding to the needs for adequate health care facilities of small communities, cities, non-profit organizations and private developers alike, from Electra, Texas, to Petoskey, Michigan.

A GUIDE TO HEALTH PLANNING TERMS AND CONCEPTS

Health planning: broadly covers all matters relating to the design and projection of health-care programs; more specifically, the term refers to the planning of capital improvement and services expansion projects within a community context, subject to approval by state and areawide regulatory agencies.

Certificate of need: the approval of state and areawide regulatory agencies required to proceed with capital and service expansion projects costing more than \$100,000. The hospital must show the community need for its proposal and the proposal's feasibility.

Health systems agencies (HSAs): local and statewide planning organizations with governmental authority which review applications for certificates of need and federal funds for health projects. The agencies also review community health needs in an effort to improve services without increasing health care costs and to eliminate duplicate services, and they make recommendations for health facilities projects.

Long-range plan: planning document which includes analysis of a hospital's patient community, use, workload, resources, services, programs and facilities (both existing and proposed), projections of need and priorities for development.

PL 92-603 (Social Security Amendment): 1972 law requiring capital budgeting and institutional planning to receive federal reimbursement for patient care.

PL 93-641 (National Health Planning and Resources Act): 1974 law requiring states to pass certificate of need legislation.

Planning team: group involved in health-care planning, which may be composed of hospital administrators, staff and trustees; hospital consultants, architects and financial advisors; construction and project managers, etc.

Glossary by Robert Douglass.



Project: Tulane University Hospital and Ambulatory Care Center, New Orleans

Client: Tulane University Medical Center and School of Medicine

Architects: Caudill Rowlett Scott, Houston, August Perez and Associates, New Orleans, and J. Buchanan Blich and Associates, New Orleans

Project Description: The basic concept employed in design of the hospital and clinic is that of placing inpatient and ambulatory care programs on the same horizontal levels and in close proximity for efficiency of staff and student travel between major work sites. On floors three through seven, space for both inpatient and ambulatory care programs is arranged to form two discrete vertical zones linked by a central core housing mechanical services and elevators exclusively for patients, staff and visitors, and for materials distribution. The project was completed in 1976.

Photo by Rick Gardner



Project: Southwest Unit, Memorial Hospital System, Houston

Client: W. Wilson Turner, President, Memorial Hospital System

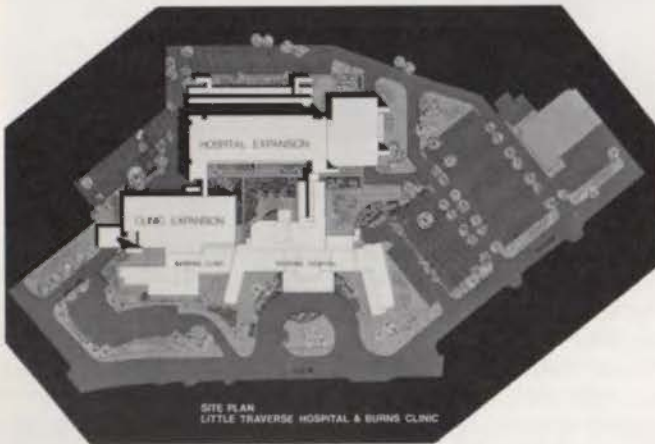
Architects: S. I. Morris Associates, Architects and Planners, Houston

Project Description: The Memorial Hospital Southwest Unit is a 596-bed complex replacing an obsolete central-city facility and one satellite unit, the prime consideration being to provide high quality health care at minimum construction and operating costs.

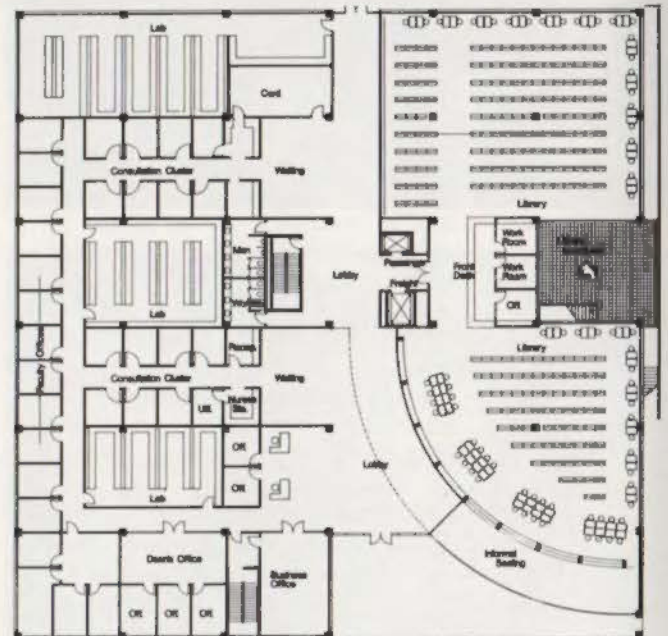
The master plan for the 1,005,000 sq. ft. complex required a two-phase construction program, the first of which, completed recently, included a hospital tower, a medical professional building, an energy dispatch building, a heliport and a parking garage for 1,100 automobiles. Structures are interconnected by below-grade corridors for pedestrian traffic and materials and utilities distribution. Phase two elements include a parking garage, a second hospital tower, a second medical professional building, a motel for visitors and outpatients, an education building and additions to the energy dispatch building.

Hospital functions are grouped by floors in the hospital base. The snowflake configuration of the 459-room octagonal tower makes for accessibility to the central core by patients and staff. Rooms themselves are octagonal, allowing more efficient utilization of space.

Proposed hospital expansion.

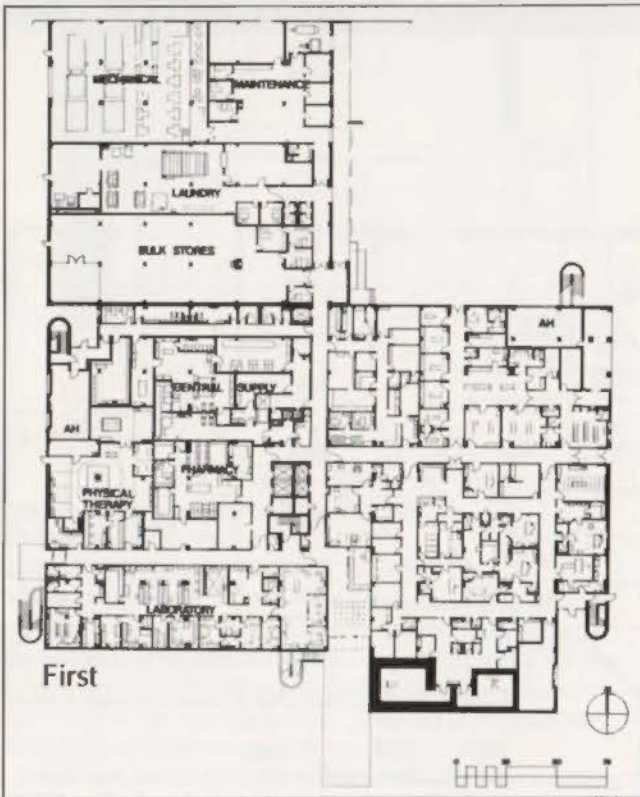


Project: Little Traverse Hospital and Burns Clinic Medical Center, P.C., Petoskey, Michigan
Client: Little Traverse Hospital Association, Inc.
Architects: James Falick/Klein Partnership, Houston
Project Description: In 1973, a joint clinic-hospital planning committee developed a plan for the expansion of the Burns Clinic Medical Center and the Little Traverse Hospital Association into a Comprehensive Regional Secondary Care Medical Facility. Today the Hospital and Burns Clinic is in the middle of a building program to respond to those goals by redeveloping the hospital's dual facilities. The initial bed capacity will be 250 beds with provisions for future expansion to 400, and clinic facilities will be expanded to accommodate 73 physicians. Major diagnostic and treatment facilities included in the expansion are: radiation therapy, nuclear medicine, radiology, endoscopy, surgery, pathology and morgue-autopsy. The estimated completion date for the hospital is July, 1978, with the clinic to be completed in June.



Project: Texas Tech Regional Academic Health Center, El Paso
Client: Texas Tech University School of Medicine
Architects: Harwood K. Smith and Partners, Dallas, and Davis Associates, El Paso (Associated Architects)
Project Description: One of several satellite "outreach centers" under development as part of the School of Medicine's regionalized health care plan, the El Paso center is designed to take health care services to the people who need them. The design problem for the facility was to develop a structure which provided a balance of education, research and patient-care activities and which could expand in incremental stages as additional construction funds became available. The partially completed building was designed as an adjunct to the R. E. Thompson General Hospital and is being constructed in three ongoing phases.

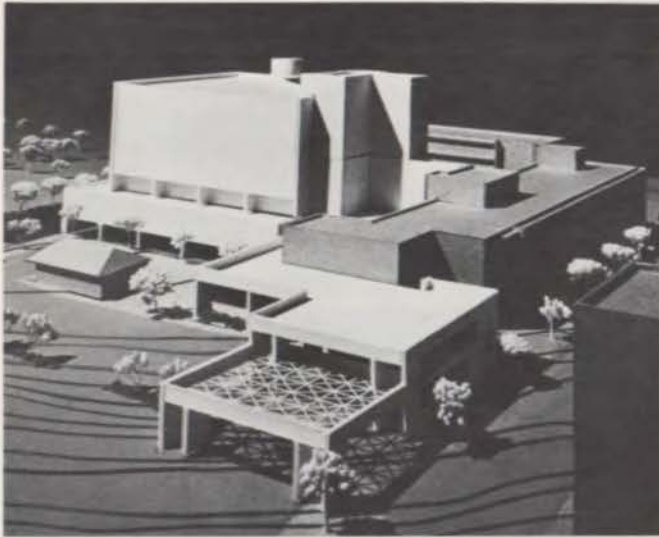
To support a specialty emphasis on surgery, medicine, obstetrics, gynecology, pediatrics, psychiatry and family practice, a series of patient clusters are linked with research laboratories and student teaching facilities in a two-story building, zone-constructed for flexibility in space assignment.



Project: Shannon West Texas Memorial Hospital,
San Angelo
Client: Shannon West Texas Memorial Hospital
Architects: Page Southerland Page, Austin
Project Description: After further expansion of the existing hospital proved unfeasible, an entirely new 258,000 sq. ft. facility was designed, the ancillary portion of which is geared toward extensive outpatient services and also contains 207 single-occupancy rooms. The project is scheduled to be completed in December, 1978.



Project: Electra Memorial Hospital, Electra, Texas
Client: Electra Hospital District
Architects: Charles Harper Associates, Wichita Falls
Project Description: The plan was to design a community hospital for a city of 3,500 persons to replace an outdated facility, the new building to provide the ancillary area for 75 beds, with 25 beds in the initial phase. The solution was to group all spaces around an interior courtyard so that they could be added to or enlarged when the need arose. The building is concrete frame with prestressed concrete tee roof, making for a low overall cost. This is the first hospital to obtain State Health Department approval to allow the "scrub areas" to serve both surgery and delivery rooms.



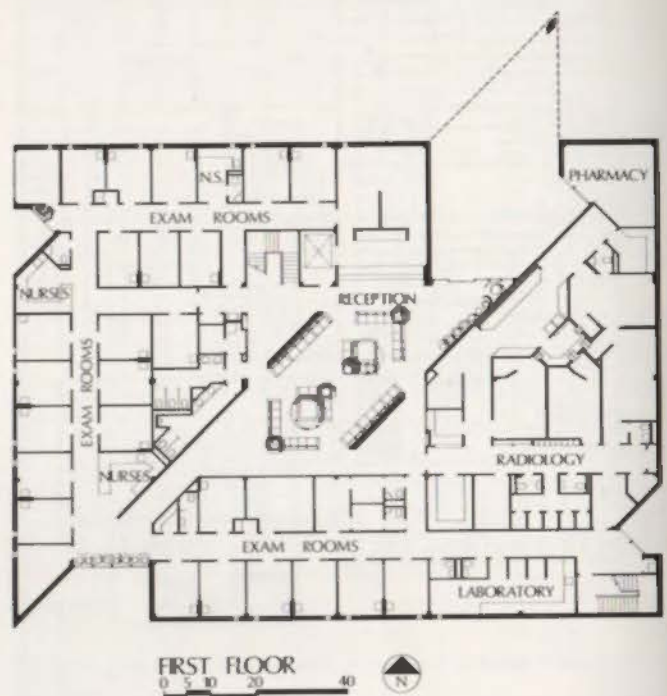
Project: Fort Worth Osteopathic Hospital, Fort Worth
Client: Fort Worth Osteopathic Hospital, Inc.

Architects: Golemon and Rolfe, Houston

Project Description: Sixty thousand square feet of new construction and 30,000 square feet of major remodeling mark Phase I of the project, which will include the addition of new diagnostic and treatment facilities, such as emergency, outpatient, radiology, surgery and recovery, as well as business offices and a cafeteria. Renovation is planned for the lab, storage areas, pharmacy, "central sterile" and kitchen.

Phase II additions include a 144-bed nursing tower connected to the existing building on all levels. Provision has been made for future expansion both horizontally and vertically, which should offer minimum interference with on-going hospital operations and will not require further renovation of existing spaces.

Photo by Rick Gardner



Project: Kelsey-Seybold West Suburban Medical Center, Houston

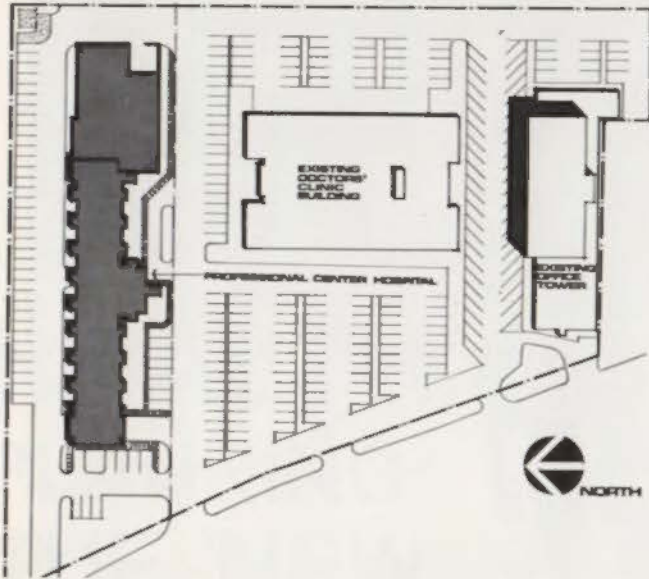
Client: Kelsey-Seybold Leasehold, Inc.

Architects: Wilson/Crain/Anderson/Reynolds, Houston

Project Description: To provide convenient, diversified health services for its suburban clientele, the Kelsey-Seybold clinic established this West Houston branch which consolidated facilities of two branches previously located in the area. Completed last April, the two-story structure contains a fully occupied 13,875 sq. ft. first floor and a partially occupied, unfinished second floor of 13,035 square feet, designed for future expansion.

The clinic opens into an irregularly shaped two-story reception court which is sky-lighted and landscaped. Corridors branch away from this central reception area, leading to medical and service facilities located along the perimeter of the building.

The project, on a three-acre partially wooded site, was positioned to accommodate lateral expansion and to retain as much of the natural landscape as possible.



Project: Professional Center Hospital, Irving

Client: Charles Remy Tabor

Architects: Pfluger-Polkinghorn, Austin

Project Description: Rather than expand and renovate the existing Doctor's Clinic, which was initially designed as a limited medical facility and not a complete hospital, the decision was made to build an all-new 50-bed proprietary hospital north of the existing facility, designed to provide easy access from outpatient areas to the clinic.

Scheduled for completion in May 1978, the new building will be an autonomous unit, complete with administrative offices, four operating rooms, a radiology lab and nuclear medicine, dietary and physical therapy facilities.

One problem encountered during the design phase was north-south exposure of the finished building to the sun, due to the necessarily narrow dimensions of the building site. The solution was to use overhangs on the north and south sides of the building to cast shadows over the windows. Other design problems included city code restrictions, which required the distance from the building to adjacent residential property lines to the north to be twice the height of the building and that a minimum of 150 feet lie between the nearest residence and mechanical equipment with a five or more horsepower motor.



Project: Brackenridge Hospital, Austin

Client: City of Austin

Architects: Joint venture between Barnes Landes Goodman Youngblood and Page Southerland Page, Austin

Project Description: The plan consists of the phased replacement and development of a 490-bed, expandable to 650-bed, acute and specialty care medical center. The development program consists of five separate phases of construction and has been financed by city, state and federal funds. Completion is estimated for early 1978.

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The author conducts a planning session.



HEALTH PLANNING: THE NEW IMPERATIVE

By Robert Douglass

Health planning equals money—money the public can spend or save on health care, and money that a hospital might or might not invest in capital improvements. There is no limit on the dollars that could be spent on health care, and no scientific method for measuring when to stop. Ultimately, health is a matter of public policy—how much health care the public, or its representatives, are willing to pay for.

Today's health planning also equals community. Government policy calls upon the hospital to set itself properly in the context of the total community's health needs and resources. Any proposed capital expense must not only be feasible, but must avoid unnecessary duplication of capabilities offered by other sources.

The key to successful health planning, then, is to identify an *appropriate* workable level of commitment to the community, and balance this against the hospital's resources and financial needs. This isn't easy, since the hospital is clearly caught in a bind: public demand for better health care and facilities vs. governmental measures to control expenses which inflate health care costs.

In fact, the hospital might be penalized for trying to update services and facilities. The Carter administration bills (H.R. 6575 and S. 1391) propose a "cap" on hospital revenue, limiting increases in operating income to a maximum of 9%. Exceptions to this limit would be granted only for major increases in patient load or for major capital increases and if asset/liability ratio is acceptable. However, capital expendi-

tures are also controlled. A hospital whose expenses are probably increasing 12 to 15 percent a year will find it difficult to hold the line against obsolescence and rising costs under this legislation. Adding to the hospital's frustration, most of these "hold the line" expenses will not expand programs, increase capability or significantly improve patient care. They will simply satisfy requirements that are products of an attitude and environment which has changed since most hospitals were built.

A key element in this cost containment proposal is that it operates in support of certificate of need review. The effect is that if hospitals do expand their facilities they may not be certain of being reimbursed for the debt expense if it exceeds the revenue ceiling. The entire issue must be carefully explored by hospitals preparing for a building or expansion program.

Administrators, architects, hospital consultants and all who work with hospital facility development will be forced to maneuver through this complex maze of hospital needs, pressures and outside demands if their building proposals are to become reality. Nor can they be content to do nothing, since certificate of need health planning has been required

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EXISTING FACILITY



REPLACEMENT OPTION 1



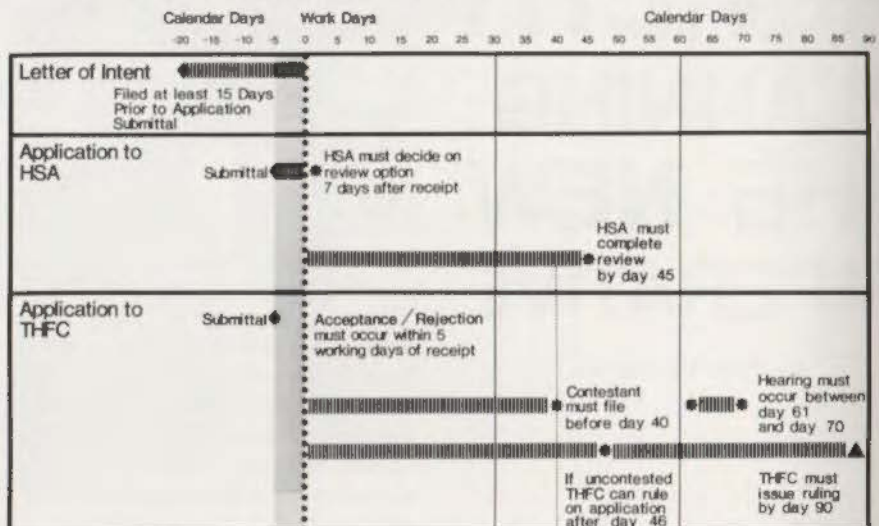
ABOVE: Series of photos illustrates alternative scenarios approach to hospital planning.

by law in Texas since May 1975. Until then, Texas hospitals could comply or not with the recommendations of planning agencies established in the '60's. But now they must cooperate with the Texas Health Facilities Commission, which reviews and passes on certificate of need requests, and with local Health Service Agencies (HSAs) designated by HEW.

Certificate of need is essential to the accomplishment of any major facilities project. The review process examines the relationship of the proposed project to the Health Systems Plan and Implementation Plan for the entire HSA area, and, specifically, need for the project, availability of resources and alternatives, feasibility, and impact on future health care costs. The application/review process takes approximately 90 days and requires submission of project justification, existing and new facility information, service and hospital utilization data, manpower requirements, and community, financial and construction information. In addition, the planning agencies may require the hospitals to submit a long-range plan to see whether it is consistent with the proposed expenditure and with the Area Health Plan.

The gathering of this data and the preparation of a well-defined, effective certificate of need application is a complex job, yet it is essential to any further consideration of facilities projects. For this reason it is vital that the hospital call on an experienced inside planning

Certificate of Need Calendar



team and/or appropriate consultants for guidance.

However, health planning can be more than a way of fulfilling requirements. Sound planning may, in fact, be the best option the hospital has to survive, and can provide these additional benefits:

- cost containment opportunities, management-by-objective targets and review mechanisms
- management information base for performance assessment
- tools to update and test plans and monitor growth
- guidelines for implementing immediate and short-term improvements, including construction projects
- knowledge of service community for

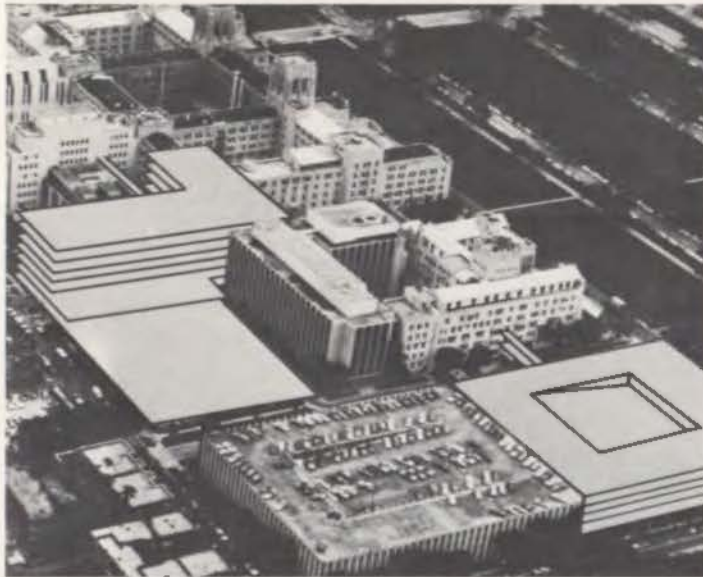
dynamic marketing strategy

- informed participation of trustees, staff and personnel

There are problems, of course, with any kind of planning, whether compulsory or voluntary. Often both hospitals and HSAs lack a reliable information base. Data is selective and limited, and much of the necessary documentation of need relies on future projections which are uncertain and subject to change. Conclusions drawn from such data are open to interpretation; moreover, it is difficult to apply standard comparisons and rules-of-thumb, since there is variation in attitude and need not only from hospital to hospital, but within individual hospitals themselves.

To successfully negotiate this com-

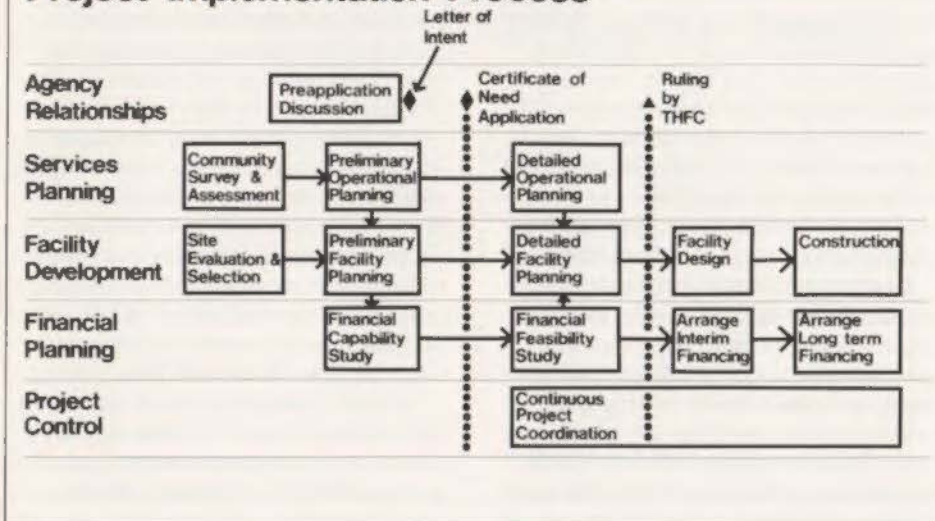
REPLACEMENT OPTION 2



RENOVATION



Project Implementation Process



plicated planning path and work effectively, the hospital should:

- establish a reliable, up-to-date information base, including a plan file of documents related to the hospital's physical history
- develop an appropriate planning team and add members as soon as they are needed—architects at the program planning stage, financial advisors for pre-certificate of need, and hospital consultants to bridge the gap between conceptual planning and design
- develop an ongoing relationship with regulatory agencies, keeping abreast of policy and developments in the community
- use "alternative scenarios" to examine possible responses to the variety of regu-

latory and market environments in which the hospital might be called to function.

Alternative scenarios can serve as a basis for a long-range plan, a document which includes analysis of a hospital's patient community, use, workload, resources, services, programs and facilities, as well as projections of need, new programs, proposed facilities, and priorities for development. The "services program"—a description of the hospital's services, projected workload and manpower estimates, plus an indication of feasibility—is that part of the plan which forms the basis for functional and space programming. The actual "facilities conceptual plan" follows these preliminary assessments. In the planning of

hospitals, program and facilities development are closely linked; a knowledge of one is indispensable to the other.

The functional and space program defines the processes, organization, methods and requirements for each of the hospital's services, and translates these into space and environmental requirements. The "facilities conceptual plan" examines the feasibility of capital projects, and includes general plans for site use, use of existing facilities, new construction, logistics and service systems, building technology, renovation, and pervasive organizational patterns. Since a hospital's operating costs are far greater than those of construction, it must give special consideration to operational implications of any proposed plan.

The "facilities conceptual plan" preceding design development is thus a many-faceted product which integrates building issues with non-facilities factors. If design is to be effective, this kind of complex health planning must precede it. And since health planning is now compulsory, all members of the hospital facilities development team—including the architect and builder—must deal with it. Fortunately, they do not need to work alone; administrators, hospital consultants and others can provide knowledge and guidance. Together they can participate in careful, organized planning which seriously considers feasibility and need, and which can enhance the possibility that facility development proposals will gain regulatory agency approval and become reality for the benefit of the community's health.

HEALTH CARE: PAYING THE PRICE

THE PUSH TOWARD COST CONTAINMENT

BY JASON W. FRYE

Health care is one of our most highly regulated industries. Since the 1940s, there have been many bills directly affecting health facility construction. For roughly 20 years, most legislation was intended to stimulate the building of hospitals in the face of a post-war shortage and a rapidly rising population. For the past seven years, however, the trend has been to reduce the number of new facilities built each year, and to contain health care expenditures.

This country is experiencing inflation in excess of eight percent annually, and much higher rates in critical areas such as single family housing (12 percent), and fuel costs (over 25 percent). The inflation in hospital-based health care for an average hospital stay is over 28 percent per year based on an average for the years 1965-1975. Though there is no comparison in the quality of care in 1975 vs. 1965, this rate of inflation is certainly worthy of concern.

Pending Legislation

Several bills addressing this concern now are before Congress. Sponsors include Senators Edward Kennedy and Richard Schweiker and Representatives Paul Rogers, Dan Rostenkowski and Tim Carter. While the final form of legislation is not yet settled, it is virtually certain that some form of cost containment legislation will be passed. It is also equally certain that the legislation will

contain regulations of capital expenditures for construction. A national moratorium on hospital construction is even being considered, and several states have legislated construction moratoriums already.

Uncertainty about legislation and other governmental actions will delay planning and construction nearly as much as a moratorium. Prior to a bill's passing there is a period of uncertainty; then, when the bill is passed, there is a period of uncertainty about how it will be interpreted and applied. Only after health care institutions have become accustomed to the legislation, and learn how it is to be interpreted, can planning resume with any degree of certainty.

Medicare/Medicaid made hospital care accessible to more people, and future national insurance programs will have the same effect. We will not be able to accommodate these programs unless there is a trend toward other forms of delivering health care. Current emphasis is on decreased utilization of inpatient facilities and more frequent use of ambulatory care. Yet, the hospital is still the center of health care activities. The use of diagnostic and treatment facilities has not decreased, though outpatient visits to hospitals have increased dramatically. The problem is that most of our existing hospitals are not designed for efficient delivery of ambulatory care. Often, the diagnostic and treatment facilities are buried deep within the hospital, generally inaccessible to outpatients. There is a need, then, for renovation in many existing hospitals. This is but one health facility need that should not be ignored.

It is a fact that there are empty beds in many hospitals far in excess of actual need, even considering bed reserves for peak periods of use. And many hospitals offer services that are underutilized.

But other hospitals have a real need for beds and services. Many hospitals do not meet current codes and standards; others are functionally obsolete and below efficiency of operations due to the physical plant.

True cost containment deals with total cost and the resultant cost of patient care. Population movement, or obsolescence of buildings due to functional changes, new technology or codes and regulations call for capital expenditures. In these instances, a moratorium will simply defer cost to a later time. In an inflationary economy, this means paying a higher cost later, which is the reverse of cost containment. It is hoped that construction programs resulting in a proven reduction of operations cost will be allowed to go forward, as well as projects designed to provide essential services.

The Architect's Role

In those health facilities which do get off the ground, cost containment will be critical. Here are several ways in which architects will be involved in keeping costs down:

- Whether in existing facilities or new construction, architects must produce innovative planning solutions which yield an appropriate facility/operations fit. Improvement of operations efficiency can result in cost containment and minimal construction.
- Life Cycle Costing has become a major ingredient in health facility planning and the design professions will be made accountable for projects which are inefficient over the life of the building. Yet, while construction accounts for only about four percent of the total life cycle cost, savings are important in this area, too. Design, material and systems decisions therefore must be made in light of both initial and life cycle costs, particularly with regard to energy conservation.

- We already have project delivery methods which reduce costs of construction and financing in inflationary periods because of more rapid delivery of the facility. We must also attempt to build in flexibility and adaptability so that facilities last longer and accommodate new uses more readily.
- Design professions can be of assistance in creating new uses for areas of health facilities currently providing unneeded services. Closing unnecessary patient beds will not reduce costs in significant amounts unless new uses can be found for the vacated areas, which still are being maintained and paid for whether occupied or not.
- Architects should have input in the drafting of codes, standards, regulations and laws affecting health facility design, many of which are very costly to comply with and do not stand up well under cost/benefit analysis.

Our hospitals are a major resource to our communities. The quality of care they provide is excellent, and that results from the efforts of many. The challenge for today's design professions in the next decade is to contribute to the effort of containing costs while preserving the quality of care and the financial integrity of our health care system.



Jason W. Frye is director of health facilities design and a general partner in the Houston firm of Golemon & Rolfe, Architects. He is the 1978 chairman

of the Committee on Architecture for Health of the American Institute of Architects.

MORE ON GOVERNMENT CONTROL

BY JOSEPH G. SPRAGUE

Over the past several years the health facility field has experienced unprecedented growth leading to improvement of the total health care system. We now are experiencing a slowdown. What has happened to change things? Our most formidable impediment is the ever-expanding maze of governmental regulation which must be negotiated as progress is made.

The government has changed its posture from continually increasing the sources needed to support rapid growth in medical technology and expanded health care access to a posture of proposed caps on revenue, limits on construction, certificates of need, and a general fear of having overloaded the system, wasting and duplicating limited health resources. The underlying reason behind this evolving posture is the rising cost of health care, perceived by the public as ever-increasing with no end in sight.

On the one hand, government is increasing its requirements for regulation of care while on the other it is telling the hospital to contain cost. In February of this year, the General Accounting Office reported that the Department of Health, Education, and Welfare issued nearly 600 proposed or final health-related regulations during fiscal year 1976. Many of these deal with the built environment—the health facility. Hos-

pitals simply cannot continue to implement every proposed rule and regulation change without affecting the cost of care to the patient. The nation's hospitals are being caught in a "regulation/inflation" squeeze, with several topical issues coming into play.

Codes and Standards

With increased regulations concerning quality of the built environment has come an explosion of code requirement changes. The most active code writing organization that publishes consensus voluntary standards is the National Fire Protection Association (NFPA). Two of the most widely recognized standards recently have been reissued—NFPA101, the Life Safety Code, and NFPA70, the National Electrical Code. These two standards are adopted by more jurisdictional authorities than any others—the Life Safety Code 1973 edition being referenced directly by both Medicare and the Joint Commission on Accreditation of Hospitals (JCAH), and the National Electrical Code being referenced by most state and local authorities as a condition of approval for licensure.

Referencing these standards is not a problem in itself. What does pose a problem, however, is the retroactive application of new requirements to existing buildings or the overzealous application of existing requirements. Also problematic is the duplication of surveys by different jurisdictional agencies. On average, most hospitals of any size are given the once-over with a close look at the physical environment from some survey authority on a weekly basis.

Accessibility by the Handicapped

The Rehabilitation Act of 1973 has placed a number of costly requirements on the existing health facility. Hospitals subject to the 504 regulations on non-discrimination against the handicapped are faced with several compliance dead-

“IF THE GOVERNMENT TAKES THE POSITION THAT HOSPITALS SHOULD BECOME EVEN MORE ACCESSIBLE, THEN IT SHOULD PRO- VIDE THE RESOURCES . . .”

lines. There is little argument against the spirit and intent of these regulations. Indeed, many hospitals have for years provided accessible facilities for the handicapped. Yet, any random or aggressive application of these new provisions will place severe restraints on hospitals both structurally and operationally if retroactively applied.

If the government takes the position that hospitals should become even more accessible, then it should provide the resources to achieve this goal. To make all buildings accessible—while being ideally possible—is not reasonable in terms of the relative dollar value available to hospitals today for conforming to updated standards.

Medicare: Conditions of Participation

The first substantial revision of Medicare's conditions of participation since 1966 are expected to be proposed soon by the Department of Health, Education, and Welfare. Any hospital would be required to conform to these requirements or possibly lose its Medicare funds. Among the major changes being considered are: (1) requirements for written hospital organization plans; (2) a limit of four patients per room; (3) accessibility for the handicapped; (4) disaster planning, including semiannual disaster drills, and (5) changes in emergency electrical power systems and operating room design.

Part of the problem in these revisions is the fact that the standards being referenced—such as 76A 1973 and 56A 1973—are currently themselves being substantially revised. An across-the-board reference to these standards, without considering the current state of the art of design, would be a costly mistake requiring changes not currently thought to be needed from a safety benefit basis. It is easy enough, for example, to limit the number of patients per room for new

construction in many areas, but to retroactively make this a requirement would have a tremendous impact, particularly on urban public-general, acute-care hospitals. And more importantly, it is the opinion of many that the multiple-patient room configuration does provide additional therapeutic value in patient care. The revision of older requirements with newer standards is an acceptable way of advancing the state of the art. The retroactive application and misuse of the standards' intent, however, is clearly a mistake.

Certificate of Need

The concept of area-wide health facility planning, utilizing regionalization and shared services concepts, has been accepted for some time. Certification that a capital project responds to a need being identified by this planning process is also appropriate. The problem comes, however, in the varied criteria for establishing need and how projects should be reviewed to determine their eligibility for a certificate. Commendably, the certificate of need concept fosters the notion that unneeded construction should be avoided. It can be counterproductive, however, by disallowing needed hospital modernization, renovation, equipment, or new construction. For example, the timetable for project review in the certificate of need process can be a serious problem. The Health Service Agency and state department of health review often takes six to eight months. In times of rapid escalation in construction costs, this delay can escalate job cost beyond the range of feasibility. If it takes six months to review a \$5 million construction project, for example, the total cost would increase more than \$300,000 based upon a one percent per month escalation. This unwarranted delay—which can often equal the architect's fee—is ac-

tually detrimental to better health care.

Regardless of the health planning, design and construction issues confronting hospitals in these frustrating times, the ultimate sift for all regulation, legislation and demand placed on the built environment is the architect. This reality makes essential a continually vigorous interaction between the health and architectural professions.



Joe Sprague is Director, Design and Construction, Department of Health Facilities and Standards, American Hospital Association, Chicago.

Editor's note: In the fall of 1976, TSA's Committee on Architecture for Health published "A Guide to Agencies and Codes for Health Facilities in Texas," a 13-page booklet still available from the TSA office, 2121 Austin National Bank Tower, Austin 78701. The committee compiled the booklet both for architects and clients who must understand and comply with health facility regulations. Of particular interest is the booklet's summary of procedures for agency review and approval.

MANAGING TO MANAGE ENERGY

BY ROBERT F. ZELSMAN

In the wake of the energy crunch, energy management is an important consideration in any architectural project. But, in view of the current special emphasis on cost containment and life cycle costing, it is particularly critical for health facilities.

The term energy management means many things to many people. This discussion will be confined to the use of energy as it applies to the heating-ventilating-air conditioning industry and the steps currently being taken to make the maximum use of our available energy.

The practice of conserving energy is not new to most professional HVAC engineers. However, the overriding consideration in many cases has been the initial cost of such systems. Since the recognition of the energy shortage, much more attention is now being given to designing systems that are more energy-efficient, although the initial cost is usually higher than that of some previously designed systems.

In February of 1974, the American Society of Heating, Refrigeration and Air Conditioning Engineers undertook a project to establish the design criteria for the conservation of energy in new buildings. The final document was approved on July 23, 1975 and published as ASHRAE Standard 90-75 with the title "Energy Conservation in New Building

Design." This standard has met with opposition from various sources and, although it is not the ultimate answer to energy conservation, it is a giant step forward in energy conservation in new building design.

Retrofitting

Along with the design of new buildings that are more energy-efficient, one of the biggest challenges to the HVAC engineer is the retrofitting of existing buildings to use less energy. (Formerly, the low cost of energy did not require a critical look at operating cost, but now it is crucial, and the HVAC engineer has to share at least some of the blame for lack of foresight in the design of existing HVAC systems.) Retrofitting existing structures takes many avenues. The first steps come in providing better thermal insulation, reducing the amount of exterior glass, providing double glazing, providing sun-screening of glass and walls, reducing interior lighting where possible, reducing intake of outside air, raising the temperature setting of thermostats in the summer, lowering thermostat settings in the winter, shutting off HVAC systems in periods of non-use hours, and cycling the fans and air conditioning equipment during use hours, where possible.

Tremendous savings of energy are being accomplished through the use of computerized control systems utilizing solid state controls adapted from miniature systems developed by the aerospace industry. Many temperature control manufacturers have formed entirely new divisions under the heading of "energy management systems," or like terms, which make use of computers, electronic circuits and other devices to automatically determine when the various functions mentioned above can be accomplished, e.g., how to re-program systems to automatically shut off electric

"TREMENDOUS SAVINGS OF ENERGY ARE BEING ACCOMPLISHED THROUGH USE OF COMPUTERIZED CONTROL SYSTEMS."

loads, without greatly affecting comfort conditions within the various spaces.

Many governmental agencies have employed registered professional engineers to investigate systems using alternate energy sources. Several engineering firms are devoting most if not full time to this pursuit. As an example, the Veterans Administration has employed engineering firms from various geographical locations in the United States to determine what sources of energy other than natural gas and number 2 fuel oil can be used to generate steam for their hospitals. These engineers have been asked to study the possibility of using energy sources such as coal, coal slurry, geo-thermal energy, solar energy, solid waste and other sources which are readily available in the area of the hospitals under consideration. When these reports are finalized, they will be compiled and some definitive regulations will be issued by the Veterans Administration regarding design of their boiler replacement projects. This is just one example of what is being done nationally to conserve our dwindling supply of natural gas.

High Priority User

We can hardly pick up a newspaper or technical publication without finding at least one article concerning energy conservation, developments in solar energy, or power generation by use of nuclear energy, coal or some source other than natural gas. In visiting with officials of natural gas producing and distributing companies, we find they have set up a priority system to determine distribution of dwindling supplies. In this regard, the terms "high-priority user" and "low priority user" have come into general usage. Generally speaking, the high priority user has come to be defined as the user of natural gas in small quantities and where the curtailment of

natural gas will endanger life, health and the maintenance of physical property. We take this to mean that hospitals will be high priority users. It also indicates that power generation will be one of the first areas in which natural gas as a fuel will be eliminated.

In summary, the HVAC engineer must make every effort possible to design energy-efficient HVAC systems. And health facility clients and architects must be willing to accept higher initial costs for such systems, assured that first costs can be recovered through energy savings in a relatively short while. In short, they must all work together in providing buildings which are as energy-efficient as possible, without compromising the comfort conditions so critical in architecture for health.



Robert F. Zelsman is a partner and shareholder in the Austin firm of O'Connell, Probst, Zelsman & Grobe, Inc. He is a registered professional

engineer and a member of the American Society of Mechanical Engineers and the American Society of Heating, Refrigeration and Air Conditioning Engineers.

THE MANDATE TO RENOVATE

BY JIM EASTER

In view of the current rate of inflation and the government's efforts to contain health care costs, architects must face the reality that a prime consideration in health facility planning today is getting the most functional area possible for the money available. To that end, an assessment of existing facilities should reveal several alternatives to new construction:

- Renovation and modernization of existing facilities.
- Relocation of certain services to leased space.
- Downgrading of existing facilities which do not conform to codes for housing "soft," low technology functions, while limiting capital expansion to highly technological diagnostic and treatment functions.
- Utilization of available space for alternate functions. For example: parking structures for building support, low priority storage areas for medical records, general office space for medical offices, etc.
- Sharing of facilities within the health care community to consolidate and improve efficiency of operation in functions such as storage, medical records, labs, etc.
- Instituting alternatives to get patients out of the hospital. For example: improved ambulatory care programs in the community adjacent to the hospital.

Some of these options are being implemented by the James Falick/Klein

Partnership Health Facility Group in its program for the Texas Medical Center. As architects and planning consultants to the Harris County Hospital District (HCHD) for the Ben Taub General Hospital, the firm is working with the District and the Baylor College of Medicine Medical staff to better utilize the existing Ben Taub facilities. The planning group is further challenged to respond to the HCHD goals and objectives for continued comprehensive medical facilities and programs which include Ben Taub, Jefferson Davis and the outlying neighborhood health centers.

Renovation of the existing facilities at Ben Taub will occur on an incremental basis over a five-year and beyond long-range planning program. To accommodate additional space needs and allow for renovation programs, the firm is investigating other locations of functions outside the facility, as well as the relocation of services (such as ambulatory care) to the community. The relocation of these services will relieve overcrowded space within the existing facility and permit expansion of support functions, as well as incremental renovation and expansion of diagnostic and treatment facilities.

The challenges resulting from changing and expanding programs at Ben Taub are easier to reconcile than at most institutions constructed in the late 1950s to early 1960s. Although the need for space at Ben Taub will always exist, the planning is made simpler through past programs that structurally planned for future expansion. The hospital, clinic and parking structure were designed to expand vertically; the architects now are capitalizing on these programs to gain maximum utilization of the existing structures.

Another case-in-point is the Little

“MORE AND MORE HOSPITALS WILL FIND THEIR GROWTH LIMITED TO INCREMENTAL EXPANSION WITH PROPORTIONAL RENOVATION AND UPDATE OF EXISTING FACILITIES.”

Traverse Hospital and Clinic in Michigan, where the architects were forced to relocate functions to permit needed hospital expansion within existing facilities. In that project,

- A grocery store became hospital stores.
- Community residences housed offices and support services.
- A comprehensive sharing program was developed with the other community hospital.
- Contiguous expansion, plus vertical expansion capabilities, were utilized for the clinic.
- New construction provided space for replacement beds and high technology diagnostic and treatment functions for the hospital.

More and more hospitals will find that, rather than plan for a major expansion program, their growth will be limited to incremental expansion with proportional renovation and update of existing facilities. It is recommended that to efficiently and economically respond to this concept, the health client should first develop a master plan that assesses the long-range need, evaluates and defines the capital improvement program, and illustrates the total picture. A “growth spine” for the institution can then be established, permitting the incremental expansion to occur in a logical, controlled and financially feasible manner. Specific planning and architectural considerations include:

- A planning module compatible with the new as well as existing elements.
- Circulation systems that are clearly defined and readily expandable.
- Provision for future vertical expansion needs, including elevators, stairs, mechanical support and structural systems.
- Assessment of fixed components including stairs, elevators, chases, etc. in

order not to impede future horizontal expansion.

- Interior space planning that allows maximum flexibility and interchangeability as services are expanded and relocated.

Also, an inherent aspect of any renovation program is the need to stay in operation with minimal disruption. Planning should therefore include a detailed analysis of the renovation phasing plan to permit maximum operational efficiency.

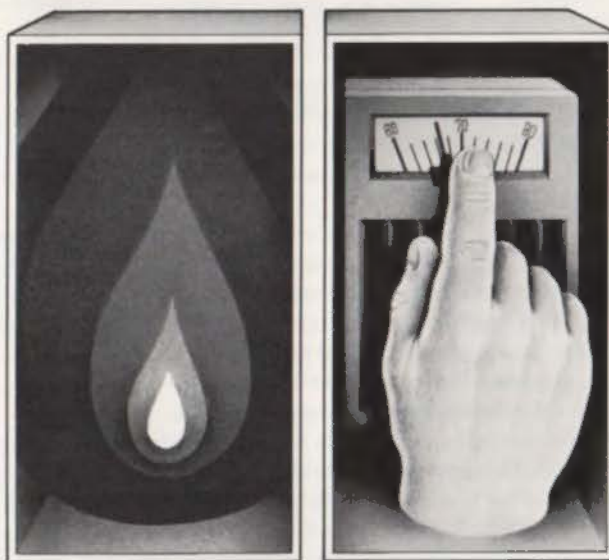
The above considerations are significant because the very future of the health facility architect is contingent upon the ability to respond to change and accept the challenges created by the current economic climate within the health industry. Indeed, renovation and creative use of existing facilities is not the most *desirable* approach to health planning. But often it is the *only* alternative.



Jim Easter is a planner/designer with the James Fack/Klein Partnership Health Facilities Group in Houston and chairman of the Health

Committee of TSA's Houston Chapter. He holds a master of architecture degree in environmental systems from Virginia Polytechnic Institute and received the AIA/AHA Graduate Fellowship for Hospital Design.

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Health needs of the developing countries are staggering. As a result, more and more frequently, foreign architects are called to developing nations for consultation. One problem has been that these experts often have recommended expensive facilities without first properly analyzing the *local* health problems and needs. In many cases these problems stem from poor nutrition, leading to mental retardation as well as other disorders. More often the water supply needs to be purified, or sewage and sanitary facilities deployed. In other cases, a simple vaccine is necessary and can be administered outdoors without any facility whatsoever. A simple, yet comprehensive rural or urban health center which can accommodate the following often can provide the greatest impact: general medicine, maternity service, pediatrics, surgery, communicable diseases, endemic diseases, TB and mental disorders, outpatient services, environmental and public health preventive medicine; occupational health, and health education programs.

The following are summaries of five typical exploratory health research and

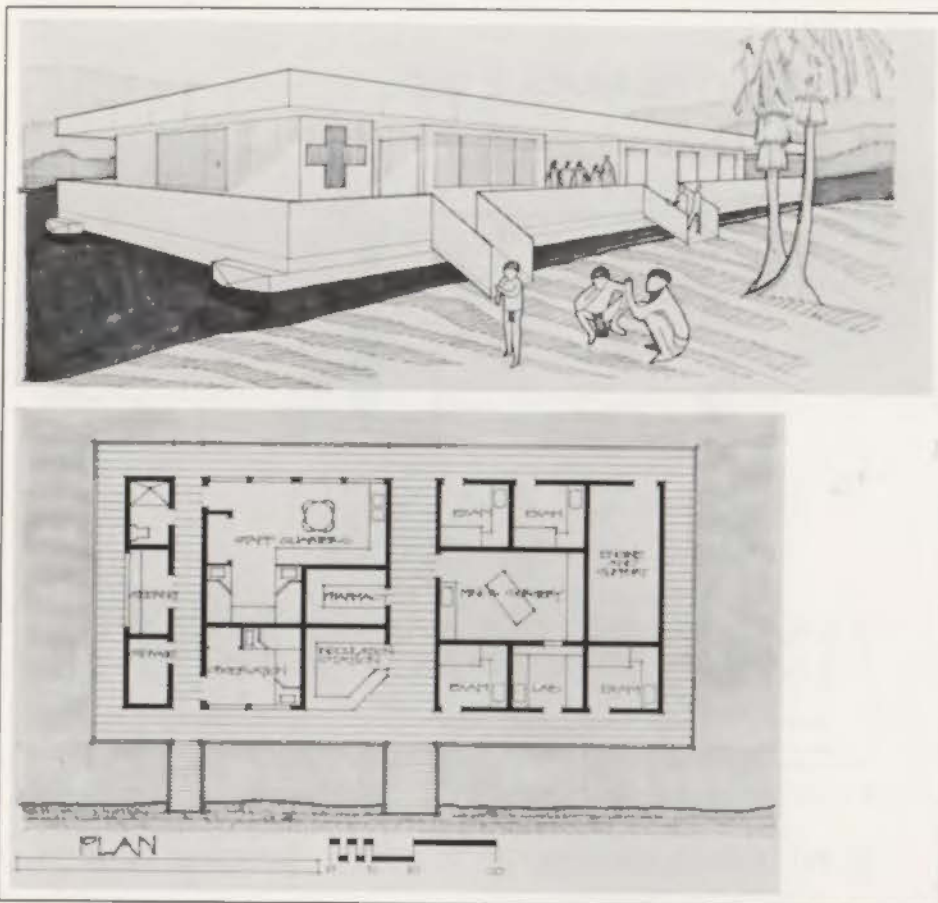
development projects undertaken by graduate students at Texas A&M University Research and Graduate Center. These projects were aimed at areas of greatest need both in the developing and developed countries.

The objective of the research was to relate an analysis of health problems and needs, in a selected geographic area, to architectural design that responds to those needs. Each professional selected an area and analyzed geography, culture, language, economy, transportation systems, political structure, and health problems and needs. This analysis then was synthesized into an architectural solution that was suitable and appropriate to the health issues in that particular geographic area, and that would realistically function within the selected cultural framework. Emphasis was placed on simple and economic solutions.

George Mann is an associate professor of architecture at Texas A&M. He acknowledges assistance and support from the following colleagues: Dean Raymond Reed; John O. Greer; David G. Woodcock; and Edward Romieniec, FAIA.

By George J. Mann

HEALTH RESEARCH: FOCUSING ON NEEDS



Un Barco Medico por Venezuela By Paul E. Klein

Venezuela's Orinoco River Valley, stretching some 1,600 miles across the interior, is inhabited by Yanomano Indians and Mestizos whose health care is either non-existent or comes from rural dispensaries located at infrequent intervals. The dispensaries have no permanent doctor on staff and must rely on the nearest rural health center for support.

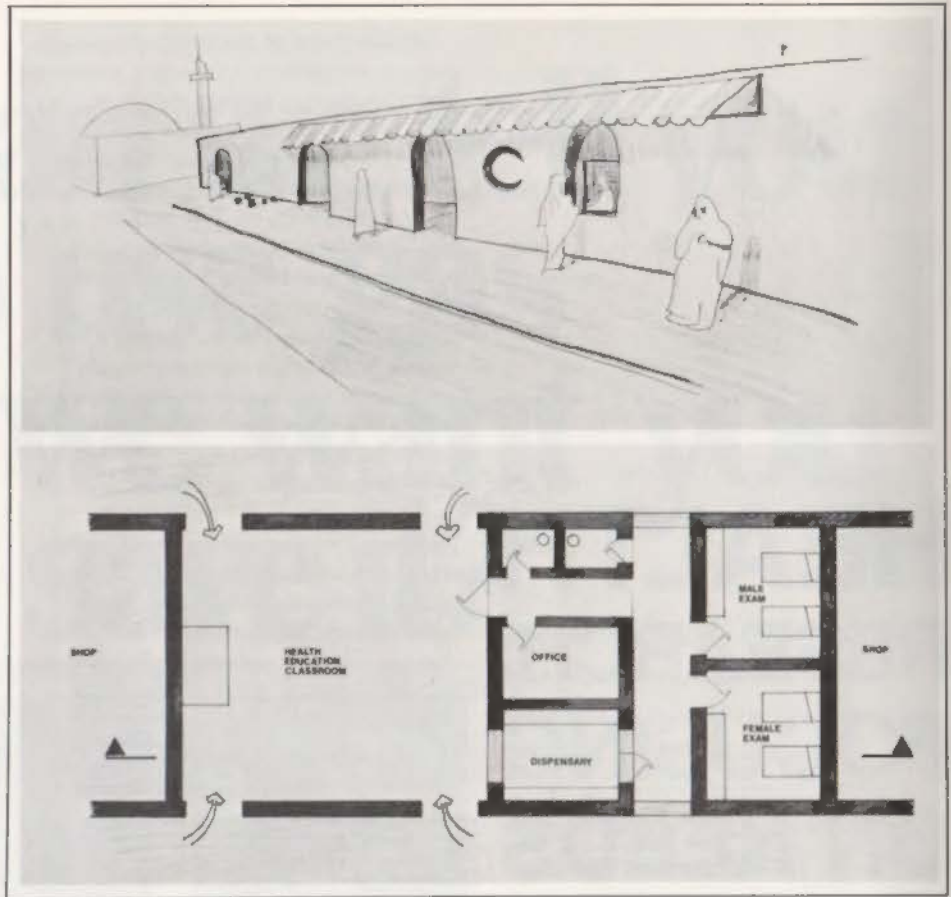
Klein's proposal is for a series of floating river clinics incorporating basic primary care with a focus on pediatrics, preventive inoculations for measles and influenza, health education, family planning, and a ferry service to secondary facilities for the critically ill. The project would be governmentally subsidized and staffed by rotation of students from Venezuela's medical and nursing schools located in Caracas.

**Rural Health Education Center,
Tunisia**

By Mark J. Probst

Fifty percent of the children born in Tunisia die before they reach one year of age, due largely to unsanitary sewage disposal conditions and a poor water supply. One health development project designed to help lower that percentage, proposed by Mark Probst, calls for the establishment of permanent health education centers in rural areas, complete with classroom, dispensary, office, outpatient examination rooms and a staff of one nurse and two assistants.

The centers would serve as extensions of regional and auxiliary hospitals, designed to diagnose and treat Tunisia's most common diseases—tuberculosis, hepatitis, syphilis and typhoid—and to educate the populace in the prevention of those diseases. In a country where the major mode of travel is by foot, the centers would be located strategically on heavily traveled streets to afford easy accessibility.

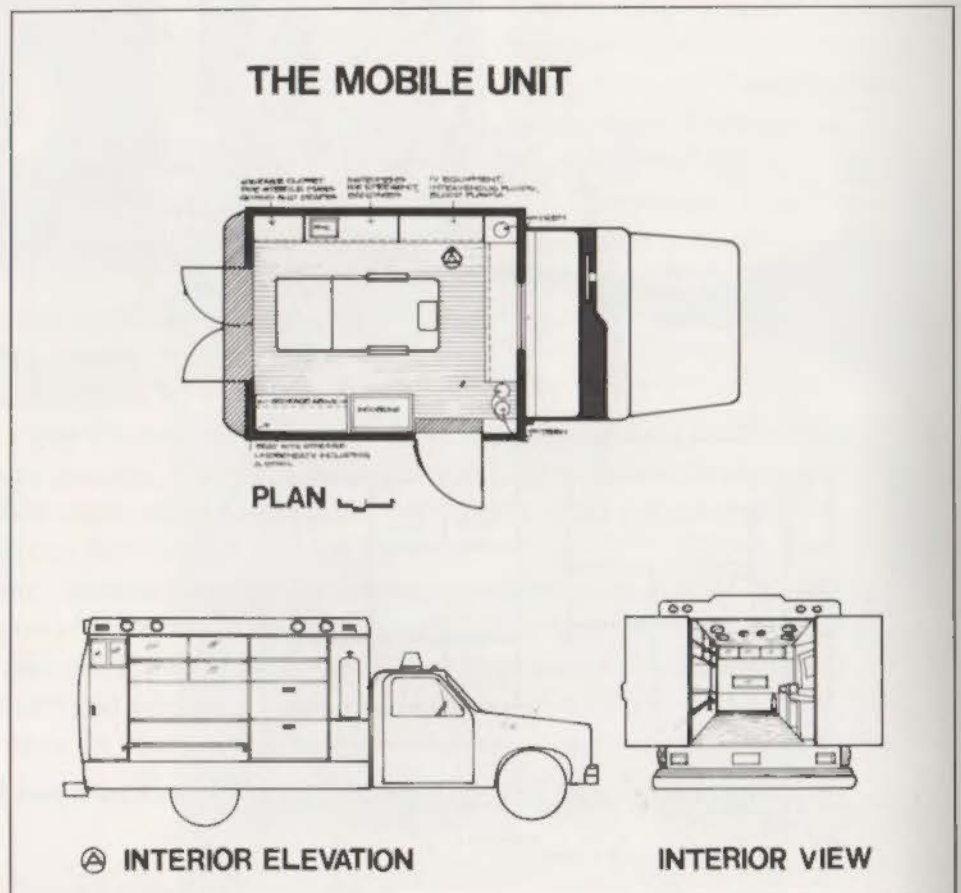


**Operation Delivery—Leon County,
Texas**

By C. Swanteson

Developing nations are not the only areas where health care needs are acute. One Texas A&M health and research project, in fact, focuses on an East Texas county midway between Dallas and Houston which is typical of many rural settings nationwide. Unable to attract competent health care personnel, rural areas often suffer higher rates of infant mortality and childhood disease and a generally lower quality of health than urban centers.

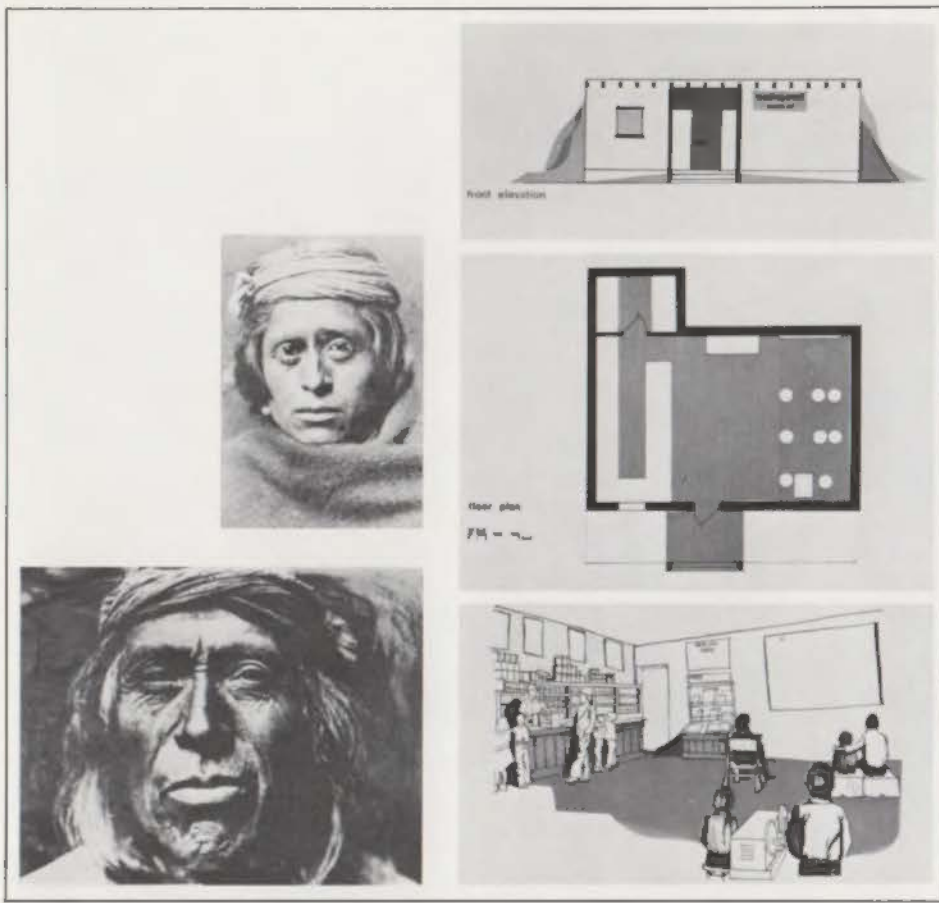
For Leon County, with a 100 percent rural population, an agricultural economy and a lower economic index than the state median, Swanteson has designed a mobile midwifery service to take health care to the mothers rather than the other way around. The program would provide pre- and post-natal education for expectant mothers, examinations at home, assistance with labor and delivery and a mobile delivery room staffed by a physician in case of emergency.



A Trading Post/Health Education Facility for Zuni, New Mexico
By Vicki Moen

Zuni, a reservation for some 6,000 Zuni Indians in northeastern New Mexico, is 40 miles from the nearest railroad and is most readily accessible by jeep. The Zuni, among the poorest Indians in the nation, are subsistence farmers who share a love of the land, a common language, and a deeply religious life. They live in harmony with nature, and even the young remain true to time-honored customs. Yet with prevalence of such health problems as infant and maternal mortality, tuberculosis and venereal disease, their existence is hardly idyllic.

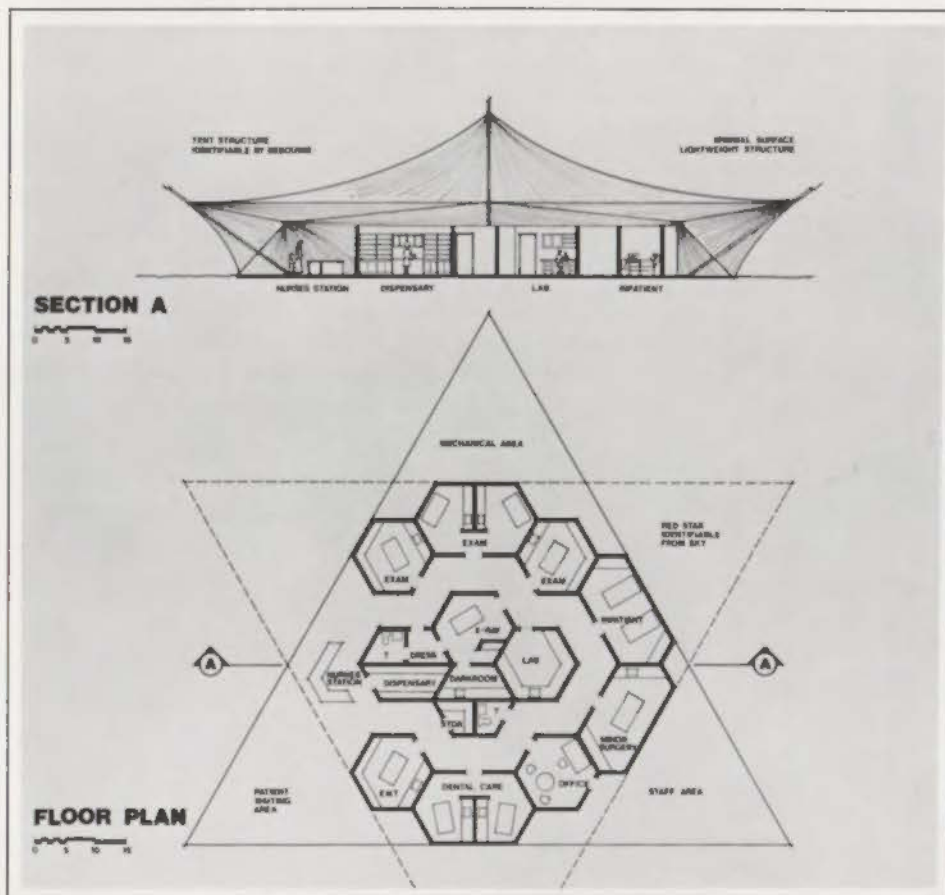
After analyzing Zuni health care needs, Vicki Moen proposed construction of a trading post/health education facility. Patrons of the store would be exposed to health information via brochures, displays and films which would counteract such problems as poor nutrition, unsanitary conditions and excessive exposure to animals and insects. The center easily could be staffed by one trained volunteer.



A Red Star Station for the Sinai
By Ron Baker

According to the World Health Organization, Israel's health problems are more administrative than medical. Urbanites and kibbutz settlers enjoy excellent health care, free of charge. But the nomadic bedouin tribes roaming the Negev and Sinai deserts receive little medical attention, suffering from diseases that often go undiagnosed.

To project Israel's efficient but not quite comprehensive health care programs outside of the settled areas and into the arid lands of the bedouin tribes, Ron Baker proposes setting up a tent-contained "red star" station in a Sinai community the wandering bedouins use as a home base. Lightweight and familiar to the nomads, the tents would be staffed by one physician, a physician's assistant, a dentist, two nurses and a lab and X-ray technician. Services would include physical examinations, dental care, immunizations and minor surgery.





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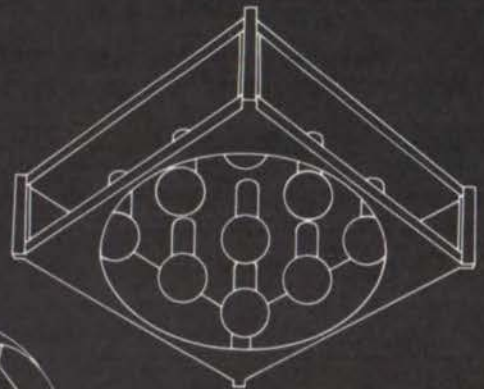
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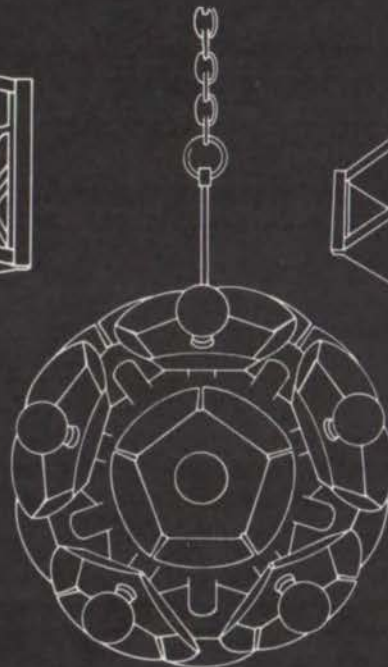
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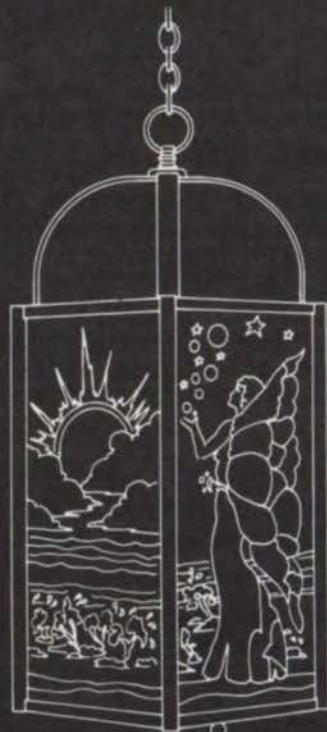
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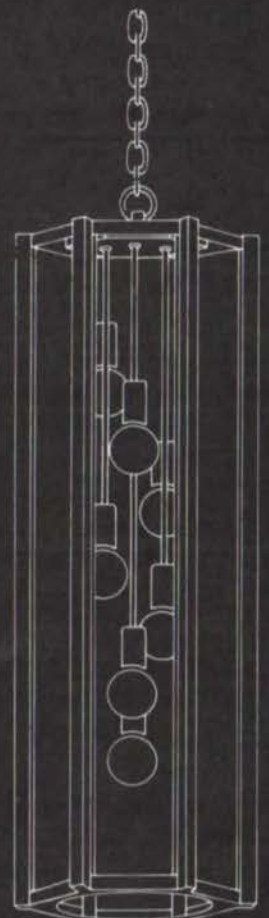
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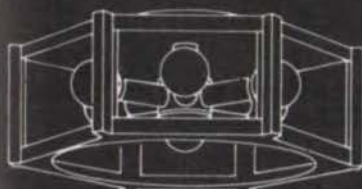
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MEDICAL CENTERS AND THE PLANNER'S ROLE

By H. Ralph Hawkins

“Various areas of interface between the city and the medical center stress the importance of cooperative planning between the two.”

Complexes of health-related institutions, including educational, patient care and research facilities, have developed within most major cities during the last century. Physical planners have been playing an increasing role in the transformation of these various health-related institutions from a nucleus of a few facilities into the complex interactive medical center. Growth and change in these centers have been rapid, due to a continually increasing expenditure of both private and public funds in the health industry. However, comprehensively planning for this growth and change over time has been difficult.

History

The medical center has developed primarily from the convergence of medical education and research with the patient care function of hospitals. Even today, the medical school is not only the impetus behind the center; it is also the nucleus. As interdependent education, research, and patient care facilities were located in the same area, interactions both symbiotic and parasitic developed, creating physical demands. These interactions primarily involved the movement of people, goods, and services among the various institutions. Interactions in the medical center were many times complicated by various public and private controls of the individual institutions. As the centers became more complex, so did the physical demands.

The typical physical development of medical centers can be characterized in identifiable cycles as described in the *Academic Medical Center Study* by Thomas E. Harvey, H. Ralph Hawkins, and William A. Porter, Rice University, Houston 1976. The *Embryonic Stage* is generally characterized by the positioning of two or three medical facilities—a medical school and one or two hospitals—in a dispersed pattern within the same general area. In this stage, there are usually few exchanges taking place between institutions (except in the case of a medical school and teaching hos-

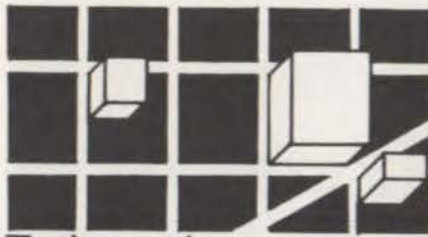
pital) and there is no defined medical center area or physical boundary.

The center begins to take shape through proximal growth of institutions in the *Formative Stage*. Major public and/or private hospitals are constructed in the general area, frequently along with medical schools. Some joint use of physical plant services begins through cooperative agreements, along with formal demarcation of the center's physical boundaries.

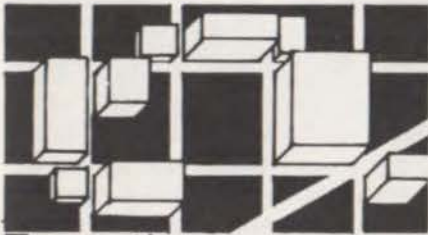
Both horizontal infill growth of institutions and major institutional expansion marks the *Maturative Stage* of medical center growth. The type and level of interactions being conducted among institutions in the center increases, resulting in limited physical connection of facilities. Central medical center organizations (collectively representing the majority of involved institutions) begin to emerge, serving continued growth within the center. Additionally, more specialized treatment facilities are constructed.

The *Internal Development Stage* of medical center evolution involves not only a great deal of vertical physical growth (due to scarce land resources) but also virtual replacement of outdated facilities in some centers. Major joint-use structures are built during this cycle to provide support services such as parking. Collective medical center bodies begin to respond to both internal and external issues. This stage is the current phase of development in many medical centers.

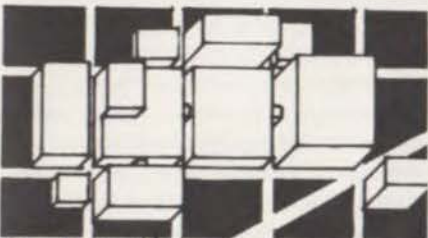
The cycle presently emerging is the *Outreach and Center Reinforcement Stage*, wherein basic decentralization of services occurs as a result of primary care networks being established outside the center by member institutions. Concurrently, more specialized facilities continue to be erected within the center, many of which are new facility types. Central “umbrella” organizations conduct internal physical planning while coordinating area-wide health planning with regional governmental councils.



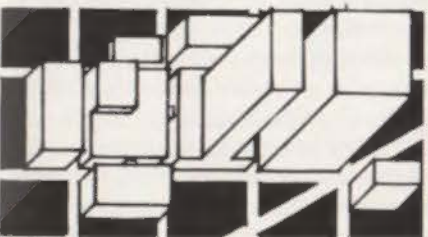
Embryonic



Formative



Maturative



Internal
Development



Outreach and
Center Reinforcement

Urban Context

Within the urban context, the medical center is an important nodal activity center providing a valuable employment base. It attracts a certain amount of residential growth as well as some industry about its periphery. Overall, it has favorable influence on the city; however, it also taxes many city-provided services such as utilities, public transportation, and vehicular circulation systems. These various areas of interface between city and center areas stress the importance of cooperative planning between the two.

Decision-makers of many medical centers now are realizing the importance of the immediate surrounding community. In most cases, the medical centers evolved in the first neighborhoods of our larger cities. When population shifted to the suburbs, medical centers often were left isolated in the midst of slums or deteriorating conditions. With capital investments too extensive to migrate with the population, the centers inherited the problems of a declining city tax base. Due to lack of service to the surrounding populace, centers often found the community hostile. The importance of community awareness evolved during this period and the medical center began to re-establish itself not only with the surrounding community but also with institutional affiliations outside the immediate area.

Rural Context

Medical centers are not limited to urban areas. Universities in isolated rural areas are making health care more accessible by establishing university-based medical centers, oriented to the surrounding rural populations. These centers are part of a broader network of outreach educational and patient care facilities providing primary care needs in rural communities. Because of its large expanse of rural area Texas has been the scene of much of this activity. Fortunately, these younger medical centers have established master growth policies to avoid many of the pitfalls of established urban medical centers.

Planner's Role

Planning within a medical center or a member institution falls basically in three areas: facilities, support systems, and programming. In most cases, facilities and support systems are areas which involve the physical planner, while programmatic planning remains a responsi-

bility of the member institutions. The decision-makers of these institutions often are reluctant to participate in an overall planning effort because of the competitive nature of their institutional plans. Therefore, any "umbrella" planning organization is established to deal only with non-controversial issues such as parking, internal transit, shared services, and joint use facilities. However, without a planning framework coordinating individual institutional objectives with overall medical center objectives, effective planning becomes extremely difficult.

To provide effective medical center planning, the architect or planner must be capable of maintaining an overall perspective of both total health care delivery and educational trends, as well as contemporary planning techniques. The resultant priorities from this understanding will produce responsive medical center planning.



H. Ralph Hawkins is a designer with the Dallas firm of Harwood K. Smith & Partners. He holds a masters degree in architecture from Rice University and a masters degree in Public Health from the University of Texas Health Sciences Center in Houston.



Doctors Office Setting



Community Health Center Setting



Photos illustrate various settings for ambulatory care. Projects by Harwood K. Smith & Partners, Dallas. TOP OF PAGE: Sammons Cancer Center, Baylor University Medical Center, Dallas. MIDDLE: Wysong Clinic, McKinney. DIRECTLY ABOVE: Texas Tech Regional Academic Health Center, Amarillo (Cantrell & Company, Amarillo, associated architects).

Moving Toward Ambulatory Care

By Ronald L. Skaggs

Ambulatory care has emerged as a primary method of health care delivery in the United States, and as a result the development of ambulatory-oriented facilities has become a major construction priority. In recent years there has been a shifting emphasis by private, public and government interests from inpatient to ambulatory care—the provision of prevention, diagnosis, treatment and rehabilitation to patients on an outpatient basis. More simply stated, ambulatory care is the care of a patient without confinement in a hospital bed.

All segments of society are demanding improved access to cost effective health care. In the first half of this decade, inpatient admissions increased approximately 15 percent nationally while, in contrast, outpatient visits grew more than 55 percent. In response to this demand, health planners supported by an increasing legislative emphasis on ambulatory care are encouraging development of more outpatient facilities as a substitute for inpatient facilities which, in many cases, have been overbuilt. In order to accommodate the growing demand for ambulatory care, new forms of health care facilities have evolved.

Alternative Facility Settings. In the past, ambulatory care has been provided in the physician's private office or at the hospital, either in the emergency department or through the use of referral diagnostic and treatment functions such as the laboratory and radiology. As organizations establish facilities to support the increase in ambulatory services, thought must be given to the kind of setting that will best serve a community's specific needs. A dichotomy that often exists in determining the best setting for ambulatory care facilities is the choice between the neighborhood, where primary care is most accessible to the public, or at the

hospital, where more comprehensive back-up facilities are available. A variety of facility settings exist, and familiarity with each of these settings provides a base for knowledgeable development of appropriate community health services.

Community Health Centers. Neighborhood health centers or satellite clinics have emerged in urban centers as a mechanism to provide community-based, family-oriented facilities as a positive ingredient to the neighborhood's everyday environment. In such outreach health centers many feel that ambulatory programs are more accessible and more attuned to the community's needs. In order to ensure comprehensive levels of care, such community-oriented facilities are often affiliated with major medical centers for secondary and tertiary levels of care. Freestanding centers can be established in a variety of methods ranging from converted storefronts to newly constructed satellites of major medical centers.

Group Practice Clinics. It is estimated that approximately a third of practicing American physicians are engaged in group practice. More than half of these physicians are in freestanding group practice clinics either co-located with a hospital or out in the community served. Doctors are beginning to consider the economies inherent in sharing equipment, staff and facilities available in a group practice, and patients are experiencing the benefits of seeing a doctor who can draw from other specialties in the group in caring for the patients' specific needs.

H.M.O. Clinics. Health Maintenance Organizations, an emerging method of health delivery, received a large boost when Public Law 93-222 provided grants and loans for H.M.O. development. H.M.O.s are intended to cover

University Medical Center Setting



the full continuum of care including ambulatory and hospital bed care, but a strong emphasis is placed on caring for the patient in an ambulatory setting. Many H.M.O. clinics are placing a major emphasis on preventive care and early disease detection utilizing such methods as "multiphasic screening," community health education and organized immunization programs.

Doctors' Office Buildings. There has been active development in the construction of physicians' office buildings, often directly connected to hospitals. Development of these buildings at hospitals has provided an aura of group practice as a result of physicians, often in solo practice, working together through referrals and joint use of specialized, sophisticated services available from the hospital. These adjacent office buildings assure the hospital the availability of physicians for emergencies and special consultation and are, in some cases, tied to a hospital-operated outpatient department.

University Medical Center. Major university medical centers have traditionally operated large ambulant patient clinics as part of the medical student's academic program. In the past, many of these institutions were operated as specialty oriented clinics, existing primarily as a place where care for the underprivileged was offered by medical students, interns and residents. These arrangements often were not conducive to the delivery of personalized continuing medical care. In recent years, medical educators have placed more emphasis on clinically oriented teaching where the student can learn in a "real world" environment. Some medical schools are establishing ambulatory care buildings with clinics planned for continuity of care, often adjacent to service-related teaching beds.

Hospital Setting



Hospital Based Ambulatory Care Centers. The public is increasingly relying on the hospital as the appropriate place to obtain all medical care, day or night. Hospital-based ambulatory care centers afford primary level care to the patient with immediate access to various specialists for consultation and to ancillary departments such as radiology and pathology for diagnosis and treatment. They also have the added benefit of receiving support from various hospital services including central services, dietary services, maintenance, house-keeping, and medical records. Community hospitals are becoming a major provider of care to the ambulant patient, and in the planning of hospitals it is desirable to develop diagnostic and treatment functions such as radiology, laboratory, surgery, emergency, respiratory therapy, electrodiagnostics and physical therapy for easy interface with an ambulatory care facility.

Specialty Ambulatory Centers. A variety of specialized ambulatory facilities are being developed, often as freestanding units. Some examples are: surgical centers providing one day surgery on an outpatient basis, multiphasic screening centers providing automated physical examinations, regional cancer centers providing outpatient therapy treatment, and renal dialysis centers for outpatient use by kidney patients.

The variability in kinds of settings for care of the ambulant patient does not permit a single answer to the development of responsive facilities, and the planning process requires great care in identifying the unique program requirements inherent in each individual project. But it is important, whatever setting is selected, to provide facilities which can efficiently provide comprehensive and continuous patient care in a manner

that is easily accessible. The hospital and its tradition as the primary location to obtain around-the-clock care is in the strategic position to exert leadership in the establishment of ambulatory care facilities. Hospitals already have in place many of the organizational and technical resources necessary to deal with the ambulant patient. Ambulatory services can add to the viability of the hospital, generating additional income through the use of ancillary services already required for inpatient use. Whether planning new hospital facilities or upgrading existing facilities, care in establishing methods for easily incorporating ever-growing ambulatory functions into the hospital framework is essential to the continuing vitality of community hospitals.



Ron Skaggs is vice-president, health facilities, Harwood K. Smith & Partners, Dallas. Skaggs has a masters degree in health facilities planning and research from Texas A&M and was a health facilities officer with the U.S. Army Surgeon General's office.

TOP LEFT: Texas Tech University Medical Center, Lubbock. TOP RIGHT: Texas Scottish Rite Hospital for Crippled Children, Dallas.

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Doctors Office Buildings Places for Practice

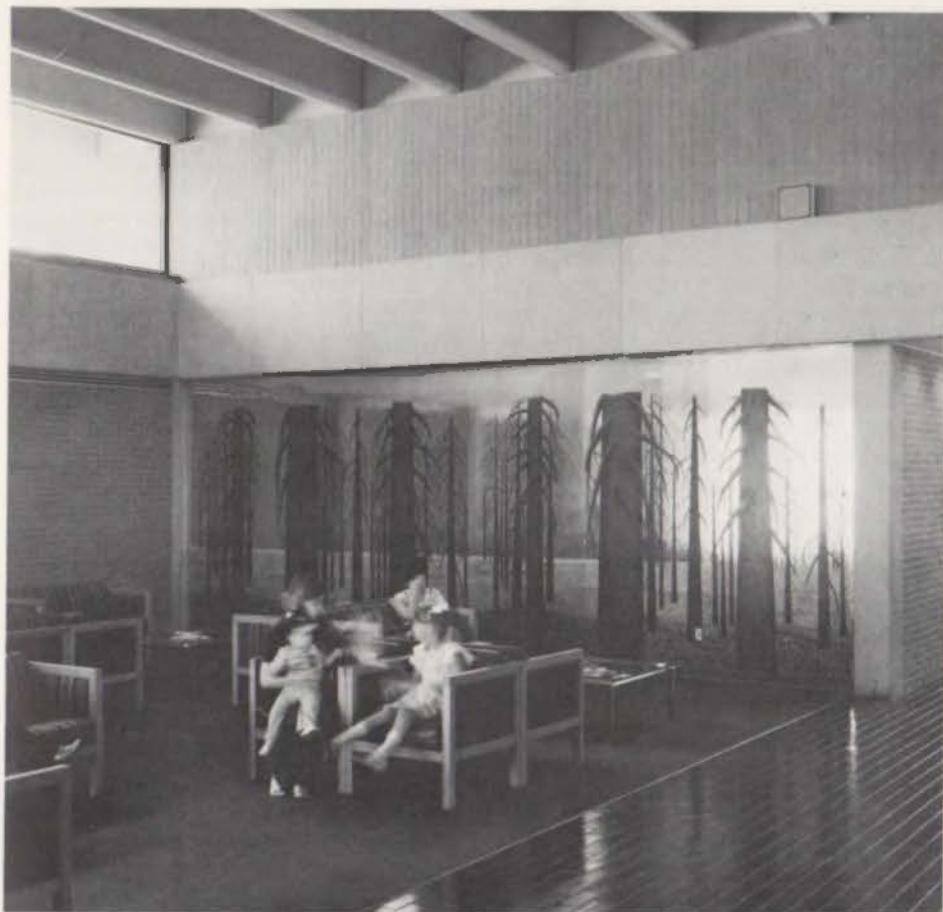
By Kenneth M. Nuhn

Places for doctors to practice medicine have shown stronger changes during the last 20 years than probably any other phase of health care facility design. Influences have been myriad, but almost all are economic and social, rather than radical changes in technology. Most importantly, these changes are resulting in benefits to both doctor and patient.

Thankfully, a lot of water has flowed under the bridge since the doctor's office was a two-room walkup over McCrory's five-and-ten on Main Street. Large buildings full of doctors were around in the 1920s with almost every city of any size having its downtown "Medical Arts Tower." Many included hospitals. Since most of these have been obscured by dust from the suburban stampede, the eternal importance of location has resurfaced: getting doctors' offices as close to an acute general hospital as land, traffic and existing structures permit.

Prime reasons are economic. Physicians are finding that trading for office time as little as one hour a day spent driving from hospital to hospital can raise their income 10 to 15 percent. Malpractice insurance classifications hinge upon what the physician does in his office. Even minor surgery performed in hospital reduces liability and, thereby, insurance rates.

Most benefits, however, are to the patient. Diagnostic skills of radiology and pathology, for example, are honed only through high volume, such as that generated by a hospital. As a corollary, this volume justifies the hospital's keeping up with advancing technology unaffordable by even a doctor group. With the doctor's office and these sophisticated skills drawn close together, the patient has all needs cared for without driving all over town.



“Thankfully, a lot of water has flowed under the bridge since the doctor’s office was a two-room walk-up over McCrory’s five-and-ten. . . .”

Projects by Page Southerland Page, Austin, Corpus Christi, Dallas & Houston. ABOVE: Waiting room, Mid-Cities Clinic, Grand Prairie.

Two-story link ties 20-space doctors office building (left) to Margaret Jonsson Charlton Methodist Hospital, Duncanville.



It follows, then, that location is the key criterion when planning any doctors office building. Except for some purely primary care neighborhood practices, the closer to the hospital, the better, particularly to its emergency/outpatient department, to diagnostic services of radiology and laboratory and to treatment services frequently used by outpatients, such as surgery, respiratory therapy and physical therapy. It is also advantageous to relate the building to the hospital's medical records department, to the doctors' entrance, to doctors' locker/lounge facilities, and to nursing unit elevators.

Correct location can be subtle, however. Some buildings have failed by being just a half-block too far from the hospital. Apparently, to a physician or patient, an auto trip is an auto trip, whether one block or one mile. (People don't like to walk much in "blue northers," coastal plain showers, 100-degree temperatures, or when the sky is brown.) Visibility to patients is also important, but if easy automobile access and parking are provided as they should be, this is seldom a problem. The building should not, however, be lost in a jungle of storage, maintenance and mechanical facilities if any other location is available.

Design Considerations

Access by the handicapped and easy future expansion point to a one-story building. But land costs and availability at most urban hospital sites make multi-story buildings, expandable vertically, most common. Character and scale of the building should be humane and, while not necessarily residential, must not be institutional. External form and feel will borrow from the adjacent hospital, but should be indigenous and at peace with the socio-economic setting. Great opportunities occur inside, via graphics, the color, texture and scale of

finishes and furnishings, and the molding of space through interior architecture.

The speculative nature of most doctors office buildings nowadays has greatly increased the need for interior flexibility. Typically, a shelled-in space will be constructed, with modular-grid mechanical plumbing and electrical services allowing tenant physicians, either singly or in groups, to tailor-make their spaces. Often, a separate finishing allowance is provided on a per-square-foot basis for prospective tenants. This can then be supplemented by the tenant for the "extras." As a rule of thumb, about 1,000 net-assignable square feet of space will be needed for each doctor. Sometimes this can be reduced by sharing waiting areas, but care is needed. Pediatrics, for example, does not combine well, nor does oncology. Typical area requirement for a 40-physician building has averaged 1,125 square feet per doctor, with a range of 800-2,000 sfn.

Functional elements of the doctors office building are waiting/reception, business office/records, nurse station, clean and soiled linen storage, office/consultation rooms, examination/treatment rooms and other support spaces. Increasingly, a cluster approach to layout is favored, with each office/consultation room flanked on either side by exam rooms. These are accessible both from the office and from the outside corridor, which greatly improves traffic flow. In fact, the entire doctors suite will turn out to be judged not so much by size as by the degree to which the doctor and staff can arrive, go about their daily routines, and leave, unimpeded by wandering patients and relatives. Space programming requires careful analysis by specialty. A family practitioner may need as many as five or six exam rooms at once, while a neurosur-

Mid-Cities Clinic viewed from Great Southwest General Hospital, Grand Prairie. Clerestory-lit waiting room.



geon might need only two. (Separate dressing rooms further reduce exam room needs.) In a high volume, day-to-day situation, details as minor as door swings can become major contributors to efficiency.

Functionally, doctors office buildings have become somewhat simpler due to reliance upon nearby hospitals for more sophisticated procedures. Unless space is desired by a radiology group, for example, provisions for X-ray will be limited to convenience service only: chests and bones. Clinical laboratories are similarly simple: CBC, urinalysis, and little else.

Second only to location in importance to the success of the doctors office building is adjacent parking. Elderly patients, particularly, fear (and soon avoid) parking areas that are at all difficult to enter or whose flow is ambiguous. Surface parking is attractive for this reason, but is seldom feasible unless land costs fall below the typical \$17-\$20/sf construction cost of parking structures, if in fact any land is available at all. In addition, surface parking is not protected. The willingness of people to pay 25-50 cents for parking has been demonstrated, enhancing multi-level feasibility.

Patient parking needs should take into account whether practice is "drop-in" or by appointment only. Appointments yield fairly even parking loads during office hours, with 12-30 patients per day remaining on-premises about 48 minutes each. For the drop-in type practices, parking will be Poisson-distributed, usually peaking at mid-morning and mid-afternoon.

Economics

From the standpoint of organization and financing, the building can be built and owned by doctor tenants; built and owned by a hospital and leased to doc-

King's Daughter's Clinic (right) and its 100-bed parent hospital, Temple. Covered access, separate parking.



tors; or built and owned by an investment group and leased to doctors. Either of the latter courses can be lease-purchase. As for the "turnkey" route, despite some good firms and claims by some nationwide developers of office packages, many doctors are going to discover that the price to be paid for plans "pulled out of Drawer 13" can be dear. It takes regional experience to know that a dozen relatives can accompany South Texas patients, that baseball-sized hail blasts San Angelo from the northwest every three years, that Austin gas and electric rates terrify, that only a few manufacturers make windows that can bar a Lubbock sandstorm's powdery fall-out, that not every roof-drain can handle six-inch-an-hour rainfall rates.

In examining the economics of a typical doctors office building, one might establish that 20 physician spaces would require 27,200 gsf shell construction at \$25/sf. Tenant finishing allowance of \$12/sf plus paving, sitework, fees, interim financing and start-up could run first-costs to about \$1,000,000 for 15 doctors. Operating expense, including taxes, utilities, maintenance, management, insurance and housekeeping will be \$4-\$6/sf, with the biggest question mark of course being future utilities costs. Any land lease fees will also be classed as operating costs. Leasing is common, since hospitals are understandably reluctant to part with contiguous land. They also watch "token" fees carefully for IRS implications. Income projections (always with a vacancy factor of at least five percent) can be arrived at through local surveys of rents and leases: in Texas, mostly \$7-\$10/sf per year.

First-cost, operating expense and gross income yield the amount available for debt service. (Roughly 10 percent of the loan amount per year will be needed,

optimistically assuming that a 25-year note at nine percent can be obtained.) One will note immediately that a minimum equity of 20 percent becomes advisable, though land can serve.

Soon, in the glow of one's calculator display, one begins to notice that cash flow, at least in the start-up decade, looks like peanuts. In fact, parking revenues, a pharmacy, a barber shop, or a restaurant will sometimes be needed to help the pro forma into the black. Some help, particularly for physicians in the 50 percent bracket, comes from Uncle Sam through depreciation and mortgage interest write-offs. And even in the absence of short-term profitability, the advantages of physician ownership near the hospital seem important enough in themselves:

- Convenience and comfort of patients.
- Stimuli to the practice and to continuing education.
- Tailor-made suite size, layout, finishes and furnishings.
- Potential value through appreciation of building share.

As for the future, the doctors office building, whether profitable or break-even, doctor- or hospital-owned, large or small, high or low, has all sails set toward hospital campuses around the nation. And, in America's convenience-oriented and fuel-conscious society, the trend looks inexorable.



Kenneth M. Nuh is a senior partner in the Austin office of Page Southerland Page, Architects, Engineers and Consultants, where he is Consultant for Medical Facility Planning. From 1960 to 1968 he was director of the Hill-Burton Program for the State of Texas.



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GRAPHICS UNDER STRESS

By Jim Glass



Good health facility graphics illustrated in these examples from M. D. Anderson Hospital and Tumor Institute Clinic Building, Houston. MacKie and Kamrath, Houston, architects. S. I. Morris Associates, Houston, interior design. **TOP LEFT:** Vinyl directional messages, utilizing lamination of two 3-mil layers, restricted to height of five feet from floor by HEW. **ABOVE:** Overhead directional sign in corridor allows prescribed clearance and emphasizes dual languages by reversing field colors, which coordinate with interior design. No smoking sign conforms to municipal code. **RIGHT:** Bilingual room identification plaque coordinated with wall stripe. Room number embossed by laminating 1/8-inch thick plastic letters to plexiglass panel with subsurface color. Letters and numbers are the advised 1 1/2 inches high.



First of all, let's update the semantic confusion over the word "graphics." The newly founded Society of Environmental Graphics Designers (SEGD) has topped the terms "architectural graphics," "signage and graphics," "interior graphics," etc. The new buzz term is "environmental graphics," and the role of its practitioner is defined: "to plan, program, design, and specify graphic elements within an environment." Typically included are signage systems which identify, direct and inform within complex facilities, i.e. cities, universities, hospitals, airports or office structures. Additionally, environmental graphics which visually enhance a space are included: murals, flags, banners, kiosks and the supergraphics that died in the late sixties but won't stay still.

Secondly, the planning and design of environmental graphics for a health care facility is basically no different than that needed for any other kind of space, with a handful of important exceptions. A normal environmental graphics program includes five or six steps: planning, programming, preliminary design, design, documentation and—sometimes—contract administration or ongoing design maintenance. A health care program works the same way except for five unique challenges that seriously affect planning and design: 1) Health facilities are often utilized in times of extreme mental stress that require survival semantics. 2) They are subject to more stringent governmental controls. 3) They have an extraordinary turnover of occupants. 4) They are subject to aseptic maintenance. 5) Texas facilities often have bilingual needs.

Mental stress. When people enter such a stressful environment as a health care facility or an airport, they forget how to read. They grab anyone wearing a uniform or who looks quasi-official and ask for information or directions, and often they are even physically afraid of the environment. Graphics can't change that; they can only ameliorate the condition of having no graphics at all.

Two keys to better message comprehension are *size priority* and *good semantics*. Priorities ensure dominance of critical messages, unlike most hospital signage which reads like a newspaper without headlines. Good semantics ensure patient understanding through simplification: "child care" over "pediatrics" or "blood testing" instead of

"hematology clinic." This is probably the most neglected area of graphics, but enlightened health care managers recognize the fact that some of their best friends are Semantics.

Confusion under stress is compounded by use of symbols. Symbols have been used in a number of health care facilities, but they are nearly always failures and have to be augmented by large directional word messages. A study at the Dallas-Fort Worth airport showed that only 4 percent of Americans understood symbols or pictographs, versus more than 90 percent comprehension by foreign nationals. We are on the threshold of an American understanding through eventual exposure to highway and transportation facility symbols, but it is years away.

Another layer of confusion can be use of color as graphic, or directional, design. For example, one cannot be expected to remember—under stress—that a parking level is number 3 *and* is represented by a flower or animal *and* the color green. Information overload. Color as utilized in interior design is usually good, however, and can be coordinated with the environmental graphics. There is some evidence to suggest that color can affect patient psychology (the red-excites-blue-depresses syndrome), but more recent evidence suggests that the psychology of color is more directly related to the ego of the designer than to patient behavior.

Government controls. Privately funded health care facilities are subject to fewer graphics restrictions than those which are publicly funded, and have greater opportunities for esthetic control of materials. Facilities built with state or federal funds are subject to a growing body of controls and codes too large to be covered here. Generally speaking, however, these controls influence word sizes, heights from floor level, and colors, with particular emphasis on braille and raised or incised letters for use by the blind. The most important controls in Texas are by HEW and Article 678g of SB 111, followed closely by OSHA and municipal codes affecting fire and smoking messages.

Turnover. Health care facilities tend to have three levels of signage in terms of permanence: building identification, departmental identification and directions, and patient identification. The latter must be extremely flexible and must work with other patient identifica-

tion systems. For example, patients in most hospitals are given an embossed plastic card with their name and address, doctor's name, etc. This is the basic stuff of identification of that patient, and the card can be used to emboss tapes or cards to be used in door plaques. Utilization is dependent upon the imagination of the designer and—alas—the cooperation of the people who must complete the design every day. Handwritten slips, addressograph tapes, magnetic plaques and a myriad of other materials are the primordial clay of day-to-day transient patient identification.

Maintenance. Aseptic conditions don't always require aseptic graphics. Such conditions were always a concern in the past when everything was routed out of wood-grain plastic in LeRoy Bold type, and health care managers were worried about the dust collecting in the bottoms of the O's. Nowadays, paint is almost obsolete, and subsurface graphics have alleviated maintenance problems as well as those of vandalism. In-house manufacturing facilities seem to be desirable, but not always practical. Now that the ugly and inept engraving machines are giving way to replacement films, astute management is finding more uses for their cameras in the areas of teaching, personnel identification and directory strips.

Bilingual graphics. In Texas, health care managers are often faced with the need for English/Spanish messages. Properly handled, they are only slightly tougher to use than monolingual messages. Canadian graphics offer good research in this area. The important things to remember are size priorities and *consistent location* of each language against its background. English words can also be combined with symbols understood best by foreign nationals, which helps smooth out the visual clutter.

In summary, environmental graphics for health care facilities require more precise planning and greater attention to restrictive regulations than for other building types. But the results are often more rewarding to both the manager and the designer as well as the user.



Jim Glass is the owner of Kelvin Group Design Office in Houston, a firm specializing in environmental graphics.



Above are examples of symbols which add a layer of confusion under stress, particularly when used without supporting messages. Many health care services are processes or activities—such as outpatient registration—which cannot effectively be symbolized by an object.

A SALUTE TO TSA'S 1977 CITIZENS AWARD HONOREES

Concern for the quality of life is inherent in the everyday activity of architects as shapers of the built environment.

So it is that, each year during its annual meeting, the Texas Society of Architects seeks to reaffirm its own goals and commitments by recognizing several Texans whose awareness, whose concern for the quality of life in our environment is evident through their accomplishments.

This year's honor awards, presented at the El Paso Civic Center October 21, consist of five Honorary TSA Memberships and two Citations of Honor. The recipients were selected by committee from chapter nominations across the state. *Texas Architect* commends the honorees for their exemplary accomplishments, which are summarized on the following pages.



Bob Armstrong
Austin
Citation of Honor

Bob Armstrong long has been known as a friend of the land. Back when he was serving Travis County as state representative for three terms in the 1960s, Armstrong was initiating valuable legislation concerned with the environment. He sponsored, for instance, the Bay Study Committee's Beach Bill, prohibiting sale of surface rights to submerged lands and requiring permits to dredge sand if the beach would be affected by dredging. He also authored the bill creating the Texas Conservation Foundation.

When elected Land Commissioner in 1970, Armstrong's initial goal was to provide wise management for Texas' 22.5 million acres of state-owned land. Accordingly, he has initiated numerous beneficial policies for the state's minerals, uplands and coastal regions. He established the environmental planning division within the General Land Office and directed the first attempt to create manageable blocks of state land in West Texas through land trade legislation. He initiated the practice of prior review of state-owned tracts for oil and gas leases to detect possible environmental dangers during drilling and production—a practice which enabled Texas to hold offshore oil and gas lease sales at a time when the federal government was enjoined from doing so because it lacked this same kind of protective action.

Armstrong is a successful Land Commissioner, firstly, because he enjoys the outdoors. He is an avid hunter, rancher, fisherman, backpacker and canoeist. He pilots his own small airplane. In his seven years as Land Commissioner, Armstrong has demonstrated an unswerving dedication toward preserving the rich natural environment of Texas—and ensuring that it will be enjoyed by future generations of Texans.



Mr. and Mrs. George R. Brown
Houston
Citation of Honor

George Brown, former board chairman of Brown & Root, Inc. and Texas Eastern Transmission Corp., and his wife Alice, are native Texans who together have had a firm hand in molding Texas into the progressive and industrial state it is today.

Though recognized as giants in engineering and construction, little notice has been paid to Mr. and Mrs. Brown for their interest and participation in the field of architecture. With the purchase of Brown & Root by the Halliburton Company for \$46 million in 1962, the Brown Foundation was incorporated and George and Alice Brown donated approximately 80 percent of their resources to the foundation. Since the incorporation, they have been directly involved with the design and construction of such outstanding facilities as the Houston Medical Center and the Houston Museum of Fine Arts, and buildings at Rice University, the Colorado School of Mines and Southwestern University. And Mrs. Brown has played an integral role in the design of these facilities, working personally with architects and interior designers and donating art objects from the family collections to add final, individual touches to a project.

During Brown's last years as chairman of Texas Eastern, the Houston Center project came into being. This 33-continuous-block development of the Houston central business district will continue to be a source of challenge and inspiration to the architectural profession during the next two decades. Today, retired from the chairmanships of Brown & Root and Texas Eastern, the Browns devote their time to charitable pursuits, including the activities of the Brown Foundation.



Aaron J. Farfel
Houston
Honorary Membership

When Houston financier Aaron J. Farfel was only four, his family emigrated from Lithuania to New York City. It was there that his father, a wholesale food salesman in Manhattan, introduced each of his children to the concept of the "charity pocket": when the family left on excursions, Hyman Farfel handed each child a coin and said, "Every voyage should have as part of its mission an errand of mercy." When they met somebody in need, the children reached into their "charity pocket" and made a gift of their coin.

Today, though he has come a long, profitable way in the world of high finance, Farfel has never forgotten his humble beginnings nor his father's eloquent lesson in generosity. In the 40-odd years since he arrived in Houston, fresh from IRS agents school in Dallas, Farfel has established himself as a leading force in the blossoming of a great metropolis.

Farfel has devoted his considerable energies to a wide variety of civic organizations: Houston Chamber of Commerce, Houston Symphony, Alley Theatre, Museum of Fine Arts, United Fund, Houston Community Council, Houston Chapter of the American Jewish Committee. He was an original investor in Arts Investment Ltd., aimed at bringing fine works of art to Houston homes. He was among a group of investors which organized the Astros baseball club and is the director, president or trustee of numerous philanthropic organizations such as the St. Joseph Hospital Foundation and the Pauline Sterne Wolff Memorial Foundation.

Keenly admired by his colleagues for his sense of ethical values, generosity and humility, Farfel won the National Conference of Christians and Jews Brotherhood Award in 1965. An educational grant to the College of Architecture at the University of Houston was donated in his name.



Mr. and Mrs. William Curry Holden
Lubbock
Honorary Membership

William Curry Holden and his wife Frances are almost as much a part of the cultural legacy of West Texas as Apaches, cowpokes and gushers of oil; for they are preservers of heritage.

Dr. William Holden, born in Cooleedge in 1896, has devoted his life to exploring the culture of the Southwest, leaving behind a wonderful historical record of the region. Holden is the author of numerous books dealing with the history of the Southwest. He has taught at McMurry College (where he established the department of history), the University of Texas and at Texas Tech University, where he is now professor emeritus.

Holden has also established two museums—a history museum at McMurry College in Abilene and a general regional museum at Lubbock on the Texas Tech campus, which he directed from 1929 to 1965. With Frances, he co-chaired the Ranch Headquarters Planning Committee for the 73-acre Ranching Heritage Center at Texas Tech (see *TA*, May/June 1977), an open-air annex to the Tech museum in which early Texas structures are restored to original condition. In addition, he established the West Texas Museum Association.

In her own right, Frances Mayhugh Holden has enjoyed a distinguished career of service to the cultural arts. She has worked tirelessly in museum administration, research and exhibitions of art history in collaboration with Dr. Holden. Mrs. Holden organized the Women's Council of the West Texas Museum Association and was the first Honorary Associate of the Council. She has held memberships on the Board of the Texas Tech Foundation as well as civic organizations concerned with history, music, art, dance and the theater.



Weiming Lu
Dallas
Honorary Membership

Since taking a position in the Department of Urban Planning in 1971, Weiming Lu, Assistant Director for Urban Design in Dallas and a naturalized American citizen from China, has been intimately involved in restructuring the urban ambience of Big D. Under his direction, the city design staff has engaged in a wide range of studies for downtown, inner city neighborhoods and developing areas, including projects such as neighborhood plans, ecological studies, environmental guidelines, preservation ordinances, historic districts, a new sign ordinance, street and highway design standards, downtown malls, and neighborhood parks.

An ardent proponent of historic preservation, Lu was the guiding spirit in the development of Dallas' Swiss Avenue Historic District. His adept shepherding of the ordinance through a typical maze of governmental entities has become a model for saving neighborhoods and has brought national publicity to Dallas.

Another of Lu's recent projects was the creation of a Downtown Historic District in Dallas—a proposal to entice people and businesses back to the declining downtown core while preserving the fine architectural heritage of an earlier Dallas. The necessary ordinance is now a reality and the area is already showing evidence of an upsurge.

Perhaps Lu's greatest contribution is his willingness to solicit and accept the input of Dallas citizens as to their own needs and goals. He has journeyed to the neighborhoods of Dallas and met the people. The resultant urban design and planning reports are bright and colorful masterpieces of the genre.



Mary Moody Northen
Galveston
Honorary Membership

Scion of an old and influential Galveston family, Mrs. Mary Moody Northen has spent a long and distinguished career in service to her community, state and nation.

A member of the Board of Trustees of the Moody Foundation since it was established by her late mother in 1942, Mrs. Northen is currently its chairman. The Foundation has contributed in excess of \$75 million to educational and charitable causes throughout the state. Mrs. Northen has directed its grant program into areas of architectural preservation. Major Galveston projects include restoring Ashton Villa and the 1894 Opera House, the purchase of the Santa Fe Building (which will provide offices for non-profit organizations and house a railroad museum) and the establishment of the Strand Revolving Fund.

In addition, Mrs. Northen has contributed personally to many restoration and architectural projects. In 1965 she purchased the building her father had constructed in 1919 as the City National Bank. Following complete refurbishing, she presented the building to Galveston County in 1972 for a County Historical Museum which now features semi-permanent displays of the work of famous Galveston architect Nicholas Clayton, early maps of the city and traveling exhibits. She has donated a building in memory of her father to Virginia Military Institute and a building in memory of her mother and father to Hollins College, Virginia. She has also given the E. C. Northen Scouting Center to the Bay Area Council of the Boy Scouts of America in memory of her husband.



Des Taylor
Austin
Honorary Membership

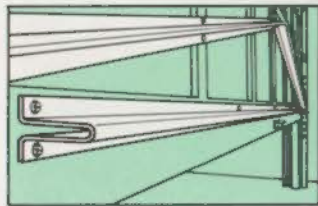
Since becoming executive director of the Texas Society of Architects in 1972, Des Taylor has dedicated his most intense energies to the successful execution of his job and to the welfare of the Society. In a surprise gesture of gratitude during the final evening of its recent El Paso convention, TSA officially recognized his "outstanding accomplishments and devoted service in behalf of the architectural profession" by declaring him an honorary TSA member.

The announcement—which Taylor said constituted "one of my life's most surprised and honored moments"—was made by TSA President Charles Stahl. The convention marked the fifth anniversary of Taylor's appointment as executive director and of his first address to the Society in El Paso during the 1972 TSA convention. During Taylor's tenure, the Society "has made great strides in every area of its activity," Stahl said.

Taylor is chairman of the Council of Architectural Component Executives of the American Institute of Architects and a member ex officio of the AIA board of directors. In 1976, TSA's Austin chapter made him an honorary member of the chapter.

Taylor is on the Commercial Panel of the American Arbitration Association and holds memberships in the state and national bar associations, Phi Alpha Delta legal fraternity, and the state and national societies for association executives. He belongs to Austin's Downtown Lion's Club and the Beautify Texas Council.

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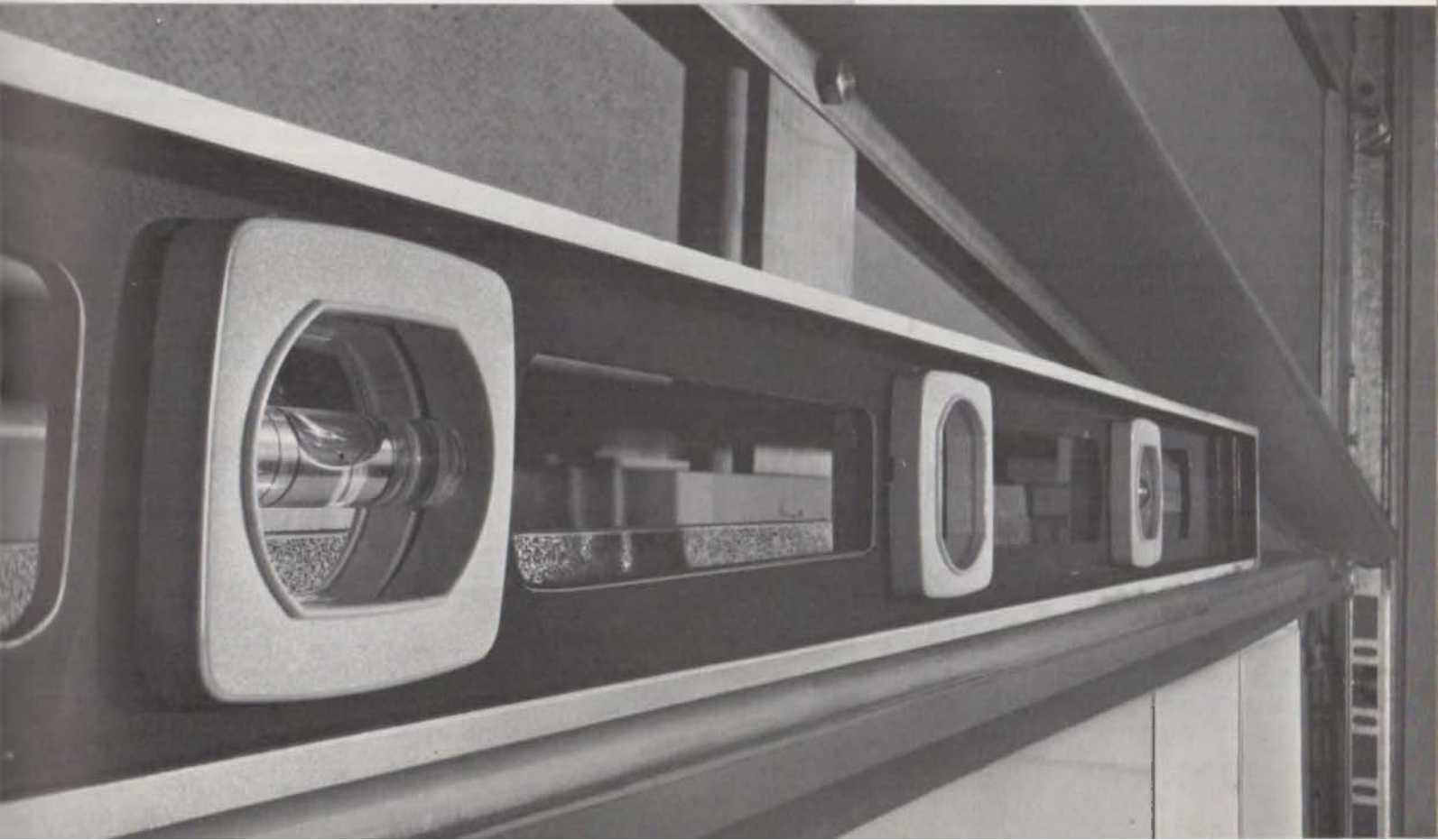
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First Honor Awards

The Winners: Texas Architecture 1977

Texas Architecture 1977, this year's continuation of TSA's annual design awards competition, attracted 164 entries from architectural firms across the state. Sixteen projects emerged as winners in the competition, yielding three First Honor Awards, five Honor Awards and eight Awards of Merit. Pictured herein, the projects will receive further editorial treatment in Texas Architect next year.



Photo by Gordon H. Schenk, Jr.

WAKE FOREST FINE ARTS CENTER—WINSTON-SALEM, NORTH CAROLINA. Owner: Wake Forest University. Architect: Caudill Rowlett Scott, Houston, in association with Newman/Calloway/Johnson/Van Etten/Winfrey, Winston-Salem, North Carolina. Contractor: George W. Kane, Inc., Winston Salem.



Photo by Richard Payne

LONGVIEW PUBLIC HIGH SCHOOL—LONGVIEW: Owner: Longview Independent School District. Architect: Allen, Buie and Associates, Longview. Contractor: LaRoe Building Company, Inc.

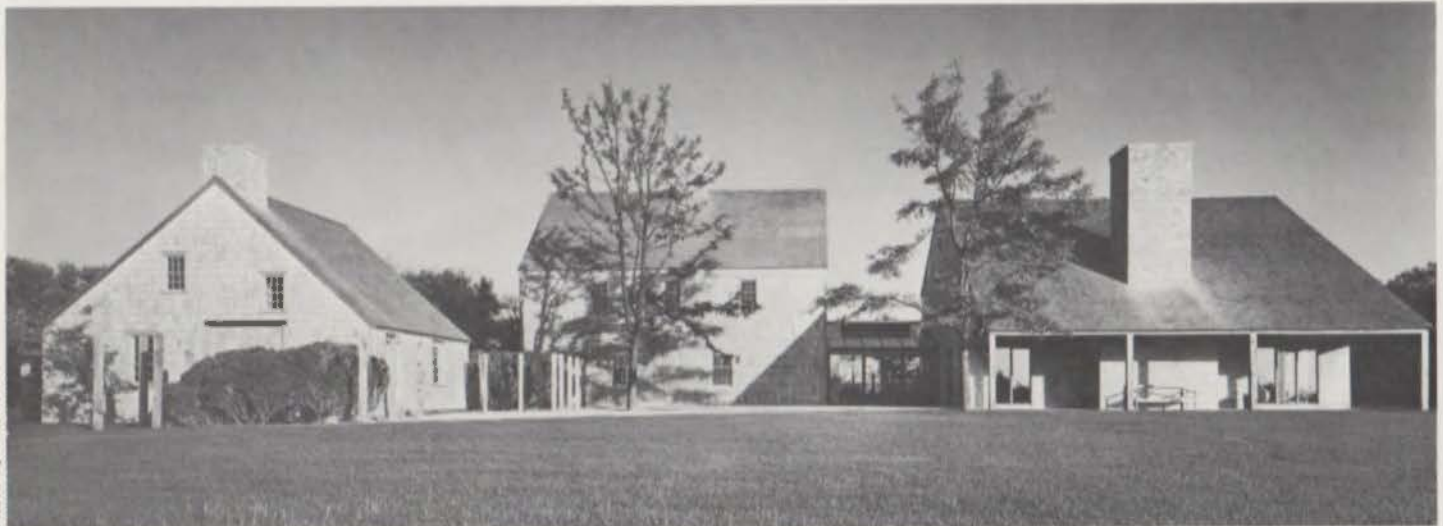


Photo by Bill Morris

THE DE MENIL-CARPENTER PROJECT—EAST HAMPTON, LONG ISLAND. Owner: Adelaide de Menil and Edmund Carpenter. Architect: Howard Barnstone, FAIA, Houston, in association with William Chaffee, Denver; Morey & Hollenbeck, East Hampton, New York; and Daniel M. C. Hopping, New York, New York. Contractor: Sam Lester, East Hampton, New York, and M. Clarke Smith, South Hampton, New York.

Honor Awards

Photo by Ed Stewart



TEXAS EASTERN UNIVERSITY—TYLER. Owner: Texas Eastern University. Architect: Caudill Rowlett Scott, Houston. Contractor: Allen M. Campbell Company, Tyler.



SOUTHSIDE RECREATION CENTER—SAN ANGELO. Owner: City of San Angelo. Architect: Jack E. Meek, San Angelo. Contractor: J. D. Burk Construction Co.

Photo by Maurice Miller



TEACHER EDUCATION CENTER—HUNTSVILLE. Owner: Sam Houston State University. Architect: Rapp Fash Sundin/Incorporated (formerly Rapp Tackett Fash). Contractor: Fleetwood Construction Company, Houston.



ADAPTIVE REUSE OF THE 1870 ROSENBERG BUILDING—THE STRAND, GALVESTON. Owner: Robert L. K. Lynch. Architect: Taft Architects. Contractor: Robert L. K. Lynch.



LAKE LIVINGSTON STATE PARK—POLK COUNTY. Owner: Parks and Wildlife Dept., State of Texas. Architect: Charles Tapley Associates, Houston. Contractor: Katy Engineering.

Awards of Merit



ADDITIONS & ALTERATIONS TO RESIDENCE—FORT WORTH. Owner: James Foy. Architect: Emery Young Associates, Fort Worth. Contractor: Russell A. Gill, Fort Worth.



Photo by Rick Gardner

WALKER'S MARK TOWNHOUSES—HOUSTON. Owner: GreenMark Incorporated. Architect: William T. Cannaday & Associates, Inc., Houston. Contractor: GreenMark Construction, Houston.



REPUBLIC MOTOR BANK—DALLAS. Owner: Republic National Bank of Dallas. Architect: Omniplan, Inc., Dallas. Contractor: Joe Funk Construction Engineers, Dallas.



SALANTER-AKIBA-RIVERDALE ACADEMY—RIVERDALE, NEW YORK. Owner: Salanter-Akiba-Riverdale Academy. Architect: Caudill Rowlett Scott, Houston. Contractor: Miller & Raved, New York, New York.



Photo by Richard Payne

MIDLAND NATIONAL BANK TOWER—MIDLAND. Owner: Midland National Bank and Gerald D. Hines. Architect: S. I. Morris Associates, Houston. Contractor: Harvey Construction Co., Houston.



Photo by Rick Gardner

DENNEY THEATRE—HOUSTON. Owner: Houston Independent School District. Architect: Harvin Moore/Barry Moore, Houston. Contractor: Schneider Construction Company, Houston.

Village

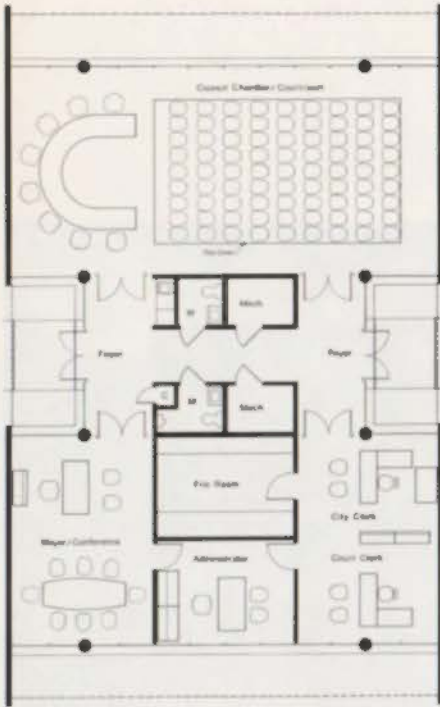


CEDAR VALLEY COLLEGE—DALLAS. Owner: Dallas County Community College District. Architect: Jarvis Putty Jarvis, Dallas. Contractor: Robert E. McKee, Inc., Dallas.



RESTAURANT & SHOPS ADDITION TO LOS PATIOS LANDSCAPING & GARDEN CENTER—SAN ANTONIO. Owner: John Spice. Architect: Frank Welch Associates, Midland. Contractor: Pat H. Symons, San Antonio.

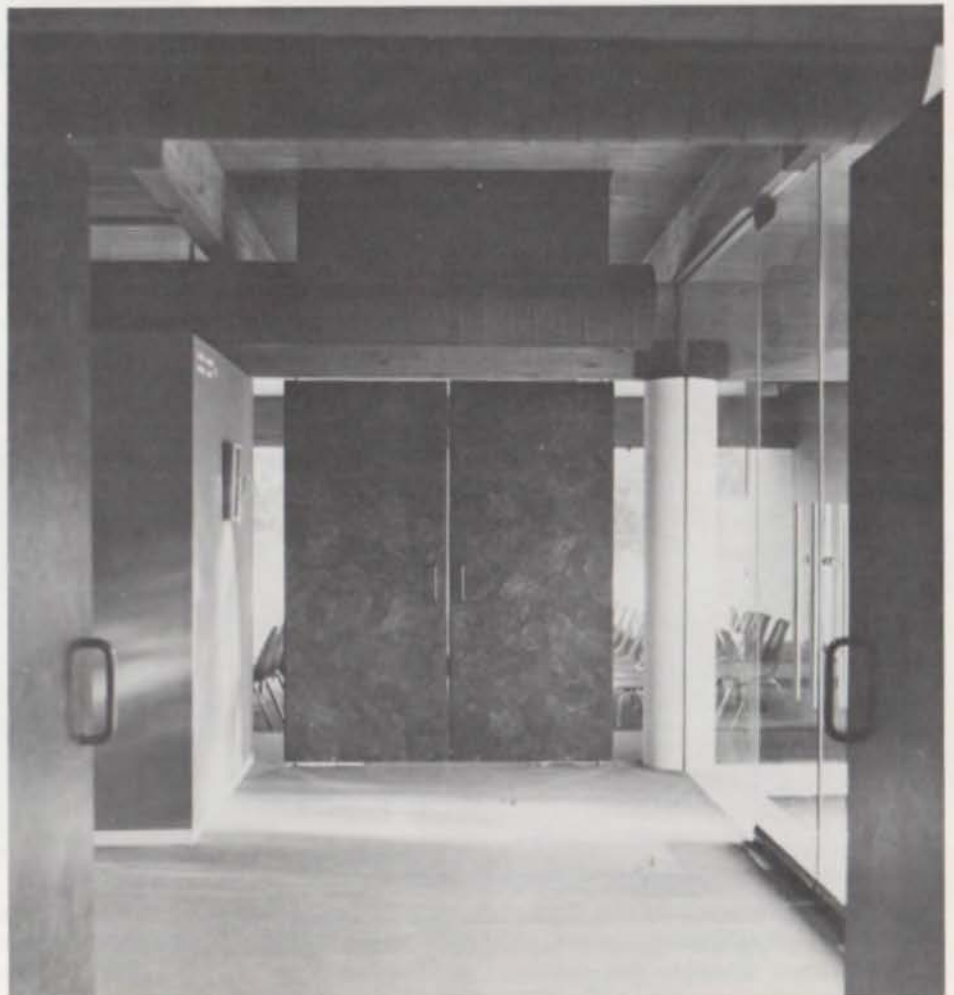
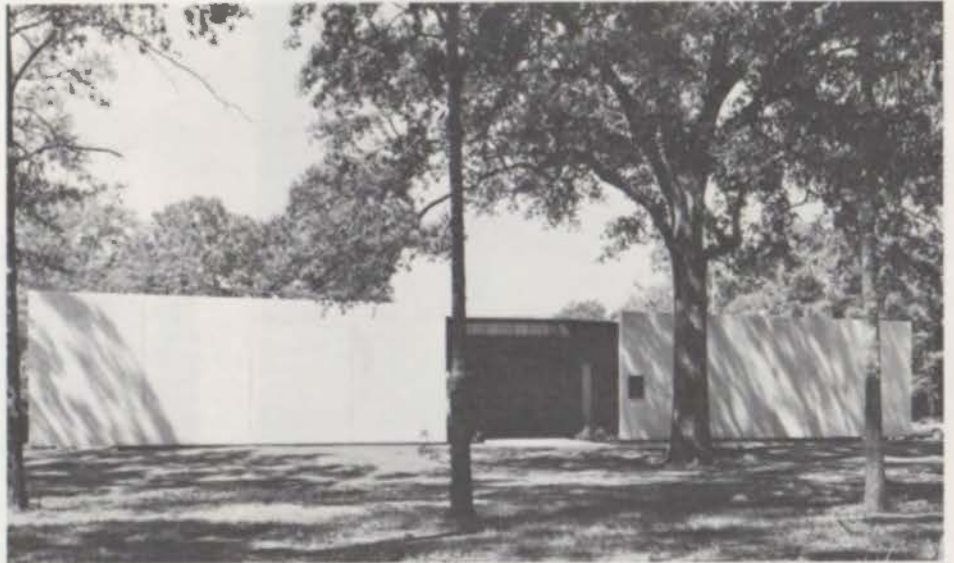
**Award of Merit
Texas
Architecture
1976**



Floor Plan



Architects: *McKittrick, Drennan, Richardson & Wallace, Houston*
Partner-in-Charge: *Tom McKittrick*
Project architect: *Charles Philips*
Interior furnishings: *Selected by Frances Galloway*
Engineers: *Walter P. Moore & Associates, Houston (structural); Timmerman Engineers, Inc. (mechanical)*
Contractor: *Berkman Construction, Inc., Houston*



Bunker Hill Village

In 1975, the city council of Bunker Hill Village—an affluent suburban community in the Memorial Drive area on the west side of Houston—determined a new city hall building was needed to supercede the frame garage apartment which had served as municipal headquarters since incorporation of the village. The Houston architectural firm of McKittrick, Drennan, Richardson and Wallace was retained to design the new facility.

The program was “distilled” to reduce its size to meet budget limitations, and some public works maintenance functions were relegated to metal buildings at the extreme rear of the site.

The basic plan consisted of a combined council chamber and courtroom, an office for the city and county clerks, a central file room, an office for the city administrator, and a combined mayor's office and conference rooms. A central “dog run” foyer and corridor, plus mechanical rooms, rest rooms and coffee bar in two cores effectively demarcate the building into zones. The council chamber/courtroom and ancillary facilities are accessible to the public at times when the other offices are closed. Two mechanical systems, which employ short runs of exposed spiral ducts, further facilitate the different schedules of use in the two sectors of the building.

A prime objective in the design of the project was to create an architectural statement which contradicted the usual concepts one associates with government and governmental structures. This building is visually light rather than ponderous. Large expanses of minimally detailed glass, protected by generous overhangs, convey a sense of openness in government—any interested citizen can observe what is going on inside. Return air openings, adjacent to pairs of pivot-mounted, frameless doors opening to the foyers, also serve to dissipate any sense of secrecy inside the building.

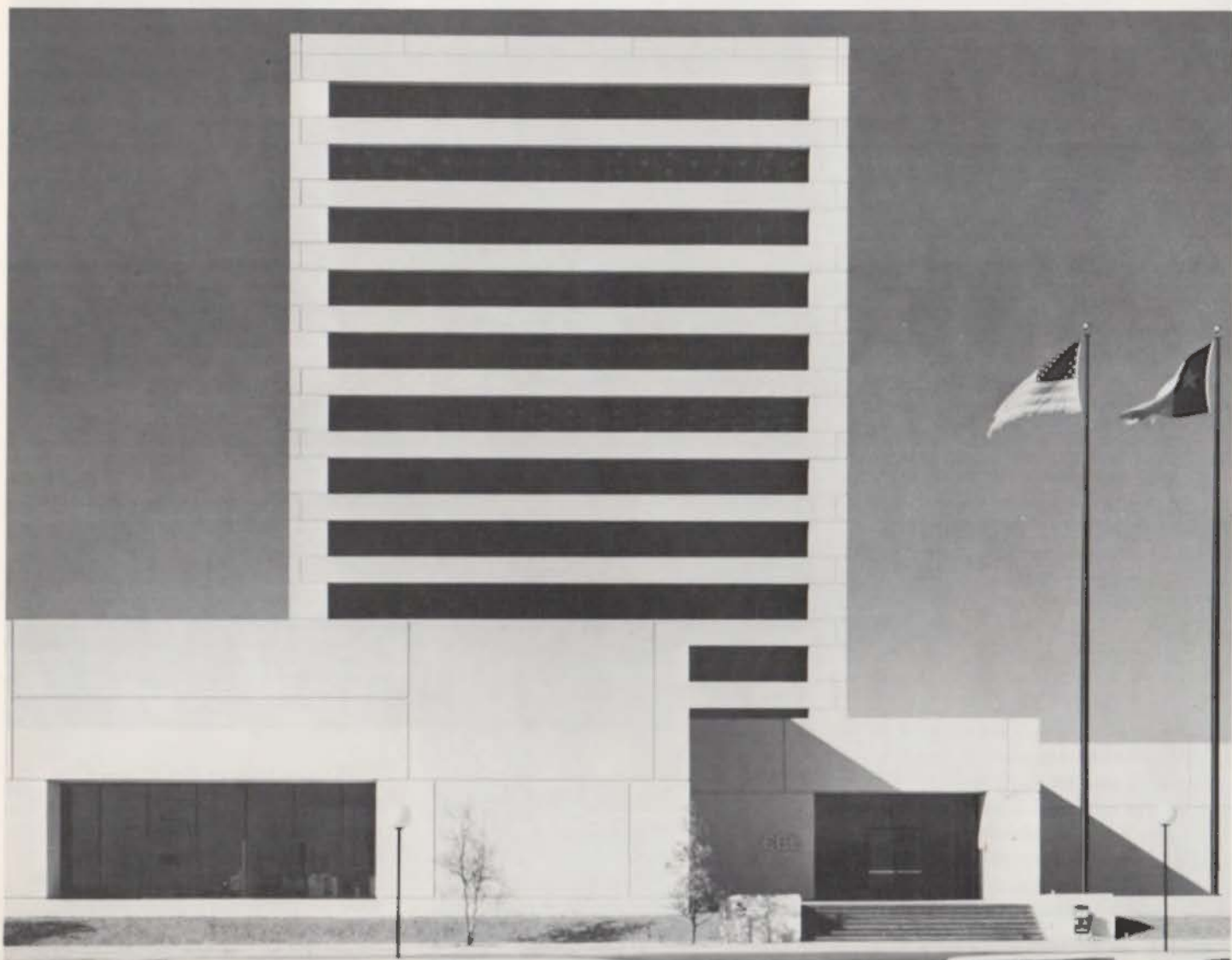
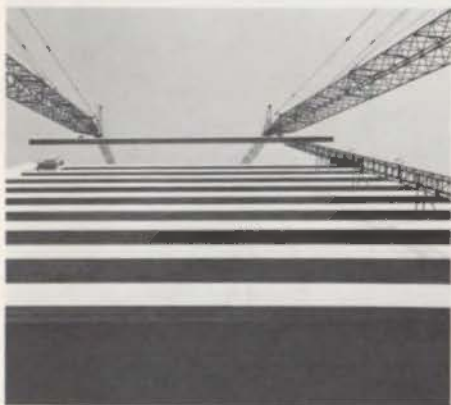
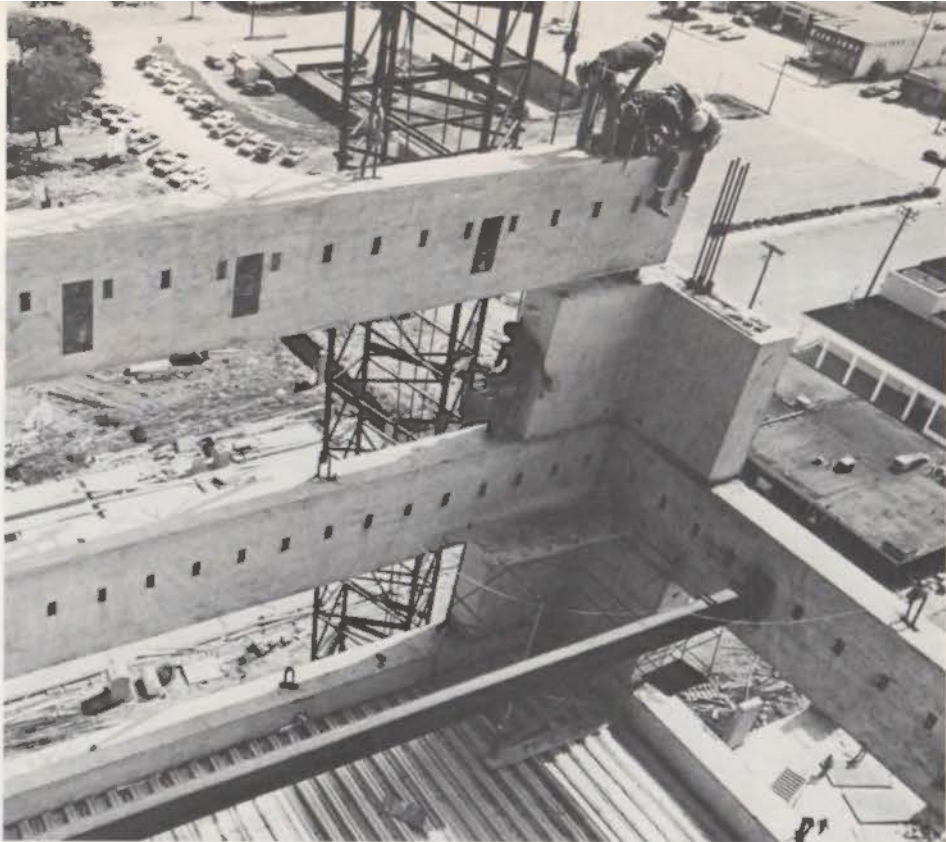
The building shell consists of insulated marblecrete and drywall on steel stud walls on the east and west. There are stiffened butt-glazed glass walls on the

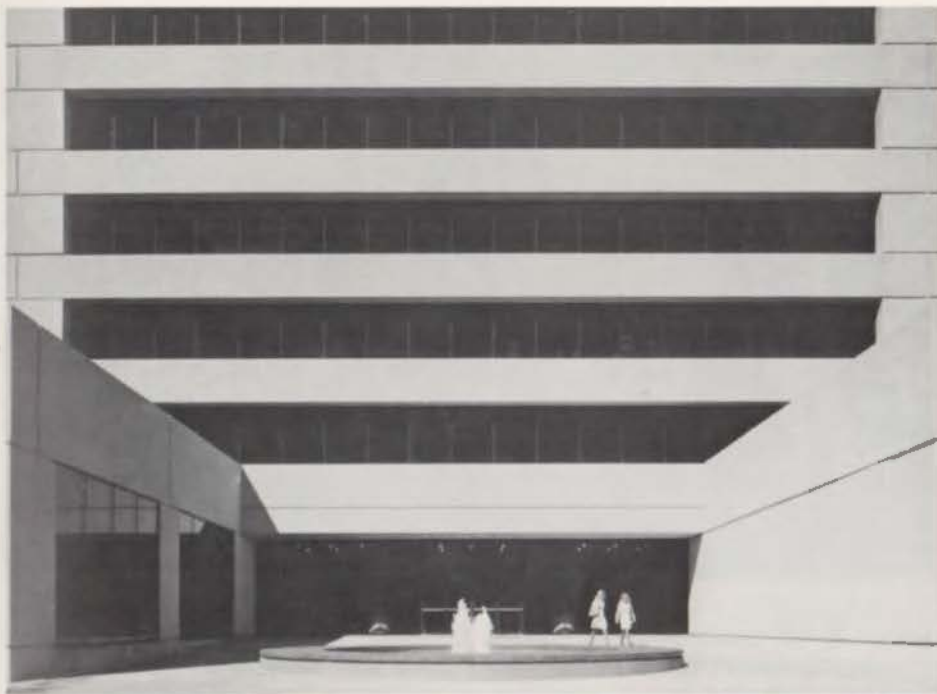


north and south, and at the entrance recesses. Interior partitions are drywall on non-com wood studs. Concrete columns support a laminated wood roof structure of wood deck, insulation, built-up roofing and copper fascias. Floor area is 2,880 square feet.

The new Bunker Hill Village City Hall, though efficient and up-to-date in every sense, captures some of the elements of an old town meeting hall. Rather than wall the citizenry off from their government, it invites them to participate.

Honor Award
Texas
Architecture
1977





CITIZENS BANK

As with so many buildings nowadays, one of the chief design considerations for the Citizens Bank Center in Richardson (on the northern edge of Dallas) was to capture the hurried attention of—and create an appealing identity for—motorists whizzing by on the expressway. Another consideration was harmonizing the facility with its suburban setting. And yet another was a long-range concern for possible expansion of banking services, as well as increased commercial lease space and parking.

The 13-story, 220,000 sq. ft. multi-purpose facility, designed by OMNIPLAN of Dallas, is a handsome, flexible, unpretentious high-rise whose appeal is in its simplicity. Located on a 12-acre site, the tower is an eye-catching composition of alternating bands of solids and voids—pre-cast concrete inset with insulating glass. The facility is master-planned according to long-range projections, with the bank and tower the first phase in the total plan.

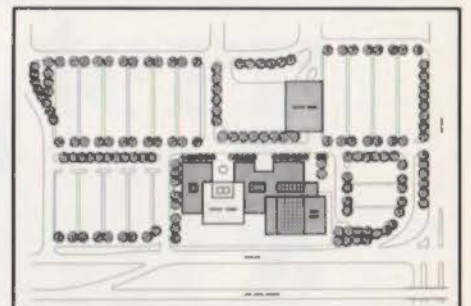
The building was planned around its structural system, which utilizes a slip-formed reinforced concrete core, pre-cast columns and spandrels, steel beams and deck with poured concrete floor. The tower is a 110 foot square, with a

central core housing elevators, stairs, toilets and mechanical rooms. There are no interior steel columns; pre-cast concrete beams extend from the core to the exterior. "L" shaped pre-cast concrete columns connect to the beams at the corners. The floor system is composed of steel beams and composite metal deck and lightweight structural concrete.

The office tower rises gracefully out of the 40,000 sq. ft., two-level bank facility. At night, the interior is softly illuminated and the building becomes a glowing landmark for the city of Richardson.

Drive-in facilities consist of 12 visual pneumatic units and two manned units. Two additional office towers, extra retail space and a multi-level parking deck are planned for the future.

Architects: *OMNIPLAN, Dallas*
 Principal-in-Charge: *George F. Harrel*
 Project Designer: *E. G. Hamilton*
 Engineers: *Datum Structures Engineering, Inc., Dallas (structural); Chenault, Brady & Freeman, Dallas (mechanical); Shimek-Roming-Jacobs & Finklea, Dallas (civil)*
 Landscape architects: *Myrick, Newman & Dahlberg, Dallas*
 Bank interiors: *Don R. Scott, Dallas*
 Contractor: *Thomas S. Byrne, Fort Worth*



Existing



Future

Projects in Progress

New Braunfels to Have New Savings & Loan

Construction is underway on the First Federal Savings and Loan Association building in New Braunfels—a three-level facility with a stately portico entrance and 32,000 square feet of office space. Designed as a joint venture by the San Antonio architectural firms of **Rehler, Vaughn, Beaty & Koone, Inc.**; **Joel Reitzer and Associates**; and **J.B. Roberts, Architect**, the structure is located on a 1.87-acre parcel on the northwest corner of a downtown plaza adjacent to the Comal County Courthouse. The site features large native pecan trees, many of which will be retained when the lot is landscaped.

There is a splashing fountain outside. The grand pillared entrance sits behind a broad open space which is an extension of the existing town plaza. The high lobby features stained-glass sky-



lights in a coffered wood ceiling with an open mezzanine floor projecting into the 25-ft. space.

Brick exterior and interior walls are highlighted by fine masonry details linking the building to the past; extensive wood detailing provides color and warmth. Clay tile floors, carpeting and

custom ceramic light fixtures complement the brick and wood.

There is basement parking of approximately 10,000 square feet, as well as an outdoor parking lot punctuated by trees and landscaping. Four drive-in teller lanes accommodate vehicle banking functions.



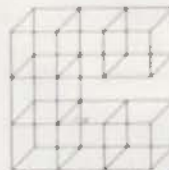
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Valley's Tallest Building Underway in McAllen

A bank and office tower complex which will be the tallest building in the Rio Grande Valley is being constructed in downtown McAllen. Upon completion, the 240,000 sq. ft. McAllen State

Bank Tower—designed by **3D/International**, based in Houston, in association with the McAllen firm of **Rike/Ogden**—will stand 17 stories above its palmdotted ten-acre site.

The bank tower will rise gracefully from a sloping two-story skylighted base containing the first floor main bank lob-

by. Banking functions will also occupy the tower's third and fourth floors, while the remaining 13 floors will contain lease space.

A carefully arranged "alfresco" environment integrates the building with its sub-tropical South Texas setting. A skylight encircling the structure at the intersection of the base and tower provides natural light for the bank lobby and mezzanine.

Exterior surfaces for the reinforced concrete structure will be warm-tone concrete sandblasted to expose limestone aggregate, bronze anodized aluminum, and dual-glazed bronze-tinted reflective glass. Deep pre-cast vertical concrete fins, which give the building a striped appearance, have been computer-designed for optimum depth and angle and to provide maximum sun shade.

Landscaping will feature washingtonia palms along the perimeter, which reflect the early history of the Valley when palms were planted to border land parcels.

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(214) 368-2952

terr a z z o



Hines Announces Plans For Well Tech Building

Gerald D. Hines has announced plans for an eight-story, 105,000 sq. ft., glass and aluminum office building for downtown Houston at the corner of Rusk and Louisiana. Named the Well Tech building, it will be part of a four-structure complex including One and Two Shell Plazas, and Pennzoil Place.

Designed by S.I. Morris Associates, Houston (Ken R. Harry Associates, Inc., Houston, will handle the interior architectural design work), the structure will tie architecturally into Pennzoil Place, across the street from Well-Tech's canopied main entrance. The building curtain wall will be the same bronze aluminum with bronze insulating floor-to-ceiling reflective glass. This dual pane glass has special thermal and reflective characteristics intended to provide maximum comfort year round and to reduce air conditioning and heating costs.



Well Tech will have retail shopping on the ground floor and in the tunnel concourse which will connect it to Two Shell Plaza on the south and Pennzoil Place on the north. The entire complex will connect with an existing network of air-conditioned passages to other ma-

ior facilities in the downtown area. (The three existing buildings comprise an established, functional business community whose office space is virtually 100 percent leased.)

Completion is slated for summer 1978.



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Sample, price information and application directions are available upon request.

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California 92704 (714) 979-0422





Austin Central Library Near Completion

Nearing completion is the new central building for the Austin public library system. Designed by **Jessen Associates, Inc., Architects and Planners of Austin,** the new facility is downtown on the one-half city block south and adjacent to the existing 1930s vintage central

library building. The existing building is being retained and will be used principally for the library's Austin-Travis County Collection of historical materials.

The new facility provides 116,000 square feet of floor area on five levels, including a basement. The first three floors will house stacks, reading and reference spaces. The top floor will con-

tain administrative offices, lounge, meeting rooms, staff work spaces and a 200-seat auditorium. Mechanical equipment and service functions will be contained in the basement.

Constructed of reinforced concrete, the exposed exterior elements are a combination of poured-in-place and pre-cast architectural concrete. Concrete surfaces will receive "brush-blast" sand blasting, resulting in a color similar to that of the limestone exterior of the existing building.

Glazed window surfaces are bronze insulating glass recessed five feet from the spandrel beam faces. Glass at upper floors is shielded from the sun by vertical fins and horizontal sun screens of architectural concrete. The building will be surrounded on three sides by plaza-like landscaped walks. Vehicular parking, a service drive and a receiving-docking dock are planned in the intermediate space between the new and existing structures and will receive landscaping designed to unify the two structures.

Interior features include pan-formed concrete waffle slab ceilings with lights and acoustical treatment in the coffers. Interior columns will be brush sand blasted. The first floor will be punctuated by a wide open-well stair with glass and aluminum balustrade and massive wood handrail. The large glass areas and open planning will contribute to an airy, informal atmosphere.

A special feature is the "telelift" conveying system which mechanically transports books and materials throughout the building. Thus, the usual extensive use of conventional book carts and lifts is reduced, contributing to a minimum of wear and tear on library materials and building surfaces, as well as increased efficiency and reduced personnel requirements.

Extensive engineering calculations were made on energy consumption as related to the design of the exterior building shell as the building design developed. The final design uses approximately the same amount of energy as a building with only 25 percent exterior glass surface without overhangs. The concrete overhangs and fins shade the large glass areas and function as heat absorbers during the day and as dissipators of heat during the night.

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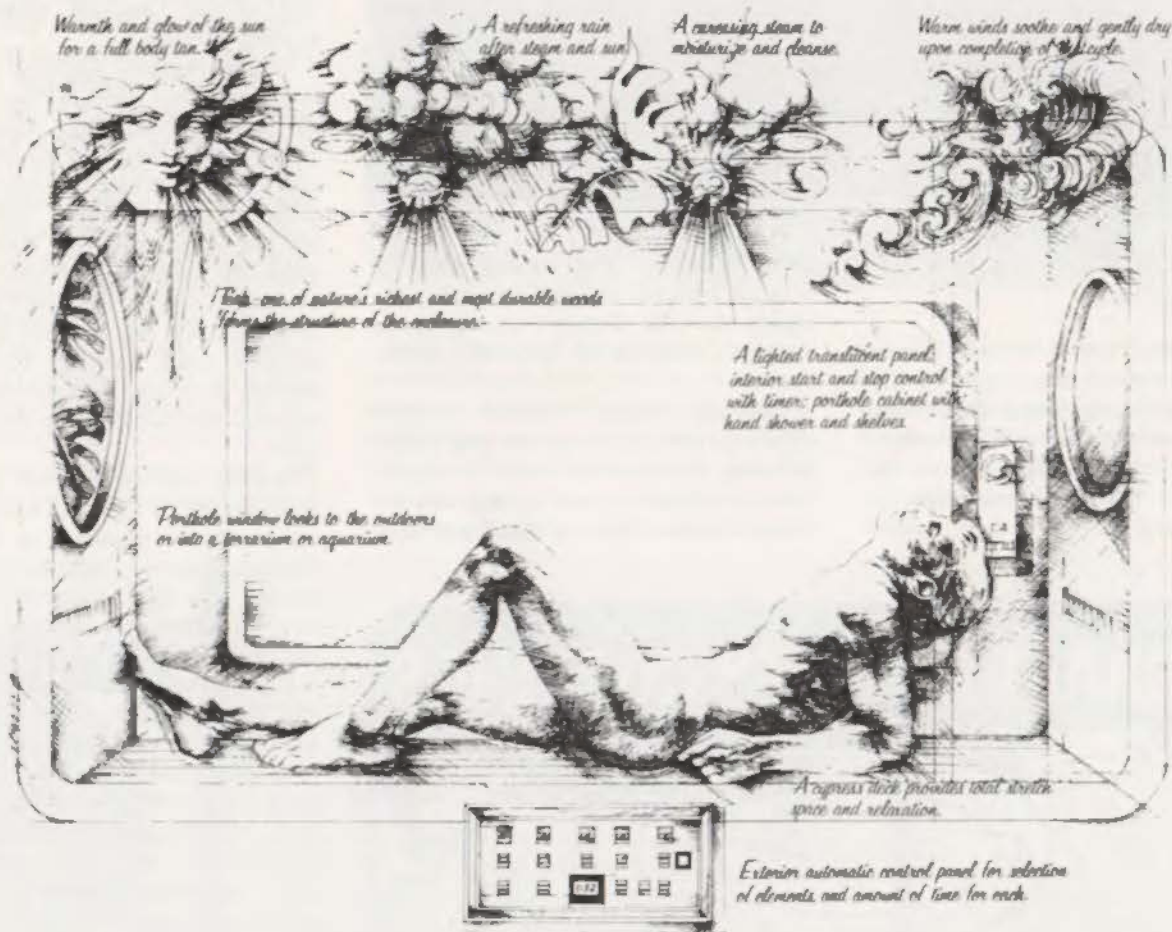
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In the News



McGintys Win Pitts Award

Two Houston architects, Milton B. McGinty and his son, John M. (Jack) McGinty, of the McGinty Partnership, Architects, Inc., are joint recipients of TSA's 1977 Llewelyn W. Pitts Award "for exemplary performance as architects and for dedicated service to the profession of architecture."

Established in 1967 in memory of former TSA president Llewelyn "Skeet" Pitts, the Pitts Award is considered the highest honor the Society can bestow. This year marked the first time the award has been presented to two individuals in one year.

Milton McGinty, FAIA, established the family firm in Houston in 1948, the year he served as president of TSA. Formerly, he had served as president of TSA's Houston Chapter from 1941-43. He received his architecture degree from Rice University and taught at Rice in 1942-43. His name is listed in "Who's Who in the Southwest."

Jack McGinty, FAIA, the current AIA president, received a BA in architecture from Rice University in 1957 and a Master of Fine Arts from Princeton University in 1961. He joined his father's firm in 1966 and took a leave of absence during 1967-68, serving a year in Washington as a White House Fellow and assistant to Secretary of the Interior Stewart L. Udall. In 1972, he was a member of the AIA Cultural Exchange Delegation to Russia. He has also taught architectural design at Rice University and at the University of Houston.

The McGinty Partnership, Architects, Inc., which also includes Milton's brother Burke, and his son, Milton, Jr., has received numerous awards for design work on every level of competition.

The Pitts awards were presented October 21 in El Paso during TSA's 38th annual meeting.

John G. Flowers Award

A newspaper writer, a magazine editor and a television producer—all of Houston—and a Dallas radio news director were recipients of the Seventh Annual John G. Flowers Memorial Award presented "for outstanding architectural reporting and criticism" at the TSA annual meeting in El Paso October 21. Presented in memory of late TSA Executive Director John G. Flowers, the awards consisted of a certificate and a \$500 cash prize for the winners in each of four media categories—newspaper, magazine, television and radio.



Holmes



Koen



Miller



O'Brien

Newspaper winner Ann Holmes, fine arts editor of the *Houston Chronicle*, was cited for a wide-ranging series of articles on the Houston architectural scene, described as providing "valuable medicine for an audience which probably doesn't worry very much about what makes a good city." Magazine winner Karleen Koen, editor of *Houston Home and Garden*, was honored for her series of articles on award-winning Houston homes, which was praised for explaining well "to a 'general public' audience what good houses are really about." Judge for the two print media categories was *Architectural Record* editor Walter F. Wagner, Jr.

Winner in the television category was Ray Miller, of *KPRC-TV* in Houston, for producing three segments of the "Eyes of Texas" series which investigated new uses for old architecture. The award was Miller's third consecutive Flowers Award for architectural reporting via television. In the radio category, Dave O'Brien, news director for *K-BOX* in Dallas, was cited

for producing and broadcasting a three-part special series on subterranean housing, described as "intriguing and professionally produced." Judge for the electronic media categories was J. Liener Temerlin of Glenn Bozel & Jacobs, Inc., Advertising and Public Relations, Dallas.

Texas Architect Cited

For the third consecutive year, *Texas Architect* has been judged a winner in the district awards program of the International Association of Business Communicators (IABC). Competing against publications throughout the Southwest, *Texas Architect* received a commendation based on graphics, writing and overall content. Managing editor Larry Paul Fuller accepted the award in Austin October 11.

In addition, *TSA Handbook 77* was a winner in its category, "One-time Issue Publications."

Architecture for Religion

Southwest architecture will be a focus of the Fourth International Congress on Religion, the Arts, Architecture and the Environment in San Antonio, May 26-30. Several hundred architects, designers, builders, artists, arts administrators, social scientists, educators, religious leaders and environmentalists from around the world will convene over Memorial Day weekend to consider various esthetic and moral dimensions of the environment—natural and constructed—and the arts—performing and visual—and "to attempt to understand where we as peoples have been in these areas and where we should be going."

Several arts and religious organizations have come together to sponsor the congress under the aegis of the Interfaith Research Council. The theme of the Fourth International Congress is "Rebirth of Imaginative Vision."

Taxpayer Information

The TSA office has been instructed that over the next few months, tax officers from Comptroller Bob Bullock's office will be visiting "every business in Texas." The representatives will inform taxpayers what is required of them by law, render assistance, answer questions, and insure that up-to-date permits are in effect. Such personal visits are to allow



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the early detection of taxpayer problems before they become critical, and also to acquaint the businesspeople of Texas with their particular representatives from the Comptroller's office. For information or assistance, dial the toll-free Tax Information Line: 1-800-252-5555.

Also, Bullock has sent a reminder that a new state law prohibits the issuance of a state check for goods or services to any individual or firm that is delinquent on any state tax.

Frye Named Health Committee Chairman

Houston architect Jason W. Frye has been named 1978 chairman of the AIA Committee on Architecture for Health.

A graduate of Rice University, Frye has practiced architecture in Houston for more than 20 years and is a partner in the firm of Golemon & Rolfe. He is an author, lecturer, and a member of numerous professional organizations, including the American Association of Medical Colleges.

Composed of 90 hospital and clinic designers from leading architectural firms around the nation, the Committee on Architecture for Health is AIA's advisory component on such factors affecting hospital design as cost containment, codes and regulations and the design process.

Best Booth Winner

A display representing Arcraft Industries of El Paso won the Best Booth Award in TSA's 1977 annual meeting exhibition in the El Paso Civic Center October 19-21. Arcraft's booth displayed the company's use of composite wall panels for wall systems. Arcraft also had winning booths in 1974 and 1976.

Best Booth Runner-up was a tie between JG Furniture of Quakertown, Pennsylvania, for a panel system furnish-



Arcraft, Best Booth



J. G. Furniture, runner-up



Monarch Tile, runner-up

ings exhibit, and Monarch Tile of San Angelo, which displayed ceramic tiles.

The awards were presented on the basis of ballots cast by convention registrants. TSA's 1978 exhibition will be held in San Antonio November 1-3.

Architecture Essay Award

The Heritage Society of Austin, in cooperation with the Texas Society of Architects, has established a student award for the best essay on historic architecture in Austin or Travis County.

Five hundred dollars will be awarded to a full-time student in a Texas college or university whose essay is judged the best in, among other criteria, general editorial and visual impact, historical and architectural accuracy, originality and extent to which the essay establishes the significance of the architecture described. The winning essay will be published in *Texas Architect*. A panel of judges will consist of a member of the *Texas Architect* staff, a restoration architect and a member of the board of the Heritage Society.

The essay should be 1,500 to 2,000 words—typewritten and double-spaced—and should be submitted with photographs and/or drawings for illustration. Specific subject matter within the general category of Austin-Travis County historic architecture may be limited to any number of historic structures, treat-

ed individually or in a group. The essay may not have been previously published and a bibliography of resource material is required.

Deadline for entries is March 15, 1978. All entries should be mailed to the Austin Heritage Society, Post Office Box 2113, Austin 78767. All submissions become the property of the Heritage Society and the Texas Society of Architects, who reserve the right to withhold the award and not publish an essay should the judges consider no entry worthy of selection. While only one cash award will be made, *Texas Architect* may publish any entry considered worthy of publication.

Interested persons should contact Joe Hart, c/o the Heritage Society of Austin, for further information.

News of Firms

Koetter Tharp Cowell & Bartlett, Architects & Planners, Inc., Houston, has appointed A. William Modrall, Jr., as Director of Business Development. Modrall is chairman of TSA's Practice Management Committee and is serving his second three-year term as a member of UT-Austin's School of Architecture Foundation Advisory Council.

KTC has also added the following members to its staff: architect/urban designer Ronald K. Burke; architect Bill Dakin; engineer Bill Davis; architect Alan Demos; architect Randy Distefano; architect Ken English; graphic designer Sydney Jimerson; space planner Gary Owens; and interior designer Carol Salley.

Mary Carter, a graduate of the UT-Austin School of Communication, recently was named Director of Communications.

3D/International (3D/I), Houston-based international architectural/engineering/project management company, is expanding its professional services to include civil engineering and has named senior associate Ahmad J. Ghaddar, PE, as director of the new activity.

The firm also has formed a contract management and services group and has appointed John L. Helm, formerly of Knoll International, as vice president and director.

Dr. Richard E. Wainerdi, PE, formerly director of Texas A&M University's Center for Energy and Mineral Resources, has joined 3D/I as a senior vice president. The firm has also announced the

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following promotions: to senior vice president—Victor A. Kormeier, Jr., CPA; George R. Thompson; Gilbert W. Thweatt; and Marcus R. Tucker; and to vice president—Frank F. Douglas; H. Davis Mayfield; Harry L. Scoggin; Keith J. Simmons; Charles B. Turner; Bob G. Wade; and Dennis T. Yaklofsky.

Bronson Dorsey has joined the firm of **Jessen Associates, Inc., Architects and Planners**, Austin.

Leo S. Wou, FAIA, founder and chief executive of Leo S. Wou & Associates of San Francisco and Honolulu, has

joined the Houston firm of **Golemon & Rolfe, Architects** as a lead designer. Wou, internationally recognized for his expertise in high-rise buildings, will specialize at Golemon & Rolfe in the design of high-rise commercial building projects, including apartments, hotels and office buildings.

The firm of **Lloyd Jones Brewer Associates**, Houston, has relocated to 802 Lovett Blvd., Houston 77006.

Houston architects F. James Akin and Stuart L. Rothman have organized a new firm, **F. James Akin/Stuart L. Rothman**,

Associated Architects, 10405 Town and Country Way, Suite 404, Houston 77024. Telephone: (713) 465-3261.

Corpus Christi architects Johnny W. Cotten and Gordon E. Landreth have organized a new firm, **Cotton/Landreth Architects**, located at Bank & Trust Tower #43, Corpus Christi 78477. Telephone: (512) 884-3295.

William C. Schenck has been appointed an associate in the Austin firm of **Coffee and Crier, Architects and Planners**. Since 1974, Schenck has been office manager and project coordinator for the firm.

The Austin-based architectural/engineering firm of **Page Southerland Page** has announced the appointment of the following new partners: Richard S. Atmar; William H. Brydson; Acree B. Carlisle; Ernesto G. Liebrecht; Phocion S. Park; Robert E. Tieman; and Jay L. Willmann. (Atmar is located in the firm's Corpus Christi office, Carlisle in Houston, and all others in Austin.)

Dallas architect James L. Hewlett has announced the opening of a new firm, **James L. Hewlett & Associates, Inc.**, offering services in project management, architecture and interior design. The firm is located at One North Park East, Suite 127, Dallas 75231. Telephone: (214) 750-6858.

Charles E. Lawrence, FAIA, senior vice president of **Caudill Rowlett Scott**, was named outstanding officer and Pat T. James was named outstanding associate of the Houston-based architectural planning and engineering firm for their significant contributions to CRS during the past year. The annual award for outstanding officer and associate is an education and research stipend.

CRS has also announced the appointment of two senior vice-presidents, two vice-presidents and ten new associates. To senior vice-president: E. Bruce Appling P.E., and Joe B. Thomas P.E. To vice-president: Roylance R. Bird, Jr., and Gerald S. Pfeffer. To associate: Conny R. Brown; Dennis G. Felix; Nathaniel Firestone; Louis E. Hood; Jim C. Kollaer; James W. McGibney; Charles F. Pock; Jane M. Stansfeld; Edward S. Werth; and Howard P. Zweig.

Lady Bird Awards

Eugene B. Barrier, maintenance construction supervisor in Karnes County for the State Department of Highways and Public Transportation, received a personal check for \$1,000 from Mrs.

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Lyndon B. Johnson for winning the 1977 Lady Bird Johnson Award for Highway Beautification. The second place award of \$500 went to Eugene Finke, of Washington County.

The award was established in 1970 by Mrs. Johnson to recognize the Highway Department employee who has performed the best job of highway beautification during the year. Barrier developed a method to increase the numbers of roadside wildflowers in Karnes County.



Left to right: Barrier, White, Johnson, Taylor, Stahl.

TSA Executive Director Des Taylor and President Chuck Stahl attended the award ceremonies Sept. 1 at Lyndon B. Johnson State Park in Stonewall. Judges were Texas Tech University Professor E. J. Urbanovsky, chairman; Glenn Biggs, San Antonio; Dr. Robert Dewers, College Station; Mrs. Jake Hershey, Houston; Mrs. William P. Hobby, Jr., Houston; Mrs. Marshall Steves, San Antonio; and architect Roy White, FAIA, Austin.

McMath Donates Art Collection

Architect Hugh L. McMath of Austin, TSA Emeritus, professor emeritus at UT-Austin and a Fellow of the Royal Society of Arts of Great Britain, has donated part of his art collection to Southwest Texas State University in San Marcos. Included in the collection are signed lithographs by American artist Thomas H. Benton and two pieces of McMath's own work.

The first director of the UT-Austin School of Architecture, McMath has been an art collector many years; several of his pieces are displayed in the Massachusetts Institute of Technology's historical collection. McMath says he gave his art treasures as a means of "leaving things of beauty" and hopes his donations will influence the students who view them.

Community Excellence Awards

Pinkie Martin, wife of Brooks Martin, FAIA, of Martin and Ortega, Architects, San Antonio, was one of six winners of the Community Excellence Award presented by TSA's San Antonio chapter. Martin was recognized for her support of legislation in favor of historic preservation.

Industry News

The **Spencer Company** is the new name for the former American Lawn Maintenance Company and its American Interior Plant's Division, a landscape maintenance and indoor plants company in Houston. The firm specializes in corporate facilities maintenance, including landscape design.

Monarch Tile Manufacturing, Inc., of San Angelo, has recently acquired a controlling interest in Ranger Clay Co., Inc., of Ranger, a producer of low-fire red clay used in the manufacture of ceramic tile, pottery and other clay products, Monarch president C. Scott Holcomb has announced. Monarch will

use the clay in its own tile products as well as provide the material to other manufacturers.

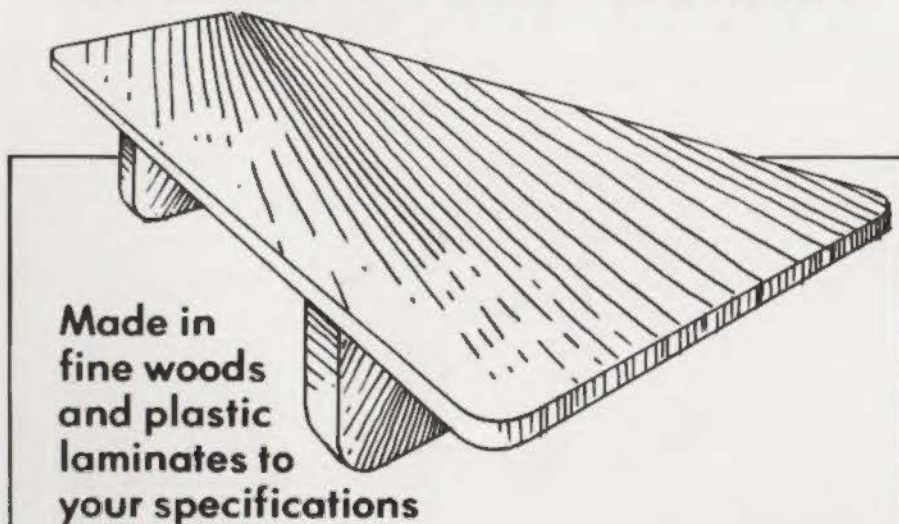
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School Awards

Four architectural projects were awarded a "Citation for Excellence" among 29 projects selected for display in the 1977 Outstanding School Architecture Exhibit at the TASA-TASB Joint Convention held recently in San Antonio.

Winning projects were: **Tarrant County Junior College**, Northwest Campus, Tarrant County—Geren Associates, Fort Worth; **Jonesboro High School**, Jonesboro, Arkansas—Caudill Rowlett Scott, Houston; **Longview High School**, Longview—Allen, Buie & Associates, Longview; and **J. L. McCullough High School**,

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The Woodlands—Simmons, Cavitt, McKnight, Weymouth, Houston, and McKittrick Drennan Richardson Wallace, Houston.

Other projects selected for display were:

Armand Bayou Elementary, Houston, Doughtie & Porterfield, Pasadena; Spring High, Spring, Wylie W. Vale, Houston, Newman Smith High, Carrollton, John R. Thompson & Assoc., Dallas; Country Place Elementary, Carrollton, John R. Thompson & Assoc., Dallas; W. A. Vines High, Plano, Corgan Assoc., Dallas; Renovation of Denney Theatre High School for Performing Visual Arts, Houston, Harvin Moore-Barry Moore, Houston; Kindergarten, Pecos, Covington, Shelton, Taylor, Odessa; Middle School, Mt. Belvieu, John Perry Assoc., Houston; Community School, Ladue, Missouri, Hellmuth, Obata & Kassabaum, Inc.,

Dallas; Holland Hall Lower School, Tulsa, Oklahoma, Ford, Powell & Carson, San Antonio; Trinity Elementary, Trinity, Swanson, Hiestler, Wilson, Claycomb, Dallas; Acton Elementary, Duncanville, Brasher+Goyette+Rapier, Dallas; Comanche High, Comanche, Swanson, Hiestler, Wilson, Claycomb, Dallas; Washington Irving Junior School, San Antonio, Phelps & Simmons & Garza, San Antonio; Briargate Elementary, Ft. Bend, MDRW Architects, Houston; Noel Grisham Middle School, Round Rock, Barnes, Landes, Goodman, Youngblood, Austin; American High, Miami, Florida, Caudill, Rowlett, Scott, Houston; Harvey S. Williams Elementary, Austin, Pfluger & Polkinghorn, Austin; The Briarwood School, Houston, MDRW Architects, Houston; Buda Elementary, Buda, Pfluger & Polkinghorn, Austin; Jenkins Elementary and Meyer Elementary, Spring, Swanson, Hiestler, Wilson, Claycomb, Dallas; Louis W. Fox High, San Antonio, Phelps & Simmons & Garza, San Antonio; Natatorium, Houston, The Klein Partnership, Houston; Missouri City Junior High, Missouri

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Photo by Richard W. Payne



Tarrant County Junior College

Photo by Otto Baitz



Jonesboro High School

Photo by Richard W. Payne



Longview High School



J. L. McCullough High School

Lubbock Scholarship Recipients

The TSA Lubbock Chapter's annual Golf and Tennis Tournament September 9 at Hillcrest Country Club in Lubbock provided \$500 scholarships for Texas Tech University architecture students Mark Drake, Lonnie Gray and Billy Lorraine. Tournament participants included architects, building contractors, building materials suppliers and persons from associated professions and trades.

News of Schools

Rice—Architecture students at Rice University and Tulane University in New Orleans recently completed a joint project involving the design of a hypothetical oil and gas museum on a nine-acre site near Hermann Park in Houston. Twenty third- and fourth-year Rice students were pitted against 21 of their Tulane counterparts in the project moderated by faculty architects William Cannaday of Rice and Brand Griffin of Tulane.

In presentations judged by architects Paul Rudolph, former dean of Yale University's School of Architecture; Michael Graves, of Princeton University; and Craig Hodgetts, University of California at Los Angeles, a Tulane student captured top honors and Rice students took second and third place.

Texas Tech—The National Architectural Accrediting Board advised the Texas Tech University Division of Architecture that its accreditation has been extended until 1982. For accreditation the NAAB reviews a school's curriculum, resources and programs. The board includes representatives named by the American Institute of Architects, the Association of Collegiate Schools of

Architecture, and the National Council of Architectural Registration Boards.

UT-Arlington—Brooks Martin, FAIA, senior partner of Martin and Ortega Architects, San Antonio, is teaching a graduate course in design this fall at the University of Texas at Arlington. The course investigates the re-use possibilities of old buildings, particularly those which are significant to the community either as a representative structure from an architectural period, or because they housed an important historical event. Martin, who has a bachelor of architecture degree from Texas A&M University and bachelors and masters degrees from Harvard University, has lectured previously at Boston Architectural Center and served as Visiting Critic in Design at Harvard.

UT-Austin—Dr. Edward McClure has been named associate dean for planning for the University of Texas at Austin School of Architecture and director of the Community and Regional Planning program for graduate students. A specialist in land use, McClure was formerly with the Florida State University urban and regional planning department, which

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he established in 1965, serving as chairman from 1965 to 1974.

Four other new faculty members have joined the UT-Austin School of Architecture for the fall term. Visiting Professor Marshall Kaplan is teaching two new courses in community and regional planning. Kaplan is a senior partner in the nationally-known firm for public policy and economic consulting, Marshall Kaplan, Gans and Kahn.

Visiting Associate Professor Lance Tatum, a Bryan architect known for his work in programming complex facilities,

is teaching programming and advanced architectural design.

Assistant Professor Everett Lowell Fly, an environmental designer, is teaching advanced architectural design and environmental design drawing.

Assistant Professor James Ortner, a transportation, urban policy and public services planner, is teaching a course entitled "Public Policy and Administration," which examines the financial relationships between federal and local governments.

Austin Chapter Winners

Seven architectural projects have been recognized for design excellence in the 1977 TSA Austin Chapter design awards program.

Chartier Newton was cited in the residential category for the design of his own residence, and in the non-residential category for Pecan Square specialty shopping center. Sinclair Black was honored for the design of the L. M. Coates residence at Lakeway.

Other non-residential category winners included the joint venture of Peters & Fields and Jessen Associates for their work at the University of Texas at Permian Basin; Coffee & Crier, Architects, for the Interpretive Center at McKinney Falls State Park southeast of Austin; Pfluger and Polkinghorn for the first unit of the Good Shepherd Lutheran Church in Cedar Park; and Emerson-Fehr, Architects, for additions to Robert Mueller Municipal Airport.

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Letters

Editor: The article, "Interior Architecture: An Overview," in your July/August issue has caused a number of comments among the membership of the Texas Chapter of ASID.

It is ASID's hope to improve the cooperation between architects and interior designers and to enlighten the architectural profession regarding the education, experience, and submission to a national qualifying examination by interior designers.

While many colleges and universities offer interior design programs, we recognize the necessity of educating qualified people and have worked together with Interior Design Educators Council to establish the Foundation for Interior Design Education Research (the organization to qualify schools of interior design) which is now recognized by the U.S. Office of Education and Council on Post-secondary accreditation. It is not feasible or desirable to have all interior design programs identical and therefore, university politics notwithstanding, what is taught is more important than what division interior design is in. There are strong schools of interior design as there are architectural schools. Since there are weak programs in both, would it not benefit the interior design and architectural professions, as well as the community, to work in a cooperative effort to understand each other?

We realize the need to continue improving our profession and our organization; national and chapter has this goal and we invite AIA and TSA to join in a cooperative effort. We would hope the ultimate goal is not a personal ego trip, but to better serve the client.

Perhaps in a future issue a more learned article on interior architecture/interior design could be written and we would welcome the opportunity to contribute to such article.

Jeannie Bazer
American Society of Interior Designers
President, Texas Chapter
Dallas

Editor: Your El Paso issue is a fine response to the annual problem of a convention theme issue. Outstanding cover, too.

Howard Falkenberg
Neal Spelce Associates/Manning, Selvage & Lee
Austin

Editor: I was pleased to see that you published the letter by Fred Oberkircher in your September/October issue, which was in response to the editorial by Marcus Tucker in your July/August issue on *Interior Architecture*. Professor Oberkircher's summarization that the editorial direction of the "IA" issue "could have helped to integrate the Interior Design/Architecture community instead of helping to alienate it" is the position Mr. Tucker asserted when he implied that only architects program, shape, and arrange three-dimensional space and concern themselves with materials, lighting, and user needs. As a professional Interior Designer for the past thirteen years, I have practiced these very same activities in architectural firms, in interior design firms, and as a consultant. And whenever it has been possible, I have worked with the building architect with the common goal of achieving the best possible interior design which enhanced the quality of the lives of the users and reflected the architectural, structural, and mechanical considerations of the building. When it has not been feasible to work directly with the building architect, the goal has been the same.

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It seems to me that this is the very goal for which we are all striving. If it is, then I can attest to its having been accomplished by many interior designers, interior architects, architects, space planners, and specifiers. To become fixated on terminology for people practicing Interior Design is absurd if we are really interested in using the best of our creativity and skills to accomplish environments to enhance the lives of all who experience them. Is not a more constructive approach one that encourages all of the environmental design disciplines to strive for excellence?

Cooperation and not divisiveness among environmental specialists will accomplish more of the excellent quality of interior architecture which your July/August issue published. And I would like to suggest that this cooperation take the form of recognizing all Interior Designers (regardless of which title they prefer) who practice Interior Architecture.

Cathy B. Allgeier
School of Architecture and Environmental Design
The University of Texas at Arlington
Arlington

Editor: It is my pleasure to express to you my warmest congratulations on the production of the September/October issue of the Texas Architect. In my judgment it is the finest thing we have ever done in the magazine and the effort resulted in a great turn-out for our convention in El Paso.

The scholarly compilation of creditable data, the imagination and professional editing and the design of graphics and the magazine results in a production of high merit.

Thank you and the staff for an excellent issue. Of course, I am prejudiced!

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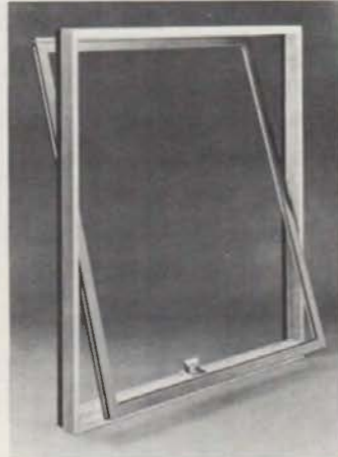


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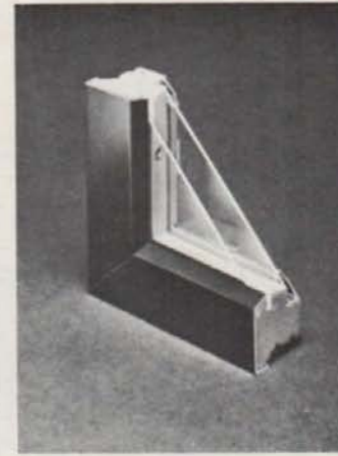


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