Texas Architect

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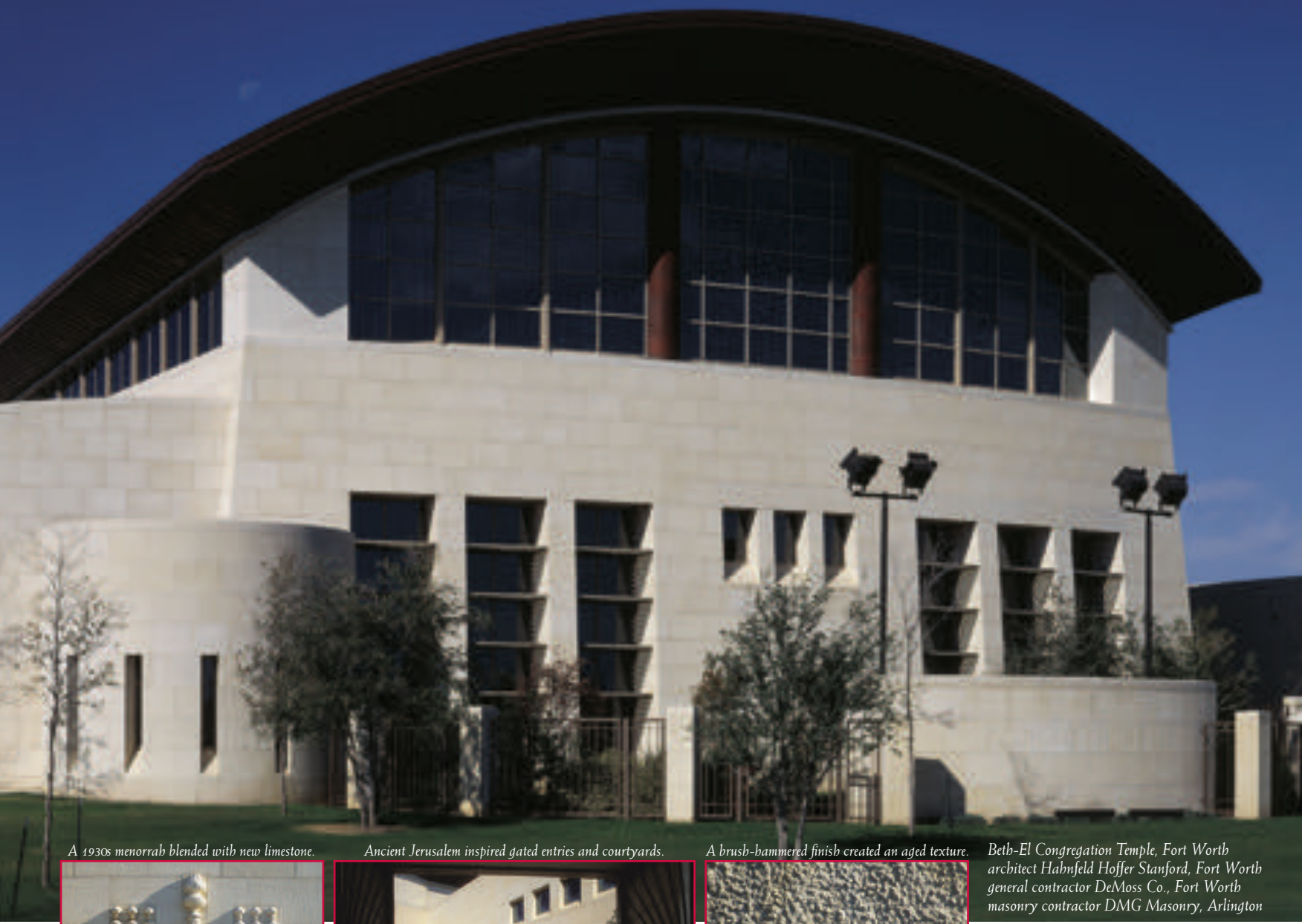

A 1930s menorrah blended with new limestone.

Ancient Jerusalem inspired gated entries and courtyards.

A brush-hammered finish created an aged texture.

Beth-El Congregation Temple, Fort Worth
architect Habnfeld Hoffer Stanford, Fort Worth
general contractor DeMoss Co., Fort Worth
masonry contractor DMG Masonry, Arlington

Photography Ray Don Tilley, Bastrop, TX

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"Beth-El is an established congregation, so the design for its new temple had to reflect a sense of permanence. We used Texas Quarries Cordova Cream limestone with a brush hammered finish to recall antiquity. We even integrated carved limestone menorrahs from the original building seamlessly into the new design. The layout was inspired by Solomon's Temple. Gated entries lead you from street to courtyard to the sequence of spaces inside, which progressively become more sacred. Each enclosure opens onto a courtyard and is scaled to create a sense of ancient Jerusalem. Despite these allusions, this is clearly a modern structure, one particularly well-suited to the timeless and comforting qualities of Texas Quarries limestone."
— David Stanford, AIA, Habnfeld Hoffer Stanford, Fort Worth

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COLOR

DEPARTMENTS

ON THE COVER
Home on 21st Street by Urs Peter Flueckiger; photo by Urs Peter Flueckiger

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'Green' Renewal

Historic preservation can represent the ultimate strategy for sustainable architecture

ALBEIT tangential to this edition's "Color" theme, the profession's achievements in sustainable design deserve to be acknowledged at every opportunity. The fact that three of the AIA Committee on the Environment's Top Ten Green Projects are in Texas demonstrates how the state's architects are successfully responding to their clients' desire for buildings that minimize environmental impact and maximize the energy-efficient attributes of high-performance design. See the article on page 8 for news on those three COTE honorees.

STEVE HUDSON COURTESY W.O. NEUHAUS ARCHITECTS

The rehabilitated Jefferson Davis Hospital is now the Elder Street Artists Lofts, with a planted roof on the three-story addition at the far right.

Another recent success story is the rehabilitation of the former Jefferson Davis Hospital near downtown Houston, a 34-unit residential project that exemplifies sustainability in several ways. First and foremost, the project – now called Elder Street Artists Lofts – rescued the decrepit and empty 1924 Neo-classical edifice from demolition. The old hospital, abandoned for 20 years, was steadily deteriorating until Artspace, a Minneapolis-based non-profit developer, teamed with the local Avenue Community Development Corporation to create new dwellings for artists. With funding from various sources, the recently completed project revivifies the Washington Avenue community in the city's First Ward by fulfilling a tremendous need for affordable housing while also establishing a connection to the thriving downtown Theatre District. W.O. Neuhaus Architects of Houston designed the project.

The project also features the first planted roof on a historic tax-credit project in Texas. That aspect is particularly important to Anna Mod, who worked as the historic preservation consultant for Artspace. Mod sees the integration of the planted roof as a significant step toward aligning the discipline of historic preservation with environmental-conscious architectural design. "'Green' really hasn't easily embraced historic preservation," Mod says, although the principles behind "green" architecture might suggest a closer relationship.

The planted roof is only about 300 square feet and is not accessible to tenants. However, Mod says its inclusion in the design – and in the funding package that made the entire tax-credit enterprise possible – added a critical environmental benefit to the project. "It lowers the amount of heating and cooling required for that part of the building," she says, "as well as reduces the amount of heat reflected back to the city." The technology, common throughout Europe and in a few U.S. cities, is slowly being implemented in Texas.

With advocates of sustainable design now working more closely with historic preservationists, there's still hope that this relationship will strengthen. "This is the ultimate in 'green' architecture," Mod says about the rehabilitated hospital, because rather than tearing down the existing fabric and starting over, "we're recycling old buildings."

STEPHEN SHARPE

Staff Changes at *Texas Architect*

A close look at the masthead on the opposite page will clue alert readers to the departure of Art Director Rachel Wyatt and Associate Publisher Linda Trinh, as well as the promotion of Ashley St. Clair from assistant editor to art director. Rachel, who joined the *TA* staff in November 2004, is the new associate art director at *Texas Monthly*. Linda, after almost two years with the *TA* staff, has taken a position with Bulldog Solutions in Austin as a marketing campaign manager. Both Rachel and Linda have worked closely with Ashley since she began working part-time one year ago while completing her bachelor's degree in communications at the University of Texas. Ashley, an accomplished photographer with excellent graphic design skills, was the natural choice to succeed her mentor. (Rachel previously taught graphic design at UT Austin and is proud to describe Ashley as having been her favorite student.)

A couple of other changes to the masthead took place with publication of the Jan/Feb 2006 edition—the addition of two new *TA* contributing editors, Bryce Weigand, FAIA, of Dallas, and Gregory Ibañez, AIA, of Fort Worth. Their bylines have appeared in *Texas Architect* with increased frequency over the past several years, and their agreeing to join the *TA* stable of writers is gratefully appreciated by this editor. Both Bryce and Greg bring to *TA's* pages their keen insights into design and, a rarer talent, the ability to write intelligently about it.

CORRECTIONS

Due to an editing error, a news story in the May/June edition misstated the year the Kimbell Art Museum was built. The museum was completed in 1972.

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Texas 'Green' Projects Among AIA's Top Ten

TEXAS has three projects among the AIA's 2006 top 10 examples of sustainable architecture and green design solutions that protect and enhance the environment. The annual list of Top Ten Green Projects is selected by the AIA's Committee on the Environment (COTE).

The 2006 COTE Top Ten Green Projects address environmental conservation and the notion of sustainable development with designs that integrate architecture, technology, and natural systems. They make a positive contribution to their community, improve comfort for building occupants, and reduce environmental impacts through strategies such as: reuse of existing structures, connection to transit systems, low-impact site development, energy and water conservation, use of sustainable or renewable construction materials, and design that improves indoor air quality.

The three Texas projects are:

• Westcave Preserve Environmental Learning Center in Travis County by Jackson & McElhaney Architects of Austin—A 30-acre nature preserve and canyon 28 miles northwest of Austin, Texas needed to expand its community programs by building a new "wilderness classroom" and provide a meeting place for walking tours to a nearby waterfall and "live" grotto cave. The goal of the two agencies who partnered for the project was to foster the respect and stewardship of the natural environment, provide environmental education, and preserve this sanctuary into the future. The design of the structure was conceived as a 3-dimensional textbook. The architecture and design elements work to mimic or model the surrounding natural systems.

Jury comments: "This project is truly of its place. They looked at building as a teaching tool. The east and west faces are the long faces of this building … the eaves are a regional vernacular. There is pocket parking and a wooded site. The glass is high and well protected. They were careful to preserve the vegetation. They paid close attention to issues of thermal mass."

• World Birding Center in Mission by Lake/Flato Architects of San Antonio — The Lower Rio Grande Valley is one of the richest bird habitats in the world, however only 5% of the native habitat currently remains. On the major migratory pathway for most North American species, the area has become a major destination for nature enthusiasts. The new World Birding Center, built at the Bentsen–Rio Grande Valley State Park for Texas Parks & Wildlife, creates a gateway between the disturbed agricultural land and a 1700-acre native habitat preserve. The design approach was to do more with less. The architecture learned from the regional vernacular, responded to the harsh climate, and minimized disturbance of existing habitat.

Jury comments: "It caters carefully to the type of occupant, a place for quiet observation, it was a nice, delicate intervention on its site. They brought the programmed square footage down from 20,000 to 13,000. This is a good example of right-sizing, an approach that is often overlooked. This project also follows the big moves: reduce, reuse, recycle. Reducing square footage is the biggest move you can make."

• School of Nursing & Student Community Center in Houston by BNIM Architects of Kansas City, Missouri, and Lake/Flato Architects of San Antonio — The School of Nursing design team became stewards of the vision established by University leadership for a nursing school and student community center designed to be state-of-the-art for learning, research, student service, and workplace. The resulting building reduces the use of energy, polluting chemicals, cleaning agents, potable water, and other resources. The School of Nursing and Student Community Center at The University of Texas Health Science Center at Houston establishes benchmarks for healthy buildings; for daylight; for visual acuity and cognitive learning; and for flexibility, durability, and reduced operating costs. The design is straightforward and transparent. In plan and section, distinct zones organize building functions, to maximize exposure to the adjacent park, views, and daylight.

Jury comments: "This was a programmatically complex project on a difficult and dense site. They had to combine a lot of human and high tech functions. I like that they set this building up to get greener; there is a framework for photovoltaics when they can afford it. I think we should all be thinking about designing buildings that can adapt over time."

TEXAS ARCHITECT STAFF

Westcave Preserve, Travis County

World Birding Center, Mission

School of Nursing, Houston

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As the Texas A&M College of Architecture concludes its yearlong centennial celebration, we pay tribute to those who have guided our destiny and look confidently to the future and the roles our students and faculty are yet to play in shaping a sustainable, livable and aesthetically pleasing future.

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Taniguchi Set to Unveil Revised Design this Summer for Asia House Houston

COURTESY ASIA SOCIETY TEXAS

Preliminary renderings of Asia House Houston illustrate the essence of Taniguchi's response to the site in the city's Museum District. The early drawings depict a two-story building with a roof terrace opening to a view over adjacent gardens and toward the skyline.

HOUSTON Yoshio Taniguchi, best known in the U.S. for his recent expansion of the Museum of Modern Art in New York City, will unveil his latest schematic design for Houston's Asia House later this summer. The client, Asia Society Texas, has acquired two facing parcels totaling 78,000 square feet along one block of Southmore Boulevard between Caroline and Austin streets in the city's Museum District. The 35,000-sq. ft. facility is expected to open in summer 2009 and will serve as a venue for cultural, artistic, educational, and business exchange. Asia Society Texas is affiliated with the Asia Society, which describes itself as an international organization dedicated to strengthening relationships and deepening understanding among the peoples of Asia and the U.S. Headquartered in New York, the Asia Society also has nine regional centers around the world.

Asia House Houston is the second international commission for Tokyo-based Taniguchi and Associates, whose MoMA project was completed in late 2004. In his native Japan, Taniguchi is well known for a wide range of exceptional buildings executed over the past 25 years that include art museums, libraries, schools, a hotel, an aquarium, and a tea house and garden. *Nine Museums by Yoshio Taniguchi* was one of the inaugural exhibitions at the expanded MoMA. Though focused on only one building type, the exhibition highlighted Taniguchi's approach that gives priority to the immediate physical and cultural context of each project and the programmatic requirements of each specific institution. His architecture is known for its simplicity of forms, refined proportions, and attention to materials and details. Taniguchi was selected as the architect for Asia House Houston from a short list that included New York-based Tod Williams Billie Tsien Architects and Kyu Sung Woo Architects of Cambridge, Mass. Kendall/Heaton Associates of Houston is architect of record for the project and Houston architect Geoffrey Brune is serving as the design liaison/project manager.

Asia House Houston, best described as a cultural center, will be composed of five major program components—exhibition spaces, a theater, public reception spaces, meeting rooms, and administrative and office spaces. A tea room and gift shop also will be a significant part of the project. Exhibition spaces totaling 5,000 square feet will be of two types: galleries for temporary exhibitions of art and culture and galleries for rotating exhibitions of works from the Mr. and Mrs. John D. Rockefeller 3rd Collection of Asian Art, which is the core of the renowned permanent collection of Asia Society New York. A 300-seat theater will accommodate a variety of performing arts including music and dance as well as for film and lectures. The reception spaces will serve for a range of social, educational, and business functions.

Taniguchi's preliminary schemes for the project have focused on a relationship between the building and its surroundings. Continuity between interior and exterior spaces, and the development of gardens and terraces have been a priority. Taniguchi has placed the building on the south parcel along Southmore Boulevard while reserving the north side for garden spaces and landscaped parking. The unique situation of a separated site and Taniguchi's architectural response will allow for controlled views from the building into a block-long, park-like setting. Preliminary designs show a two-story building with public spaces on both levels. A proposed roof terrace should provide a spectacular view across the street, over the landscaped north parcel and towards the downtown skyline. The creation of a more idealized site condition within an architecturally heterogeneous and rapidly changing neighborhood may be similar in attitude to the approach for the surroundings of the Menil Foundation's "village museum," only a short distance from Asia House, that established a unified architectural and landscape context over several blocks. Asia House Houston is expected to be relatively modest in size and scale to respond to the predominately residential character of the area.

Taniguchi's design for the MoMA exemplifies how he places importance on outdoor space, and how his buildings express a continuity between inside and outside spaces. While architect Peter Eisenman and sculptor Richard Serra had suggested that the MoMA's sculpture garden (realized by Philip Johnson in 1953) should be removed, Taniguchi maintained it as an important and central design element in his project. At the MoMA, Taniguchi's site approach and urban insertion were masterful. A similar result is likely in Houston. In general, Taniguchi's architectural approach relies more on refinement than innovation. In New York, however, a higher level of finesse of execution would have been desirable, and the architect's reputed command and success related to detail and materiality fell short of expectations. On this count Houston should strive for better results.

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Woodall Rodgers Park Planned as Literal Bridge for Urban Dallas

DALLAS Fueled by a vision that is as compelling as it is bold, Woodall Rodgers Park has quickly emerged as one of the most significant – and popular – initiatives in Dallas' urban core.

Since the early 1980s, the canyon created by the construction of Woodall Rodgers Freeway has physically separated the northern quadrant of the central business district from neighborhoods to the north. With the concurrent emergence of the Arts District on the downtown side and a wonderful, walkable urban residential district to the north, known as Uptown, this separation has become increasingly significant. Woodall Rodgers Park will literally bridge this gap and create a much needed urban oasis for Dallas.

In 2005, the Woodall Rodgers Park Foundation was created to pursue this vision. Armed with $3.5 million in initial funding, including a $1 million grant from The Real Estate Council, much has been accomplished. Under the leadership of Dallas Park and Recreation Assistant Director Willis Winters, AIA, an international field of designers was considered before the search culminated in the selection of The Office of James Burnett. In addition, Dan Biederman (renowned for leading the renaissance of NYC's Bryant Park) was tapped for programming consultation and Carter and Burgess was retained for its bridge and transportation expertise.

The current design creates a five-acre park spanning from Pearl to St. Paul streets created by decking over a portion of Woodall Rodgers Freeway. Rich in programmed features, the design reflects the influence of Biederman (learned over his 20 years running New York City's highly acclaimed Bryant Park) by providing a wide variety of activity centers to entice visitors. These will include cafés, interactive water features, food kiosks, a children's area, a dog park, and – likely its most iconic element – a band shell set on a massive lawn.

ILLUSTRATIONS BY JIM ARP FOR THE OFFICE OF JAMES BURNETT

The initiative will create five acres of public parkland by decking over part of Woodall Rodgers Freeway. The freeway now separates the north end of downtown Dallas (including the Arts District) and adjacent residential districts.

Careful consideration also has been given to the way the park nestles into the surrounding urban fabric. One lane of the surrounding frontage roads will be reclaimed to provide on-street parking with adjacent tree groves to soften the street edges. Harwood Street will be closed through the park and Olive Street will be diminished to minimize the intrusion of the street grid into the footprint of the park. Connections with adjacent urban assets also are being considered, including the Katy Trail and the McKinney Avenue Trolley. The present design has yet to solve the problem of effectively bridging Pearl Street and providing robust linkage to the important cultural elements in the north end of the Arts District.

Woodall Rodgers Park has clearly captured the imagination of many, and its trajectory is ascending. Current plans call for a 2007 groundbreaking and completion in 2010, with costs expected to be $70 million. Of this total amount, $10 million has been approved by the State of Texas and $20 million has been slated for inclusion in Dallas' upcoming bond election.

Also, a fundraising campaign that began on June 7 already has garnered more than $10 million in pledges from the private sector. Given its proximity to other significant initiatives – such as the Dallas Center for the Performing Arts, the Nasher Sculpture Center, the Trinity River Plan, and the Calatrava bridges – the catalytic power of transforming a freeway canyon into a green connection between two increasingly vibrant districts in the core of the city is proving to be a simple, but powerful idea.

DUNCAN T. FULTON, FAIA

Of Note: Calatrava Bridges

DALLAS Among the defining elements of Dallas' Trinity River Plan, none have received more attention than Santiago Calatrava's three proposed signature bridges. In early June, this attention turned to scrutiny when city officials announced that the low bid for the first bridge was $113 million—almost twice its $57 million budget. Located at the terminus of Woodall Rodgers Freeway, this 1,800-foot span features a graceful 40-story parabolic suspension tower. City officials expressed disappointment with this development, but indicated they intended to work with Calatrava to address this situation in a manner that still resulted in a signature bridge. Less certain, however, was the prospect that all three of his bridges will ultimately be built.

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AIA Houston Presents Design Awards

HOUSTON AIA Houston recognized 15 projects in the chapter's 2006 Design Awards. The jury – Margaret Helfand of Helfand Architecture; Steve Cassell of Architecture Research Office; Zack McKown of Tsao & McKown Architects; and Rob Rogers of Rogers Marvel Architects – selected the winners from 113 submittals.

Seven Honor Awards were presented in four different categories. The jury bestowed four projects with Honor Awards in the category of Architecture—Bellaire Medical Complex by MC² Architects; Harris County Youth Services Center by Page Southerland Page; Canal Street Apartments by Val Glitsch, FAIA; and Jones Plaza Cornerstones by Natayle Appel + Associates Architects.

Bellaire Medical Complex received an award with notation for sustainable design given for use of north-facing clerestories and courtyards to diffuse natural light, and low-impact building systems for its construction.

The 72,800-sf Harris County Youth Services Center is organized into bar-shaped buildings scattered over a large green site, creating a series of interior and exterior courtyards. Materials, plants, colors, and systems used to identify departments reinforce building/client interaction.

Canal Street Apartments is the city's first single room occupancy apartment complex built in a neighborhood district. Located in Houston's Second Ward, the 40,000-sf complex is divided into two separate structures joined by a breezeway, enclosing an outdoor courtyard with native landscaping.

Jones Plaza Cornerstones converted existing concrete air shafts for underground parking ventilation into visual landmarks at each corner of Jones Plaza, the heart of Houston's Theater District. Sandblasted images representative of the surrounding arts venues animate each corner of the backlit perforated steel panels.

In the Housing category, Jay Baker Architects received an Honor Award for the Jeff Shankman House, and Collaborative Designworks with Openshop Studio earned an Honor Award for House 2045. Powers Brown Architecture with SWA Group also received an Honor Award for Westchase District Long Range Plan in the Urban Design category.

The Jeff Shankman House is designed with sensitive scaling of both the exterior form and the interior spaces. The floor plans are clear and provide interaction with the courtyard. A second floor screen porch, located between the two bedrooms, provides a view of the garden below.

House 2045 reinforces a growing trend toward modern design along Houston's University Boulevard. The 3,400-sf residence features two crossing rectangular tubes; the lower tube contains the main living areas while the upper tube contains the guest bedrooms and a play area.

Westchase District Long Range Plan earned a notation for sustainable design. The 4.2-square mile project proposes the transformation of an aging city district into pedestrian-friendly zones centered about urban amenities.

Jones Plaza Cornerstones

Bellaire Medical Complex

Canal Street Apartments

House 2045

Harris County Youth Services Center

Shankman House

Westchase District Long Range Plan

AIA West Texas Awards Five Projects

SAN ANGELO Five projects received awards in AIA West Texas's 2006 Design Awards. The projects were reviewed by a panel three jurors—Ray Bailey, FAIA, of Bailey Architects; Rick Archer, FAIA, of Overland Partners; and Dan Shipley, FAIA, of Shipley Architects.

Jurors presented an Honor Award to Midland Classical Academy by Rhotenberry Wellen Architects. The new private school for grades 7-12 features a classroom wing, a resource center wing, and a student center wing arranged in a pinwheel plan around a central courtyard.

Rhotenberry Wellen Architects also received three Merit Awards, one each for Palo Alto Ranch, McDonald Observatory Visitors Center, and Trinity School Play Center.

Palo Alto Ranch, located on seven acres in a rural development outside of Fredericksburg, is separated into three wings joined by a multi-use space. Sensitive to the region's vernacular, the exterior is comprised primarily of local limestone and a standing seam copper roof.

The 11,000-sf McDonald Observatory Visitors Center in Mt. Locke includes an 85-seat orientation theater, exhibit space, a classroom, a café, a gift shop, and support spaces. Designed to be an integral part of the observatory's public education program, the site features a sundial court, a telescope park, and an amphitheater to accommodate "hands-on" star-gazing.

The Trinity School Play Center is the first structure in an updated campus master plan. The day care center, accommodating 50 children, provides open activity space, secure outdoor play areas, and easy access to the street.

A Merit Award was also presented to San Angelo Visitors Center by Chakos Zentner Marcum Architects and Craig Kinney Architects. Situated in the city center, the 11,500-sf structure faces the main thoroughfare and abuts the banks of the Concho River. A covered breezeway connects the building's two sides, with patios and a fountain that spills down the hillside into the river. The new structure has dramatically increased attendance to the center.

McDonald Observatory Visitors Center

Midland Classical Academy

Trinity School Play Center

Palo Alto Ranch

San Angelo Visitors Center

Ranches Preserved Exhibit at Texas Tech

The National Ranching Heritage Center at Texas Tech University will host *Ranches Preserved: Historic American Buildings Survey Documentation of West Texas Ranches*. The exhibit will display drawings, photographs, and artifacts associated with West Texas ranches, including Charles Goodnight's and John Adair's JA Ranch in Palo Duro Canyon; the Goodnight Ranch House at Goodnight; and the 6666 Ranch House, Barn, and Bunkhouse at Guthrie. For more information, contact Dr. Gary Lindsey, AIA, at (806) 742-0498. OPENS JULY 9.

RDA Hosts Forums on Public Realm

"The Public Realm" is a series of three civic forums that will be presented by the Rice Design Alliance focusing on three areas in the Houston area where significant transformations are beginning to take place. The first forum will cover the Downtown District. The forums will consider the definition of the public realm and those who are responsible for the public realm. Admission is free and open to the public. All forums begin at 7 p.m. in the Brown Auditorium at The Museum of Fine Arts, Houston (enter via the Main Street door). Call (713) 348-4876 or access more information at *www.rda.rice.edu*. JULY 12.

A Second *Gee's Bend* at MFAH

Gee's Bend: The Architecture of the Quilt at the Museum of Fine Arts, Houston features brilliant, bold, and dynamic quilts that are as much reminiscent of abstract paintings as of traditional American quilts. (See review on p. 20.) This exhibit follows *The Quilts of Gee's Bend*, an exhibition of stunningly original works by the women of Gee's Bend, Alabama, that was organized and premiered at MFAH in 2002. Go to *www.mfah.org* for more information. THRU SEPT. 4.

Children's Health Symposium

The Fourth Biennial Scientific Symposium on Children's Health as Impacted by Environmental Contaminants will feature discussions on three major issues, including how the built environment affects children's health. Learn about healthy building design, construction, maintenance, the development of standards for materials, and the adoption of policies for operating practices that can reduce health risks to children. Hosted by the Children's Environmental Health Institute, the symposium will take place at McKinney Roughs Nature Park near Austin, located 13 miles east of Austin-Bergstrom International Airport. More information is available at *www.cehi.org*. SEPT. 16.

Girl Scout Leadership Center

The Sally Cheever Girl Scout Leadership Center, designed by Marmon Mok, will be a 30,000-sq. ft. regional headquarters serving Girl Scouts in the San Antonio area and nine surrounding counties. The wooded seven-acre site just north of San Antonio International Airport offered the architect the opportunity to embrace the spirit of the Girl Scouts by taking a "nature in the city" approach that has resulted in several environmental-friendly attributes, including rainwater collection, hiking paths, and native landscaping. The $3.8 million project will include an adult volunteer training facility, a shop, offices, and meeting rooms. A central lobby will connect a one-story wing and a two-story wing, all sheathed in native stone and cement plank over a steel/wood superstructure. The color palette derived from colors found on the wooded site, including wildflowers, rocks, moss, and leaves. The project is scheduled for completion in October 2007.

Advanced Micro Devices

In April 2005, Advanced Micro Devices announced plans for a new campus on a 59-acre tract at the southern edge of Austin to house its design and administrative staff. AMD hired Graeber Simmons & Cowan Architecture of Austin to design a masterplan as well as the individual components. The planned campus exemplifies sustainable building principles, especially by containing the buildings within the smallest footprint possible to meet AMD's space requirements. Another example is the integration of a complex rainwater collection system: each building's roof will collect rainwater in eight 45,000-gallon cisterns that will be used to irrigate the campus' native landscaping. A material palette of native stone and metal panels will provide the campus with a visual continuity, and abundant use of glass will allow occupants to enjoy the natural setting. Completion is scheduled for September 2007.

The Porch House

"New Housing Prototypes for New Orleans" was a competition sponsored by Architectural Record and Tulane University's School of Architecture that asked architecture students across North American to consider traditional New Orleans house types as a basis for proposing contemporary solutions to rebuilding in neighborhoods damaged by Hurricane Katrina. Five designs were selected by a jury among more than 500 entries. Among the winning designs was the Porch House by two students, Amin Gilani and Josh Spoerl, both seniors at the University of Texas at Arlington's School of Architecture. They were sponsored by architecture professors Bijan Youssefzadeh and Heath MacDonald. (Another winner was Shotgun Chameleon by University of Houston's Zui LIg Ng.) The Porch House derives from the region's traditional shotgun house plan but is updated with metal framing to stand three stories tall. Exterior wall panels that form a deep porch on the street-side are outfitted with louvers toward the rear of the house to provide natural light to the bedrooms.

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— Ed Reh, AIA, Austin

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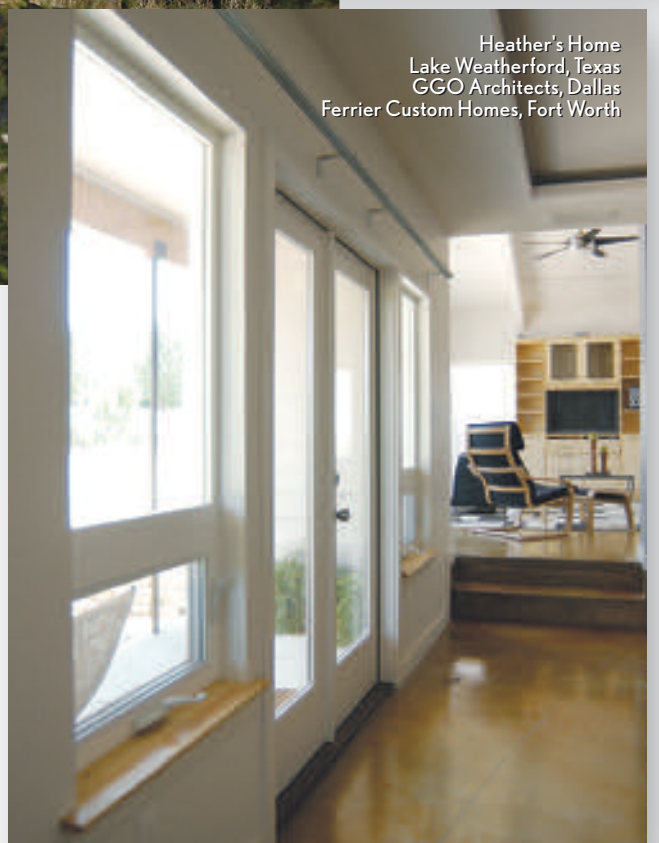

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Rural Fabric

The renowned quiltmakers of Gee's Bend find inspiration in their built environment

by LIZ AXFORD

'Strips'

'Blocks and Strips' by Ruth Kennedy

'Center Medallion with Cornerstones'

ILLUSTRATIONS COURTESY MFAH

WHEN asked about sources of inspiration for *The Quilts of Gee's Bend*, which debuted at the Museum of Fine Arts, Houston in the fall of 2002, the quiltmakers often cited their surroundings. In the current exhibit, *Gee's Bend: The Architecture of the Quilt*, debuting once again at the MFAH, the curators have worked to make this connection more apparent. The title refers not to the architecture of commercial and public buildings, but to the vernacular architecture of rural southwestern Alabama.

Gee's Bend, also known as Boykin, Ala., is an enclave of a few hundred residents, surrounded on three sides by the Alabama River, and accessible only by ferry or two-lane dirt road for most of its existence. Recognized in the 1930s as one of the poorest communities in the nation, many of the substandard housing units were replaced with government-sponsored housing; the residents were offered low interest, government-sponsored mortgages, eventually allowing them financial freedom from landlords. It is this "Roosevelt housing" – along with shops, fences, fields, and the spaces they define – that serves as inspiration for the quilts in the current exhibit. Just as the men have improvised repairs and additions to their housing with available materials, the women have improvised quilts from worn-out clothing and other scraps. Though they possess a huge visual impact, these are quilts born of utility. They typically employ large chunks of fabric, (which sometimes retain the shape of the garment section from which they derive), pieced together and quilted in the most expedient fashion.

While quilting has been an outlet for personal creativity in Gee's Bend, it also has been a source of community interaction. While the piecing of the quilt tops – the composition – is almost always the product of an individual (the quilting, i.e., the stitching that penetrates and holds together the pieced front, middle layer of batting for warmth, and pieced or plain backing) is often completed in a communal event known as a quilting bee.

Gee's Bend: The Architecture of the Quilt features some 70 quilts in six rooms that each have a specific focus. The first room, Housetops and Bricklayers, establishes the major architectural themes. The basic pattern from which so many of the quilts derive consists of a central square surrounded by strips on all sides, commonly known as the Log Cabin block. If the values are arranged such that the pattern creates contrasting concentric squares, the Gee's Bend quiltmakers call it a Housetop. Often the concentric square is bisected horizontally and vertically and the quadrants reassembled with or without dividing strips known as sashing. Sometimes the quadrants retain their original orientation, and sometimes they are rotated. The range of possibilities offered by joining multiple Housetop blocks can be appreciated by viewing the six pieces by Martha Pettway, all titled "Housetop Variation," with most dating from the 1930s. If the values are arranged to form an hourglass or stair-step shape, it is known in Gee's Bend as Bricklayer. Aolar Moseley's "Bricklayer" (c.1950) is a powerful example a single large motif covering the entire quilt, while Loretta Pettway's "Twenty-block Bricklayer" (1958) shows the possibilities of many smaller blocks joined with sashing.

The second room, The Work-Clothes Quilts, contains some of the most evocative pieces in the exhibit. As the theme suggests, the primary materials consist of worn jeans and workshirts, which give the quilts an instant patina, increased even further by their use as quilts. Many of the pieces show evidence of hems let out and pockets removed – the darker blue patches are thoughtfully arranged to create a counterpoint to the primary composition of the piecing. Some of the quilts are pieced both front and back: Martha Jane Pettway's "Housetop Variation (two sided)" (c. 1920s) shows an example of a European American pieced pat-

'Blocks and Strips' by Irene Williams

tern, a variation of an Irish Chain, backed with a more energetic improvised pattern composed of strips and squares. Perhaps most evocative of the surroundings of Gee's Bend is Emma Lee Pettway Campbell's "Blocks and Strips Work-Clothes Quilt," which exploits the white strip along the selvage of dark fabrics to suggest the slightly opened joints of hardwood floors.

In the 1970s many of the Gee's Bend quiltmakers participated in the Freedom Quilting Bee in nearby Alberta, Ala. The group was under contract to New York department stores to make traditional European American-based quilts and later to Sears Roebuck to produce pillows of wide wale corduroy in a limited range of the colors of the day, among them avocado, royal blue, copper, and harvest gold. When the arrangement was terminated in the early 1980s, the quiltmakers were allowed to purchase the leftover materials, both yardage and rolls precut to specific width for use in the pillows, at a minimal cost. While most quiltmakers would find wide-wale corduroy too difficult to handle, the Gee's Benders, used to working with heavy jeans and work clothes, were not deterred. Using wide strips of fabric and exploiting the nap of the corduroy to catch light differently depending upon its orientation, the Gee's Bend quiltmakers made over 100 quilts in a narrow range of colors. Ten of these inventive designs are featured in the Avocado Leaf Green room. Perhaps the most striking is Ruth Kennedy's "Blocks and Strips" (2003). Using 5 shades of corduroy, she deftly placed contrasting strips irregularly along the outside edges to lead the eye around the perimeter. While the center is composed of one shade of avocado green, it is subdivided into small squares randomly rotated in four directions,

subtly modulating the color and activating the large blank space.

The fourth room, Bending Geometry, contains the most idiosyncratic quilts of the collection. America Irby's skillfully pieced six-pointed "Star of Bethlehem Variation" (c. 1940s), by virtue of the placement of the various calicos, does not quite form a star. Irene Williams's "Strips" (c. 1960s), though carefully composed to exploit the symmetry of four knit basketball jerseys, will never lie flat due the shaping in the original garments. Pearlie Pettway Hall's "Medallion" (c. 1950s) is the most minimal of compositions—a large beige rectangle floating on a field of ecru. Perhaps because of the lightweight fabric, or because the layers of fabric were not evenly stretched prior to quilting, the quilt has a sense of low relief as it ruffles irregularly across the surface, imparting to the quilt a decidedly feminine quality.

Most likely due to the community's relative isolation, many women of Gee's Bend can trace their ancestry back seven generations to Dinah Miller, a slave who came to the Pettway plantation via Mobile Bay on the last known (and illegal) slave ship in 1859. Dinah Miller made quilts and passed the skill down to succeeding generations. The penultimate room, the Living Legacy of Dinah the Slave, celebrates the many generations of quiltmakers in Gee's Bend, including the idiosyncratic work of Irene Williams, whose four Strips and Blocks quilts stand in contrast to the predominant Housetop pattern of the exhibit. Loretta Pettway, whose work was featured in the first Gee's Bend exhibit, but who had ceased making quilts prior to that exhibit, has the powerful new "Housetop" (2003) based on a large single motif and composed of high-contrast stripes and dots of varying sizes. Also featured are two corduroy and cotton Bricklayer quilts by Quinnie Pettway, one from 1975 and another from 2005. The star of this room is Loretta P. Bennett, Quinnie Pettway's daughter, who has traveled around the world as an Army wife, and who made quilts only sporadically until the first Gee's Bend exhibit. In 2001 she applied for and received a grant from the Alabama State Council on the Arts for her mother to teach her what she knew about quiltmaking, and five of her quilts are included in this exhibition. Like Irene Williams, Bennett prefers Strips and Blocks over the Housetop pattern, and her work veers from compositions of large irregular shapes creating a center Medallion pattern to networks of thin, relatively straight strips of one color against a field of a contrasting color; the latter are unlike any others in the exhibit.

Mother-in-Law/Daughter-in-Law features the work of Mary Lee Bendolph and her daughter-in-law, Louisiana Bendolph, whose interest in quiltmaking was also awakened following the success of the 2002 *Quilts of Gee's Bend*; she made her first quilt in 2003. The elder Bendolph's cohesive oeuvre is in evidence in "Blocks and Strips" (2003). Working with narrow-wale corduroy in a half dozen vibrant colors, she has created a center section of blocks composed of wide strips which join to create complex secondary shapes. The edge blocks are predominantly composed of navy and turquoise, and create a sophisticated network of interlocking positive and negative shapes. Not surprisingly, the younger woman's work relies more on bold experimentation. Working with the familiar Housetop block in "Housetop Variation" (2003) Louisiana Bendolph cuts up and reconstructs the basic block so thoroughly, recombining it with strips and blocks of solid fabric, that its origin is almost obscured. While her artistic career is just beginning, her "Housetop Variation" (2004) and "Strips" (2003) show her range of interest and hint at what might come in the future. In 2005, the Tinwood Alliance, co-curators of the exhibit (along with Alvia Wardlaw of MFAH) arranged for Mary Lee and Louisiana Bendolph to spend two weeks at the Paulson Press in Berkeley, Calif., creating fine art prints. While their quilts have informed their prints, the experience has also changed how the quiltmakers view and approach their quilts.

'Bricklayer Variation'

While I was initially skeptical of the theme of *The Architecture of the Quilt* (I wondered if the connection would be any more than superficial), I was convinced of its validity while viewing the exhibit and especially when reading the excellent catalogue. The color photos of the Gee's Bend vernacular architecture, most of them details, are beautiful in their own right and give an excellent sense of what the quiltmakers encounter in their daily lives.

Mary Lee Bendolph comments on her sources of inspiration: "I see the barn and I get an idea to make a quilt. I can walk outside and look around in the yard and see ideas all around the front and back of my house. Then, sitting down looking at a quilt, I can get an idea from a quilt I already made."

And Nettie Young remarks on the parallels of designing and constructing quilts and houses: "You're building. Sure is. When you're making a quilt, you're building, because you got to put the first plank just like you got to put the first block. You put the blocks together and you're thinking all the time, 'Now, what block is going to fit this block?' And when I get that block and it has fit well, the next block like to come fixed. And I keep my mind on how I'm building this quilt. When I get this quilt built and I look at this quilt, I see then what I built. I say, 'That is good. I got this together just like I want it.'

Liz Axford is a studio quilt maker/surface designer in Houston.

Red Shed

by DARWIN HARRISON

PROJECT Home on 21st Street, Lubbock
CLIENT Flueckiger family
ARCHITECT Urs Peter Flueckiger
DESIGN TEAM Rex H. Reynolds; Steven Still; Matthew Garcia; Daniel Pruske; Urs Peter Flueckiger; Carol Flueckiger
CONTRACTOR Harry S. Fry Construction
PHOTOGRAPHER Urs Peter Flueckiger

IN Western culture color has long been considered trivial, superficial at best; at worst it is seen as artificial, sometimes even dangerous. So writes artist and scholar David Batchelor in *Chromaphobia*, his 2004 treatise on the theory and cultural history of color. In developing his argument, Batchelor illustrates how painters, writers, sculptors, and architects have for centuries scorned the realm of color as "vulgar" and "routinely excluded from the higher concerns of the Mind." He traces this enduring sentiment back to its ancient roots in the Latin *colorem* ("to hide or conceal") and in the Middle English term *colour* ("to embellish and adorn; to disguise or misrepresent"). This etymological background leads Batchelor to argue that in modern times we should be able to move past such preconceptions and blatant misconceptions. He argues that if this sentiment continues, we will remain locked in a world that deprives itself of the rich complexities and charms of color—the dazzle, delight, and seduction that comes only from color and an openness to its vast possibilities.

The Flueckiger residence in Lubbock is a testament to Batchelor's idea of color as a rich and endearing element that should not be simply dismissed as trivial. The house illustrates that color can be subtle *and* bold, practical *and* emotional, logical *and* evocative, and ultimately a highly sensitive design element that addresses many factors, such as site, materials, budget, and inhabitants.

The house, a marriage of art and architecture, directly reflects the couple who designed it and live there—Urs Peter Flueckiger, a Swiss-licensed architect, and Carol Flueckiger, a painter originally from Minnesota. Both teach at Texas Tech University—he in the College of Architecture and she in the College of Visual and Performing Arts. Their new home mirrors his understanding and appreciation of the logic and order of Swiss design, particularly the simple elegance of former employer Mario Botta, as well as his admiration of Donald Judd, who he has been studying in depth for years. As a result, the house clearly indicates his fondness for plain materials and the colors often inherent to those materials.

Carol Flueckiger brought to the project her own knowledge and appreciation for color in regards to surfaces and chromatic interplay. She also brought a painterly freedom with ideas born from her own methods of applying or creating coloration to a blank canvas to evoke something more than mere material. In her fine art, she often uses traces of other objects or elements of nature to capture a spirit or elicit an emotional response. Color and painting are not just by-products but the tools of her evocative artistry. One example is the simple, inexpensive doors she has adorned with delicate profiles of mulberry leaves she picked from a tree outside their previous apartment, their first dwelling after marriage. The process is rich with color and emotion but also recalls a chapter in their history as a couple.

As with any creative collaboration, the Flueckigers' house shows evidence of both their backgrounds, educations, and personal sensitivities. The unadorned concrete floors may be seen as his choice while the green living room walls sampled directly from Granny Smith apples may be labeled as hers. But this belies the fact that their collaborative decisions on color and materials, like most design solutions, were also a matter of practicality and budget. The house was built for an astoundingly inexpensive $50.87 per square foot at a time when the cheapest custom designed homes would easily cost more than $80 in the same area. The decision to use corrugated panels for the exterior is based on their mutual love of the simple, highly functional agricultural sheds of the region. The decision to use vivid red is based on selecting a color straight from the manufacturer's color chart thus no more expensive than other options. The color chart contained all the usual neutral background colors but the desire was for something that set itself off from the big blue sky and the bold grass green lawns without impacting the bottom line of the tight construction budget.

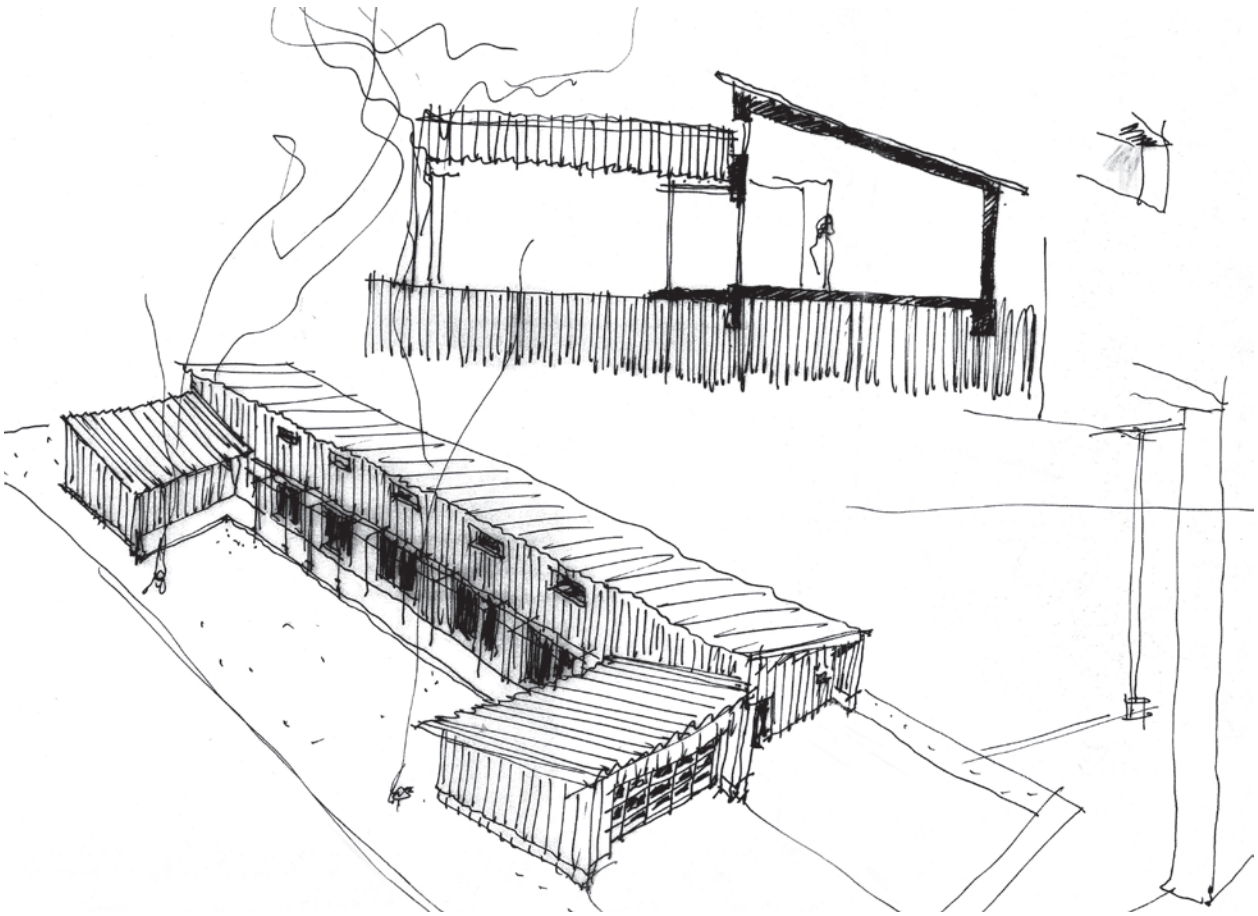
Red may seem overly adventurous for a residence in an established neighborhood of mostly traditional homes. But as Batchelor notes in his book, one problem with color is that words are incapable

(opposite page) The main house is a linear series of rooms, each connected to the courtyard by an inexpensive pergola. Urs Flueckiger's architecture studio anchors the southern end. (above) The region's intense and abundant sunlight complements Carol Flueckiger's artwork and choices for interior décor.

SITE PLAN

1 FRONT PORCH
2 LAUNDRY AREA
3 KITCHEN/DINING
4 LIVING AREA
5 BEDROOM
6 ARCHITECTURE STUDIO
7 PORCH
8 COURTYARD
9 PAINTING STUDIO

N



of offering much insight to color. He argues that it has been proven that the human eye can discern several million color variations yet many languages use 11 general color names at most to identify the core color spectrum. Describing the Flueckiger house as red proves Batchelor's point. The corrugated surface allows the color to modulate and be rich with variety even in broad daylight. At certain times, it is not so much red as it is auburn or crimson or rose or burgundy or pink.

Flueckiger spent a great deal of time visiting and studying the villas of Andrea Palladio during his education, and he was particularly inspired by Palladio's Villa Emo with its clear cut working wings separated by the body of the house that encompassed the living quarters. Much like the composed order of the villa, the Flueckiger house has Carol's painting studio at the north wing and Urs' design studio at the south with the major living spaces forming the middle connection of the U-shaped plan. Another example that shows a knowledge and investigation of traditional design ideas is the outdoor courtyard. The space is wrapped by every single major living space offering constant and frequent opportunities for interaction and use. The courtyard layout originated from the study of Japanese rock gardens, as well as the traditional residential plans found throughout the Southwest. The result is a serene, contemplative space, a place with a strong sense of order yet fully capable of hosting lively social gatherings.

Because the house is pragmatic and well-designed – and red – it is often compared to a Swiss Army knife. And within this abode of comfortable functionality is an environment that captures the morning sunshine, indulges in the afternoon shadows, and invites in the breezes while protecting its occupants from West Texas windstorms. For the Flueckigers, and their young son Lucas, the house is a truly delightful place to live, work, and raise a family.

Darwin Harrison is an instructor at Texas Tech's College of Architecture and a field representative for Holzman Moss Architecture.

The front entry shows the Botta influence with simple alternating bands of burnished and standard concrete masonry blocks creating a rhythm of textures. The garage at left doubles as Carol's studio with north-facing windows providing even, natural light.

RESOURCES FENCES, GATES, AND HARDWARE: All-State Fence & Supply; SITE, STREET, AND MALL FURNISHINGS: Modernica; MASONRY UNITS: Acme Brick Co.; METAL MATERIALS: MBCI Metal Roof and Wall Systems; ARCHITECTURAL WOODWORK: Pan-Tex Plywood& Lumber Co.; ARCHITECTURAL METAL WORK: Jarvis Metal, Steel Div.

Graphic Design

by DONNA KACMAR, AIA

PROJECT Federal Reserve Bank of Dallas, Houston Branch
CLIENT Federal Reserve Bank
ARCHITECT Michael Graves & Associates with PGAL
DESIGN TEAM Thomas Rowe, AIA; David Andrews, AIA; Paul Bonnette, AIA; Kathy Dy; Jenna Ford; Marcia Mink
CONTRACTOR Linbeck
CONSULTANTS Walter P. Moore (structural); I.A. Naman + Associates (MEP); PGAL (civil); Kroll Schiff & Associates (security); IRM International (telecommunications/IT); WJHW (acoustics/AV); Clark Condon Associates (landscape)
PHOTOGRAPHER Richard Payne, FAIA

THE new Houston Branch of the Federal Reserve Bank of Dallas is hard to miss: its imposing form and graphic detailing rise above the trees along Allen Parkway just west of downtown. While its exterior appears heavy-handed from a distance, one must experience the inner workings to fully appreciate the facility's design.

The architect selection process was lengthy. After a two-tiered nationwide search narrowed the field to three firms, the team of Michael Graves and PGAL was selected. Federal Reserve officials were seeking to build a classically derived landmark, and they appreciated the historical references in much of Graves' work. Initial sketches by Graves from July 2001 depict a colorful acropolis adorned with some nautical references.

The Houston Branch is part of the Federal Reserve Bank of Dallas, one of 12 regional reserve banks that operate collectively as our nation's central bank system. Dallas is the headquarters of the Eleventh Federal Reserve District – encompassing northern Louisiana, southern New Mexico, and all of Texas – and has three branch offices (in El Paso, San Antonio, and Houston). The Houston Branch serves as a cash depository for banks in southeast Texas and as a center for regional economic research and education. Its operations are overseen by a seven-member board of directors appointed to represent a variety of economic interests in the region served by the Houston Branch.

A large portion of the 300,000-sq. ft. Houston Branch facility is dedicated to the storage and handling of U.S. currency. Money that comes into the facility is inspected and stored for recirculation, unless it is deemed unfit to continue to circulate and is then destroyed on site. In addition to the handling of currency, the building houses administration areas, meeting rooms, a public exhibit area, and a conference center. Within the conference center are training rooms, a business center, a videoconference room, and a multipurpose room, all of which help the Federal Reserve fulfill

its education agenda. Additional spaces in the Houston Branch are varied and include a library, a cafeteria, a firing range used by Federal Reserve law enforcement officers, a wellness center, and parking for 300 automobiles. The new facility, currently occupied by 220 employees, is designed for flexibility to adapt to changing demands and future growth.

The building, the Houston Branch's fourth location, was completed in 2005 at a cost of $90 million. The site was previously occupied by the Jefferson Davis Hospital (designed by Alfred C. Finn and Joseph Finger) that was built in 1937 and demolished in 1999. The Federal Reserve bought the eight and a half-acre site in January 2000 from a private developer; the site was selected for the Branch due to its proximity to downtown and location halfway between Houston's two airports. On September 11, 2001, with construction documents about 80 percent complete, the project was postponed while security features were reconsidered. Eventually, perimeter fencing, a separate pre-inspection building, a blast-resistant front facade, bulletproof glass, and redundant structure were added to the program. The architects successfully synthesized the prescribed security measures without making it a forbidding place to work or visit—the building wraps around exterior spaces, terraces, and porches to provide connections to the landscape without compromising its security.

The overall organization is revealed in its massing. According to Tom Rowe of Grave's office, "The pitched roofed section houses the secure cash processing facilities in the relatively solid first two floors with the common meeting, dining, and office spaces on the top two levels with panoramic views to the Houston skyline." The boardroom, the symbolic heart of the building, is located on the northern end of the fourth level and has a porch that overlooks Allen Parkway and Buffalo Bayou. The functional heart of the building is the currency vault, located in a concrete shell protected by the green tile barrel-vaulted roof and set parallel to the bayou. "Together these volumes are intended to

(opposite page) Viewed here from the northeast, the Federal Reserve Bank's Houston Branch stands out along Allen Parkway. (this page) A pergola wraps the third-floor dining terrace.

(above) An enclosed two-story bridge connects the parking garage, shown at right, to the main building. (right) The boardroom, located on the fourth level, is the symbolic heart of the building.

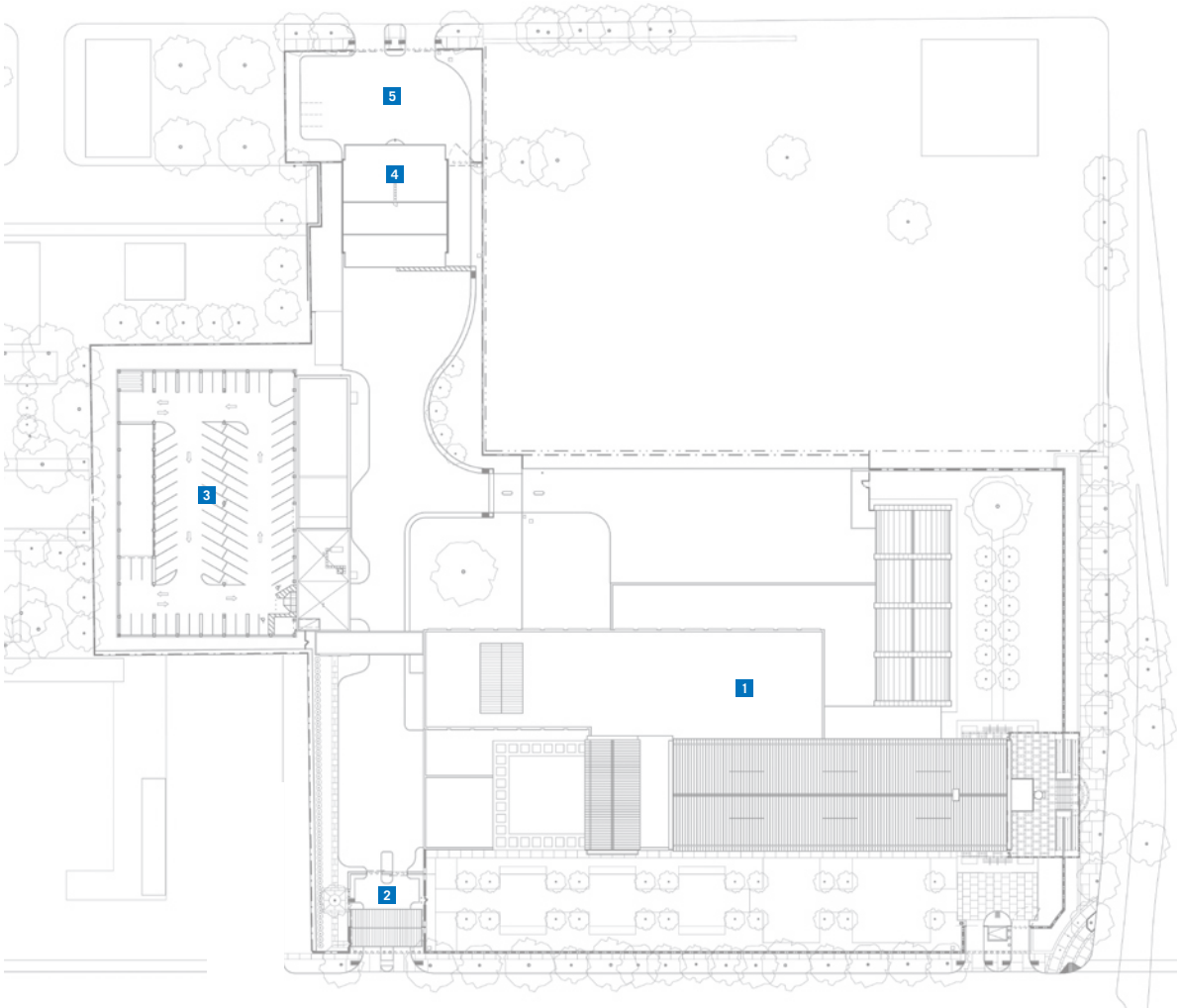
exhibit the Federal Reserve's commitment to security (the vault), outreach, and openness (the open loggia defining the entrance), and tradition (the temple front)," Rowe stated via an e-mail message. Additionally, as stated in another message from Graves' office, "The classical motif of the rusticated base has been frequently used [notably by Palladio] to connote strength and stability and help to establish a hierarchy of scale for a building. Our rendering of the pattern is more graphic and colorful but the underlying intent is similar—a representation of construction and of a firm foundation."

The same Glen-Gery brick that Graves applied to the exterior is brought inside the building to enliven the interior. Red and white oak finishes also brighten the interior spaces, and an impressive art collection adds further interesting touches. Many items in the building were designed by Michael Graves and Associates Architecture, including most of the carpet, the light fixtures, the furniture in the administration area, and the boardroom table, which is outfitted with integrated microphones, speakers, and data ports. Some other items in the building are standard products of Graves Design, a branch of the architect's office.

Most of the major spaces connect to porches with views of the cityscape or the immediate neighborhood, a neglected district that has been bolstered economically with the addition of the Federal Reserve facility. (The area, including San Felipe Park situated to the east of the building, is expected to benefit from development planned under the aegis of the Buffalo Bayou Master Plan.) While the new Houston Branch's prominent form and eye-catching coloration stand out amid the mostly vacant surroundings, someday in the not-so-distant future the facility and its environs may become one of many active civic spaces along this prominent corridor leading to downtown.

RESOURCES **UNIT PAVERS:** Pacific Clay; **MASONRY UNITS:** Glen-Gery Brick (Upchurch Kimbrough, dist.); **GLAZED MASONRY UNITS:** Elgin-Butler; **FORMED ALUMINUM:** Baker Metal Products; **METAL WINDOWS:** Accura Systems; **COILING DOORS:** Wayne Dalton; **WOOD FLOORING:** Interface; **ACOUSTICAL CEILINGS:** Acoustical Concepts Inc.; **SECURITY BOLLARDS/FENCING:** Anchor Post Products of Texas; **ORNAMENTAL METALS:** Berger Iron Works Inc.; **DOORS, FRAMES, AND HARDWARE:** Door Pro; **GRAPHICS:** GraphTec Inc.; **ROOFING:** Ludowici (Architects Source, rep.); **CURTAINWALL, GLASS, AND GLAZING:** Haley-Greer; **MILLWORK AND CASEWORK:** Hoffman Company; **ACCESS FLOORING:** Hudson Building Systems Inc.; **AUDIO /VISUAL EQUIPMENT:** ieSmart Systems; **MASONRY AND STONE:** Lucia Constructors Inc.; **STRUCTURAL STEEL FABRICATION:** Safety Steel; **FLOORING:** Spectra Contract Flooring; **REINFORCING STEEL FAB:** Sterling Steel; **READY-MIX CONCRETE:** TXI Inc.; **PLASTERING:** Tobin & Rooney Inc.; **OPERABLE PARTITIONS:** TRW Modernfold Company Inc.; **EAGLE SCULPTURE:** Ullberg Studios Inc.; **PLUMBING:** Way Engineering; **FIRE PROTECTION:** Western States Fire Protection

Donna Kacmar, AIA, is principal of architect works, inc. in Houston and an assistant professor at the University of Houston's Gerald D. Hines College of Architecture.



SITE PLAN
1 MAIN BUILDING
2 PUBLIC ENTRANCE
3 PARKING GARAGE
4 PREINSPECTION BUILDING
5 DELIVERY ENTRANCE

N

RICHARD PAYNE, FAIA

Martel College at Rice University

MICHAEL Graves' signature style also appears in another building recently completed in Houston. Martel College at Rice University (shown at left) exhibits similarities with the Federal Reserve, particularly in the treatment of Martel's exterior where St. Joe brick is set in a "jumbo running-bond pattern" with precast concrete units used to mimic mortar. As with the Federal Reserve where he again played with the sense of scale on the facade, Graves was teamed with PGAL on the Rice project.

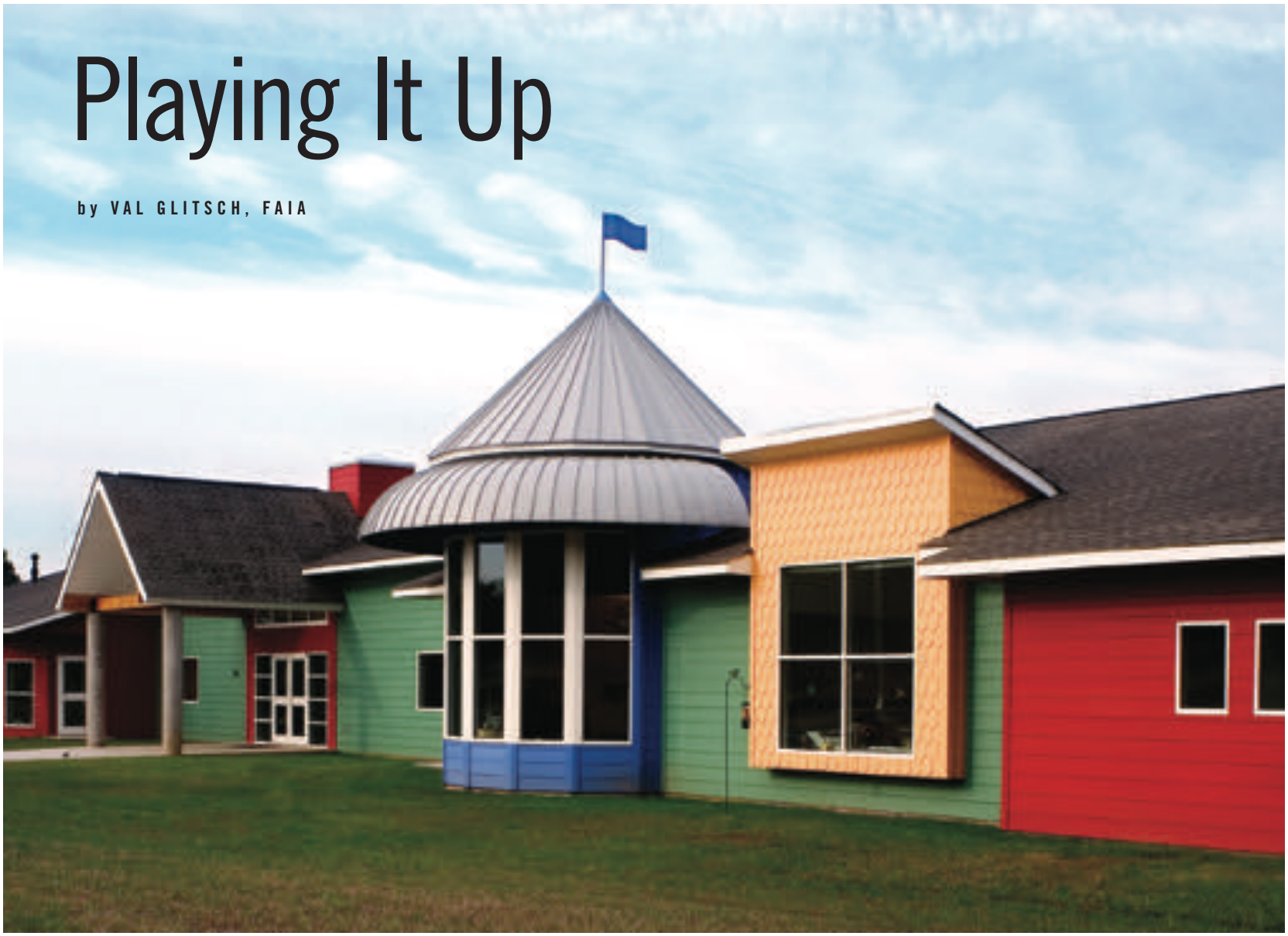
The 107,000-sq. ft. Martel College includes student residences, classrooms, dining facilities, a new Master's House, as well as a new combined kitchen facility serving Martel and two other colleges. Martel College opened in January 2001.

Similarities in the interiors of the two projects also are evident. Martel's dining hall expresses its structural system with large laminated wood arches that support glulam beams to create a large, double-height volume. While the Federal Reserve's dining room is slightly less expansive, the articulated arches soar above the table groupings to define a voluminous interior space. However, unlike the exposed wood arches in Martel's dining room, the arches in the Federal Reserve's are finished with gypsum board. In both dining halls, the same pendant fixtures by Graves Design are installed.

— Donna Kacmar, AIA

Playing It Up

by VAL GLITSCH, FAIA



PROJECT Christ Lutheran Day School, Brenham
CLIENT Christ Lutheran Church
ARCHITECT Upchurch Architects
DESIGN TEAM Thomas Hayne Upchurch, AIA; Elizabeth M. Price, Assoc. AIA; Dawson Skow, Assoc. AIA
CONTRACTOR Collier Construction
CONSULTANTS Architectural Engineers Collaborative (structural); Tom Green and Company Engineers, Inc. (MEP); O'Malley Engineers, LLP (civil)
PHOTOGRAPHER Hester + Hardaway

(this page) Colorful building components evoke the playful activities that await inside. (opposite page) As illustrated by the lunch room, the day school features bright interiors with large windows in classrooms and public spaces.

THE recently completed Day School for Christ Lutheran Church in Brenham puts a new face on school design for this small city Northwest of Houston. Previously occupying a small house and shared weekday use of a rather bleak set of Sunday School rooms, 125 children (with their 24 teachers) now occupy a building Upchurch Architects has designed *just* for them.

The church's stated mission in the community always has been to provide low-cost/ high quality education for young children. To this purpose, the church originally hired Upchurch Architects to conduct a feasibility study for a classroom addition to the original structure. However, several schematic designs later, the architects recommended an unexpected approach to the congregation: a separate building of its own identity, located at the far west end of the church's property. So, rather than "attach + blend," Upchurch Architects pushed for the construction of a new building to begin a campus plan for the 7.5-acre property. Sited at the bottom of an east/west slope and aligning a newly created greenbelt (actually a drainage swale), the 12,700-sq. ft. building now gathers all the site's attention, as the new multicolored village of forms easily upstages the drab-toned brick of the original church.

Approaching the site daily, each child can review the school layout in its entirety as they spiral along a counter-clockwise path from the main road all the way through the drop-off loop to the school's "little red schoolhouse" entrance. Projecting the interior on the exterior was the architect's primary design strategy. "We wanted the children to be able to identify their classrooms upon arrival," states principal Thomas Hayne Upchurch, AIA. The linear layout, forms, colors, and fenestration patterns all support this goal.

(this page, above and right) Exaggerated forms and graphics add interest to interior spaces. (opposite page) Likewise on the exterior where the fanciful south elevation adjoins the playground.

Even though the school's image in the neighborhood is sympathetic in scale and form to its adjacent residential context, the building still sits apart as a special piece. A long, horizontal green-sided gable threads together brightly colored Froebel-esque blocks – yellow shed classroom projections (clad in fancy butt shingles) and red lap-siding boxes that envelop subsidiary forms (such as bathrooms) – much like beads on a child's snap necklace. In addition to the arrival gable, the only major interruptions to the green-yellow-red sequences signify the other main events of the school day—a red stucco lunch pavilion for snack time and the blue rotunda library for story time.

Partially guided by the slim budget of around $89 per square foot, the building's diagram is a simple interior street scheme, beginning near its middle at a sky-lit cupola and marked with a floor compass (inscribed in composition tile) at the crossing of main circulation paths. The "street," a wider-than-usual hallway syncopated by the individual shapes and colors of each age groups' front doors, leads to light (and progressive glimpses of the playgrounds) toward each end.

The individual classroom designs feature shaped ceilings reflecting the projecting exterior forms that frame over-sized windows: a to-the-floor variety in the crawling rooms and deliberately deep sill window boxes (multi-use display, work, and lounging zones) in the toddler and preschool rooms.

The Day School reports that the school's new image has had a positive impact on the staff by greatly improving their work environment and effectiveness of teaching, and by affecting an increased enrollment and attendance in the student body. The consequences actually have been broader-reaching, boosting the church's image by creating a more upbeat position for its chosen mission in the community, and on the city of Brenham by drawing attention with innovative design to the important task of young children's education.

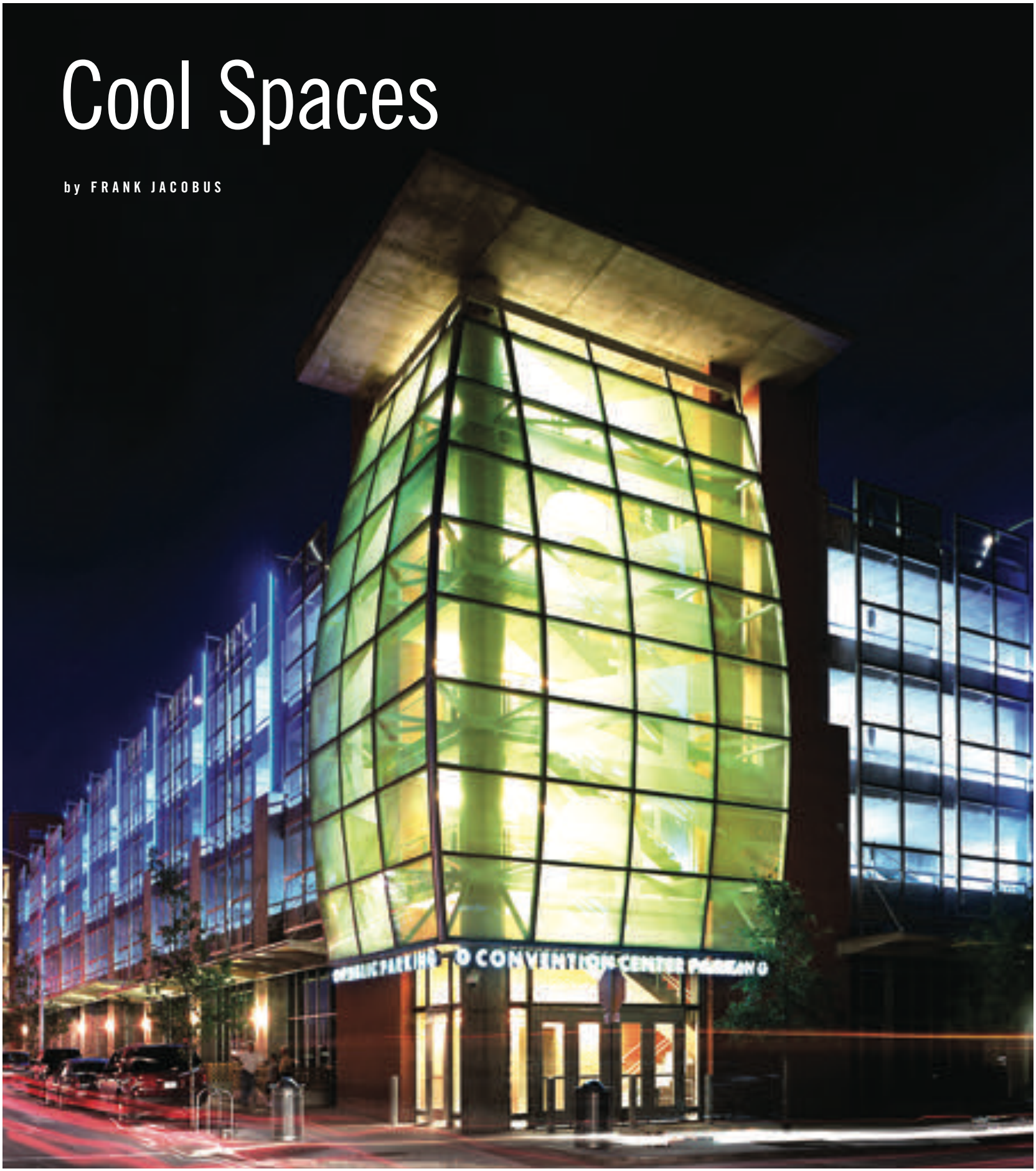
Val Glitsch, FAIA, practices architecture in Houston.

RESOURCES CONCRETE MATERIALS: Jimmie Hahn Inc.; PRE-FABRICATED WOOD JOINTS AND TRUSSES: All Pan Ltd.; ARCHITECTURAL MILLWORK: Millennium Millwork; LAMINATES: Wilsonart; BUILDING INSULATION: Knauf Insulation; VAPOR RETARDERS: Tyvek Commercial Wrap; SHINGLES: Elk; SIDING: James Hardie; METAL ROOFING: Una-Clad (MCT Sheet Metal, installer); FASCIA AND SOFFIT PANELS: James Hardie; PORTLAND CEMENT: TXI; LIME: Chemstar; LATH AND ACCESSORIES: Amico; METAL DOORS AND FRAMES: Steelcraft; PLASTIC LAMINATE DOORS: TexLam; ENTRANCES AND STOREFRONTS: Vistawall; UNIT SKYLIGHTS: Plasteco; GLASS: AFG Glass; TILE: American Olean; ACOUSTICAL CEILINGS: USG; PAINTS: ICI; FIBER REINFORCED PANELS: Glasteel; HAND PAINTED CERAMIC TILE: The Partery Place; VCT: Mannington; CARPET: Interface; FIRE EXTINGUISHER CABINETS: Larsen's Manufacturing Company; BLINDS, SHUTTERS, AND SHADES: Graber Blinds; BOOTHS AND TABLES: Worthington Direct


FIRST FLOOR PLAN
1 MAIN ENTRY
2 FOYER
3 ADMINISTRATION
4 STAFF
5 CLASSROOM
6 DISCOVERY ROOM
7 KITCHEN
8 LUNCH ROOM
9 MECHANICAL
N

Cool Spaces

by FRANK JACOBUS



THE 2002 expansion of the Austin Convention Center, a near doubling of the facility's size, as well as the concurrent construction of a new convention center hotel, prompted city officials to consider an important question: Where will all those additional people park? Ultimately, the officials decided on a project that paired the city's Convention Center Department and Austin Energy, the municipal electrical utility, and created 650-plus parking spaces while also providing chilled water for downtown customers. The city hired the Austin firm Barnes Gromatzky Kosarek Architects plus Goetting & Associates and Jaster-Quintanilla for the project that encompasses an entire city block next door to the east of the city-owned Hilton Hotel and cater-corner to the northeast from the convention center. Budgeted at $34 million, the project was completed last year for just over $31 million.

Merging the two programs resulted in a four-story structure with its western two-thirds dedicated to the 256,690-sq. ft. parking garage and the remaining one-third to the 46,492-sq. ft. cooling plant. According to the architects, the extensive technical demands of the utility facility were a major factor in driving the design. The project also incorporates 19,000 square feet of street-level retail space and responds to Austin's "Great Streets" guidelines intended to "transform public right of ways into great public places." The architects maximized the size of the individual retail spaces in an effort to appeal to a greater variety of tenants, and street-level detailing helps to create a pedestrian-friendly environment. The site is significant because it connects the convention center to the city's Sixth Street entertainment district.

Another outstanding feature of the garage is its transparency with respect to the public right of way. The majority of the exterior facade is composed of an exposed concrete skeleton with large openings. Covering the openings is a stainless steel fabric screen that is broken into smaller modules that give human scale to the large structure. Located at two corners of the building are elevator vestibules and

PROJECT Austin Convention Center Parking Garage and Austin Energy District Plant, Austin
CLIENT City of Austin
ARCHITECT Barnes Gromatzky Kosarek Architects; Goetting & Associates; Jaster-Quintanilla (joint venture)
DESIGN TEAM Jay W. Barnes III, AIA; Carl L. Gromatzky, AIA; N. Thomas Kosarek, AIA; Jan D. Cartwright, AIA; Christine Rumi; Arturo Arredondo, AIA
CONTRACTOR SpawGlass
CONSULTANTS Goetting & Associates (plant), Encotech Engineering (garage) (MEP); Jaster-Quintanilla (structural); Urban Design Group, Raymond Chan & Associates (civil); Aan Coleman & Associates (landscaping); Datacom Engineering (telecommunications); Parking Planners (parking); Project Cost Resources (cost); Archillume Lighting (lighting); Pentagram (signage)
PHOTOGRAPHER Thomas McConnell

(opposite page) Vertical strips of blue LEDs along the parking garage structure contrast with the warm glow emanating from the glass-enclosed elevator towers. (this page) An undulating metal screen signifies the movement of water being chilled within the plant.

NORTH ELEVATION

SOUTH ELEVATION

EAST ELEVATION

WEST ELEVATION

An assemblage of blue glass tiles created by San Antonio artist Ann Adams subtly calls attention to the location of an enormous water storage tank. The city-owned cooling plant, comprising one-third of the project, provides chilled water used to air-condition numerous buildings in downtown Austin.

stairwells, affectionately referred to as the "fat men" because of their convex shape. These elements comprise the building's most distinguishing feature and provide "maximum security and transparency," says Carl Gromatzky, AIA, the firm's principal in charge of the project. The stair towers are protected from the elements by a large projecting roof plane while openings at the top of their glazed surface allow any heat that accumulates within them to naturally escape.

At the eastern portion of the building is the cooling plant that not only provides chilled water during the day to its Austin customers but also makes ice during off-peak hours. (The ice is melted during the day to provide chilled water thereby reducing demand on the electrical grid at its most critical times.) The utility plant's facades use the same materials as the parking garage but the architects fashioned them in response to an entirely different program. A curving stainless steel fabric, similar in construction and scale to the screens found elsewhere on the building, gives reference to its internal fluid dynamics. The architects carefully designed the screen to diminish the visibility of the cooling towers without completely eliminating them from view. Another reference to the inner workings is a large tiled cube designed by San Antonio artist Ann Adams and installed as a component of the project through the city's Art in Public Places program. The cube, clad in variegated blue glass tiles, is a beautiful abstraction of its contents—an enormous thermal storage tank.

Through use of a simple material palette, the architects accentuated specific aspects within the design, artfully paying homage to the building's different purposes. Any formal complexities seem to have purpose, and where the building wants to maintain an air of simplicity the architects allow it to do so. As a whole, the building's uniqueness and success is grounded in the seamless cohesion of two distinct programs and their integration within the surrounding urban context.

Frank Jacobus is currently studying for a master's degree at the University of Texas at Austin's School of Architecture.

RESOURCES SITE BENCHES: Landscape Forms; **MASONRY UNITS:** Acme Brick; **ARCHITECTURAL METAL WORK:** Cambridge Architectural; **DECKING:** Lock-Deck; **WATERPROOFING AND DAMPPROOFING:** Vandex, Xypex, Tremco; **MEMBRANE ROOFING:** Hyload Roofing, Carlisle; **SPECIALTY DOORS:** Ambico Limited; **ENTRANCES AND STOREFRONTS:** EFCO; **GLASS:** Viracon; **STRUCTURAL GLASS CURTAINWALL:** EFCO; **TILE:** American Tile; **HIGH-PERFORMANCE COATINGS:** Sherwin-Williams

Study in Green

by CHARLES ROSENBLUM

PROJECT Stuckeman Family Building for the School of Architecture and Landscape Architecture, Pennsylvania State University
CLIENT Pennsylvania State University
ARCHITECT Overland Partners Architects
ARCHITECT OF RECORD WTW Architects
DESIGN TEAM (Overland) Robert Shemwell, FAIA; Jim Shelton; Fernando Ortega; (WTW) Richard De Young, AIA; Joseph Nagy, AIA
CONTRACTOR Whiting-Turner Contracting Company
CONSULTANTS LaQuatra Bonci Associates (landscape); Arup (structural & MEP schematic design, energy and daylight modeling); H.F. Lenz Company (MEP); Whitney, Bailey, Cox & Magnani (structural)
PHOTOGRAPHER Jeffrey Totaro/ESTO

(this page) The new building is more than just green in color. The metal cladding consists of more than 90 percent recycled copper. (opposite page) Third-floor critique spaces demonstrate the building's generous daylighting and general openness.

A well-traveled sidewalk on the Penn State campus leads past Hort Woods, the university's last swath of untouched forest. The path turns slightly at a large water tower before continuing on axis toward Henderson Mall, the historic main quad. When under-designed parking lots abutted this minor turn, it was essentially unnoticeable. Now, though, a great green curtain wall, four stories tall, closely faces this path. The patinated copper southwest facade of the new Stuckeman Family Building for the School of Architecture and Landscape Architecture seems to peel away from the structure here, ending in a cantilever. But this curving wall, which actually indicates the intersection of two campus grids at a pivotal point, gathers more than it divides. Not only does it guide passersby into the new building, it also epitomizes a structure that joins academic disciplines and campus spaces through thoughtful and dynamic design. Inside, architects and landscape architects share open, airy studios in a $26 million, 110,000-square foot facility that also houses classrooms, labs, shops, offices, and a library, all with rich visual and material connections to the outdoors.

It wasn't always this way. With distinct curricular origins in engineering and horticulture, architecture and landscape departments at Penn State had long been housed in separate parts of the World War I-era Engineering Blocks. Tight spaces and ad hoc additions over the years essentially squelched any real interchange between the two disciplines. "There were tremendous psychological barriers just because of the shape of the rooms," says Brian Orland, head of the landscape architecture department. Neil Porterfield, former dean of the College of Arts and Architecture, originally championed the idea of a combined building. "He had this vision of architects and landscape architects working together, constantly rubbing shoulders in the same facility," says Orland.

This ideal became the seed of a collaborative, innovative, and open process that prefigured the interdisciplinary qualities of the building itself. By selecting Overland Partners Architects of San Antonio and LaQuatra Bonci Associates, a landscape architecture firm in Pittsburgh, Penn., the university emphasized collaboration. The two firms had worked together on an unrealized environ-

As though designed decades apart, the two segments of the new building join at the northeast entrance. The office wing is to the left and studio spaces to the right. The campus water tower looms in the background.

mental center near Pittsburgh and also had been short-listed for an arboretum project at Penn State. Perhaps more importantly, Overland "really understands how architecture and landscape can be put together in a seamless way," explains principal landscape architect Fred Bonci. The participating firms — including associate architect WTW of Pittsburgh, engineering firm Ove Arup, and contractor Whiting Turner — roundly describe an outstanding team dynamic. Similarly, the university responded to faculty advocacy by emphasizing sustainable design generally and the LEED rating system in particular. Both objectives were firsts for Penn State.

Once hired, the designers began with a four-day, 75-person charrette in which professionals, faculty, staff, and students met to brainstorm, document, and present ideas. "Most of the significant ideas that ended up in the building had at least their genesis in those four days," recalls Overland's principal-in-charge Bob Shemwell, FAIA. They refined priorities for sustainable design, outlined the building footprint, established the character of the studio spaces, and even sketched the building's distinctive section. "It gave the consultants a lot of general principles to work with," says Orland.

Other important aspects of the project were not so cheerfully embraced. The site, pre-selected by the university, initially seemed hugely undesirable and uniformly unloved. (Terms such as "degraded," "back-of-the-house," "grim-looking," and "a leftover" were commonly used to describe the site.) The ill-defined parking lots and an imposing water tower reinforced the hodge-podge nature of the proposed location wedged between arts buildings and dormitories. But closer study underscored the heavy pedestrian traffic and the dynamic, pivotal quality of two abutting campus grids. "The building had to fit in such a way as to knit together the many disparate parts," says Shemwell. And the results are successful. The new parking lot, with bioswales for stormwater treatment, is a beautiful and instructive design on its own, and its planning with new athletic fields and axial walking paths leading to and through the building has changed the perception of this whole area. "This part of the campus previously had no order," says Dan Willis, head of the architecture department. "Now it seems like the perfect site for the building."

With forms that respond with logic and clarity to function, site, and client, the new building comes across as a pastiche. The donor "wanted a more traditional building," says Shemwell. The

SECTION AT ENTRY
1 LOBBY
2 STUDIOS
3 MULTI-MEDIA CRITIQUE SPACE
4 MEZZANINE/CRITIQUE SPACE

east facade appears to be two buildings in the campus's traditional brick. The office wing to the southeast, with its horizontal ribbon windows and brises-soleil, connects with the studio wing to the northwest, where three-story brick piers with copper-clad spandrels give way at the upper-most level to a double-height wall composed largely of glass. The building's main northeastern entry, with an upturned canopy, sits on an axis at the juncture of these two wings—as does the notorious water tower located on the building's opposite side. The architects emphasized its position on axis with the main entrance, allowing it to look, from some positions, like a dome.

Then there's that green wall. A wrapping skin at the northwest end of the building, it opens into a giant rectilinear tube that frames views at the southeast. To the architects' credit, this prominent component of the project is more than just green in color—the copper cladding is composed of more than 90 percent recycled material and the designers have included a variety of openings to accommodate daylight to a surprisingly gray region. ("Fewer sunny days than Seattle," notes Shemwell.) The vaguely Corbusian rhythm of openings and shades in a sculptural surface is a fairly matter-of-fact indication of interior space and structure, yet the result is much more spirited and willful than the sedate east facade. "We have sort of a schizophrenic building," admits Willis. Indeed, the pieces could almost be from different decades. But despite arguments for architectural coherence, co-existence of divergent approaches seems appropriate for a building that newly unites two disciplines.

As responsive as it is to its site, the building is to a large degree designed from the inside out. The architects adhered to a simple but ingenious sectional diagram developed at the beginning of the process. It creates double-height studios at the building perimeter on the second and fourth floors of the studio wing. The third floor, devoted to critique spaces, is really a small mezzanine at the center of the building. Shemwell says, "The design of the building is really about sectional connections. There are places where you can stand and get a feeling of all of the floors simultaneously."

Indeed, amid the hum of activity and within the instructive armature of building and site, the long-anticipated unity of architecture and landscape architecture is at its clearest. T

Architectural historian and critic Charles Rosenblum teaches at Carnegie Mellon University and writes for *Pittsburgh City Paper*.

RESOURCES CONCRETE PAVING: Centre Concrete Co.; **SITE, STREET, AND MALL FURNISHINGS:** Columbia Cascade; **CONCRETE MATERIALS:** Centre Concrete Co.; **MASONRY UNITS:** Glen-Gery Brick; **FLAGSTONE AND WALLS:** Meshoppen Stone; **METAL DECKING:** Epic Metals; **ARCHITECTURAL METAL WORK:** McGregor Industries; **RAILINGS AND HANDRAILS:** McGregor Industries; **MAPLE WOOD PANELS:** SierraPine; **WATERPROOFING AND DAMPPROOFING:** W.R. Grace; **MEMBRANE ROOFING:** Firestone; **METAL ROOFING AND WALL PANELS:** Revere Copper; **METAL DOOR FRAMES:** Steelcraft; **MAPLE VENEER DOORS:** Mohawk Doors; **ENTRANCES AND STOREFRONTS:** Kawneer; **ALUMINUM FRAMING:** Kawneer; **UNIT SKYLIGHTS:** SuperSky Products; **GLASS:** PPG Industries; **ETCHED GLASS:** McGregor Industries; **GYPSUM BOARD FRAMING AND ACCESSORIES:** Dietrich Metal Framing; **CERAMIC TILE:** Terra Green Ceramics, Inc.; **ACOUSTICAL CEILINGS:** Armstrong; **MAPLE FLOORING:** Connor Sports Floor; **TACKABLE WALL SURFACE:** Forbo; **PAINTS:** Pratt & Lambert; **GLASS AND SOLID INSULATED PARTITIONS:** Hufcor, Inc.

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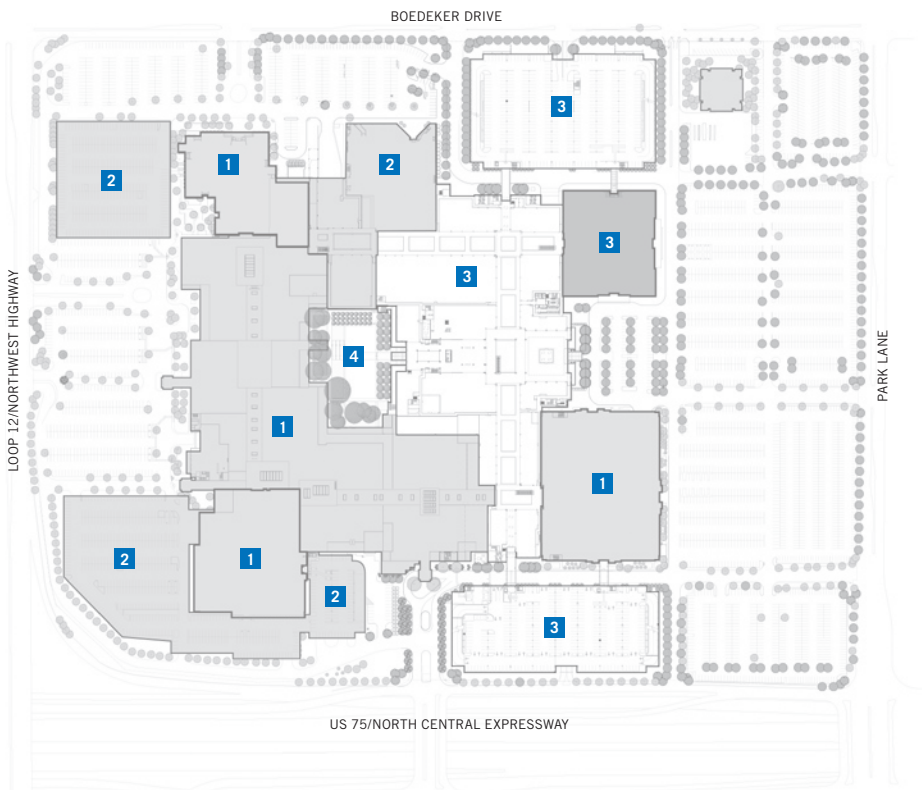
NorthPark Center Expansion

PROJECT NorthPark Center Expansion, Dallas
ARCHITECT Omniplan Inc.
CONTRACTOR Whiting-Turner Contracting Company
CONSULTANTS Pacheco Koch Consulting Engineers (civil); Datum Engineers Inc. (structural); Mesa Design Group (landscape); ARJO Engineers (MEP); DeShazo, Tang & Associates Inc. (traffic engineer); Candela (lighting); Schirmer Engineering Corporation (fire protection engineers)
PHOTOGRAPHER James F. Wilson

The recent expansion of NorthPark Center in Dallas by Omniplan represents the second major alteration of the innovative 1964 shopping mall. Originally developed by Raymond D. Nasher in an L-shaped plan, NorthPark has been reconfigured as a closed square with double the amount of retail space. Additions include a 1.5-acre park located in the center of the square, 110 new stores, two new parking garages, and a new third level occupied by a 15-screen cinema. Overseeing the expansion was Nasher's daughter, Nancy Nasher, and her husband/partner David Haemisegger who worked with Omniplan, the firm that evolved from Harrell + Hamilton, the firm that designed the original mall for her father. Among the goals for the expansion was to maintain NorthPark's signature white brick walls while introducing some contemporary features, such as a smoother concrete floor in the corridors. Other features remain the same but are larger in scale. For example, the size of skylights and clerestories is increased to bring more natural light indoors. Throughout its expanded mall, NorthPark will abide by its long-held tradition of displaying twentieth-century works of fine art from the personal collection of Raymond Nasher.

JENNIFER LEE

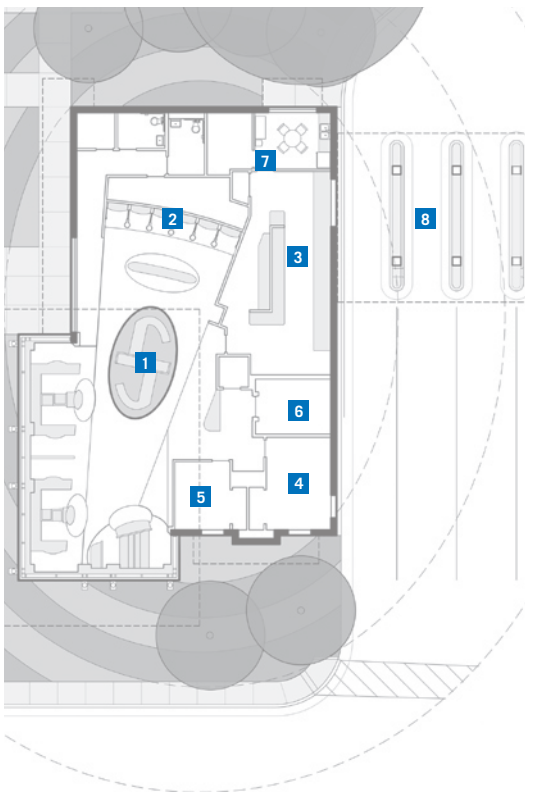


RESOURCES **CONCRETE TOPPING BOMANITE:** North Texas Bomanite Inc.; **RETROPLATE CONCRETE POLISHING SYSTEM:** Texas Stone & Tile; **MASONRY UNITS:** Acme Brick; **MODIFIED BITUMINOUS MEMBRANE ROOFING:** Firestone Building Products; **PEDESTAL PAVERS:** Wausau Tile Inc.; **SKYLIGHTS:** Naturalite Skylight Systems; **GLASS:** Viracon; **FASCIA AND SOFFIT PANELS:** Alucobond; **ENTRANCES AND STOREFRONTS:** Vistawall; **GLAZED CURTAINWALL:** Vistawall; **TILE (GRIS FOUSSANA LIMESTONE):** Stone Marketing

N

SITE PLAN
1 1964 MALL
2 1972 EXPANSION MALL AND PARKING DECKS
3 2006 EXPANSION MALL AND GARAGES
4 2006 GARDEN

University Federal Credit Union



GROUND FLOOR PLAN
1 CONCIERGE DESK
2 VIDEO TELLERS
3 TELLER ROOM
4 INVESTMENT OFFICE/CONFERENCE
5 MANAGER OFFICE
6 SAFE DEPOSIT VAULT
7 BREAK ROOM
8 DRIVE THROUGH LANES

N

PROJECT University Federal Credit Union–Brodie Lane Branch, Austin
CLIENT University Federal Credit Union
ARCHITECT Antenora Architects
CONTRACTOR Marcon Construction
CONSULTANTS Architectural Engineers Collaborative (structural)
PHOTOGRAPHER Paul Bardagjy

University Federal Credit Union's new Brodie Lane branch in Austin illustrates the institution's rethinking of its marketing strategy. According to the architect, the goal was to design a visually striking landmark that would reflect the advances in technology within the banking world while not alienating UFCU's long-standing, less digital-savvy members. Borrowing from Le Corbusier, the result is a "machine for banking" that invites customers to enter a largely transparent, sunlight-infused lobby space that departs dramatically from the conventional notion of a dark-paneled bank interior. Shaped like an upside-down, three-dimensional trapezoid enclosed on three sides by high-efficiency glass, the lobby is finished with maple surfaces – including furniture, casework, and ceiling – and accents of brushed stainless steel. Elliptical shapes are integrated into the plan, carpet patterns, and landscaping to facilitate circulation. The glazing is divided into three horizontal zones: the lowest with slightly tinted glass that allows a view of customer activities within; the middle zone with glass more darkly tinted to de-emphasize mechanical and lighting systems while maximizing solar control; and the highest zone with clear glass to optimize outside views of lobby signage. The three zones are delineated by horizontal awnings that wrap the lobby to minimize sunlight and provide platforms for window-washers.

JENNIFER LEE

RESOURCES STONE MASONRY VENEER: Lueders Limestone, LP; METAL FRAMING: Uni-strut; STEEL DECK: Epic Metals Corp.; STEEL BAR GRATE: Construction Metal Products; CUSTOM WOODWORK: Progressive Millwork; WATERPROOFING AND DAMPPROOFING: Tamko; ENERGYGUARD AND PERMALITE INSULATION: GAF Materials Corp.; ROOF AND WALL PANELS: Mapes Architectural Products; BITUMINOUS SHEET ROOFING: GAF Materials Corp.; METAL ROOFING: MBCI; WOOD DOORS: Eggers Industries; FLOAT GLASS AND HEAT-TREATED GLASS: PPG Industries; GLAZED CURTAINWALL: Vistawall; WALL TILE AND UNGLAZED CERAMIC TILE: Daltile; ACOUSTICAL CEILINGS: Armstrong World Industries; PAINTS: Hammerite; VINYL COMPOSITE TILE: Armstrong World Industries; LINOLEUM FLOOR COVERINGS: Forbo Industries; CARPET FLOORING: Shaw Contract; PAINT: Sherwin-Williams, ICI Dulux; SIGNAGE AND GRAPHICS: Concepts Unlimited; BIRD CONTROL SYSTEM: Bird-B-Gone, Inc.; BULLET-RESISTANT GLASS: Diebold; STOREFRONT: Vistawall; SUNSHADE WALKWAY: Construction Metal Products

New Trends in Walls and Ceilings

Advanced technologies continue to broaden design solutions for architects and allied professionals

Compiled by the staff of Texas Architect

COURTESY PAGE SOUTHERLAND PAGE

A model for the FBI Field Office in Houston shows the innovative design for its double skin. Heavily fritted laminated glass, attached to a lightweight metal frame, shades the reinforced concrete structure. The project, a joint venture by Page Southerland Page and Leo A. Daly/LAN, is now under construction and is scheduled for a September 2007 completion.

NEW technologies are offering architects and designers further innovative solutions to increase their projects' overall value through operational efficiency and long-term maintenance. These range from improved materials to enhanced techniques for their application.

High-Performance Building Facades

Facilities managers and other experts no longer view exterior facades historically viewed as an autonomous building component. Instead, they have learned to see exerior facades, as well as all the other components that comprise a building, as integrated systems that will help achieve and maintain efficient operations.

According to a recent study conducted by the Lawrence Berkeley National Laboratory's Building Technologies Program in Berkeley, Calif., a facade system delivers the greatest performance when it becomes an essential part of a fully integrated building design. The LBNL study, as reported in the April 2006 edition of *Building* magazine, focused on facades that utilize daylighting, solar control, ventilation systems, and dynamic systems. While the study's primary objective was to explore and define facade performance for California building owners so they could make informed decisions about potential energy efficiency, ventilation, productivity, and sustainability.

As defined by LBNL, high-performance commercial building facades are comprehensive systems that incorporate daylighting, solar heat-gain control, ventilation, and space conditioning. They also are typically respectful of the limits of latitude, location, solar orientation, acoustics, etc.

Among these high-performance, integraged systems is the double-skin facade, which consists of a single exterior layer of heat-strengthened or laminated safety glass, with exterior air inlet and outlet openings controlled with adjustable flaps. A second layer is the interior facade, which consists of fixed or operable windows. Set between these two facades are manual or automated blinds or shades. Typically, the blinds/shades cover the full height of the facade during cooling conditions, and are tilted to block direct sun.

To access the Lawrence Berkeley National Laboratory's High-Performance Commercial Building Facades study, go to gaia.lbl.gov/hpbf/backgr.htm. *The referenced article from* Buildings *magazine is available online at* www.isdesignet.com.

EIFS (Exterior Insulation and Finish Systems)

EIFS is an insulating, decorative and protective finish system for exterior walls that can be installed on any type of construction. It is the only exterior wall covering that insulates and provides weather protection in a selection of shapes, colors, and textures that can replicate almost any architectural style or finish material, or stand by itself as an architectural finish. While similar in appearance to stucco, EIFS is an exterior cladding system that consists of components and installation requirements very different from traditional stucco. EIFS also requires very different care and maintenance than traditional stucco.

In 1952, two significant developments took place that led to the development of EIFS in Europe. The first patent was granted for expanded polystyrene (EPS) insulation board and the first synthetic plaster, an organic plaster using water based binders, was developed. The use of EPS and synthetic resin materials together began in the late 1950s and in 1963. EIFS was marketed in Europe as a response to a need in the European construction market for a material that could insulate older masonry structures and enhance their appearance. In Europe, the use of EIFS on stud/sheathing walls is rare, as most European buildings have solid masonry walls. European concrete or masonry substrates can function as exterior walls without the EIFS. European EIFS tend to have thicker and coarser finishes, which provides for better waterproofing. The systems used in Europe also feature the use of less portland cement and a higher resin content in the base coat, giving the system more flexibility and water resistance, albeit at greater cost.

The technology for EIFS was transferred to the U.S. in 1969. During the oil crisis of the early and mid 1970s, EIFS becomes popular with energy-conscientious builders and buyers, who sometimes see energy bills halved. EIFS began by being used almost exclusively in the commercial building market, and was only gradually adopted for use in homes. By 1980, EIFS cladding accounted for one-half of 1 percent of the residential housing market, and by 1995 nearly 200 million square feet of EIFS were being installed annually on exterior walls in North America.

Also, in 1995, the industry suffered a setback when a number of EIFS clad homes in the Wilmington, North Carolina area were discovered with moisture damage behind the cladding. The damage was caused by poor construction detailing and practices, principally, the omission or improper installation of flashing in violation of minimum standards of construction set forth in building codes.

COURTESY BAKER DRYWALL

The Firewheel Town Center in Garland was awarded the 2005 Excellence in Construction award by the EIFS Industry Members Association. The open-air retail center opened in June 2005 and was designed by David M. Schwarz Architectural Services.

While giving the appearance of stucco, EIFS is actually a multi-layered wall system that consists of the following components:

- *insulation board* made of polystyrene (or similar material)secured to the exterior wall surface;
- *base coat* that is applied on top of the insulation and reinforced with fiber mesh; and
- *finish coat* that is applied on top of the base coat giving a durable, crack-resistant finish.

The first half of the acronym ("Exterior Insulation") is derived from the fact that the first component installed is a foam insulation board. The foam board is mechanically and/or adhesively attached to the exterior sheathing of the home. In this respect the foam board serves as an exterior insulating layer. Over this foam board is applied a synthetic base-coat material in which is embedded a fiberglass reinforcing mesh, typically referred to as the "base-coat." On top of the base coat is applied one or more "finish coat," an exterior layer that gives the product its stucco-like appearance. Hence the second part of the acronym "Finish Systems."

EFIS provides many advantages that other exterior finishes and sidings do not. Chief among these are superior energy efficiency and great design flexibility. As a matter of fact, studies have shown that EIFS can reduce the air infiltration in a wall by as much as 55 percent, when compared to standard brick or wood construction. An EIFS system, however, is a non-structural component of the wall.

Most early EIFS employed a face seal approach to rainwater management, and was thus very susceptible to failure. Because of these early problems, most EIFS now incorporates some sort of a drainage plane to allow for moisture drainage. However, due to the realities of the construction process, it is important to avoid "short-cuts" in the application of EIFS systems that might cause the primary face seal moisture barrier to fail.

The information on EIFS was adapted from an article posted on www.dspinspections.com.

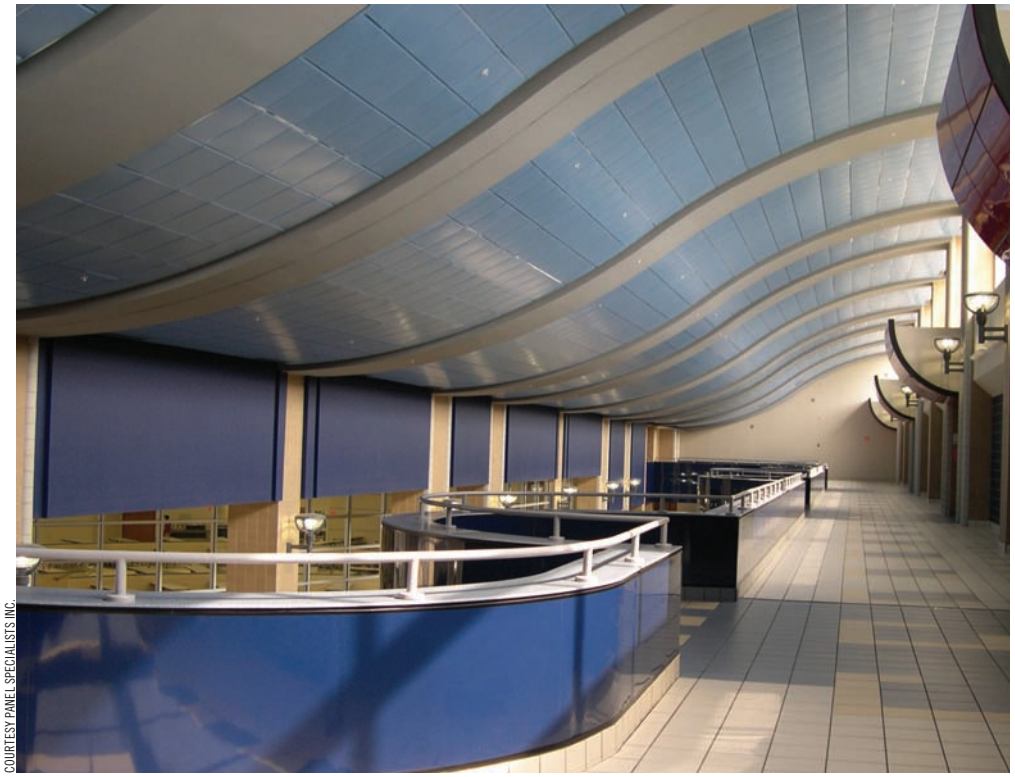
Masonry

Brick and stone continue to offer architects and designers great potential for individualized expression via a broad palette of durable products and finishes.

The TxDOT Travel Information Center in Amarillo, shown below, by Richter Architects was recognized nationally with the 2003 Brick in Architecture Award from The Brick Industry. Christus St. Elizabeth Hospital in Beaumont, shown at bottom, by HOK was honored with the 2005 Golden Trowel Award from the Texas Masonry Council.

CRAIG BLACKMON, FAIA

COURTESY AKER-ZVONKOVIC PHOTOGRAPHY



COURTESY PANEL SPECIALISTS INC.

Laminate Panels

Equally suited for new construction or remodeling, laminate wall panels are durable and easy to maintain while being extremely functional. They are available in many different finishes and surfaces. The panels are typically mechanically attached using a system of molding and trim pieces for a customize the finished look.

Metal Panels

Using metal panels often increases the flexibility of design and offers a long lifecycle. Depending on the finish, metal can give a project either a high-tech image or a historical look. The material can be bent, curved and, joined together in an almost limitless range of geometric configurations. In addition, the panels will maintain their luster for years.

A recent example is the City of San Antonio's Fire Station 48 by Alamo Architects, shown in the photo at right.

COURTESY ALAMO ARCHITECTS

INSIGHT

Industry Resource: AWCI

After several mergers and more than 85 years since its founding, the Association of the Wall and Ceiling Industry (AWCI) represents more than 2,100 contractors who perform work in the fields of acoustics systems, ceiling systems, drywall systems, exterior insulation and finishing systems, fireproofing, flooring systems, insulation, and stucco contractors, suppliers and manufacturers, and those in allied trades

AWCI provides an array of technical and product information, as well as education and training opportunities.

Among the educational programs currently offered by AWCI are "EIFS—Doing It Right" and "Steel—Doing It Right." The EIFS program is an outgrowth of the problems with improper installation of EIFS and other building components by untrained installers. While most of the problems occurred in the residential market, these problems had the potential to adversely affect the commercial EIFS market. "Steel—Doing It Right" delves into many aspects of cold-formed structural steel framing. It was developed in a partnership with the Steel Framing Alliance in response to the changes in the International Building Code that allows cold-formed steel framed buildings up to a height of seven stories.

AWCI is an active member in the American Society for Testing and Materials (ASTM) in those areas specific to our members' needs. With the adoption of ASTM standards into the I-Codes, participation in the activities of ASTM has taken on a more important role than ever before. These standards are important to AWCI members in that they very often determine the successful outcome of a project. It is important for the design community to fully understand what is covered by these standards as well as how to apply these standards to their work.

AWCI has publications that are specific to design in the areas of drywall installation and finishing, stucco, plastering, fireproofing inspection, EIFS, and cold-formed steel framing. A list of current publications is available at *www.awci.org*.

The above information was prepared by Don Smith, AWCI's director of technical services.

Texas does indeed love EIFS (Exterior Insulation Finishing System) and it is easy to understand why…EIFS is the versatile and practical solution for the facades for Texas.

When the architect and developer are looking for a high energy efficient cladding for the hot desert like conditions of West Texas, or need a drainable wall system that meets the Dade County Hurricane Code for the coastal area of Texas, EIFS is the practical solution.

If you think you know EIFS when you see it…think again. The New Generation Finishes of EIFS today can offer you the look of Cast Stone, Texas limestone, Old World plaster and even brick.

With the versatility of EIFS, it should be no surprise that the EIFS industry had a record breaking year with its highest sales volume ever in 2005! This record year helps keep EIFS once again as the largest slice of the pie in commercial wall cladding. YES, EIFS is selected to clad more exterior walls on commercial buildings than any other option.

Since 1952, the members of Texas Lathing & Plastering Contractors Association (TLPCA) have been recognized for their work with National awards and 2006 was no exception. This year both EIMA (EIFS Industry Members Association) and ABC (Associated Builders & Contractors Association) selected a Texas project using EIFS installed by a member of TLPCA for the National Exterior Wall Cladding of the Year award!

For over 50 years, TLPCA has promoted quality methods and practices for the plaster trade. Please visit www.tlpca.org for a list of membership, standard plaster details and technical information, AIA program availability or simply give us a call at 866-96-TLPCA and let us know how we can help.

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APA Launches Industry Blog

The new APA Blog for Professional Associates (*www.apawood.org/pablog*), is a tool for industry pros to learn about and discuss the latest news from APA - The Engineered Wood Association. Members of APA's technical staff of engineers and scientists post several entries each week on topics of interest to engineers, architects, code officials and builders. APA's Product Support Help Desk team posts some of their more frequently asked questions, and APA's Publications Department posts an entry each time a new or updated publication edition is released so blog readers can keep up to date on the latest APA recommendations. Recent topics have included using 16- and 24-in. portal frames in the same wall line, I-joist compatible glulam beams and whether you can build a prescriptive 18-ft tall wall. Users are encouraged to add comments and ask further questions on the topics, or suggest new topics for entries. Blog archives are fully searchable by key word, date posted or category.

Online Glossary of Concrete Terms

The concrete industry covers a broad range of people who design, use, apply, and build with concrete. Whether it is a concrete contractor, a manufacturer, an architect, designer, homeowner, builder, or supplier, a general understanding of terms used within the industry can be very beneficial. The Concrete Network provides an online glossary of most commonly used decorative concrete terms and definitions. Access the glossary at *www.concretenetwork.com/glossary/index.html*. The glossary includes over 200 decorative concrete terms, and is organized by simple alphabetical navigation. Terms cover types of decorative finishes such as acid stain, stamped concrete, and concrete overlays, as well as application techniques such as flashing (or flash broadcasting) and diamond grinding, and technical terms such as craze cracks, delamination, and efflorescence. Many of the terms link to additional information and other resources found on the Concrete Network and other related sites. For example, viewers interested in epoxy terrazzo can read the definition of the term and then click on it to access an expanded section with information including design options, how it's installed, and much more. The Concrete Network also offers many tools for readers to research decorative concrete including a substantial glossary specifically for concrete countertop terms, and a photo gallery (*www.concretenetwork.com/photo_library/index.html*) covering the gamut of decorative concrete applications including concrete interior floors, driveways, patios, pool decks, concrete countertops, fireplaces, concrete furniture, and much more.

National Conference to Promote Green Schools

The U.S. Green Building Council, Turner Construction Company, the nation's leading general builder, and Global Green USA will sponsor a June 27 conference that will focus on sustainable design and construction in both the K-12 and higher education sectors. "Investing in the Future: A Green Schools Symposium" also will provide insight on the significant economic, health, and productivity benefits of building green schools. The conference is part of a series resulting from a commitment made at the Clinton Global Initiative Inaugural Meeting in 2005 by the USGBC and Turner Construction. The daylong symposium will be held at the California Science Center in Los Angeles. The various panel discussions will include national, regional, and local experts that will address the latest in research, policy and practice in the field of sustainable building and design.

Local Color

Searching for meaning in fireworks stands, those homegrown works of 'roadshed' architecture

by CHRISTIAN SHERIDAN, ASSOC. AIA

AS you speed along the highway you can't help but notice how fireworks stands repeat themselves along the Texas landscape. Their placement seems mindless—they huddle together; they sit in isolation. But upon closer inspection, you begin to realize that their placement and orientation have meaning.

The owners openly discuss their strategies for choosing their stand's color and which family member will be assigned to a specific stand. The competition can be fierce. Each year the small, independent stands must compete against larger, regional warehouse-type vendors, as well as against other local families also looking to earn extra income.

In documenting these unique examples of "roadshed" architecture, I have been asked by owners if I was spying on their business. Of course, spying is not unheard of since an extra stand along a near vacant stretch of road can mean the loss of business for existing stands.

As temporary as this architecture seems to be (in construction and perhaps in terms of legal use during the year), these stands represent specific points of collection and celebration of the populace. My interest is in bringing the stands to the foreground, releasing them from the ubiquity that often obscures roadside architecture.

The writer works with Brave Architecture in Houston.

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