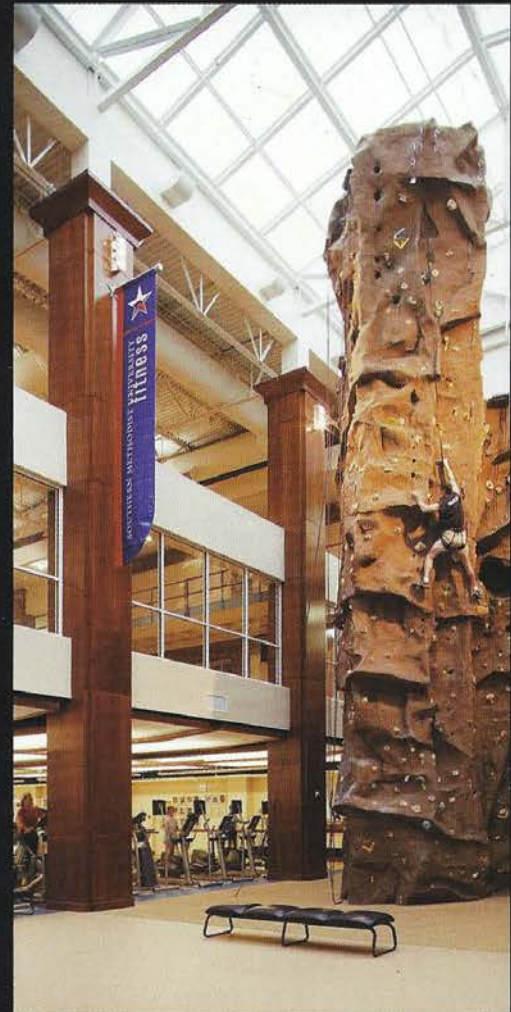
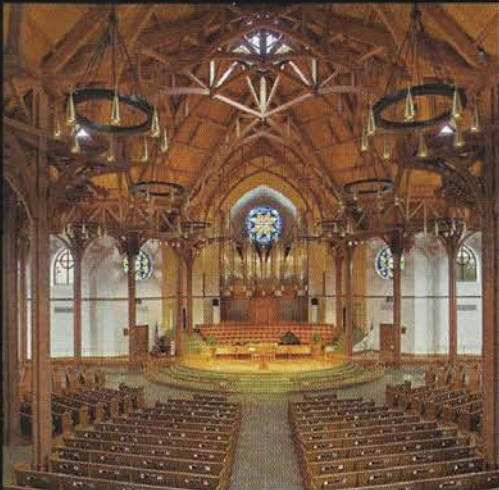


REAL ESTATE & CONSTRUCTION REVIEW

Dallas/North Texas Edition

www.constructionreviews.com

volume 8 2008 Edition



The Resource for Real Estate & Construction Decision Makers

construction  communications



International Construction Data

P.O. Box 983
Keller, TX 76244
817-379-3644
fax: 817-379-3644
prebuildcontrol@aol.com

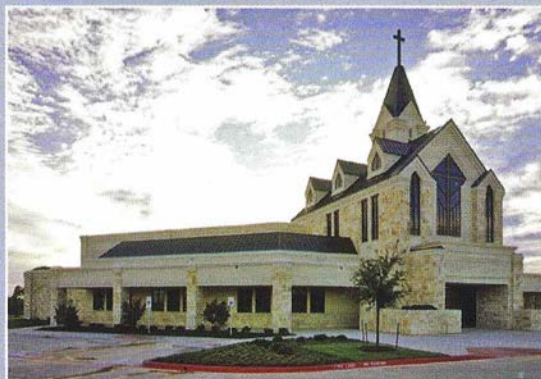
Company's Specialties: Using computer modeling to find and correct problems, and generate precise "prebuilt" construction data for reducing actual construction time. Over half the projects in this issue have benefited from the ICD prebuild process.

DGB Glass, Inc.	70, 74, 82, 86, 88, 124, 125
DK Painting & Construction Co.	32, 130
DLS Flooring Systems.	26, 122, 123
DPR Construction, Inc.	92, 116, Back Cover
Dee Brown, Inc.	28, 35, 46, 68, 80, 86, 87, 88, 128
Delta-T, Inc.	57, 64, 124
DeShazo, Tang & Associates, Inc.	44, 53, 58, 90, 95, 117
Design Electric.	54, 58, 60, 76, 79, 82, 118
Don Burden & Associates, Inc.	66, 69, 80, 128, 129
Dunkin Sims Stoffels, Inc.	53, 126
ERS	18, 113
Ed Brown Distributors.	66, 126
Electro Acoustics, Inc.	48, 49, 68, 70, 93, 112
Fanning, Fanning & Associates, Inc.	71, 97, 128
Faulkner Design Group, Inc.	32, 97, 126
Fellows Irrigation Services, Inc.	19, 126
Furgo Consultants, L.P.	66, 82, 124
GFS Texas.	24, 69, 119, 122
G & L Mechanical	70, 132
Griffin Dewatering Corporation	104, 135
HB Welding.	32, 103, 130
H.G. Rice & Company/ Millunzi & Associates, Inc.	58, 62, 70, 76, 97, 122
HKS, Inc.	40, 42, 76, 87
Hammes Company	85, 90, 98, 132
Hill Country Steel LP.	22, 137
Hudson Site Control, LLC	60, 69, 99, 138
Hugo Reed and Associates, Inc.	72, 94, 114
Image Engineering Group, Ltd.	62, 76, 128, 129
Integrated Interiors Inc.	47, 65, 86, 112
International Construction Data	52, 53, 54, 56, 57, 60, 61, 62, 64, 66, 73, 80, 82, 86, 88, 93, 113
JB Commercial Millwork.	16, 112
JJA, Inc.	21, 54, 98, 128
JMEG, LP Electrical Contractors.	28, 42, 44, 54, 58, 118, 119
JWL Tile Co.	64, 113, 114
KAI Texas	Inside Front Cover, 93, 116
Kemiko Concrete Stain	18, 44, 122, 123
Key Construction.	18, 76, 77, 79, 93, 116
King Masonry Inc.	39, 128, 129
L.A. Fuess Partners Inc.	21, 28, 35, 48, 99, 136



Don't leave your project to chance
Prebuild it!

International Construction Data, Inc.
*The Construction Industry Leader In
Building Information Modeling Since 1995*



Office: 817-379-3644
P.O. Box 983 • Keller, TX 76244
Jspencer@prebuildcontrol.com
www.Prebuildcontrol.com

Facts & Figures

Owner: Mansfield Independent

School District, Mansfield

Type of Project: Two new elementary schools within one building

Architect: SHW Group, LLP, Fort Worth

General Contractor: Hunt Construction Group, Dallas

Size: 79,274 square feet (size of each building)

Cost: \$10.098 million (Anna May Daulton); \$10.162 million (Cora Spencer)

Construction Time: March 2005 - May 2006

The Need: Two new elementary schools to help relieve an overcrowded district

The Challenge: Ensuring the schools' quality and longevity

Supportive Team Members

International Construction Data
Building Information Modeling



Photos courtesy of Richie Escovedo

Grand Prairie, Texas

Anna May Daulton Elementary School and Cora Spencer Elementary School

Mansfield Independent School District (ISD) was facing the issue of overcrowding in its schools. In reaction to its increasing population, the district decided to build two new elementary schools — Anna May Daulton Elementary School and Cora Spencer Elementary School.

In order to save money on this project, the district decided to build the two schools on the same property and attach them so they could share elements such as the gymnasium, the cafeteria and the kitchen.

Constructing the two schools as separate institutions within a single one-story building allows each school to remain small and manageable for the young students, as well as creates an economy of scale that would not normally be present for the construction of two different elementary schools. The construction crews had only one site to manage, and any design issues that came up were solved for two schools at the same time.

The architecture and material choices for the building's exterior were chosen to complement and blend in with the surrounding residential neighborhoods. Structurally,

the schools were designed to create a positive atmosphere for the students. "These projects have load-bearing CMUs [concrete masonry units] at all exterior walls; however, they are very specifically designed to push the limits of the technology so we take advantage of the positive benefits of load-bearing masonry while opening the walls and flooding the interior with as much natural light as possible for the benefit of the inhabitants of the building," said Craig Drone, AIA, senior project manager and vice president of SHW Group, LLP, the project's architect.

As with all its construction projects, Mansfield ISD was very concerned about the project's quality and longevity. Hunt Construction Group, the project's general contractor, said, "The project team ensured quality by making each team member accountable and having continuous field interaction with the subcontractors. Weekly coordination meetings enforced this effort as well." With John Allen, project engineer for Hunt Construction Group, observing and making any necessary corrections

throughout the construction process, steady progress was maintained throughout the project.

Each elementary school is named for a long-time Mansfield ISD school teacher who made a significant and positive impact on the district. Anna May Daulton, who passed away in June 2006, devoted 30 years of her life to teaching in Mansfield ISD. Cora Spencer taught for 22 years in the district and was also the niece of two other Mansfield ISD namesakes — Erma Nash and Elizabeth Smith.

The mottos of each elementary school also reflect the goals of the project team. Cora Spencer Elementary School's motto is "Blazing a trail to success by doing our very best," while Anna May Daulton Elementary School's motto is "Navigating to success." With inspirational namesakes and motivational mottos, both schools are sure to provide their students with the tools to lead them to toward promising futures. ■

— Marci Grossman



Facts & Figures

Owner: Cedar Hill Independent

School District, Cedar Hill

Type of Project: A new middle school

Program Manager: Huckabee/Dikita, Fort Worth

Architect: BMA Architects, Duncanville

General Contractor: Turner Construction Company, Dallas

Size: 135,310 square feet

Cost: \$14.1 million (construction costs)

Construction Time: May 2004 - August 2005

The Need: A new middle school for a growing school district

The Challenge: Dealing with a tight schedule and discrepancies in the design documents

Supportive Team Members

Battson Contracting Co., Inc.
Underground Utility Contractor

DeShazo, Tang & Associates, Inc.
Consulting Engineers

Dunkin Sims Stoffels, Inc.
Landscape Architects

International Construction Data
Building Information Modeling

MAS-TEK ENGINEERING & ASSOCIATES, INC.
Consulting Engineers

S & J Electric
Electrical Contractor

Southwest Lath & Plaster
Plastering

Wenger Corporation
Music & Performing Arts
Consulting & Equipment



Cedar Hill, Texas

Bessie Coleman Middle School

In August 2005, work was completed on Cedar Hill's new middle school, which was named after Bessie Coleman (1892 - 1926), who was born into poverty and yearned to become an airplane pilot, but every flying school turned her down because she was a black woman. In 1920, she went to France and earned her international flying license two years before Amelia Earhart, becoming the only licensed black pilot in the world at the time.

"Cedar Hill had one middle school that was 110 percent beyond capacity," said Jim Robertson, program manager for Cedar Hill Independent School District (CHISD), the project's owner. "In 2001, the community approved a bond issue to address this and other facilities. Bessie Coleman Middle School is the first facility in Cedar Hill named for an African American."

Located on a 24-acre site, the new two-story, 135,310-square-foot school houses grades six, seven and eight. The school's design evokes a 1930s aviation building with a brick and metal stud veneer applied to the steel structure with composite deck. "Elements of the design's interior and structure are based upon the aviation industry as it was associated with Ms. Coleman," explained Robertson.

The school is divided into two academic "neighborhoods" of 300



students. The neighborhoods are connected to each other and common activity areas by a two-story mezzanine. Although the school capacity is 600 students, core areas such as the "cafetorium," the high-tech library, the gymnasium and fine arts spaces are designed to handle 1,200 students. Movable walls allow for individualized classroom size, and seating areas in corridors foster the development of relationships. Outside, the project also included a practice football field and a nine-lane running track.

Completed in just 15 months, the project's tight schedule was a difficult obstacle to overcome. Jerry Hammerlun, president of Huckabee/Dikita, the program manager for the school, said, "In my opinion, the schedule was the biggest challenge related to this project. [General contractor] Turner Construction [Company] did a great job of staffing, managing and getting the building constructed. The entire team worked well together."

According to Glenn Stratton, project manager for Turner, an additional challenge occurred just



Photos courtesy of BMA Architects

60 days into the project when the team discovered that although design documents indicated the building should have just seven moment connections, the intent was to have more than 100. As opposed to rigid connections, moment connections give a structure the ability to move, which is critical during situations such as earthquakes. "Increased manpower and the resequencing of trades enabled [the team] to overcome the design issue and still keep the project on time and on budget," said Stratton.

The result of the team's hard work is a state-of-the-art middle school that everyone can be proud of. Robertson said, "This has turned out to be an excellent facility for the district and an excellent facility for other districts to study." ■

— Rick Geyerman

Facts & Figures

Owner: Dallas Independent School District, Dallas

Type of Project: A new high school

Architect: SHW Group, LLP, Dallas

General Contractor: McCarthy Building Companies, Inc., Addison
Size: 330,000 square feet

Cost: \$50 million

The Need: A new high school for Dallas Independent School District, which hadn't seen a new high school in 20 years

The Challenge: Finding a large enough site for a high school

Supportive Team Members

Aber Fence & Supply, Inc.
Fence Contractor/Stairways & Balcony Railings

Alpha Industries, Inc.
Structural Steel Fabricators & Erectors

Armetco Systems Inc.
Exterior Wall Cladding

Bonded Lightning Protection Systems
Lightning Protection

Design Electric
Electrical Contractor

International Construction Data Building Information Modeling

JJA, Inc.
Mechanical, Electrical & Plumbing Engineers

JMEG, LP Electrical Contractors
Electrical Contractors & Engineering/Testing/Inspection

MS Dallas Reprographics
Reprographics

SHWGROUP
ARCHITECTS • ENGINEERS • PLANNERS



Dallas, Texas

Emmett J. Conrad High School

Dallas Independent School District (ISD) has its first new high school in 20 years. The 330,000-square-foot Emmett J. Conrad High School is the 26th high school in a district of 234 campuses.

Phil Jimerson, associate superintendent for construction services for Dallas ISD, said, "It's hard to find available land where you need it [with] enough acreage for a school. We ended up buying [property containing] a large apartment complex and demolishing it." The site itself was still insufficient for a 7.5-acre building,

parking for 2,000 students and staff members, and athletic fields. In order to expand the high school's property lines, the district made a deal with the City of Dallas to raise a major portion of an adjacent city park out of the flood plain it existed in using dirt infill. The deal expanded the usable property for the school to more than 30 acres.

The school is four stories tall, but in order to fit the existing site topography, it was designed so only three of these levels are above grade. "The [building's] exterior is clad with brick, glass,

aluminum and pre-finished metal trim," said Gary Hardaway, AIA, project manager for SHW Group, LLP, the project's architect. "A concrete frame supports most of the building, but steel framing spans the larger spaces such as the gymnasium, the cafeteria, the auditorium and the library. Natural light is a central design theme at [the school]. Access to sunlight and excellent views of the park and landscaped grounds connect students, staff and visitors to the larger community outside. This connection allows a very large building to



Photos courtesy of Pro Photodallas

Facts & Figures

Owner: Duncanville Independent School District, Duncanville

Type of Project: Renovation and expansion of a high school

Architect: SHW Group, LLP, Dallas

General Contractor: Hunt Construction Group, Dallas

Size: Approximately 530,000 square feet (new construction); approximately 354,000 square feet (revocations)

Cost: \$90 million

Construction Time: August 2002 (beginning of Phase I) - August 2005 (Phase VI completed)

The Need: To accommodate a growing high school population in a single building

The Challenge: Working to connect the buildings while school was still in session

Supportive Team Members

Campbell Glass & Mirror Inc.
Glass & Glazing Contractor

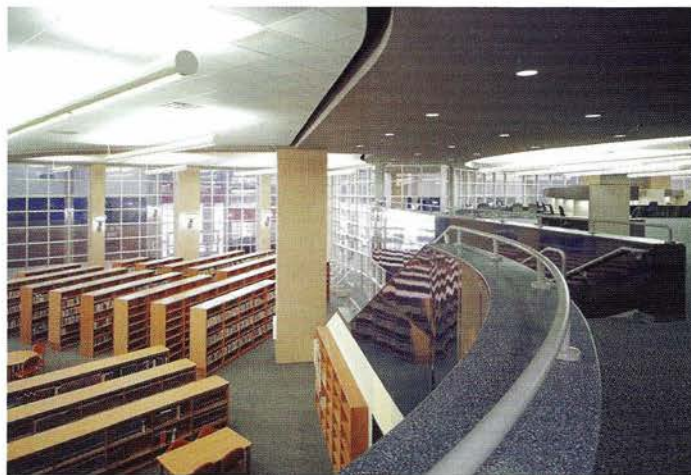
Century Mechanical Contractors, Inc.
Mechanical Contractors

International Construction Data Building Information Modeling

Morris Drywall Systems, Inc.
Drywall Contractors

Wenger Corporation
Music & Performing Arts Consulting & Equipment

SHWGROUP
ARCHITECTS & ENGINEERS, P.C. DALLAS, TEXAS



Photos courtesy of Mark Trew Photography

Duncanville, Texas

Duncanville High School Additions and Renovations

With an expanding population, the Duncanville Independent School District (ISD) needed more space to accommodate high school students. After exploring options and considering multiple possibilities, Duncanville ISD determined that it wanted to try something new. The decision was made to consolidate Duncanville High School's existing 11 buildings by renovating and connecting them to create a single building that would include the district's ninth-grade student population.

The consolidated school is approximately 884,000 square feet divided into two separate communities — one for the ninth graders and one for the 10th through 12th graders. The communities are separated by a central academic district made up of state-of-the-art elective opportunities available to all grades. By including ninth graders in this facility, the district was able to relieve overcrowding without building a new school for the middle school population.

The improved Duncanville High School includes 18 science classrooms with full laboratory facilities, special education classrooms

with training laboratories for offering life skills, multipurpose lecture rooms, large group instruction areas, an instructional resource center (IRC), a dance room for the high school drill team, and a separate cafeteria for the ninth graders. Additionally, the campus includes a baseball/softball field that rivals collegiate fields.

According to Tammy Kuykendall, director of communications and public relations for Duncanville ISD, one of the school's most unique features is the IRC, which provides open space with meeting tables and conference rooms where teachers from different disciplines can meet to collaboratively discuss cross-course instruction, promoting team teaching concepts. Additionally, the IRC encourages more frequent teacher-student interaction and tutoring.

The project allowed the district to significantly upgrade the aging school. All the systems were rebuilt, replaced or updated, including the roof, HVAC and utilities. By updating and upgrading all equipment and fixtures in this manner, the project team created an economy of scale that helped reduce cost as

well as create consistency for the various components, resulting in a new 50-year life span for the school.

The biggest challenge was creating one facility out of multiple buildings while the school was occupied by students. "The project consisted of 14 bid packages and six phases of seamless construction to connect the 11 existing buildings — bringing the entire campus under one roof," said Michael Elmore, AIA, project manager for SHW Group, LLP, the project's architect. "Through careful planning and ensuring the construction team was a part of the initial planning meetings, all six phases were seamlessly constructed while classes were in session — an extraordinary feat."

Elmore said, "Not only is the [improved] Duncanville High School something the community...is proud of, it has become its crossroad. It is a place where people meet, learn and grow. It is a bridge for its students from middle school to high school to college and beyond." ■

— Marci Grossman



Facts & Figures

Owner: Little Elm Independent School District, Little Elm

Type of Project: A new athletic complex for a school district

Architect: SHW Group, LLP, Dallas

Construction Manager: Charter Builders, Ltd., Frisco

Size: 357,557 square feet

Cost: \$15.5 million (construction costs)

Construction Time: June 2005 - July 2006

The Need: A new athletic complex to be used by an entire school district

The Challenge: Stabilizing the site's soil for construction

Supportive Team Members

Bonded Lightning Protection Systems
Lightning Protection

Delta-T, Inc.
HVAC Testing & Balancing

International Construction Data
Building Information Modeling

Pro-Bel Group of Companies
Division 11 Window Washing Equipment



Photos courtesy of Mark Trew Photography

Little Elm, Texas

Little Elm Athletic Complex

Little Elm Independent School District (ISD) wanted to ensure its new athletic complex offered a superior experience for both the participants and the spectators for all the athletic endeavors that it would be supporting, including football, soccer, Special Olympics events, and its athletic tradition of track and field.

The Little Elm Athletic Complex is comprised of an outdoor football/soccer field; an eight-lane, 400-meter event track; four long jump runways; two pole vault runways; two shot put pads; and two discus pads. The home side bleachers, which comprise 4,478 seats facing the events field, also serve as the sloping back wall to the field house. The field house contains a press box that rises three levels above the bleachers, two locker rooms — one for the visiting team and one for the home team, and a front entrance facing a 1,350-car parking lot. The visitor's side bleachers contain seating for 3,000 people. According to Kent Crutsinger, deputy superintendent of Little Elm ISD, the new facility allows the district to compete with area schools. "You

can watch every event from the stands and never have to leave the stadium," he said.

According to Terry Hoyle, AIA, principal in charge for SHW Group, LLP, the project's architect, the most impressive aspect of the complex is the state-of-the-art, three-tier press box. The first level of the press box sits just above the top row of the home bleacher seats and is designed for video taping and general observation. The second level has a break room; two restrooms; and multiple viewing rooms for the community, the media and scouts. The top level has two split-level viewing rooms for the coaches — one at either end of the press box; four rooms in the center for public address, running the scoreboard, and radio and television operations; and a break room with restrooms.

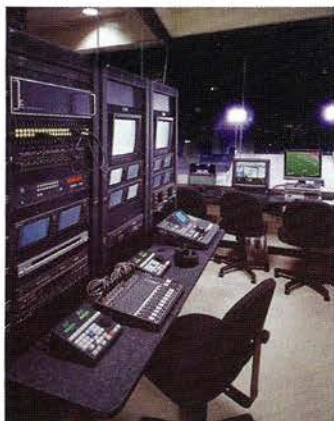
The complex's athletic field and track were built to last by using quality, up-to-date materials. The football/soccer field is made of synthetic turf with sand and rubber fill components, and the event track is a Beynon Sports Surfaces, Inc. synthetic surface system. In addition to being durable and easy to maintain, these are the same materials used in National

Collegiate Athletic Association (NCAA) and U.S. Olympic facilities. From a competition standpoint, this is one of the highest quality facilities in the state.

According to M. Brady Ream, senior project manager for Charter Builders, Ltd., the project's construction manager, one of the greatest challenges was getting the site's soil stabilized for construction. Using an injection machine, all the soil was injected with more than five million gallons of water and a small amount of sulfuric acid in order to break down the clays and force them to hold a maximum amount of water. Paving slabs were then placed on top to hold moisture in. The injection process was performed on every part of the project that did not have natural grass, according to Ream.

Completed in July 2006, the new Little Elm Athletic Complex is a state-of-the-art facility. Crutsinger said, "[The athletic complex] allows us to compete with area schools in a similar facility, and the community has something that shows we have pride." ■

— Marci Grossman



Facts & Figures

Owner: Frisco Independent School

District, Frisco

Type of Project: A new high school

Architect: SHW Group, LLP, Dallas

Construction Manager at Risk:

Turner Construction Company, Dallas

Size: 303,000 square feet (main building); 33,287 square feet (field house); 2,875 square feet (concessions building)

Cost: \$49 million

Construction Time: July 2004 - July 2006

The Need: A third high school for a growing district

The Challenge: Dealing with a record amount of rainfall during construction

Supportive Team Members

Alpha Industries, Inc.
Structural Steel Fabricators & Erectors

H.G. Rice & Company/Millunzi & Associates, Inc.
Food Service Consultants

Image Engineering Group, Ltd.
Mechanical, Electrical & Plumbing Engineer

International Construction Data Building Information Modeling

Lone Star Communications
Low-voltage Integrator

Southwest Lath & Plaster
Plastering

Tranor Glass Company
Glass & Glazing

Frisco, Texas

Justin Wakeland High School



SHWGROUP
ARCHITECTS / ENGINEERS / PLANNERS



Photos courtesy of Mark Trew Photography

Frisco Independent School District (ISD) is one of the fastest growing school districts in Texas and has consistently posted student enrollment gains of 20 to 30 percent annually. Enrollment was at 20,215 students on the last day of school in the 2005/2006 school year, and more than 24,000 students were expected to enroll in fall 2006.

To solve the issue of overcrowding, Frisco ISD decided to build a third high school and name it after former Frisco ISD superintendent, Justin Wakeland, Ed.D. The new, two-story 303,000-square-foot Justin Wakeland High School has a capacity of 2,000 students on a 104-acre campus. "A central commons runs east to west along

Facts & Figures

Owner: McKinney Independent

School District, McKinney

Type of Project: A new high school and associated athletic fields

Architect: PBK, Dallas

General Contractor: Pogue

Construction, McKinney

Size: 545,000 square feet

Cost: \$144.59/square foot

(construction costs)

Construction Time: April 2004 - July 2006 (Phase I); April 2004 - November 2006 (Phase IA); April 2004 - July 2007 (Phase IIA); April 2004 - July 2008 (anticipated completion for Phase IIB)

The Need: A new high school to support growth in the school district

The Challenge: Building on a site with a large slope in elevation

Supportive Team Members

Ackerman Barnes Consulting

Delta-T, Inc.

HVAC Testing & Balancing

International Construction Data

Building Information Modeling

JWL Tile Co.

Ceramic, Marble, Granite & Stone Contractor

Morris Drywall Systems, Inc.

Drywall Contractors

RTS Enterprises, Inc.

Electrical Contractors

Southwest Lath & Plaster

Plastering

Torres Commercial Cleaning

Services, LLC

Final Cleaning (After Construction Cleaning)



McKinney, Texas

McKinney Boyd High School

When demographic studies indicated the need for a new high school in McKinney due to an increase in existing and projected growth of the district's secondary student population, the school district went to work.

Hiring architect PBK and general contractor Pogue Construction, McKinney Independent School District (ISD), the project's owner, began construction on McKinney Boyd High School, completing the first phases in November 2006. The final phase of the project is anticipated to be finished in July 2008.

In addition to the classrooms required to support the core curriculum, the high school also includes an early childhood center, a health science laboratory, a special needs suite, a video production laboratory, a horticulture classroom and greenhouse, and several business education classrooms/computer laboratories, said Tim Dry, director of construction for McKinney ISD. Outside, the school features a variety of athletic fields.

According to Fred B. Montes, AIA, partner for PBK, a clear sense of circulation was one of the drivers behind the design. "This large and complex building is made efficient and comprehensible to both students and visitors by organizing all the spaces within a long, two-story mall lit naturally with skylights," he said. Each of the school's educational departments is connected to the mall.

One of the primary considerations in the exterior design was creating a clear sense of entry for the various functions of the campus. The main entry is complemented with entrances to the gymnasium and the auditorium. Columns, archways, framed windows and projecting cornices all combine to create a traditional expression for the exterior of the school, according to Montes.

The greatest challenge encountered on this project was the site elevation, which sloped 65 feet from west to east. In addition, the site was approximately

10 acres less than the optimum acreage required for a high school site, said Dry. Despite the extreme elevation change, the team was able to build the school without split-floor levels, which often has to be done in such a situation. In fact, the team was able to use the elevation to its advantage to provide an aesthetically pleasing view of the facility from Lake Forest Drive, said Dry.

Phase I, which encompassed 251,000 square feet, had to be completed quickly. All the team members had experience in short, fast-paced construction schedules, which made it easier to accomplish that goal. "The project team addressed construction issues in an expeditious manner to prevent delays," said Dry. PBK provided quick answers to typical construction issues, he said, and Pogue was able to meet the timeline thanks to its experienced management team and its quality subcontractors.

Once the final phase is complete, McKinney Boyd High School will be able to accommodate 3,000 students to help the school district keep up with the projected population growth. ■

— Jamie Rawcliffe



Photos courtesy of Jud Haggard

Facts & Figures

Owner: Midlothian Independent School District, Midlothian

Type of Project: An addition and renovation to an existing high school complex

Architect: VLK Architects Inc., Arlington

Construction Manager at Risk: Buford-Thompson Company, Arlington

Size: 443,095 square feet (new and renovated space)

Cost: \$39.4 million (construction costs)

Construction Time: Summer 2005 - August 2007

The Need: To provide more modern, unified space for an outdated and overcrowded high school

The Challenge: Working while school was in session

Supportive Team Members

Ackerman Barnes Consulting

BRI Roofing & Sheet Metal, Inc.,
Roofing Contractors

Ed Brown Distributors
Commercial Laundry Equipment

Furgo Consultants, L.P.
Geotechnical Engineers

International Construction Data
Building Information Modeling

Red Dot Building Systems
Structural Steel Fabricators & Erectors

Reed, Wells, Benson and Company
HVAC Systems

StageLight, Inc.
Theatrical Systems Supplier & Installer

Wenger Corporation
Music & Performing Arts
Consulting & Equipment



Midlothian, Texas

Midlothian High School Addition and Renovation

An addition to Midlothian High School, Midlothian Independent School District's only high school campus, unites two existing buildings into one cohesive unit that is capable of providing for 2,500 students.

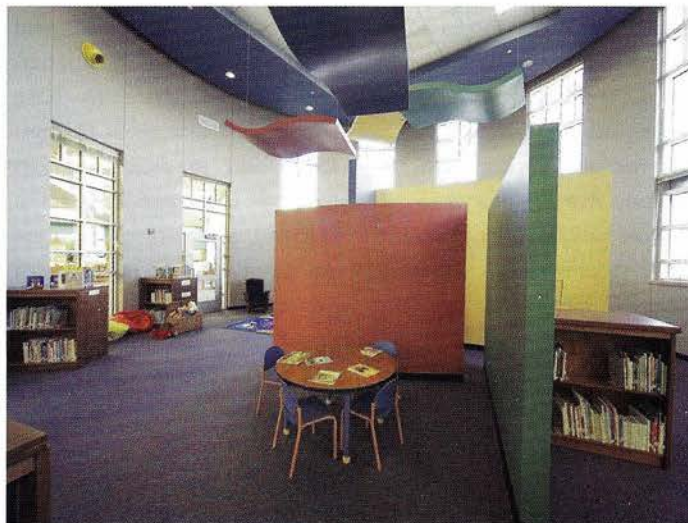
Located between the two existing buildings, the addition includes a new 800-seat auditorium with a fully functioning fly loft

and support facilities, a new joint-use library that meets the Texas Education Agency's standards and serves the school and the community, a new student cafeteria, a new 2,500-fixed-seat gymnasium/arena complex, and a new consolidated administration area. The project also involved a complete renovation and reconfiguration of the existing buildings to

provide for departmental consolidation. The outdated classrooms received new technology and electrical infrastructure, and the project brought the entire campus up to current life-safety standards.

Faced with outdated and overcrowded facilities, coupled with the fact that students had to travel between the two buildings via an unsecured parking lot that was exposed to the weather, the school district initially considered a replacement high school campus. When a bond referendum defeated the proposed new campus, the decision was made to connect the two buildings with a centralized administration.

Leesa Vardeman, principal for VLK Architects Inc., the project's architect, described the addition's design as a "main street" type of connection between the two buildings. Since there was already a clear interior circulation connecting the two structures, the design utilized



Photos courtesy of Chad M. Davis, AIA

Facts & Figures

Owner: Midlothian Independent School District, Midlothian

Type of Project: A new middle school

Architect: VLK Architects, Inc., Arlington

General Contractor: Buford-Thompson Company, Arlington

Size: 173,334 square feet

Cost: \$21 million (total)

Construction Time: June 2004 - August 2005

The Need: A new middle school to accommodate an increased population

The Challenge: Completing the building and related site improvements before school began, and dealing with bond issues



Photos courtesy of Chad M. Davis, AIA

Midlothian, Texas

Walnut Grove Middle School

Supportive Team Members

Ackerman Barnes Consulting

BRI Roofing & Sheet Metal, Inc.
Roofing Contractors

Campbell Glass & Mirror Inc.
Glass & Glazing Contractor

International Construction Data
Building Information Modeling

Reed, Wells, Benson and Company
HVAC Systems

TDIndustries
Specialty Contractors

Wenger Corporation
Music & Performing Arts
Consulting & Equipment

Midlothian Independent School District's new Walnut Grove Middle School houses grades six through eight and has the capacity to hold 1,250 students. The project responds to increased growth within the district and provides a second middle school for Midlothian students.

The two-story prototype building has a center core flanked by a sixth-grade wing on one side and a seventh- and eighth-grade wing on the other. The wing system integrates the sixth-grade students into the facility while still providing a smaller scale environment for these younger children. Each grade level has a unique identity and both wings have secure vestibules through which visitors must pass before entering the main portion. All classrooms have wireless multi-media Internet technology.

The building's core houses the administration area and the front entrance on the first floor, and the library with its panoramic view on the second floor. A strong circulation corridor connects the administration area to gymnasiums, fine arts classrooms, the student commons area and the cafeteria.

According to J.D. Kennedy, Ed.D., superintendent for the

Midlothian Independent School District, road improvements were necessary to accommodate the increased traffic that the new school would generate. Additionally, since the site was undeveloped raw land, the team had to run a major sanitary sewer line several thousand feet, requiring an inter-local agreement between the city and the school board. And, since the building was located over an underground creek, the team had to change the original plans and relocate the tennis courts to the northwest corner to avoid probable foundation expenses. All these improvements required completion before the school opened. The scheduled mid-year completion date would have caused coordination difficulties, so the team fast-tracked the project, finishing four months early and avoiding construction after the beginning of the school year. "We were successful in this endeavor," said Kennedy.

Leesa Vardeman, principal for VLK Architects, Inc., the project's architect, explained that since two different bond packages funded the project, the team members began by designing the

sixth-grade wing with plans for occupancy to commence with grade six, and then expand to grades seven and eight. This meant phasing the construction in two parts, so they could come back and add on later after funding from the second bond passed. Halfway through construction, the bond for funding the remaining seventh- and eighth-grade wings passed. VLK Architects incorporated the entire building into the design documents and structured together the six grade elements first and the rest later, although it was all under one contract. "We [completed] the entire building in the initial construction period," Vardeman said. "The [general] contractor [Buford-Thompson Company] accelerated the overall delivery."

Kennedy complimented the team on its expertise and "can-do" attitude. He added that the fast track schedule did not sacrifice quality. "The building is functional and attractive," he said. "It will serve the school district well for years to come." ■

— June Campbell

Facts & Figures

Owner: City of Frisco
Developer: Five Star Development Co., Inc., Flower Mound
Type of Project: A new city hall and library
Architect: Holzman Moss Architecture, New York, NY
Construction Manager at Risk: Lee Lewis Construction, Inc., Lubbock
Size: 99,000 square feet (city hall); 51,000 square feet (library)
Cost: \$34 million (total)
Construction Time: August 2004 - June 2006
The Need: More space for Frisco's city hall operations and library
The Challenge: Finding the appropriate subcontractors

Supportive Team Members

ASI-Modulex
Signs

BRI Roofing & Sheet Metal, Inc.
Roofing Contractors

Bonded Lightning Protection Systems
Lightning Protection

Dee Brown, Inc.
Masonry Contractors

Don Burden & Associates, Inc.
Mechanical Contractor

International Construction Data
Building Information Modeling

Michaels' Lighting
Lighting Manufacturer

RTS Enterprises, Inc.
Electrical Contractors

SCHMIDT & STACY Consulting Engineers, Inc.
Consulting Engineers

Texoma Industrial Insulation, Inc.
Insulation

Torres Commercial Cleaning Services, LLC
Final Cleaning (After Construction Cleaning)



Photos courtesy of Holzman Moss Architecture
© Tom Kessler

Frisco, Texas

George A. Purefoy Municipal Center

The new master planned George A. Purefoy Municipal Center houses the City of Frisco's city hall operations and library. The building provides the convenience of having a number of services located under one roof and that share a common entry. The 99,000-square-foot, five-story city hall houses offices of the city manager, city attorney, city secretary and city clerk, and contains a 300-seat council chamber and a "city room" used for ceremonies. The connected four-floor, 51,000-square-foot library houses the collections, a reference area, the Family Learning Center, administrative offices, multipurpose and conferences rooms, a café, and a post office.

The project was needed because the town had outgrown its former facilities. "We needed additional space for the city hall operation and for the library," said the facility's namesake, George A. Purefoy, city manager for the City of Frisco, the project's owner. "The city hall operation was in approximately 15,000 square feet [of space] and the library was approximately 6,000 square feet." Situated just west of its former location, the new

municipal center is a centerpiece for a newly developed area of downtown Frisco. The city's former buildings are being reupposed into business space.

Malcolm Holzman, FAIA, partner for Holzman Moss Architecture, the project's architect, said the client wanted an enduring structure that is distinctively Texan, symbolizing Frisco's aspirations and spirit. To that end, the freestanding stone facility fronts a civic green space. A trapezoidal clock tower defines the building, flanked by wings and granite columns on the first floor and end pavilions with mansard roofs. Symbols that appear on the custom fabrics throughout facility are an amalgamation of images representing the Frisco City seal, railroad and agricultural history. "The client's desire for a civically significant structure that transcends fashions and exudes a sense of permanence was translated into a building that responds to local traditions and conditions," said Holzman. "In addition, the client's concern for cost efficiency resulted in innovative uses of material."

Production of the granite columns, in particular, called for

innovative approaches. The team lined cylindrical forms with remnant strips from granite countertops and then attached ties to each granite piece before casting it in concrete. Difficulties stemmed from finding a granite supplier to provide the remnant strips, finding a precast fabricator willing to attempt precasting the granite, and finding an installation company to install the columns.

Thanks to their willingness to collaborate and work as a team, the owner, architect and construction manager at risk found ways to save time and money on the project. On many occasions, the team found more affordable substitutions for products or processes than what was originally planned. Mike Morgan, project manager for Lee Lewis Construction, Inc., the project's construction manager at risk said, "...[The team] all working together during the development of the project proved that the [construction manager] at risk delivery method has great value for municipalities." ■

— June Campbell



Facts & Figures

Owner: City of Lewisville

Type of Project: Expansion of and renovations to a public library

Architect: F&S Partners Incorporated, Dallas

Construction Manager at Risk: Hunt Construction Group, Dallas

Size: 26,241 square feet (renovated space); 51,581 square feet (new space); 77,822 square feet (total)

Cost: \$9 million (construction costs)

Construction Time: July 2005 (groundbreaking) - January 2007

The Need: More space for an ambitious public library

The Challenge: Keeping the library open during construction

Supportive Team Members

Brockett/Davis/Drake, Inc.
Consulting Engineers

DGB Glass, Inc.
Glass & Glazing Contractor

Design Electric
Electrical Contractor

Furgo Consultants, L.P.
Geotechnical Engineering

International Construction Data
Building Information Modeling

TDIndustries
Specialty Contractors



Lewisville, Texas

Lewisville Public Library Addition & Renovations

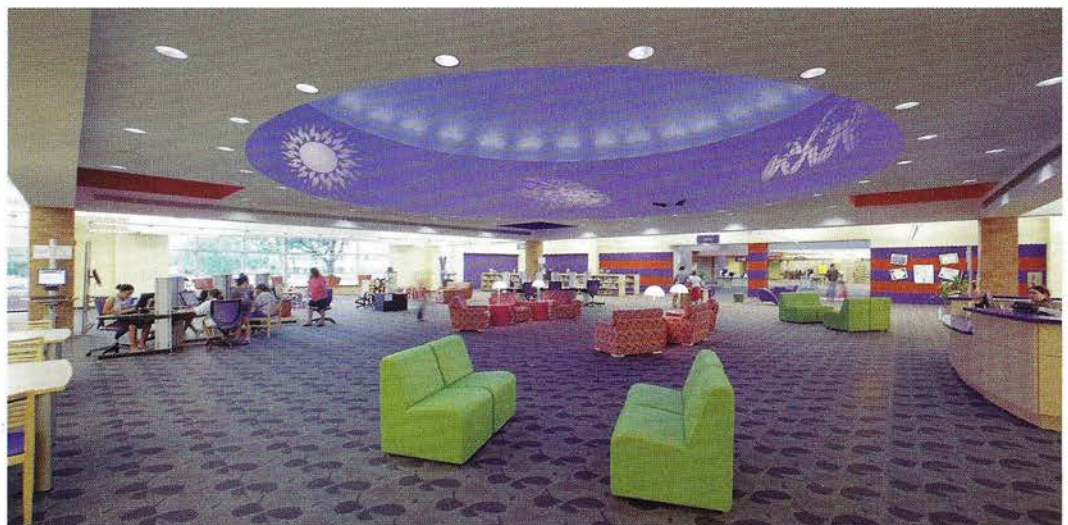
By 2001, the Lewisville Public Library realized it had programming and ideas that were larger than its current physical structure could support. In order to properly serve the Lewisville community, an addition/renovation was necessary.

The existing two-story library is attached to a two-story municipal complex that includes Parks and Leisure Services Administration, a municipal court, information

technology services, police administration, and 911 emergency dispatch. The two-story addition is connected to the existing library by a two-story concourse, featuring clerestory windows that provide the space with an abundance of natural light.

Included within the first floor of the 51,581-square-foot addition are conference rooms, two meeting rooms, a computer

training laboratory, a library staff work area and break room, storage space, a registration and checkout area, audiovisual materials, foreign language materials, large-print materials, magazines and newspapers, a reading room, copiers and printers, and drive-up services. The addition's second floor includes study tables and seating, group study rooms, the teen materials collection, the



Photos courtesy of Craig Blackmon, FAIA

Facts & Figures

Owner: Baylor All Saints Medical Center at Fort Worth, Fort Worth

Type of Project: A vertical expansion of an existing medical center

Architect: Gideon Toal, Inc., Fort Worth

General Contractor: MEDCO Construction Company, Dallas

Size: 72,000 square feet

Cost: \$29 million (construction costs)

Construction Time: February 2005 - July 2006

The Need: To provide a new transplant unit and a new oncology unit to a growing community

The Challenge: Maintaining the existing medical center's operations while removing penthouses from five elevators, and vertically extending the concrete facility three stories with steel

Supportive Team Members

Century Mechanical Contractors, Inc.
Mechanical Contractors

DGB Glass, Inc.
Glass & Glazing Contractor

Dee Brown, Inc.
Masonry Contractors

Integrated Interiors Inc.
Drywall/Acoustical

International Construction Data
Building Information Modeling

Fort Worth, Texas

Baylor All Saints Medical Center at Fort Worth Three-story Expansion



Photo courtesy of Nathan Shands, Shands Photographics

A new three-story vertical expansion of the existing five-story Baylor All Saints Medical Center at Fort Worth houses a 27-bed transplant unit and a new oncology unit that provide patients with a complete continuum of care. The project allows the hospital to offer enhanced medical services and to meet the growing community's local and regional health care needs.

When announcing the opening of the transplant unit, Steven R. Newton, president of Baylor All Saints Medical Center at Fort Worth, said, "Our patient outcomes consistently exceed national averages as determined by the United Network for Organ Sharing. We are pleased to be able to provide Tarrant County and surrounding counties with this much needed service."

The new oncology unit on the seventh floor provides diagnosis and staging, treatment, long-term follow-up care, palliative and terminal care, an inpatient medical unit, an outpatient infusion area, cancer research, an inpatient hospice unit, lymphedema services, stroboscopy/speech therapy, chronic pain management, and brain tumor treatment. "This comfortable and spacious new environment gives us the opportunity to make a great difference in the lives of cancer patients and their families," said Linda Schickedanz, RN, MSN, CNS,



Photo courtesy of MEDCO Construction Company

executive director of the cancer program. "Our goal remains providing comfort, symptom management and hope during trying times while fighting cancer."

The new transplant unit on the eighth floor accommodates acutely ill patients who need to remain in the hospital for an indeterminate amount of time while waiting for or recovering from transplant surgery. The unit comprises an education center, private consultation rooms, a support group meeting room and family waiting areas; and provides services including evaluation, living kidney donation coordination, long-term follow-up care, housing coordination and financial services. The sixth floor remains empty for now, providing space for future growth.

According to Herman Vess, superintendent for MEDCO Construction Company, the project's general contractor, vertically extending three service elevators and two public elevators posed a challenge because the elevators had concrete penthouses that had to be completely removed. In order to keep the existing medical center operating during this part of the project, the team worked on one elevator



Photo courtesy of Nathan Shands, Shands Photographics

at a time, leaving the other four available for use. "This allowed the facility to operate as normal, saving dollars in down time," said Vess.

The project's most complex challenge stemmed from vertically expanding the concrete structure with steel. The project team cut and opened the roof in 70 different locations to install the structural steel columns, then temporarily resealed each location until all columns could be set and the structure plumbed. After completing the work, MEDCO maintained the roof system for two and a half months during the structural steel fabrication, and once again opened up the roof and parapet to install the columns before resealing.

The team's hard work and planning paid off. The three-story expansion was completed successfully in July 2006 with cost savings to the owner. ■

— June Campbell

Facts & Figures

Owner: Baylor Health Care System, Dallas

Type of Project: A new cardiovascular hospital

Architect: RTKL Associates, Inc., Dallas

General Contractor: MEDCO Construction Company, Dallas

Size: 197,000 square feet

Cost: \$65 million (total)

Construction Time: July 2005 - November 2006

The Need: A new state-of-the-art cardiovascular specialty hospital in Plano

The Challenge: Translating the building's unique design into reality, and dealing with limited site access

Supportive Team Members

Alliance Glass
Glass & Glazing

CONLEY GROUP, INC.
Building Envelope
Architects/Consultants

Century Mechanical Contractors, Inc.
Mechanical Contractors

DGB Glass, Inc.
Glass & Glazing Contractor

Dee Brown, Inc.
Masonry Contractors

International Construction Data
Building Information Modeling

MasTec North America, Inc.
Underground Utility Contractors

Meinhardt Consulting Engineers
Consulting Engineers

The Sharon Companies, LTD.
Structural & Miscellaneous Steel

Superior Striping Service, Inc.
Pavement Markings

TDIndustries
Specialty Contractors

Unistrut International Corporation
Unistrut Support Systems

RTKL



Photo courtesy of MEDCO Construction Company

Plano, Texas

THE HEART HOSPITAL Baylor Plano



Photo courtesy of © Charles Davis Smith

THE HEART HOSPITAL Baylor Plano is a 197,000-square-foot, technologically advanced cardiovascular specialty hospital located adjacent to the Baylor Regional Medical Center. The new five-story building contains 68 patient rooms, four operating rooms (ORs), three cardiac catheterization laboratories, three electrophysiology laboratories, one vascular laboratory, and a nine-bed post-anesthesia recovery unit.

On the first floor, the hospital houses a computed tomography (CT) scan area; a state-of-the-art

cardiac rehabilitation facility; an emergency department and a pharmacy connected throughout the hospital by a pneumatic tube system; and administration, human resources and materials management areas. Floors two through four house patient rooms, ORs and procedure rooms. Each level offers a spacious waiting room, ORs and procedure rooms. Outside the third-floor waiting room, an accessible terrace overlooks the entrance canopy and the front drive, which features a prominent fountain between the hospital and the parking garage. On the fifth level, a penthouse area houses a doctors' lounge and library.

The hospital was designed in a bow-tie shape to maximize patient care as well as space on the tight 4.9-acre site. Curved hallways help caregivers maintain

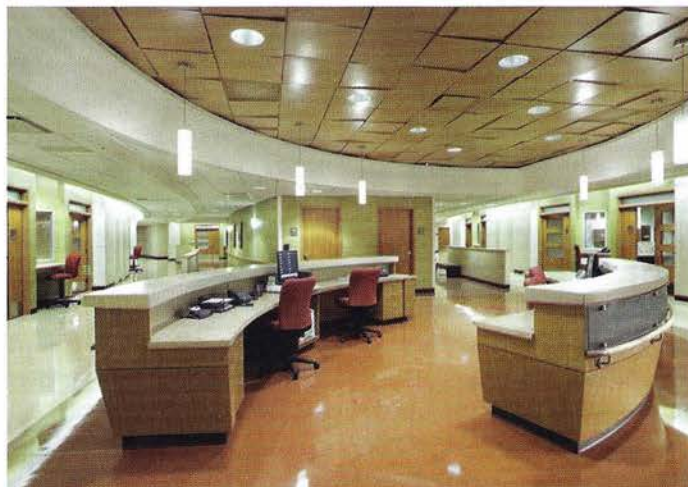


Photo courtesy of © Charles Davis Smith



Photo courtesy of © Charles Davis Smith