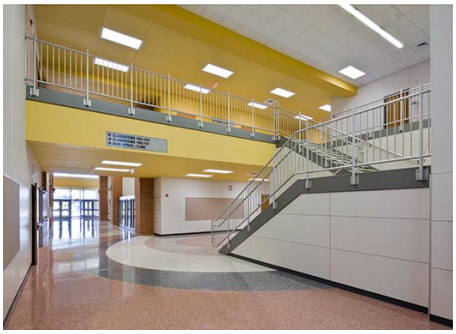
Pickett, Kelm & Associates, Inc.
Consulting Structural Engineers

Stiles Middle School



PROJECT LOCATION: LEANDER, TEXAS

PROJECT OWNER: LEANDER ISD

ARCHITECT: FIELDS & ASSOCIATES

GENERAL CONTRACTOR: BARTLETT COCKE

COMPLETED: 2012

CONSTRUCTION COST: $33,000,000

PROJECT DESCRIPTION:
Pickett, Kelm & Associates, Inc. provided structural engineering for this two-story, 178,000 square foot middle school facility. The two-story classroom/administrative wing encloses 118,000 square feet of floor space for classrooms, laboratories, offices, restrooms and corridors. The athletics/fine arts/cafeteria wing encloses 60,000 square feet of locker rooms, restrooms, theater arts, choir and band areas, a cafeteria and two gymnasiums. 12,000 square feet of platform area was provided above the second floor corridors and and above the athletics area for mechanical equipment.

Site-cast, concrete tilt-up load-bearing wall panel construction was used extensively on the project to reduce the costs of exterior wall construction; reduce interior finish costs; eliminate concern about mold; and provide a strong, durable and energy efficient building envelope. Exterior panels are insulated sandwich-type wall panels with a 3" architectural concrete facing, 2" of insulation and a structural wall thickness. Interior panels are uninsulated. Panels were generally painted, but masonry veneer was used as cladding accents at several locations around the building.

The concrete tilt-up wall panels are supported by concrete grade beams and drilled piers, with column loads supported directly on drilled piers, founded in limestone. First floor construction throughout consists of ground supported slabs.

The standing seam roofs at the classroom/administrative wing are hipped and gabled. Roof framing consists of metal roof deck supported by a combination of gabled and parallel chord open-web steel bar joists, steel trusses and load-bearing tilt-up concrete wall panels. The mechanical platform floor consists of composite steel deck with concrete topping slabs supported by steel columns, with composite steel framing where deck spans exceed 10 feet. Upper floor framing consists of composite steel and concrete decks with composite steel beams and girders supported by a combination of steel columns and concrete tilt-up wall panels.

The roof framing at the adminstration/athletic wing consists primarily of parallel chord open web steel joists supported by load-bearing tilt-up wall panels. Gymnasiums and the library use long-span acoustical steel roof decking to provide a light, open appearance. At canopies with exposed structure, long-span architectural decking and galvanized steel tubing with bolted connections are utilized.

The project included an outdoor post-tensioned concrete sport court.