

A+ Logical Solution

Concrete Moves to the Front of the Class

Trussville High School sits nearly a mile down a quiet road off Deerfoot Parkway near Birmingham, rising up through masses of tall oak trees and resting just feet from the rushing waters of the Cahaba River. Deer and wild turkey roam nearby, occasionally startled by the distant clanking and roaring of construction, which has run steady and constant here for the past several months.

Scheduled to open this fall, the 361,000-square-foot high school is a masterpiece, designed with architectural details like striking fluted walls, dramatic recessed masonry panels, and polished concrete floors. Ringing in at \$71 million, it is no surprise that this work of art is the largest bid school in the history of state.

"It is pricy. And it's big," admitted Courtney Quinlivan, principal architect with Davis Architects in Birmingham and manager of the Trussville High School project. However, this was no ordinary project. Trussville is one of Alabama's fastest growing communities, having jumped from only 3,500 residents in 1980 to just under 20,000 in 2005. Its appeal became more widespread when, in 2005, "CNN Money Magazine" ranked Trussville 56th in its listing of Best Places to Live.

Three years ago the city formed its own school system. The new Trussville High School will be the fifth school in the system and will serve as the only high school in the city, said Kelly Bowles, community relations coordinator for Trussville City Schools. Building a new high school, in many ways, represented the board's faith in the future of its city.

School board members' vision for the school was far reaching, stretching beyond current high school enrollment, which is at about 1,200. Too often schools have been built with little thought of where enrollment would be years later, said Bowles, resulting in the need for portable buildings. "We didn't want to get to that point," she added. Thus, the school board dreamed big. However, it did not want to sacrifice beauty and durability in the process.

With the board's wishes in mind, Quinlivan designed the school large enough to hold 1,600 students, and included a separate four-story wing that could be added later to make room for an additional 800 students. The plan also included an indoor gymnasium as well as a practice gymnasium, large theater with stadium seating, cafeteria with an outdoor porch and a large band room with individual practice rooms.

Five outdoor practice fields also were planned across the Cahaba River, connected to the school by a bridge.

Quinlivan wanted the school's design to be respectful of its environment, saving as many trees as possible around the building and even in the parking areas. But she also wanted it to be attractive and modern while complimenting the city's traditional style. "The board was interested in thinking long term, about what kind of legacy it could leave because this school needs to last a long time," Quinlivan said. So she looked to sustainable building materials that not only would be attractive, but also would hold up well over time and require little maintenance.



Concrete was a logical solution. "It's beautiful, low-maintenance and timeless," Quinlivan said. "And it's fast and easy."

Nearly 600,000 regular concrete measuring units are used in the school, as well as 400,000 jumbo brick. As many as 120 masonry craftsmen were needed to meet the stringent deadline. Their work with the project was substantially completed in February.

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Creative use of stacked stone and split-face block added elegance to the exterior of the building. At the school's entrance, the masonry veneer was laid with a fluted pattern, offering definition and style to the exterior. Hallways were enhanced by recessed panels made from concrete blocks. And polished and stained concrete covered most floors.

Some concrete applications may have been more expensive than other materials on the front end, Quinlivan said. But because concrete requires so little upkeep, using it saves money in the long run. "It's so low maintenance," she said. "Concrete pays for itself in just a few years."

Barry Davis with Trussville Board of Education's support services for new construction says that the low maintenance issue made concrete an attractive choice. "That's why we went with the polished concrete floors," he said. "They require no stripping and waxing two times a year as with BCT tiles, and you don't have to replace them like with carpet." Creative use of concrete on the exterior also had low maintenance advantages. "No painting is needed. It takes a lot less maintenance than, say, using stucco," he said.

While the building was not designed to be LEED Certified, Davis said, every effort was made to respect and protect natural environment around which the school was built. "I think we've done an environmentally good job with the new building," Davis added. "It is still an environmentally sound building on a nice piece of property. And it will give years of enjoyment to our community."



Though the school is situated a bit off the beaten path, it will be connected by walking trails to the city's soon-to-be-open civic center. As Trussville continues to prosper, the school eventually will be in the new heart of town, Bowles said. "With the civic center opening soon, this area will be a new hub of activity."

■ by Jennifer Walker

