Systems for Building Schools and Communities

As part of an ambitious $165 million school bond package passed in 2012, the Southwest Independent School District awarded Texas-based architects, Pfluger, the design of the new high school and middle school. To assist them, Pfluger called upon Alpha Consulting Engineers as the structural engineer. The design team was challenged to meet the influx of new students in this rapidly growing school district outside of San Antonio.

School design has been trending towards flexible, adaptive spaces to vary the learning experience. It also serves to address the multitude of teaching styles that are currently being practiced, but also ones not yet conceived. Materials are selected to fulfill a number of criteria.

Judith A. Resnik Middle School is 170,000 square feet to accommodate the education of 1,200 students. The design is based on team-teaching and “school within a school” academic models. This strategy features autonomy, as well as interaction in spaces that are flexible for collaboration, with an open floor plan that accommodates multiple learning environments.

Southwest Legacy High School is 370,000 square feet for 2,500 students. Pfluger’s design includes “a large central ‘mall’ with amphitheater-style seating for large group presentations and collaboration.” Flexibility is a key component as well as the variation of collaborative and conference spaces to supplement classrooms.

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**Trends in school design**

Acoustical considerations and durability must be addressed in high-traffic applications like schools. And when the structure is exposed, time and money can be saved by eliminating secondary systems such as dropped ceilings, without sacrificing performance. Plus, acoustical versions of long-span steel deck can meet and exceed the qualities of acoustic ceiling tile. When combined with the long-span capabilities of steel decking, like Versa-Dek®, the exposed structure contributes to the aesthetics.

The school cafeterias and gymnasiums for example — loud spaces at any school — feature acoustical Versa-Dek®. This avoided the costs, additional labor, and diminished aesthetic of a conventional acoustical drop ceiling. The libraries and hallways also benefit from the acoustical qualities.

New Millennium Building Systems supplied all of the steel joists, roof, and floor deck for Southwest Legacy and Judith A. Resnik. “New Millennium was uniquely qualified to manufacture all of the joist and deck types on this massive project,” says New Millennium architect and Market Development Manager, Alex Therien. “We were able to deliver everything the project needed — joists, Versa-Dek® 3.5, Versa-Dek® 3.5 Acoustical, standard roof deck, and composite floor deck — on time and on budget for both schools.”

_Southwest Legacy High School_
New Millennium offers a range of continuing education courses that provide one hour of AIA LU and PDH credit. Courses will increase your knowledge of a wide variety of steel joist and deck building systems and will help you to lower the costs of building design and construction. For larger professional groups, our knowledgeable experts can present credit-hour courses in-person at your facility. Courses are followed by an in-depth question and answer session.

To learn more, visit: [www.newmill.com/resources/education-courses.html](http://www.newmill.com/resources/education-courses.html)