



CASE STUDY

Project | *Universal City Public Library*
 Location | *Universal City, TX*
 Architect | *MarmonMok, San Antonio, TX*
 Product | *Tectum® E Roof Deck Panels*



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the challenge:

The Universal City, Texas, public library was deteriorating and considered too small to serve the needs of the growing city. As a result, city officials requested a new, updated library be built on the same site as the old library. One of the important design considerations of the new facility was its acoustic environment, not only because it was a library but also because its interior featured an exposed structure design.

the solution:

To help provide the desired acoustic environment, the design team at MarmonMok, the San Antonio architectural firm responsible for the design of the new library, selected Tectum® E roof deck panels from Armstrong Building Solutions for the facility's 12,800-square-foot roof.

Tectum roof decks are available in a wide variety of panels to match the needs of a building's design and are especially well suited for exposed structure spaces. The Tectum E roof deck panels installed on the Universal City library are a three-layer composite consisting of a 1½" thick Tectum cementitious wood fiber substrate, 5¼" thick Expanded Polystyrene (EPS) insulation, and 7/16" Oriented Strand Board (OSB) sheathing.

The Tectum substrate is made of rapidly renewable FSC®-certified aspen wood fiber that is bonded with an inorganic hydraulic cement. It has a textured interior finish and a Noise Reduction Coefficient (NRC) of 0.60, indicating it absorbs up to 60% of the sound that strikes it. The insulation has an R-value of 24.57, and the sheathing provides a nailable surface for direct application of the roof. Both a water and ice shield and a standing seam metal roof were installed at the library.

By providing predictable acoustical performance, high insulating value, a nailable top surface, and structural integrity all in the same panel, Tectum roof decks are much faster and easier to install than the multi-step installation of acoustical steel deck systems. Drew Svendsen, General Manager of Drury South Inc., the San Antonio construction firm that installed the library's roof deck, confirms the ease of installation.

"The installation of an acoustical steel deck usually requires four steps and multiple trades," he says. "The Tectum deck is a laminated, engineered product and does not have to be pieced together at the jobsite. As a result, we were able to install the Tectum deck in half the time and approximately half the labor cost as a steel deck and layers of insulation." Svendsen also notes that the Tectum panels were 4' x 10' in size which meant he could install 40 square feet at a time and close the roof in quickly.

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