

Arts Facility Use GCP to Complete Concert Design

New concert design implements an innovative waterproofing solution with our products.



Project	Green Music Center at Sonoma State University
Owner	Sonoma State University, Rohnert Park, CA
Executive Architect	A.C. Martin Partners, Los Angeles, CA
Concert Hall Architect	BAR Architects, San Francisco, CA
Design Architect	William Rawn Associates, Boston, MA
Engineering	Arup, San Francisco, CA
Construction Manager	Rudolph and Sletten, Inc., Redwood City, CA
Waterproofing Installation	Lawson Roofing Company, San Francisco CA
GCP Solutions	BITUTHENE® waterproofing, PREPRUFE® pre-applied waterproofing

Project

Music center design sparks design innovation

When you think of designing a world-class music center for the arts, excellent acoustics and soundproofing may come to mind. With its smart design, the 1,400-seat Green Music Center at Sonoma State University more than meets those concert design requirements. But perhaps surprisingly, one of the most innovative aspects of the concert hall wasn't its soundproofing, but its waterproofing system.

For all participants involved in this project, finding a successful solution to this unusual waterproofing challenge was music to their ears.

"With the high water table presenting a challenge, a smart solution was proposed that supported our building design and enabled the project to move forward successfully."

Bryce Tanner,

Arup

Waterproofing in a unique environment

The Green Music Center concert hall entrance sits at ground level, and the hall slopes downward, below grade, and toward the stage. In addition, there is several feet of space required for the building's air supply below the floor, extending the depth even farther.

With a high water table just a few feet below the surface, some clever concert design and construction was needed to create both a temporary underground dewatering system during construction and a long-term waterproofing solution to keep the concert hall and cultural exhibition dry for years to come.

"We knew that the water table would create a real challenge, so temporary wells were created around the perimeter foundation that collect water for pumping during construction," explained Bill Bussey of A.C. Martin Partners, the architects for the concert hall.

"We specify Preprufe® and Bituthene® on pretty much all of our projects. It's an easy choice as far as we're concerned, because we've had so much success using GCP waterproofing."

Waterproofing and dewatering solutions yield success

Due to the high water table, water pumps were moving thousands of gallons of water per day and operating constantly during construction. With energy and noise concerns, it became apparent that a more efficient long-term solution was needed. As a result, a sub-surface diversion system for the groundwater was created around the perimeter of the entire building.

In addition to the dewatering system, waterproofing was essential to the success of the concert design project. With the guidance of their specialized waterproofing consultants, A.C. Martin Partners specified GCP waterproofing products, based on the architectural firm's long-term track record using them in these types of projects.

PREPRUFE®300R was utilized in the sump pit, where despite muddy conditions, the pre-applied waterproofing membrane's aggressive pressure-sensitive adhesive formed a tight adhesive bond to the concrete to prevent ingress or migration of water around the structure. To waterproof the exterior basement walls, BITUTHENE®System 4000 was applied. As a pre-formed waterproofing membrane, BITUTHENE®System 4000 incorporates a super tacky self-adhesive membrane with a latex surface primer to provide a long-term waterproofing solution

"We're pleased with the overall solution," said Bill Bussey. "The basement is dry with no complaints."

In addition, to isolate the concert hall from any noise created by the water pumps, the facility is completely sound-insulated to ensure the finest acoustics. And now, the entire hall is waterproofed just as effectively, thanks to the unique concert design

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