

Project Profile



Project

Fajardo Ferry Passenger Terminal
Fajardo, Puerto Rico

Owner

Puerto Rico and Municipal Islands
Maritime Transportation Authority

Roofing Contractors

FOR Roofing Contractors
(Roofing Membrane)
San Juan, Puerto Rico

Vivaldi & Associates
(Lightweight Concrete)
San Juan, Puerto Rico

Architect

LMC & Associates
San Juan, Puerto Rico

Architect of Record

E. Morell-Rivera Architects
& Consultants, PSC
San Juan, Puerto Rico

Roofing System

Adhered roof system using white 72 mil
Feltback G410 EnergySmart Roof® membrane

Project Size

12,000 square feet

Completed

May 2010

Ferry Terminal Watertight Thanks to Sika Sarnafil Roof System

It seems only logical that the owner of a ferry terminal would know the importance of being watertight. Especially when that terminal is located in Fajardo, Puerto Rico, in an area known as “Hurricane Alley.” When the built-up roof on the Fajardo Ferry Passenger Terminal started to fail, the Maritime Transportation Authority of Puerto Rico wanted a new roof that could be installed without interrupting operation of the terminal, would offer high wind uplift resistance, and of course, would be watertight.

“The Maritime Transportation Authority typically has had modified bitumen systems and conventional built-up roofs protecting their facilities,” said John Cortes, manufacturer representative for Sika Sarnafil and principal of Architectural Systems, Inc. – Division 7 Roofing and Waterproofing of San Juan, Puerto Rico. “In this case, these systems were discarded due to the logistics of torching on a roof and hot kettles to be used during the renovation of this building – all to be taking place while continuous ferry service was being provided. The Sika Sarnafil system was recommended to the design architect over the traditional BUR systems.”

Added Jose Torres, project engineer for LOA Ingenieros of San Juan, representatives for the Maritime Transportation Authority, “I don’t like built-up roofs because the finish is not smooth, so all sorts of debris sticks to them, and smoke easily discolors them. Plus, I just don’t like the way they look.”

“We decided to look for a more engineered, proven, long-term solution,” said Cortes, “which is why I recommended the Sika Sarnafil system.” The Sika Sarnafil adhered system could be installed without generating fumes that would disturb passengers and employees, Cortes explained. “The system was also selected due to the high wind performance capabilities. Having an FM 1-540 wind uplift resistance when adhered directly to the cellular lightweight concrete meant there was a higher probability the roof could withstand high winds and even hurricane force winds.”

The Sika Sarnafil system also offers energy savings, due to its light-colored membrane which reflects the sun’s heat. “We were also very pleased that Sika Sarnafil has a recycling program for their membranes so our customers are able to recycle their roofs by simply contacting us at the end of its service life to qualify,” Cortes added.

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Edgar Morell, architect/consultant of LMC & Associates of San Juan, added, "We have had previous experience with the Sika Sarnafil system and felt it was an excellent choice due to the environmental aspects which allowed us to comply with the funding requirement for a green building."

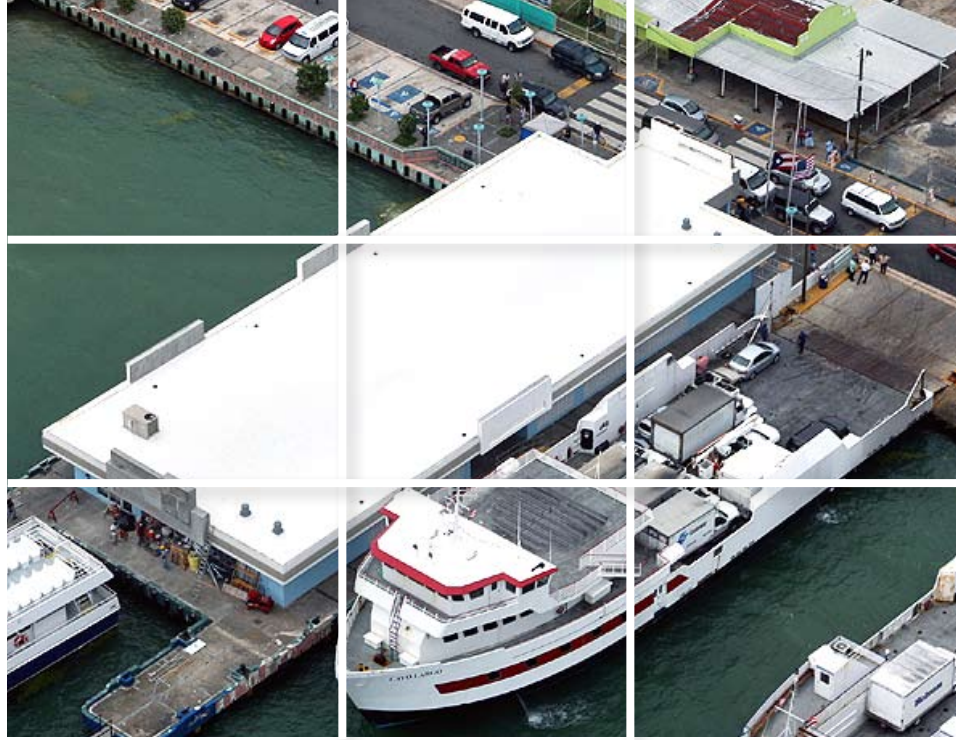
Cortes pointed out that another benefit of the Sika Sarnafil system is its chemical resistance to salt air and the normal fumes from the ferry boats. "Overall, the Sika Sarnafil system outweighed any other roofing system," he explained. "I wanted to have the best quality application possible, and felt the Sika Sarnafil system was a 'bulletproof' system that would meet the needs for a roof that was energy efficient, low maintenance and wind resistant."

An Aboveboard Installation

Installation of the new roof posed several challenges. The Fajardo Ferry Terminal has numerous ferries going to vacation sites Vieques and Culebra on a daily basis, and the tear-off of the old roof and installation of the new roof had to be done without disrupting the ferry schedules. "Not only were we working on the water, but we also had to work around the ferry schedules as far as loading the roof," Cortes stated. "We had to make sure we did not obstruct the passengers."

The project involved removing the deteriorating roof system, including the existing lightweight concrete, and then installing a temporary roof to keep the area watertight. "This way we could pour the new cellular lightweight concrete deck and increase the slopes to ¼ inch in the field and ½ inch in the valleys," Cortes explained. The Sika Sarnafil system was then adhered to the new cellular lightweight concrete deck.

"There was a lot of detail work involved, including penetrations, wrapped pipes and stanchions," Cortes said. "There was also an exterior insulation finishing system (EIFS) on the wall that we had to tie the roof into, and the entire perimeter fascia was reconstructed for aesthetic reasons."



Despite all these challenges, there were no major problems or inconveniences. "The fact that there were no down times or delays in the transit schedules was impressive," Cortes said. "There were also no leaks during a complete tear-off while a major interior retrofit was going on underneath the roof. This was very pleasing to all involved."

Sika Sarnafil technical representatives came out several times to inspect and approve the installation of the Sarnafil assembly. "The Sika Sarnafil people were very helpful in explaining the system and also offered several options for rectifying a problem with the parapet," said Torres. "I also found Architectural Systems Inc. easy to work with and very accessible."

Smooth Sailing Ahead

Today the Fajardo Ferry Passenger Terminal roof is considered first rate. "I really like the clean appearance of the roof, and how easy it was to install and it is to maintain," said Torres. "I also am impressed with the way the reflective roof reduces the internal temperature of the building, and how it offers high wind uplift resistance. Most importantly, the roof is performing perfectly."

Morell was also pleased. "The final result is very good. The roof looks impeccable, the workmanship was great, and the client and other parties are all satisfied with the result. We definitely will continue to recommend the Sika Sarnafil system because it is such a superior system compared to other roofing systems."

"At first there was the typical concern from all parties involved about the new system replacing the conventional roofing materials they were accustomed to using," Cortes said. "However, not only was the final result pleasing to everyone, but it was agreed to use the Sika Sarnafil system on the new ticketing facility across the street from the Fajardo Ferry Passenger Terminal. I believe this is proof of the total satisfaction of all involved."

The Sika logo, featuring the word "Sika" in a stylized, bold, yellow font with a registered trademark symbol (®) to its right, set against a red triangular background.

The Sarnafil logo, featuring the word "Sarnafil" in a bold, blue, sans-serif font with a registered trademark symbol (®) to its right.

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