



# SIKA AT WORK

## MSOE ATHLETIC FIELD AND PARKING COMPLEX MILWAUKEE, WISCONSIN

ADHERED WATERPROOFING SYSTEM  
USING 80 MIL Sarnafil® G410 MEMBRANE

**Sarnafil**

**BUILDING TRUST**



# MSOE GETS A KICK OUT OF SARNAFIL ROOFING SYSTEM

When is a roof not a roof? When it is also a soccer, rugby and lacrosse field. Such is the case at the Milwaukee School of Engineering (MSOE) soccer and parking facility in downtown Milwaukee. In addition to featuring spots for 780 vehicles and several retail spaces, the new parking structure is also home to the Pamela and Hermann Viets Field, an artificial turf athletic field that is now part of MSOE's athletic complex. Installing this roof was not an easy shot, however, and in fact required some fancy footwork.

## DEALING WITH THE BEND

Rob McNamara, president of F.J.A. Christiansen Roofing Co., Inc. of Milwaukee, a Tecta America Company, said there were many unique requirements for this roof. "We needed to provide a watertight seal to protect the parking structure and retail spaces, but we also needed to create a camber that would allow the athletic field to drain properly," he explained.

The original specifications called for a traditional concrete deck with tapered polyisocyanurate, covered with an EPDM membrane and the artificial turf. However, tapering the flat insulation panels to achieve the proper camber would have been "very difficult," according to McNamara. "We could create a pitch, but it would be almost impossible to create a camber," he remarked.

## SUBSTITUTES NEEDED

McNamara said the F.J.A. Christiansen team put their heads together and decided to present an alternative to the university. They proposed substituting the flat concrete deck with a lightweight insulating concrete. "We could custom slope the lightweight concrete into a cambered shape, achieving the proper drainage," McNamara stated. "And because of the concrete's insulating qualities, we could

also eliminate the need for a layer of traditional roof deck insulation."

The use of the lightweight concrete resulted in a change of membrane from EPDM to the Sarnafil® G410 feltback membrane, which is known for superior waterproofing over concrete. The felt backing also provides excellent adhesion.

"We like working with Sika and the Sarnafil membrane because of our many years of experience with them. Plus, their representatives give us lots of help with details that we don't always receive from other manufacturers," McNamara said. "The crews like the weldability of the membrane, and how Sika delivers materials on time. Most of all, we like the performance and value of the Sarnafil membrane. We have many Sarnafil projects that are over 20 years old and we haven't had any issues with any of them."

The drainage mat laid over the Sarnafil membrane was AirDrain from Airfield Systems, a special mat made out of recycled materials. AirDrain meets the drainage and ecological needs of the synthetic turf project and allows synthetic turf replacement many times over the useful life of the drainage mat. With the AirDrain system, water flows to trench drains underneath the concrete around the complete perimeter of the field, reducing storm water runoff. "The drains weren't too challenging once we came up with the right details," McNamara commented. "Our Sika representative was very helpful with the drainage system on the outside perimeter."

## NO STOPPAGE TIME

One big challenge F.J.A. Christiansen Roofing faced was the time period allotted for the project. "We had only 15 days to install the roof, and there was a delay in getting the project underway," McNamara said. "We worked around the clock, including on Saturdays and

## PROJECT

MSOE Athletic Field and Parking Complex  
Milwaukee, Wisconsin

## OWNER

Milwaukee School of Engineering

## ROOFING CONTRACTOR

F.J.A. Christiansen Roofing Co., Inc.  
Milwaukee, Wisconsin

## WATERPROOFING SYSTEM

Adhered 80 mil Sarnafil G410 membrane

## PROJECT SIZE

100,000 square feet

## COMPLETED

July, 2013





Sundays and the July 4th holiday.' They also did a large portion of the work during a very rainy period.

Despite the time crunch, F.J.A. Christiansen Roofing was able to complete the project on time. "Everyone was very happy," McNamara remarked.

"People can't believe the athletic field is on top of a parking structure," stated Kevin Morin, vice president of operations at MSOE. "That says a lot about the roof and the roofing contractor." It was this professionalism that earned F.J.A. Christiansen Roofing second place in the Waterproofing Category of Sika Sarnafil's 2013 Project of the Year competition.

#### **ADVANTAGE SARNAFIL**

Today the roof is winning accolades as an energy-efficient structure and McNamara said he wouldn't hesitate to recommend Sarnafil roofing systems in the future. "The local representative works his tail off for us and is always going to bat for us," he said. "F.J.A. Christiansen Roofing has been in business 135 years, so we need to work with companies that have the same standards that we do. At the end of the day we have a partnership with them."

"All parties involved did a great job, and that is proven in the final product," Morin added. "We are still elated with the roof."



# MSOE ATHLETIC FIELD AND PARKING COMPLEX



## WHO WE ARE

Sika is a globally active specialty chemicals company. Sika supplies the building and construction industry as well as manufacturing industries (automotive, bus, truck, rail, solar and wind power plants, facades). Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting loadbearing structures. Sika's product lines feature high-quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

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 Please consult the Product Data Sheet prior to any use and processing.  
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 ENERGY STAR® for roofing products is only valid in the United States  
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 LEED® is a trademark of the U.S. Green Building Council.  
 Green Globes® is a trademark of the Green Building Initiative



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