SIKA AT WORK
MCCORMICK PLACE NORTH BUIDLING CHICAGO, ILLINOIS

BALLASTED ROOF SYSTEM WITH G 410 80 MIL MEMBRANE IN WHITE AND PAVERS

Sarnafil®

BUILDING TRUST

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SARNAFIL EASES A SUSPENSEFUL ROOF INSTALLATION

Usually installing a roof larger than 500,000 square feet is usually pretty straightforward, because a larger roof footprint means more wide open runs with more room to set up. But the roof on the McCormick Place North Building in Chicago proved to be very challenging. In fact, you might say it was a job full of suspense.

PAVING THE WAY TO A NEW ROOF

The McCormick Place North Building is part of the McCormick Place convention center – the largest convention center in North America. It holds numerous trade shows every year, and the four buildings of the center are accessible to the public all hours of the day and night, and at times host well over 100,000 people.

The North Building is a 50-foot tall exhibition hall with a roof totaling 374,000 square feet, connected to a lower "crate storage area" roof with an additional 150,000 square feet of roof. The original roof consisted of a metal deck with fiberglass insulation and a loose laid EPDM membrane. On top of the EPDM was a layer of 2" polystyrene insulation and concrete pavers. The pavers not only hold the roof in place but are a critical part of the building structure, as the building was designed like a suspension bridge and the weight of the pavers provide tension on the cables.

When the EPDM roof started to fail, indicated by the numerous leaks, the Metropolitan Pier Exposition Authority (MPEA) wanted a proven roof membrane, especially since the roof would be difficult to access after installation due to the pavers. MPEA also wanted a roof that was cost effective and had a NDL warranty of at least 20 years. Muller + Muller (M2) of Chicago, the architects on the project, specified that the new roof be a Sarnafil roof. "We are a strong proponent of Sarnafil roof systems and have had a solid relationship with Sika Sarnafil for many years," said Susan Johnson, technical director at M2.

"We have been using Sika Sarnafil products for over 15 years and find it to be a very good product," added Dave Wehrle, operations manager at Anderson & Shah Roofing, Inc. of Joliet, Illinois, the roof installers. "The membrane is very easy to work with and welds easily, and the support from the technical staff is second to none."

KEEPING THINGS IN SUSPENSE

Undoubtedly the most difficult part of the installation on the new Sarnafil roof was dealing with the 83,840 30" x 30" concrete pavers, weighing 120 pounds each. The suspension bridge-like feature of the building meant that it was critical to keep the pavers at the proper weight to provide the right amount of tension on the cables. This meant that only a small percentage of the pavers could be moved at any given time and they could not be stacked to a height greater than two pavers.

"Anderson & Shah spend many hours using spreadsheets and CAD programs to design a system to move, pressure-wash 30 years of dirt off the pavers, and relocate the pavers on the roof," Wehrle explained. The crew used landscape paver moving equipment that would clamp onto the paver and had wheels, much like a dolly. This equipment let crew members move pavers easily without bending over to pick them up. "Once we got used to moving the pavers we were able to refine our system to double our production," Wehrle added. "It was a very synchronized process --- move the pavers, wash the pavers, install the new roof, have Sika Sarnafil representative inspect the roof, replace the pavers."

Wehrle stated that this procedure required a Sika Sarnafil representa-

PROJECT
McCormick Place North Building
Chicago, Illinois

OWNER
Metropolitan Pier and Exposition Authority

ROOFING CONTRACTOR
Anderson & Shah Roofing, Inc.
Joliet, Illinois

ARCHITECT
Muller + Muller
Chicago, Illinois

ROOFING SYSTEM
Ballasted Roof System with G 410 80 mil membrane in White and Pavers

PROJECT SIZE
524,000 square feet

COMPLETED
November 2017

tive to be on site almost every day to inspect the new roof installation. "They always seemed to find a way to fit us in," he commented. "Kudos to their technical people --- you ask a question and they get right back to you."

DUST IN THE WIND

As if dealing with the pavers wasn't enough of a challenge, Anderson & Shah also had to deal with the McCormick Place's show schedule. "The show schedule was king and its interruption was strictly prohibited," Wehrle remarked. "There was to be no indication that there was a roof replacement going on – no noise, no dust. Controlling dust is always difficult when removing a roof but we were dealing with 30 years of dirt trapped in the ballast and installation, next to Lake Michigan in Chicago's windy city!"

Anderson & Shah also had to replace 96 exhaust fans, along with smoke vents and skylights. They also recycled 500,000 square feet of polystyrene insulation and 22.9 tons of EPDM membrane during the project.

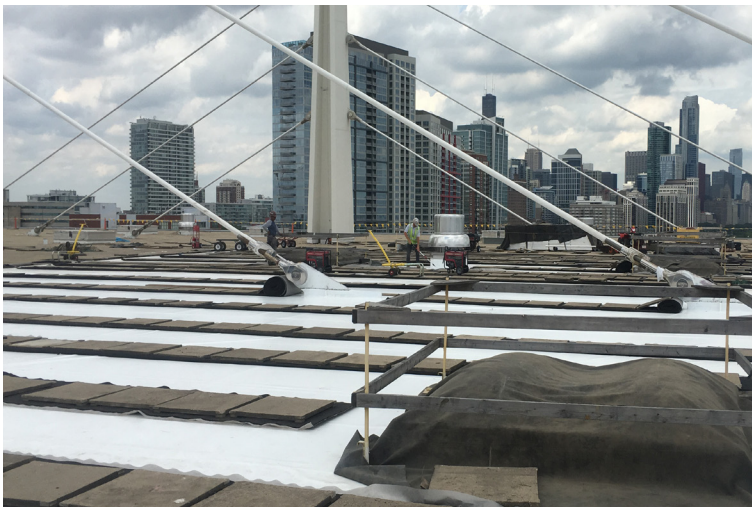
All of their work received high praise from Johnson. "Anderson & Shah worked very well in dealing with us and with McCormick Place," she stated. "They were very responsive in abiding by their requests to work around some events. It worked out very well."

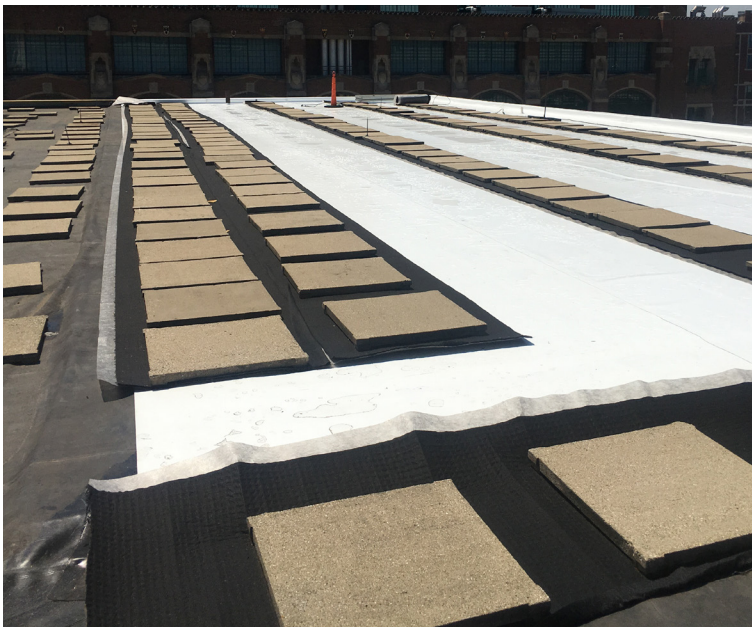
It was this professionalism that earned Anderson & Shah Roofing second place in the Sustainability Category of Sika Sarnafil's 2017 Project of the Year competition.

"HAPPY AS A CLAM"

Everyone involved agrees the project was a big success. "Our planning and Sika Sarnafil's technical and logistics department kept the project on schedule, and the dust, dirt and noise out of the building," Wehrle said. He added that the new roof has been performing very well and that MPEA is "happy as a clam" with it. Wehrle and Johnson both stated that they already have plans to install Sarnafil roofs in the future. "We use it every chance we get," Wehrle stated.

That's a suspense story with a happy ending.





MCCORMICK PLACE NORTH BUIDLING

WHO WE ARE

The commercial roofing industry has relied on thermoplastic single-ply membranes from Sika for more than 50 years to achieve sustainable roofing and waterproofing solutions.

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 load-bearing 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.

Our most current General Sales Conditions shall apply.
Please consult the Product Data Sheet prior to any use and processing.
ISO 14001: 2004-Compliant

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SIKA CORPORATION • ROOFING
100 Dan Road • Canton, MA 02021 • USA
Tel: 781-828-5400 • Fax: 781-828-5365
usa.sarnafil.sika.com

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