

Project Profile



Project

Data393
Englewood, Colorado

Owner

Managed Data Holdings
Fairfax, Virginia

Roofing Consultant

Foothills Roof Services, Inc.
Larkspur, Colorado

Roofing and Waterproofing Contractor

Superior Roofing, Inc.
Aurora, Colorado

Roofing and Waterproofing Systems

Adhered roofing system using white 60 mil Sarnafil® G410 membrane, and adhered waterproofing system using 60 mil Sarnafil G476-SA membrane

Project Size

24,880 square feet (14,500 sq. ft. reroof, 1,680 sq. ft. new roof, 8,700 sq. ft. waterproofing)

Completed

June 2008

Data393 Counts on Sika Sarnafil for Redundant Protection

Making sure their clients' data is secure is a key concern of Data393, providers of colocation, managed hosting, disaster recovery, and IP network services. That's why Data393 offers data redundancy and backup systems, so that one system can take over if another fails. Since a watertight environment is crucial to keeping their equipment operational, it was only fitting that when Data393 decided to expand their data center in Englewood, CO the company looked for the same kind of redundancy in their roofing and waterproofing systems.

"It is like wearing a belt and suspenders at the same time," explained David Pierce, RRO and president of Foothills Roof Services, Inc., a roofing consultant company based in Larkspur, CO. "If one fails then the other acts as a back-up."

In addition to redundant systems that would keep their facility watertight, Data393 also wanted systems that could be applied with little or no disruption to their operations during installation. Fortunately, the Sika Sarnafil roofing and waterproofing systems met both of their needs.

Critical Decision for Protecting Critical Data

Data393's facility was a two-story office building with a data center on the first floor. The company needed to expand their data capacity at the site, so they decided to move the administrative offices out of the second floor and put a second data center in that space. An addition to the building was also going to be built to house batteries and power generators.

Since the existing ballasted EPDM roof on the building was leaking, it was decided to replace that as part of the facility's expansion. The new roof had to be "redundant," providing two systems to protect against leaks. In addition, it had been difficult to locate leaks on the original roof due to the presence of the ballast, and for that reason the building owner desired a non-ballasted roof system.

Finding a waterproofing system for the floor of the second story data center was also important. "The new data center would house fluids for cooling purposes, so we felt strongly that we needed to protect the data center on the floor below from any potential leaks," said Alan Appelbaum, the construction manager working on behalf of

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Data393. "In addition, we couldn't have any kind of water leaking down into the existing data center during installation."

Because these decisions were so critical, and because "we kept getting conflicting opinions," Appelbaum explained that it was decided to hire a roofing consultant to help with the selection of roofing and waterproofing systems. The architect recommended using Foothills Roof Services, Inc., whom he had worked with before.

Foothills' Pierce said one of his first tasks was to evaluate the owner's original plan to install fluid-applied waterproofing over the existing concrete surface of the second floor. "There were concerns as to whether the concrete surface could be cleaned enough of old contaminants, and about possible seepage of the fluid-applied system through the floor and onto the data center below," Pierce stated. "Fumes from the fluid-applied waterproofing were also a consideration, since the building would be occupied during the installation."

Pierce recommended that Data393 use the Sika Sarnafil adhered waterproofing membrane instead. "With this system there are no concerns about seepage and fumes to bother the building's occupants," he said. "Plus, the Sika Sarnafil system is strong enough to withstand the weight of a raised data floor and its support pedestals."

A Sika Sarnafil system was also Pierce's recommendation for the new roof and the replacement roof. He suggested they do a complete tear-off of the existing EPDM roof and install Sarnafil's SarnaVap-SA self-adhered vapor barrier, which would provide an additional layer of protection against moisture and water. The vapor barrier would then be covered with a layer of polyisocyanurate roof insulation, a 1/2 inch layer of gypsum board, and the Sarnafil G410 60 mil adhered membrane.

Pierce selected the Sika Sarnafil systems for several reasons. "I believe Sika Sarnafil makes the best roofing products out there, and their sales and technical people are top-notch and go the extra mile," he said. "Having one manufacturer to provide both the waterproofing and roofing systems was a



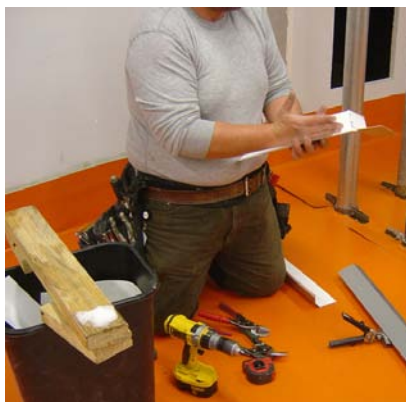
A grid system is installed on pedestals over the Sarnafil G476 membrane. To the left of the photo are floor panels, already installed.

big plus, and also meant we only had to work with one contractor for both."

A Complex Installation

The installation of the waterproofing and roofing systems ranged from straightforward to "extremely difficult," said Bruce Levey, president and CEO of Superior Roofing, Inc. of Aurora, CO. "The waterproofing was pretty straightforward. We had a wide open, empty room and the Sika Sarnafil product was very easy to work with and went down very well," he said.

The roofing installation was another story. There were numerous glycol pipes snaking across much of the roof, and since the pipes were used for cooling in the existing



Workman installing Sarnaclad sealant pockets around floor penetrations on installed Sarnafil G476 membrane.

data center they had to remain operational throughout the removal of the old roof and the installation of the new system. "The roofing crew had to do much of the work on their hands and knees because of those pipes and other equipment on the roof," Levey stated. "It was an extremely difficult job because the roof is so 'busy' with penetrations, curbs, and pipe lines."

"This is one of the most complex roofing jobs I've seen in 10 years," said Pierce. "But even with all those pipes we got the job done with no leaks, no drips, no errors."

Appelbaum said Sika Sarnafil and Foothills Roof Services both played crucial roles in the successful installations. "We got excellent support from the Sika Sarnafil representatives and they really kept things going," he stated. "Dave Pierce did a great job as well. We needed a consultant and he fit the bill. He looked at the situation objectively and picked the right products for the job."

Safe and Secure Solutions

Today the roofing and waterproofing systems are performing as promised. "The products seem to be exactly what we wanted and the installation went as expected." Appelbaum said. "I would definitely recommend Sika Sarnafil products in the future."

That's something that bears repeating.

Sika Sarnafil

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