

Perimeter and Corner Enhancements Restore Roof to FM Global Standards

Hologic, Inc. | Danbury, CT

CHALLENGE

The four-ply built-up roof (BUR) over Hologic, Inc., a developer, manufacturer, and supplier of premium diagnostic and surgical products and medical imaging systems, was beginning to show its age. Although the leaks were minor and had not yet affected operations at the 62,500-square-foot facility in Danbury, Connecticut, Kevin Placella, regional manager for facilities services, knew it was only a matter of time before the condition worsened and began causing serious problems. In addition, Hologic's insurance provider, FM Global, was concerned with the deck and perimeter roof system attachment due to the facility being located in a hurricane prone zone. The original system was not adequately secured to withstand the potential corner and perimeter wind uplift pressures. Placella contacted local Garland representative, Steve Botelho, who he had worked with on preventive maintenance at the facility, to conduct an analysis of the roof. Placella also suggested Botelho work with the Factory Mutual representative to develop a solution that would satisfy Factory Mutual's concerns and achieve a long-term plan to ensure the building remains watertight.

“Steve took ownership of his job and that says a lot about him and Garland.”

Kevin Placella
Regional Manager for Facilities Services
Hologic, Inc.

SOLUTION

Botelho conducted an infrared scan which revealed a minimal amount of wet insulation. The current main roof had good structural slope with proper drainage and the four-ply BUR system were in good shape, prompting Botelho to recommend the main roof be restored and the smaller loading dock roof be replaced. In addition, Factory Mutual recommended that decking in the corners be properly secured to the framing system and the current roof system be secured to the decking around the entire perimeter of the building. In an effort to reduce costs, Botelho suggested the FM enhancements and restoration project be completed together. Botelho explains, “Since there was an overlap in some of the work, the cost to combine the projects was significantly less than if they were done separately.” Botelho helped develop technical specifications to meet Hologic's specific performance objectives. Three contractors submitted bids for the project, and the job was awarded to Quality Improvements LLC, a Connecticut-based roofing contractor.

Prior to any work beginning, more than 70 abandoned rooftop mechanical units and penetrations were removed, and another handful that remained were properly secured in accordance with Garland and FM specifications. The original roof was removed down to the deck in each corner and fastened to the purlins using FM-approved fasteners every six linear inches. Following the installation of the fasteners, Garland's two-ply StressPly® IV Mineral fiberglass reinforced, mineral-surfaced, SBS modified bitumen torch-applied system, which meets and exceeds FM requirements for corner wind speed requirements, was installed. The roofing system and insulation 10-feet wide around the perimeter of the building was then properly secured to the decking using an FM-approved fastening pattern. A torch-applied system was then installed over the existing roof to the perimeter edge and up onto the coping cap. In addition, new flashings were installed around the perimeter of the building, providing additional waterproofing protection.

After the FM enhancements were completed, Garland's Black-Knight®/Black-Stallion® Cold coal tar-based, cold process roofing adhesive was installed and gravel was then embedded, extending the life of the roof and getting it back under a long-term warranty administered through The Garland Company, Inc. The roof over the loading dock was removed, the decking was properly secured to the purlins, and again the Factory Mutual approved Garland StressPly IV Mineral was installed. Botelho worked closely with FM Global throughout the project to ensure compliance and coordinated system installations with Quality Improvements.

Placella was pleased with the coordination and overall outcome of the project, his first major project with Garland. He credited the success to Steve and the contractor, who both worked diligently to ensure the work being completed was in accordance with FM Global specifications. Placella reports, “I can't give enough credit to Chris Vogt at Quality Improvements for his dedication throughout this project, and to Steve for really committing himself to this job. Steve took ownership of this job and that says a lot about him and Garland.”

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MANUFACTURING



Project: Hologic, Inc.
Location: Danbury, CT
Garland Rep: Steve Botelho
Contractor: Quality Improvements, LLC
Materials: Black-Knight®/
Black-Stallion® Cold,
StressPly® IV Mineral