



**INTELLIGENT
ROOFING SOLUTION**

no. 43

FiberTite®
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FiberTite® Roofing System protects sensitive medical environment at Duke University

As part of a complete re-roofing project, Duke University Health System officials wanted to incorporate a multi-platform roof-top heliport on its facility in Durham, N.C., to provide enhanced emergency services for its patients. Because medical facilities are sensitive environments, officials needed a roofing system that was durable, reliable and resistant to chemicals found in aviation environments.

In early 2006, work began to replace the hospital's old and failing built up roof (BUR). The new 90,000 square-foot roofing system was completed with a fully-operational heliport in November of 2006.

CFE, Inc., of Apex, N.C., was the contractor for the re-roofing project. CFE, Inc., a Platinum Level FiberTite installer who has been installing FiberTite for over 20 years, applied a fully adhered, 45-mil FiberTite XT Fleece-back membrane beneath three-inch T-Clear insulated concrete pavers. Other peripheral areas of the project were covered with 45-mil FiberTite XT Fleece-back Tan colored membrane adhered over polyisocyanurate insulation.

"FiberTite is one of the few roofing membranes that is resistant to jet fuel," according to James Russo with CFE, Inc. "Because refueling for the helicopter takes place on the roof, Duke needed a roofing membrane that was proven to handle that kind of exposure."

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Modified bitumen was also considered for the re-roofing project but was not chosen because of its poor performance in aviation environments.

FiberTite demonstrates excellent results when tested in jet fuel and the membrane has a proven performance history of lasting more than 20 years in high traffic airport installations.

Using a proprietary weaving and coating process, Seaman Corporation manufactures FiberTite membranes with the highest strength yarns and densely packed fibers. DuPont™ Elvaloy® Ketone Ethylene Ester (KEE) is the foundation of FiberTite's proprietary coating formula, ensuring the membrane's long-term strength and continuing flexibility in all types of environments. FiberTite membranes have unmatched resistance to tears, punctures, UV rays, chemicals, fatty acids, oils and grease.

FiberTite also has a low odor that makes it perfect for re-roofing medical facilities that have patients in their care throughout the project. Because many ventilation systems are located on rooftops, odors from the roofing material and application process can easily enter the building causing discomfort for staff and patients. FiberTite has a negligible odor compared to TPO or Modified Bitumen.

The project included numerous other installation challenges. The roofing crew had to work around pre-installed steel beams that supported the elevated heliport. The re-roofing job also included about 44 recessed roof areas at various elevations of the building. Many of these areas could only be accessed with the use of portable swing stages and many set-ups placed roofing crews over 100-feet from grade.

The project also included a 7,000-square-foot vegetative roof to serve as a patio for hospital guests and patients. FiberTite serves as the protective underlayment for the vegetative roof areas. Because vegetative roofs require irrigation, FiberTite serves also as a barrier against possible water seepage into the building's structure.

Richard Nuhn of Richard Nuhn Consultants of Greensboro, North Carolina, who consulted on the job, has confidence in FiberTite's performance in nearly any environment.

"I've used FiberTite since 1984," Nuhn said. "Every project we've done has been successful. We've worked on many projects that expose the roofing membrane to chemicals. FiberTite has always held up very well."

FiberTite was introduced in 1979. Since then, over 99% of FiberTite roofs installed are still protecting.



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