

FiberTite Success Story: Duke University Medical Center



INTELLIGENT
ROOFING SOLUTIONS

Duke University Medical Center, located in Durham, North Carolina is a nationally ranked health care provider. Established in 1930, the medical center is Duke University's flagship teaching hospital that has also grown to become a world-renowned academic medical center. Duke University Medical Center is also one of three Level I referral centers in North Carolina's Research Triangle, providing the highest level of surgical care to trauma patients.

Challenge:

In early 2006, work began to replace the hospital's old and failing built up roof (BUR). As part of the complete re-roofing project, Duke University Health System officials wanted to incorporate a multi-platform roof-top heliport on its facility to provide enhanced emergency services for its patients as well as a vegetative roof-top patio. Because medical facilities are sensitive environments, officials needed a roofing system that was durable, reliable and resistant to chemicals found in aviation environments.



The project included a number of installation challenges as well. The roofing crew had to work around pre-installed steel beams that supported the elevated heliport. The re-roofing job also included around 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.

Solution:

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. The new 90,000 square-foot roofing system was completed with a fully-operational heliport in November of 2006.

"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."

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.



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 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.

Fast Facts: Duke University Medical Center

Installation dates: November 2006

Total Square Feet: 90,000 square feet

Product: 45-mil fully adhered FiberTite XT Fleece Back membrane

Owner: Duke University Health System

Specifier: Richard Nuhn Consultants

Authorized FiberTite Contractor: CFE, Inc.

About FiberTite

FiberTite has been protecting buildings for more than 35 years. FiberTite is tougher, lighter and more flexible than other roofing options.

Contact Us:

[Email Bryan](#) or Call: 800-927-8578

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