



# Project Overview

## FRP REPAIR OF REINFORCED CONCRETE SLAB IN HOSPITAL

**Name:** Holy Cross Hospital  
**Type:** Health Care Facility  
**Location:** Silver Spring, Maryland  
**Completed:** April 2009

### PROBLEM

The in the Holy Cross Hospital in Silver Spring, Maryland, a hole had to be cut into the concrete slab. Consequently the adjacent sections around the openings were overstressed. A strengthening method was needed which could be done without shutting down the operating hours of the hospital. The slab was accessible from below.

### SOLUTION

QuakeWrap® FRP Repair System was selected to strengthen the slab next to the openings. Four 1-ft wide carbon FRP strips around the rectangular opening were stronger than the loss in strength due to the slab opening. The flexibility of the material allowed the installation despite of the conduits and installations on the bottom of the slab.

The installation could be completed within a day. The hospital operation did not get affected by the structural repair. The installation was quick and free of odor, toxics and noise.



## Technical Highlights

- A required slab opening needed strengthening of the remaining slab around the opening.
- QuakeWrap® unidirectional carbon fabric was used in four 1-ft wide strips around the future opening
- The fabric was applied before cutting the slab to avoid extensive deflections of the slab prior to the installation.
- The installation could be completed in 1 day.

## Credits

Consultant: Rickert Engineering, Inc.  
General Contractor: Twin Contracting Corporation



*“The FRP Retrofit Experts”*