

Case Study

Winchester, TN

Carbon Fiber Horizontal and Vertical Applications



Project Overview

USS was contacted after noticing structural concerns and visible cracking within the foundation walls of the building. The cracks raised concerns about ongoing movement and the long term stability of the basement structure.



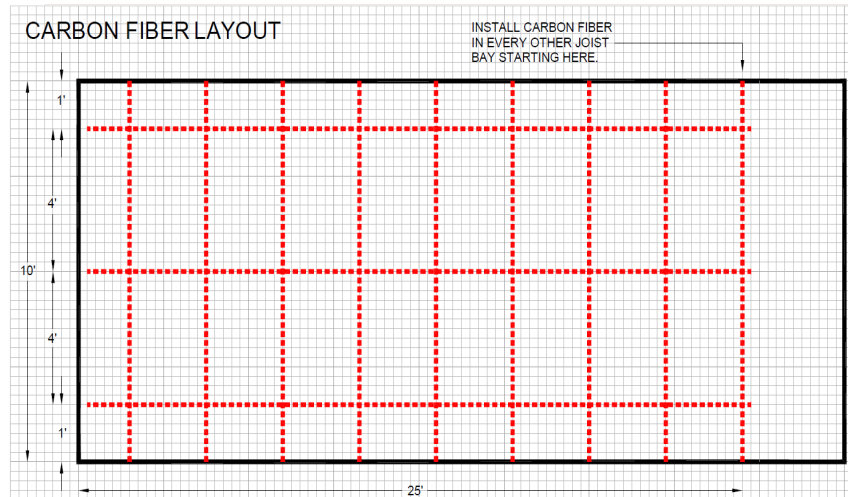
During the inspection, the USS team identified cracking throughout the basement wall system. The wall conditions indicated structural stress that required reinforcement to prevent further movement and preserve the integrity of the foundation.

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Contact USS for a free inspection and project consultation at: (888) 565-1194

Challenges

- A key challenge on this project involved the height of the basement wall. Due to the wall dimensions and structural load demands, standard reinforcement spacing would not provide sufficient stabilization. The team had to engineer a tighter on center spacing configuration to properly compensate for the wall height and ensure long term structural performance.
- The project required a customized carbon fiber reinforcement layout that addressed both vertical and horizontal stresses within the wall system.



Solutions



- USS installed eighteen Fortress Carbon Fiber wall straps vertically at 32 inches on center to stabilize the basement wall and prevent additional inward movement. To further strengthen the wall system, additional Fortress Carbon Fiber wall straps were installed horizontally at 4 feet on center, beginning 2 feet from the top of the wall.

- This combined vertical and horizontal reinforcement application permanently stabilized the HCMU basement wall system while providing a non-invasive structural repair solution designed for long-term performance and durability.

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