

Carbon Fiber Strengthening of Masonry Walls

Albert N. Parlin School – Everett, MA



THE CHALLENGE

Photo 1: Routine construction had exposed failed, separated masonry in the interior brick walls on two levels of the Parlin school.

THE SOLUTION

The Alpha Weatherproofing Team successfully performed **carbon fiber strengthening of the structure's non-reinforced masonry walls**

Photo 2: All voids and cracks were filled with SikaGrout 212 by forming and pouring, or the dry pack method. Smaller cracks were injected with Sika epoxy of various viscosities.

Photo 3: Dustless grinding was performed to level the surface and remove small projections on the surface.



Photo 4: Sikadur 330 epoxy was applied to the surface and a layer of Sikawrap Hex 430G was then applied and dry-rolled to bring the epoxy through the carbon fiber mesh.

Photo 5: A second layer of Sikadur 330 epoxy was applied and the Sikawrap Hex 430G was applied in the opposite direction.

Photo 6: A top-coat of epoxy was then applied to seal the surface and complete the project.