Project Overview

FRP RETROFIT OF MANSORY WALL IN SCHOOL BUILDING

Name: All Hallows Academy
Type: School Building
Location: La Jolla, California
Completed: December, 2006

PROBLEM

During on site inspection of existing buildings in the school campus, certain masonry walls were found to have less steel reinforcement than shown in structural plans. Retrofit work was required to account for the missing steel.

The work had to be done on the inside and outside face of a masonry wall in the teachers lounge and retrofit work programmed during the Christmas break in order not to disrupt academic activities.

SOLUTION

A QuakeWrap® Fiber Reinforced Polymer (FRP) Retrofit System was selected due to the fast installation time and the virtually odorless characteristics of the epoxy resins. Horizontal and vertical strips of FRP composite glass fabric were placed on the inside and outside faces of the wall in order to account for the missing steel reinforcement. Jams were created on the ends of the horizontal strips using double layers of vertical strips.

Technical Highlights

- Indoor and outdoor work on an existing school building.
- FRP composite glass fabric was used for structural retrofit of a masonry wall.

o No interference or damage to furniture, office equipment, architectural finishes and other installations in place. Once retrofit was finished, the indoor work to be hidden using sheet rock panels. The outside work to be hidden using mortar finish.

o The FRP retrofit of the masonry wall was completed in 2 days with a 3 man installation crew.

Credits

Structural Engineer: KNA Consulting Engineers, Laguna Hills, CA.
General Contractor: Jaynes Corporation, San Diego, CA.