

SmartJack® System

Project: Fort Coombs Armory

Location: Apalachicola, FL

Date: February 2017

Challenge:

The Fort Coombs Armory is located within the Apalachicola Historic District and was rebuilt in 1901 after being destroyed by fire shortly after construction in 1898. By 2017, the wood floor of the main level had more than 6 inches of differential settlement due to a combination of sagging floor joists and partial failure of the joist support system which consisted of three brick walls running the length of the building and spaced about 14 feet apart. Due to the age and condition of the existing brick wall support system, it was determined that a new joist support system was required at the main room area and that it also be capable of lifting the flooring at the center of the room up to 3.5 inches. It was important to the owner that the original wood flooring in the main room be preserved, so access to the sub floor of the main room was restricted to small access areas in adjacent rooms and the building exterior.

Solution:

Alpha Foundations recommended using the Supportworks SmartJack® system, a supplemental support system specifically designed for crawlspace areas with the capability for vertical adjustment at the proposed lift areas. A total of 142 Model 288 SmartJack® supports and 626 feet of supplemental I-beam were installed to lift and support the sagging floors adjacent to the failing brick walls. The SmartJack® supports were installed on 5-foot centers along the I-beams and utilized an aluminum base founded on a 2' x 2' x 2' poured concrete footing. The floor joists were then lifted to bring the wood flooring back to near level and the adjustable SmartJack® supports were locked off. All of the work was performed through the small access areas and was completed in three weeks.

Project Summary

Architect: EMO Architects

SmartJack® Installer: Alpha Foundations

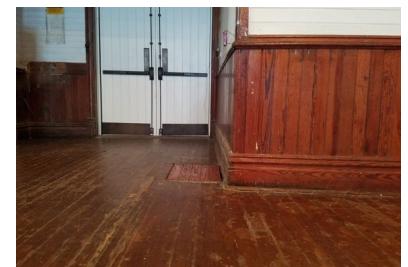
Products Installed: (142) Supportworks® Model 288 SmartJack® Supports



Fort Coombs Armory



Floor settlement at corner



Settlement at crawl space access area



SmartJacks installed and attached to new support beam