

PROJECT PROFILE

Empire State Building New York, NY

VERTICAL
access



Project overview

Vertical Access was retained by Jones Lang LaSalle to assist with water testing of two replacement louvers and adjacent masonry at the 83rd floor of the Empire State Building, in order to determine the water resistance of recently-installed mock-up wall louvers and the water repellence of existing façade construction adjacent to the louvers. The scope of work included performing several spray tests on the east façade in accordance with a water test designed by Rainer Gerbatsch of Commercial Roofing Analysts, Inc.

Building description

The Empire State Building is a 103-story skyscraper in Midtown Manhattan, located on 5th Avenue between 33rd and 34th streets. Designed by William F. Lamb of the architectural firm Shreve, Lamb and Harmon, construction took place between 1930 and 1931. When completed, the Empire State Building was the tallest building in the world, a distinction held until 1970. Its steel frame is clad with limestone to the 86th floor. The cast aluminum spandrel panels at the floor lines between windows have an Art Deco design that adds to the distinctive style of the building.

Challenge

Perform water testing in accordance with ASTM Standard E1105 at floors 83 through 85 to determine the source of water infiltration and to evaluate the performance of recently-installed pilot louvers.

Solutions

- Used industrial rope access to reach floors 81 through 85 to fasten and remove masking and to maneuver the spray rack during water testing.
- Temporarily masked surrounding wall area to preclude overspray and determine whether water infiltration at floors 81 and 82 originated at the newly installed louvers at floor 83.
- Used infrared thermography to evaluate the extent and pattern of moisture within the wall materials.

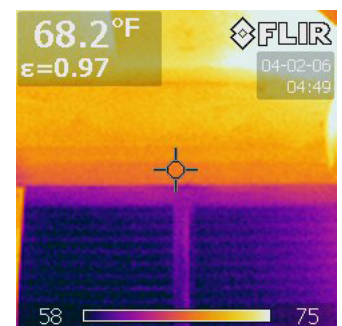
Building owner

Empire State Realty Trust

In collaboration with

Jones Lang LaSalle

Commercial Roofing Analysts, Inc.



Photos by Vertical Access