

# Vizcaya Museum Gardens Hurricane Restoration

By Don Ford

**H**istoric restoration is different from all other repairs because the building/monument/structure to be repaired is, to paraphrase the commercial, priceless. The items repaired are often façades, structures, or pieces that are approaching or are over a century old, and consist of materials and craftsmanship that is too expensive to recreate in large scale. As often happens during repair projects, the scope of the work changes as the project progresses. In the case of the Vizcaya Museum and Gardens in Miami, FL, however, Mother Nature was the main reason the scope of work grew.

## History

Vizcaya was completed for John Deering as a summer home in 1916, with a peak work force during construction of over 1000 laborers, masons, and other craftsman. It was designed and carefully built to appear as an Italian Estate that had stood for 400 years, including faux renovations to reflect a family living in it and modifying it for centuries. The expansive Gardens combine Renaissance, Italian, and French designs. The designers, Suarez and Chalfin, worked for 7 years to create the gardens, striving to create one vast outdoor room integrating the elements with various fountains and a central pool surrounding an elevated island, the elevated mound with its small casino statuary, and several themed gardens.

The original designers traveled throughout Europe during 11 different trips to assemble hundreds of antique statues, stone works, balustrades, and other artifacts all from the 15th and 16th century. Each

was then carefully disassembled, packed, and shipped across the Atlantic where it was unpacked and carefully assembled in its new location within the gardens. With over 50 acres of gardens, over a dozen ships loaded with antique artifacts specifically for Vizcaya were commissioned during the construction almost a century ago. Even the few areas that were constructed using new materials are now a century old.

Deering died in 1925, and about a decade later, the property was turned into a museum. It has become a favorite day-trip destination of architectural and historical significance for tourists while in Miami, with 200,000 visitors a year.

## Original Restoration Project

At Vizcaya Museum and Gardens, the original scope of work was to stabilize and repair many of the structures that had been imported from Europe that date back 250 years before the United States became a nation in 1776. Some of the statues dated back to the 15th century and were brought over when the estate and gardens were built. Just touching a 500-year old artifact in disrepair was so daunting that the repair work crews whispered during the early stages of the survey and stabilization work, as if a single loud noise might turn the pieces into dust.

A restoration specialty contractor teamed up with an acclaimed conservator to form the team to undertake the restoration and stabilization of the Vizcaya Gardens. The two firms had collaborated on several prized historic statues/monuments, and this was critical to the Vizcaya project. While maintenance had been planned and a phase completed by the same team in the spring of 2005, some work had been scheduled for the future for budgetary reasons. As time slowly tore at the structures within the garden, weather forced the museum's hand in the fall of 2005.

The 2005 hurricane season had severe detrimental impact on Vizcaya Museum and Gardens, beginning with Hurricane Katrina on August 25 and culminating with the devastation of Hurricane Wilma to the gardens, grounds, and collections on October 24. Dozens of historic statues, garden features, and architectural elements were damaged, while scores of trees and the plantings of the Maze Garden were completely destroyed.



*Vizcaya Mansion (photo courtesy of Greg Gulik)*



*Certainly “special conditions” here*



*More Hurricane Katrina damage*

With an average of 2000 visitors a day during the tourist season that started on December 1, the museum needed a team that could jump right in, but just as important, a team that could handle 500-year old priceless masonry and stone structures without increasing the existing damage, and one that could correctly restore the gardens and their historical significance.

## **Hurricane Changes Scope of Work**

After Katrina hit, the team was quickly awarded emergency hurricane restoration contracts in addition to the originally contracted work. With much of the originally contracted molds and matching samples in place, the team was able to eliminate the 3- to 6-month lead times typical on this type of restoration work. With so much at stake, the team was able to cut months off of the restoration schedule and begin resetting pieces within 3 weeks of the disaster.

The conservator was onsite as the clean-up of each hurricane began, creating the master plan to return the gardens to their original splendor, and to ensure that the removal of debris did not create additional damage to the stone and statuary pieces. Because of his knowledge of the original inventory, many pieces were salvaged under tons of hurricane debris, or found hundreds of feet from their original locations.

Once the master plan was in place, the specialty contractor and the conservator worked in concert to reassemble, reset, and refurbish the dozens of damaged, knocked over, and washed-away pieces. One task was to structurally stabilize the numerous fountains, columns, and statues that had been damaged by the 120 mph (193 km/h) winds and flying debris. More than 400 trees had fallen throughout the site, many hitting adjacent stone structures and knocking them askew or down. Addressing the wide variety of pieces in various conditions was a large task once everything was stable. Some were taken to an onsite repair studio where they were carefully cleaned



*Temporary bracing on priceless marble fountain*

and repaired with fill material. The refurbished pieces were then taken to their designated locations where, working in tightly controlled and protected areas, the craftsman installed the pieces using the same techniques the original craftsman used almost 100 years ago.

Another difficult challenge was for the conservator and specialty contractor to create matching pieces for dozens that were completely destroyed or never found as a result of the high winds and resulting storm surge. The challenge was how to create a matching piece adjacent to a piece that was carved in Europe 500 years ago, and then subjected to 500 years of environmental exposure. The curator actually chose a combination of techniques, including new carvings and proprietary repair materials from Europe to blend in the remedial work and replacement pieces with stunning results.

What was most interesting about this project was the criteria for a successful repair. It wasn't the “good as new” criteria faced in modern buildings. It wasn't even “so good I can't find the repair” that is also standard. The repairs simply had to blend in

and look 50 to 100 years old on a 500-year-old series of stones. It was a balance that is rarely seen in structural concrete repair in the U.S. Over 600 individual pieces were surveyed, cataloged, refurbished as necessary and reinstalled. Another 80 pieces were fabricated to match existing pieces and were installed. The work spanned a 50-acre area of the site, while allowing for the safety of 1500 tourists on a daily basis. For the work crew, even after 8 months, the thrill never dissipated in handling pieces of history that were 500 years old.



**Don Ford** is Vice President of Business Development for C.A. Lindman Companies. Ford currently serves on the ICRI Board of Directors and as Committee Chair for the Meetings and Conventions Committee. He is also a Past President of the ICRI Carolinas Chapter and has over 25 years of service to the concrete restoration industry.



*Balustrade pieces found during the clean-up (left) and refurbished balustrades ready for reinstallation*



*A newly cast replacement (left) and original centuries-old balustrade to be repaired*



*A balustrade reassembly in progress (left) and completed balustrade assembly (right)*

## Vizcaya Museum Gardens

### Owner

Vizcaya Museum and Gardens  
Miami, FL

### Project Designer

Conservation Solutions, Inc.  
Washington, DC

### Specialty Repair Contractor

C.A. Lindman, Inc.  
Pompano Beach, FL