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Feature Story - February 2004

Blending Modern Technology with Medieval Art

The Cloisters has undergone a series of renovations since 1998. Current work involves exterior, interior and casement window restoration.

By Amy S. Choi

The team restoring the Cloisters, which houses the medieval collections at the Metropolitan Museum of Art in New York, was charged with blending modern technology with medieval art

"Very little had been done to the building since the 1930s for a variety of reasons, but a lot of it was a desire not to change the landmark qualities of the building."

The task was easier said than done.

"Very little had been done to the building since the 1930s for a variety of reasons, but a lot of it was a desire not to change the landmark qualities of the building," said Ann Kaufman Webster, manager of architecture and historic preservation at the Cloisters and representing the Met. "But as a result of the hesitancy to touch the building, there was a great deal of need for renovation. So we had to address as many things as we could to bring the museum up to modern standards on a technical point of view while retaining the charm and intent of the original designers."

The Cloisters, located on four acres overlooking the Hudson River, has undergone a series of renovations since 1998. Webster master planned the latest preservation project to protect the building envelope from infiltration of the elements; improve the internal infrastructure, focusing on climate control; and make upgrades to the galleries.

The renovation team recently completed a gallery renovation of the St. Guilhem Cloister. Currently, the museum is in the midst of the \$3.5 million city phase three project, which includes exterior, interior and casement window restoration.

Walter B. Melvin Architects LLC, of New York, N.Y., and Kaisen Woo Architects, PC, of Flushing, N.Y., the two architects on the project, and Graciano Corp., the general contractor for the exteriors, are working together on the exterior work. They're removing, salvaging and reinstalling the mission tile roofing at Langon Chapel, the main tower, and the Education Library.

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After waterproofing the roof, the team reinstalled the original clay tile system, manufactured by Ludowici Celadon in the 1930s. It is also cleaning and salvaging the external granite and installing a new water drainage system under the terrace of the Fuenti Duena.

The workmanship of the tiling and restoration was particularly important in even the smallest aspects of the project, both because of the Cloisters' status with the National Trust for Historical Preservation and because of its contents.

"Because it was built both as a museum in its construction and to house artwork, we have to make sure our quality is museum quality," said Tom Corbo, vice president and general manager of Graciano's New York division.

This was true for the restoration of the gothic windows. The windows, which were carved in the 12th Century, required the replacement of the limestone frames. To ensure that the material was compatible with the existing stone, the Cloisters team found a limestone contractor in France who could match the original color and cross section. Walter B. Melvin, the lead architect on the windows, also designed and installed a new protective glazing system, which is a layer of glass outside of the stained glass. The stained glass is vented at the top and bottom so internal museum air can bathe both sides of the windows, preventing condensation and also protecting the stained glass from the weather and other external elements.

Introducing these new systems, though, forced the team to deal with both a theoretical and aesthetic challenge: guaranteeing the architectural integrity of the museum while using the most honest method possible.

"The real philosophical challenge of working with historic artwork is deciding what the new work should look like," said Robert Bates, an associate at Walter B. Melvin. "The new stone masons and carvers wanted the work to look new, but 800 years later the new stone looks quite different from the original. On the other hand, you could distress the new stone to make it look exactly like the old, but that is an entirely false process."

The interior renovations of the kitchen and bathrooms in the museum are being handled by Kai Woo, principal of Kaitsen Woo Architects. The job is currently being bid out by construction manager Ed Hern Holtzman Inc.

"We want to design modern and pleasant spaces, but they should complement the building and not compete against it," Woo said.

As the project team grappled with how to ensure that the restoration stayed true to the original aesthetic of the museum, it also had to ensure that the property could remain operational and open. Protection of the artwork and guests was paramount.

This aspect of the project was made even more difficult by the complex building plan of the Cloisters, which links both outdoor space and small complicated units of the property together, with limited access points and multiple roof structures.

The protection measures vary from project to project. For the windows, for example, the team installed a complex air filtration device to pull the limestone dust out of the construction area and prevent any flow of air into the building. It also uses more conventional methods of tarping and putting up plastic barriers around the work to shield the guests and the artifacts.

There is more to come for the Cloisters after completion of phase three. Webster has planned several gallery renovations in addition to a repaving project for all of the museum entrances and exits to improve access for the general public and people with disabilities.

Also planned is the installation of a climate-control system inside the museum to help preserve the artwork.

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