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Historic cottage at Belmont gets new viewing

BY LINDLEY ESTES

Something is odd about the caretaker's cottage at Falmouth's Belmont estate.

Beate Jensen, site preservationist for Belmont, began working at the cottage across from the estate that includes the Gari Melchers home and studio in Falmouth in 1999.

She said she noticed the architectural curiosities of the cottage back then.

The windows seemed to be in the wrong places, and one of the levels of the building looked too tall from the exterior.

She thinks the building was constructed in the 1840s and that at some time the roof was raised to create a second story. But she was not able to say that with certainty until students from the University of Mary Washington's historic preservation department came in this fall.

The eight students worked on the cottage, which, along with the Melchers estate, is owned by UMW.

The students are part of Michael Spencer's building forensics class and, without knowing of Jensen's suspicions, substantiated nearly everything she thought about the structure.

The class uses nondestructive technology, such as infrared cameras, micro-drills and borescopes, which are becoming more common among preservationists, to learn more about historic buildings.

“It’s really exciting to be able to read and interpret structures like this,” Spencer said. “We can see things that normally we could not see with the naked eye or without destructive analysis.”

They hope to augment the research Jensen has already done on the property.

Jensen found that the structure was originally slave quarters and then was converted into a home for the caretaker’s family after the Civil War.

She found construction materials dating to that era in the basement and documents on the building.

With the infrared camera, students are able to identify the interior structure of a wall.

They found that there was once a door where there is now a window facing Washington Street.

They also found studs that would have supported a roof. The studs stop in the middle of the upstairs wall, showing that the roof was raised to create a second story.

“Resistance drills” allow them to chart deterioration in a piece of wood, as does a “time-of-flight” machine, which uses sound waves to learn how dense beams are and where they may be rotten.

Historic preservationists have appropriated these technologies from other industries, such as forestry, where the micro-drill was invented and is used to test for rot in trees.

Spencer said radar used by the government to see through walls is the next big innovation for preservation.

“We would be able to see inside walls,” he said.

UMW’s historic preservation department was founded in 1984 and is one of the oldest in the country.

The department, Spencer said, has a better inventory of non-destructive tools than 99 percent of undergraduate or graduate programs.

Seniors Victoria Leonard, 21, and Rachel Tippett, 22, did preliminary testing on the cottage to see if beams in the basement had rotted.

“It’s pretty solid,” Tippett said.

Tippet said that she has learned more in the building forensics class than in any other class at UMW.

“It’s really hands-on,” she said.

Two other seniors, Jennifer Sustar, 25, and Linda Eckley, 22, used a Bore Scope to look inside the foundation.

“I knew historic pres[ervation] would be hands-on,” she said. “But I never would have thought I’d learn so much about technology and tools.”

Spencer said the class prepares students for the preservation job market, which is growing.

“There is more interest in sustainability,” he said. Preservation allows people to live in older homes and restore them responsibly. Correct restoration can also result in tax credits.

Spencer has offered this class before, with students working on the Mary Washington House, the Lewis Store and the Rising Sun Tavern in Fredericksburg.

The Belmont caretaker’s cottage, though, with its extensive alterations over time, is “a perfect laboratory,” Spencer said.

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