

Agency Official 106 Effect Report

*Installation of a Ductless HVAC System in Fredericksburg National Cemetery Lodge
Fredericksburg, Virginia*

**U.S. Department of the Interior
National Park Service
Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park
120 Chatham Lane
Fredericksburg, Virginia 22405
Description and Purpose of Undertaking**

Purpose

The Fredericksburg National Cemetery was established in 1867. The cemetery contains Union dead from the battles of Fredericksburg, Chancellorsville, Wilderness, Spotsylvania Court House, Mine Run, North Anna River, and the winter camps in Stafford County. The cemetery was maintained by the United States Quartermaster Department of the United States Army, until 1933 when the Fredericksburg National Cemetery was transferred to the National Park Service, to be administered by the Fredericksburg and Spotsylvania National Military Park. As long as room existed, service men, women and spouses could be buried in the cemetery. The last burial occurred in 1994. Currently, the cemetery is closed to future burials.

Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park was authorized by an act of Congress on February 14, 1927 (44 Stat. 1091). The purpose of the park, as stated in the act, is “to commemorate the Civil War battles of Fredericksburg, Spotsylvania Court House, Wilderness, and Chancellorsville, including Salem Church ... to survey, locate, and preserve the lines of the opposing armies in said battles, to open, construct, and repair such roads, highways, paths, and other approaches as may be necessary to make the historical points accessible to the public and to students of said battles ... and together also with such additional land as the Secretary of War may deem necessary for monuments, markers, tablets, roads, highways, paths, approaches, and to carry out the general purposes of this Act.” By Executive Order 6166 in 1933 the park was transferred to the Department of the Interior to be administered by the National Park Service.

Need

The Fredericksburg National Cemetery Lodge was constructed in 1871. It was built as a residence and has always been used as such. The heating and cooling system relies on a gas fired boiler with radiators for heat and air conditioning window units for cooling. The system is outdated and highly inefficient. This leads to an uncomfortable living environment for park employees and poor climate control for the historic structure.

Property Description

A. Major Physical Components – The Fredericksburg National Cemetery Lodge sits in the Fredericksburg National Cemetery on the Fredericksburg Battlefield. Adjacent to the lodge is the ca.1961 Fredericksburg National Cemetery Maintenance Building, the Sunken Road corridor of the Fredericksburg Battlefield and the Fredericksburg Battlefield Visitor Center.

B. Architectural Significance – The Fredericksburg National Cemetery Lodge was constructed in 1871 to serve as the residence for the cemetery superintendent and his family. It was initially a one-story structure, but in 1874 a second story was added. A kitchen addition and porch on the north facade of the lodge was built in 1905. A cellar was constructed in 1929 to accommodate a

central heating system consisting of a coal fired furnace and 30-gallon hot water tank, which was replaced in the 1960s by a gas fired boiler and radiator system. In the 1940s, the back porch was enclosed to create a mudroom and laundry room. In the most recent draft of the park's National Register of Historic Places documentation update, the lodge (NR #FR00147e) is considered a contributing structure under the park's subtheme: Memorialization and Commemoration on the Battlefields – 1865 to 1942. The Fredericksburg National Cemetery Lodge is on the park's List of Classified Structures (LCS) – LCS#07889.

C. Landscape Resources – The Fredericksburg National Cemetery Lodge sits within the Fredericksburg National Cemetery. The cemetery was established in 1867 and is the burial place of 15,436 service men, women and spouses. In the most recent draft of the park's National Register of Historic Places documentation update, cemetery (FR0147a) is considered a contributing structure under the park's subtheme: Memorialization and Commemoration on the Battlefields – 1865 to 1942. While the park lacks a Cultural Landscape Report for the Fredericksburg National Cemetery, a Cultural Landscape Inventory was completed in 2011. The Fredericksburg National Cemetery Lodge is considered a character-defining feature of the Fredericksburg National Cemetery landscape.

Description of Alternatives

Alternative A – No Action

This alternative would hinder the park's ability to provide adequate and efficient climate control to the Fredericksburg National Cemetery Lodge.

Alternative B – Install a Ductwork HVAC System in the Fredericksburg National Cemetery Lodge

Under this alternative, a new heating and cooling system would be added to the Fredericksburg National Cemetery Lodge through the installation of a heat pump system that utilizes ducts to provide service throughout the building. The gas fired boiler would be removed from the cellar and the air conditioning window units would be removed from each room. Two external heat pump condensing units would be installed outside, while a furnace would be installed in the cellar. In each room of the lodge, the existing radiators would be removed. Ductwork would run through the cellar to supply service through vents cut into the floor of each room. The building lacks an attic, so ductwork would have to be installed from the first floor to the second floor and vents cut into the floor of each room on the second story. The ductwork would be visible on the first floor or chases would be constructed for the ductwork. Under this option, a new energy efficient system would be installed, but a lot of the material (ductwork) needed to supply service would either be visible or require construction to hide. Also, the cutting of vents into the floors of each room would involve the possible loss of historic fabric.

Alternative C – Install a Ductless HVAC System in the Fredericksburg National Cemetery Lodge (Preferred Alternative)

Under this alternative the a new heating and cooling system would be added to the National Cemetery Lodge through the installation of a heat pump system that does not utilize ducts to provide service throughout the building. The gas fired boiler would be removed from the cellar

and the air conditioning window units would be removed from each room. Two split-system external heat pump condensing units would be installed outside of the building. Utility lines to and from the two units would access the interior of the lodge through existing holes that currently serve utility lines. In each room of the lodge, the existing radiators would be removed. In their locations will be installed ductless floor-mounted air handlers. Each air handler must be connected to electrical and refrigerant lines. These lines would run through the floor and ceiling holes that already exist for the water lines that serve the current radiators. No loss of historic fabric is anticipated in the installation of this system.

Description of Mitigation Measures

A. All utility and service lines will run through existing holes and access points in the building.

B. The location of the two exterior heat pump condensing units will be off the northeast corner of the lodge, where the original building and kitchen addition meet. This is where the electrical lines and other utilities access the house. This is also on the side farthest away from the cemetery, which will minimize the impact of noise in the cemetery. The park also proposes to plant a few boxwoods around the heat pump units to help mask their visibility and retard the noise.

Park Consultation

The proposal is being circulated to the park's Section-106 advisors for historic architecture and cultural landscapes.

The proposal is going through a 30-day public comment and review period. During this time, the project will be posted on the National Park Service PEPC (Planning, Environment and Public Comment) website. The park has contacted representatives of interested local organizations such as Mary Washington College's Department of Historic Preservation, the Rappahannock Valley Civil War Round Table, the City of Fredericksburg, the Central Virginia Battlefields Trust, the Civil War Trust and the Friends of the Fredericksburg Battlefield.

The project will undergo a 30-day comment and review period with the Virginia SHPO.

Effect Analysis

During the installation of the ductless HVAC system in the Fredericksburg National Cemetery Lodge, no historic fabric will be affected. The installation will utilize existing access points for installation. The addition of two heat pump condensing units is a small change to the landscape, but the park will place them where they will have the least noise impact and screen them with vegetation. For this reason, the park's opinion is that this undertaking will have "no adverse effect" on architectural or landscape resources.

Attached Supporting Documentation

- A. Park Map
- B. Scope of Work
- C. Photos

Report Prepared By

Eric J. Mink
Section-106 Coordinator/Cultural Resources Management Specialist
(540) 371-6416