

Historic Core HVAC Upgrades at George Washington Birthplace National Monument

In 2029 George Washington Birthplace National Monument has plans to install new exhibits throughout the park. Two of these locations include the Colonial Revival Kitchen and the Memorial House Museum. This project proposes to install HVAC at the Colonial Revival Kitchen and upgrade the existing (and failing) HVAC at the Memorial House Museum. These upgrades are necessary to ensure all cultural resources assets are in a more stable climate controlled environment as well as providing a higher level of visitor comfort, particularly in the warmer months, the park's peak season.



Proposed Modifications to Colonial Revival Kitchen for HVAC Upgrades

The Colonial Revival Kitchen has no cooling mechanism, only heat. In response to the upcoming exhibits as well as this building being used as a demonstration space for open-hearth cooking, the park is opting to install two low-profile AC units in the downstairs of this building and one in the upstairs of the building. These units will provide the necessary climate-controlled environment needed for the new exhibits but will also provide much needed cooling in the summer months when the building is uncomfortably hot. The units will be placed where the wall and ceiling join and will only impact the non-original plaster. The minimal impact will also make these modifications reversable (Figure 1).



Figure 1. Photo simulation of proposed indoor wall-mount unit #1 in demonstration space. Blue line shows trajectory of line set. **Photo is to scale.**

Proposed Modification to the Memorial House Museum for HVAC Upgrades

The current system at the Memorial House Museum (MHM) was installed in 2011, and since its installation it has not functioned as designed. The primary issues with the current system is that it is unable to provide climate control necessary to protect the park's cultural resource assets in the building and is a concern as the park works toward the 2029 exhibit project which will have archeological materials on display, objects that require a higher level of climate control.

The most current readings for the MHM illustrate how the current system is not working properly and has extreme fluctuations in temperature and humidity. For example, the beginning of September 2025 the park's monitoring system recorded temperatures with a high of 83.2 and a low of 66.1 and humidity with a high of 84.7 and a low of 52.6, just as an example.

In order to make the system function properly GEWA proposes to improve and upgrade the existing Water Source Heat Pump Equipment in the basement with In-kind equipment. This system will provide the necessary climate control for all cultural resource materials and will also increase visitor comfort when in the building.

In terms of ground disturbing activities, the majority of the limits of disturbance (LOD) for the project has been tested, particularly the cooling line (see figure below). The park is proposing archeological monitoring of the cooling line and the excavation of two 5ft by 5ft excavation units prior to construction of the cooling tower base. These units will largely cover the LOD and will provide sufficient information should any unanticipated finds occur. In the event that features, or other unanticipated finds are located the park will following our Standard Operating Procedure for unanticipated finds. This area has been covered using Human Remain Detection canines and will also be GPR'd prior to any archeological studies. Additional excavations are needed where the cooling tower enters the home. This excavation will be completed

by the park archeologist up to 2 feet below ground surface. The contractor will excavate to the base of the foundation. This area is extremely disturbed from the construction of the MHM but is being formally excavated in an abundance of caution.

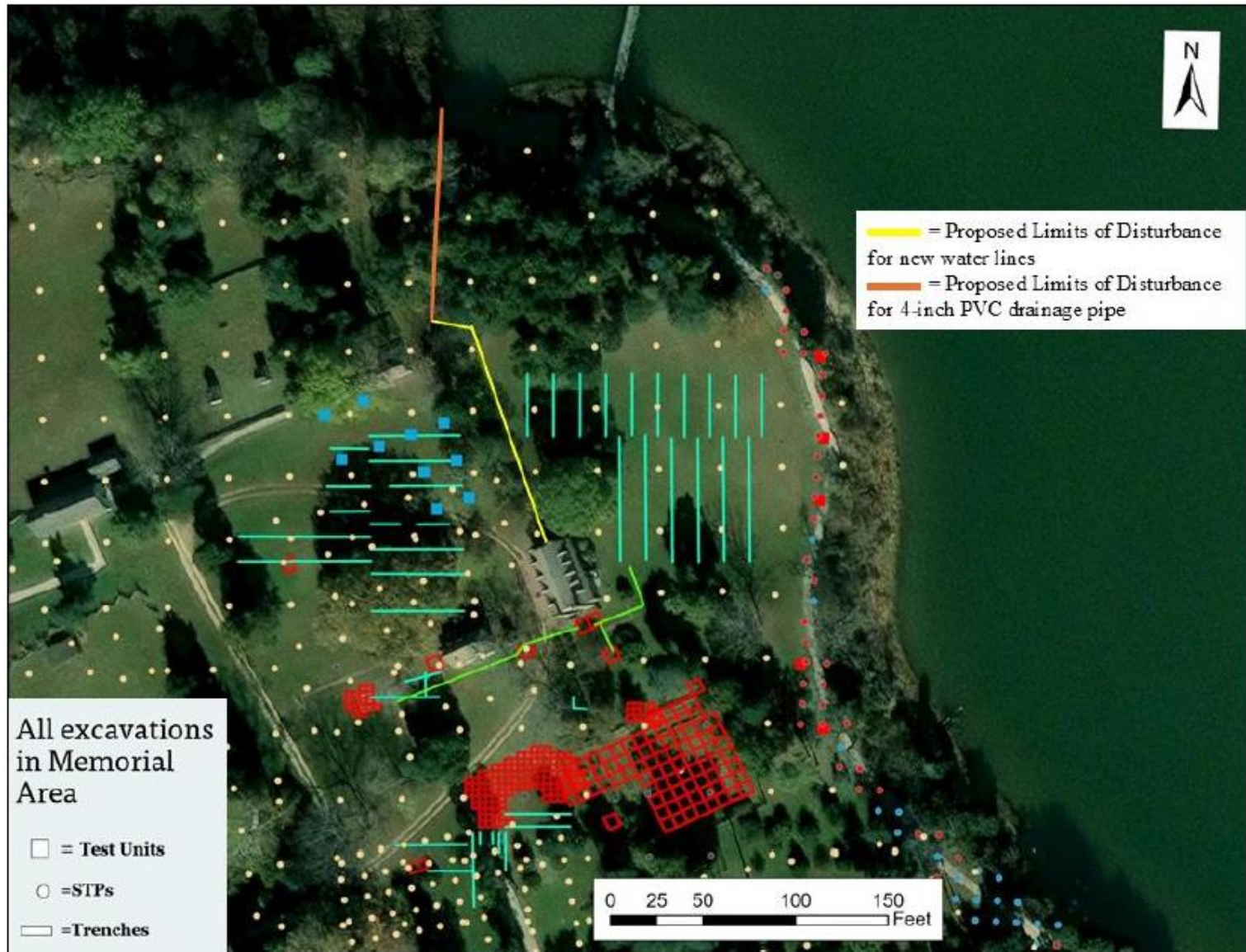


Figure 2. Proposed alignment for water loops and cooling tower (yellow).