Preliminary Assessment of the

Mary Washington House Kitchen

Historic Structure Report



Chris Young

University of Mary Washington

Historic Structure Report

Mary Washington House Kitchen

Prepared for

Preservation Virginia

By Chris Young

Survey Partner **Erika deBroekert**

Advisor

Professor Michael Spencer

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Preface

Chris Young conducted the historic structure report on the Mary Washington house kitchen with assistance from Erika deBroekert during the fall of 2010. Both attend the undergraduate program at the University of Mary Washington and both major in historic preservation. The report was completed for a building conservation class under the guidance of Professor Michael Spencer. Although the project was designed as a semesterlong educational tool to provide students with hands-on experience, the ultimate intention was to share the findings of the Historic Structure Report (HSR) with *Preservation Virginia*. The Mary Washington house is owned and operated by the Mary Washington Branch of *Preservation Virginia*.

Executive Summary

Assessing the Mary Washington house kitchen and compiling the analysis for the HSR was a multistage process, requiring many on-site visits and background research. The class was structured to compliment the steps and requirements to complete the final HSR. Process:

- Surveying the property and documenting with photos.
- Researching the history and evolution of the building.
- Evaluating the structure and assessing possible preservation concerns and determining appropriate testing.
- Collecting samples from different sections of the building and noting their provenance.
- Completing a variety of labs, testing samples of wood, brick and mortar obtained from the kitchen.
- Analyzing the results of testing and compiling it with the archival research to evaluate the building's existing condition status.
- Determining the appropriate measures to remediate the threats to the structure and provide a plan to help preserve the structure.

The ultimate goal of the project was to teach students about building conservation while helping to research and preserve a historic structure. The final products, a preliminary HSR and a short presentation to Preservation Virginia, help satisfy this goal.

Historic Overview

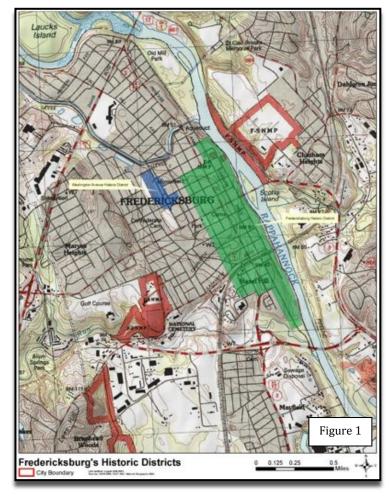
Mary Washington House

The Mary Washington House, located at 1200 Charles Street in Fredericksburg Virginia, includes several buildings within the property lines, one of which being a one-

story detached kitchen. The property was inhabited by Mary Washington, mother to George Washington, from the spring of 1772 until her death in the summer of 1789. Mrs. Washington moved to the property from nearby Ferry Farm where she had resided since 1739. The impetus for moving surrounded the need for Mrs. Washington to reside closer to her daughter.

The residence lies within the historic district of Fredericksburg, which spans 40 blocks on the western side of the Rappahannock River. See Figure 1. The historic district contains several notable properties including Kenmore Plantation, the home of Mary Washington's only daughter, Betty.

The infamous conflagration of 1807 ravaged the city of Fredericksburg, destroying a large



number of properties, but the fire primarily consumed the "square [that] was then known as the 'Commercial Block.'" ¹The Mary Washington property exhibits no evidence of significant fire damage or subsequent repairs stemming from fire damage.

The Association for the Perseveration of Virginia Antiquities bought the property in 1891 from Mrs. Mary Moon and George M. Shepherd. Under the supervision of the APVA, the house and its dependencies have undergone several restorations in an effort to preserve the home, as it existed in the late 18th century.

Historic Overview

Mary Washington House Kitchen

The Historic American Building Survey found a deed including the term "buildings" referring to the property when George Washington bought the plots of land.² One could assume the kitchen was one of the "buildings" referenced in the deed. However the document goes on to say that the construction date for the kitchen is unknown. The first mention of a kitchen structure appears in an 1805 insurance map of the property, which establishes the construction of a kitchen on the property prior to that date.

Significance

The period of significance of the detached kitchen is linked to its most famous resident, Mary Ball Washington. The period of significance is stipulated by the time she lived in the property, which is from the spring of 1772 until her death on August 25, 1789.

After 1891, the goal for the property was to restore and preserve the house so it reflected the time Mary Washington lived in it. Despite the subsequent renovations, some original material remains. The structure no longer sits upon original foundations but it remains in its original locations and retains its initial orientation. According to the researchers conducting the 2006 Reconnaissance Level Survey listed the kitchen as "contributing" to the property. ³

Based on the observations of this preliminary survey, it appears the Mary Washington House kitchen satisfies several of the criteria for nomination to the National Register. The kitchen meets Criteria B and C under Section II, National Register Criteria for Evaluation.⁴

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. that are associated with events that have made significant contribution to the broad patterns of our history; or

B. that are associated with the lives of persons significant in our past; or

C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. that have yielded, or may be likely to yield, information important in prehistory or history.

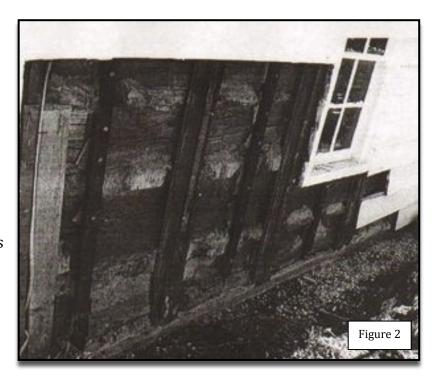
Development

1930s

The Mary Washington House and its dependencies underwent significant restoration under the supervision of architect, Philip Stern. The Historic American Building Survey document neglects to mention all of the work done to the kitchen. However, we can theorize they placed the kitchen foundation on a concrete sill during this time. A photograph during the HABS survey in the 1930s, after the restoration, shows evidence of a concrete sill on the exterior. The photograph also shows a straight-brick patterned floor. The brick floor that exists today exhibits a herringbone brick pattern. The evidence available promotes the likelihood that the current brick floor was added in the early 1930s during the restoration.

1972

After the large-scale renovation conducted during the 1930s, the kitchen underwent another major restoration in 1972. Architect Frederick D. Nichols from the University of Virginia and local contractor, Kenneth Covert, oversaw the restoration. During this time the kitchen was stabilized: iron rods were adhered to the hewn timbers underneath the clapboard siding. See figure 2. The iron rods



were spaced every 30" underneath the exterior clapboard siding.⁵ A metal detector was used during this investigation and the results from a full building scan proved they are still in place.

2002

Paul S. Muller from Muller Engineering Associates conducted a structural survey of the kitchen. The siding was removed to evaluate the substructure and possible changes since its restoration in 1972.⁶

2004

Mike Armel from Mike Armel's Custom Painting repaired portions of the kitchen. The repair involved repainting the kitchen, re-plastering certain walls, replacing rotted siding, sealing cracks, cleaning exterior siding and re-chinking voids in the wall.⁷ See figure 3.

2005

The roof shingles were replaced. However, no alteration was made to the pitch of the roof.⁷

2006

A reconnaissance-level survey was carried out for the entire property. The William and Mary Center for Archaeological Research conducted the survey on behalf of the DHR and the City of Fredericksburg. In this survey, they suggest the kitchen was built in 1790 based on field observations.³



2010 Physical Description of the Kitchen

The kitchen rests approximately 16 feet to the southwest of the main house and the southern gable end abuts the sidewalk along Lewis Street. The building is square log construction with brick chinking covered by white, latex painted weatherboard siding. The entrance is on the eastern wall with one window (4/4, double hung). There are two windows (6/6 and 4/4, double hung) on the western wall and one window (4/4 double hung) on the gable end. The floor is covered with brick in a herringbone pattern. It has a gable roof with lapped, tapered wood shingles and a brick chimney on the southern gable end. A small staircase in the northeast corner leads to an upstairs loft with one window (4/4, double hung) on the northern gable and two small windows (4 light, casement) on the southern gable. The window trim is painted brown and the walls are covered in white plaster on both interior levels. The footprint of the building is approximately 24 feet by 18 feet.

Theories of Evolution

A lack of archival evidence about the structure inhibits a comprehensive understanding about the building and its evolution; however, records from other colonial Virginian kitchens and structures can help illustrate the evolution of the Mary Washington House kitchen. This exoteric view of colonial kitchens and 18th and 19th century society, consequently, provides a more holistic view of the Mary Washington House kitchen which explains the factors surrounding its construction and use.

Dwelling to Kitchen

Building Adaptation could support the notion the use of the structure may shifted from a dwelling to kitchen.

Similarities between the kitchen and other early colonial, one-room dwellings suggest the kitchen may have originated as a dwelling and later evolved into a kitchen dependency. The description of a one-room house in *Everyday Architecture of the Mid-Atlantic* states a "one- room house usually contained at least one window, typically set in the gable end away from the chimney or near the door, and a ladder or stair to a loft or upper story used for sleeping or storage." The book describes "the standard dimensions for one-room houses were 16 to 18 feet by 18 to 20 feet, with exceptionally small dwellings being as tiny as 10 feet square and large examples as spacious as 20 by 26 feet."

Kitchen Past and Present

Structural Similarities with other colonial kitchens suggest it was built initially as a kitchen.

Despite the similarities to the one-room house, the description of a colonial kitchen also supports the notion the Mary Washington kitchen was built initially *as* a kitchen. The book states "kitchens tended to be one-room, single story structures, often considerably rougher construction than the main house. Delaware and Maryland orphans; court property valuations taken from the mid-eighteenth century through the late 1830s depict a kitchen as an 18 by 20 foot structure on average."

However, "the interior of early out-kitchens was dominated by a large open hearth..." Based on field observations and comparison to other hearths found in out-kitchens, the Mary Washington kitchen hearth appears smaller. Further field measurements could support or disprove this notion.

Kitchen Past and Present

Social and Cultural Influences support the idea of a detached kitchen.

The custom of having detached kitchen was prevalent in colonial America. This supports the theory that kitchen dependency was originally built as a kitchen since it was a common practice.

"By the first decades of the eighteenth century, it was already customary for the owners of large plantations to confine various cooking tasks to separate buildings located some distance from their residences. This move is usually interpreted solely as a response to practical considerations: the heat, noise, odors, and general commotion associated with the preparation of meals could be avoided altogether by simply moving the kitchen out of the house."

"The detached kitchen was an important emblem of hardening social boundaries and the evolving society created by slaveholders that increasingly demanded clearer definitions of status, position, and authority." 9

Earthfast to Concrete Foundation

Foundation Replacement is apparent since concrete is a more modern invention.

The kitchen presently sits atop a concrete sill which functions as the primary foundation. This modern alteration to the structure obstructs most of the evidence of the original foundation construction. However, sources on colonial kitchen architecture suggest it was probably an earthfast foundation.

"Other visitors remarked that Chesapeake houses were often founded on wooden sills, blocks, or earthfast posts." ¹⁰

"As a rule, outbuildings were more lightly constructed than the houses they attended. Less than 2 percent of all 2,083 advertised outbuildings were constructed of brick, and only 3 percent more had brick or stone support below their posts and sills. Storehouses were the only structures likely to have masonry underpinning or cellars to help protect from moisture and vermin their valuable contents of finished and sometimes imported goods." 11

The foundation of the kitchen was log and probably rested directly on the ground. The deterioration of the wood sill suggests significant decay which could have stemmed from the problems associated with having an earthfast foundation. Wood decays relatively faster when placed in or on the ground.

Primary Kitchen to Summer Kitchen

Two KitchensPresent at the Mary Washington house by the beginning of the 19th century suggest a shift in primary use of the earlier, exterior kitchen.

Examinations underneath the two-story addition of the main house alerted us to another brick hearth. Previous HABS drawings illustrate the presence of two kitchen-style hearths on the property. With this information, we can suggest the exterior kitchen may have at one time functioned as the summer kitchen based on similar accounts.

"In the southern climate, families were more concerned with keeping the heat of the cooking fire out of the house during the warmer months than they were with the risk of a house fire." ¹²

"Analysis of the Lee inventories suggests that there may have been two kitchens or 'cook rooms' in use at Stratford in the 18th century and 19th century. The main kitchen seems to have been continuously located in the southeast dependency; however, there is some indication that a second cook room was located on the ground floor of the main house. It has been assumed that any indoor facility was located on the ground or basement level of the main house in the extreme southeast apartment. The large size of the fireplace opening in that room, the proximity to the interior service stairs and the presence of a door opening to the outside are some of the architectural features of this room that tend to support this hypothesis." ¹³

Hearth to Iron Cookstove

Technological Shift from hearth to iron cookstove was a common occurrence in the 19th century.

The ghost of a flue in the kitchen and a square support base in the loft suggest the residents shifted from using the hearth to using an iron cookstove. This practice was common in colonial America and "by the mid-nineteenth century, the hearth had begun to be replaced with an iron cookstove or range vented through a masonry flue"⁸

Ladder to Stairs

Minor Improvements to the structure may include the upgrade of a ladder to staircase.

Pieces of lath with traces of plaster were found under the staircase which suggests the staircase was added later to the kitchen. Oddly, the lath pieces are oriented vertically rather than horizontally. Lath holds plaster to the wall but in order for the plaster to

key/cling to the lath, it must be arrange horizontally. Therefore, this discovery does not support evidence an original lath and plaster wall in the kitchen. However, it highlights the practice of reusing of materials and expands on the diverse construction chronology.

Prior to the staircase, residents or workers probably reached the upper



level by ladder. However, this understanding comes from a superficial investigation of the structure. A more thorough investigation will yield stronger conclusions.

Existing Conditions

Overview

The condition assessment of the Mary Washington house kitchen combines field observations and basic testing methods. This data provides a preliminary view of the threats to the structure. This HSR primarily identifies the detrimental effects of moisture on the masonry and wood components on the exterior and interior of the kitchen. It appears the tilt in the structure, observable on the exterior eaves and interior ceiling, does not allude to continued structural deformation. Therefore most of the analysis focuses on the lower portion of the structure which exhibits signs of deteriorating bricks and mortar stemming from repeated oversaturation.

Testing

Several different testing methods were employed to evaluate the present condition of the structure and enrich the historical understanding of the building's construction and evolution. The results from some of the testing aid in the evaluation and recommendations of the HSR. However, some of the testing requires further examinations; therefore, all testing is mentioned but no conclusions are asserted since the testing is incomplete. More exhaustive testing can comment on the structural integrity of the building and its condition. The scope of this preliminary HSR limits the depth of testing and interpretation.

- a. *Moisture Monitor* (HOBO Data Logger) For this project the Hobo meter monitored the conditions inside the kitchen for a span of 15 days and recorded temperature, relative humidity, absolute humidity, and dew point.
- b. *Moisture Meter* (Delmhorst Pin-Type Moisture Meter)- This provides on-site moisture readings. It cannot determine moisture percentages above 40%. The pins on the meter are pressed into the wood and evaluate the moisture levels within the wood.
- c. *Resistance Drill* This tested the interior decay of timber members. Further testing will provide a more complete analysis of the structural integrity. Drill penetrates into the wood and measures the strength of the wood.
- d. *Porosity Testing-* The samples of brick and mortar from the kitchen were tested to determine the absorption and desorption rates.
- e. *Mortar Testing-* This destructive test method involved acid digesting the mortar sample to determine the ratios of clay, aggregate, and binder present.
- f. **Wood Identification-** Samples of wood from the timber structure were extracted identify the type and condition.

Exterior

Weatherboard

The exterior weatherboard reveals signs of deterioration on the northern, eastern, and western wall. Visual inspection of the siding reveals mold, rot, and mildew on the lower portion. The visible signs of rotting on the surface, coupled with the high moisture meter results, suggest an accelerated rate of decay to the lower wood members.

On the eastern wall, there is evidence of black mold beginning at the lowest board and extending up approximately three feet. See Figure 5.

Along the lower portion of the northern, gable end there is clear evidence of mildew and mold. Green mildew covers much of the lower portion on this exterior wall. See Figure 6.

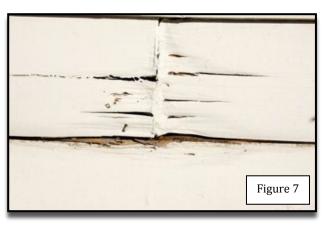
Certain portions of the western wall show evidence of rot underneath the latex paint. There is less observable mold but the lower pieces of weatherboard are soft to the touch. See Figure 7.

Visual observations of the northern wall yield little evidence of mold, rot, or mildew. Therefore, no subsequent testing was conducted on the exterior of the northern wall.

Most of the lower weatherboards on the northern, eastern, and western wall s have modern cuts and a smoother finishes than some of the higher boards. The visual evaluation along with the documents of recent repair, suggest that the lower boards represent a collection of some of the newest replacement materials. However, they display some of the most significant deterioration.







Testing with the moisture meter provided further evidence of wood deterioration below the surface. The tests 9 through 15 utilized the moisture meter and yielded varied results.

The moisture meter can read moisture levels up to 40%; therefore, there is no way to determine the exact percentage above that limit. Tests 13 and 14 recorded moisture readings of 40%. Test 15 had readings closer to 10% but Test 15 taken from weatherboard 30" from the ground whereas Test 13 and 14 were taken from 20" and 15" from the ground, respectively. Tests 11 and 12 had high readings similar to the western wall. Test 9 and 10 were both taken 6.5" to the right of the door jamb. However Test 9, which was taken 5" lower to the ground than Test 10, had readings

Approximate
Testing Locations

9,10

11,12

close to 30%, nearly double the moisture percentages for Test 10.

Most of the weatherboard close to the ground recorded high levels of water saturation. Although the tests were taken during a relatively

Testing Log	
Instrument	Test
Resistance Drill	1-8
Moisture Meter	9-15

wet week, the rain still should not have augmented the readings to 40%.

Concrete Foundation

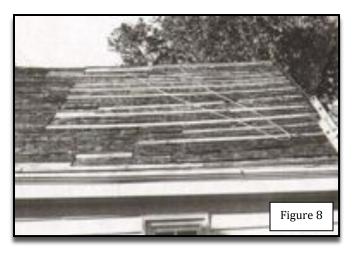
The concrete foundation which supports the overlying timber structure shows signs of isolated cracking in different areas. There is evidence of previous remediation efforts to fill in the cracks. One of the more noticeable foundation cracks is found on the eastern wall below the left side of the door jamb. Despite the cracking, the deterioration of this rigid material does not pose a major threat to the stability of the structure.



The impervious concrete foundation is a relatively unforgiving material and poses a preservation concern with the wood members which rest atop it. The concrete does not allow for the passage of water which accelerates the deterioration of the wooden sill. Rain water collects on top of the concrete foundation as the water travels down the side of the building. The water stagnates on the surface of the foundation and the wood members directly above it collect water and over-saturates to a level which promotes rotting and other decay.

Roof

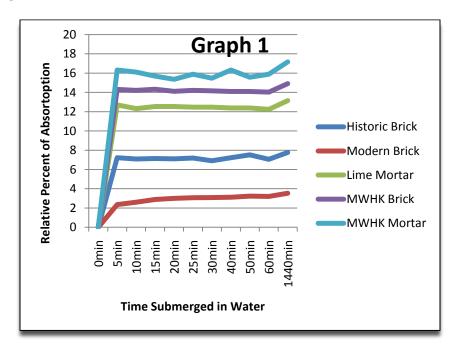
No testing was performed on the roof but there are no visible signs of decay. The roof shingles were replaced in 2005 and presently they retain a grayish tan color. Figure 8 shows the exposed roof just before the new shingles were placed on top 5 years ago.



Interior

Almost the entire interior of the kitchen's two levels are covered with paint and plaster; however, evidence of deterioration was still apparent on the first floor. Similar to the exterior, the interior is plagued by high levels of moisture. The plaster and bricks of the hearth exhibit some of the most deterioration.

Statistically, 18th and 19th century building materials when compared to modern building materials are more porous and weaker. Samples of historic brick and mortar were tested to determine the rate of water absorption and desorption when submerged in water. Modern samples were also included for comparison. The brick and mortar sample from the Mary Washington house kitchen (MWHK) absorbed the highest relative percent of water as evidenced by Graph 1. In many regards, the more impervious the material, the longer it will last against repeated exposure to water. The increased presence of water to plaster, brick, and wood expedite the decay process. Therefore, increased levels of moisture present in the Mary Washington house kitchen pose a serious threat to the physical integrity of its historic materials.



The brick hearth is covered with plaster and paint but exhibits significant spalling. There are many places where the plaster has fallen off to reveal the underlying brick which has noteworthy deterioration. Brick dust continuously falls through the holes in the plaster which is detrimental to structural integrity of the entire chimney. Figure 9 shows the spalling of the plaster on the right side of the chimney. Figure 10 shows plaster dust on the ground which has fallen from the wall.

Figure 11 shows evidence of spalling within the fireplace and Figure 12 shows the amount of brick dust which has fallen through the crack.









The resistance drill and the moisture monitor were both utilized to evaluate the levels of moisture present within the kitchen and within the building materials. The data from the resistance drill provided basis for further investigation. Proper analysis of the results will come from a more thorough evaluation of the readings and comparison to other structures. The HOBO monitoring system also yielded quantifiable data about the dew point, temperature, and humidity levels present in the structure. However, more data about the environment and behavior of the structure are necessary to properly connect the readings obtained from the HOBO.

Recommendations

Preservation Introduction

Although the kitchen hints at future structural issues, there are no observable structural failures within the structure. However, the evidence of high levels of moisture and its effects on the wood and masonry components hint at future structural concerns. A proactive approach rather than a reactive approach, when addressing the moisture issue is the most responsible way to address the immediate and long term needs of the building.

The direction for the Mary Washington House kitchen, at this time, should center on the preservation and stabilization of the structure. This implies addressing the active threats to the structure and the deterioration of materials. The subsequent repairs and replacements to the structure should place emphasis on preserving as much of the original character of the kitchen as possible.

Future work should address the most immediate areas of concern first. The most impacting threats to the structure should carry the most weight when deciding upon the different remediation efforts.

Areas of Concern

The kitchen is susceptible to accelerated deterioration in several different areas. Although they do not pose any serious threats yet, they should be incorporated into the building's preservation plan.

The list concerns:

- 1. Weakening of the chimney stack.
- 2. Deterioration of exterior weatherboard siding.
- 3. Overhanging tree limbs nearby.

1. The weakening of the chimney stack

Initial field observations suggest the re-pointing efforts and re-plastering over top the fireplace bricks have significantly impacted the constitution of the brick. Brick dust on the floor suggests spalling and a significant buildup of moisture within the bricks. The kitchen chimney acts as an anchor to the structure and weakening of this support could prove disastrous to the stability of the rest of the structure.

One of the contributing factors to the weakening of the chimney stems from improper remediation efforts of the past. Some of the materials encasing the brick hearth trap rising damp from the ground and prohibit its evaporation. When retrofitting old structures with replacement materials, the modern materials are often unforgiving and detrimental to their surroundings.

In order to secure the stability of the chimney, it is suggested that the plaster surrounding the hearth be removed. Since there is evidence of deteriorated and weakened bricks beneath the plaster, replacement of these bricks should be expected. Before undertaking any future remediation efforts with the chimney, necessary structural restraints should be placed to avoid unintended structural collapse.

2. Deterioration of the exterior clapboard siding.

One of the possible causes of the accelerated deterioration to the lower weatherboard stems from the automated sprinkler system close to the building. The strip of vegetation between the brick walkway and the building requires minimal watering and the current watering system over saturates the area and splashes the side of the building.

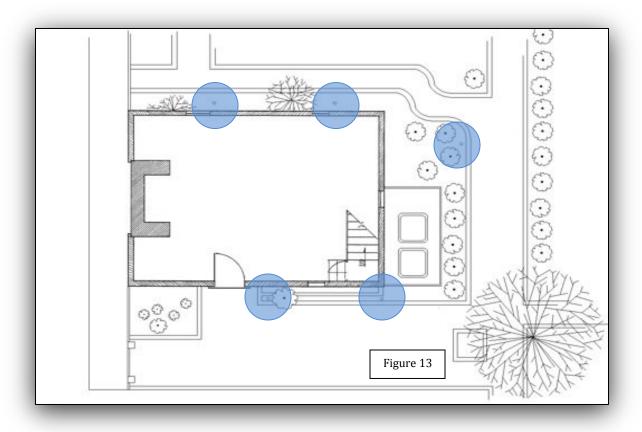


Figure 13 outlines the sprinklers in use around the kitchen. Apart from the sprinkler on the northern end of the building, all the other sprinklers are less than a foot and a half away from the structure. Figure 14 and 15 show evidence of the aggressive watering system.





Therefore in an effort to better preserve the structure and reduce water consumption and costs, it is suggested that the sprinkler zone around the kitchen be permanently switched off. Hand watering the bushes and flowers around the kitchen will reduce the amount of water exposure to the structure and may curb the proliferation of rot, mildew, and mold to the weatherboard.

3. Overhanging tree limbs nearby.

Another concern which primarily affects the preservation of the northern wall and the roof on the western side, involves the overhanging crape myrtle trees near the structure. The sprinkler facing the northern gable end contributes to the growing mildew issue on that wall but the large trees near the kitchen may also heighten the dampness of the area. The shade created by the tree prevents the quick evaporation of water from the area, which perpetuates the growth of mildew and mold. A mild trimming of the large crape myrtle branches may alleviate the moisture problem while

still preserving the visual integrity of the landscape. In order to remove the mildew from the northern wall, a mild concentration of bleach (1:10) with water may help remove the mildew.

The tree abutting the western wall may pose a series threat to the preservation of the roof. Its foliage covers a significant amount of the



roof and creates the potential of trapping moisture and preventing the wooden shingles from adequately drying. See figure 16.

Note:

Despite the observable tilt in the structure, any effort to correct the deformation is unnecessary, costly and dangerous to the preservation of the structure. Therefore, at this time, it should not represent a primary focus for future restorations. The preservation efforts in the 1930s preserved the observable tilt in the roofline and the dip of the ceiling when the kitchen was placed on the concrete sill. In the 1970s preservationists decided against jacking up and correcting the deformation of the structure because they felt it might be risky to the integrity of the structure. The same risks associated with correcting the tilt exist today. However, the structure should be regularly monitored and observed, similar to structures with no tilt, to identify threats to the stability of the roofline and ceiling.

In an effort to strive for the best practices, before undertaking any repairs or restorations, consult current research. Referencing up-to-date preservation philosophy will yield better results through responsible remediation practices. Poor repairs can prove detrimental to the structure and accelerate its deterioration.

Bibliography

Armel, Michael. "RE: Plaster, Prime, and Paint Kitchen (Estimate)." Email to the Mary Washington House. 7 Oct. 2004.

Armel, Michael. "RE: Mary Washington Kitchen- repair fireplace, and log joints." Email to the Mary Washington House. 27 Oct. 2004.

Armel, Michael. "RE: Mary Washington Kitchen- Estimate on Exterior of Kitchen." Email to the Mary Washington House. 3 Nov. 2004.

Braxton, Gail. "Mary Washington House kitchen." Email to Gary Stanton. 13 Aug. 2008.

Camille Wells, "The Planter's Prospect: Houses, Outbuildings, and Rural Landscapes in Eighteenth- Century Virginia." *Winterthur Portfolio*, XXVIII (1993), 21

Carlisle, N. Nasadinov, Melinda T. "America's Kitchen's." Tilbury House Pub, 2008.

Harbury, Katherine. "Colonial Virginia's Cooking Dynasty." *E University of South Carolina Press* 2004

Herman, Bernard L. and Gabrielle M. Lanier. Everyday Architecture of the Mid-Atlantic: Looking at Buildings and Landscapes. Johns Hopkins University Press. Baltimore, Maryland: 1997. 12-52.

Muller, Paul S. "Re: Structural Survey of the Kitchen." Email to Ms. Braxton, Director of the Mary Washington House Branch APVA. 23 Jan. 2002.

Quinn, S. J. The History of the City of Fredericksburg Virginia. Hermitage Press Incorporated Richmond Va. 1906

Stern, Philips. Written Historical and Descriptive Data on the Mary Washington House, Fredericksburg Va. *Report of the Historic American Buildings Survey*. No. 11-2

Virginia Department of Historic Resources: Reconnaissance Level Survey. William and Mary Center for Archaeological Research on behalf of the DHR and the City of Fredericksburg. 10 Oct. 2006.

Vlach, John M. Back of the Big House: The Architecture of Plantation Slavery. *The University of North Carolina Press.* Chapel Hill, NC:1983. 43,44

Appendix 1: Theories of Evolution

Continued from page 13

Chimney Quandary

One of the intriguing features of the Mary Washington House kitchen is the interior chimney. A portion of the chimney massing is uncovered on the south-facing elevation. The clapboard siding does not extend across the chimney massing. Unfortunately the scope of this HSR limits the depth of structural research. Therefore, we cannot accurately hypothesize about this visually peculiar feature in the kitchen. However, it is necessary to note this feature as a topic of interest.

"Chimneys were initially part of their features but later were often built outside, both as a preventive gesture against fires and as a new architectural statement. Because of the floor plans of these homes, cooking and dining took place in the multipurpose rooms on a daily basis. Such multipurpose one- or two-cell houses were found perfectly acceptable even by the gentry and would dominate the Virginia countryside throughout the eighteenth century." 14

"External masonry fireplaces and chimneys represent the more common southern practice." 15

Supplementary Literature on Colonial Kitchens

Kitchen Building Practices

"The practice of building a detached kitchen was established by the end of the 17th century in the Chesapeake region.

Green Hill's kitchen was a frame building of typical size about sixteen by 18 feet and one and a half stories high-but it had an unusually massive stone chimney and three fireplace openings. "

Chimney Size

"Although most were not as elaborate as the one at Green Hill, plantation kitchens generally had large cooking hearths, despite the growing popularity of cookstoves in the nineteenth century." ¹⁶

The fireplace was the central element of a kitchen's interior. Of one such plantation kitchen, former slave Cicely Carthown recalled: "The kitchen was bigger than this house [here]; and that fireplace! I never saw such a big one. The stick of wood for this fireplace was twelve

foot long. There was hooks, two big hooks up in the chimney. I've seen em hang lambs' and calves' hind quarters up in that chimney to smoke."9

Note:

References to research conducted by the *Colonial Williamsburg Foundation* continuously surfaced during our investigation of colonial kitchens. Therefore, for further investigations on the Mary Washington House kitchen, members of the research group encourage researchers to utilize the online resources published by the *CWF*. Some of these can are located at the URL listed below.

http://www.colonialwilliamsburg.org/foundation/journal/summer07/kitchens.cfm#top

Appendix 2

Ancillary Data Sheets

Sample Data Sheet	Location: Mary Washington House Kitchen
Sample Number: 1	Address: 1200 Charles Street
Sampler: Chris Young	Fredericksburg Va., 22401
Date: 9/27/10	38°18′17.61″N
Material: Wood	77°27′47.86"W
Sample Size: 0.14g	
Sample Provenience	
From ground level: 12"	Sketch: First Floor(underneath stairs)
From East wall: 0"	
From North wall: 3"	
Interior / exterior	
Reason for removal:	
Wood identification	Manuscript American S
Additional Notes:	Not to scale
Photo Number: MWHK 1, MWHK 1b Additional data sheet: N/A	University of Mary Washington Hisp 461 Research
	map tot research

Sample Data Sheet	Location: Mary Washington House Kitchen
Sample Number: 2	Address: 1200 Charles Street
Sampler: Chris Young	Fredericksburg Va., 22401
Date: 9/27/10	38°18′17.61″N
Material: Wood	77°27'47.86"W
Sample Size: 0.33g	
Sample Provenience	
From ground level: 18"	Sketch: First Floor(underneath stairs)
From East wall:11"	,
From North wall: 40.5"	
Interior / exterior	
Reason for removal:	
Wood identification	promonent amounts
Additional Notes: Wood was from riser on the stair	Not to scale
Photo Number: MWHK 2, MWHK 2b,	Not to scale
MWHK 2c	University of Mary Washington
Additional data sheet: N/A	Mary Washington Hisp 461 Research

Sample Data Sheet	Location: Mary Washington House Kitchen
Sample Number: 3	Address: 1200 Charles Street
Sampler: Erika deBroekert	Fredericksburg Va., 22401
Date: 9/27/10	38°18′17.61″N
Material: Brick	77°27'47.86"W
Sample Size: 45.98g	
Sample Provenience	
From ground level: 18"	Sketch: First Floor(underneath stairs)
From East wall:10"	Silver in the first from (under ficulti states)
From wall:	
Interior / exterior	
Reason for removal:	
Brick saturation testing and visual analysis	pannonum (mannum)
and comparison	
Additional Notes:	
	Not to scale
Photo Number: MWHK 3, MWHK 3b, Additional data sheet: N/A	UNIVERSITY OF MARY WASHINGTON
	Hisp 461 Research

Sample Data Sheet	Location: Mary Washington House Kitchen
Sample Number: 4	Address: 1200 Charles Street
Sampler: Erika deBroekert	Fredericksburg Va., 22401
Date: 9/27/10	38°18′17.61″N
Material: Mortar	77°27′47.86″W
Sample Size: 9.49g	
Sample Provenience	I.
From ground level: 16.5"	Sketch: First Floor(underneath stairs)
From East wall:16.5"	sketch. Thist i loof (underneach stairs)
From wall:	
Interior / exterior	
Reason for removal:	
Mortar digestion lab to determine ratio	Walnut Control of the
percentages of binder, aggregate, and clay.	
Also for visual examination.	
Additional Notes:	
DI A NI I MANUNA MANUNA	Not to scale
Photo Number: MWHK 4, MWHK 4b,	University of
Additional data sheet: N/A	University of Mary Washington High 461 Pagaarch
	Hisp 461 Research

Sample Number: 5 Sampler: Erika deBroekert Date: 9/27/10 Material: Wood Sample Size: 0.40g Sample Provenience From ground level: 0.5" From South wall: 3.25" Interior / exterior Reason for removal: Wood identification to determine procurement of wood and compare to other timber members Additional Notes:	Sample Data Sheet	Location: Mary Washington House Kitchen
Sampler: Erika deBroekert Date: 9/27/10 Material: Wood Sample Size: 0.40g Sample Provenience From ground level: 0.5" From West wall: 33.5" From South wall: 3.25" Interior / exterior Reason for removal: Wood identification to determine procurement of wood and compare to other timber members	Sample Number: 5	Address: 1200 Charles Street
Date: 9/27/10 Material: Wood Sample Size: 0.40g Sample Provenience From ground level: 0.5" From West wall: 33.5" From South wall: 3.25" Interior / exterior Reason for removal: Wood identification to determine procurement of wood and compare to other timber members	<u> </u>	9
Material: Wood Sample Size: 0.40g Sample Provenience From ground level: 0.5" From West wall:33.5" From South wall: 3.25" Interior / exterior Reason for removal: Wood identification to determine procurement of wood and compare to other timber members		
From ground level: 0.5" From West wall:33.5" From South wall: 3.25" Interior / exterior Reason for removal: Wood identification to determine procurement of wood and compare to other timber members		//°2/4/.86 W
From ground level: 0.5" From West wall:33.5" From South wall: 3.25" Interior / exterior Reason for removal: Wood identification to determine procurement of wood and compare to other timber members	Sample Size: 0.40g	
From West wall: 33.5" From South wall: 3.25" Interior / exterior Reason for removal: Wood identification to determine procurement of wood and compare to other timber members		
From South wall: 3.25" Interior / exterior Reason for removal: Wood identification to determine procurement of wood and compare to other timber members	From ground level: 0.5"	Sketch: First Floor
Interior / exterior Reason for removal: Wood identification to determine procurement of wood and compare to other timber members	From West wall:33.5"	
Reason for removal: Wood identification to determine procurement of wood and compare to other timber members	From South wall: 3.25"	
Wood identification to determine procurement of wood and compare to other timber members	Interior / exterior	
procurement of wood and compare to other timber members	Reason for removal:	
timber members	Wood identification to determine	1 minutes
	procurement of wood and compare to other	
Additional Notes:		" /
Additional Notes:		
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	Additional Notes:	
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		THE LOP
Not to again		Not to goals
Photo Number: MWHK 5, MWHK 5b,	Photo Number: MWHK 5 MWHK 5h	Not to Scale
Additional data sheet: N/A University of Mary Washington	· · · · · · · · · · · · · · · · · · ·	University of
Hisp 461 Research	nautional acta sheet. 11/11	Hisp 461 Research

Appendix 3

Sample Photos











 1 Quinn, S. J. The History of the City of Fredericksburg Virginia. Hermitage Press Incorporated Richmond Va. 1906

- ³ Virginia Department of Historic Resources: Reconnaissance Level Survey. William and Mary Center for Archaeological Research on behalf of the DHR and the City of Fredericksburg. 10 Oct. 2006.
- ⁴ National Register Bulletin. Section II: How to Apply the National Register Criteria for Evaluation. National Park Service. December 2010. http://www.nps.gov/nr/publications/bulletins/nrb15/nrb15 2.htm
- ⁵ Braxton, Gail. "Mary Washington House kitchen." Email to Gary Stanton. 13 Aug. 2008.
- ⁶ Muller, Paul S. "Re: Structural Survey of the Kitchen." Email to Ms. Braxton, Director of the Mary Washington House Branch APVA. 23 Jan. 2002.
- ⁷ Armel, Michael. "RE: Plaster, Prime, and Paint Kitchen (Estimate)." Email to the Mary Washington House. 7 Oct. 2004.
- ⁸Herman, Bernard L. and Gabrielle M. Lanier. Everyday Architecture of the Mid-Atlantic: Looking at Buildings and Landscapes. Johns Hopkins University Press. Baltimore, Maryland: 1997. 12-52.
- ⁹ Vlach, John M. Back of the Big House: The Architecture of Plantation Slavery. *The University of North Carolina Press.* Chapel Hill, NC:1983. 43,44
- ¹⁰Camille Wells, "The Planter's Prospect: Houses, Outbuildings, and Rural Landscapes in Eighteenth-Century Virginia." *Winterthur Portfolio*, XXVIII (1993), 9
- ¹¹ Camille Wells, "The Planter's Prospect: Houses, Outbuildings, and Rural Landscapes in Eighteenth- Century Virginia." *Winterthur Portfolio*, XXVIII (1993), 21
- ¹² Carlisle, N. Nasadinov, Melinda T. "America's Kitchen's." Tilbury House Pub, 2008.
- 13 Wyrick, Constance H. Site Precis. Robert E. Lee Memorial Association, Incorporated. October, 1975. 14-15

² Stern, Philips. Written Historical and Descriptive Data on the Mary Washington House, Fredericksburg Va. *Report of the Historic American Buildings Survey*. No. 11-2

 14 Harbury, Katherine. "Colonial Virginia's Cooking Dynasty." E University of South Carolina Press 2004

 $^{\rm 15}$ Carlisle, N. Nasadinov, Melinda T. "America's Kitchen's." Tilbury House Pub, 2008. 50

 16 Carlisle, N. Nasadinov, Melinda T. "America's Kitchen's." Tilbury House Pub, 2008. 51