Archaeological Investigation of the Elizabeth Hemings Site (44AB438)

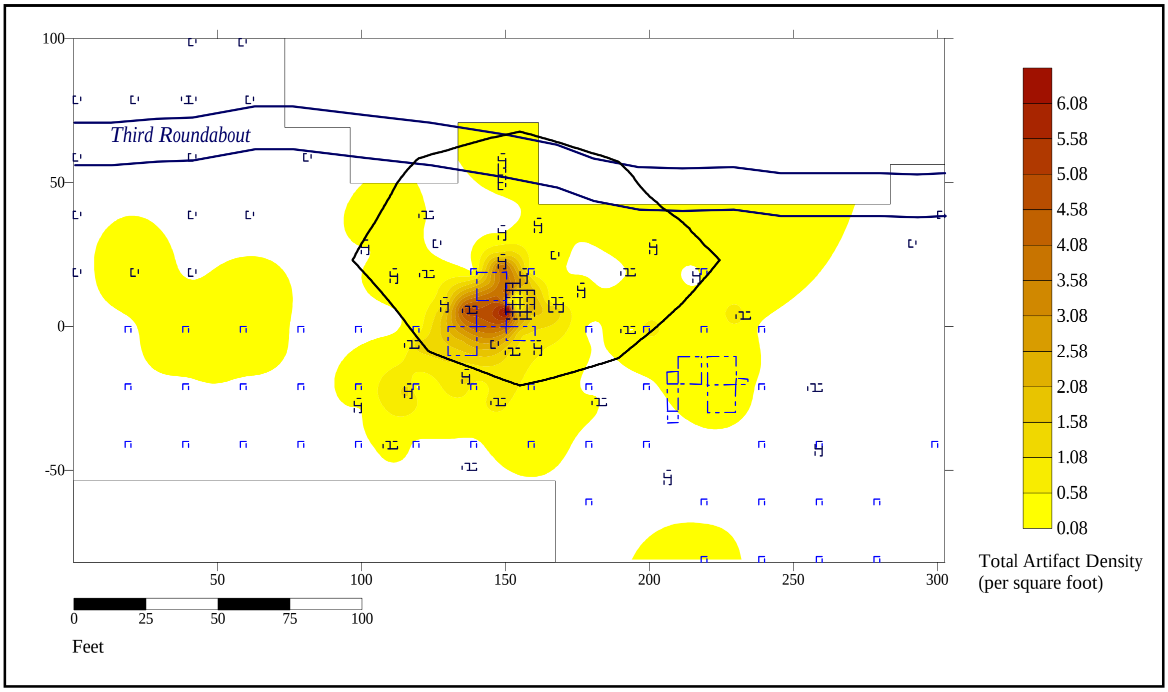

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Table of Contents

List of Figures

List of Tables

1. Introduction

The Monticello of traditional historical memory is the neoclassical mansion built and rebuilt by Thomas Jefferson over a period that began in 1769 and ended with Jefferson's death in 1826. However, the real historical Monticello was a 5000-acre plantation that was home not only to Jefferson and his family, but also to scores of free workmen and hundreds of enslaved African Americans. Slavery made possible the Monticello of traditional memory. It was the economic foundation of the society that produced Thomas Jefferson. The connections among the members of these groups, characterized by a complex mix of cooperation and conflict, were fundamental to the lives of all. Getting the history of Monticello right requires documenting and explaining the social and economic dynamics exhibited by this complex community over time.

Over the past two decades, archaeology has played an important role in calling attention to the existence of the real historical Monticello (Heath 1999, Kelso 1997, Sanford 1995). By uncovering the buried physical traces of long-vanished living and working spaces of enslaved and free workers, archaeologists have helped raise the real historical Monticello above the threshold of historical visibility. This report is a contribution to that ongoing effort. It describes the recent archaeological investigation of a small domestic site at Monticello that was once the home of a central member of the Monticello community, Elizabeth Hemings, during the decade or so that preceded her death in 1807.

Known to Jefferson and his family as Betty, Hemings was the matriarch of an extended slave family whose members filled the ranks of domestic servants and skilled artisans at Monticello. By the time of Jefferson's death in

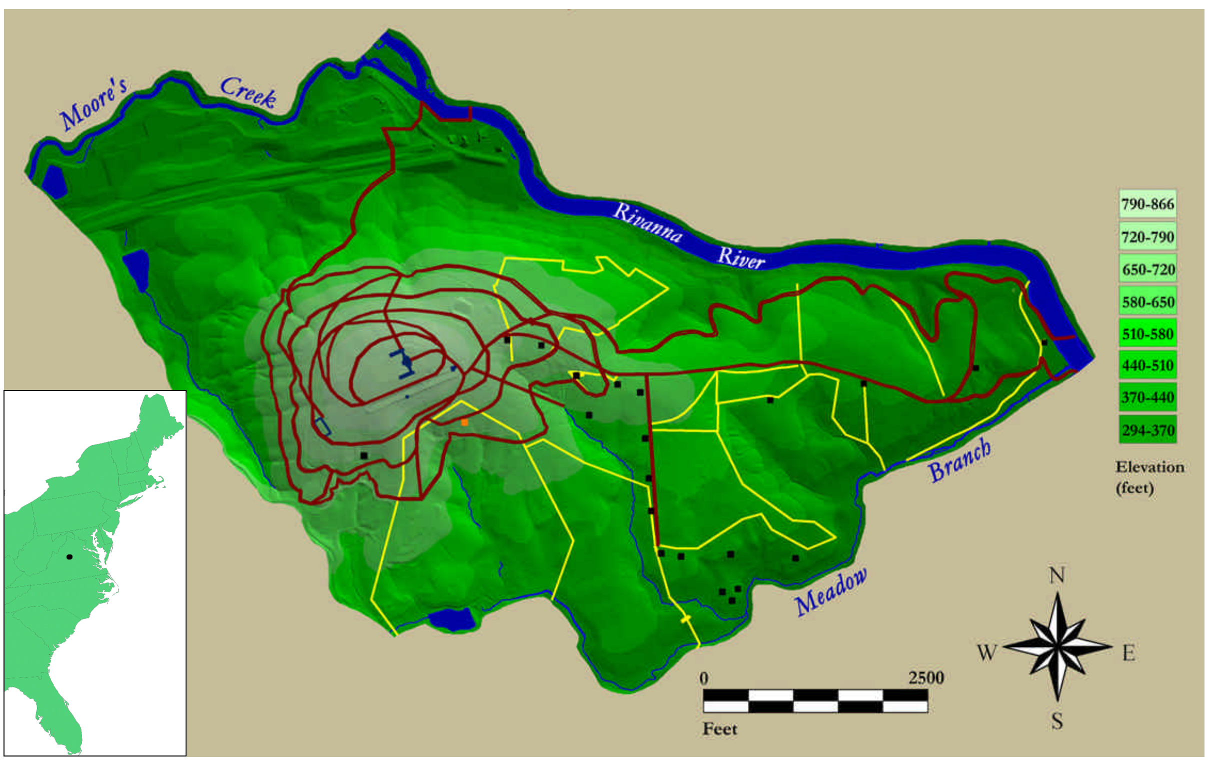

Figure 11. *Monticello Mountain, the core of Thomas Jefferson's Albemarle County, Virginia plantation, depicting Jefferson period roads (red), field boundaries (yellow), archaeological sites (black) and the Elizabeth Hemings site (orange). Monticello Mountain is bounded on the north and east by the Rivanna River, the Meadow Branch to the south, Moore's Creek to the northwest and Mount Alto (Carter's Mountain) on the west.*

1826, one-third of the 130 African Americans who were listed as part of his Albemarle County estate belonged to this one family. Recent historical, genetic, and statistical research (Gordon-Reed 1997, Foster et al. 1998, Neiman 2000), makes it clear that six of her grandchildren were Thomas Jefferson's children with Sally Hemings, Elizabeth Hemings's youngest daughter.

This is a remarkable record of personal and familial achievement within the bonds of slavery. Both documents and archaeological surveys offer tantalizing clues about the uniqueness of Hemings's experience at Monticello, but appreciating that uniqueness requires fitting the historical facts and archaeological artifacts into a larger historical context. This is an ongoing process, the first steps of which are reported here. We aim to explore the physical outcomes, in terms of site location and structure, architecture, and material possessions, of the complex interactions between Betty Hemings and the rest of the Monticello community, including Thomas Jefferson.

Geographical Setting

Our exploration of the Hemings Site begins with its location, on the southern slopes of Monticello Mountain, a short distance from Jefferson's mansion, which was situated on the mountain top (**Figure 1**). The site's location can be understood at several spatial and historical scales. The largest of them relates to the settlement of the region by Europeans and Africans, beginning in the early 18th century. The smallest of them relates to the internal spatial structure of Monticello Plantation, as it emerged in the late 18th century. We describe these below.

Monticello Mountain is part of the Southwest Mountains, a chain of hills that runs along the western edge of the Virginia Piedmont. Europeans, relying on the labor of enslaved Africans to produce tobacco for trans-Atlantic markets, began to move out of the Coastal Plain and into the Piedmont in the 1720's. The land comprising Monticello Mountain was patented soon thereafter by Thomas Jefferson's father, Peter, as part of a larger tract that included land on both the north and south banks of the Rivanna River. Two features made the tract especially attractive. The first was the Rivanna, which offered transportation for tobacco crops to the James River, the Chesapeake Bay, and ultimately Atlantic markets. It also provided a mill seat, of which Peter Jefferson would eventually take advantage. The second attraction was high-quality soil. Jefferson's tract was entirely underlain by the fertile Davidson soil association (USDA 1981). Davidson clay loams are the product of deep weathering of the Catoctin formation, a mass of metamorphosed basalt (greenstone), with inter-stratified sandstone beds, that comprises the Southwest Mountains (Sherwood 1981).

By 1740, Peter Jefferson was living at Shadwell, his home farm on the northern bank of the Rivanna. Recent fieldwork, conducted as part of the ongoing Monticello Plantation Archaeological Survey, has revealed that the Monticello tract, located on the southern bank, was first settled c. 1750 by enslaved African-Americans working on an outlying quarter farm associated with Shadwell. This early Monticello quarter was located on the eastern slope of the mountain.

By 1770 Thomas Jefferson had begun to develop Monticello Plantation on his father's tract. Monticello Mountain became the site of Jefferson's house and the Monticello home farm quarter. Jefferson would eventually develop three outlying quarter farms, as part of Monticello Plantation. The Tufton Farm also lay south of the Rivanna, while Lego and Shadwell shared the northern bank. The Meadow Branch tributary separated Monticello from Tufton Farm.

Jefferson began construction of his mansion at the top of Monticello mountain in 1769. The locational choice built on gentry practice in the Coastal Plain. There, by the early 18th century, wealthy slave owners situated their mansions so they commanded large vistas across wide flood planes. Piedmont geology denied a prospect across a broad river valley. But Jefferson gained an even larger vantage by building on Monticello Mountain. Given 18th-century transportation technology, Jefferson indirectly paid enormous costs for this decision for the rest of his life, in the form of the increased effort required to get everything from building supplies to drinking water to his house. Those

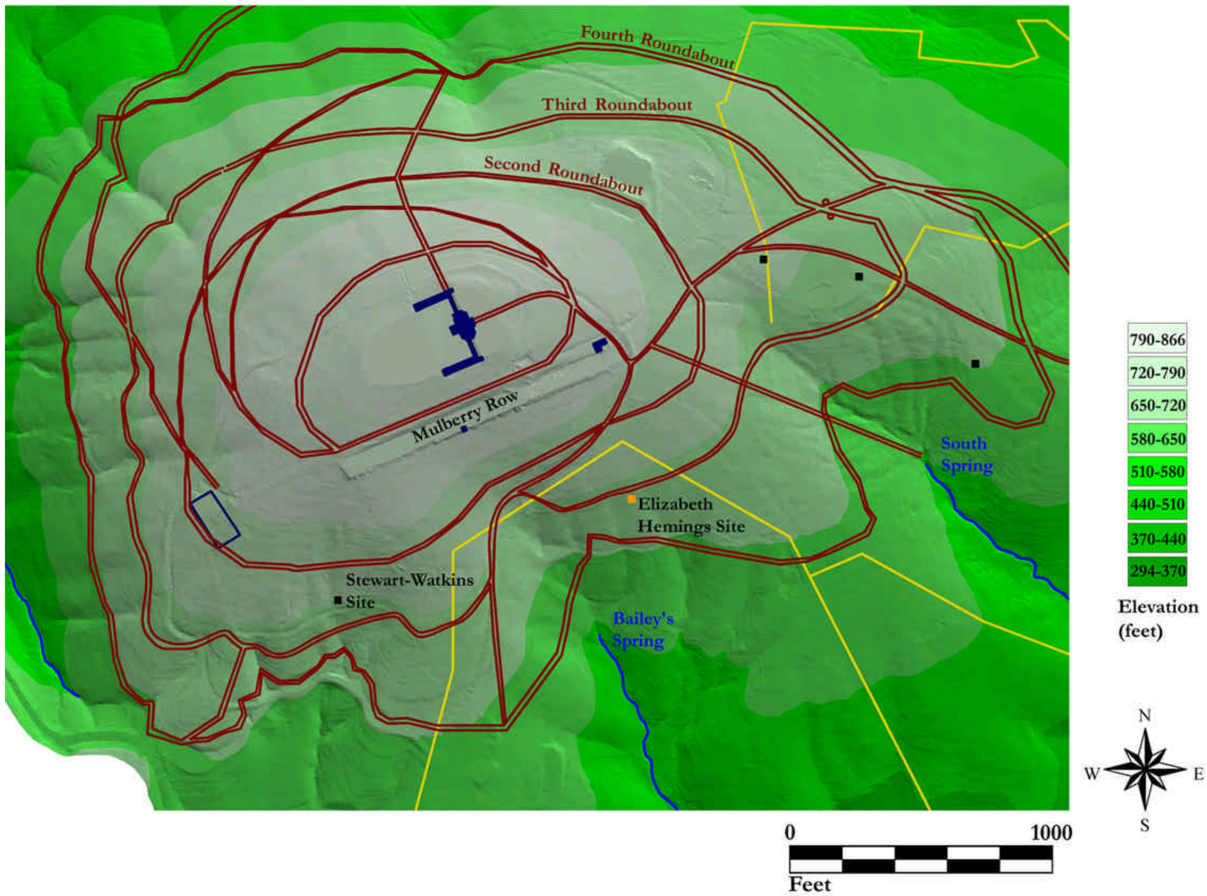

Figure 2. *Location map for he Elizabeth Hemings Site.*

costs were directly paid by his slaves, as required by their forced labor for Jefferson and by their efforts to maintain themselves and their families.

Whatever its ultimate causes, given the costly location of the mansion on the mountain top, the layout of the rest of the Monticello home farm appears to have been engineered with efficiency in mind. Two artificial features of the resulting landscape are important to an understanding the location of the Hemings Site on the mountain: Mulberry Row and the home farm quarter. Jefferson laid out Mulberry Row, a 1000-foot long, straight street of plantation outbuildings, conveniently adjacent to the mansion. To maximize its length, Mulberry Row was oriented parallel to the major axis of the mountain top's contours. The structures along it, in which enslaved domestics and artisans worked and lived, enjoyed a southern exposure.

The layout of Jefferson's agricultural operations on Monticello Mountain also followed topographic constraints. Monticello Mountain rises over 500 feet above the Rivanna. The north and west aspects of the mountain are steeply sloped, while the east and south faces present a gentler grade, descending for one and a quarter miles before reaching the Rivanna River and its tributary, the Meadow Branch. Most of the agricultural fields that comprised the Monticello home farm were located on these gentle eastern and southern slopes, along with the houses of enslaved farm workers and an overseer. The small quarter farm that Peter Jefferson had operated on the mountain around 1750 was similarly situated (**Figure 1**.)

The southern and eastern slopes of Monticello Mountain are dissected by intermittently flowing springs that drain into the Meadow Branch. Two springs are relevant to the location of the Hemings Site (**Figure 2**.). The South Spring lay south of the homes of the enslaved laborers who worked the Monticello home farm quarter. Its name was likely derived from this spatial relationship. When there was water in it, the South Spring was the closest water source for these individuals. Bailey's Spring, named for the Irish gardener whose house was located at the head of its drainage (see below), lay southwest of the South Spring (Betts 1944:630). Because the watershed for Bailey's Spring was considerably smaller than the watershed for the South Spring, the latter was probably a more reliable water source.

The location of Hemings's house needs to be understood in the spatial context of Mulberry Row, the home farm quarter, and the two water sources. The house was situated about 350 feet south of Mulberry Row and a roughly equal distance from the head of Bailey's Spring, suggesting that both locations were important to Hemings. As we shall see, the proximity to Mulberry Row is understandable, given that many of Hemings's children lived and worked there. Less clear is the attraction of Bailey's Spring. Hemings's house might have been situated the same distance from Mulberry Row and nearly as close to the head of the South Spring, a more reliable water source. But it was not. Why?

Several hypotheses might explain the choice, among them that Hemings was supplied water by family members working on Mulberry Row, or that use of the South Spring was monopolized by farm laborers living to the north of it. The latter might imply that Hemings's house was sited with spatial separation from enslaved farm workers in mind. Here we encounter more

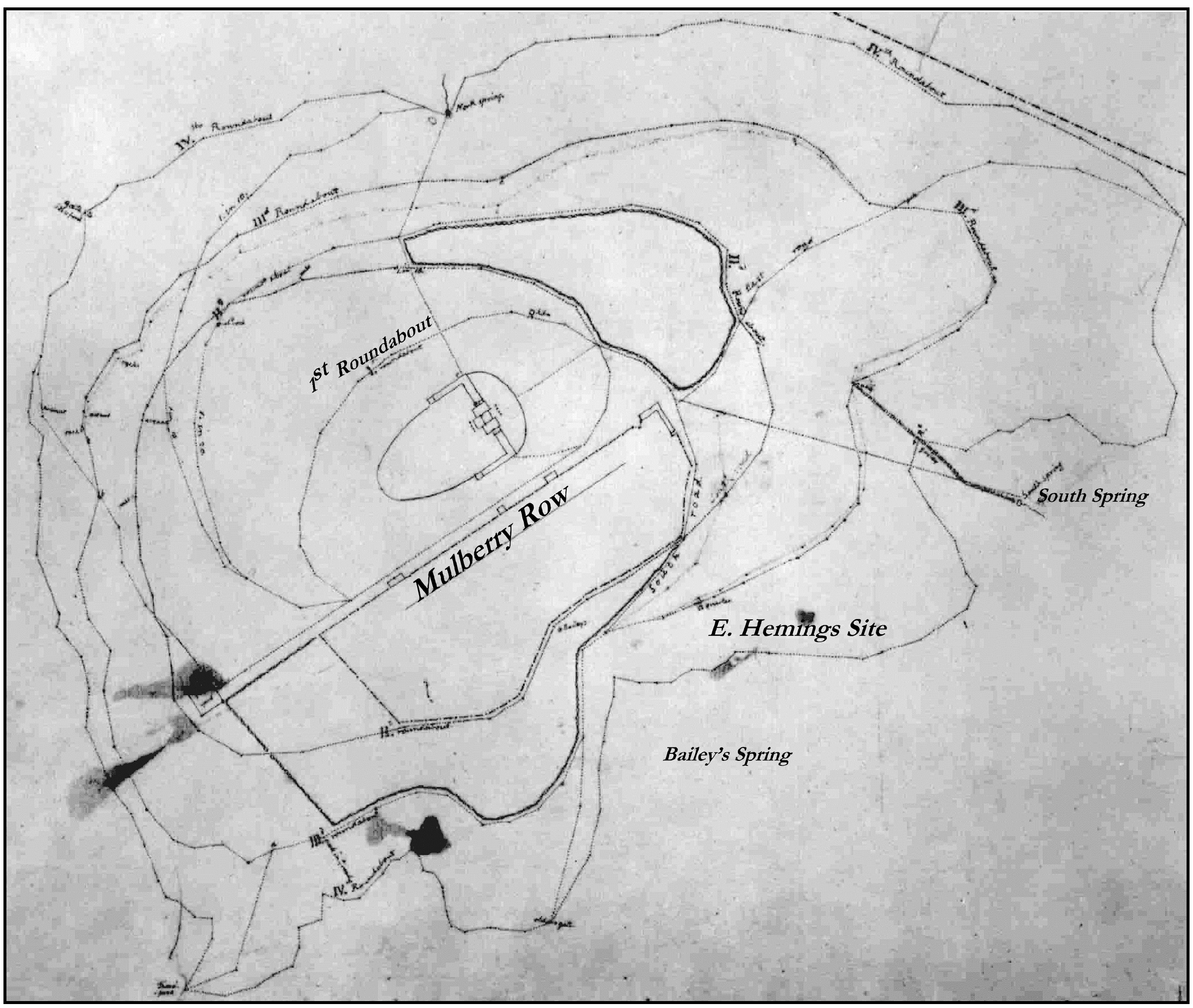

Figure 3. *Thomas Jefferson's plat of the mansion proper and roads including the four roundabouts (N-225).*

than a little ambiguity, due to our incomplete knowledge of where enslaved field hands lived. We know the locations of a few farm laborers's houses north of the South Spring from Jefferson's documents. But most of our knowledge on this topic comes from the Plantation Archaeological Survey, which so far has focused exclusively on the area north of the South Spring. Jefferson's documents show no slave housing south of the South Spring, except of course the Hemings Site itself. But it is not clear that absence of documentary evidence is evidence of actual absence of slave settlement south of the South Spring. Archaeological evidence from systematic survey of this area is required to resolve the issue.

In the mean time, additional light on the location of Hemings's house is forthcoming from a finer-grained consideration of the mountaintop landscape. Of particular importance here is the system of the four "roundabout" roads, laid out by Jefferson, that circled the mountain at roughly constant elevation (**Figure 3**)[1]. The roundabouts were linked by additional roads, referred to by Jefferson as "1 in 10s" and "1 in 20s", depending on their slopes. The roundabout system had a practical role as an internal transportation system for the mountaintop. But it also had an decorative component. It is clear from Jefferson's plans, that he intended the roundabouts to be integrated into a larger ornamental scheme, borrowed from European sources and dubbed the *ferme ornée* or ornamental farm (Williamson 1995). The idea was to use both crops and animals as ornamental elements in a landscape design whose primary motivation lay in aesthetic effects and costly display, not utility. It seems likely that the roundabouts were the only parts of the scheme that were actually constructed.

The four roundabouts were at least partially constructed in succession over the course of several decades. The First Roundabout enclosed the main house at the very summit of the mountain and was finished by 1772. Generally oval in shape, one straight segment formed Mulberry Row. The Second Roundabout encircled the kitchen garden and orchards planted on the slopes just below the mansion; completion of this road came roughly a decade after the first, in 1782. The Third Roundabout was finished in 1795. Construction of the Fourth Roundabout began in the previous year.

The Third and Fourth Roundabouts marked a transition zone between the ornamental and agricultural precincts of the Monticello Mountain landscape. Hemings's house was located in this zone. It stood 30 feet south of the Third Roundabout roadbed. The house's location is documented on two plats, drawn by Jefferson himself. The first, dated c. 1806, labels the house "B.Hem's". The second, drawn c. 1809, after Hemings's death in 1807, identified it only as a "Quarter" (**Figure 4)**.

The same Jefferson plats reveal that two other dwellings were located on the Roundabout roads, not far from Hemings's house. Both were the houses of free white workmen. Bailey's was the closest dwelling. It stood just south of the Second Roundabout, on the south-facing slope below the fenced orchard (see **Figure 4**). Beginning in 1794, Scottish gardener Robert Bailey and his family occupied this house. By 1802 Bailey was working in Washington, D.C.. Thus it is likely he was living at the site when Hemings moved in next door. The structure appears on Jefferson's c. 1809 map of the mountaintop. Possibly it housed one or more of the craftsmen Jefferson periodically hired for the ongoing construction of his mansion. Proximity suggests the residents of Bailey's shared the

[1] There are three numbering systems in place for cataloguing Jefferson drawings. The first was introduced by Fiske Kimball, where all entries are sequentially numbered after a "K" designator (Kimball 1968). After the discovery or attribution of additional Jefferson documents, Frederick Nichols reorganized the papers and sequentially numbered them after an "'N" designator (Nichols 1978). Recently, the Massachusetts Historical Society has begun to re-catalog the materials for a third time. In this report, we use the Nichol's numbering system. For a complete listing and concordance see http://jefferson.village.virginia.edu/wilson/catalogs/catalog.html

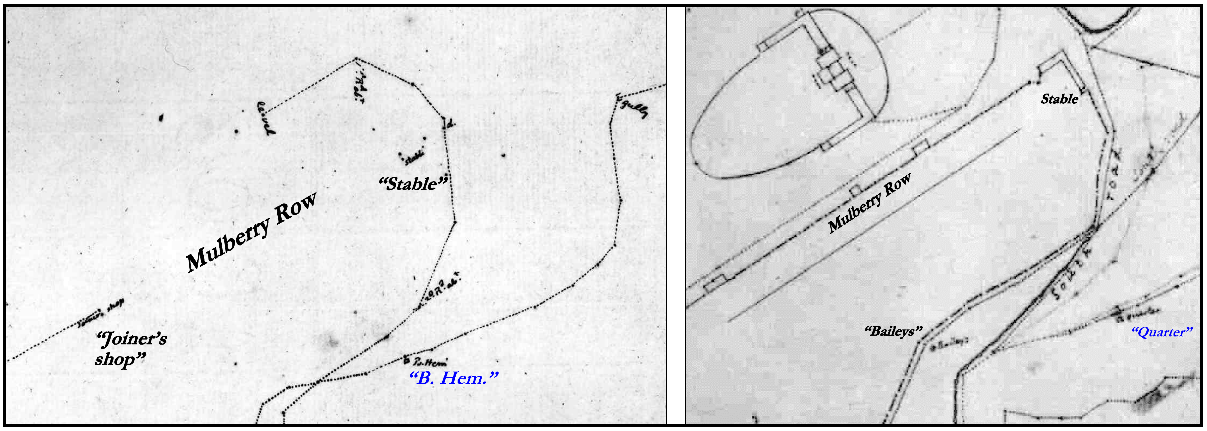

Figure 4. *Details of Jefferson plats (left, N-215, c.1806 and right, N-225, c.1809) showing Betty Hemings site location.*

eponymous spring, when water was available in it, with Hemings.

William Stewart, a white blacksmith from Philadelphia, occupied a house on the Third Roundabout, west of Hemings's dwelling (see **Figure 2**). He lived there with his family from 1801-1807, a period coinciding with Elizabeth's time at the Hemings site. The Stewart house stood unoccupied for a brief time until another white artisan, carpenter Elisha Watkins, resided there briefly with his own family in 1809-1810. After that time, like Elizabeth Hemings' house, this structure seems not to have been further occupied and was torn down (Heath 1991:3). While Stewart's house lay in the Meadow Branch watershed, it was about the same distance from the Bailey's and Meadow Branch Spring heads.

The location of the Hemings Site in the larger Monticello landscape appears to have been somewhat unusual. If current incomplete evidence proves accurate, other enslaved African-Americans lived along Mulberry Row or north of the South Spring. The fact that Hemings's house was situated in a different precinct within the roundabouts, whose other denizens were free whites adds to the apparent anomaly. Some of the ingredients for an explanation can be found in the documentary record.

2. The Documentary Record

Elizabeth Hemings

Elizabeth Hemings came to Monticello as part of Thomas Jefferson's inheritance from his father-in-law, John Wayles. According to her grandson Madison, Hemings had been born around 1735, the daughter of a "full-blooded African woman" and a sea captain named Hemings (Gordon-Reed 1997:245). Hemings was born into slavery, and was the property of Francis Eppes IV of Bermuda Hundred in Chesterfield County by 1746 when she was transferred to the household of John Wayles upon his marriage to Martha Eppes, Martha Jefferson's mother (Stanton, in press).

During her childhood and early adulthood in the Eppes-Wayles households, Hemings had become a valued enslaved house servant. When John Wayles made out his will in 1760, "Betty Hemings and Jenny the cook" were the only two slaves singled out by name in the division of his estate (John Wayles's will, 15 April 1760 in *Tyler's Quarterly Magazine* 1924-1925).

When Thomas Jefferson inherited a portion of his father-in-law's land and slaves, Hemings was 38 years old and had ten children, six of whom were apparently fathered by John Wayles (Gordon-Reed 1997:245); the paternity of the others is unknown. John Wayles's daughter Martha married Thomas Jefferson in 1772. When Wayles died a year later, Thomas and Martha Jefferson inherited a portion of his lands and slaves, including Hemings.

At the settlement of John Wayles' estate in January 1774, Jefferson made a list of the slaves he had inherited and their whereabouts. Hemings had been living at one of Wayles' outlying quarter farms in Amelia County, "Guinea;" and Jefferson transferred her and her youngest children to another quarter farm, "Elk Hill," in Goochland County (Bear and Stanton 1997:329). Hemings's grown children were sent immediately to Monticello. By February of 1775, however, Jefferson brought Hemings and her remaining children to Monticello. By design or not, this move united the Hemings family at Jefferson's home plantation (Betts 1987).

When she arrived at Monticello in 1775, Hemings was roughly 40 years old. She gave birth to two more children in the next two years, bringing the total of her known children to twelve. White housewright Joseph Neilson might have fathered one of these last two children (Madison Hemings recollections in Gordon-Reed 1997:245). Her exact whereabouts at Monticello during the 1770s and 1780s was not recorded, but as an enslaved domestic, Hemings in all probability lived on Mulberry Row. Jefferson depicted several quarters for enslaved workers on a c.1776 map of Mulberry Row. They included a building with a central chimney termed the "Negro quarter" as well as a "workmen's house." It is likely that the joinery and blacksmith shops also provided housing for slaves. In the mid-1770s Jefferson sketched plans to build neoclassical dwellings on Mulberry Row that would complement his mansion; in so doing he designated one for "Betty Hemings and family" (N-38, Nichols 1978). Although only one such structure was built (the workman's house now called the "Weaver's Cottage," which still stands on Mulberry Row), Jefferson's plans demonstrate that Hemings probably lived on Mulberry Row throughout the 1770s and 1780s (Kelso 1997).

Hemings was one of Jefferson's core staff of house servants. She was reportedly one of the servants in attendance when Martha Jefferson died in 1782 (Bear 1967:99). While Jefferson leased his slaves to neighboring plantations whenever they could be spared (a common practice), he specifically exempted Hemings. While serving in France in 1788, Jefferson sent home the instructions that "Great George, Ursula, Betty Hemings [are] not to be hired at all" (Boyd 1956:343). Later that year, planning a short visit home, he listed a requisite few servants for his stay: "Great George, Ursula, and Betty Hemings will be there, of course..." (Boyd 1958:362).

Documentary evidence suggests that by 1790, Hemings was less active in the work force. In that year Jefferson took office as secretary of state, leaving his daughters and son-in-law behind at Monticello. He instructed his foreman to make available to them the house servants, but limited Hemings's availability by noting "also...Betty Hemings, should her services be necessary" (Boyd 1971:29). Until that time, all references to Hemings place her at the Monticello home farm. Sometime between 1790 and 1794, however, she was sent to the outlying quarter farm, Tufton, which adjoined the home farm to the south. A 1794 plat of Tufton shows a structure labeled "B.Hem's," with the corresponding survey note, "Betty H's house" (N522-2, 6). With Jefferson absent, the aging woman may have been released from duties at the mansion. It was customary for the elderly to assist as nurses for slave children. Hemings might have done so at the nearby farm. Nevertheless, the causes behind the move to Tufton remain obscure.

Jefferson brought Hemings back to Monticello in 1795 when she was almost 60 years old. Jefferson's "Roll of the negroes and where to be settled for the year 1795" situated her at Monticello, and all subsequent records place her at the Monticello home farm (Betts 1966: 30, 50-53, 56-57).

It is probably not coincidental that Hemings' move from Tufton back to Monticello occurred in the same year that her daughter Sally bore her first child conceived at Monticello with Thomas Jefferson (Neiman 2000). This timing suggests that Hemings' reappearance at Monticello was designed to facilitate caring for her grandchild Harriet. It seems reasonable to assume that the log house where Hemings spent her final years was built at this time. As we have seen, the structure was located on the Third Roundabout, and documents indicate that workmen had completed construction of this road by 1795. The Hemings house would not have been a major undertaking; Jefferson recorded that similar dwellings took about one week to build (Betts 1987:pl.67). Hemings almost certainly occupied the structure by 1802. Writing in that year from Washington, Jefferson instructed his daughter to "remove" any servants that had contracted the measles from the mountaintop (and away from his mansion), suggesting that "Squire's house would be a good place for the nail boys...and Betty Hemings' for Bet's or Sally's children" (Betts and Bear 1966:231) .

Like other slaves, Elizabeth raised both vegetables and poultry, for food and for eggs, and sold them to the Jefferson family. Jefferson paid "Betty Hemings for a pullet 7 ½ d. [cents]" in 1776, and again in 1783 "Pd. Betty Hemings for fowls" (Bear and Stanton 1997: 415, 533). After returning to Monticello from Tufton, she continued this enterprise. Anne Cary Randolph, one of Jefferson's granddaughters, noted in her account book for the years 1805 and 1806 several purchases of eggs, chickens, and once, three cabbages from "Betty Hemming [sic]."(Gawalt 1994:19-38). Hemings might also have cared for children too young to work during this time, including her own grandchildren. In Jefferson's 1801 listing of slaves to be leased to John Craven and a corresponding list of those to be "retained:" Hemings's name is found in the latter column (Betts 1966: 60). That listing was updated when Jefferson partially crossed through her name and noted, "d.07," - meaning that she died in 1807. She was 72 years old.

The Hemings Family

In his journals, Thomas Jefferson noted the working status of his slaves, whether house servant, tradesman, or farm hand (e.g.: Betts 1987:128). Hemings and her children appear in the skilled roles rather than the general category of farm laborers. Hemings was a house servant; her children and grandchildren also filled positions of responsibility and trust in the house and in the workshops of Mulberry Row (Bear and Stanton 1997; see also **Figure 5**).

Hemings's oldest daughter, Mary Hemings Bell, was a seamstress whose six children included Betsy, a house servant, and Joe Fossett, Jefferson's blacksmith. Another daughter, "Bett" or Betty Brown, was also a seamstress and likely the first Hemings to arrive at Monticello. Brown very likely accompanied Martha Jefferson to Monticello upon the Jefferson's' marriage in 1772 (Stanton in press: chapter "1774: People and Property"). Bett's children included gardener Wormley Hughes, butler Burwell Colbert, and house servants Edwin and Robert. Hemings's oldest son Martin Hemings was Jefferson's butler. Nance Hemings worked as a weaver, and her own daughter was a nurse for Jefferson's

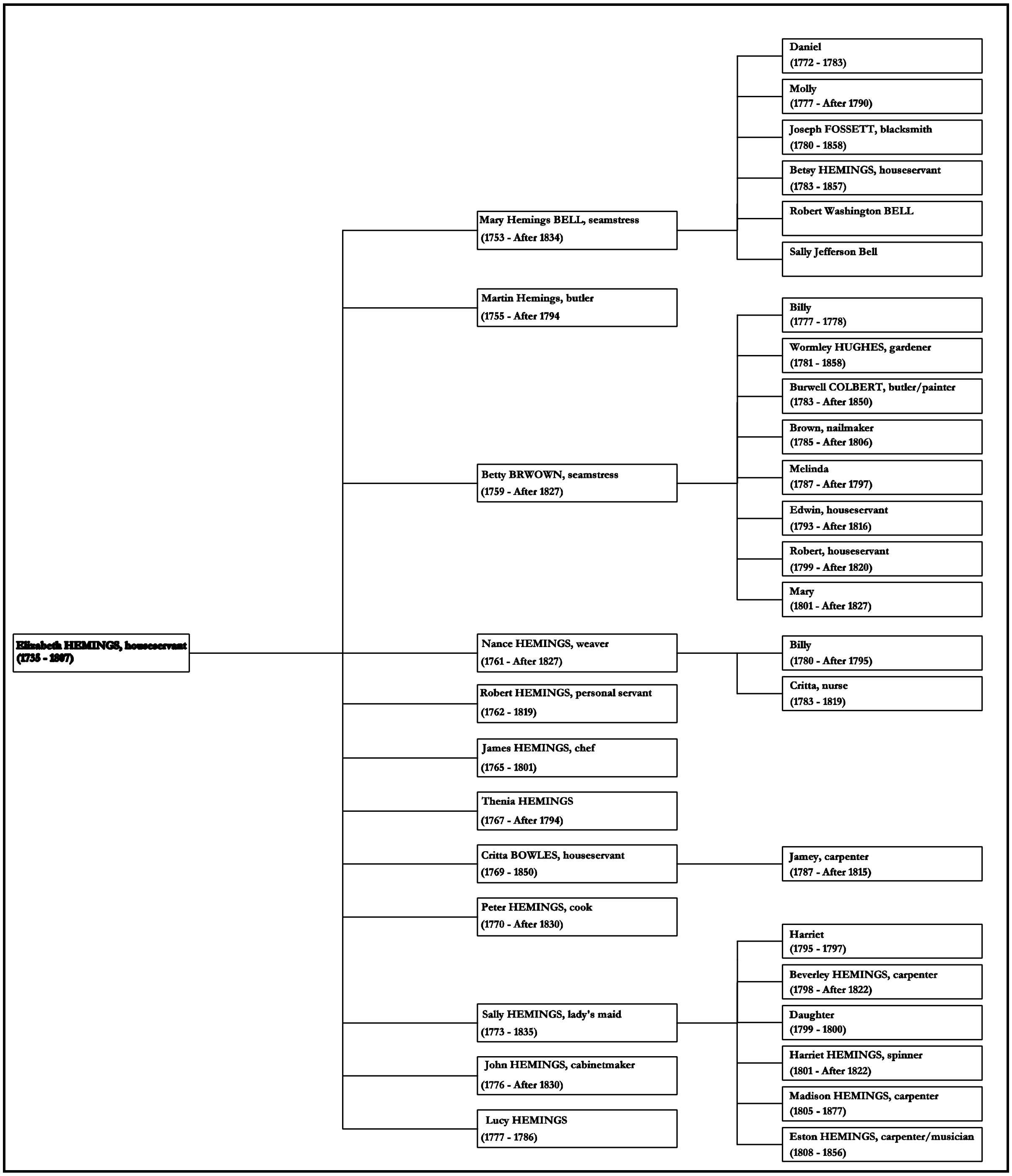

Figure 5. *Elizabeth Hemings' family tree (adapted from Stanton 1996).*

grandchildren; Robert Hemings served as Jefferson's personal manservant, and James Hemings accompanied Jefferson to Paris to learn French culinary arts. Daughter Critta Bowles was another house servant, and her son Jamey became a carpenter. Peter Hemings took over as Jefferson's cook after his brother James was granted his freedom; Peter later became a brewmaster (Bear and Stanton 1997:912). John Hemings was a skilled cabinetmaker who was responsible for much of the interior woodwork at Monticello. Hemings's youngest daughter, Sally Hemings, was a lady's maid (also described as chambermaid and seamstress (Stanton in press; Madison Hemings Memoirs in Gordon-Reed:248)) whose own children included carpenters Beverley, Madison, and Eston, and spinner Harriet, all the offspring of a long-term relationship with Thomas Jefferson (Madison Hemings' Memoirs in Gordon-Reed 1997; Neiman 2000; Stanton in press).

By the time Hemings moved to the Third Roundabout, six of her children were living at Monticello, probably along Mulberry Row and in the rooms under the South Terrace of the main house, which were just being completed (Stanton in press). Thus Hemings's house stood just down the mountain slope from the homes of her children and grandchildren. Madison Hemings remembered his grandmother during her last days: "My earliest recollections are of my grandmother Elizabeth Hemings. That was when I was about three years old. She was sick and on her death bed" (Madison Hemings Memoirs in Gordon-Reed 1997:247). Whether she lay in her own house or was at her daughter Sally's (Madison's mother), or another of her children's houses, one gathers that Elizabeth Hemings was surrounded by family members in death, as well as in life.

3. Fieldwork: Methods and Results

Initial Testing and the 1995 Field Season
The archaeological remains of Hemings's house were first identified by William Boyer of James Madison University, who conducted limited testing at the map-predicted site location in 1981, as part of Monticello's summer archaeological field school. Boyer quickly identified what he thought was a "cut and leveled area" approximately 20 feet downslope of the barbed wire fence that today separates woods and field (Boyer 1983:5). He and his crew observed a small concentration of brick bats and sandstone cobbles around the base of a tulip poplar tree (*Liriodendron tulipfera*) and noted two shallow depressions about 20 feet east of the tree. A single test pit (ER430) excavated between the depressions produced three wrought nails, two pieces of dark green bottle glass, and one fragment of burned bone (Boyer 1983:5). A hand-made brick was also recovered from the ground surface near the tulip tree. Boyer conducted no further testing in the interest of "maintaining the integrity of the site" (Boyer 1983:5).

Testing of the Hemings Site resumed in 1995 as part of the Monticello/University of Virginia Archaeological Field School under the direction of Susan Kern. Research goals for the 1995 field season included locating the remains of the house shown on the 1809 plat (see **Figure 4**), defining site boundaries, and verifying the location of the Third Roundabout. Kern established a site datum linked to a survey point established in 1977 by surveyor Kurt Glockner. The survey point, designated C-74, marked what Glockner believed was a point on the Third Roundabout, based on his analysis of bearings and distances recorded by Thomas Jefferson when he surveyed the course in 1809. Kern's site baseline extended 300 feet east from point C-74 and was oriented on a bearing of North 60E 40' 51" East to match the alignment of Mulberry Row. Grid points were established every twenty feet across a 100 feet (north-south) by 300 feet (east-west) area, centered on the baseline.

Kern initiated excavations using 2-by-2 foot excavation units, a size designed to expose a large enough area to facilitate the identification of features while providing for quick excavation and the efficient sampling of artifacts (Kern 1996). Test units were excavated stratigraphically and sediment was sifted through quarter-inch steel mesh to ensure uniform recovery of artifacts. Following the archaeological recording system established in 1979 for the excavation of Mulberry Row, Kern assigned each unit a unique provenience number known as an Excavation Register Number (ER); the layers and features--i.e., contexts--found within each unit were given consecutive letter designations (i.e., ER1864-A, ER1864-B). A Stratigraphic Record form detailed for each unit the stratigraphic location, elevation, and artifact content of the contexts included in that unit. One profile of one test unit wall was drawn on the reverse side of the form. Finally, the location of each test unit was recorded on a base map of the site (**Figure 6**).

Kern's test units revealed the nature of the stratigraphic layers across the site (discussed below) and pinpointed areas of artifact concentration. Excavators dug forty-nine test units on 20-foot centers within the site area, recovering artifacts from thirteen of the units. Two units west of the brick/cobble concentration at the tulip poplar tree identified by Boyer in 1981 were then expanded. ER 1864 was increased to 10-by-10 feet and ER 1865 was expanded to 4-by-10 feet. The units revealed an artifact midden that continued northward, and two more 10-by 10-feet units (ERs 1900 and 1902) were subsequently opened to expose the remainder of the midden (Kern 1995a, 1995b, 1996).

During the 1995 field season, Kern noticed on the ground surface a concentration of greenstone cobbles some sixty-five feet southeast of the artifact midden. The cobble feature measured 12 feet (north-south) by 23 feet (east-west) with a noticeably straight, even northern edge. Three 10-by-10 feet test units (ERs 1897, 1898, and 1899) exposed the bulk of this stone concentration. Four additional test units of various dimensions were excavated to reveal the periphery of the feature (ER 1903 measured 4-by-

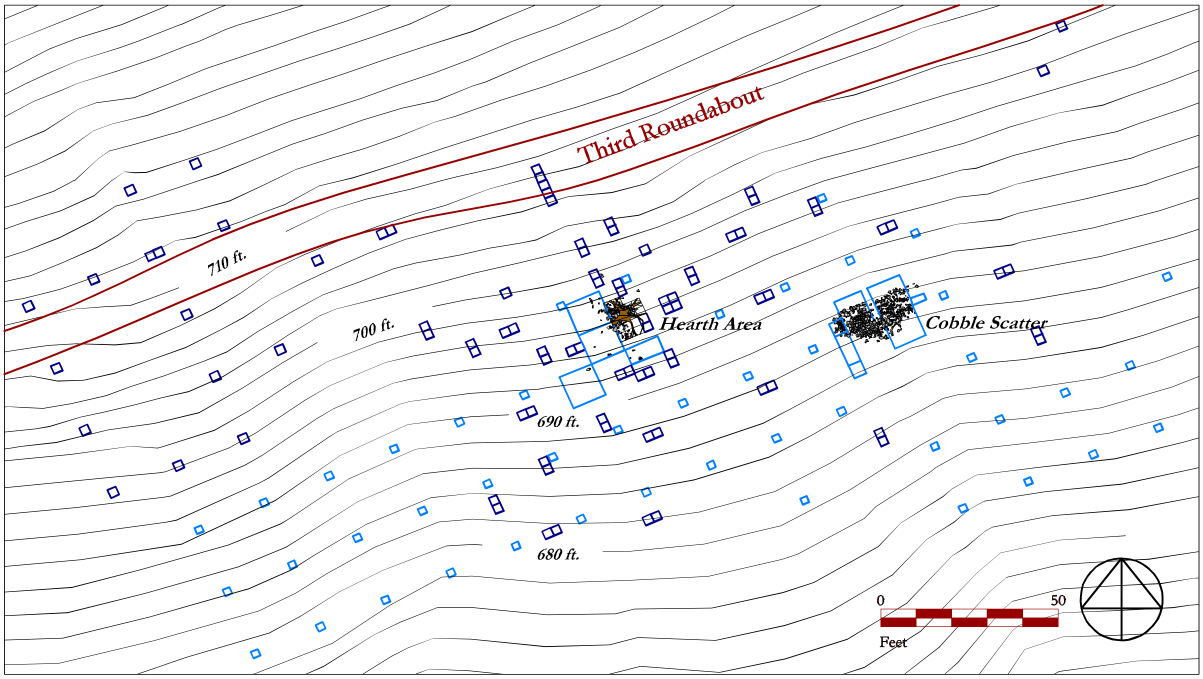

Figure 6. *Test Units excavated during the 1995 (light blue) and 1996 (dark blue) field seasons.*

4 feet; ER 1904, 2-by-4 feet; ER 1905, 4-by-4 feet; and ER 1906, 4-by-10 feet). Although few artifacts were found associated with the feature, excavators concluded that the concentration of greenstone cobbles represented structural remains (Kern 1996).

Artifacts recovered from the site area were domestic in nature with the refined earthenware ceramics dating between c. 1765 and 1820 (**Appendix 1**). Most of the assemblage came from the artifact midden west of the tulip poplar tree.

The 1996 Field Season

The 1996 field season was conducted under the direction of Fraser Neiman; again, the site was the focus of the Monticello/University of Virginia Archaeological Field School (**Figure 7**). Excavators returned to the two previously identified areas of cultural activity, the midden and the cobble feature. They investigated the northwest project area as well (grid coordinates N20-100, E0-60), where soil chemical mapping conducted in the fall of 1995 revealed elevated levels of potassium. Field methods were modified to maximize the data recovery potential of an ephemeral site such as this one, where there are relatively few artifacts and features and most apparent stratification is related to soil formation, not sediment deposition. In addition, grid points were re-surveyed using an Electronic Distance Measurer (EDM).

The 1996 field strategy featured a more extensive campaign of testing that involved expanding the investigated area in all directions (**Figure 6**). Test unit dimensions were standardized to 2.5-by-2.5 feet; large areas were exposed by excavating blocks of 2.5-by-2.5 feet test units. This unit size was selected to facilitate comparison with previously excavated areas that measured two, five and ten feet square.

Where double units were excavated, the orientation (north-south or east-west) of the two-unit block was variously selected. Although test units continued to be excavated stratigraphically, each layer was excavated in arbitrary 0.25-foot increments to maximize vertical control. Arbitrary levels within layers were numbered sequentially in the order they were encountered (i.e., ERs 1921-A1, 1921-A2, 1921-A3).

Changes in field documentation included an updated, comprehensive Context Record form. These forms were designed to prompt excavators for specific details concerning elevation,

Figure 7. *Field school students excavating during the 1996 season.*

stratigraphic relationships, excavation method, sediment description, artifact content, and interpretation. A separate Context Record sheet was filled out for each context within a test unit. Finally, excavators drew two adjacent profiles within each test unit. The results of the 1996 investigations follow.

Soils and Sediments

Soil profiles across the site area were relatively uniform. Sediments in Unit 1919 were typical of the site area, where an A horizon composed of very dusky red (2.5YR 2.5/4) silty clay loam that overlay a B horizon composed of dark red (2.5YR 4/6) clay (**Figure 8**). Within and around the relatively level house area, sediments included an A horizon that ranged from a very dusky red (2.5YR 2.5/3) to a dark red (2.5YR 4/6) clay loam, and the B horizon was a dark red (2.5YR 3/6) clay. The A horizon, or topsoil, was characterized by root disturbance and bioturbation, and ranged from 0.4-0.6 feet thick in the central and eastern portions of the site to 1.3 feet in the westernmost site area. Gravel to cobble-sized greenstone and sandstone clasts were common throughout the topsoil, generally comprising 3% of the soil matrix.

Despite the 25-percent slope of the general site area, the land surface remained relatively uneroded and intact. Sediments were surprisingly stable, with little or no evidence of erosion. The top 0.1-0.2 feet of the A horizon were relatively artifact free, a result of *in-situ* soil development since the abandonment of the site. Below this zone, artifacts were distributed throughout the A horizon, down to the top of the B horizon, presumably a result of bioturbation and cycles of drying and crack development in the clay-rich soil profile.

Architectural Features

Architectural features identified at the Hemings Site consisted of the scattered remains of a hearth and one small post hole. Boyer in 1981 described, but did not identify, the hearth when he noted a small concentration of bricks and stones at the base of the tulip poplar tree (Boyer 1983:5). Excavation of this concentration revealed hand-made bricks, including whole bricks and brick bats, and local sandstone and greenstone cobbles spread across an area measuring approximately 7.5-feet square. No sections of intact hearth remained: the tulip poplar had grown up through the center of the feature, dislodging any intact masonry that might have remained (**Figure 9**). The tree comprised the central 2.5-feet square of the feature area. The majority of the cobbles were sandstone, with lesser amounts of epidote greenstone and, occasionally, chlorite greenstone. Since greenstone weathers more readily than sandstone, it is less frequent on the ground surface (Sherwood 1981). The infrequency of greenstone among the hearth stones suggests that these stones were gathered from the surface rather than drawn from subsurface deposits.

The amount of stone and brick suggests that only the hearth and firebox were of masonry construction, and that the chimney stack was wood, chinked and lined with mud. A post hole (1865E) located 10 feet south of the hearth feature supports the hypothesis of a wood-framed chimney. The post hole measured 1.2 feet (north-south) by 0.8 feet (east-west), with depth of 0.4 - 0.6 feet north to south. There was no detectable post mold. A single wrought nail was recovered in the fill, just below the B-horizon surface (**Figure 10**). The size, depth, and location of the hole--downslope of and centered on the hearth--suggests that this feature secured a wooden pole that served as a chimney prop. Chimneys constructed with masonry hearths and wooden stacks were a standard component of domestic architecture for slaves as well as for middling- to

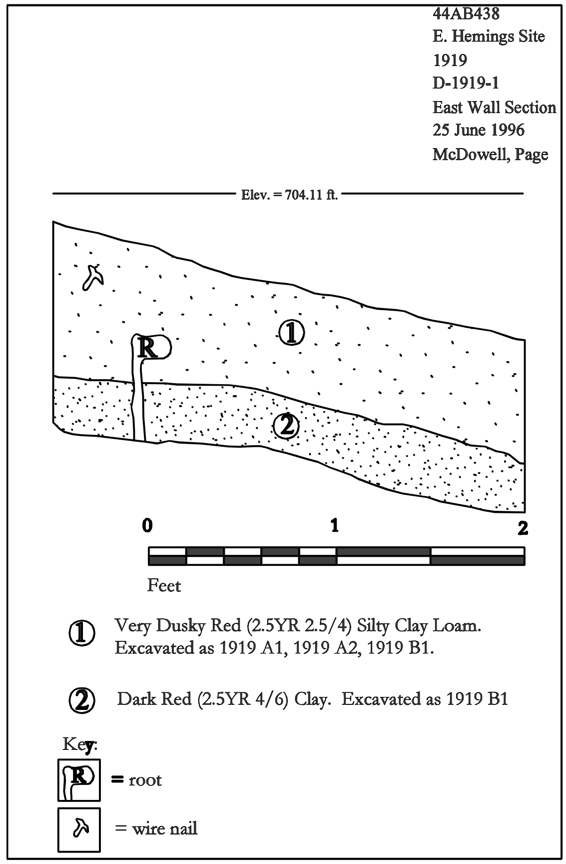

Figure 8. *Typical soil profile for the Elizabeth Hemings site.*

Figure 9. *Remains of the Elizabeth Hemings hearth.*

poor free whites. An important element of this building technique was the chimney prop, a pole that could be removed quickly in the event that the wooden stack caught fire, thus allowing the outward-leaning chimney to fall away from the house (**Figure 11**).

Sandstone cobbles found in the vicinity of the hearth might have served as foundation stones for the Hemings house, and to help level it on the 15-degree slope. The placement of several stones, to the east, west and north of the hearth, correspond with the 12-by-14 foot dimensions of Buildings *r*, *s*, and *t*, which were erected at the eastern end of Mulberry Row in 1793 (Gruber 1991). The spatial arrangement of the hearth and chimney prop indicates that Hemings's house faced the Third Roundabout (**Figure 12**). This places the fireplace on the south gable end of the structure and the door on the north. No evidence of a wooden floor was detected. Window glass was recovered at the site (see Chapter 4), indicating that Hemings's windows were glazed.

Architectural Patterns

The foregoing information on the configuration of Hemings's house needs to be understood in the context of patterns of change

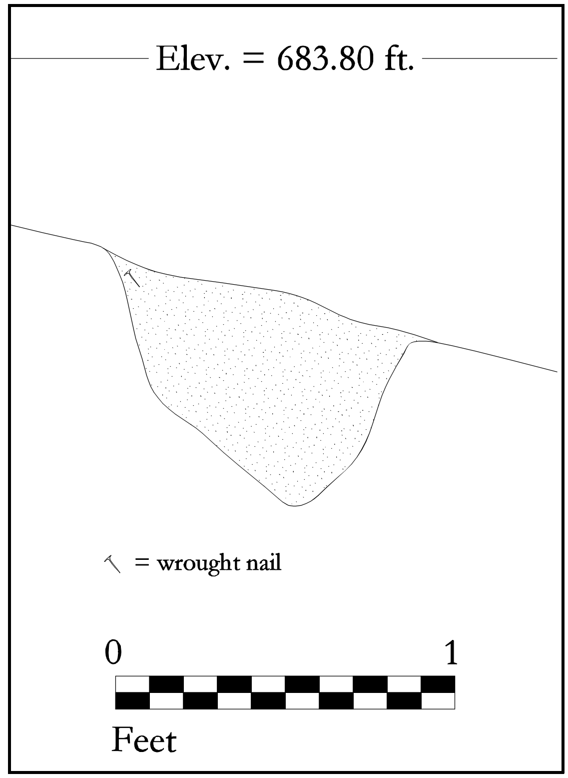

Figure 10. *East profile of chimney prop post hole located 10 feet south (downhill) of the hearth feature (excavated during the 1995 field season).*

Figure 11. *Tidewater example of dwelling employing chimney props.*

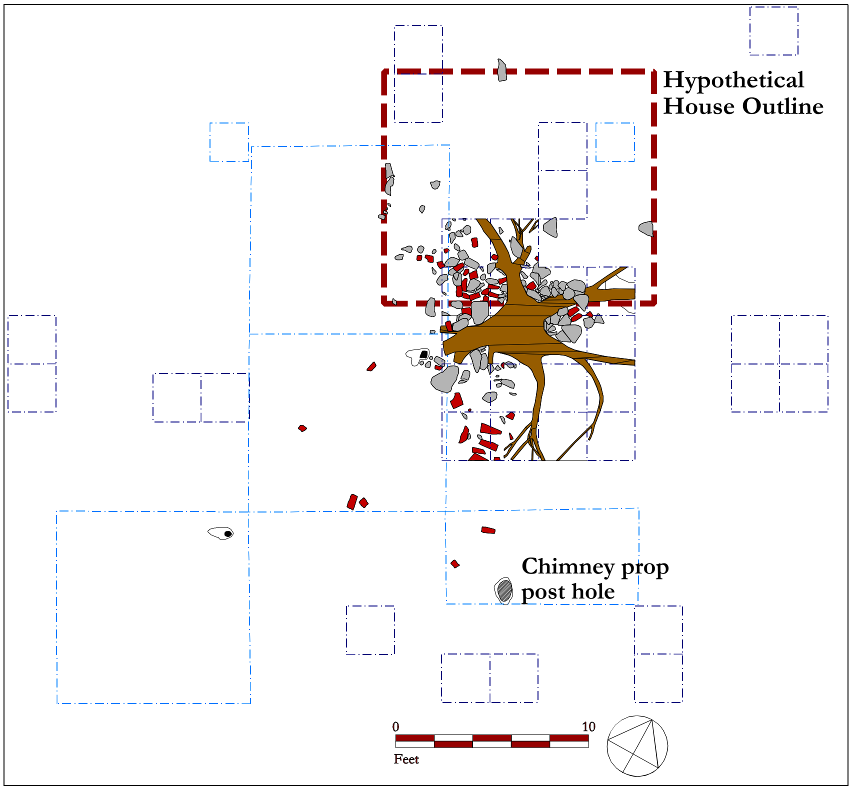

Figure 12. *Conjectural outline of Betty Hemings dwelling based upon archaeological evidence.*

and variation in slave housing at Monticello and across the Chesapeake. Recent archaeological research has shown that for much of the 18th century, Chesapeake slaves were housed in what archaeologists have referred to as "barracks-style" housing (Kelso 1984, McKee 1991). The physical conditions denoted by this term include multiple individuals, many of whom were unrelated to one another, living together in the same room. The key to understanding the social dynamics behind this housing situation lies in sub-floor pits. The floors of early slave houses in the Chesapeake are usually riddled with multiple sub-floor pits (*e.g.* Kelso1984). These features probably have served as storage closets for the meager personal possessions of enslaved residents, including perhaps weekly food rations provided by their owners. Subfloor pits appear to have served as "safe-deposit boxes". By storing personal belongings in a highly visible pit, enslaved people made access to their few possessions public and thus socially accountable. Under this hypothesis, subfloor pits worked like today's freedom of information act. By using them, slaves bootstrapped community morality and achieved a modicum of security for personal belongings in a world in which locked furniture was unavailable. Subfloor pits were a clever invention by individuals enslaved in the Chesapeake to cope with the fact that slave owners denied them the ability to choose their residence partners. That control over residence partners was the key variable is suggested by the fact that 18th-century slave houses in South Carolina lacked subfloor pits. There is independent evidence, from documents and archaeology, that slaves in South Carolina had more control over their living arrangements (Neiman 1997). In the Chesapeake, slave houses with large rooms and multiple subfloor pits were replaced by single-cell structures with smaller room sizes, and with one or, more often, no subfloor pit, toward the end of the 18th century. The change represents the emergence in the region of more choice for slaves over who they lived with, the apparent modal choice being to live in small family groups

(Neiman 1997).

The change came to Monticello at about this time. Archaeology has revealed in detail the plans of two slave houses on Mulberry Row whose construction dates to the 1770's. A slave house that Jefferson described as a “Negro Quarter” had two rooms, each about 17-feet square, with two subfloor pits under each one. Building *o*, had a single room of about the same area, and again there were two subfloor pits beneath it. In contrast, slave houses built in the 1790's on Mulberry Row fit the later Chesapeake pattern. For example, Buildings *r*, *s*, and *t*, constructed in 1793, were single-cell structures measuring a scant 12 by 14 feet. Two of them had a single subfloor pit (Gruber 1991, Kelso 1997). Excavators explained the lack of a sub-floor pit under Building *r* on grading for a parking lot constructed in the 1930's.

Slave domestic spaces built on Mulberry Row during the first decade of the 19th century seem to have lacked subfloor pits entirely, *e.g.* the cook's room in the South Terrace and the Stone House (Kelso 1997). The pattern of change indicates that at least some Monticello slaves achieved marginally greater autonomy in their living conditions as the 18th century drew to a close.

The configuration of Hemings's house fits this larger pattern. However, one possible anomaly does emerge. Unlike Building *s* and *t*, which had been built only a few years before, Hemings's house lacked a subfloor pit. Several hypotheses might account for the difference. The spatial isolation of Hemings's house might have offered greater security, relative to houses located along densely populated Mulberry Row. Alternatively, her house might have been fitted with a lock. In either case, assuming the safe-deposit hypothesis is itself correct, the lack of a subfloor pit indicates that Hemings had greater control over who had access to the interior of her house than did the residents of Building *s* and *t*.

Additional perspective on Hemings's house and slave housing at Monticello can be had from a comparison with the contemporary house of William Stewart, the free white blacksmith. The Monticello archaeologists excavated the Stewart/Watkins site in 1989-1990, under the direction of Barbara Heath. They determined that

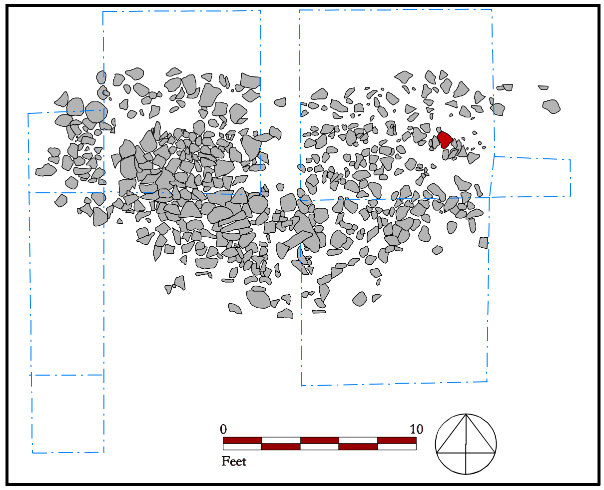

Figure 13. *Cobble scatter possibly associated with field clearing.*

Stewart's house, like Hemings's was a log building, seated on a dry-laid stone foundation. However, when initially constructed around 1800, the house was much larger, measuring roughly 20 by 24 feet in plan. An addition in 1803 increased its length to 36 feet. The completed building contained two rooms, both heated by end chimneys of wood and mud, built on stone hearths. A wood-lined half basement, measuring 10 by 12 feet square, was located beneath the larger of the two rooms (Heath 1991, 1999).

Stewart's house had more than four times the floor area than Hemings's did. The difference is not explained by the fact that Stewart had a wife and 5 children living with him, while Hemings did not. There are no slave domestic structures on Mulberry Row approaching the size of Stewart's house, yet we know slave families were housed there. Even after the transition to family-based housing at Monticello, enslaved families lived at densities from 2 to 4 times greater than free workers. The cause is not hard to pinpoint. Free workers like William Stewart could choose to go elsewhere if their expectations concerning housing were not met.

The second salient difference between Stewart's and Hemings's accommodations lies in Stewart's large wood lined-cellar. Again freedom figures in the explanation. Enslavement severely constrained its victims ability to acquire food in sufficient bulk to require a large cellar for storage.

Regular provisioning of staples to slaves lessened the payoff to attempting bulk acquisition. Free workmen, on the other hand, had access to cash and were not provisioned with staples. They thus had both the means and the motive to acquire food in sufficient bulk to require a large subfloor storage space.

Cobble Scatter

The other significant feature on the Hemings Site was a large concentration of sandstone and greenstone cobbles southeast of the house site, identified during the 1995 season. Measuring 12 feet (north-south) by 23 feet (east-west), the stones lay generally two and three deep (**Figure 13**). The scatter was composed primarily of sandstone. As with the hearth, the predominance of sandstone cobbles suggests that they were collected from the adjacent ground surface. Greenstone cobbles are only found in high frequency further down the soil profile (Sherwood 1981). Soil horizon development around the stones suggests that the feature was old enough to have been contemporary with the Hemings house.

The obvious linear configuration of the cobble scatter's north edge and the superficial similarity with stone floors excavated in several of the Mulberry Row structures lead to an initial interpretation of this feature as architectural (Kern 1996). However, the scarcity of associated artifacts and the absence of any discernable hearth remains argue against this idea, as does the ragged, circular configuration of three of its sides. Rather, its straight northern edge suggests the presence of a barrier there, such as a fence or field edge. The feature extends downslope, with the center of the lower or southern edge extending furthest south. This overall configuration seems more consistent with a cache of field-cleared stones, deposited over time against a fence. On this hypothesis, the fence stood along the northern edge of the cobble scatter and cobbles were thrown against it from the south. Support for this hypothesis, along with a better understanding of how space around Hemings's house was used is forthcoming from an analysis of the site's terrain.

Landscape Analysis

Microtopography

Concurrent with field excavations, the Department of Archaeology sought to clarify outstanding questions regarding the spatial relationship between the Hemings site and Third Roundabout. Jefferson's plats placed Hemings's dwelling just south of the Third Roundabout. In 1977, Kurt Glockner surveyed various landscape features on Monticello mountain using the bearings and distances written on Jefferson's plats. However, all the features and most of the artifacts thought to represent the Hemings site fell *north* of Glockner's resulting placement of the Third Roundabout, which according to him ran through point C-74, along the North-0 grid line or baseline of Kern's grid (see above). Adding to the puzzle was the fact that Glockner's survey placed the roadbed in a location where no physical evidence of a road or path existed.

Because of this discrepancy between the 1977 survey results and both the physical and historical evidence, the Department re-surveyed the site area. A total station was used to take elevations on roughly 20-foot intervals on the grid established by Kern, over an area measuring 250 feet (north-south) by 300 feet (east-west). A digital elevation model (DEM) was then computed from the scattered elevations. An elevation was interpolated for every point on a 1-foot grid, using radial basis functions (Golden Software, Inc. 1999:104). The resulting DEM offers a useful portrait the site's microtopography (**Figure 14**). In addition, the DEM makes it possible to compute various derivatives of the microtopography, which further clarify the relationships among the microtopography, Hemings's house, the cobble scatter, and the elusive Third Roundabout.

Two derivative measures are especially important: slope and plan curvature. To construct a slope map, the slope at each grid point on the DEM is estimated as the change in elevation relative to change in distance in the direction the terrain's aspect. Aspect is the direction of the steepest ascent or descent (**Figure 15**). The darker sections of the slope map represent relatively level spaces, while the lighter sections denote steeper areas. The slope map shows that Hemings's house and its immediate yard area are

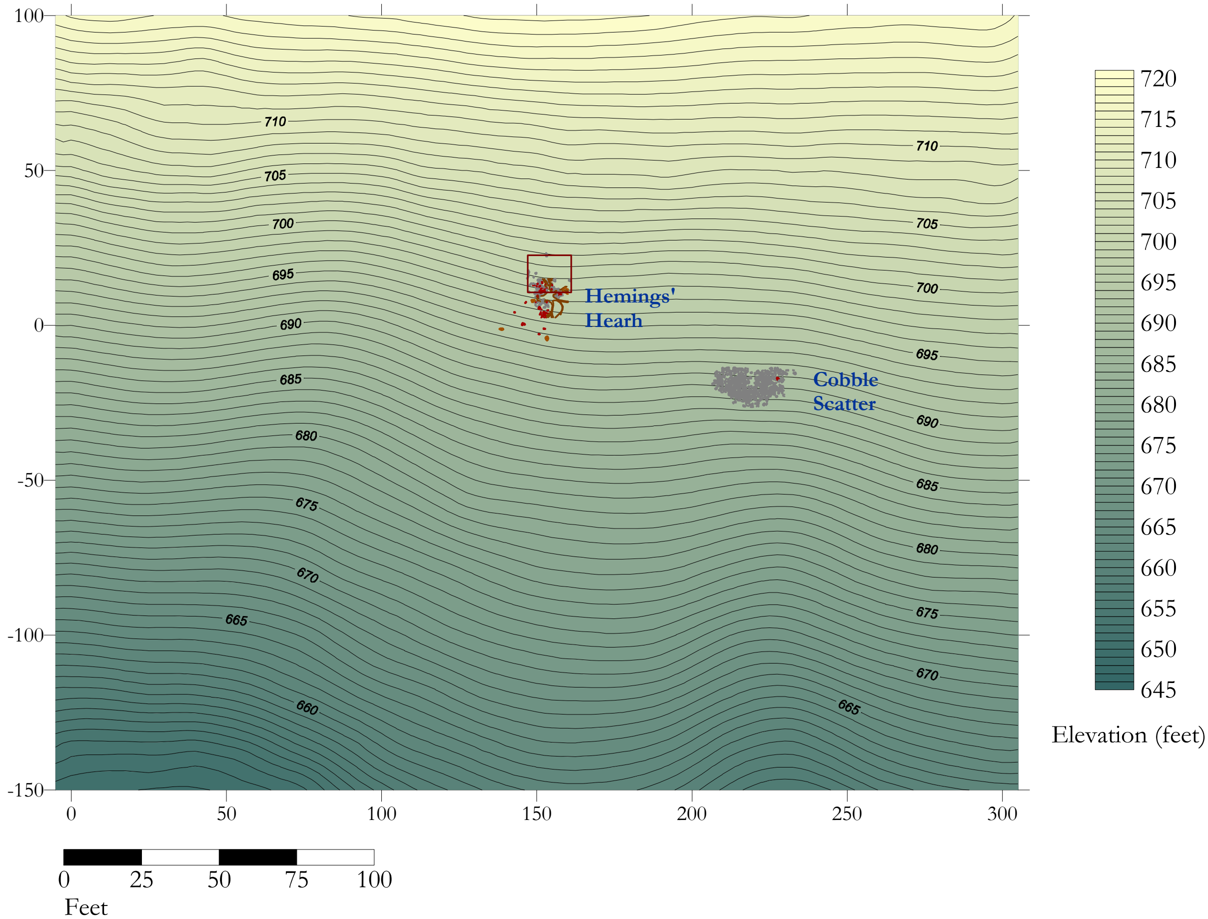

Figure 14. *One-foot contour map of the Elizabeth Hemings Site.*

located on a 24 to 28 percent slope. To the west the hillside is a bit steeper, with varying terrain to the east. More importantly, this map clearly shows a linear patch of more level ground roughly paralleling the North-60 grid line. In contrast, the roadbed proposed by the Glockner survey, along the North-0 grid line, lies along a section of uninterrupted slope. Given this evidence, we propose that the linear patch of more level ground is the topographic trace of the Third Roundabout. Confirmation for this hypothesis is immediately forthcoming from the fact that the remains of Hemings's house were found south of the linear patch. This is the spatial relationship between roundabout and house documented on Jefferson's plats (see **Figure 4**). Note that the north side of the Fourth Roundabout, in its actively maintained, modern incarnation, is visible in the southeast corner of the slope map.

The slope map also reveals that Hemings's house was located just north and upslope of a relatively more gently sloping area about 125 feet in diameter whose southern boundary is formed by the Fourth Roundabout. It is tempting to suggest that the house was strategically positioned to help minimize costs of access to the Third Roundabout and to this more level patch. Such positioning would have been attractive for Hemings because it made for easy access to a large area over which the costs of movement, determined by slope, were relatively low.

Further insight into the location of the house and cobble scatter is provided by a plan curvature map (**Figure 16**). Plan curvature is the second derivative of aspect. It measures the amount of curvature in the contour lines on a contour map. Positive values for plan curvature indicate areas into which water flow converges, while negative values represent areas from which

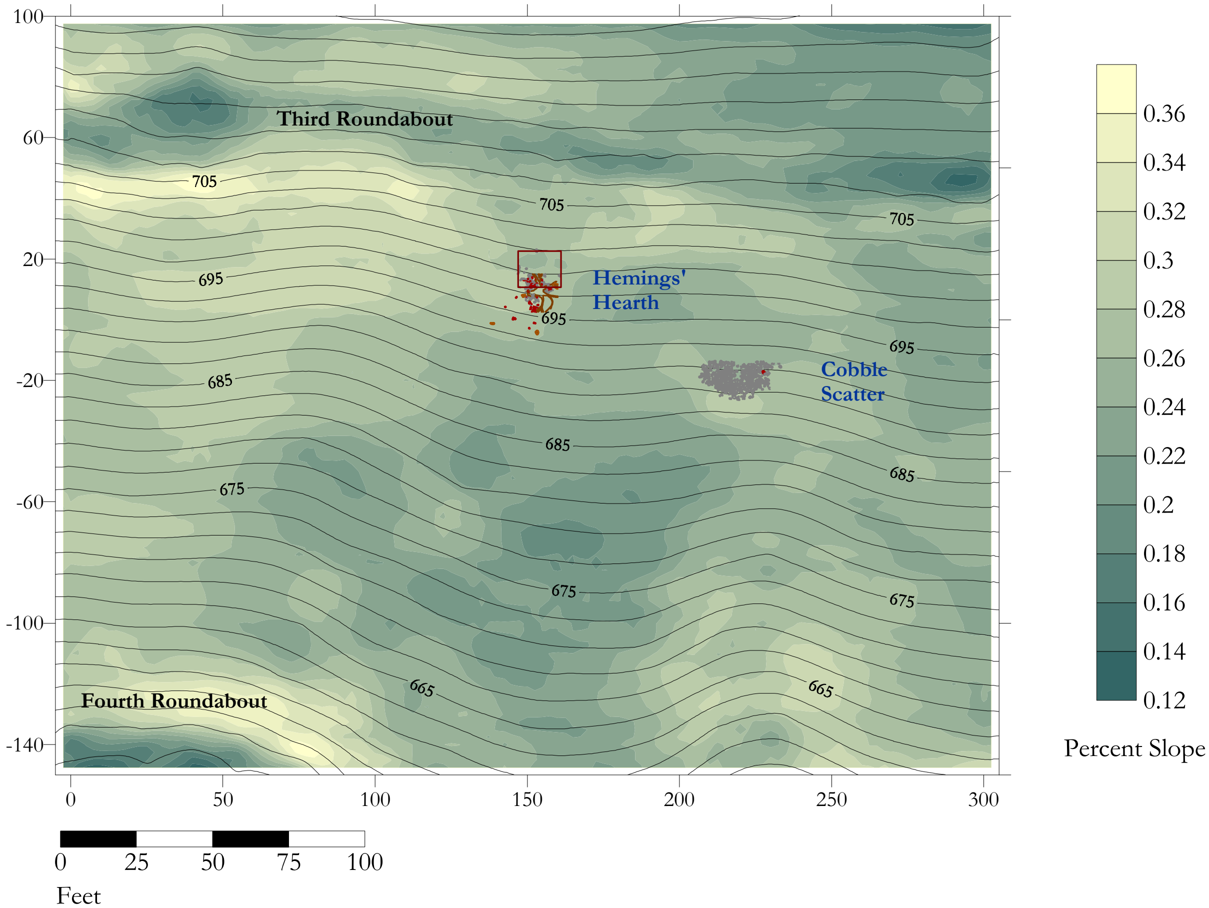

Figure 15. *Percent slope map with superimposed two-foot contour map.*

water flow diverges. The plan curvature map highlights the north-south trending rise on which the house was located and the gullies on either side of it. We see that the house is precisely centered on a rise, presumably because of the drainage advantages of divergent flow. The large relatively flat area south of the house was also a well drained area of divergent flow. On the other hand, the cobble scatter is precisely centered on the eastern gully, an area of convergent flow.

We suggested above that the straight northern edge of the cobble scatter betrays the presence of a fence line against which the cobbles were thrown from the south. It is tempting to suggest that the area from which the cobbles were cleared was the well drained flat area to southwest, and further that this area may have been used by Hemings as a garden. The evaluation of this idea should receive top priority in future investigations at the site. In any case, the fact that the cobble scatter is centered in a gully provides further support for the idea that it is not the remains of a building.

The Third Roundabout

In order to test further the hypothesis that the linear patch on the slope map was the Third Roundabout, five contiguous 2.5 by 2.5 feet units were excavated across it (Units 1976, 1977, 1991, 1992, and 2001). The resulting 12.5-foot trench was oriented north-south so as to reveal a profile of any extant roadbed. It exposed a layer of compacted clay (2.5YR 4/6 red clay loam) seven feet wide (north-south) sandwiched between topsoil (2.5YR 4/4 reddish brown, silty clay loam) and the underlying B horizon (2.5YR 3/6 dark red clay) (**Figure 17**). Unlike the sloping layers of sediment above and below, the upper surface of the clay layer was relatively level; it ranged in thickness from 0.1 - 0.9 feet north-south. The

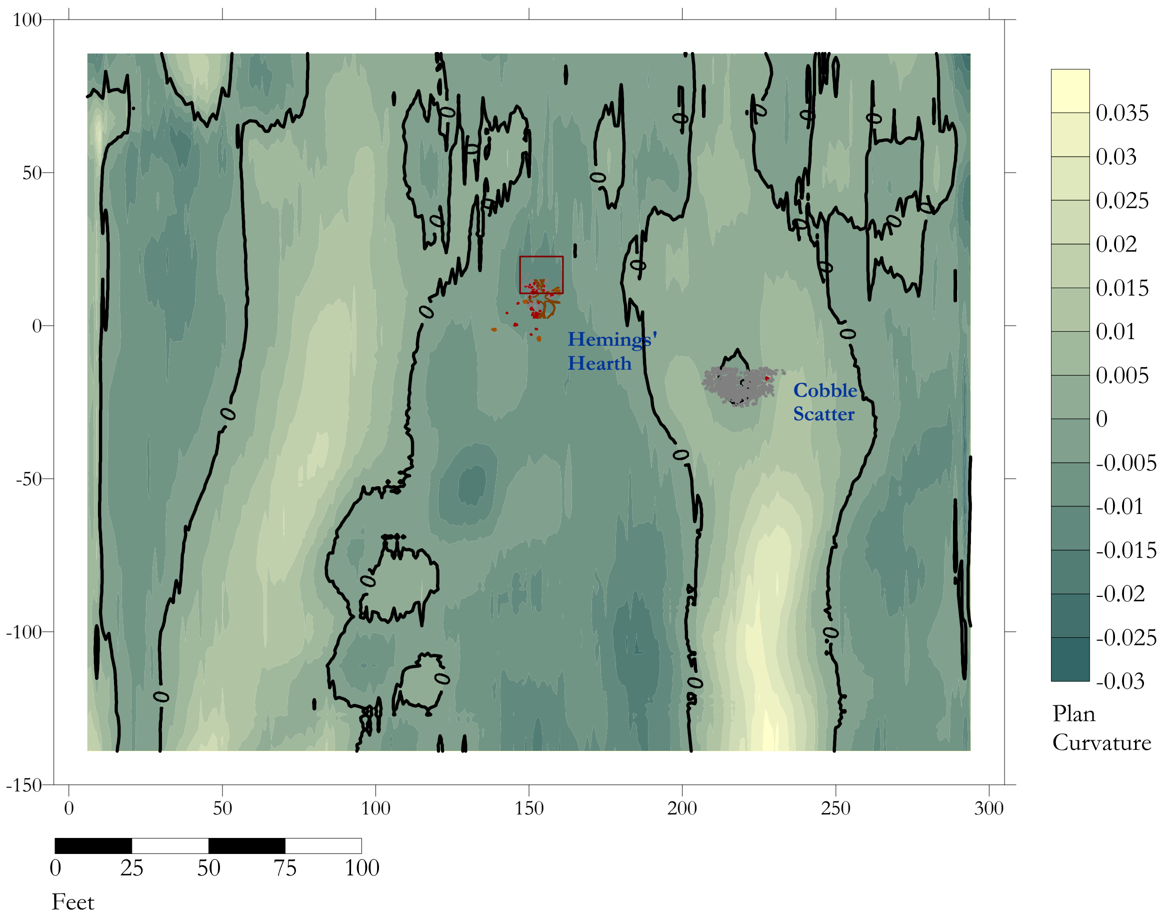

Figure 16. *Plan curvature map of topography surrounding the Elizabeth Hemings site. Green areas denote divergent flow and the yellow a convergent flow.*

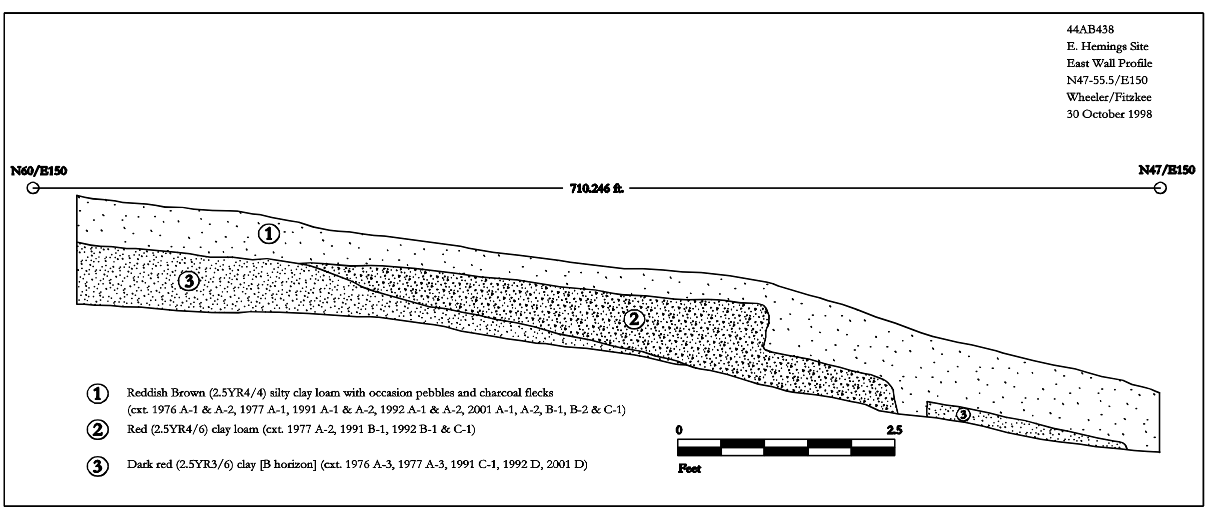

Figure 17. *East profile of test trench excavated across the third roundabout.*

layer included fine- (6-10 mm) to cobble-sized (65-250 mm) particles of greenstone and sandstone that comprised 7-10% of the soil matrix. This percentage, which is over twice that of any other area on the site, indicates that at some point an attempt was made to maintain the road bed by adding rock to it. The configuration of this layer also suggests that it is fill deposited in an attempt to create a level roadbed. There can be little doubt that these sediments represent Jefferson's Third Roundabout.

Site Structure

How big was the activity space around Hemings's house? How was it spatially structured and how did the structure of activities within it relate to the roundabout, the cobble scatter, and the house itself? Our approach to these questions begins with a simple model, based on recent ethnoarchaeological work, of how activities might have been spatially organized at the Hemings site. We then look to evidence from the spatial distribution of chemical elements and artifacts on the site to evaluate the model.

Over the past two decades, archaeologists have begun to document ethnographically how humans organize activities in regard to their spatial layout on sites (Binford 1983, 1987; Hitchcock 1987; O'Connell 1987; O'Connell et al. 1991; Schiffer 1987; Wandsnider 1996; Yellen 1977). A crucial variable that organizes and segregates activities spatially is the extent to which they interfere with one another. Interference is likely when the objects involved in activities take up a large amount of space, or processing them generates a large amount of debris, or the activity itself requires large amounts of uninterrupted time. Each of these factors, singly or in concert, renders simultaneous use of the same space for other purposes costly in time or effort. Thus, there will be a long term benefit to the expenditure of additional effort to cover travelcosts incurred in the location and pursuit of such activities at some distance away from the area in which most other activities occur. Thus activities with higher interference potential will tend to be conducted in out-of-the-way areas. Prime examples of special activities include bulk processing and storage of plant and animals foods and the disposal of bulky or hazardous refuse. On the other hand, additional energy will not be expended to remove to special areas those activities that require smaller amounts of space, generate little refuse, or have short durations. These activities will tend to occur together in the same general activity area. General activity areas can be expected to be the site of pursuits like the preparation of food for immediate consumption, social interaction or sleeping. This argument leads to the expectation that, other things being equal, domestic sites will be partitioned radially, with a general activity area at the site core and special activity areas on the periphery. The distance that special activities are removed from the domestic core is a function of their interference potential (Neiman 1993).

Cost Surface Modeling

How might we identify the spatial scale of these zones? One way to proceed is to estimate the costs of movement from the domestic core to any spot on the site. Our estimates can be represented as a cost surface, a contour map whose contour lines indicate the locations of peripheral zones to which it was equally costly to walk, following a least-cost path, in order to pursue a specific activity. The location of features like the Third Roundabout and the cobble scatter on the cost surface might indicate the maximum extent of an intensively used site core. And this could be further evaluated using evidence from the spatial distribution of artifacts and chemical elements across the site.

When a site is located on a flat surface, the cost of activity removal from center to periphery is a function of linear distance from the core. But when a site is on an irregular, sloping surface, costs no longer scale linearly with distance. Movement perpendicular to the direction or aspect of the slope is easier than movement up it.

Making this observation analytically useful requires estimating the costs of movement, which can be done with the help of a formula derived from backpacking:

$$\mathrm{Cost}_{\mathrm{oneway}} = \begin{cases} 1 + 3.2s, & \text{if } s>0 \\ 1 + 1.2s, & \text{otherwise} \end{cases} \qquad (1)$$

where $Cost_{oneway}$ is the cost of movement across 1

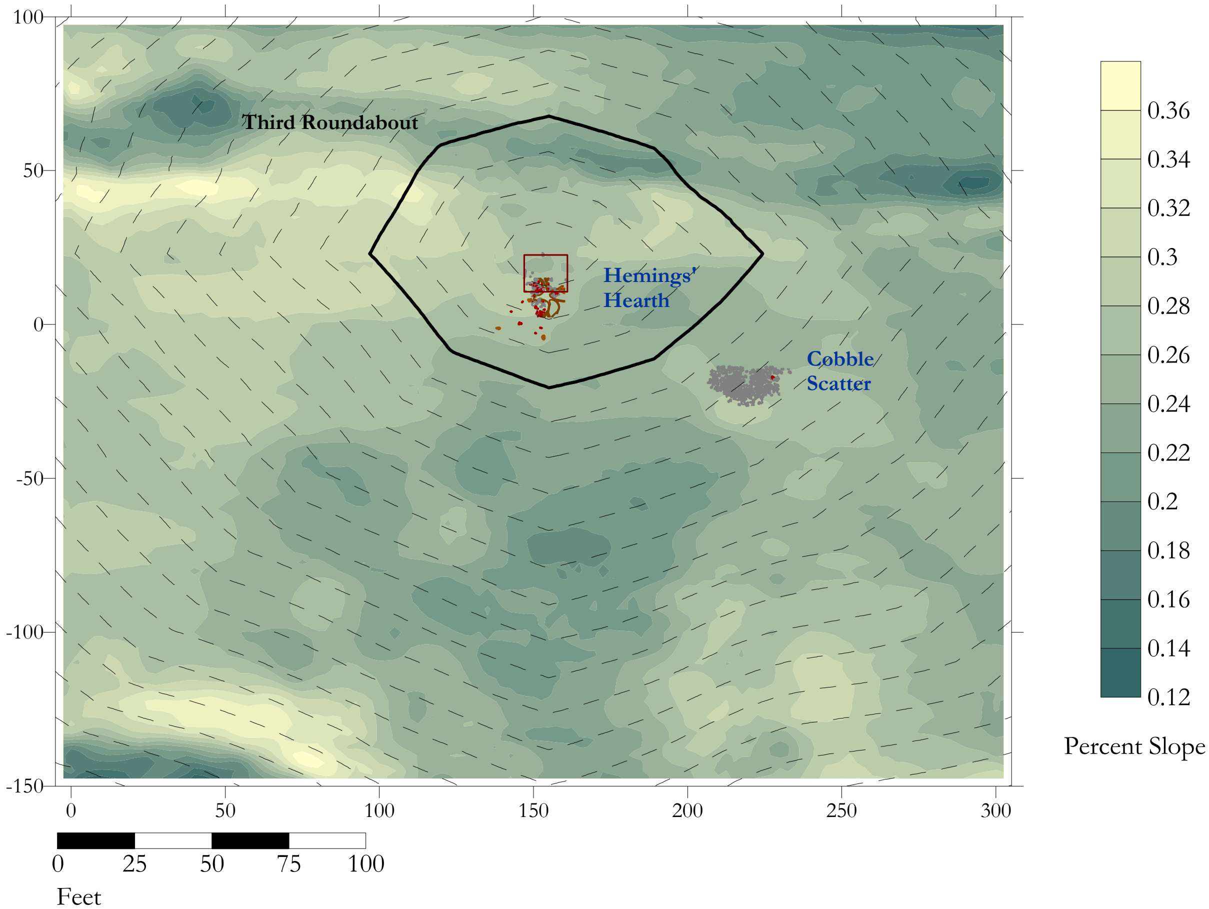

Figure 18. *Cost surface contour map superimposed over percent slope map. The 80-cost unit contour is highlighted to show the intensively-used Hemings site core.*

unit in a horizontal plane, and *s* is the slope, given as vertical change, divided by horizontal change (Ericson and Goldstein 1980).

The use of this formula to model movement in multiple directions across complex topography come under the heading of anisotropic cost surface modeling. The key word here is anisotropic. It refers to the fact that the cost of movement is a function not only of the steepness of the slope, but also of the direction at which the slope is attacked. Anisotropy means that costs vary as the difference between the slope's aspect the direction of travel varies. Hence anisotropic cost surface analysis requires a cost grid, which specifies the costs of moving across a grid cell in the study area, and an aspect grid, which specifies the (azimuth) direction in which the costs of movement are greatest.

The forgoing formula implies that a grid containing the costs of moving back and forth or up and down across a grid cell can be estimated from a grid of slopes:

$$\text{Cost}_{\text{bothways}} = 1 + 4.4s \qquad (2)$$

Both the slope and aspect grids are computed from the DEM of the study area. Because the costs are anisotropic, estimating the actual costs of movement requires taking into account the angle at which the grid cell is crossed. Basic trigonometry makes it easy to show that the actual cost of crossing a cell is:

$$\text{ActualCost}_{\text{bothways}} = 1 + 4.4s\,|\cos(a)| \qquad (3)$$

It is possible then to estimate our sought-after cost surface, with the help of *Equation 3* and an algorithm that uses it to trace the least-cost path from a given source point on the DEM to all other points.[2]

The cost surface that results is shown in **Figure 18**. The lozenge-shape cost contours reflect that fact that the same amount of effort gets one further when one travels along the southern-facing slope than up and down it. Both the Third Roundabout and a line paralleling the northern edge of the cobble scatter fall roughly along the 80-unit cost contour. This implies a more intensively-used site core, in which general activities were more likely to occur, measuring 90 feet (north-south) by 130 feet (east-west). The eastern and western edge of this area coincide with the center of the two gullies identified on the plan curvature map.

The size of this area was an important part of Hemings's daily experience. One dimension of its significance for her is apparent in the difference between it and the sizes of yard areas associated with Buildings *r*, *s* and *t* on Mulberry Row. These 12-by-14 foot structures stood 25 feet apart. At their front doors lay Mulberry Row. By 1809, a garden fence stood about 10 feet behind them. If the cost surface analysis is an accurate approximation, then Hemings's yard space was roughly 10 times the size of the yard area associated with the Mulberry Row structures.

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[2] The algorithm used here is the VARCOST module in the Idrisi GIS (Clark Labs 1998). VARCOST handles an anisotropy by *powering* a cost grid, computed from *Equation 2*, by a user-specified function of the difference angle *a*. This means that it is impossible for the algorithm to duplicate *Equation 3* precisely. But it is possible to come very close using the following approximation:

$$\text{ActualCost}_{\text{bothways}} \approx (1 + 4.4s) \,/\, ^{|\cos(a)|} \qquad (4).$$

This approximation is used here. The Pearson correlation between actual costs as given by *Equation 3* and the approximation in *Equation 4* is .998 for $0 < s < 2$ and $0 < a < 360$ degrees.

Spatial Patterns

Soil and Sediment Chemistry

One domain in which the radial model of site structure has special archaeological relevance is trash disposal. It leads to the expectation that different kinds of refuse will be deposited in general activity areas and special activity areas. When individual refuse items have high interference potential or when a large amount of refuse needs to be disposed of at once, trash will be transported greater distances from general-activity space at the center of the site to the periphery. The study of spatial variation in the chemical elements across the site offers a way to evaluate this expectation.

Archaeologists have discovered that data on the abundance of chemical elements in soils and sediments can be useful in locating archaeological sites and defining different activity areas within those sites. Researchers have hypothesized that certain chemical elements or combinations of elements are indicative of specific types of human activities (Cook and Heizer 1965). Although American prehistorians began to use soil chemistry data in the 1950s, historical archaeologists overlooked the possibilities until the late 1970s. In the Chesapeake, archaeologists first demonstrated the potential of soil chemical patterns in the analysis of seventeenth-century sites (Keeler 1978; Pogue 1988).

Most archaeological studies focus on a handful of chemical elements, including potassium, phosphorous, calcium, and magnesium. Phosphorous (P) has been used for a long time to identify sites. It reflects a wide range of activities because it is present in soft animal tissue, excrement, and bone, as well as other organic materials (Cook and Heizer 1965; Eidt 1977, 1985). Potassium (K), magnesium (Mg), and, to a lesser extent, calcium (Ca) are all components of wood ash (Griffith 1980, 1981; Heidenreich and Konrad 1973, Konrad *et al.* 1983, Middleton and Price 1996, Schuldenrein 1995). Calcium is a major chemical constituent of shell and bone (Cook and Heizer 1965, Middleton and Price 1996, Schuldenrein 1995). On sites with masonry, unlike the Hemings Site, elevated Ca levels are also likely to be a product of lime in mortar (*e.g.* Metz *et al.* 2000).

The 1996 season saw the implementation of a comprehensive soil chemical mapping program. The Department took an initial collection of soil chemistry samples during the Fall of 1995 in an attempt to clarify the location of the Hemings house and any associated features. Excavators collected 104 samples, taken every 20 feet across an area measuring 140 feet (north-south) by 300 feet (east-west). An additional 41 samples were taken from the profiles of test units. All of the soil samples were acquired 0.3 feet below modern grade. The 145 soil samples were analyzed at Virginia Polytechnic Institute's Soil Testing and Plant Analysis Laboratory in Blacksburg, Virginia.

A second more intensive sampling campaign was initiated after the remains of the hearth were identified during the 1996 field season. Initially, samples were taken every ten feet within a 60-foot square centering on the southwest corner of the suspected hearth, resulting in 49 samples. An additional 25 samples were collected from north-south and east-west transects, centered on the 60-foot square block. These samples were also taken 0.3 feet below modern grade. For comparative purposes, the samples were sent to the Plant Analysis Laboratory in Blacksburg (VPI), the University of Wisconsin at Madison's Archaeological Chemistry Laboratory and to A&L Eastern Agricultural Laboratories, Inc. (A&L) in Richmond, Virginia.

A final sampling campaign was undertaken after excavations at the site were completed. An Oakfield corer was used to collect 143 soil samples at 2.5 foot intervals from unexcavated ground within a 40 foot (north-south) by 32.5 foot (east-west) area surrounding the hearth feature. Fourteen additional samples were obtained from sediments within the hearth and from excavated contexts 0.3 feet below modern grade. Unfortunately the area southwest of the hearth could not be sampled in this fashion because it had been excavated in 10-foot quadrat units in 1995. Due to the small bore diameter of the Oakfield corer, samples were sent only to one lab: The University of Wisconsin's Archaeological Chemistry Laboratory.

The extensive soil chemistry sampling program offers a unique opportunity to explore two technical issues. The first is the extent to which assays by the different labs, using different extractions methods and instrumentation, agree for each element. Agreement across labs for a given element indicates that the labs' measures are reliable, that is each lab offers reasonable estimates of the same underlying quantity. This is a necessary condition for valid inferences about the meaning of that element's spatial pattern. The second issue is the extent to which the spatial patterns exhibited by different elements correlate with one another across different spatial scales. Consistency across spatial scales in the pattern of correlations among elements would also suggest that the spatial patterns exhibited by various elements are reliable.

Element	VPI-A&L	Wisc.-A&L	VPI-Wisc.
K	0.8930	0.8270	0.8800
Ca	0.8290	0.8340	0.8710
Mg	0.8380	0.8010	0.7220
B	0.7710		
Zn	0.7427	0.5074	0.5693
Mn	0.4610	0.6240	0.4830
Cu	0.4690		
Fe	0.6960	0.2280	0.4030
Al	0.1420	-0.0740	0.6850
Na		0.2100	
P	0.1017	0.0691	0.0646

Table 1. *Correlations (Spearman's r) between the ranks of element concentrations tested at three independent soil labs (ordered from highest correlation to lowest).*

The first issue, agreement across labs, was addressed using the 10-foot interval samples, that were analyzed by all three labs. Each lab analyzed a slightly different suite of elements. Eight elements (Al, Ca, Fe, K, Mg, Mn, P and Zn) were common to all three labs. Two (B and Cu) were common to A&L and VPI alone, while one element (Na) was common to A&L and Wisconsin. Correlation coefficients were computed to measure the similarity among rank-orders of element assays by pairs of labs. We used ranks, and not the original values, to minimize the effects of outliers on the results. **Table 1** shows that there is reasonably strong agreement among the labs for three of the four elements that have traditionally interested archaeologists (Ca, K, and Mg), while there are moderate to zero correlations among the rest.

Phosphorus (P) has the lowest correlation for all of the elements tested. This is the result of the unique characteristics for Catoctin formation, Davidson clay loam soils, the chemical properties of phosphorus, and the element extraction methods employed by the soil labs. In the local soils and sediments, most of the P introduced by decaying plant and animal tissue quickly bonds to mineral silicates. The tightly bound phosphorus is not easily extracted and detected.

The soil testing program at VPI, for example, only attempts to measure the amount readily available for new plant growth (water soluble) and does not attempt to detect the total P. Soil samples are dried, pulverized and sifted through a 2 millimeter sieve. Four cubic centimeters are placed in 20 milliliters of Mehlich No. 1 extractant (0.05N HCl in 0.025N H_2SO_4). The samples are shaken for five minutes, filtered and then analyzed by inductively coupled plasma-atomic emission spectroscopy (ICP/AES).

The acid extraction method employed at the Wisconsin lab is much more aggressive and the resulting readings reflect a higher proportion of the total amount of P in the sample. At Wisconsin the sample is dried, pulverized, and sifted through a 2 millimeter sieve. 0.2 grams is placed in a 1N HCl solution for two weeks at room temperature and then analyzed by ICP/AES. Note that the acid concentration, as measured by solution molarity (N), is 20 times greater that used by VPI. And the extraction time is measured in weeks, not minutes.

The A&L lab detects P using two different acid solutions. The weak Bray or P_1 test is very similar to VPI's Mehlich No. 1 test in that this method determines the amount of readily available phosphorus usable for plant growth. The prepared sample is placed in a 0.025M HCl + 0.03M NH_4F solution for 1 minute and then analyzed by ICP/AES. The strong Bray or P_2 test extracts the water soluble phosphates (ammonium- and mono-calcium phosphates), weak acid soluble phosphates (di-calcium phosphates), and a small amount of the active reserve phosphates (i.e., tri-calcium phosphate). Soil samples are placed in a 0.1M HCl + 0.03M NH_4F solution for 1 minute and then analyzed by ICP/AES (Ankerman and Large n.d.:26).

For our purposes, the Wisconsin test yields useful estimates of P by providing values that reflect the anthropogenic processes at work on Monticello sites. The Mehlich No. 1 and the weak and strong Bray tests are too weak to break much more than a tiny fraction of anthropogenic P from its chemical bonds. These very different measures account for the low correlation coefficients in **Table 1**. As a result, only the Wisconsin results for the 2.5- and 10-foot interval will be used for analysis.

The second issue, consistency of correlations among elements at different spatial scales, was also addressed using correlation analysis. Three symmetric matrices of correlation coefficients among log-transformed elements were computed for the 20-foot, 10-foot and 2.5-foot interval samples. The pattern of correlations among elements was similar for each of the three matrices. Typical results are shown in **Figure 19**. The plot captures about 60% of the total variation for the 10-foot interval sample, as analyzed by the Wisconsin Lab. Note the acute angles between the vectors representing three of the four elements that have traditionally interested archaeologists: calcium (Ca), magnesium (Mg), and potassium (K). This pattern represents the relatively high positive correlations that were obtained among all three elements, and especially between Mg and K, whose vectors display the most acute angles. The positive correlations among these three elements appear at all three spatial scales and in all three lab results. This indicates that the spatial distributions of these three elements are broadly similar and strengthens confidence in the reliability of the results. The vector representing the fourth element of traditional archaeological interest, phosphorus (P), lies at right angles to the vectors representing the other three elements, reflecting the near-zero correlation between P and the other three elements. This result shows up in the 2.5-foot interval sample, analyzed by the Wisconsin Lab as well. Again the agreement indicates reliability.

The positive correlations among Ca, K, and Mg suggest that there might be a single process responsible for the majority of variation in the distributions of all three elements. To better characterize that process, we could map the

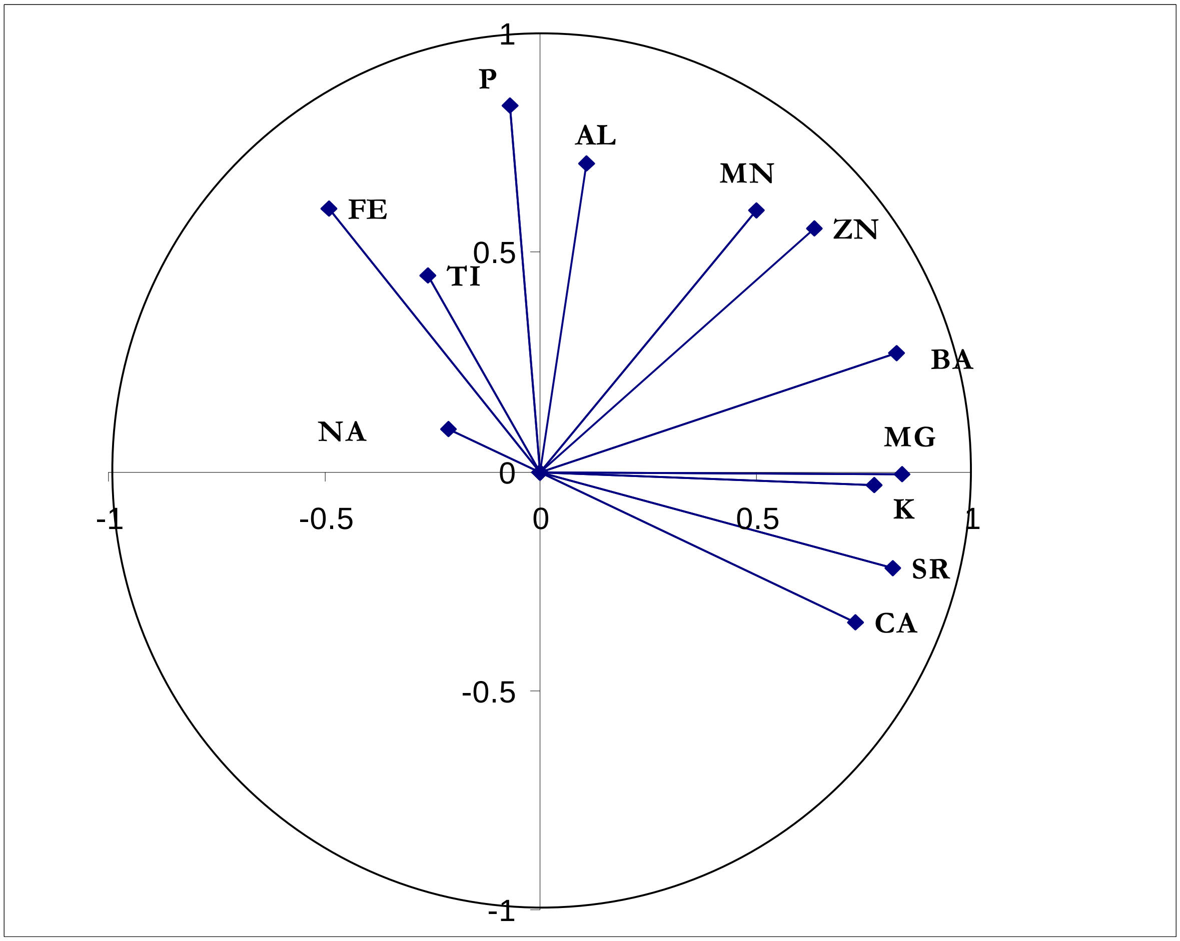

Figure 19. *H-plot summarizing the pattern of correlations among log-transformed element concentrations from the 10-foot interval soil samples, Wisconsin Lab (Baxter 1994). The angle between a pair of vectors is proportional to the correlation between the corresponding elements: vectors forming an acute angle are positively correlated; vectors at right angles are uncorrelated; vectors pointing in opposite directions are negatively correlated. The length of each vector represents how faithfully its pattern of correlations is represented in the plot. Elements represented: calcium (Ca), strontium (Sr), potassium (K), magnesium (Mg), barium (Ba), zinc (Zn), manganese (Mn), aluminum (Al), phosphorus (P), titanium (Ti), iron (Fe), sodium (Na).*

three distributions individually and guess about the spatial pattern that they have in common. Or we could estimate the common pattern statistically and then map it. The latter option is preferable because it relies less on interpretive whim. It has statistical advantages as well. Our analysis of inter-lab correlations revealed that estimates of element concentration are laden with error. Estimating variation shared by several elements is one way to dampen the effects of that error. Principal components analysis (PCA), is a natural way to estimate the variation shared by the three element distributions. PCA produces, among other things, a numeric score for each sample location. The score for each location is a weighted average of the original element concentrations. The weights are computed so that the scores they produce account for the maximum possible amount of variation in the data. The scores with this variation-maximizing property are called principal component scores. There are as many sets of principal component scores as there are variables in the original data. But if the original variables are correlated, then

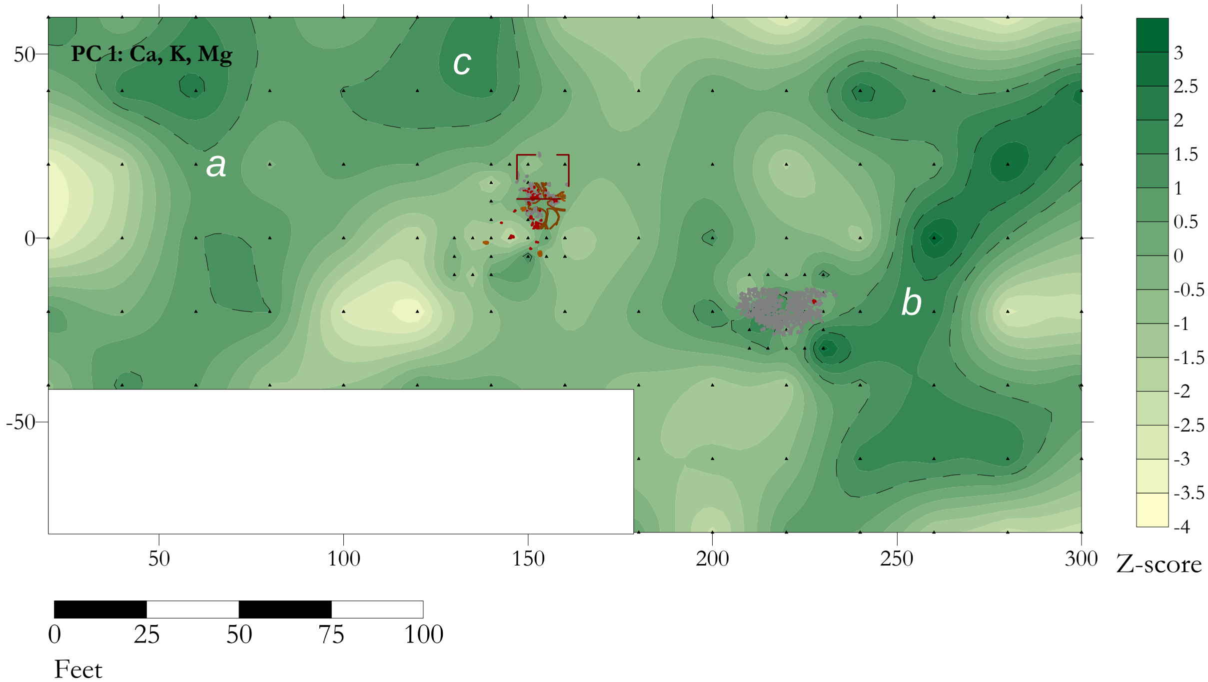

Figure 20. *Contour map of the spatial pattern held in common in the distributions of Ca, K, and Mg, as estimated by principle component analysis. The shared pattern was estimated from the first principle component extracted from the correlation matrix among the three elements. Triangles represent soil sample locations, taken at 20-foot intervals and from side walls of excavated units. Letters denote areas of high concentration discussed in the text. The element distributions were estimated by the VPI Soils Lab.*

the first principal component accounts for most of the variation in the data and summarizes the common pattern (Baxter 1994).

A final word about methods. In order to portray spatial patterning in the distribution of chemical elements, we have relied on contour maps. These have been produced by interpolating a regular and continuous grid of element concentrations from the spatially isolated sample locations, and then contouring this grided surface. The grided values were estimated by Kriging, a statistical method that, under certain circumstances, yields estimates that have minimum squared error (Golden Software, Inc. 1999). Kriging, like all surface interpolation methods, relies on the existence of spatial autocorrelation among values at sampled locations. Sampled locations that are close together have more similar values than locations that are far part. We tested this assumption for all three of our sets of samples (20, 10 and 2.5-foot intervals), and in each case found the positive spatial autocorrelation required by the method.

The first principal component computed from the Ca, K, and Mg distributions for the 20-foot interval sample accounts for 65% of the variation in the data. Each of the three variables contributes in roughly equal amounts to the component, that is the weights for each element are about equal. The spatial pattern exhibited by the scores shows that high concentrations of all three elements tend to occur some distance from the house. Concentrations *a* and *b* lie outside the cost surface contour that bounds the intensively-used core of the site (**Figure 20**). Concentration *c*, located about 20 feet north-northwest of the house, falls within the estimated core boundaries. Finally note the zone of relatively lower values northeast of the house, separating concentrations *c* and *b*.

Similar patterns appear in the 10-foot interval sample analyzed by the Wisconsin lab. Here the first principal component accounts for 74% of the variation in the original distributions of Ca, K, and Mg. Again, the three elements contribute about equally to it. The spatial pattern

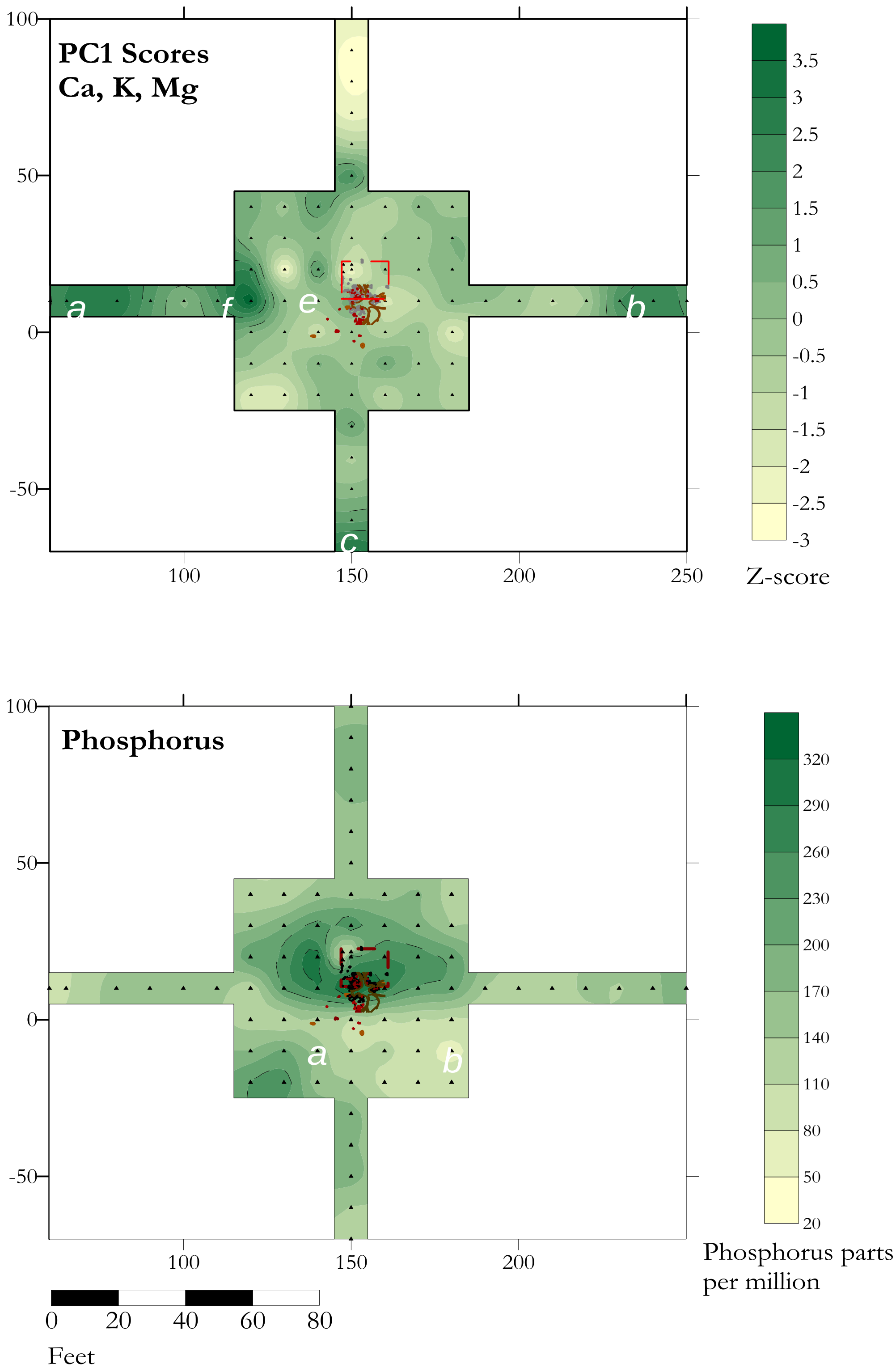

Figure 21. *Contour maps of the principle component scores for Ca, K, and Mg and of the distribution of P. Triangles represent soil sample locations, taken at 10-foot intervals and from side walls of excavated units. Letters denote areas of high concentrations discussed in the text. The element distributions were estimated by the Wisconsin Lab.*

in the resulting component scores looks familiar. The highest values appear at some distance from the house, beyond the edges of the site core as estimated by the cost surface and at the opposite ends of the east-west transect (concentrations *a* and *b*, **Figure 21**) and at the southern end of the north-south transect (concentration *c*). A third area of high values (*d*) north-north west of the house and within the estimated core echoes the concentration in the same location on the 20-foot interval map (concentration *c*, **Figure 20**). Again, we see the area of low values northeast of the house. The novelty on the 10-foot map is the appearance of smaller concentrations within the site core, about 10 feet and 30 feet west of the house (*e* and *f*).

Unlike the 20-foot interval samples analyzed at VPI, the 10-foot interval samples, which were analyzed by the Wisconsin lab, yielded reliable values for P (**Figure 21**). The spatial patterns exhibited by P and the first principle component appear unrelated. The appearance is confirmed by a near-zero correlation between P values and the principle component scores (Pearson's r = -.07, p= .53). There is a large concentration of P under and adjacent to the house, on the west (*a*) and east (*b*). This large concentration lies in the same area that displays low to moderate values for Ca, K and Mg in both the 20-foot and 10-foot interval samples. In contrast, as we have seen, large concentrations of Ca, K, and Mg are all considerably farther from the house.

The 2.5-foot interval sample provides a still higher resolution picture of chemical variation in the immediate vicinity of the house. Several differences in spatial patterning appear at this more fine-grained spatial scale. First, the strength of the correlations among Ca, K, and Mg increases. As a result, the first principal component now accounts for 86% on the variation in these three elements. Second, we begin to see small concentrations of the three elements under and immediately adjacent to the house (**Figure 22**). Two of these appear to be associated with the hearth (*e* and *f*). A third (*c*) is located just inside the presumed location of a door in the north wall of the house. A fourth along the eastern wall (*d*) is a bit more enigmatic. Two additional concentrations northwest of the house (*a* and *b*) echo what we have seen on the 10-foot series map in the same direction (**Figure 21**, concentrations *d* and *e*).

In the 2.5-foot interval samples, the distribution of P does share some patterns in common with the Ca, K, and Mg principal component scores (**Figure 22**). The high concentrations just inside the hypothesized door (*a*), outside the door to the west (*b*), and adjacent to the hearth (*d*) are three examples. The fourth area of high P concentration (*c*) partially overlaps the Ca, K, and Mg concentration adjacent to the east wall of the house. The apparent modest similarity between the P and Ca, K, and Mg distributions is confirmed by a modest but statistically significant rank correlation value of .31 ($p < .0001$). However, aspects of the contrast between the distributions of P and Ca, K, and Mg, noted in the 10-foot interval sample, recur here. High concentrations of P are closer to the house and they are more spatially clumped, while Ca, K, and Mg concentration also occur away from the house and the concentration are more dispersed.

What are we to make of these patterns? How do they relate to the organization of activities and space on the site? Much of the large-scale pattern in the distribution of Ca, K, and Mg, visible in the 20-foot and 10-foot interval samples, is likely a function wood ash deposition. Two depositional contexts for wood ash may be distinguished: burning of trees and brush that result from the clearance and maintenance of the site core and ongoing disposal of fireplace ash generated in the house. Burning trees and bush is clearly an activity with large interference potential, one that we should expect to occur in a special-activity area on the site periphery. Disposal of large quantities of ash, likely to contain live coals from the periodic cleaning of a continuously used fireplace, is another such activity. Hence, under the radial model of site structure, the observed concentrations of Ca, K, and Mg at the site periphery are to be anticipated and may be used as corroboration for the division of the site into general and special activity areas based on the cost surface.

What then are we to make of the smaller concentrations of Ca, K, and Mg that emerge within the site core in the 10 and 2.5-foot interval

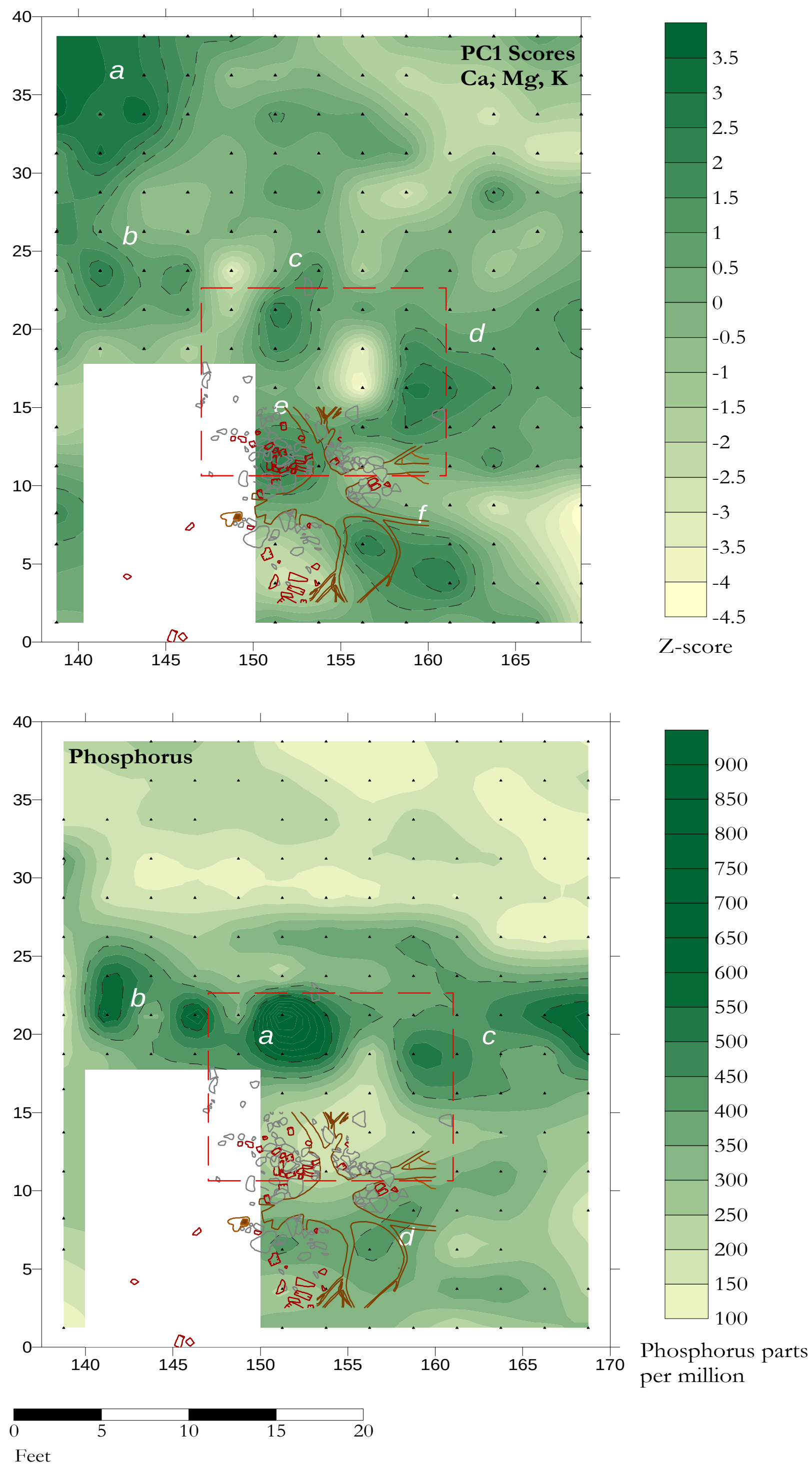

Figure 22. *Contour maps of the principle component scores for Ca, K, and Mg and of the distribution of P. Triangles represent soil sample locations, taken at 2.5-foot intervals. Letters denote areas of high concentration discussed in the text. The element distributions were estimated by the Wisconsin Lab. No chemical samples were taken from the blank area in the southwest corner when it was excavated in 1995.*

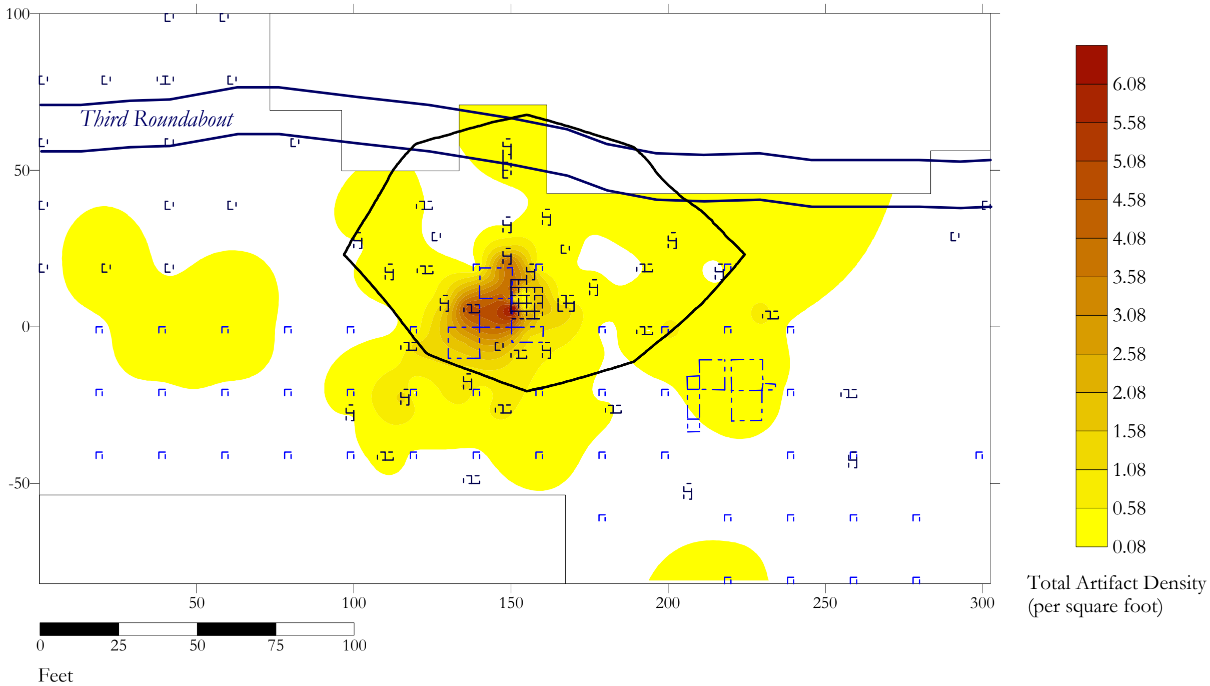

Figure 23. *Total artifact distribution map for all excavated test units at the Elizabeth Hemings site.*

samples. These may be the result of the occasional expedient deposition of fireplace ash closer to the house. The hypothesis that fireplace ash deposition plays a more important role in spatial a patterning at smaller scales receives independent support from the increasing strength of among-element correlations in the 10- and 2.5-foot samples. If some bone and soft-tissue waste were being cycled through the fireplace, we would expect increased levels of Ca and P in fireplace ash and increased correlations of K and Mg with Ca and of all three elements with P as a result of ash disposal. This is the pattern that we see.

However, we have also seen that the distribution of P is quite different from the distribution of Ca, K, and Mg, even in the 2.5-foot interval sample. This indicates that most P deposition occurred independently of ash dumping. In addition, the low correlation between P and Ca indicates there are more important sources of P on the site than bone. A likely context of the deposition of P is therefore soft tissue and liquid deposited in the course of meal preparation and food waste disposal after meals. The small amount of refuse involved in any one depositional episode makes for lower interference potential and thus deposition closer to the house, within the general-activity area of the site core. This would explain why P concentrations tend to occur closer to the house than do Ca, K, and Mg. If this is correct, then the high concentrations of P along the northern interior wall of the house (**Figure 21**, concentrations *a* and *c*), might represent zones of food preparation, situated to take advantage of light at an open door. A final aspect of the distribution of Ca, K and Mg is worthy of note. We have seen that in the 20, 10 and 2.5-foot samples, the area north-northeast of the house has consistently low levels of Ca, K, and Mg. This may point to the location and orientation of a path, that was kept clear of debris, running from the front of the house to the Third Roundabout.

There is clearly unexplained variation in the distribution of chemical elements across the site. Some of the residual variation is probably caused by spatial inhomogeneity in the chemical composition of the greenstone parent material on which the soil across the site has weathered. However, major features of the distribution of the four elements discussed here fit comfortably with the radial model of site structure, and the division of the site into general and special activity zones based on the cost surface analysis. The fit

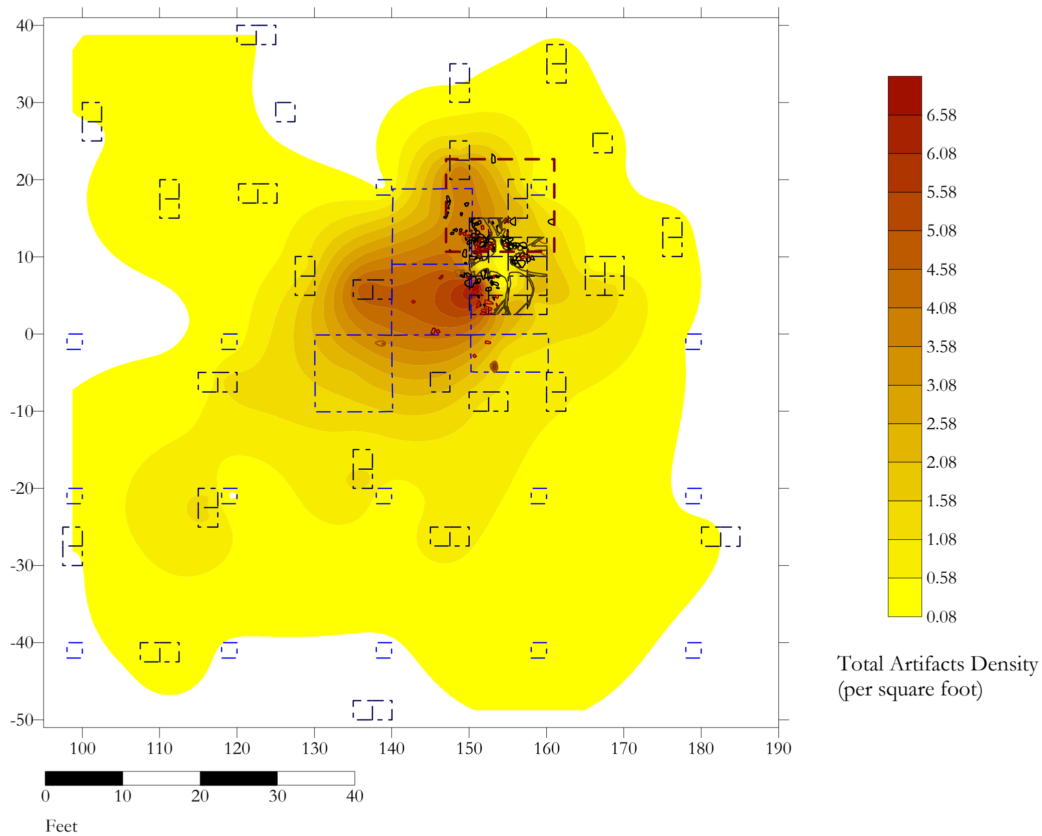

Figure 24. *Total artifact density contour map for test squares around the Elizabeth Hemings house site.*

supports the primarily anthropogenic origin of these distributions.

Artifact Distributions

Additional insight into the use of space inside and outside the general-activity core of the Hemings Site can be had from the study of the spatial distribution of artifacts that were recovered in quarter-inch mesh screen from the excavated quadrats. Again we use contour maps estimated with the Kriging interpolation method to portray the spatial patterns. A map of the distribution of all artifacts combined clearly shows that the great majority of artifacts were dumped to the south or behind the Hemings structure, but within the general activity-core (**Figure 23**)[3]. The majority of the artifacts mapped here are nails and ceramics (see **Appendix 1** for complete artifact inventory). Once broken or disused, most of these artifacts would have minimal interference potential, and their deposition within the site core is not unexpected. As we shall see, however, there are informative exceptions to this generalization. As **Figure 23** makes plain, artifacts were on occasion discarded outside the site core. Two low density concentrations, due east and west of the house, fall in roughly the same spots as the large concentrations of Ca, K, and Mg discussed in the previous section. Their spatial coincidence supports the idea that, like the artifacts, at least some of the chemicals were transported from the house to the site periphery.

Within the site core, artifacts are concentrated in two areas (**Figure 24**). The first is a large concentration, about 15 feet in diameter, that lies behind the house, just off its southwest

[3] Due to various quadrat sizes, all distribution maps reflect artifact density instead of artifact counts. The 2.5 foot square unit is the median quadrat size and the artifact density of 0.08 (minimum plotted density) represents an artifact count of 0.5 for a unit of this size.

corner. Most of the artifacts in this concentration were probably broken in the house and then transported to this location in the yard. The southern edge of this yard midden coincides with the southern boundary of the yard as predicted by the cost surface analysis described above. The second area of artifact concentration partially falls within the suspected house boundaries, north of the hearth. Smaller in area and less dense than the yard midden, this scatter is roughly 10 feet across. Unlike the yard midden, the smaller concentration may largely be comprised of artifacts generated during the destruction of the house, not deposition associated with its ongoing occupation.

Additional insight into the processes responsible for artifact deposition can be had by considering variation in the spatial distributions of different classes of nails and ceramics. We begin with nails. Both hand-made wrought nails and machine-made cut nails occur on the site, with the former outnumbering the latter. The occurrence of both nail types means that during the occupation of the site cut nails had begun to replace wrought nails, at least for some purposes. These two nail types have slightly different spatial distributions (**Figure 25**). In both cases, we find a concentration to the west of the house. However, the locations of concentrations closer to the house differ. There are two modest cut-nail concentrations associated with the hearth – one just to north, under the house, and the other just to the south. In contrast, wrought nails cluster under the northwest corner of the house. This difference could register temporal differences in locations of nail disposal. On the other hand, it might also reflect different functional roles for wrought and cut nails. We can choose between these alternatives by further dividing wrought nails into two classes: construction nails greater than 2 inches long and finishing nails less than or equal to 2 inches long (**Figure 26**). The finishing nail distribution is nearly identical to the cut nail distribution, with its signature concentration just north and south of the hearth. This suggests that cut nails and wrought finishing nails were put to similar uses, which differed from the uses to which construction nails were put. The association between cut and wrought finishing nails and the hearth is compatible with the idea that they were used preferentially in the construction of the chimney, perhaps in nailing the laths over which mud was plastered. This would mean that the nail concentrations beneath the house are derived from its destruction, not from ongoing nail disposal during the occupation. The significance of the wrought construction nail concentration under the north west corner of the house is not apparent. Finally, it is worth emphasizing that the biggest nail concentration occurs not where the building once stood, but where the bulk of refuse generated during the course of the occupation was discarded.

Ceramics are the other major constituent of the yard midden. Examination of the spatial distribution of pearlware and creamware reveals some startling differences (**Figure 27**). The pearlware distribution resembles the various nail distributions: the biggest concentration of pearlware occurs off the southwest corner of the house. However, the distribution of creamware is dramatically different. The bulk of the creamware concentration lies further from the site core as estimated by the cost surface. What might account for the difference? Given the documented differences in manufacturing dates for the two wares, 1762-1820 for creamware and 1780-1820 for pearlware, it might be suggested that early in the occupation trash was transported farther from the house for deposition than later in the occupation. But it is not clear why this might be.

A better explanation relates to the radial model of site structure and the differences in the interference potential of sherds from vessels in creamware and pearlware on the Hemings Site. As we will see in the next chapter, vessel shapes are very differently distributed across the two ceramic ware types. Creamware vessels are nearly exclusively hollow forms like tea bowls and saucers. The latter were deep and bowl-like in the 18th and early 19th centuries. The majority of pearlware vessels are flat forms: plates and platters. Pearlware sherds therefore could be relied upon to lie flat on the ground, while the curved creamware sherds would protrude. Because of their greater interference potential, discarded creamware shreds were transported past the edge of the site core for discard. Examination of the distribution of Chinese porcelain across

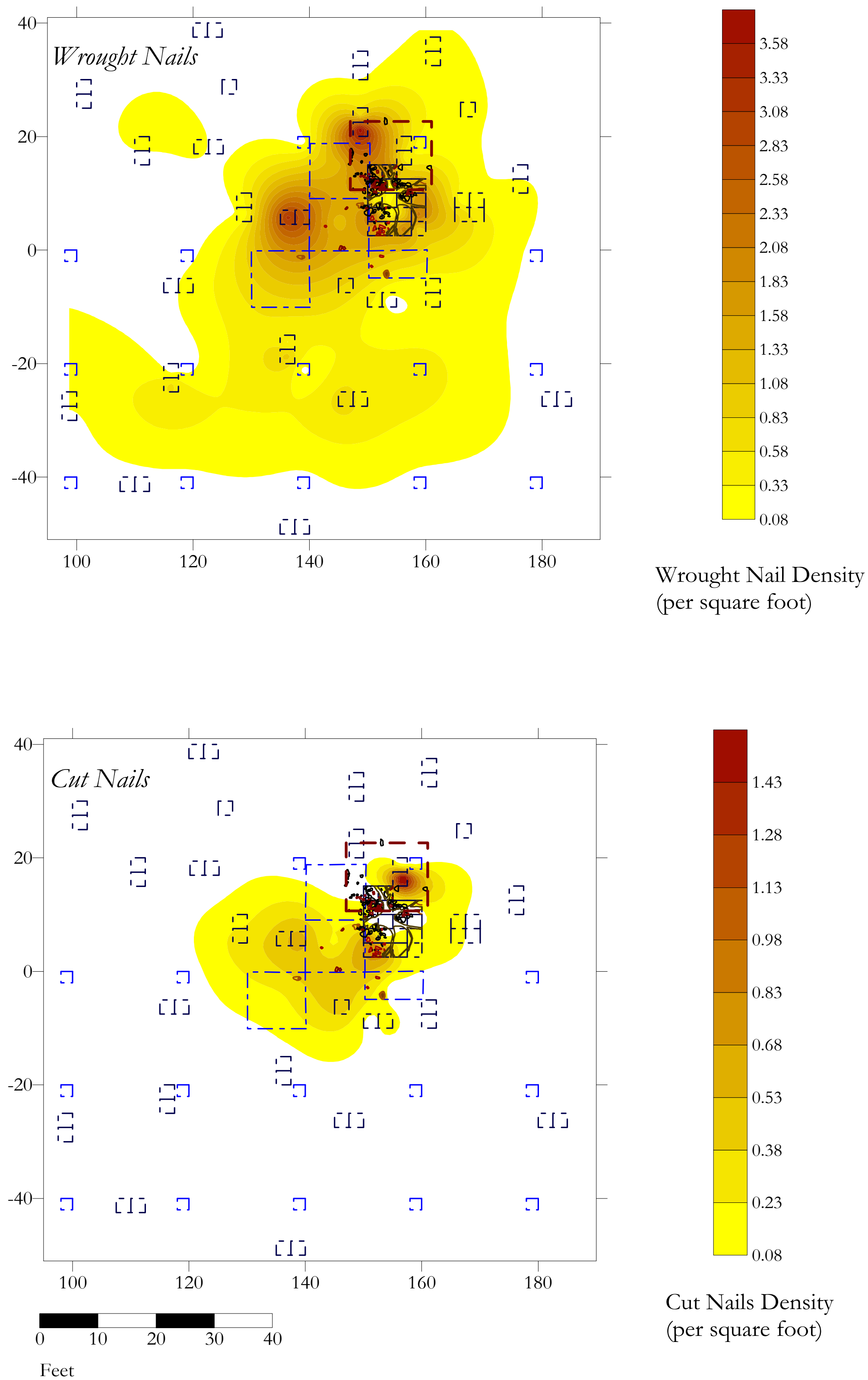

Figure 25. *Distribution of wrought nails (top) and cut nails (bottom) at the Elizabeth Hemings site.*

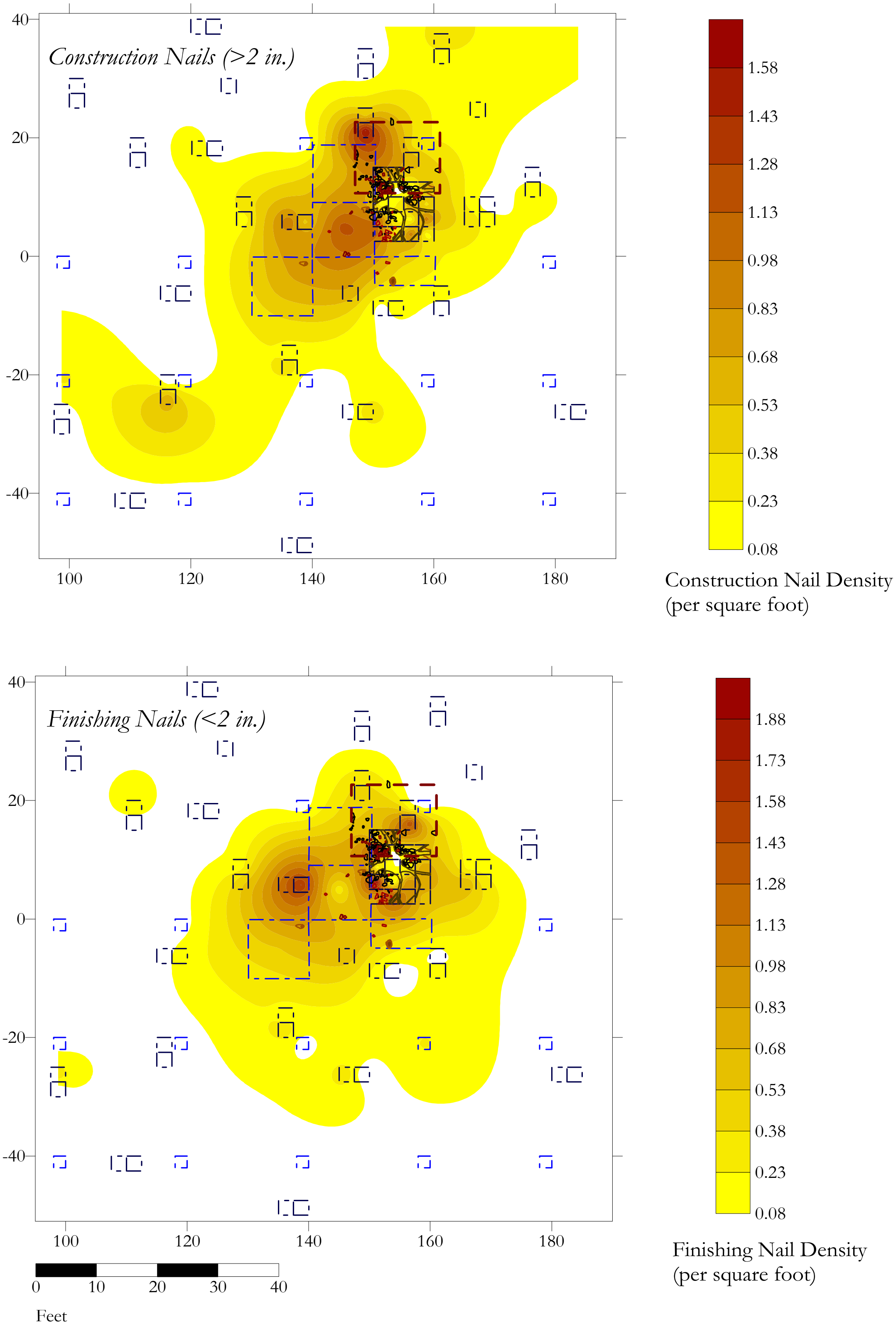

Figure 26. *Distribution of construction nails (top) and finishing nails (bottom) at the Elizabeth Hemings site.*

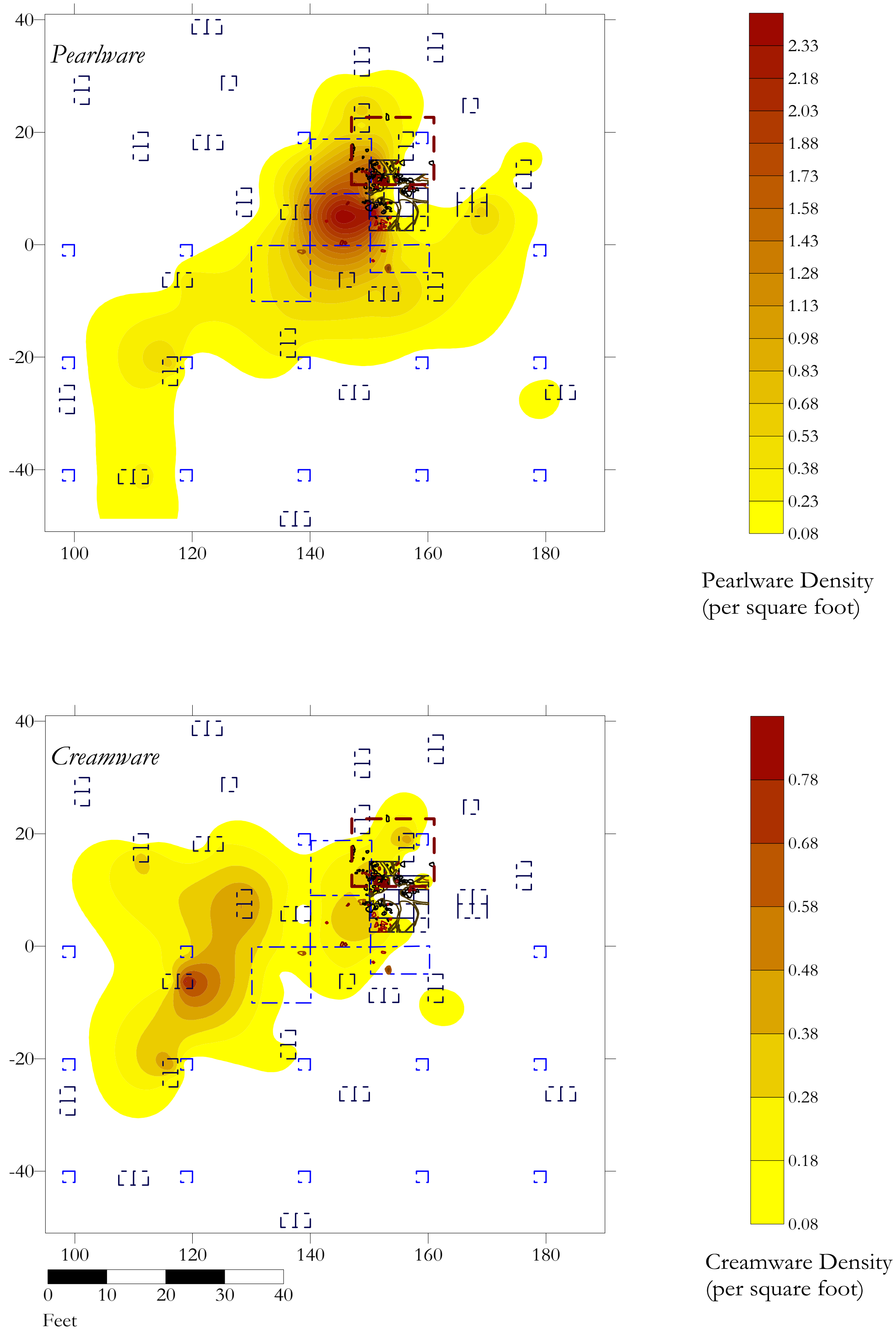

Figure 27. *Distribution of pearlware (top) and creamware (bottom) ceramic sherds. The mostly curved, holloware form creamware sherds are found further away from the house site than the mostly flat pearlware sherds.*

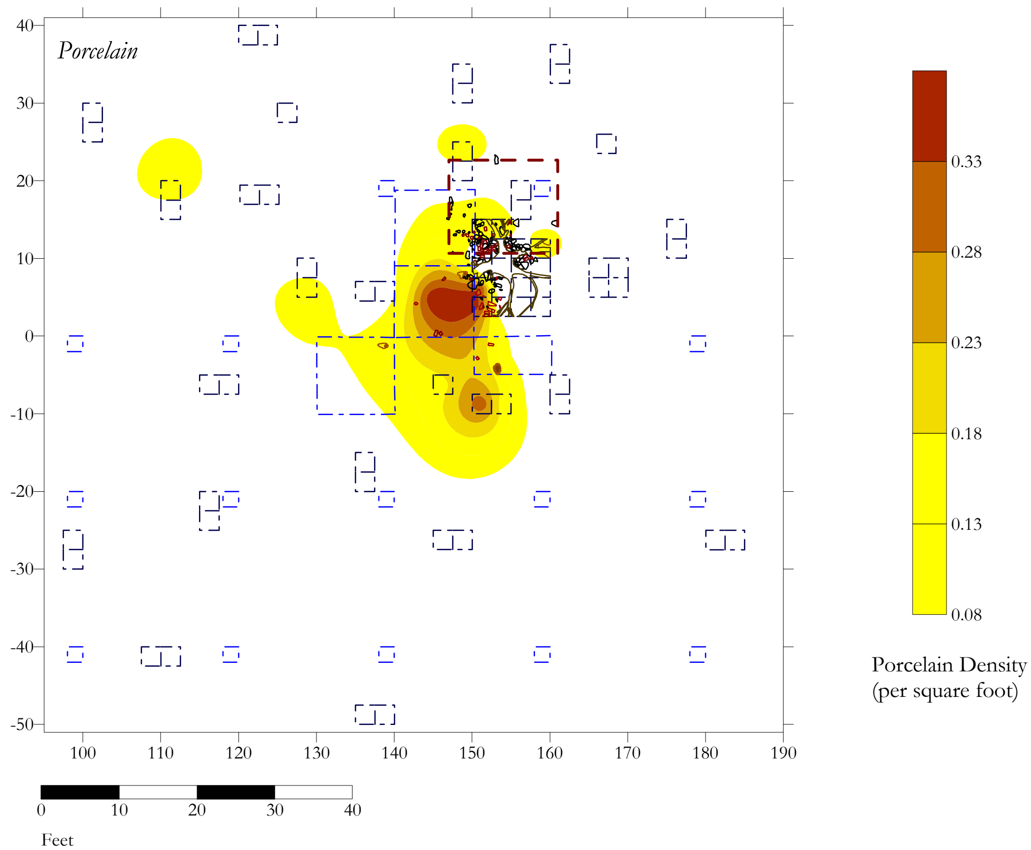

Figure 28. *Distribution map for Chinese porcelain sherds. Note the similar distribution to the pearlware sherds.*

the site offers an opportunity to evaluate this explanation. If interference potential is the key variable, then the Chinese porcelain distribution should resemble the pearlware distribution, since the former, like the latter, were derived nearly exclusively from plates (**Figure 28**). This expectation is met.

Phytolith Analysis

Today the Hemings Site lies in a hardwood forest, dominated by oak, hickory and poplar. Recent estimates place the age of much of this stand on the order 100 to 150 years (Tice 1980). Was this the condition of the site when Hemings occupied it 200 years ago? Evidence to address this question can be had from phytoliths, microscopic silica bodies that many plant species build in the interstices between their cells. Aspects of cellular structure are preserved in phytoliths. To the extent that structure is taxonomically distinctive, phytolith shapes offers clues about the kinds of plants that produced the phytoliths.

Seventeen phytolith samples were collected from the Hemings site. The samples came from eight discrete locations: four near the cobble scatter, three adjacent to the house, and a single sample on the western extremity of the site. The sample locations were chosen to make it possible to study, at a gross level, spatial variation in vegetation cover across the site, with the house and cobble scatter as central features of interest and the western most sample as an "off-site" control (**Figure 29**). At seven of the sample locations, two samples were retrieved from the A-horizon at depths of 0.3 and 0.5 feet. Two of these locations, both near the house, yielded only a single sample with enough phytoliths for counting (Samples 270 and 254, see **Figure 29**). Three samples were taken from the eighth location at depths of 0.3, 0.5 and 0.75 feet. The different sample depths were intended to capture change over time in phytolith frequency.

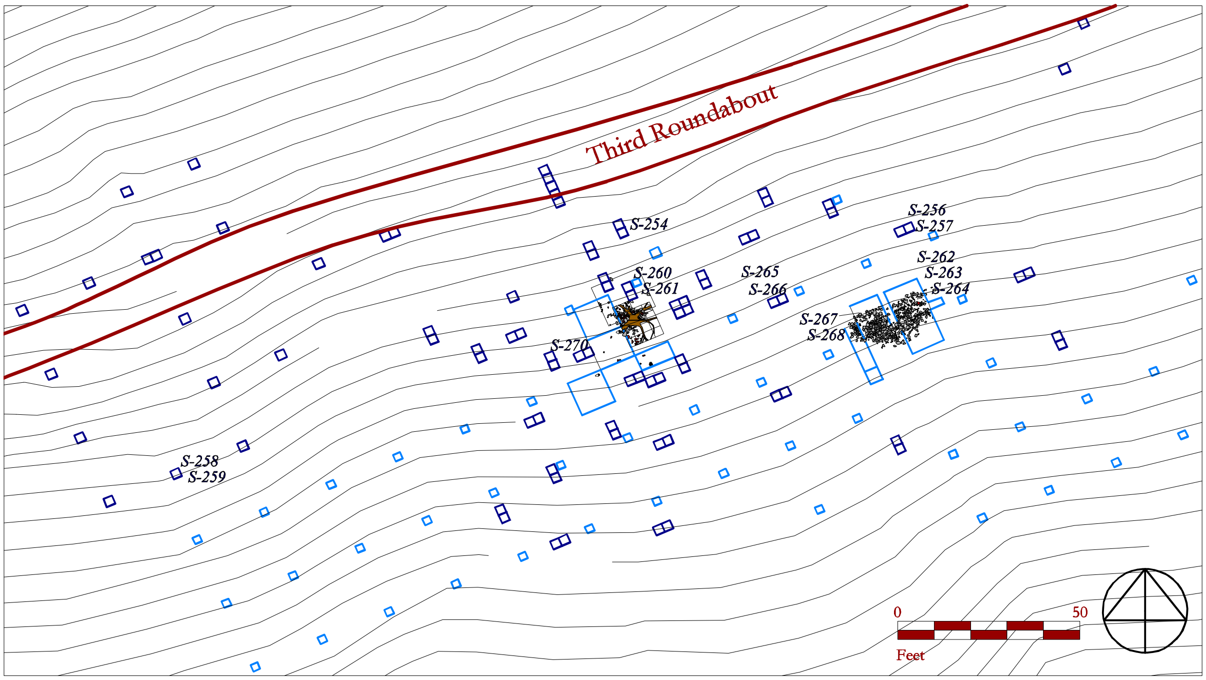

Figure 29. *Phytolith sample locations denoted by their sample number.*

The phytolith identifications reported here were carried out by Dr. Lisa Kealhofer at the Colonial Williamsburg Phytolith Lab (Kealhofer 1998). Phytolith samples were processed by standardized techniques outlined by Piperno (1988), with a few modification in chemicals used and processing times. Soil processing for the mostly clay Piedmont soils required approximately two months before the identification and quantification of the phytoliths commenced. After removal from the sediment matrix, the phytoliths were mounted on microscope slides and viewed at 400-times magnification.

The silica bodies were classified in detail by shape. Groups of shapes were in turn assigned to sub-families of the grasses (*Pooideae, Panicoideae*, *Chloridoideae*, and *Bambusoideae*), the arboreal dicots, and to two families of herbaceous plants (*Cyperaceae*, *Compositae*). With very few exceptions, phytolith analysis is not refined enough to identify phytolith shapes to the species or even genus levels. However, assignment of phytoliths to one of the seven major taxonomic groups mentioned above is still very helpful in interpreting past micro-environments at Monticello. In this report we describe patterning among these seven major taxa, and leave a discussion of variation in phytolith shape classes for a future occasion. The grass sub-families are of special analytical interest. The Pooid grasses are generally found in cool, dry and open environments. Some members of this sub-family include the European cultigens of wheat, oats, and barley. The panicoid grasses thrive in warm, wet environments. Corn (maize) is a panicoid grass. Chloridoid grasses, on the other hand, tend to be found in hot, dry areas such as pastures or other open grasslands. Most chloridoid species tolerate the extremes of high temperatures and aridity better than the other grasses.

Most panicoid and chloridoid species use the C-4 photosynthetic pathway and are native to the New World. Most pooid grasses use the C-3 pathway and, in a Virginia context, many are Old World Natives. Finally, the Bambusoideae are best suited for wet environments, and are found predominantly within the tropics and sub-tropics. Rice is one member of this sub-family (Twiss 1992). The distinctive habitat preferences of the panicoid, chloridoid, and pooid groups raise the possibility of using phytoliths frequencies in habitat reconstruction. The correlation with Old and New World origins in a Virginia context raises the additional possibility that change in grass phytolith frequencies may reflect ecological replacement of native by European grasses.

Grass Sub-Family	Commonly Known Members	Modern Frequency	Environment
Pooideae	wheat, barley, oats	40%	dry, cool, open
Panicoideae	corn (maize)	30%	warm, wet
Chloridoideae		15%	hot, dry
Bambusoideae	rice	5%	wet

Table 2. *Relative frequencies of grass sub-families expressed in percent of species in total grass flora. Data extrapolated from frequency maps.*

Recent research into the modern distribution of these sub-families of grasses show that within Virginia, the Pooid grasses comprise, on average, forty percent of the total grass species. Panicoid grasses make up thirty percent, the Chloridoids approximately fifteen percent, and the Bambusoids another five percent (**Table 2**) (Twiss 1992). Comparing these data to the Hemings phytolith samples presents many problems. First, the frequencies listed in **Table 2** are for the entire state of Virginia, and it is not known how much the Piedmont region in general, and Monticello specifically, deviates from the norm. Second, the frequencies reflect the number of grass species within each taxon, and not the number of individual plants, or the amount of phytoliths that each plant generates. No work has determined the relationship between species numbers and the number of phytoliths they produce. Finally, with the introduction of many exotic plants over the last two centuries, the modern frequencies are most likely not applicable to the past. Recent analysis, in fact, raises the possibility that there was a general replacement of native panicoid grasses by exotic pooids during Jefferson's lifetime (Metz et. al. 2000; Sullivan 1999, and see below).

A simple approach to analyzing the phytolith data is to compare variation among samples in the relative frequency of pairs of phytolith taxa, where the taxon pairs have been chosen to emphasize the habitat and ecological correlates outlined above. Consider first stratigraphic trends, as measured by phytolith totals at the .3 and .5-foot depths, summed across all sample locations (**Table 3**). There is a statistically significant decrease in the C4 Index, computed as C4/(C4+C3), 45% in the .5-foot levels to 41 % in the .3-foot levels. This is driven by a decrease in the chloridoid grasses, relative to the pooids. In addition, the Panicoid Index (panicoid/(panicoid+pooid)) decreases slightly from 24% to 22%. A negative correlation between the arboreal index and the C4 index is what we might expect, if the local ecology were left to its own devices: fewer trees should encourage the proliferation of heat and drought-tolerant C4 grasses. As we have seen, however, the temporal trend at the site is the reverse: fewer trees are accompanied by decreases in C4 grasses. This supports the idea that C3 grasses increased in frequency over time at Monticello and that the

Level	C4 Index	Panicoid Index	Chloridoid Index	Arboreal Index	Herbaceous Index
.30 feet	0.41	0.22	0.28	0.25	0.10
.50 feet	0.45	0.24	0.33	0.32	0.02
.75 feet	0.48	0.37	0.25	0.23	0.02

Table 3. *Variation in relative frequencies of phytolith taxa by depth. Note that there is a single sediment sample from the .75-foot level, while the other levels have 6 samples each. The availability of only a single sample may explain apparently anomalous values for the .75-foot level.*

increase was helped along by human introduction and manipulation.

In addition to the shift in grass species at the site, there was also a change in tree cover. The Arboreal Index (arboreal/(arboreal+grass)) decreases significantly over time at the site, going from 32% in the .5-foot samples to 25% in the .3-foot samples. This is further supported by a parallel increase from 2% to 10% in the Herbaceous Index (herbaceous/(herbaceous+arboreal)). As the tree cover was removed, shrubs increased.

How did the timing of this change relate to the Hemings occupation? The .3-foot phytolith samples came from a zone just below the A-horizon that had developed since the abandonment of the site. Hence they reflect, in a general way, conditions at the site when it was occupied. The differences between the upper samples and the lower samples taken at .5 feet represents the general direction of change over time. It is likely that the lower samples contain phytoliths that were initially deposited when the site was occupied and the upper samples contain phytoliths deposited after the site was abandoned. This movement down the stratigraphic column is an expected consequence of illuviation and bioturbation. The direction of change leading up to the Hemings occupation is clear and indicates that when Hemings lived at the site, it was not forested as it is today.

The phytolith sampling campaign offers a glimpse of spatial variation at the site as well (**Table 4**). The predominance of chloridoid grasses in all the samples (see below) suggests that much of the spatial variation monitored dates to a time when the site was open. The C4 Index is greater in the samples distant from the Hemings house. Statistically significant variation in both chloridoid and panicoid grasses, relative to pooids, drives this contrast. Note that the Arboreal Index displays precisely the opposite pattern, with significantly higher frequencies of tree phytoliths in the samples close to the house. The logical inference is that the area adjacent to the house had a higher density of trees than did the areas further away, which were dominated by grasses adapted to hot and dry conditions. This pattern of spatial variation matches the ecological expectation of the a negative correlation between the arboreal index and the C4 index. Note that the area with higher tree density corresponds to the site core, as defined by the cost surface analysis. The preservation of trees adjacent to Hemings's house would have offered the advantages of shade.

So far our discussion has highlighted gross trends in phytolith frequency in time and space. It was worth noting that depth and sample location, taken one at a time or together, do not fully explain variation in phytolith frequency among the individual samples. One symptom of this unexplained variation is the fact that the differences between the .3 and .5-foot phytolith samples from a given location to not necessarily match the depth trend for the entire site. Statistical modeling of phytolith frequency variation using multinomial logistic regression reveals that, for the most part, these departures cannot be explained as sampling error. There are several possible explanations. As we have seen, it is evident that there is considerable movement of phytoliths in the actively weathering soil horizon on the site. Illuviation and bioturbation guarantee that the phytolith assemblages from a given depth are massively time-averaged. If movement rates vary among sample locations, and they almost certainly do, then phytolith samples from the same depth will sample different periods of time. A second possibility is that the phytolith counts

Location	C4 Index	Panicoid Index	Chloridoid Index	Arboreal Index	Herbaceous Index
Cobbles	0.44	0.26	0.30	0.26	0.06
House	0.34	0.16	0.24	0.36	0.06
"Off Site"	0.52	0.30	0.40	0.25	0.02

Table 4. *Variation in relative frequencies of phytolith taxa by location.*

may not be statistically independent of one another, as is assumed in the binomial and multinomial sampling models that are the basis for statistical evaluation. In other words, the presence of one tree phytolith in a sample may make the presence of another one more likely. This kind of statistical "contagion" in counts of individual taxa would result from the fact that phytoliths enter the archaeological record in clumps (e.g. a leaf) and not one at a time. It is likely that both these factors explain idiosyncratic sample variation at the Hemings site. Clearly the issue of phytolith taphonomy in pedogenic contexts requires further exploration. The kind of fine-grained vertical sampling (e.g. at .1-foot intervals down a soil horizon) required to clarify this issue is a high priority for future research.

Additional light on the environmental implications of the Hemings phytolith assemblages can be had by comparing them to phytolith samples from elsewhere at Monticello. We chose scatter plots as the most effective means of doing this. In order to enhance our ability to see patterns in these data, we used log-ratio transformations (Aitcheson 1982). Logratio analogs of the various indices used above were computed by adding 0.5 to all counts, dividing one count by its companion, and transforming to natural logs before plotting. These steps reduce the distorting effects of outlier values and zero counts, and improve symmetry of the marginal distributions As an aid in reading the graphs, recall that the log of 1 is 0. Hence samples with negative log ratio of 1 have equal frequencies of the two phytolith taxa used in the ratio.

Consider first the plot of C3/C4 and

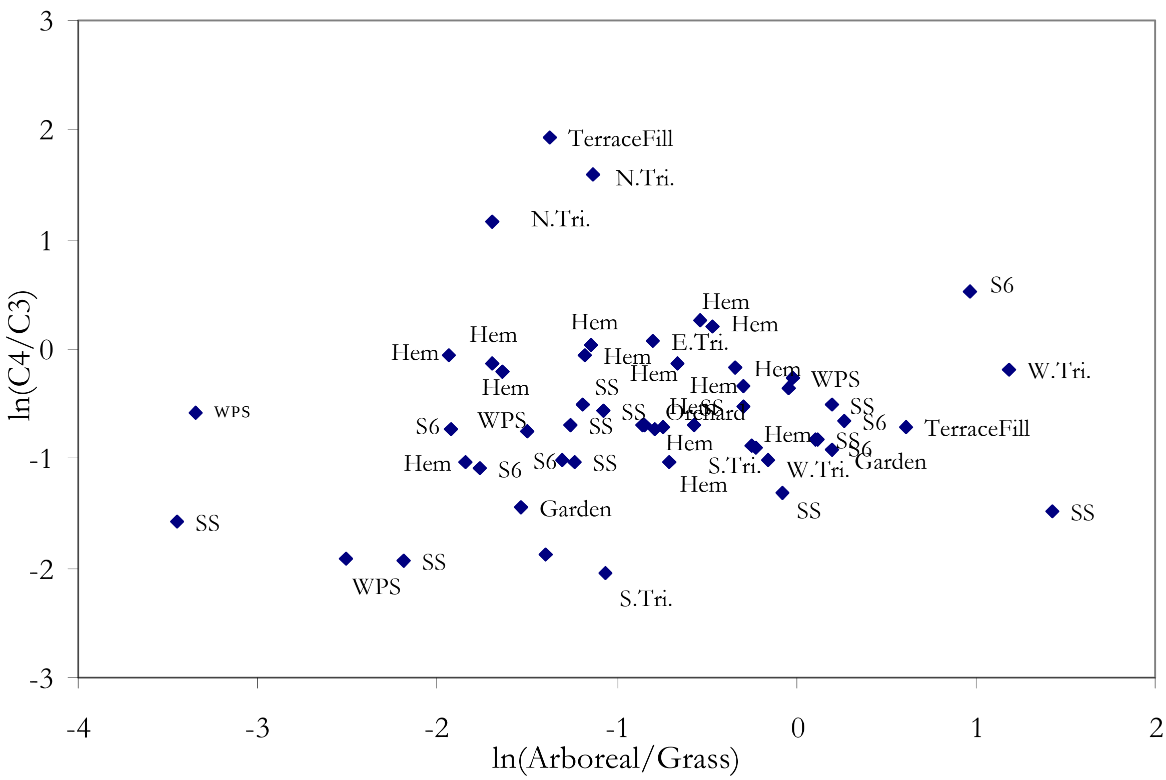

Figure 30. *Plot of logratios for C3 vs. C4 grass phytoliths and arboreal vs. grass phytoliths. The Hemings Site samples are denoted by "Hem". Samples from other locations at Monticello are shown for comparative purposes. Terrace Fill: samples from soil horizons buried by the construction of Jefferson's garden terrace in 1809; N, S, E, and W Tti: samples from Jefferson's planting beds in the tops of the north, south, east and west corner triangles of Monticello Mansion; Garden and Orchard: modern reference samples from currently cultivated beds in the vegetable garden and from the surface of the South Orchard; SS: samples from sediment eroded into the South Spring drainage after 1830, but before 1900.*

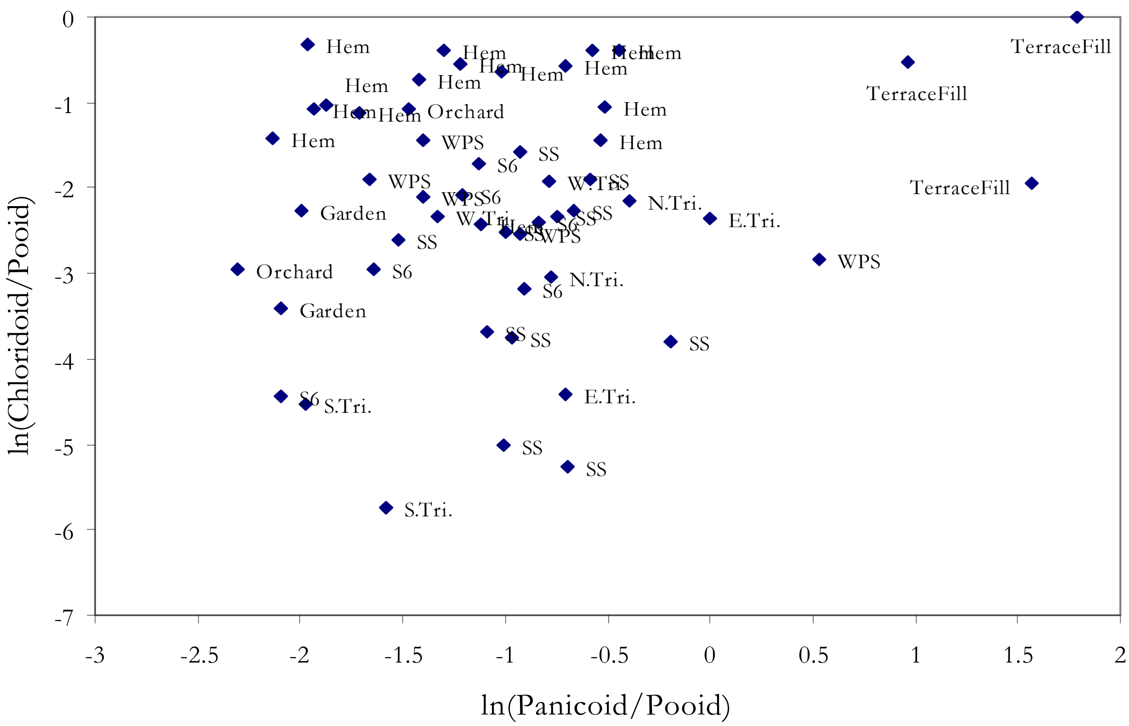

Figure 31. *Logratio plots for chloridoid vs. pooid and panicoid vs. pooid grasses. Labels are the same as in Figure 30.*

Arboreal/Grass ratios (**Figure 30)**. The predominance of negative values in the y-axis indicates that nearly all the Monticello samples are dominated by C3 or pooid grasses. However is its clear that nearly all the Hemings samples are richer in C4 grasses than nearly all other samples. The most important exception is three samples from the fill that comprises the vegetable garden terrace, completed in 1809. The terrace fill is derived from topsoil that covered an earlier vegetable garden in the same location. The historically documented cultivation of corn in this earlier vegetable garden is a partial explanation for the elevated C4 ratios. If the terrace C4 ratios are a typical signature for sustained maize cultivation in a garden context, then the sampled locations on the Hemings site never saw this activity.

Variation among the sites in the arboreal ratio lends support to our earlier conclusion that most of the sampled locations at the Hemings site were denuded of trees at the time of the occupation and later reforested. If this is correct, then we can expect areas on the mountain that have never been reforested since they were initially cleared in the 18th century to have lower arboreal ratios than Hemings. Two such areas can be identified. The first is the modern orchard, which has been in grass from Jefferson's time until today. The second is the fill beneath the vegetable garden terrace, which represents an area cleared by Jefferson in the 18th century and then sealed in 1809. The Orchard samples are a time-averaged mixture of two centuries of grass cover and the pre-Jefferson forest. The garden terrace samples represent a similar mixture, but with only several decades of grass cover before begin sealed. It makes sense then that the mean arboreal ratio for the orchard samples (-2.19) is lower than the mean for the garden terrace (-1.4), which is in turn lower than the mean for the Hemings site (-.99).

The logratio plot for Chloridoid/Pooid and Panicoid/Pooid grasses further increases our understanding of the Hemings site assemblages (**Figure 31**). The Hemings samples have highest chloridoid ratios, matched only by the garden terrace and one of the modern orchard samples. Both the latter areas have southern exposures and were denuded of tree cover, confirming that a similar situation once existed at the Hemings site. The cause of the extraordinarily high C4/C3 ratio values in the garden terrace samples is now evident: the superabundance of panicoid grasses, the subfamily to which maize belongs. The pattern further weighs against the cultivation of maize in the sampled locations of the Hemings site.

4. Artifacts

Ceramics

The artifact assemblage recovered from the Elizabeth Hemings site was relatively small, not surprising given that the dwelling was inhabited for only about a decade and probably by a single individual. Recovered sherds point to over thirty ceramic vessels, however, and these were almost exclusively creamware, pearlware, and Chinese porcelain. A half dozen upholstery tacks, two buttons, a woman's brass shoe buckle, and a slate pencil add to the archaeological inventory of household goods. Aside from a small amount of table and bottle glass, the remainder of the assemblage consisted largely of architectural debris, that is, nails and fragmented brick.

A primary analytical tool applied to the artifact assemblage was a conservative, or minimum count of individual ceramic vessels as represented by the excavated sherds. This Minimum Vessel Count offers only a partial image of Elizabeth Hemings' goods related to food consumption; unrepresented are those vessels that probably were removed to other households upon her death, and not seen are the pewter vessels that might have comprised part of this assemblage. Nonetheless, the ceramic sherds offer some indication of ware and vessel types used during Hemings's occupation of the site.

Analysis of the ceramic assemblage revealed a minimum of 33 vessels. Fourteen pearlware vessels comprised 42.42% of that total; nine creamware and eight Chinese porcelain vessels represented 27.27% and 24.24% respectively. One blackglazed redware vessel and one white saltglazed stoneware, decorated with a "debased" scratch blue design, each represented 3.03% of the assemblage. A pearlware plate fragment, whose evenly scalloped, straight-lined shell edge dates from after the time of Hemings's 1807 death (c.1810-30), was not included in the vessel count. Similarly, a Rockingham jar rim dating post-1830 was not included, as it clearly postdates Hemings's occupation of the site. Both of these vessels were excluded from further analysis.

Aside from the preponderance of pearlware, the vessel count revealed some correspondence between ware type and vessel form: pearlware and Chinese porcelain vessels were mostly flatwares, or dinnerwares, while creamware vessels were mostly tea wares (**Table 5**). Half of the pearlware vessels were dinnerwares: six plates and one platter, out of a total of fourteen vessels (one can, two saucers, three bowls, and a chamberpot completed the assemblage of pearlware) (**Figure 32**). All but one of the Chinese porcelain vessels were flatware: five plates and two platters (the remaining vessel being a tea bowl). By contrast, the majority (67%) of creamware vessels were teawares: three tea bowls and three saucers (the remaining creamware is represented by fragments of a possible creamer, a single plate, and a chamberpot). The blackglazed redware vessel was an unidentified hollow form, as was the white saltglazed vessel (though the latter probably was a chamberpot). This relation between vessel form and ware type was noted earlier, along with a corresponding spatial distribution pattern of the discarded sherds and will be discussed in more

	Flatwares			**Hollow Forms**							
	plate	platter	**Total**	tea bowl	saucer	bowl	can	creamer	ch. pot	unid	**Total**
pearlware	6	1	**7**		2	3	1		1		**7**
porcelain	5	2	**7**	1							**1**
creamware	1		**1**	3	3			1	1		**8**
white salt glaze									1		**1**
blackglazed redware										1	**1**
Total	12	3	**15**	4	5	3	1	1	3	1	**18**

Table 5. *Minimum vessel count for the Elizabeth Hemings site.*

detail below.

Twenty-nine vessels from the Hemings occupation could be dated solidly and were used to produce a mean ceramic date of 1790.3 (**Table 6**) (see South 1977:210-212). This averaged date reflects an assemblage that included older and well-used creamware, pearlware, and porcelain vessels, along with several pieces of more recently acquired pearlware.

It is instructive to look at the vessels individually. With the exception of an overglaze painted saucer all of Elizabeth Hemings's creamware was undecorated; all creamware pieces however were very light in tint, placing their probable manufacture after the mid-1770s. Missing were annular decorated vessels that became common c. 1790. Among the pearlware, Hemings's shell-edged plates were all the rococo style popular from 1780-1810; two were green edged, three were blue. A blue, rococo shell-edged platter had additional moldings of beads and swags; it is contemporaneous with the plates. An additional plate/platter, painted with a blue floral motif, also dates from this period. Numerous cuts or scratches in the glaze attest to heavy and/or long use. A slop bowl, saucer, and chamberpot painted in blue with floral or Chinese motifs date c. 1780-1810 as well. More up-to-date were a polychrome painted saucer and can, or small mug (date range 1795-1830), and an annular decorated bowl (1790-1820). Three of the porcelain plates recovered from Hemings's yard midden were painted with Nanking II-style motifs that date from 1785-1800; all three featured a "blue willow-" type landscape in the central panel. A "blue trellis" border (1690-1790) encircled the rim of a fourth plate while a fifth had a simple, hatched border. "Blue spearhead" motifs decorated a fairly old (1735-1770), octagonal-rimmed plate/platter, and a tea bowl also had a "blue trellis" border. All of the porcelain was painted in blue under the glaze; there were no overglaze enamels or gilding. The single white saltglazed stoneware vessel, a globular, unidentified hollow form (probably a chamber pot), was decorated with a "debased" scratch blue floral motif that dates c.1765-1790 (for more on dates of porcelain decoration motifs, see Madsen 1995).

The ceramic assemblage from the Hemings site offers unique analytical opportunities at several spatial and temporal

Figure 32. *Pearlware bowl recovered from the Elizabeth Hemings site.*

WARE AND DECORATIVE MOTIF	DATE RANGE	COUNT	MEDIAN DATE
white saltglazed stoneware, debased scratch blue	1765-1790	1	1777.5
creamware, lighter tint	1775-1820	9	1797.5
pearlware, rococo molded	1780-1810	6	1795
pearlware blue painted wares, chinoiserie	1775-1810	4	1792.5
pearlware, annular/"warm" polychrome hues	1795-1830	3	1805
Chinese porcelain, Nanking II pattern	1785-1800	3	1792.5
Chinese porcelain "Blue Trellis" motif	1690-1790	2	1740
Chinese porcelain "Blue Spearhead" motif	1735-1770	1	1752.5

mean ceramic date = 1790.3

Table 6. *Mean ceramic date for the Elizabeth Hemings.*

scales. Taking advantage of them requires comparison of the Hemings assemblage with Monticello assemblages excavated from sites along Mulberry Row in the 1980s and from the Stewart-Watkins site in 1990. As we shall see, the Stewart Site provides a particularly informative comparison, given its almost precise contemporaneity with the Hemings occupation.

Consumption Patterns for Plates, Tea Bowls and Saucers

Ceramic data from these sites need to be understood in the context of long-term trends in the consumption of stylish ceramics that swept the Chesapeake and the rest of the Atlantic world in the 18th and early 19th centuries. During the late 17th and early 18th eighteenth centuries, consumers replaced traditional pewter drinking vessels with newly fashionable ceramic ones supplied by Staffordshire earthenware and stoneware potters and by German stoneware potters. This change is registered in a dramatic increase in the relative frequency of cups and mugs in the Chesapeake archaeological record (*e.g.* Neiman 1980; Beaudry *et al.* 1981). The early 18th century also witnessed the emergence among the wealthy of entirely novel ceramic vessel shapes--tea bowls and saucers--required to execute properly the social rituals surrounding tea consumption (Roth 1961). Evidence from probate inventories indicates that by the American Revolution most Chesapeake households contained at least one piece of the special equipment required to drink tea (Carr and Walsh 1994). Over the course of the last half of the 18th century, consumers in the Chesapeake and the rest of the English-speaking Atlantic world replaced their traditional pewter dining vessels with fashionable creamware, pearlware, and Chinese porcelain plates (Martin 1994). Martin has shown, using probate inventory evidence from Albemarle county, among other sources, that during its heyday pewter was ubiquitous in households at even the lowest economic and social levels, including households of slaves. The demise of pewter is currently best documented in data garnered from store invoices from Virginia and Maryland. Pewter plates declined from 73% to 2% of plates available for purchase between 1750 and 1810 (Martin 1989). These trends in ceramic usage are a part of a larger historical phenomenon, recognized by archaeologists as "Georgianization" (Deetz 1988, Leone 1988) and by social historians as the "consumer revolution" (*e.g.* Carson 1994).

To what extent were Monticello's residents participants in these developments? Getting an answer to this question from archaeological evidence requires a measure of vessel frequency that is sensitive to variation in discard rates, and use frequencies that drive them, among Monticello sites. Here we use two measures, the Plate index and the Tea Index. The Plate index (*PI*) is estimated as:

$$PI = \frac{plates}{(plates + bowls + mugs)}$$

where the numbers that comprise the index are estimates of the minimum number of vessels of each shape in the assemblage in question. The tea Index (*TI*) is estimated in a similar fashion.

$$TI = \frac{(tea\ bowls + tea\ saucers)}{(tea\ bowls + tea\ saucers + bowls + mugs)}$$

These indices have an advantage over simple percentages of the entire ceramic assemblage. They avoid spurious negative correlations induced by the closed-sum constraint. For example, a high percentage of tea wares might not be a larger-than-normal number of tea wares; instead it might result from a low number of some other category. The assumption here of course is that mug and bowl discard rates remained relatively constant.

It is clear that there is both substantively and statistically significant variation among Monticello sites in *PI* values (**Figure 33**). Despite gaps in our knowledge of the archaeological chronology of Mulberry Row sites, there is good evidence for increases over time in *PI* values. *PI* values are lowest in the Dry Well and Building *o* assemblages. The Dry Well assemblage is derived from the clay fill of a cool storage facility that was abandoned before it could be completed in the 1770s. The feature's proximity to Mulberry Row and Monticello's original kitchen dependency suggests that the assemblage derives from slaves living and working in that facility (*cf.* Crader 1990,

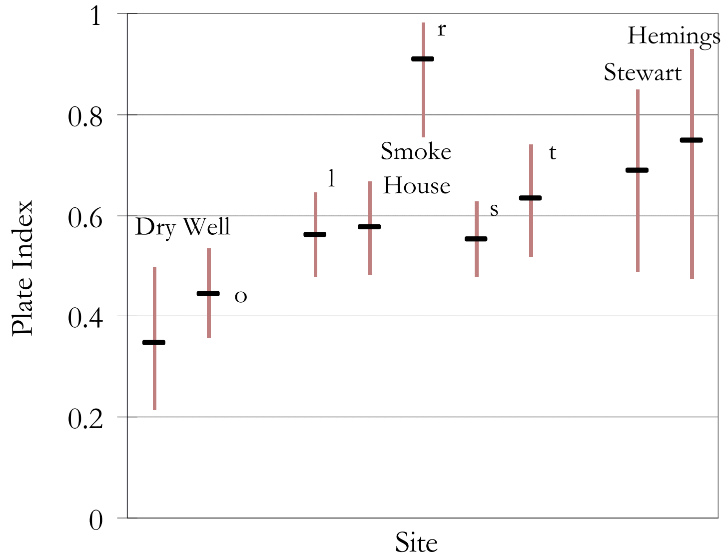

Figure 33. *Plate index values with exact 95% confidence limits for 7 Mulberry Row Sites and the Hemings and Stewart Sites. The Dry Well and Building o sites are known to be significantly earlier than the rest.*

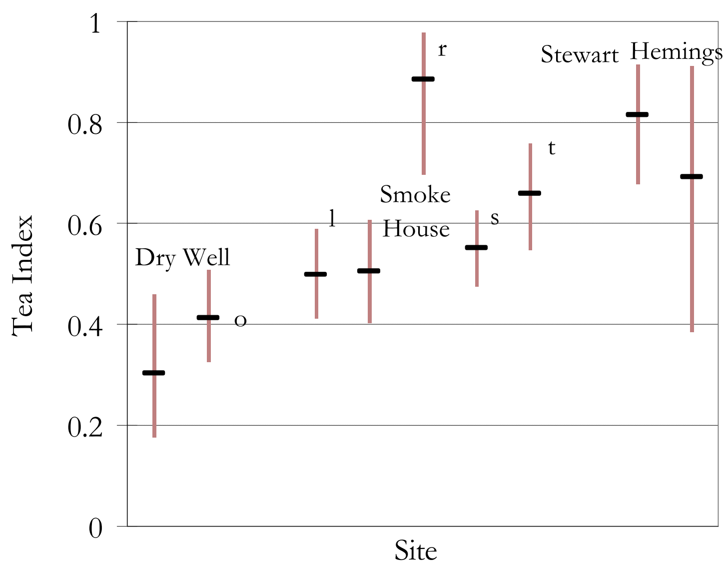

Figure 34. *Tea index values with exact 95% confidence limits for 7 Mulberry Row sites and the Hemings and Stewart Sites.*

Kelso 1997). Building *o* is located on Mulberry Row, and its occupation is currently thought to have ended by 1800 (Kelso 1997). Significantly higher *PI* values are found at the other five Mulberry Row assemblages, from Buildings *r, s, t, l,* and the Smokehouse-Dairy (*m*). Chronological control is poor, but the bulk of these assemblages is thought to date to the 1790s and the early 1800s (Kelso 1997). The Hemings and Stewart *PI* values are slightly greater than the values for the later Mulberry Row sites, with the exception of the anomalously high values for Building *r*. The tentative conclusion is that enslaved and free laborers at Monticello, like most Chesapeake residents, were increasing their investments in stylish ceramic plates at the expense of pewter. Elizabeth Hemings was a participant in this trend.

A similar pattern emerges for the *TI* values (**Figure 34**). Tea vessel discard rates clearly increased over time. Among the later Mulberry Row sites, Building *r* again emerges with an anomalously high value and it is nearly matched by the Stewart assemblage. The Hemings site falls in line with the later pattern of higher tea vessel frequency found on Mulberry Row. It is clear then that tea vessel discard rates increased along Mulberry Row during the late 18th and early 19th centuries. However, it is also evident that there is considerable variation among the later sites for both *TI* and *PI* values. In addition, this variation is strongly correlated: sites with higher *TI* values have higher *PI* values. For example, the Hemings Site has the second highest *PI* value and the third highest *TI* value in the sample.

What might this correlated variation mean? Our current working hypothesis is that *TI* and *PI* both measure the amount of resources that individuals responsible for an assemblage were willing to expend on acquiring ceramics of little or no practical utility. In other words, *TI* and *PI* represent forms of conspicuous consumption (Veblen 1899). Conspicuous consumption is a form of social advertising or costly signaling (Boone 1998; Neiman 1997; Smith and Bliege Bird 2000). In this model, social advertising is engineered to faithfully reflect the costs that must be born to maintain it. The costs that individuals are willing to bear for social advertising are a function of the level of material and social resources to which they have access and the payoffs to letting others know it. Payoffs increase as familiarity between advertisers and receivers declines and as individuals's resource levels become more difficult for receivers to ascertain directly, without the help of cues from conspicuous consumption (Neiman 1997). Conspicuous consumption is an advertising strategy in which signalers attempt to attract useful social allies and deter competitors by sending costly signals of their social and economic power that cannot be counterfeited.

If this is right, then our results indicate that levels of resource access and/or the advertising payoff increased at Monticello over time and that the Hemings assemblage falls at the higher end of the continuum, although its small sample size and correspondingly large confidence limits add uncertainty. Additional uncertainty is forthcoming from the poor chronological control for the Mulberry Row assemblages. For example, it is not clear that the Building *r* assemblage's *PI* and *TI* values are high because the assemblage is much later in time than the others, or because the individuals who generated it invested significantly more resources in social advertizing than their contemporaries. If time proves not to be a significant factor, then one could conclude that resource access levels and/or advertising payoffs were higher for Elizabeth Hemings, the enslaved residents of building *r,* who themselves may have been her descendants, and for the free blacksmith William Stewart. This would make sense to the extent that the social and economic resources of the Hemings site's and Building *r* 's residents depended on maintenance of favorable relationships with Jefferson and his white family, relationships whose character was difficult for others to judge without material cues. Stewart, despite the fact that he was free, may have been in a similar position, although freedom brought both greater economic resources and more contacts with people who were unfamiliar with the Monticello social scene. Ongoing research, conducted as part of the Mulberry Row Reassessment Project and aimed at finer-grained chronological control of these assemblages should clarify the picture considerably.

Cost Implications of Ceramic Plate Discard Rates

The forgoing reading of assemblage variation depends on the assumption that both *PI* and *TI* are correlated with the costs incurred by an assemblage's users. The case is easier to make for *TI* values. After all, ceramic tea vessels represent an entirely novel form of expenditure, and the more tea you drink, the more tea ceramic vessels you break. The case is not as clear cut for ceramic plates because they are replacements for plates in another material: pewter. Because they are replacements, the crucial question is whether or not maintaining a household with ceramic plates was more costly than pewter plates. The Hemings assemblage offers a path to an answer.

We can make a start toward that answer as follows. The total cost per year (*T*) to an individual opting to use a vessel in a given material is a function of the costs of acquiring a vessel (*c*), the proportion of the acquisition cost that may be recouped after vessel failure through recycling (*r*) , and the number of vessels that must be acquired per year to replace failed vessels (*n*):

$$T = c(1-r)n$$

In order to estimate the cost of ceramic plate usage relative to pewter, we need to have estimates of each of these quantities for both materials, or their ratios. The Hemings site provides some of the necessary information. The spatially extensive sampling strategy allows us to use the Minimum Number of Vessels for plates as an estimate of the total number of plates discarded at the site during the occupation. As we have seen, documents indicate that Hemings lived at the site from 1795 to 1807. This yields a plate discard rate of 1.25 plate/person/year (=15 plates and platters /[1 person × 12 years]). The Stewart assemblage yields a lower estimate of 0.74 plates/person/year, although here the estimate is complicated by the presence of 5 children who account for 30 person-years, in addition to Stewart himself (6 person-years) and his wife (2 person-years).

Store accounts from the last quarter of the 18th century in Virginia reveal that the cost of an English-made creamware plate was 25% of the cost of a pewter one, while a Chinese porcelain plate cost nearly as much as pewter. Hence a *conservative* estimate of the relative value of *c* for a ceramic plate is .25, relative to a value for pewter of 1. Newspaper ads and probate inventories reveal that individuals wishing to unload their worn pewter vessels could expect to recover 40% of the original cost (Martin 1989:179). This leaves us with a single missing value: the number of pewter vessels (*n*) that must be replaced each year (or its reciprocal, the use life of a pewter vessel). The data necessary to estimate this value are unavailable. However, it is possible to conclude that, given the Hemings plate breakage rates, ceramic plates would have been more costly than pewter for all *n* values for pewter less than .52, or for a mean use life for a pewter plate greater than 1.9 years. The corresponding values for the Stewart data are .31 pewter plate/year and 3.2 years. If pewter plates lasted more than 2-3 years on average, then running a household with even the cheapest available ceramic plates (creamware) was more costly than running a household with pewter plates. This result offers independent support for the idea that greater *PI* values at Monticello register greater social advertising costs. It also suggests that by replacing pewter plates with ceramic ones, consumers across the Chesapeake saddled themselves with similarly increased advertizing costs, a change that presumably was underwritten by increased wealth levels or advertising payoffs or both. Teasing apart the causal processes involved at Monticello and elsewhere is a goal for future research.

Ceramic Ware Types and Vessel Shapes

Elizabeth Hemings not only had access to fashionable ceramics, she was apparently selective in what was acquired. Her choices contrast in interesting ways with those of the free blacksmith Stewart. Over 90 percent of ceramic vessels in both assemblages occur in creamware, pearlware, and Chinese porcelain. However tea vessels and plates were distributed across the three ware types in radically different patterns at each site. In addition, these patterns differed between the two sites.

Understanding this variation requires knowing something about the acquisition costs for ware types in question. Multiple sources of evidence indicate that creamware vessels were considerably cheaper than pearlware or Chinese porcelain. Store invoices indicate that a shell-edged pearlware plate cost about 1.5 times a

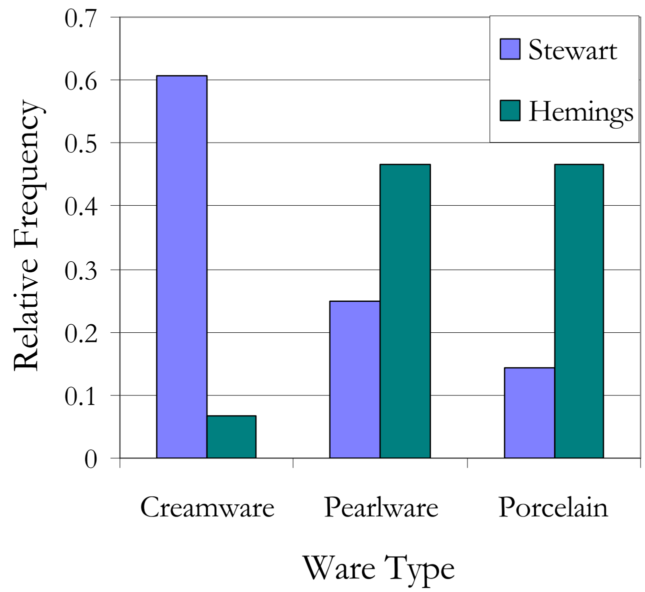

Figure 35. *Proportion of plates and platters that occur in different ceramic ware types at the Hemings and Stewart Sites.*

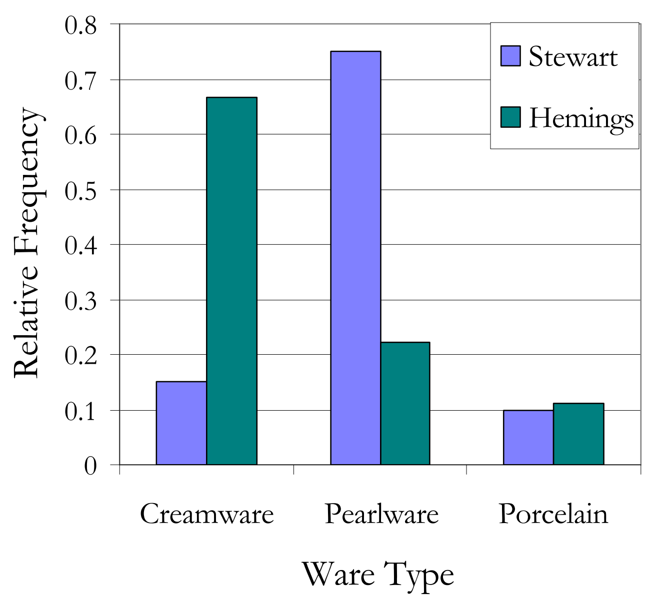

Figure 36. *Proportion of tea cups and saucers that occur in different ware types at the Hemings and Stewart Sites.*

creamware plate by about 1800. Cost differentials for painted pearlware tea vessels were similar (~1.5-2.0) at this time (Miller 1991). Our current best evidence for the cost of Chinese porcelain dates to the 1770s. At that time the cheapest porcelain teacups and saucers were roughly twice as expensive as their creamware equivalents. The cheapest porcelain plates, on the other hand, were almost six times as expensive as creamware flatwares (Martin 1994:181).

Consider first plates and platters. As **Figure 35** reveals, over 90 percent of Hemings's flatwares occurred in more costly porcelain and pearlware, while she owned only a single creamware plate. The pattern for Stewart was the reverse. Over 60 percent of Stewart's plates were creamware. The difference is statistically significant. Thus Hemings's plates were more costly than Stewart's. When we consider tea wares, we see precisely the opposite pattern (**Figure 36**). Sixty-seven percent of Hemings's tea wares were cheap creamware, while over 85 percent of Stewart's were in more costly pearlware and porcelain. Again the difference is statistically significant.

If ceramic dining and tea drinking vessels were forms of social advertising, then Hemings's and Stewart's signaling strategies differed. Hemings invested more advertising effort in dining vessels and less in tea vessels, while Stewart invested more heavily in tea vessels than in dining vessels. It is worth noting that this difference may also be registered in the fact that the Stewart assemblage *TI* values are greater than the Hemings assemblage (**Figure 34**).

What might account for this mirror-image pattern? One possibility is that it betrays a difference in the contexts for social display in the two households. Stewart and his family used the emerging ritual of tea consumption to impress unfamiliar competitors and allies, while apparently dining with individuals who were already familiar with their social and economic ability. For Hemings, meals were the venue for signaling to others, while tea drinking was more of a private affair. More work is needed to determine if this pattern holds for the rest of Monticello's enslaved workforce.

Glass

Analysis of table glass (colorless, leaded glass), wine bottles, and other bottle fragments also resulted in minimum vessel counts for those artifact groups. Elizabeth Hemings had at least three stemmed drinking vessels, or wine glasses. Copper wheel engraving decorated a sherd from an unidentified vessel, possibly one of the above glasses. Three wine bottles were represented in the artifact assemblage: two English bottles and one French bottle. Also present in the assemblage were fragments of an aqua, glass pharmaceutical phial and an aqua, glass jar/bottle.

Architectural Materials

The architectural debris encountered at the Hemings site included some three dozen hand-molded bricks and brick bats (broken bricks retaining two measurable surfaces). All were overfired and/or warped. (An additional sixteen pounds of fragments, equaling roughly four bricks, were also recovered.) Jefferson had brick made on the plantation for the ongoing construction and renovation of the mansion; the bricks found on the Hemings site appear to have been "wasters" (bricks ruined in the firing process) that were unsuitable for this purpose and were instead used in the construction of the Hemings dwelling. The ruined brick included one watertable brick, one a cavetto-molded section (similar to those used in Jefferson's chimney moldings), and four other fragments of specially-molded brick. Most of the bricks and brick bats were concentrated in the hearth feature.

Only 17 sherds of window glass were recovered from the site; together they make up less than one 12" by 12" pane of glass (the standard size in Jefferson's day [McLaughlin 1988:164]). While small in number, the window glass sherds suggest that the dwelling had at least one glazed window.

Finally, the site produced a sizable quantity of nails, most of which were wrought. Preservation was fairly good, due in part to the ferrous sediments of the site; this allowed for identification not only of the manufacturing technique (wrought or machine-cut) but also of shank length. As discussed in Chapter 3 nails occurred in two length categories, roughly corresponding to nails used for finishing work and for basic construction. Nail fragments denoted shafts (with or without ends) with heads no longer extant, and while they were cataloged, fragments were not included in any counts. A total of 811 nails were recovered.

Wrought nails comprised 90.63% of the total (735 out of 811). They were divided nearly equally in terms of size: 49.52% measured between two and four inches in length, and 39.86% were less than two inches; 10.61% were of indeterminate length, the points not being extant. Most of the wrought nails had faceted "roseheads;" L-headed, T-headed, and headless nails were fewer in number. One horseshoe nail and one strake nail (used to attach an iron band or "tire" to the wooden wheel of a wagon or carriage) probably attest to the proximity of the Third Roundabout.

Machine-cut nails made up only 9.37% of the assemblage; nearly all (64 out of 76) measured less than two inches. Of these short nails, nineteen were hand-headed, 5 had L-heads, four had machined, square heads, two were headless, and 34 had heads of indeterminate manufacture. Seven machine-cut nails measured between two and four inches; all were hand-headed except for one indeterminate head. Of five nails of indeterminate length, two were hand-headed, one had a machined, square head and two were indeterminate. The preponderance of short lengths and hand-headed manufacture indicates that these nails date from the late eighteenth-early nineteenth century, when production of machine-cut nails began.

Miscellaneous

As noted above, Elizabeth Hemings's recoverable household goods included furniture tacks, buttons, a shoe buckle, and a slate pencil fragment (**Figure 37**). The six copper alloy upholstery tacks, with domed heads and square-sided shafts with pointed ends all measured approximately one centimeter, both in length and head diameter. Upholstery tacks secured leather or fabric covering to chairs, and leather straps to wooden trunks. Both buttons were one-piece, pewter disks with loop shanks. The small, copper alloy shoe buckle was decorated with a chased design and fit the shoe of a woman or adolescent. Three pieces of lead round shot and one fragment of scrap lead were also found, as was a slate pencil. The slate pencil was seven-sided, half a centimeter in diameter, and measured just 3.8 cm in length.

Figure 37. *Miscellaneous artifacts recovered from the Betty Hemings site including copper alloy upholstery tacks (upper right), lead shot (lower right), slate pencil fragment (lower left), copper alloy buttons (upper left), and copper alloy shoe buckle (center).*

5. Summary

The archaeological investigation at the Elizabeth Hemings site provided for the first time insight into the life of an enslaved African American living off of Mulberry Row. The project investigated how the site location fit into the larger Monticello Plantation. It revealed that what initially appeared to be an isolated site location, was actually a central location between important sources of water and Mulberry Row where Hemings's children and grandchildren worked and lived.

Archaeological testing showed that Elizabeth Hemings lived for the last decade of her life (approximately 1795 until 1807) in a single room structure approximately fourteen by twelve feet in size. The house was most likely built of logs and contained at least one glazed window, and a 7.5 foot square hearth. The lack of great quantities of brick and stone and more importantly a chimney prop post hole showed conclusively that Hemings's chimney was made of wattle and daub. A cobble scatter measuring 23 by 12 feet was found sixty feet to the southeast of Elizabeth's dwelling. The scatter with its straight northern edge represents the results of field clearing along a boundary such as a fence. A likely explanation is that the area cleared was a garden south of the dwelling. Additional sampling for pollen and phytoliths in this area could resolve the ambiguities.

Phytolith analysis shows that while the site lies in a hardwood forest today, during Elizabeth Hemings's occupation, the area was open and dominated by grasses and to a lesser extent shrubs. The area immediately surrounding Hemings's house was the exception; lower amounts of chloridoid grasses which thrive in hot, dry environments suggests that some trees remained to shade the dwelling.

By living next to the Third Roundabout, Elizabeth was able to enjoy a much larger activity space than either the enslaved or free workers living along Mulberry Row. Multiple lines of evidence, including landscape analysis, cost surface modeling, soil and sediment chemistry and artifact distributions, point towards Elizabeth organizing her activity space in a pattern similar to those documented on other archaeological sites. General activities such as social interaction, food preparation and sleeping occurred in or near the dwelling. Special activities such as waste disposal (fireplace ash, food waste, and trash dumping) took place further from the structure. Due to the slope of the site (20% average), the general activity area was lozenge-shaped as opposed to the more common circular pattern. This is the result of the higher energy cost for traveling up or down slope as opposed to along the contours. The Third Roundabout, 30 feet uphill or to the north and the cobble scatter 65 feet to the southeast (along the slope) are two of the boundaries between the general and special activity areas. From this estimate, Elizabeth Hemings's yard space was at least ten times that of the people living along Mulberry Row.

Analysis of the ceramic assemblage showed that Elizabeth Hemings had access to fashionable ceramics and was selective in what she acquired. Hemings, like her contemporaries, replaced pewter vessels with more costly ceramic versions. Cheaper creamware ceramics were acquired for tea consumption, but she acquired more expensive pearlware and porcelain plates for food consumption. This pattern is a mirror image to the ceramic assemblage of William Stewart, a free blacksmith living at Monticello from 1801-8. The difference appears to be related to different patterns of social advertising. For Hemings, meals were the venue for more costly display, while tea drinking was a more informal affair. In contrast, Stewart used the emerging ritual of tea consumption to impress unfamiliar competitors and allies. More work is needed to determine if this patters holds for the rest of Monticello's enslaved workforce and to explore further its meaning.

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Appendix I. Artifact Inventory

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
0430	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
0430	1	Iron	Nail	Rosehead				Wrought/Forged		
0430	1	Glass	Container	Wine Bottle				Empontilled		Body
0430	1	Bone	Faunal Specimen	Medium Mammal				Natural/Unworked		
0430	1	Brick	Brick					Hand Made		
1859A	1	Refined Earthenware			Pearlware				Undecorated	Base
1859A	1	Porcelain			Chinese Porcelain			Press Molded	Undecorated	Base
1861A	1	Iron	Nail	Tire/Strake				Wrought/Forged		
1863A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Porcelain			Porcellaneous			Wheel Thrown	Undecorated	Body
1864A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1864A	1	Porcelain			Chinese Porcelain			Wheel Thrown	Undecorated	Body
1864A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1864A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1864A	1	Refined Earthenware			Pearlware		Brown	Press Molded	Painted Under	Body
1864A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Base
1864A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1864A	1	Refined Earthenware			Pearlware		Brown	Press Molded	Annular	Body
1864A	1	Refined Earthenware			Pearlware		Brown	Press Molded	Annular	Body
1864A	1	Refined Earthenware			Pearlware		Brown	Press Molded	Annular	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Indeterminate
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Indeterminate
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1864A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1864A	1		Faunal Specimen							
1864A	1		Charcoal							
1864A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1864A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1864A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1864A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1864A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1864A	1	Refined Earthenware			Creamware			Press Molded		Body
1864A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1864A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1864A	1	Glass	Window Glass							
1864A	1	Glass	Window Glass							
1864A	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		
1864A	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded			Free Blown		Base
1864A	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded			Free Blown		Base
1864A	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded			Free Blown		Base
1864A	1	Glass	Table Glass	Unidentified	Colorless Leaded	Copper Wheel En		Free Blown		Body
1864A	1	Brick	Brick Bat							
1864A	1	Brick	Brick Bat							
1864A	1	Iron	Nail	Rosehead		Pointed End		Wrought/Forged		
1864A	2	Iron	Nail	Rosehead		Pointed End		Wrought/Forged		
1864A	28	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1864A	4	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1864A	2	Iron	Nail	Rosehead		Pointed End		Wrought/Forged		
1864A	42	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1864A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1864A	8	Iron	Nail	Rosehead				Wrought/Forged		
1864A	4	Iron	Nail Fragment					Wrought/Forged		
1864A	2	Iron	Nail Fragment			Chisel Point		Wrought/Forged		
1864A	4	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1864A	2	Iron	Nail	T-Head		Chisel Point		Wrought/Forged		
1864A	3	Iron	Nail	Rosehead		Blunt Cut End		Machine-Cut		
1864A	3	Iron	Nail	L-Head		Pointed End		Machine-Cut		
1864A	1	Iron	Nail	Horseshoe		Pointed End		Wrought/Forged		
1864A	1	Iron	Nail Fragment			Blunt Cut End		Machine-Cut		
1864A	4	Iron	Nail	Indeterminate Head		Blunt Cut End		Machine-Cut		
1864A	6	Iron	Nail	Indeterminate Head				Machine-Cut		
1864A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Base

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1864A	1		Slate Pencil							
1864A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1864A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1864B	1		Brick Fragment							
1864B	4		Faunal Specimen							
1864B	4	Charcoal	Organic Substance							
1864B	1	Iron	Nail	Rosehead				Wrought/Forged		
1864B	3	Iron	Nail	Rosehead				Wrought/Forged		
1864B	4	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1864B	3	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1864B	2	Iron	Nail Fragment			Chisel Point		Wrought/Forged		
1864B	1	Kaolin	Tobacco Pipe	Imported				Press Molded		Bowl
1864B	1	Porcelain			Chinese Porcelain			Wheel Thrown	Undecorated	Body
1864B	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Handle
1864B	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Base
1864B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Rim
1864B	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1864B	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Annular	Body
1865A	1	Charcoal	Organic Substance							
1865A	1	Plastic	Button	One Piece				Molded		
1865A	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded			Free Blown		Base
1865A	7	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1865A	9	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1865A	1	Iron	Nail	Indeterminate Head		Chisel Point		Wrought/Forged		
1865A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	
1865A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1865A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1865A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1865A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1865A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1865A	1	Refined Earthenware			Pearlware	Shell Edge	Green	Press Molded		Rim

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1865B	1	Copper Alloy	Ring					Cast		
1865B	1	Iron	Nail	Rosehead				Wrought/Forged		
1865B	4	Iron	Nail					Wrought/Forged		
1865B	1	Brick	Brick							
1865B	1	Copper Alloy	Ring							
1865B	7	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1865B	11	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1865B	3	Iron	Nail	Rosehead				Wrought/Forged		
1865B	1	Iron	Nail	HeadLess		Chisel Point		Wrought/Forged		
1865B	1	Iron	Nail Fragment			Pointed End		Wrought/Forged		
1865B	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1865B	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1865B	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1865B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1865B	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1865E	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1867A	1	Glass	Container	Wine Bottle				Free Blown/Empontilled		
1867A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1867A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1868A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Rim
1869A	4	Charcoal	Organic Substance							
1870A	1	Glass	Container	Wine Bottle				Free Blown/Empontilled		Body
1872A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1877A	2	Charcoal	Organic Substance							
1879A	1	Bone	Faunal Specimen	Medium Mammal				Natural/Unworked		
1879A	3	Iron	Wire	Barbed				Drawn		
1879A	22	Iron	Nail	Machine Round H		Pointed End		Wire		
1879A	6	Iron	Nail Fragment			Pointed End		Wire		
1883A	1	Glass	Container	Wine Bottle				Free Blown/Empontilled		Body
1888A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1888A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1890A	1	Glass	Container	Cylind Wine Bottle				Free Blown/Empontilled		Body
1891A	1	Charcoal	Organic Substance							
1891A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1897A	1	Charcoal	Organic Substance							
1897A	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Empontilled		Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1897A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1897A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1897A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1897A	1	Glass	Container	Beer/Pop Bottle			Green	Mold Blown		Body
1897A	1	Glass	Container	Beer/Pop Bottle			Aqua	Mold Blown		Body
1897A	1	Glass	Table Glass	Unidentified	Colorless Leaded		Aqua	Free Blown		Body
1897A	1	Glass	Window Glass							
1897A	1	Porcelain			Chinese Porcelain			Wheel Thrown	Undecorated	Body
1897A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1897A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1897A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1897A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1897A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1897A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1897A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Base
1897A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Base
1897A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1897A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1897A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1897A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Printed Under	Body
1897A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1897A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1897A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1898A	1	Quartzite	Stone	Architectural						
1898A	1	Glass	Button	One Piece			White	Mold Blown		
1898A	2		Faunal Specimen							
1898A	1	Charcoal	Organic Substance							
1898A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1898A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1898A	1	Glass	Container	Bottle			Aqua	Mold Blown/Empontilled		Body
1898A	3	Glass	Window Glass							
1898A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1898A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1898A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1898A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1898A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1898A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1898A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1898A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1898A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1898A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1898A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1898A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1898A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1898A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1899A	1		Brick Fragment							
1899A	1	Quartzite	Stone	Architectural						
1899A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1899A	3		Window Glass							
1899A	1	Iron	Nail	HeadLess		Chisel Point		Wrought/Forged		
1899A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1899A	3	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1899A	1	Iron	Nail	L-Head		Pointed End		Wrought/Forged		
1899A	1	Coarse Earthenware			Black-Glazed Redware			Wheel Thrown		Body
1899A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1899A	1	Stoneware			White Salt-Glazed			Wheel Thrown		Body
1899A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1899A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1899A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1899A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Rim
1899A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Finish
1900A	1		Brick Fragment							
1900A	1		Brick	Watertable						
1900A	1	Copper Alloy	Ring							
1900A	1	Charcoal	Organic Substance							
1900A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Finish
1900A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1900A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1900A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1900A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1900A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1900A	1	Glass	Container	Pharm Bottle			Aqua	Mold Blown/Empontilled		Body
1900A	3	Glass	Window Glass							
1900A	3	Glass	Window Glass							
1900A	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded					Base
1900A	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded					Base
1900A	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded					Rim
1900A	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded					Rim
1900A	1	Glass	Table Glass	Unidentified	Colorless Leaded					Body
1900A	1	Glass	Table Glass	Unidentified	Colorless Leaded					Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1900A	1	Glass	Table Glass	Unidentified	Colorless Leaded					Rim
1900A	1	Glass	Table Glass	Unidentified	Colorless Leaded					Indeterminate
1900A	87	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1900A	8	Iron	Nail	Rosehead				Wrought/Forged		
1900A	19	Iron	Nail	Rosehead				Wrought/Forged		
1900A	2	Iron	Nail	T-Head		Chisel Point		Wrought/Forged		
1900A	5	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1900A	2	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1900A	4	Iron	Nail	HeadLess		Chisel Point		Wrought/Forged		
1900A	63	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1900A	1	Iron	Nail	T-Head		Chisel Point		Wrought/Forged		
1900A	4	Iron	Nail	HeadLess		Pointed End		Wrought/Forged		
1900A	1	Iron	Nail	Rosehead		Pointed End		Wrought/Forged		
1900A	2	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1900A	1	Iron	Nail	Rosehead		Blunt Cut End		Wrought/Forged		
1900A	2	Iron	Nail	Machine-Square		Blunt Cut End		Machine-Cut		
1900A	7	Iron	Nail	Hand-Headed		Blunt Cut End		Machine-Cut		
1900A	1	Iron	Nail	Hand-Headed		Blunt Cut End		Machine-Cut		
1900A	8	Iron	Nail	Indeterminate Head		Blunt Cut End		Machine-Cut		
1900A	3		Faunal Specimen							
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Base
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Base
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Rim
1900A	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Rim
1900A	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Rim
1900A	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Rim
1900A	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Rim
1900A	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Rim
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Creamware		Polychrome	Press Molded	Painted Over	Body
1900A	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Rim
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Body
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Rim
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Rim
1900A	1	Refined Earthenware			Pearlware		Yellow	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Yellow	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Brown	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Rim
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Rim
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Creamware		Polychrome	Press Molded	Painted Over	Base
1900A	1	Refined Earthenware			Creamware		Polychrome	Press Molded	Painted Over	Body
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900A	1	Refined Earthenware			Pearlware	Shell Edge	Green	Press Molded		Rim
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Rim
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Rim

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1900A	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded			Free Blown		Stem
1900A	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded			Free Blown		Base
1900A	2	Copper Alloy	Upholstery Tack					Cast		
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Base
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Base
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Base
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Base
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Base
1900A	1	Copper Alloy	Buckle	Shoe				Cast		
1900B	10	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1900B	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1900B	3	Iron	Nail	Rosehead				Wrought/Forged		
1900B	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1900B	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1900B	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1900B	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1900B	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1900B	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Body
1900B	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Indeterminate
1900B	1	Refined Earthenware			Creamware		Polychrome	Press Molded	Painted Over	Body
1900B	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1900B	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900B	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1900B	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1900B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1900B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1900B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware		Yellow	Press Molded	Painted Under	Body
1902A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1902A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1902A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1902A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1902A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1902A	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1902A	1		Brick Fragment							
1902A	1	LEAD	SCRAP					Cast		
1902A	1	Copper Alloy	Upholstery Tack					Cast		
1902A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1902A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1902A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1902A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Finish
1902A	2	Iron	Nail	L-Head		Pointed End		Wrought/Forged		
1902A	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1902A	1	Iron	Nail	Indeterminate Head		Chisel Point		Wrought/Forged		
1902A	23	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1902A	24	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1902A	5	Iron	Nail	Rosehead				Wrought/Forged		
1902A	4		Faunal Specimen							
1902A	1	Iron	Nail Fragment			Chisel Point		Wrought/Forged		
1902A	1	Iron	Nail Fragment					Wire		
1902A	2	Iron	Nail	Hand-Headed		Blunt Cut End		Machine-Cut		
1902A	1	Iron	Nail	L-Head		Blunt Cut End		Machine-Cut		
1902A	17	Iron	Wire	Barbed				Drawn		
1902A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1902A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Base
1902A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1902A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1902A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1902A	1	Refined Earthenware			Creamware		Polychrome	Press Molded	Painted Over	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1902A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1902A	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1902A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Base
1902A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1902A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1902A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1902A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1902A	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1902A	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Rim
1902A	1	Refined Earthenware			Pearlware		Yellow	Press Molded	Painted Under	Body
1902A	1	Refined Earthenware			Pearlware		Yellow	Press Molded	Painted Under	Body
1902A	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1902B	1	Porcelain			Chinese Porcelain			Wheel Thrown	Undecorated	Body
1902B	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1902B	1	Porcelain			Chinese Porcelain		Blue		Painted Under	Body
1902B	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1902B	1	Glass	Table Glass	Unidentified	Colorless Leaded					
1902B	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Rim
1902B	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Body
1902B	1	Glass	Container	Pharm Bottle			Green	Free Blown/Empontilled		Body
1902B	1	Copper Alloy	Button	One Piece				Cast		
1902B	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Rim
1902B	15	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1902B	3	Iron	Nail	T-Head		Chisel Point		Wrought/Forged		
1902B	2	Iron	Nail	Rosehead		Pointed End		Wrought/Forged		
1902B	6	Iron	Nail	Rosehead				Wrought/Forged		
1902B	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1902B	22	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1902B	8	Iron	Nail	Rosehead				Wrought/Forged		
1902B	4	Iron	Nail	Rosehead				Wrought/Forged		
1902B	4	Iron	Nail Fragment			Chisel Point		Wrought/Forged		
1902B	1	Iron	Nail Fragment			Pointed End		Wrought/Forged		
1902B	1	Iron	Nail Fragment					Wrought/Forged		
1902B	1	Iron	Nail	Machine-Square				Machine-Cut		
1902B	1	Iron	Unid Hardware					Wrought/Forged		
1902B	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Rim
1902B	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Rim
1902B	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1902B	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1902B	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1902B	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1902B	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1902B	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1902B	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1902B	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1902B	1	Refined Earthenware			Pearlware		Brown	Press Molded	Painted Under	Body
1902B	1	Refined Earthenware			Pearlware		Brown	Press Molded	Painted Under	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1902B	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Rim
1902B	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1902B	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Body
1902B	1	Refined Earthenware			Pearlware		Yellow	Press Molded	Painted Under	Body
1902B	1	Refined Earthenware			Pearlware		Yellow	Press Molded	Painted Under	Body
1902B	1	Refined Earthenware			Pearlware		Brown	Press Molded	Painted Under	Rim
1902B	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1902B	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1902B	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1902B	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Base
1902B	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Base
1902B	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Rim
1903A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1903A	1	Porcelain			Chinese Porcelain			Wheel Thrown	Undecorated	Body
1903A	1	Iron	Nail	T-Head		Chisel Point		Wrought/Forged		
1904A	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1904A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1905A	1	Refined Earthenware			Refined Earthenware			Press Molded	Undecorated	Body
1906A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1906A	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1906A	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1911A	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1911A	1		Slag/Clinker							
1918A1	1	Glass	Bottle Glass	Beer/Pop Bottle			Amber	Machine Made		Body
1918A1	1	Iron	Nail	Machine Round H				Wire		
1918A1	1	Iron	Nail Fragment			Pointed End		Wire		
1918A1	1	Glass	Bottle Glass	Beer/Pop Bottle			Amber	Machine Made		Body
1918A1	1	Glass	Bottle Glass	Beer/Pop Bottle			Amber	Machine Made		Body
1918A1	1	Glass	Bottle Glass	Beer/Pop Bottle			Amber	Machine Made		Body
1918A1	1	Glass	Bottle Glass	Beer/Pop Bottle			Amber	Machine Made		Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1918A2	1	Stoneware			White Salt-Glazed	Scr/Fill:Debased	Blue	Press Molded		Body
1918A2	1	Iron	Nail	Machine Round H				Wire		
1919A1	1	Glass	Bottle Glass	Beer/Pop Bottle	Colored Glass		Amber	Machine Made		Body
1919A1	1	Glass	Bottle Glass	Beer/Pop Bottle	Colored Glass		Amber	Machine Made		Body
1919A1	1	Glass	Bottle Glass	Beer/Pop Bottle	Colored Glass		Amber	Machine Made		Body
1919A2	1	Glass	Bottle Glass	Beer/Pop Bottle	Colored Glass			Machine Made		Body
1919A2	1	Iron	Nail Fragment			Pointed End		Wire		
1920A1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1921A1	1	Refined Earthenware			Refined Earthenware			Press Molded	Undecorated	Indeterminate
1921A1	100	Tinned Iron	CAN	Food/Condiment				Rolled/Sheet		
1921A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Base
1922A1	2	Tinned Iron	CAN	Food/Condiment				Rolled/Sheet		Rim
1922A2	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1922A2	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1922A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1923A3	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1923A3	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1924A2	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1926B2	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Rim
1926B2	1	Refined Earthenware			Pearlware	Other Mold Decoration	Blue	Press Molded		Rim
1927A2	2		Brick Fragment							
1928A1	1	Refined Earthenware			Bennington			Press Molded		Rim And Body
1928A1	1	Refined Earthenware			Bennington			Press Molded		Rim And Body
1931A2	1	LEAD	Ammunition	Round Shot				Dropped		
1933A1	1	Iron	Nail Fragment			Pointed End		Wire		
1933A2	1	Iron	Nail	Machine Round H		Pointed End		Wire		
1933A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1934A1	7	Iron	Nail	Machine Round H		Pointed End		Wire		
1934A2	1	Iron	Nail	Rosehead				Wrought/Forged		
1934A3	2	Iron	Nail	Machine Round H		Pointed End		Wire		
1935A1	1	Porcelain			Chinese Porcelain			Wheel Thrown	Undecorated	Base
1935A1	1	Glass	Container	Wine Bottle				Wheel Thrown		Body
1935A1	1	Glass	Container	Wine Bottle				Wheel Thrown		Body
1935A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1935A2	1	Glass	Window Glass							
1936A1	2	Glass	Window Glass							
1943A1	12	Charcoal	Organic Substance							
1943A1	12	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
1943A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
1943A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1943A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
1943A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
1943A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
1943A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
1943A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
1943A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
1943A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
1943A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
1943A2	7	Charcoal	Organic Substance							
1944A1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1944A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
1944A1	6	Charcoal	Organic Substance							
1946B1	2	Charcoal	Organic Substance							
1947C1	1	Quartz	Unmodified Stone							
1951A1	1	Glass	Container	Unidentified	Colorless Colorless-Ld					Body
1951A2	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1951A2	1	Quartz	Unmodified Stone							
1953A1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1953A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1955B1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1955B1	2	Iron	Nail	Rosehead				Wrought/Forged		
1955B2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1955B2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1955B2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1955B2	2	Iron	Nail	Rosehead				Wrought/Forged		
1955B2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1955B3	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1956A2	1	Iron	Nail	Rosehead				Wrought/Forged		
1956A2	1	Iron	Nail	Rosehead		Indeterminate Tip		Wrought/Forged		
1956B1	1		Brick Fragment							
1956B1	1	Iron	Nail	L-Head				Wrought/Forged		
1956B1	1	Iron	Nail	L-Head				Wrought/Forged		
1956B1	1	Iron	Nail	Rosehead				Wrought/Forged		
1956B1	7	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1956B2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1956B2	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1956B2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1956B2	3	Iron	Nail	Rosehead				Wrought/Forged		
1956B2	2	Iron	Nail	HeadLess				Wrought/Forged		
1956B2	2	Iron	Nail Fragment			Chisel Point		Wrought/Forged		

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1956B2	4	Iron	Nail Fragment					Wrought/Forged		
1957A1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1957A1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1957A1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1957A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1957B1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1957B1	1		Brick Fragment							
1957B1	1	Iron	Nail	Rosehead				Wrought/Forged		
1957B1	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Rim
1957B1	2		Brick Fragment							
1957B1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1958A2	2	Charcoal	Organic Substance							
1958A2	23		Brick Fragment							
1958A2	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1958A2	5	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1958B1	8		Brick Fragment							
1958B1	1	Charcoal	Organic Substance							
1958B1	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1958B1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1958B1	1	Iron	Nail	Rosehead				Wrought/Forged		
1958B1	2	Iron	Nail	Indeterminate Head				Machine-Cut		
1958B1	1	Iron	Nail Fragment			Chisel Point		Wrought/Forged		
1961B1	1		Brick Fragment							
1962A1	1	Quartz	Unmodified Stone							
1962A2	1	Iron	Nail	Indeterminate Head		Blunt Cut End		Machine-Cut		
1962B1	1	Iron	Nail	Rosehead				Wrought/Forged		
1963A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1963B1	1	Refined Earthenware			Pearlware		Yellow	Press Molded	Painted Under	Body
1963B1	1		Brick Fragment							
1963B2	1	Floral	Floral Specimen							
1964A1	1	Glass	Table Glass	Unidentified	Colorless Leaded			Mold Blown		Indeterminate
1964A1	1	Glass	Window Glass							
1964A1	3		Brick Fragment							
1964A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1964A2	1	Copper Alloy	Upholstery Tack					Cast		
1964A2	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1964A2	1	Iron	Nail	Rosehead				Wrought/Forged		
1964A2	3	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1964A2	1	Iron	Nail	HeadLess		Pointed End		Machine-Cut		
1964A2	16		Brick Fragment							

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1964B1	1		Brick Fragment							
1965A1	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1965A1	1	Iron	Nail	Rosehead				Wrought/Forged		
1965A1	4		Brick Fragment							
1965A1	1		Brick Bat							
1965A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Rim
1965A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1965A2	2		Brick Fragment							
1965A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Rim
1965A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Rim
1965A3	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1968A1	1	Floral	Floral Specimen							
1968A2	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1968A2	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1968A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1968A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1968A2	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1968A2	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1968A2	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
1968A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1968A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1968A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1968A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1968A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1968A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1968A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1968A2	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded			Mold Blown		Rim
1968A2	1	Glass	Table Glass		Colorless Leaded			Mold Blown		Body
1968A2	1	Glass	Table Glass		Colorless Leaded			Mold Blown		Indeterminate
1968A2	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1968A2	4	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1968A2	1	Iron	Nail	L-Head		Pointed End		Wrought/Forged		
1968A2	1	Iron	Nail	T-Head				Wrought/Forged		
1968A2	1	Iron	Nail	Indeterminate Head		Pointed End		Machine-Cut		
1968A2	1	Iron	Nail	Indeterminate Head				Machine-Cut		
1968A2	1	Iron	Nail	Indeterminate Head		Chisel Point		Machine-Cut		
1968A2	1	Iron	Nail Fragment			Pointed End		Machine-Cut		
1968A2	10		Brick Fragment							
1968A2	1		Brick Bat	Molded Brick						
1968A2	1		Brick							

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1968B1	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1968B1	1	Iron	Nail	Rosehead				Wrought/Forged		
1968B1	1	Iron	Nail	Indeterminate Head				Machine-Cut		
1968B1	1	Iron	Nail Fragment					Wrought/Forged		
1968B2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1969A1	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1969A1	5		Brick Fragment							
1969A2	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1969A2	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Under	Rim
1969A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1969A2	3	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1969A2	1	Iron	Nail	L-Head				Wrought/Forged		
1969A2	1	Iron	Nail	Indeterminate Head				Machine-Cut		
1969A2	2	Iron	Nail Fragment			Blunt Cut End		Machine-Cut		
1969A2	30		Brick Fragment							
1969A2	1		Brick Bat	Molded Brick						
1969A2	1		Brick Bat	Molded Brick						
1969A2	1		Brick Bat							
1969B1	1	Refined Earthenware			Pearlware	Shell Edge	Green	Press Molded		Rim
1969B1	1	Iron	Nail	T-Head		Chisel Point		Wrought/Forged		
1969B1	1	Iron	Nail	T-Head				Wrought/Forged		
1969B1	1	Iron	Nail	Indeterminate Head		Blunt Cut End		Machine-Cut		
1969B1	1	Iron	Nail	Indeterminate Head				Machine-Cut		
1969B1	2		Brick Fragment							
1970A1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1970B1	1	Copper Alloy	Upholstery Tack					Cast		
1971A1	1		Brick Fragment							
1971A1	1		Slag/Clinker							
1971A1	1	GreenStone	Unmodified Stone							
1971A2	1		Brick Fragment							
1971A2	1	Iron	Nail	Rosehead				Wrought/Forged		
1972A1	2	Glass	Container	Cylind Wine Bottle				Mold Blown/Empontilled		Body
1973A1	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Empontilled		Body
1974A1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Indeterminate
1976A1	1	Coarse Earthenware			Black-Glazed Redware			Wheel Thrown		Body
1977A1	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Indeterminate
1978A1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1978A1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1978A1	1		Brick Fragment							
1978A2	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1978A2	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1978A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1978A2	1	Refined Earthenware			Pearlware	Shell Edge	Green	Press Molded		Rim
1978A2	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1978A2	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1978A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1978A2	1	Refined Earthenware			Pearlware		Yellow	Press Molded	Painted Under	Body
1978A2	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Rim
1978A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1978A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1978A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1978A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1978A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1978A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1978A2	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded			Mold Blown		Base
1978A2	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded			Mold Blown		Body
1978A2	4	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1978A2	4	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1978A2	1	Iron	Nail	L-Head		Indeterminate Tip		Wrought/Forged		
1978A2	2	Iron	Nail	Indeterminate Head		Blunt Cut End		Machine-Cut		
1978A2	8		Brick Fragment							
1978A2	1		Brick	Molded Brick						
1978B1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1978B1	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1978B1	1	Iron	Nail	HeadLess		Chisel Point		Wrought/Forged		
1978B1	1	Iron	Nail	Indeterminate Head		Pointed End		Machine-Cut		
1978B1	1	Iron	Nail	Hand-Headed				Machine-Cut		
1978B1	1		Brick Fragment							
1978B1	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Indeterminate
1978B1	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Indeterminate
1978B1	1	Glass	Table Glass	Unidentified	Colorless Leaded	Copper Wheel En		Free Blown		Body
1978B1	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Body
1978B1	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Body
1978B1	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Body
1978B1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1978B1	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Rim
1978B1	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Rim
1979A1	5		Brick Fragment							
1979A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1979A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1979A2	6		Brick Fragment							
1980A1	3		Brick Fragment							
1980A1	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
1980A1	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1980A1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1980A1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1980A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1980A2	1	Iron	Nail	Hand-Headed				Wrought/Forged		
1980A2	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1981A1	1	Iron	Nail	Hand-Headed		Blunt Cut End		Machine-Cut		
1981A1	3		Brick Fragment							
1981A1	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Base
1981A2	1		Brick Fragment							
1981A2	1	Refined Earthenware			Pearlware	Shell Edge	Green	Press Molded		Rim
1981A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1981A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1981A2	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1982A1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1982A1	1	Glass	Window Glass							
1982A1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1982A2	1	Refined Earthenware			Pearlware	Shell Edge	Green	Press Molded		Rim
1983A1	2		Faunal Specimen							
1983A2	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Rim
1983A2	1	Refined Earthenware			Pearlware	Shell Edge	Green	Press Molded		Rim
1983A2	1	Refined Earthenware			Pearlware	Shell Edge	Green	Press Molded		Body
1983B1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1984A2	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1984A2	6		Brick Fragment							
1984A2	1	Refined Earthenware			Refined Earthenware			Press Molded		Rim
1984A2	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1984B1	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1984B1	2	Iron	Nail	Rosehead				Wrought/Forged		
1984B1	1	Iron	Nail	Rosehead				Wrought/Forged		
1984B1	2		Brick Fragment							
1985A1	4		Brick Fragment							
1985A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1985A2	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1985A2	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1985A2	6		Brick Fragment							
1985B1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1985B1	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1985B1	1	Iron	Nail	Rosehead				Wrought/Forged		
1985B1	3	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1985B1	1	Iron	Nail	Rosehead				Wrought/Forged		
1985B1	1	Iron	Nail Fragment					Wrought/Forged		
1985B1	20		Brick Fragment							
1985B2	2	Iron	Nail	Rosehead				Wrought/Forged		
1986A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1986A2	4	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1986A2	1	Iron	Nail	Rosehead				Wrought/Forged		
1986A2	1	Iron	Nail	Machine-Square		Blunt Cut End		Machine-Cut		
1986A2	6		Brick Fragment							
1987A3	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1987A3	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1987A3	1	Iron	Nail	Rosehead				Wrought/Forged		
1987A3	1	Iron	Nail	Rosehead				Wrought/Forged		
1987A3	3		Brick Fragment							
1987A3	1	Copper Alloy	Button	One Piece				Cast		
1987B1	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1987B1	3	Iron	Nail	Rosehead				Wrought/Forged		
1987B1	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1987B1	1	Iron	Nail	T-Head		Chisel Point		Wrought/Forged		
1987B1	1	Iron	Nail	T-Head				Wrought/Forged		
1987B1	1	Iron	Nail	Indeterminate Head		Blunt Cut End		Machine-Cut		
1987B1	11		Brick Fragment							
1987B1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1988A1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1988A1	1	Iron	Nail	Rosehead				Wrought/Forged		
1988A1	1	Iron	Nail Fragment			Chisel Point		Wrought/Forged		
1988A1	3		Brick Fragment							
1988A1	1	Quartz	Unmodified Stone							
1988A1	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1988A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1988A2	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1988A2	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1988A2	1	Iron	Nail	Rosehead				Wrought/Forged		
1988A2	1	Iron	Nail	HeadLess		Chisel Point		Wrought/Forged		
1988A2	1	Iron	Nail	Indeterminate Head		Blunt Cut End		Machine-Cut		
1988A3	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1988A3	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1988A3	1	Iron	Nail Fragment			Chisel Point		Wrought/Forged		
1988A3	1	Iron	Nail Fragment					Wrought/Forged		
1988A3	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
1989A1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1989A2	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1989A2	3	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1989A2	2	Iron	Nail Fragment			Chisel Point		Wrought/Forged		
1989A2	1	Iron	Nail Fragment			Pointed End		Machine-Cut		
1989A2	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Body
1989A2	1		Brick Bat							
1989A2	10		Brick Fragment							
1989A3	1		Brick Fragment							
1990A1	3	Charcoal	Organic Substance							
1990A1	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1990A2	1	Iron	Nail	T-Head		Chisel Point		Wrought/Forged		
1990A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1990A2	1		Brick Fragment							
1990A2	1		Brick Bat							
1990A2	1		Brick Bat							
1991A1	1	Iron	Nail	Hand-Headed		Blunt Cut End		Machine-Cut		
1991A1	1	Iron	Staple			Pointed End		Wrought/Forged		
1991A1	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1991A1	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
1991A2	1		Brick Fragment							
1992A1	1		Brick Fragment							
1992A2	1	Quartzite	Stone	Architectural						
1992A2	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded					Body
1992C1	1	LEAD	Ammunition	Round Shot						
1993A1	1	Quartzite	Mineral Sample							
1993A1	1		Brick							
1993A1	1	Porcelain			Pearlware		Blue	Press Molded	Painted Under	Body
1993A1	1	Porcelain			Pearlware			Press Molded	Undecorated	Body
1993A2	3	Iron	Nail	Hand-Headed		Blunt Cut End		Machine-Cut		
1993A2	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1993A2	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
1993A2	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
1993A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Base
1993A2	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1993A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1993A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1993A3	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1993A3	1	Iron	Nail	Rosehead		Pointed End		Wrought/Forged		
1995ZZ	1	Iron	Nail	Rosehead				Wrought/Forged		
1995ZZ	1		Brick Bat							
1995ZZ	1		Brick Bat							
1995ZZ	1		Brick Bat							
1995ZZ	1		Brick Bat	Watertable						
1995ZZ	1		Brick							
1995ZZ	1		Brick Bat							
1995ZZ	1		Brick Bat							
1996A1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1996A1	1	Iron	Wire	Barbed				Drawn		
1996A1	1	Charcoal	Organic Substance							
1996A1	1		Brick Fragment							
1996A2	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1996A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1996A2	1	Iron	Nail	Hand-Headed		Blunt Cut End		Machine-Cut		
1996A3	4		Brick Fragment							
1996A3	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
1996A3	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1996A3	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1996B1	1	Iron	Nail	Rosehead		Pointed End		Wrought/Forged		
1996B1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1996B1	3	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1996B1	1	Iron	Nail	Rosehead				Wrought/Forged		
1996B1	1	Iron	Nail	Rosehead		Pointed End		Wrought/Forged		
1996B1	1	Iron	Nail	HeadLess		Pointed End		Wrought/Forged		
1996B1	1		Brick Fragment							
1996B1	1	Charcoal	Organic Substance							
1996B1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1996B1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1996B1	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
1996B1	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1996UU	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1996UU	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1996UU	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
1996UU	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1996UU	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1996UU	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
1996UU	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
1997A1	1	Iron	Nail	Machine Round H		Pointed End		Wire		
1997A1	1	Charcoal	Organic Substance							
1997A3	1		Brick Fragment							
1997B1	1	Charcoal	Organic Substance							
1997B1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
1998A2	1	Iron	Nail	Rosehead				Wrought/Forged		
1998A2	4		Brick Fragment							
1998A2	1	Glass	Container	Wine Bottle						Body
1998A2	1	Glass	Container	Wine Bottle						Body
1998A3	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1998A3	1	Iron	Nail Fragment					Wrought/Forged		
1998A3	7		Brick Fragment							
1998B1	1	Iron	Nail	Rosehead				Wrought/Forged		
1998B1	1	Iron	Nail	L-Head		Pointed End		Wrought/Forged		
1998B1	1	Iron	Nail	Machine Round H		Pointed End		Wire		
1999A1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1999A1	10		Brick Fragment							
1999A1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
1999A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1999A2	1	Iron	Nail	Rosehead				Wrought/Forged		
1999A2	1	Iron	Nail Fragment			Chisel Point		Wrought/Forged		
1999A2	1	Iron	Nail	Machine Round H		Pointed End		Wire		
1999A2	11		Brick Fragment							
1999A3	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1999A3	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
1999A3	1	Iron	Nail	HeadLess		Chisel Point		Wrought/Forged		
1999A3	1	Iron	Nail	Rosehead				Wrought/Forged		
1999A3	1	Iron	Nail Fragment					Wrought/Forged		
1999A3	4		Brick Fragment							
1999A3	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Base
2000ZZ	1	Quartz	Biface	Stage Two				WORKED		
2001A1	1	Iron	Nail	Machine Round H				Wire		
2001A2	1		Brick Fragment							
2001B1	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
2002A1	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2002A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2002A2	1	Iron	Nail	Hand-Headed		Blunt Cut End		Machine-Cut		
2002A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
2002A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2003A2	1	Iron	Nail	Rosehead		Pointed End		Wrought/Forged		

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
2003A2	5	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2003A2	1	Iron	Nail	L-Head		Pointed End		Wrought/Forged		
2003A2	1	Iron	Nail	Rosehead				Wrought/Forged		
2003A2	3	Iron	Nail Fragment			Chisel Point		Wrought/Forged		
2003A2	4	Iron	Nail	Indeterminate Head		Blunt Cut End		Machine-Cut		
2003A2	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
2003A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2003A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2003A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2003A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2003A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2003A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2003B1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2003B2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2003B2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2003B2	2	Iron	Nail	Rosehead				Wrought/Forged		
2003B2	1	Iron	Nail Fragment			Pointed End		Wrought/Forged		
2003B2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2003B2	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
2004A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2004A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2004A2	1	Iron	Nail Fragment			Chisel Point		Wrought/Forged		
2004A2	11		Brick Fragment							
2004A2	1	Quartz	Mineral Sample							
2004A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2004A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2004A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2004A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2004A2	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
2004A3	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2004A3	3	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2004A3	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
2004A3	1	Iron	Nail	L-Head				Wrought/Forged		
2004A3	1	Iron	Nail Fragment			Indeterminate Tip		Wrought/Forged		
2004A3	4		Brick Fragment							
2004A3	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
2004A3	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Rim
2004A3	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
2004A3	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2004A3	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
2004A3	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2004A3	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2004B1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2005A1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2005A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2005A2	1	Iron	Nail	L-Head		Chisel Point		Wrought/Forged		
2005A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2005A2	1	Quartzite	Fire-Crack Rock							
2005A2	2	Quartz	Mineral Sample							
2006A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2006A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Handle
2006A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2006A2	2	Iron	Nail	Rosehead				Wrought/Forged		
2006A2	2	Iron	Nail	Rosehead				Wrought/Forged		
2006A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2006A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2007A1	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
2007A1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2007A2	1	LEAD	Ammunition	Round Shot				Cast		
2007A2	8	Brick	Brick Fragment							
2007A2	1	Copper Alloy	Upholstery Tack					Hand-Headed		
2007A2	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
2007A2	1	Glass	Table Glass	Stemmed Glass	Colorless Leaded			Free Blown		Base
2007A2	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Indeterminate
2007A2	1	Glass	Table Glass	Unidentified	Colorless Leaded			Free Blown		Rim
2007A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2007A2	1	Refined Earthenware			Creamware		Red	Press Molded	Painted Over	Body
2007A2	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2007A2	4	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2007A2	2	Iron	Nail	Rosehead				Wrought/Forged		
2007A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2007A2	1	Iron	Nail	T-Head		Chisel Point		Wrought/Forged		
2007A2	3	Iron	Nail	Rosehead				Wrought/Forged		
2007A2	2	Iron	Nail Fragment			Indeterminate Tip		Wrought/Forged		
2007A2	2	Iron	Nail	Rosehead		Pointed End		Wrought/Forged		
2007A2	1	Iron	Nail	Machine-Square		Blunt Cut End		Machine-Cut		
2007A2	1	Iron	Nail	HeadLess				Machine-Cut		
2007B1	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2007B1	1	Iron	Nail	Rosehead				Wrought/Forged		
2007B1	1	Iron	Nail	Machine-Square		Blunt Cut End		Machine-Cut		

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
2007B1	1		Faunal Specimen							
2007B1	1	Glass	Window Glass							
2007B1	1	Glass	Table Glass	Unidentified	Colorless Leaded	Copper Wheel En				Body
2008A1	1	Refined Earthenware			Pearlware		Polychrome	Press Molded	Painted Under	Rim
2008A1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2008A2	2	Iron	Nail	Rosehead				Wrought/Forged		
2008A2	2	Iron	Nail	T-Head		Chisel Point		Wrought/Forged		
2008A2	1	Iron	Nail	HeadLess		Chisel Point		Wrought/Forged		
2008A2	9		Brick Fragment							
2008A2	1	Glass	Window Glass							
2008A2	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Rim
2008A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
2008A3	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2008A3	1	Iron	Nail	Rosehead		Pointed End		Wrought/Forged		
2008A3	3	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2008A3	2	Iron	Nail	Rosehead				Wrought/Forged		
2008A3	7		Brick Fragment							
2008B1	1		Brick Fragment							
2009A1	1	Glass	Container	Wine Bottle						Body
2009A1	1	Porcelain			Chinese Porcelain		Blue	Wheel Thrown	Painted Under	Body
2009A1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Rim
2009A1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Base
2009A1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2009A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2009A2	2	Iron	Nail	Hand-Headed		Blunt Cut End		Machine-Cut		
2009A2	1		Brick Fragment							
2009A2	1		Slag/Clinker							
2009A2	1	Refined Earthenware			Refined Earthenware			Press Molded		Body
2010A2	1		Brick Fragment							
2010A2	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
2010A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2011A2	1	Iron	Nail	Rosehead				Wrought/Forged		
2011A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2011A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2011A2	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2011A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2011A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2011A3	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Base
2011A3	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2012A1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
2012B1	2		Faunal Specimen							
2012B1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2012B1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2012B1	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
2012B1	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Rim
2012B1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2012B2	1		Faunal Specimen							
2012B2	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
2013A1	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2013A1	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
2013B1	1	Refined Earthenware			Creamware			Press Molded	Undecorated	Body
2013B1	4	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2013B1	1		Faunal Specimen							
2014A2	3	Iron	Nail	Rosehead				Wrought/Forged		
2014A2	2	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2015A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2015A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2015A2	1	Iron	Nail	Rosehead				Wrought/Forged		
2015A2	1	Glass	Window Glass							
2016A2	1	Iron	Hinge	Strap				Wrought/Forged		
2016A2	1	Iron	Nail	Rosehead		Indeterminate Tip		Wrought/Forged		
2016A2	1	Iron	Nail	Rosehead				Wrought/Forged		
2016A3	1		Brick Fragment							
2017A2	1	ORGANIC			Chinese Porcelain		Red	Wheel Thrown	Painted Over	Body
2018A2	1	Glass	Container	Pharm Bottle			Aqua	Free Blown/Empontilled		Body
2018A2	1	Glass	Container	Pharm Bottle			Aqua	Free Blown/Empontilled		Body
2019A2	1	Glass	Container	Pharm Bottle			Aqua	Free Blown/Empontilled		Body
2019A2	1	Glass	Container	Pharm Bottle			Aqua	Free Blown/Empontilled		Body
2019A2	1	Glass	Container	Pharm Bottle			Aqua	Free Blown/Empontilled		Body
2019A2	1	Glass	Container	Pharm Bottle			Aqua	Free Blown/Empontilled		Body
2020ZZ	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
2020ZZ	1	Glass	Container	Wine Bottle				Mold Blown/Empontilled		Body
2021ZZ	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
2022ZZ	1	Iron	Staple			Pointed End		Wrought/Forged		
2023ZZ	1	Porcelain	Closure	Lightening-Type	Porcellaneous		White	Press Molded		
2024ZZ	1	Glass	Container	Beer/Pop Bottle			Aqua	Mold Blown/Non-Empontilled		Complete
2024ZZ	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
2024ZZ	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
2024ZZ	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
2024ZZ	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Finish

Context	Count	Material	Form	Subform	Ware	Decorative Technique	Color	Manufacturing Technique	Applied Decoration	Element
2024ZZ	1	Glass	Container	Cylind Wine Bottle				Mold Blown/Non-Empontilled		Body
2024ZZ	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base/Foot
2024ZZ	1	Refined Earthenware			Pearlware	Shell Edge	Green	Press Molded		Rim
2025ZZ	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2025ZZ	1	Iron	Nail	L-Head		Blunt Cut End		Machine-Cut		
2025ZZ	1	Iron	Nail	Hand-Headed		Pointed End		Machine-Cut		
2025ZZ	1	Iron	Nail	Hand-Headed				Machine-Cut		
2025ZZ	1	Glass	Container	Beer/Pop Bottle			Amber	Machine Made		Body
2025ZZ	1	Refined Earthenware			Pearlware		Yellow	Press Molded	Painted Under	Base
2025ZZ	1	Refined Earthenware			Pearlware	Shell Edge	Blue	Press Molded		Rim
2025ZZ	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2025ZZ	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2026ZZ	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Body
2026ZZ	1	Glass	Wine Bottle		Colorless Non-Ld	Other Mold Decoration		Machine Made		Complete
2027A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
2028A2	1	Refined Earthenware			Pearlware		Blue	Press Molded	Painted Under	Body
2028A2	1	Refined Earthenware			Pearlware			Press Molded	Undecorated	Base
2028A2	1		Faunal Specimen							
2028A2	3	Quartz	Mineral Sample							
2029A1	5	Iron	Wire	Barbed				Drawn		
2030A1	1		Brick Fragment							
2031A2	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2032B1	1	Glass	Container	Beer/Pop Bottle			Amber	Machine Made		
2032B1	1	Glass	Container	Beer/Pop Bottle			Amber	Machine Made		
2033ZZ	1	Iron	Nail	Rosehead		Chisel Point		Wrought/Forged		
2034Z	1	Stoneware			White Salt-Glazed	Scr/Fill: Debased	Blue	Wheel Thrown		Body

Appendix 2. Test Unit Locations

Test Unit	Easting	Northing	Length E-W (ft.)	Length N-S (ft.)	Area (ft.^{2})
1858	19	-1	2	2	4
1859	39	-1	2	2	4
1860	79	-1	2	2	4
1861	59	-1	2	2	4
1862	99	-1	2	2	4
1863	119	-1	2	2	4
1864	135	-5	10	10	100
1865	155	-2.5	10	5	50
1866	179	-1	2	2	4
1867	199	-1	2	2	4
1868	219	-1	2	2	4
1869	239	-1	2	2	4
1870	139	-21	2	2	4
1871	119	-21	2	2	4
1872	99	-21	2	2	4
1873	79	-21	2	2	4
1874	79	-41	2	2	4
1875	59	-21	2	2	4
1876	39	-21	2	2	4
1877	19	-21	2	2	4
1878	59	-41	2	2	4
1879	139	19	2	2	4
1880	39	-41	2	2	4
1881	19	-41	2	2	4
1882	239	-21	2	2	4
1883	219	19	2	2	4
1884	199	-21	2	2	4
1885	179	-41	2	2	4
1886	119	-41	2	2	4
1887	179	-21	2	2	4
1888	159	-21	2	2	4
1889	139	-41	2	2	4
1890	159	-41	2	2	4
1891	159	19	2	2	4
1892	239	-41	2	2	4
1893	99	-41	2	2	4
1894	199	-41	2	2	4
1895	259	-41	2	2	4
1896	299	-41	2	2	4
1897	225	-15	10	10	100
1898	225	-25	10	10	100
1899	214	-15	10	8	80
1900	145	5	10	10	100
1901	179	-61	2	2	4
1902	145	15	10	10	100
1903	208	-18	4	4	16

Test Unit	Easting	Northing	Length E-W (ft.)	Length N-S (ft.)	Area (ft.^{2})
1904	232	-19	4	2	8
1905	208	-32	4	4	16
1906	208	-25	10	4	40
1907	219	-61	2	2	4
1908	239	-61	2	2	4
1909	259	-61	2	2	4
1910	279	-61	2	2	4
1911	219	-81	2	2	4
1912	239	-81	2	2	4
1913	259	-81	2	2	4
1914	279	-81	2	2	4
1918	101.25	38.75	2.5	2.5	6.25
1919	103.75	38.75	2.5	2.5	6.25
1920	121.25	18.75	2.5	2.5	6.25
1921	123.75	18.75	2.5	2.5	6.25
1922	111.25	18.75	2.5	2.5	6.25
1923	111.25	16.25	2.5	2.5	6.25
1924	101.25	28.75	2.5	2.5	6.25
1925	101.25	26.25	2.5	2.5	6.25
1926	21.25	18.75	2.5	2.5	6.25
1927	1.25	18.75	2.5	2.5	6.25
1928	1.25	38.75	2.5	2.5	6.25
1929	256.25	21.25	2.5	2.5	6.25
1930	258.75	21.25	2.5	2.5	6.25
1931	256.25	41.25	2.5	2.5	6.25
1932	256.25	43.75	2.5	2.5	6.25
1933	161.25	36.25	2.5	2.5	6.25
1934	161.25	33.75	2.5	2.5	6.25
1935	231.25	3.75	2.5	2.5	6.25
1936	233.75	3.75	2.5	2.5	6.25
1937	41.25	18.75	2.5	2.5	6.25
1938	41.25	38.75	2.5	2.5	6.25
1939	1.25	58.75	2.5	2.5	6.25
1940	41.25	58.75	2.5	2.5	6.25
1941	41.25	78.75	2.5	2.5	6.25
1942	21.25	78.75	2.5	2.5	6.25
1943	191.25	18.75	2.5	2.5	6.25
1944	193.75	18.75	2.5	2.5	6.25
1945	216.25	18.75	2.5	2.5	6.25
1946	216.25	16.25	2.5	2.5	6.25
1947	38.75	78.75	2.5	2.5	6.25
1948	1.25	78.75	2.5	2.5	6.25
1949	61.25	78.75	2.5	2.5	6.25
1950	148.75	33.75	2.5	2.5	6.25
1951	148.75	31.25	2.5	2.5	6.25
1952	58.75	98.75	2.5	2.5	6.25
1953	191.25	1.25	2.5	2.5	6.25
1954	193.75	1.25	2.5	2.5	6.25

Test Unit	Easting	Northing	Length E-W (ft.)	Length N-S (ft.)	Area (ft.^{2})
1955	148.75	23.75	2.5	2.5	6.25
1956	148.75	21.25	2.5	2.5	6.25
1957	156.25	18.75	2.5	2.5	6.25
1958	156.25	16.25	2.5	2.5	6.25
1959	41.25	98.75	2.5	2.5	6.25
1960	61.25	38.75	2.5	2.5	6.25
1961	81.25	58.75	2.5	2.5	6.25
1962	166.25	8.75	2.5	2.5	6.25
1963	168.75	8.75	2.5	2.5	6.25
1964	166.25	6.25	2.5	2.5	6.25
1965	168.75	6.25	2.5	2.5	6.25
1966	206.25	51.25	2.5	2.5	6.25
1967	206.25	53.75	2.5	2.5	6.25
1968	151.25	3.75	2.5	2.5	6.25
1969	153.75	3.75	2.5	2.5	6.25
1970	176.25	13.75	2.5	2.5	6.25
1971	176.25	11.25	2.5	2.5	6.25
1972	201.25	28.75	2.5	2.5	6.25
1973	201.25	26.25	2.5	2.5	6.25
1974	181.25	26.25	2.5	2.5	6.25
1975	183.75	26.25	2.5	2.5	6.25
1976	148.75	58.75	2.5	2.5	6.25
1977	148.75	56.25	2.5	2.5	6.25
1978	151.25	6.25	2.5	2.5	6.25
1979	153.75	6.25	2.5	2.5	6.25
1980	151.25	8.75	2.5	2.5	6.25
1981	153.75	8.75	2.5	2.5	6.25
1982	161.25	6.25	2.5	2.5	6.25
1983	161.25	-8.75	2.5	2.5	6.25
1984	156.25	8.75	2.5	2.5	6.25
1985	158.75	8.75	2.5	2.5	6.25
1986	156.25	6.25	2.5	2.5	6.25
1987	158.75	6.25	2.5	2.5	6.25
1988	156.25	3.75	2.5	2.5	6.25
1989	158.75	3.75	2.5	2.5	6.25
1990	151.25	8.75	2.5	2.5	6.25
1991	148.75	53.75	2.5	2.5	6.25
1992	148.75	51.25	2.5	2.5	6.25
1993	146.25	-6.25	2.5	2.5	6.25
1994	148.75	6.25	2.5	2.5	6.25
1996	151.25	11.25	2.5	2.5	6.25
1997	153.75	11.25	2.5	2.5	6.25
1998	156.75	11.25	2.5	2.5	6.25
1999	158.75	11.25	2.5	2.5	6.25
2001	148.75	48.75	2.5	2.5	6.25
2000	150	60	1	1	1
2002	128.75	8.75	2.5	2.5	6.25
2003	138.75	5.75	2.5	2.5	6.25

Test Unit	Easting	Northing	Length E-W (ft.)	Length N-S (ft.)	Area (ft.^{2})
2004	151.25	13.75	2.5	2.5	6.25
2005	136.25	-16.25	2.5	2.5	6.25
2006	136.25	-18.75	2.5	2.5	6.25
2007	136.25	5.75	2.5	2.5	6.25
2008	153.75	13.75	2.5	2.5	6.25
2009	128.75	6.25	2.5	2.5	6.25
2010	116.25	-6.25	2.5	2.5	6.25
2011	118.75	-6.25	2.5	2.5	6.25
2013	116.25	-23.75	2.5	2.5	6.25
2014	146.25	-26.25	2.5	2.5	6.25
2015	148.75	-26.25	2.5	2.5	6.25
2016	98.75	-26.25	2.5	2.5	6.25
2017	98.75	-28.75	2.5	2.5	6.25
2018	136.25	-48.75	2.5	2.5	6.25
2019	138.75	-48.75	2.5	2.5	6.25
2020	130	-20	0.5	0.5	0.25
2021	140	-10	0.5	0.5	0.25
2022	130	-10	0.5	0.5	0.25
2023	70	10	0.5	0.5	0.25
2027	108.75	-41.25	2.5	2.5	6.25
2028	111.25	-41.25	2.5	2.5	6.25
2029	301.25	38.75	2.5	2.5	6.25
2030	291.25	28.75	2.5	2.5	6.25
2031	167.25	24.75	2.5	2.5	6.25
2032	126.25	28.75	2.5	2.5	6.25
2033	160	10	1	1	1