Archaeological Research of The Riverside Wash House

By
M. Jay Stottman and Matthew E. Prybylski

Kentucky Archaeological Survey

Research Report No. 7

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ABSTRACT

With the success of the Detached Kitchen project, Riverside, The Farnsley-Moremen Landing continued their focus on identifying, researching, and reconstructing former outbuildings on the property. From 1998 to 2000, The Kentucky Archaeological Survey conducted archaeological excavations at the washhouse. The excavations were conducted in association with the Building Blocks of History school fieldtrip program and the Heritage Weekends, which continue to provide meaningful experiences for the public. Nearly 75 square meters was excavated within the washhouse area. Deposits from the construction, use, and demolition of the washhouse, as well as, some deposits associated with the detached kitchen were identified. The results of the excavations indicate that the washhouse was a 20 x 15 foot (6.1 x 4.6 m) wood frame building and stood from ca. 1880 to ca. 1920s. Based on the archaeological evidence, washing activities took place not only in the building but also in the yard spaces around it. The washhouse was essentially a complex that included a building with a cistern and drainage system, an outdoor hearth, and yard, where other activities in addition to washing, such as soapmaking took place. The people who performed the duties of washing at Riverside, were likely members of the Moremen family and their tenants. They included the Thomas family, who were African-American and may have been former slaves of the Moremens. The reconstruction of the washhouse could be problematic because of its close proximity to the reconstructed detach kitchen and it may not fit well with Riverside's overall interpretation. However, alternative forms of interpreting the washhouse, such as the use of signage, may be a more effective and less obtrusive form of public interpretation than its reconstruction.

ACKNOWLEDGEMENTS

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INTRODUCTION

Following the successes of the detached kitchen archaeological research and reconstruction project, the Kentucky Archaeological Survey (KAS) conducted archaeological excavations at the washhouse from 1998 to 2000 (O.S.A. Permit # 98-3, 99-5, 00-9). These excavations were conducted in association with public and educational programming, including Archaeology Weekend (later the Heritage Festival Weekend) and the Building Blocks of History education program. Thousands of school children and adult volunteers participated in the research of the washhouse.

The purpose of this research was to locate the remains of the washhouse building, interpret the architecture for possible reconstruction, learn more about its role in the outbuilding complex, and the people who worked there. The results of this project will be used to better interpret the washhouse area and Riverside's outbuilding complex in general.

Over 74 square meters were excavated during the course of the study. Based on the analysis of over 38,000 artifacts and the interpretation of 17 features, the Riverside washhouse was an approximately 20 x 15 ft. (6.1 x 4.6 m) wood frame building constructed sometime in the 1880s. It had a primary foundation of dry-laid brick and stone piers, but also included a partial lime-mortared brick foundation. However, it was discovered that there was much more to the washhouse than just a small building. The washhouse building likely served many purposes, one of which was to do washing. An outdoor brick hearth and linear fire pits were likely used to boil water for laundry and making soap. The building consisted of an elaborate drainage system that collected wastewater from not only the washhouse but also at least one other outbuilding and deposited it into a cesspool. The task of washing at Riverside was not exclusive to a building, but also took place in associated yards. Thus, the washhouse was a complex of a building and nearby yard spaces where many domestic activities took place, including washing. The people who performed the work at the washhouse complex, included Moremen family women and hired African-American servants. They represent domestic work at Riverside during the Post Bellum period, when plantation slave labor had to be replaced. The washhouse building was likely demolished sometime in the 1920s.

This report presents the findings of the archaeological investigation of the Riverside washhouse. It is organized as followed: A brief description of the Riverside property, background environmental, archaeological, and historical information, methods utilized during the study, artifact descriptions with detailed explanations of historic period artifact types, description of strata and features, analysis and interpretations of the artifacts, strata, and features, and finally a concluding remarks section that includes a discussion of relating to the interpretation and presentation the washhouse.

SITE DESCRIPTION

As described in the pamphlet that welcomes visitors to the site, "Standing atop a gentle rise overlooking the Ohio River, the Farnsley-Moremen House is the centerpiece of a 300 acre tract of land known as Riverside." Once a part of even larger tracts of land, this "...splendid example of a classic two-story, brick "I" house with a Greek Revival, full-height portico and a decorative cornice" is a fine example of a nineteenth century plantation and farm (Figure 1). The home's prominence on an Ohio River terrace and its rich history drew interest for its eventual preservation. It now has a mission to interpret life on a nineteenth century farm.

Riverside, the Farnsley-Moremen Landing is located at 7410 Moorman Road in southwestern Jefferson County, Kentucky, approximately 13 miles (21 km) southwest of Louisville. The property is situated on the second terrace of the Ohio River (Figure 2). It contains five recorded archaeological sites, one of which is the Farnsley-Moremen House (15Jf531). This site includes the historic period core of the property. Much of the land associated with the site is still used for agriculture, while the area around the historic home functions as a museum and park. The museum area includes the renovated historic home, a reconstructed detached kitchen, and a modern visitor center. This area consists primarily of mowed grass and gardens. A field to the south of the visitor's center is the location of a modern riverboat landing and pavilion. The washhouse area is located just southwest of the main house adjacent and to the south of the detached kitchen.

ENVIRONMENTAL BACKGROUND

PHYSIOGRAPHY

Riverside is situated on a terrace in the Ohio River Alluvial Lowland. The Ohio River dominates the physiography of this area. Linear terraces that parallel the Ohio River characterize the area. Elevation on the first terrace is generally 124 m AMSL (403 ft) grading up in gently rolling slopes to 137 m AMSL (445 ft) on the third terrace.

Riverside is located on the first terrace sloping to the Ohio River. On the broad extent of the alluvial plain there are numerous north-south linear rises that formed as the Ohio River moved to the northwest degrading the Indiana shore and aggrading to the east. Several creeks that flow through old channels of the Ohio River have gradually formed their own small peneplains (Powell 1970). The land is essentially flat and poorly drained with standing water in low areas during much of the winter and spring. To the west, the narrow floodplain is well drained (Gunn 1968; Powell 1970) by the Salt River.

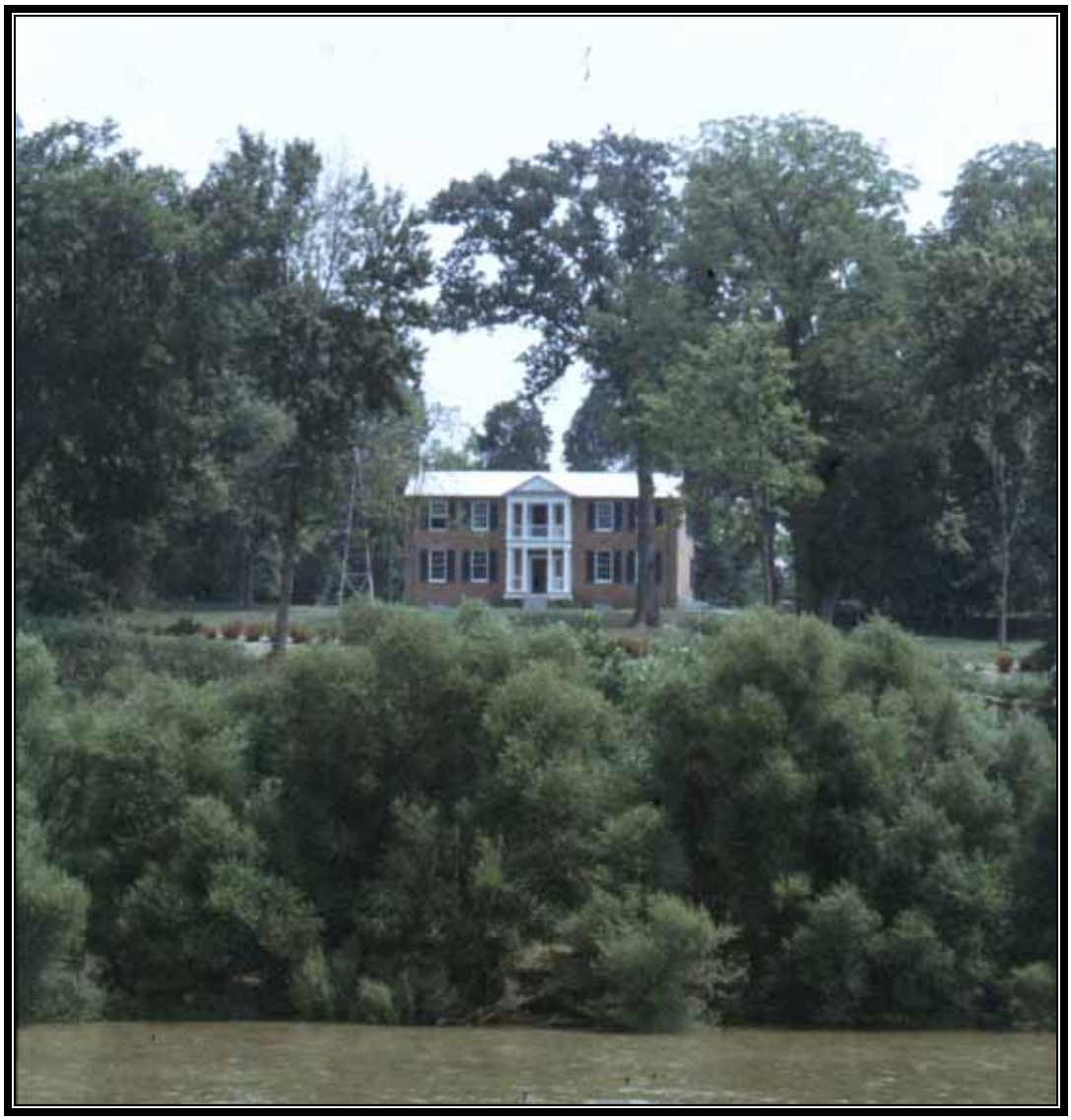

Figure 1. The Farnsley-Moremen House.

GEOLOGY

The geologic structure of the Louisville area is comprised of underlying bedrock of New Albany shale of Devonian Age and the Louisville limestone of Ordovician and Silurian Age (Kepferle 1974). Erosion of these underlying bedrocks created the flat poorly drained outwash around Louisville on the edge of the Outer Bluegrass Region known as the Scottsville Lowland (McFarlan 1943; Powell 1970). The overlying geologic deposits are a product of the Quaternary glaciation. Illinoian glacial drift combined with Wisconsin outwash sediments of silt and gravel has formed an overburden of over 30 m (98 ft) in thickness.

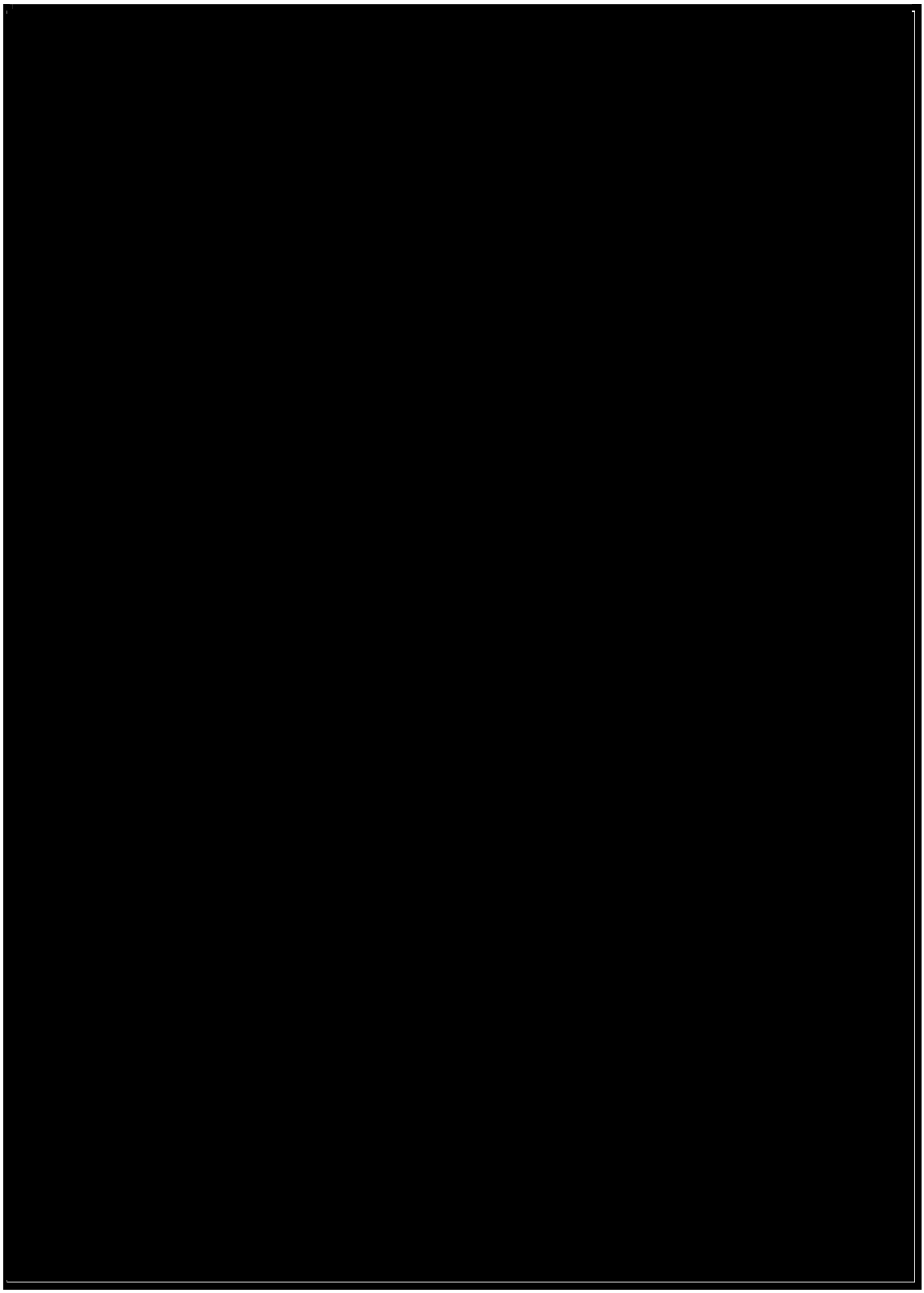

Figure 2. U.S.G.S. Topographic Map Showing Riverside, The Farnsley-Moremen Landing Property (Kosmosdale Quad).

SOILS

The soils associated with the Riverside property are consistent with glacial and hydraulic activity. In this area they consist of a combination of alluvial clays, silts and gravels of the Wheeler-Weinbach-Huntington Association (Zimmerman 1966). Soils at the surface are quite fertile sandy-silt loams that were utilized by late prehistoric and historic farmers in the area. The gravel soils are quite deep, below 3 m (9.8 ft). Because these gravels are so deeply buried, the presence of water-rolled glacial erratics in the upper zones is almost nonexistent.

CLIMATE

The climate in the Louisville area is characterized by relatively mild winters and warm summers. The growing season averages above 190 days. Mean annual rainfall is approximately 102 cm (40 in). Temperature variability is seasonal between 0 and 100 degrees Fahrenheit. Mean temperature in July is 78 degrees Fahrenheit and in January 35 degrees Fahrenheit (Butts 1915; Zimmerman 1966).

FLORA AND FAUNA

On tributaries of the Ohio River there are stands of cottonwoods, sycamore, soft maple, black willow, gum, and elm. On inland terraces white oak, black oak, yellow popular, hickory, beech and hard maple predominate. The drier portions of southwestern Jefferson County contain stands of maple, oak, sweet gum, tupelo, sassafras, black locust, and ash. Early Euro-American explorers reported that the Louisville area was "well timbered, producing large trees of many kinds, and to be exceeded by no country in variety" (Filson 1784). Filson (1784) reported the presence of the sugar tree, honey locust, coffee tree, "pappa-tree," black mulberry, wild cherry, and buckeye. Numerous grasses and perennials, such as smartweed, goosefoot, and amaranth are found in areas that are not farmed (Gunn 1968). Filson (1784) and others have commented on the abundance of great fields of cane, which grew to a height of 0.9 to 3.7 m (3 to 12 ft).

It is known in the past that the Louisville area supported a large and diverse faunal population with both floodplain and upland species represented. In modern times, the faunal population of the area has been substantially reduced with most species, such as bison, wolf, and large cats, being absent. One exception is the white-tailed deer, which has made a dramatic comeback in the area. Low populations of eastern cottontail rabbits, groundhogs, opossum, and gray squirrel also are present. Filson reported that in 1784 the faunal inventory included:

> The land fowls are turkeys, which are very frequent, pheasants, partridges, and ravens: The perraquet, a bird every way resembling a parrot, but much smaller; the ivory-bill wood-cock, of a whitish color with a small white plume, flies screaming exceeding sharp. There are still to be found many deer, elks and bears, within the settlement, and many more on the borders of it. There are also panthers, wildcats, and wolves. The waters have

> plenty of beavers, otters, minks, and muskrats: Nor are the animals common to other parts wanting, such as foxes, rabbits, squirrels, raccoons, ground-hogs, pole-cats, and opossums (Filson 1784:26-28).

The bird population presently includes, such prehistorically utilized species as various ducks (mallard and pintail), grebe, teal, quail, and morning dove. Various smaller species of mammals and reptiles also are present. As historic settlement of the area increased, common domesticated animals, like cow, pig, chicken, and sheep were introduced to the area as food. Beast of burden, such as, oxen, horses, mules, and jacks, also were introduced at this time.

The Ohio River was known in the past to support a wide variety of aquatic life. Filson described the species of fish he encountered during the late eighteenth century.

> The fish common to the waters of the Ohio are the buffalo fish, of a large size, and the catfish sometimes exceeding one hundred weight. Salmons have been taken in Kentucke weighing thirty weight. The mullet, rock, perch, garfish, and the eel, are here in plenty. It is said that there are no trouts in the western waters. Suckers, sunfish, and other hook-fish, are abundant; but no shad, or herrings. We may suppose with a degree of certainty, that there were large subterraneous aqueducts stored with fish, from which fine springs arise in many parts producing fine hook-fish in variety. On these waters, and especially on the Ohio, the geese and ducks are amazingly numerous (Filson 1784:26).

Native American populations used shellfish, primarily freshwater mussels. Shellfish also were exploited during the historic period for the production of shell buttons (Claassen 1994). Species that were present in 1819 were *Strepoma angularis* and *S. concolor*. *Rafinesque* also listed *Ellipstoma gibbosa* and *E. rugosa*. In 1863, Lea describes three species: *Lithasia obovata*; *Pleurcera canaliculatum*; and *Anculosa praerosa* (Goodrich 1929). *Anculosa trileneata* is also reported (Goodrich 1929).

PREHISTORIC BACKGROUND

PALEOINDIAN PERIOD (9,500-8,000 B.C.)

The earliest sites in Kentucky date to the Paleoindian period. While only a few archaeological sites of this period have been investigated professionally, the existence of Paleoindian people in Kentucky has been documented (Tankersley 1996). It is generally assumed that Paleoindians were hunter-gatherers who lived in small highly mobile bands.

The Paleoindian period is divided into three subperiods based on stylistic changes of stone chipped projectile points, which archaeologists believe correspond to changes in subsistence practices. Early Paleoindian subperiod (9,500-9,000 B.C.) projectile points

are characterized by fluted bases formed by the removal of a long basal flake from either one or both sides of the tool (Clovis style). It is believed that Early Paleoindian groups were primarily big-game Ice Age hunters (Tankersley 1996:26).

By the Middle Paleoindian subperiod (9,000-8,500 B.C.) most of the large game animals prevalent during the Late Pleistocene Ice Age had become extinct and the subsistence strategies of Paleoindian groups had become more generalized (Tankersley 1996:32). While projectile points remained fluted, many slight stylistic differences have been identified, suggesting the emergence of regionalized groups with less interaction between groups.

By the Late Paleoindian subperiod (8,500-8,000 B.C.) fluted projectile points had disappeared and were replaced by the unfluted Dalton Cluster styled points (Justice 1987:35-44; Tankersley 1996:33). Dalton points have more stylistic differences than fluted points, reflecting greater regional diversity (Justice 1987). There is also a wider range of tools associated with the Dalton tool kit than with earlier Paleoindian groups (Ellis and Deller 1988; Tankersley 1996:22).

ARCHAIC PERIOD (8,000-1,000 B.C.)

The trend toward increased regionalization continued into the Archaic period. Like their Paleoindian predecessors, Archaic groups were hunter-gatherers. However, over the course of this 7,000 year period the nature of their settlement systems changed dramatically, and by the end of the Archaic, Native American populations had become more sedentary. Many sites were utilized more intensively and occupied for much longer periods of time as social organization became more complex. These trends correspond with changes in the natural environment. From 7,000 to 3,000 B.C. the eastern United States experienced a long period of warm, dry conditions referred to as the *Hypsithermal climatic interval* (Jefferies 1996:39).

The Archaic period is traditionally divided into three distinct subperiods. Cultural activities during the Early Archaic (8,000-6,000 B.C.), more closely corresponded to the Ice Age hunters of the Paleoindian period. The Early Archaic is seen as a time of cultural transitions as regional populations more fully adapted to new environmental conditions. Many, if not most, of the modern animal and plant species native to Kentucky became established at this time. Game species included white-tail deer and turkey, while plant species included such nut bearing hardwood trees as oak, hickory, and chestnut. Throughout the Early Archaic, regional populations remained highly mobile and few Early Archaic sites have yielded evidence of midden development or substantial features that would indicate long-term occupation (Jefferies 1996:40). Early Archaic groups utilized similar lithic tool-kits as their Paleoindian antecedents. During the early portion of the Early Archaic, Kirk Corner Notched and Thebes Side Notched projectile points dominate site assemblages. Later, Early Archaic groups began using bifurcate base point types, such as Le Croy and Kanwha (Justice 1987:54-82, 91-97).

By the beginning of the Middle Archaic (6,000-3,000 B.C.) the highly mobile subsistence strategies of the Early Archaic had given way to greater regionalization and far less subsistence related mobility. Sites in the lower Tennessee-Cumberland Valleys, as well as along the Ohio, appear to have been base camps used on a long-term, perhaps year-round basis (Jefferies 1996:54; Nance 1987). Midden development is substantial and there are numerous features as well as occasional human burials. The Middle Archaic also is characterized by a relative explosion in regionally distinct projectile point types (Jefferies 1996; Justice 1987). These cultural changes may be closely related to the change in the environment, which began around 7,000 B.C. Dryer conditions may have restricted the distribution of subsistence resources and encouraged more intensive exploitation of foodstuffs available in smaller areas. This is indicated by the adoption of a variety of specialized tools, such as stone axes, pitted anvils (for processing nuts), grinding stones, and pestles. Use of these tools allowed for the exploitation of a wider range of plant resources (Jefferies 1996:48).

An emphasis on hunting and gathering continued into the Late Archaic (3,000-1,000 B.C.) with some important changes. The population became more dispersed and subsistence strategies included a greater reliance on fresh water mussels and starchy seeds. There also is evidence of small-scale cultivation of native plants, such as squash (Jefferies 1996:57). An increase in social complexity occurred, with exotic goods being interred with some individuals in graves. In western Kentucky, individuals were interred with grave goods, such as stone tools made from exotic chert or items made from Great Lakes copper (Jefferies 1996:54; Webb 1946; Winters 1968).

Late Archaic groups were active in the Ohio Valley, particularly along the fertile river and associated bottoms, as well as some rockshelters (Jefferies 1996). Large base camps are common in the valleys, while upland rockshelters were utilized by hunting bands or by groups gathering nuts. Some projectile points during this period were stemmed rather than notched. Other artifacts, included pestles, chipped stone choppers, chipped-stone axes, metates, and nutting stones (Jefferies 1996:68).

WOODLAND PERIOD (1,000 B.C.-A.D. 900)

The Late Archaic ended with the introduction of pottery, some time around 1,000 B.C. Many of the trends initiated in the Late Archaic, such as increased social complexity and a greater reliance on native cultigens, continued into the Woodland period. These trends culminated in the elaborate mortuary practices of the Adena and Hopewell traditions of the Early and Middle Woodland.

The Early Woodland (1,000-200 B.C.) is distinguished from the Late Archaic by the introduction of ceramics and Early Woodland projectile points many of which were stemmed rather than notched (Justice 1987). The earliest known textiles and twined fabrics are also known from this period. Hunting and gathering continued to be important, but there was an increased reliance on plants grown in family gardens. Some Early Woodland sites may have been occupied year-round and there was a distinct division between residential and ritual sites.

The Adena mortuary complex emerged at this time. Elaborate earthen mounds were built late in the Early Woodland period beginning ca. 500 B.C. specifically for interment of the dead. The construction of these mounds appears to correspond to the establishment of more circumscribed territories associated with an increase in population. Early Woodland Native Americans were not just hunter-gatherers, but they also engaged in the cultivation of domesticated plants (Railey 1996:86).

The Middle Woodland period (200 B.C.-A.D. 500) is best defined by its mortuary traditions. The Adena tradition, which began in the late Early Woodland, persisted into the Middle Woodland and is contemporary with the Hopewell tradition. In addition to accretional burial mounds, Hopewell groups built large earthen enclosures in a variety of geometric shapes. There are more similarities than differences between the Adena and Hopewell traditions and it now seems likely that they are part of the same overall cultural complex (Railey 1996). Both Adena and Hopwellian groups were involved in long-range trade and ceremonial interaction spheres. These, interaction spheres involved the exchange of goods as well as information (Railey 1996; Struever 1964). Subsistence patterns continued with an increased reliance on native cultigens, such as goosefoot and maygrass, wild plants, such as nuts, and the hunting of white-tailed deer and other animals.

By the late Woodland period (A.D. 500-900) the Hopewell Interaction Sphere had collapsed. The construction of burial mounds and other earthworks also declined (Railey 1996:110). The major technological change was the introduction of the bow and arrow around A.D. 700-800 (Railey 1996:111). Stemless triangular arrow points are diagnostic of terminal Late Woodland lithic assemblages (Railey 1996:119). Horticulture also intensified, supplemented by continued hunting and gathering. Toward the end of the period, there was an increased reliance on maize

LATE PREHISTORIC (A.D. 900-1700)

By A.D. 900, Native American groups had become more sedentary. They also began to rely heavily on cultivated plants and maize, in particular, to meet subsistence needs and to participate in what archaeologists call the Mississippian and Fort Ancient cultural traditions. Mississippian populations, who occupied much of western and south central Kentucky, lived in large towns and smaller associated villages, hamlets and farmsteads (Lewis 1996:127). The towns, which were characterized by a central plaza surrounded by houses and earthen platform mounds, were the focus of Mississippian social, political, and religious activities. The platform mounds were the homes for the chiefly families. Mississippian ceramic assemblages are characterized by a variety of vessel forms, including jars, bowls, plates, bottles, and pans. Small triangular style projectile points dominate the chipped stone tool assemblages. Mississippian cultures participated in long distance exchange networks. Through these networks they obtained a variety of items, such as marine shell beads and gorgets and copper beads and coils.

The Fort Ancient sites are present in the central and eastern Bluegrass Region (Sharp 1990:479-484; Sharp and Pollack 1992). Sociopolitical organization increased in complexity from the Woodland period, though Fort Ancient tribal groups never reached the same level of sociopolitical complexity of Mississippian chiefdoms. Horticulture was the major subsistence pursuit, with beans, squash, and corn the dietary staples. Hunting and gathering contributed significantly to the Fort Ancient diet (Breitburg 1992; Rossen 1992). Through time, Fort Ancient peoples became established in large settlements. Villages were often circular or elliptical, with a midden ring and houses around a central plaza (Sharp and Pollack 1992). A low mound is present in some of the plazas. Fort Ancient ceramics are characterized by shell-tempered pottery and the projectile points are triangular (Railey 1992: Sharp 1990)

With the arrival of disease in the Ohio Valley in the 1600s, native cultures were decimated and their descendants became the historically documented tribes of the Ohio Valley, such as the Shawnee and Miami (Henderson et al. 1992:277-279).

HISTORICAL BACKGROUND

RIVERSIDE

The property's Euro-American history has its beginnings as a part of a massive tract in Jefferson County, Virginia, surveyed and claimed by John May in 1782. Huge parcels were divided and owned by numerous individuals until the first quarter of the nineteenth century. Thames believes the land remained unsettled until a man named Ebenezer Christopher acquired the property in 1822 (McBride and McBride 1989:7). According to staff and volunteers associated with the site, a structure does appear on an 1821 Ohio River navigation map, but it is unclear exactly where this "farmhouse" was in relation to the current historic house (McBride and McBride 1989:7). A copy of this particular map cannot be located at this time for verification. Christopher, who ran a ferry from his land, owned the property for only four years. He died in debt and the bank took over ownership of his estate. Gabriel Farnsley purchased the 200-acre tract of land from land speculator Joseph Reed in 1828 (McBride and McBride 1989:8). Reed was a well-known land speculator who had ties to thousands of acres in southwestern Jefferson County and it is unlikely that he occupied the Riverside property (Stottman 1998). Farnsley is believed to be the individual responsible for the construction of the existing historic structure, now known as the Farnsley-Moremen House. An increase in Farnsley's taxes between 1837-1839 indicates that he may have built the house during this time period (Linn and Neary 1998:10). However, the tax increase may also be a reaction to the economic crisis of 1837. Regardless, it is most likely that the house was built in the late 1830s. Thames thinks that it is possible that the previous owner, Ebenezer Christopher could have constructed at least a portion of the current structure because of the number of his children--six, in contrast to Farnsley's status as a bachelor (McBride and McBride 1989:8).

One idea concerning the construction of the house is that Christopher built the rear ell of the house as a two story single pen structure to support his large family and that Farnsley added the "I" house section later to complete its current configuration. This information is largely based on the previously mentioned 1821 Ohio River map. Many believe the rear ell of the house may be the Christopher home depicted on this map, but there is no evidence to support this suggestion (Linn and Neary 1998:6). However, there is solid evidence that Farnsley was involved in the home's construction, because a brick inscribed with his signature was recovered during the renovation of the structure. It is possible that Christopher lived in a structure that was located elsewhere on the property or one that was replaced by the existing Farnsley-Moremen house. Analysis by architectural historians and documentation conducted during the renovation of the house concur that the entire house was likely constructed in a single episode, further establishing Farnsley as the likely builder of the entire house, probably with the utilization of slave labor.

Gabriel Farnsley died in 1849, a bachelor without a will and children to be direct heirs to the property. This fact created a lengthy lawsuit to establish ownership of the property (Linn and Neary 1998:15). A farmer named Megowan in 1858 acquired a clear title to the property, after a decade of legal entanglement and tenancy. Megowan, rented the property to the next owner, Alanson Moremen from 1860 to 1862.

Moremen, a large landowner formerly of Brandenburg in Meade County, bought the property he rented in 1862 (McBride and McBride 1989:9). Moremen moved to Riverside with his wife Rachel, six of their children, and 23 enslaved African Americans (Figure 3). Moremen, who was in his fifties at the time, left a very successful farm in Brandenburg to his eldest son and moved to Riverside. It is unclear why he desired to start over so late in his life. When he arrived at Riverside, he made repairs to existing outbuildings, built new outbuildings, and set out to create a large farming operation. By the l880s, Moremen had one of the largest in Jefferson County, totaling 1,500 acres. In addition to agriculture, the Moremen family had a riverboat landing on the property. They were known for making soap to trade with passing riverboats, which led to the property being nicknamed "Soap Landing."

The Moremen family, with descendants still living nearby, owned the property until its acquisition by Jefferson County in 1988. The main house was renovated in 1992 and opened in 1993 as a museum called Riverside: The Farnsley-Moremen Landing, which consisted of 150 acres of riverfront land. Riverside has become one of the most popular historic house museums in Jefferson County. It has grown to include 300 acres of land, the Rosenberger archaeological site, and the ca. 1860s Aydelott/Rosenberger House.

Figure 3. Ca. 1870s Photograph of the Moremen Family and Guests (Alanson and Rachel are Seated in the Carriage and Kittie Moremen Thomas is Seated at Far Right with a Baby).

WASHHOUSE

Unlike the early to mid nineteenth century detached kitchen, for which there was little in the way of archival records and oral history, a great deal of historical information was available about the washhouse. The best information about the washhouse is a ca. 1890s photograph (Figure 4). The photo shows Rachel Moremen in the yard behind the main house with some yard fowl. In the background, two outbuildings are visible. According to most Moremen family descendants, the washhouse (also known as the soap house) was located just beyond the southeast corner of the main house. They also indicated that it enclosed a water cistern. It is believed that the small building to the left with the slanted roof is the washhouse. The building to the right is believed to be the original Farnsley era smoke house.

The photograph has been very important for helping determine the location and architecture of the washhouse. It shows that the washhouse had a gutter extending into the building. It is believed that this gutter connected the washhouse with the southeast corner of the main house, draining rainwater into a cistern enclosed by the washhouse. The cistern was still visible on the ground surface at the time of the archaeological excavations. Also, shown in the photo is a fence line to the immediate left of the

washhouse. Evidence of the fence in the form of small postholes was uncovered during the excavation of the detached kitchen (Stottman and Watts-Roy 2000). This evidence placed the detached kitchen only a couple meters from the location of the washhouse. Thus, the photograph, oral history, and archaeological excavations at the detached kitchen have helped define the general location of the washhouse.

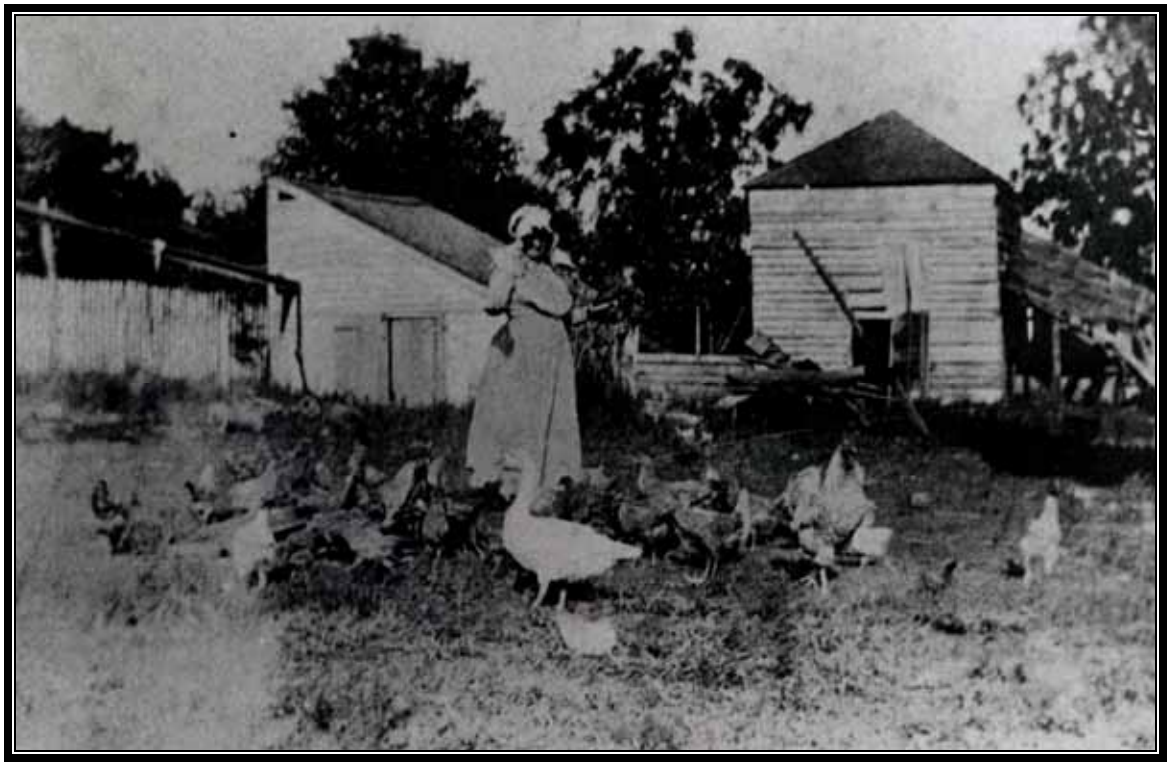

Figure 4. Ca. 1890s Photograph of Rachel Moremen in Front of the Washhouse (left) and the Smokehouse (right).

From this photograph only one side of the washhouse is visible in the photograph, much can be learned from this photograph about the architecture and appearance of the washhouse. The photo indicates that the washhouse was a one and a half story frame building with horizontal clapboard siding and wood shake roof. It appears to be a square or slightly rectangular shaped structure with a roof that slants from the north to the south. The peak of the roof is along the north wall of the structure and includes a small vent on the west side. The west side of the structure includes an entrance point for the overhead gutter at the ceiling of the first floor and a double swinging door.

Moremen family descendants indicate that the washhouse was built in the late 1800s and was demolished sometime in the early 1900s, possibly in the late 1920s. They also have suggested that the general area of the washhouse was extensively used for soap making and that a brick outdoor hearth where large copper kettles were used in the soap making process was located in this area.

Based on this information, the archaeological research at the washhouse had the benefit of knowing the location and basic architectural attributes of this building. Furthermore, based on the oral history, researchers were made aware of the fact that other features may be located in the vicinity of the washhouse, such as an outdoor hearth.

PREVIOUS ARCHAEOLOGY

During the last thirty years, the identification of archaeological sites has increased dramatically in Jefferson County. The majority of archaeological work within Jefferson County has been a result of cultural resource management projects in association with Section 106 of the Historic Preservation Act of 1966. Over 690 archaeological sites have been recorded in Jefferson County. Because Jefferson County was extensively used by native peoples for thousands of years and settled early in the historic period, many prehistoric and historic period sites have been recorded.

PREHISTORIC ARCHAEOLOGY

Significant prehistoric remains have been documented in several places along the Ohio River in the Louisville area, particularly in the vicinity of Riverside. Four major sites were identified in southwestern Jefferson County along the Ohio River as part of a Corps of Engineer's floodwall project (Collins 1979). The Longworth-Gick site (15Jf243), Rosenberger site (15Jf18), Villiers site (15Jf110), and Spadie site (15Jf14) produced significant archaeological remains from the Woodland and Archaic periods. Stratified occupation layers, middens, hearths, pits, and burials were documented. The Rosenburger site (15Jf18) is now a part of Riverside's 300-acre property.

Other important archaeological sites investigated along the Ohio River demonstrate the extensive prehistoric occupation of the Ohio River lowland. The Habich site (15Jf550) in Northeastern Jefferson County at the confluence of Harrods Creek and the Ohio River contained an intensive archaic period occupation. Numerous features were identified including burials, hearths, and storage pits (Granger et al. 1992).

Excavations at the Point Neighborhood demonstrated that significant prehistoric deposits could remain intact beneath the heavily developed nineteenth century neighborhoods of urban Louisville (McKelway 1995). Prehistoric archaeological deposits found at the Point Neighborhood, including burials and middens, dated primarily to the Archaic and Woodland periods. The Program for Archaeological Research at the University of Kentucky identified a significant Mississippian period site recently in the same area along the edge of River Road at Eva Bandman Park (15Jf668).

Extensive prehistoric deposits from the Archaic, Woodland, and Mississippian periods have also been identified on Shippingport Island adjacent to the McAlpine Locks and Dam on the Ohio River near Portland (Anne Bader, Personal Communication 2004).

Significant prehistoric sites also have been investigated on the floodplain across the river in Southern Indiana. The Clark Maritime Center site (12Cl12) contained extensive Woodland period deposits (Reidhead 1976; Sieber and Ottesen 1985). Important Archaic deposits have been identified at the Swan's Landing site (12Hr304), the Patty's West site (12Fl146), Breeden shell mound site (12Hr11), and the Old Clarksville site (12Cl1). Also, significant Archaic and Woodland period deposits were found during recent excavations at the Caesar's Casino Project (12Hr484) (Rick Burdin, personal communication 2002).

HISTORICAL ARCHAEOLOGY IN JEFFERSON COUNTY

Historical archaeology in Jefferson County has largely been focused on farmsteads, plantations, and urban neighborhoods. Several important historic period farmstead and plantation sites have been investigated archaeologically in Jefferson County. Extensive excavations have been conducted at Locust Grove (15Jf541), Farmington (15Jf574), and Johnson-Bates (15Jf538). Most of these projects have focused on locating and interpreting outbuildings. At Locust Grove, the springhouse (Granger and Mocas 1972), three slave cabins (Young 1995), a barn, and an agricultural building (DiBlasi 1997) were excavated. A kitchen (McBride and Bellhorn 1992) and a possible slave cabin (Slider 1998) were excavated at Farmington. At the Johnson-Bates farmstead an extensive investigation of several outbuildings was conducted (O'Malley 1987). Limited excavations have taken place at several other historic sites in the county including Blackacre (15Jf681) (Stottman 2000), Oxmoor (15Jf647) (Young 1997), Stonybrook (15Jf676) (Stallings and Ross-Stallings 1999), the Conrad/Dravo farmstead (15Jf638) (Bader 1997), the Vulcan Rudy slave house (15Jf685) (Stottman 2001), and the Hall-Standiford tenant house (15Jf571) (Stottman et al. 1992).

Urban archaeology projects conducted in Louisville have encompassed a wide variety of sites and features. Neighborhoods were the focus of extensive projects conducted in Highland Park (15Jf607-15Jf623) (Stottman and Granger 1993) and in the Russell Neighborhood (15Jf600-15Jf606 and 15Jf624-15Jf626) (McBride 1993; Stottman and Watts-Roy 1995). A large sample of house lots was investigated during each of those projects, which documented a variety of features mostly, privies and cisterns. Archaeological investigations also have been conducted in Louisville's central business district. Three residential lots that contained privies and a cesspool feature were the focus of investigations at the Convention Center Site (15Jf646) (Stottman 1995). Analysis of materials recovered from these features generated new insights into Louisville's earliest residential and commercial expansion from the mid-to late 1800s.

A survey of the Portland Wharf encompassed six city blocks and the wharf from the original town of Portland now located in Louisville's west end (Stottman and Prybylski 2004). The survey documented intact house foundations, privies, cisterns, roads, and sidewalks. Investigations at the Point Neighborhood along the Ohio River in eastern Louisville revealed intact nineteenth century urban deposits (Esarey 1992; McKelway 1995). Eight city blocks (15Jf592-15Jf599) were examined in the Point Neighborhood, which was occupied from the late 1700s to late 1800s. Extensive test

excavations of the Point neighborhood sampled a large section of a community, including residential, commercial, and industrial sites (Esarey 1992; McKelway 1995). A wide range of features were identified, including privies, wells, cisterns, foundations, walkways, fence posts, and trash pits. Across the canal from Portland, extensive historic period deposits associated with the town of Shippingport have been identified and are in the process of being studied (Anne Bader, Personal Communication 2004).

Other urban archaeological projects in the Louisville area were much smaller in scale to the above mentioned neighborhood studies or consisted of monitoring or salvage. A single house lot (15Jf572) was investigated in the Parkland neighborhood located in southern Louisville (Stottman et al. 1991). A privy and a cistern were excavated in association with this project. Additionally, a single house lot and privy were excavated in urban New Albany, Indiana across the river from the Portland Neighborhood (Maples 1992).

Other types of sites also have been investigated in Louisville, including industrial, secular, and river landing sites. Excavations at the Thomas Pottery (15Jf599) (Esarey 1992; McKelway 1995) and the Lewis Pottery (15Jf658) (Stradling et al. 1998; Stradling and Stradling 2001) have provided a glimpse of the pottery industry during the nineteenth century. On the outskirts of Louisville, the excavation of Ward's Mill has been important for investigating core/periphery relationships in the local economy (Granger 1984). Extensive excavations conducted underneath the Cathedral of the Assumption in central Louisville produced important information about life at the church in the mid-1800s (Mansberger 1990, 1995). Ball and Parrish (1985) surveyed historically documented riverboat-landing sites along the central Ohio River. This survey produced little archaeological evidence of these landings.

Finally, several attempts were made in the 1980s to locate intact archaeological deposits in Louisville's central commercial district. These projects, which had little success, included limited excavations at the sites of the Galleria, Louisville Science Museum, and the Jefferson County Court House (Granger 1983, 1987; Otto and Granger 1982). It is believed that most evidence of Louisville's earliest settlement and waterfront/commercial district have been destroyed by years of development. However, recent work at the Muhammad Ali Center site on Louisville's riverfront identified several early wood-lined privies and a privy associated with a mid- to late nineteenth century pharmacy (Bader 2003). This project demonstrates that complex nature of urban sites and the varying degree at which archaeological resources can be preserved.

RIVERSIDE

Riverside has been the subject of several archaeological investigations. The University of Kentucky Program for Cultural Resource Assessment conducted the first extensive archaeological investigation of the property in 1989 (McBride and McBride 1989). These investigations served the purpose of documenting the archaeological integrity of the historic core of the Riverside property (15Jf531). Special attention was given to the area around the main house and the presumed location of the riverboat

landing historically documented at the site. Shovel probing was used to sample yard deposits and locate outbuilding structures. The McBrides recommended that ground disturbance activities in the vicinity of the house be of a limited nature due to the presence of preserved occupational deposits.

University of Louisville staff archaeologist, Phil DiBlasi conducted additional archaeological investigations at Riverside. Personal communication with him indicates that excavations were undertaken in association with an "Archaeology Weekend" from 1990 to 1994. DiBlasi utilized a backhoe supplemented by hand excavation to investigate an approximately five-meter block at the location of the former attached kitchen on the south side of the house. The purpose of these excavations was to locate one of the detached kitchens and/or verify the origin of the attached kitchen. A large "root cellar" type pit was excavated and several brick piers were identified during this particular project. According to DiBlasi no early artifacts (nineteenth century) were recovered from the filled depression. Material culture recovered from this area dated primarily to the early 1900s. In addition to the "Archaeology Weekend" projects, DiBlasi monitored several renovation/construction-related projects and he indicated that numerous important features were destroyed during the renovation process of the main house. None of the investigations conducted by DiBlasi have been formally reported upon.

Valuable information about Riverside was generated by the archaeological work done at Riverside by the McBrides and DiBlasi. DiBlasi's excavations verified that the construction of the attached kitchen post-dated the construction of the house probably sometime around the early to mid-1900s. At this same location, DiBlasi also may have recovered remnants of a detached kitchen that oral tradition suggests was constructed in the 1880s. The McBride's investigations indicated the presence of intact features and soil zones to the east and southeast of the main house. They proposed that the highest archaeological potential was in the areas adjacent to the main house toward the "tenant house," which was likely a slave quarter in the Antebellum period. These areas were recommended for further examination. An area directly behind the main house also was considered to be significant. It contained a probable brick foundation and a high concentration of nineteenth-century artifacts. The McBrides also found architecturally related artifacts along the river's edge southwest of the main house. However, they were unable to find any remnants of the historically documented riverboat landing at Riverside. During the nineteenth century, private river landings often lacked wharves or buildings and consisted merely of a cleared area along the riverbank. It is doubtful that archaeological deposits associated with this landing would be preserved at this site and it is also likely that it is now underwater due to the installation of locks and dams along the Ohio River, which have raised the level of the river (Ball and Parrish 1985).

Based on the results of these earlier investigations, archaeological research at Riverside has been focused on the discovery, interpretation, and reconstruction of former outbuildings (Watts-Roy and Stottman 1995b). The original 1830s detached kitchen was the first of the outbuildings to be researched. Extensive archaeological investigations conducted at the detached kitchen from 1995 to 1998 produced nearly 30,000 artifacts

and numerous structural features dating from the mid-to late nineteenth century. Based on the results of the excavations and architectural research, the detached kitchen was determined to be a timber frame building supported by wooden posts with a brick chimney. The detached kitchen was reconstructed in 1999.

In 1997, Cultural Resource Analysts Inc identified a late-twentieth century house site, during a survey of a proposed riverboat landing, along the tree line at the southern edge of the field (McKelway 1997). According to Moremen family descendants, these remains represent a slave quarters that was moved to the location in the mid-1900s and subsequently used by a member of the Moremen family until the late 1900s.

The prehistoric component of Riverside can be seen as having mixed potential. In the McBride's report, Sharp notes the high potential for prehistoric deposits in undisturbed portions of the property (i.e., away from the Farnsley-Moremen House), but cautions that deeply stratified deposits may be present below the historic deposits around the main house and outbuilding remains. The University of Kentucky excavated several important prehistoric sites near Riverside in the 1970s: Longworth-Gick site (15Jf243), Villier site (15Jf110), Rosenberger site (15Jf18), and Spadie site (15Jf14) (Collins 1979). These excavations showed the potential for significant sites to be located along the local terraces of the Ohio River. Early Archaic and Woodland components were investigated at these sites, some of which contained a large number of human burials.

The Rosenberger site (15Jf18) is located on the Riverside property less than 1 km to the north of the main house. In addition to a large amount of prehistoric artifacts, excavations at the Rosenberger site produced a significant number of Historic period artifacts. Analysis of these historic artifacts was limited and included little in the way of interpretation. Based on the description of these artifacts, it appears that they represent a domestic structure from the late-nineteenth century. This component may be associated with the Aydelott/Rosenberger house (Kentucky Historic Sites Survey Number Jf14), which was constructed in 1862 on a 100-acre tract adjacent to the Riverside property. The Aydelott/Rosenberger property was recently purchased by Jefferson County and will be preserved along with its important archaeological resources.

In the 1980s, Betty McGraw, while working for the University of Louisville Archaeological Survey, recorded two prehistoric sites on Riverside's property (Office of State Archaeologist site forms). Sites 15Jf47 and 15Jf66 were recorded within 100 m of the main house at Riverside. Site 15Jf47 is an Archaic site documented in a vegetable garden near the house and Site 15Jf66 was documented in a plowed field near the house. No artifacts were collected by McGraw and it appears that these sites were documented based on the examination of private artifact collections.

Based on the previous investigations at Riverside, it appears that the terrace upon which the Farnsley-Moremen house is situated contains extensive archaeological deposits dating to the Archaic and Woodland periods.

Another prehistoric archaeological site was identified during archaeological survey work conducted by Cultural Resource Analysts Inc. in association with the riverboat landing and pavilion construction project. Site 15Jf654 is located in the field to the south of the Visitor's Center near the riverboat landing access road (McKelway 1997). The construction project was altered slightly to avoid impacting the site.

Intact and disturbed prehistoric deposits were identified during the excavations at the detached kitchen (Stottman and Watts-Roy 2000). Nearly 8,000 prehistoric artifacts were recovered. These artifacts ranged in date from the Early Archaic to the Late Prehistoric periods. The included projectile points, bifacial tools, utilized flakes, fire cracked rock, and ceramics, with the majority of the diagnostics dating to the Middle Woodland period. Most of the prehistoric materials were recovered from deposits disturbed by the construction of the detached kitchen in the late 1830s. However, some of the prehistoric artifacts were recovered from two test units that sampled 70 cm of intact prehistoric midden that was identified below the disturbed deposits.

PREVIOUS WASHHOUSE RESEARCH

Very little archaeological research has been conducted on washhouses in Kentucky. Kim McBride (1995) of the University of Kentucky conducted the only excavation of a building specifically used for washing at Shakertown, Pleasant Hill. McBride found the remains of a nineteenth century laundry facility under the floor of an existing structure. This facility utilized lead pipes to supply water to the structure and featured a large hearth and firing chambers. Although the building was primarily used as a laundry, McBride suggested that it also could have been used for a wide range of other domestic activities.

An attempt was made to locate examples of existing buildings in Jefferson County that may have functioned as washhouses. A small portion of a domestic outbuilding located at the John Herr house in eastern Jefferson County was likely used as a washhouse during the nineteenth century (Figure 5). However, it appears to have been multifunctional. The main section of the building was a brick structure with windows and hearths, indicating that it was probably a dwelling. The rear portion of the building functioned primarily as a springhouse. A small room in the springhouse contained a rectangular open hearth with a large built-in kettle (identified by a small chimney at the rear in Figure 5). It is likely that this portion of the building was used as a washing facility. It is probable that most nineteenth-century washing facilities were combined with other domestic outbuildings. Many springhouses documented in Jefferson County were likely multifunctional and included a washing facility.

A small wood framed outbuilding located at the Isaac Miller farm in Spencer County was identified as a possible washhouse on the Kentucky Historic Sites Inventory form. However, no evidence exists to confirm the identification. As with most plantations or farms in Kentucky, the washing activities at the Isaac Miller farm probably shared space with other activities.

Figure 5. Multipurpose Building with Washhouse at the John Herr House.

RESEARCH METHODS

FIELD AND LABORATORY METHODS

The methods employed during the archaeological excavations at the washhouse were consistent with those used for all previous excavations conducted by the Kentucky Archaeological Survey at Riverside (Stottman and Watts-Roy 2000; Watts-Roy and Stottman 1995b). One-meter squares laid in a grid network across the site were used to maintain horizontal control of artifacts and features. The grid was created from a permanent datum point established in a central location on the Riverside property. This point was given the coordinates N1000 meters and E1000 meters to ensure that all future excavations at Riverside can be tied into the same grid system. Thus, each one by one meter unit excavated was provenienced by coordinate numbers relative to this datum and was labeled at the southwest corner of the unit.

Soils encountered were removed in natural stratigraphic sequence and screened through 6.33 mm (1/4 inch) hardware mesh. The layers, fills, and features were stratigraphically sequenced during the excavation to aid later interpretation; this sequencing was aided by use of the Harris Matrix (Harris 1979). All depths were measured from the ground surface. Because of the limited scope of the washhouse project, excavations were halted when undisturbed prehistoric deposits were reached. All artifacts except brick, stone, and coal fragments were collected. Some plastics from the topsoil were sampled but most were discarded. However, all of these items were noted

during excavation. Representative walls of the excavations were profiled and all features were mapped in either plan and/or section views.

All artifacts recovered during the excavations were washed, cataloged, and curated at Riverside, the Farnsley-Moremen Landing.

ANALYTICAL METHODS

Functional Groups

The classification of artifacts into functional groups has been common practice of historic archaeologists for over 20 years (Ball 1984; South 1977). This method assigns artifacts to groups based on the historically derived function of the artifact. For example, objects associated with kitchen activities, like food service or preparation, are assigned to the kitchen group and items related to architecture are assigned to the architecture group. The number of groups in the classification scheme can range from seven to 16 depending on the type of site and the individual researcher. Percentages are then calculated for each group to characterize the function of a particular deposit or feature.

Functional groups are used in this report to characterize artifact assemblages from specific stratigraphic layers and features to help determine the function of that layer or feature. The functional groups used in this report, include activities, architecture, arms, clothing, entertainment, furniture, kitchen, miscellaneous, and personal.

While faunal remains are often associated with food remains and thus could be assigned to the kitchen group, not all faunal remains were used as such. In this report all animal bones and mussel shell were grouped together as faunal remains. This group does not represent any particular historic function.

Dating Methods

The presence of diagnostic (datable) artifacts can be used to assign a temporal range to a stratigraphic layer or feature. For some artifacts, a manufacture date range can be established by using historical documents. This date range can then be used to derive a midpoint in its production history. For example, undecorated pearlware has a manufacture date range of 1780 to 1830, and a midpoint of 1805. When the midpoints of all of the artifacts recovered from a context are averaged, a mean date for the age of that context can be calculated (South 1977). Unfortunately the mean age of an artifact collection does not always represent when all of the artifacts were deposited in a particular strata or feature. This is due to the fact that some objects are lost or discarded soon after they were manufactured, while others enter the archaeological records many years after they ceased to be made.

In order to get a better indication of when artifacts associated with a particular strata or feature were deposited, other dating methods like *terminus post quem* (T.P.Q.) are used in conjunction with mean dating and stratigraphic context (Noel Hume 1969a).

The T.P.Q. is derived from the latest beginning manufacturing date of a group of artifacts. Thus, a T.P.Q. indicates a time after which a deposit could have been formed.

It should be noted that temporally diagnostic glass artifacts are more likely to accurately reflect the deposition date of a group of artifacts than ceramic artifacts. This is due to the fact that ceramic objects tend to be curated for a longer period of time than glass artifacts. Some glass artifacts, particularly bottles, are likely to enter the archaeological record much quicker than ceramics, because their use is over when the bottles are emptied. It has been suggested that ceramics are typically curated for an average of 20 years or longer (South 1977).

Mean dating was used in cases where a context produced a large sample of nineteenth century diagnostic artifacts and the majority of diagnostic artifacts have reliable beginning and ending manufacturing dates. Mean dates were not calculated for contexts that produced mostly late nineteenth and twentieth century artifacts because these artifacts generally lack accurate ending dates or are still widely produced in the present. However, a T.P.Q. date or a general date range was used to obtain a basic sense of chronology for a particular assemblage.

Vessel Calculation

In addition to raw artifact counts, attempts were made to determine the minimum number of vessels (MNV) or objects represented by ceramic sherds and glass fragments. In most cases individual vessels were entirely or partially reconstructed with cross-mended artifacts within each context and then sorted by form and decoration. No minimum number of vessels was determined by cross mending between contexts. Also, individual objects exhibiting a unique decoration were counted as one vessel. In this report, the MNV count is denoted inside of parenthesis next to the object counts. MNV counts were only calculated for ceramic and glass vessels.

Cross Mending Analysis

A cross mending analysis was conducted with a particular artifact from the washhouse area to define relationships between strata and features. A cross mending analysis is basically an attempt to reconstruct artifacts with fragments that were found in different contexts. Due to the extensive time needed to cross mend artifacts, most artifact types are not reconstructed or mended. In the case of the washhouse, a distinctive ceramic type and decoration was used to identify relationships between contexts. A cross mending analysis can demonstrate the distribution of a single vessel's sherds across contexts and the site in general. If an artifact, such as a ceramic vessel, is reconstructed with sherds from multiple contexts, a relationship between those contexts can be demonstrated.

Window Glass Analysis

Although the use of window glass thickness for calculating mean dates has become a staple of archaeological analysis at historic sites (Ball 1983; Moir 1983; Roenke 1978), the utility of this analysis has been questioned by some researchers (Cohen 1992; Owens 1994; Rivers 1998; Stottman and Hockensmith 1998). While there seem to be many successes using this method, high variability in the thickness of individual windowpanes has been problematic, leading to just as many failures. Window glass dating formulas were not used in the research of the Riverside washhouse. However, a basic dating method based on ranges of window glass thickness has been developed (Walker 1971). This method uses certain thicknesses as temporal indicators. Glass less than .79 mm thick is typically found only on sites that were built by 1820 and no longer occupied by 1840. Glass less than 1.19 mm thick is found on sites dating prior to 1845. Glass more than 1.58 mm thick is found on sites dating after 1845. While this method cannot generate specific dates, it can provide general chronological data for a site. With this data, it may be possible to examine periods of window replacement or repair at different times (McKelway 1992).

Walker's (1971) dating method was not used to obtain dates for specific contexts. It was used however, to conduct a spatial analysis of window glass across the site. This analysis can provide insight not only into the location of windows in a structure, but also possible window replacements through time. The SURFER computer-mapping program was used to plot the distribution of window glass across the site.

Nail Analysis

A detailed analysis of the nails can provide more information about the construction type, roof type, and floor type used in the washhouse. Some researchers have suggested that based on nail length frequencies one can determine if a structure was log, timber frame, or balloon frame (Wagner 1992; Young 1991, 1994). Nail lengths are measured by pennyweight, and different nail sizes have been hypothesized to be associated with particular aspects of construction. Nail sizes are generally divided into four groups: roofing (2d-5d), siding (6d-8d), flooring (9d and 10d), and framing (12d and up) (Young 1991). Since people often did not use specific nail sizes for their best use, the assumption that a particular nail size was only used for a particular function is misleading. For example, nails that would be considered siding nails according to this classification could have been used for flooring and vice versa. Also, nails were used in a structure for more than the four functions just stated. Nails were used for lathing (in buildings with plastered walls), door and window frames, and finishing (trim, base boards, and chair rails). These nails could vary from 2d to 10d. Even during the construction of a military building, where nail sizes are specified for particular types of construction, a wide range of unspecified nail sizes were used. This was the case at a Civil War era building excavated at Camp Nelson in Kentucky (McBride and Sharp 1991). Despite the possibility that varied sizes of nails could be used throughout a building regardless of optimal function, particular sized nails are best for certain aspects of construction and were likely to have been used in that manner.

Although analyzing nail sizes can be problematic, it is still useful for providing basic information about the construction of a building. For instance, because the framing of log structures is performed with corner notching to joint the logs, there is little need for heavy framing nails, 12d and larger. However, nails 8d and smaller, used in light framing around doors, flooring, shingling, finish work, lathing, and siding, are common in log structures. The structural members of timber frame buildings are mortised and tenoned together; thus, like log buildings, they do not require heavy framing nails. However, balloon frame structures use nails at the joints instead of mortise and tenon joints or corner notching, resulting in the use of a significantly greater number of large (12d and greater) nails. The number of roofing and siding nails are fairly constant in all types of construction (Stottman et al. 2004; Young 1994).

EDUCATIONAL PROGRAMS

The washhouse excavations were conducted in conjunction with educational programming at Riverside. Most of the excavation took place during the Building Blocks of History field trip program (Figure 6). Over 5,000 school children ranging from 1st to 12th grade participated in this multidisciplinary program during at the washhouse. The Building Blocks of History program is a full day experience that includes activities in history, architecture, and archaeology. Students participated in a tour of the house, a brick making activity, and archaeological excavation. The brick making activity is in reference to a brick signed by the first owner of the house, which was found during renovation of the house. This activity was occasionally substituted with an artifact washing activity, depending on the age of the children. All of these activities were tied together as important aspects of understanding the processes of history and historic sites.

Excavations at the washhouse also were conducted during several annual archaeology weekends. These weekends were focused on sharing the process of archaeology with a much wider audience than school children. People of all ages were welcome to participate in the excavations under the supervision of KAS archaeologists. Volunteers also had the opportunity to participate in washing artifacts. A series of signs describing the archaeological process and question/answer discussions with the public were designed to engage those who chose not to participate in the excavations. Other educational programming included archaeological demonstrations and lectures in association with special events at Riverside.

Figure 6. Students Excavate the Remains of the Washhouse, as the Detached Kitchen is Reconstructed.

MATERIALS RECOVERED

A total of 38,242 artifacts was recovered during excavations from the Washhouse. This section presents a general description of the materials recovered from the Washhouse area and discusses the artifact typology used with background information on specific artifact types. This section is organized by material type.

CERAMICS

A total of 3,888 ceramic artifacts was recovered. There are two basic types of ceramics, refined and coarse. English potters dominated the manufacture of refined ceramics, which included fine table settings and delicate objects. Coarse ceramics were typically utilitarian containers and were often made locally. The ceramics are discussed in this section according to their ceramic type.

Refined Ceramics

The refined ceramics group includes several chronologically significant types based on the paste type or clay used (Table 1). With a few exceptions, refined ceramics were finished with a clear glaze most commonly made from lead. As refined ceramic technology improved over time, less porous and whiter pastes types were produced. The most prominent ceramic type produced during Kentucky's early historic settlement was creamware, named after its creamy yellowish-green tinted glaze. Josiah Wedgewood developed creamware in the 1760s, after several years of experimentation (Noel Hume 1969b). This ware represents one of many attempts by Staffordshire potters in England to produce an inexpensive version of the fine Asian hard white porcelain they sought to emulate. Throughout the late 1700s, creamware was the most popular English made china in America (Miller 1991; Noel Hume 1969b). Production of creamware continued into the 1810s, but was most prominent prior to 1800, gradually being replaced by pearlware in the 1780s (South 1977). Although no creamware was recovered from the washhouse area, it is important to understand its role in the chronology of refined ceramics during America’s early Historic period.

By the 1780s, the utilization of better clays and new glazes allowed potters to create a whiter English ceramic called pearlware. Although a blue tinted body characterizes this type of ceramic, it has a whiter appearance than the yellowish green tinted creamware (Miller 1991; Noel Hume 1969b). Pearlware (n=108) was most popular in America in the early 1800s, although production lasted into the 1830s (South 1977). By 1830, English potters had developed an even whiter colored ceramic, known to archaeologists as whiteware (Miller 1991). This ceramic type was the predominant ceramic produced throughout the mid-to late 1800s. Although whiteware (n=2,016) lacked the hardness of porcelain, it was almost as white and proved to be a popular substitute. By the time whiteware was being produced, the American appetite for imported refined ceramics had grown. The British dominated the whiteware market throughout most of the 1800s.

Table 1. Refined Ceramic Paste Types.

Paste Type	N=
Agateware	1
Earthenware	17
Fixture Porcelain	15
Pearlware	108
Porcelain	308
Rough Porcelain	248
White Granite	155
Whiteware	2,016
Unident/Other	401
Total	**3,269**

Shortly after the initial development of whiteware, a harder paste whiteware known by a variety of names, mostly commonly white granite, ironstone, and semi-porcelain, was developed. All of these names refer to brand names for the hard paste whiteware developed by the different potters. In this report, these types of ceramics were classified as white granite (n=155), a term commonly used by archaeologists to describe the harder paste whiteware (Miller 1991). Although some English potters had produced what they called ironstone and semi-porcelain by 1805 or 1815, white granite types of ceramics were not in wide spread production until 1845 (Noel Hume 1969b; Miller 1991). While both whiteware and white granite ceramics were manufactured throughout the mid-1800s, white granite had become much more common than the older and softer whiteware by the 1870s (Miller 1991; Smith 1983). Because it is very difficult to distinguish whiteware from white granite, some archaeologists do not attempt to make a distinction. However, distinguishing between the softer paste whiteware from the harder paste white granite can provide some chronological information, with whiteware being more indicative of the 1830s-1850s and white granite being more indicative of post 1850s. One white granite bowl exhibited a maker's mark from The Petrus Regout & Co. pottery in Maastricht, Holland (Figure 7). This particular mark was used from 1883-1900 and again from 1935-1955 (Kowalsky and Kowalsky 1999:648). The bowl was transfer printed and handpainted in the Canton pattern (Figure 8).

By the 1880s American potteries began to cut into the English dominance of the American ceramic market. Major ceramic producing regions began in the Midwest and East and were centered in the Ohio Valley, particularly Ohio and West Virginia (DeBolt 1994). White granite ceramics were, at the turn of this century, mass-produced by both English and American potters, making them affordable to most of the country's population. By the 1900s, white granite was more like porcelain than whiteware and American potteries frequently used terms like semi-porcelain, semi-vitreous, and vitreous to describe their wares (DeBolt 1994). Typical porcelain has a very refined paste that is almost smooth like glass. While semi-porcelain or late white granite is quite like porcelain, it is not as refined and has a grainy texture.

Figure 7. Maker's Mark from The Petrus Regout & Co. Pottery on a White Granite Bowl.

Figure 8. Reconstructed Transfer Printed White Granite Bowl in the Canton Pattern.

Some porcelain was manufactured in England and Europe in the 1700s, but it was very expensive to produce, thus beginning the quest for an inexpensive substitute described above (Noel Hume 1969b). Most porcelain (n=308) during the 1700s and 1800s was produced in Asia but some was produced in Europe. Although English and Asian porcelain was exported to America in the 1700s and early 1800s, it was generally only accessible to the very wealthy. By the mid to late-1800s porcelain was more accessible to wealthy Americans and became popular for even the moderately wealthy families. Because of the expense, most porcelain was probably purchased in the form of tea sets rather than complete dinner sets of dishes. It is difficult to date porcelain without maker's marks or specific decorations, because it has been manufactured for such a long time.

Other refined ceramics include earthenware, fixture porcelain, and rough porcelain. Earthenware (n=17) is a term that refers to a semi-vitreous clay body in general, and is often used in cases where a particular paste type cannot be identified. Earthenware is used in this report to describe an unknown paste type and the white clay that was often used in the production of marbles and pie weights. Earthenware marbles are typically undecorated, however, a single hand painted marble was found in the washhouse area.

Fixture porcelain (n=15) refers to an industrial type of porcelain that is characterized by a thick porcelain-like body. This type of ceramic was used in the manufacturing of lighting and bathroom fixtures, as well as, electrical insulators, during the 1900s. Rough porcelain (n=248) has most of the same qualities as porcelain, however, the paste is a slightly more porous and was used in heavier, and more industrialist types of wares. Agateware (n=1), a marbled paste made by swirling various colored clays, were often used for handles and doorknobs.

Refined Ceramic Decoration Types

Although refined ceramics were often undecorated (n=1,961), a wide variety of decorative types were used on these wares throughout history (n=1,326). Some of these are described below.

Decoration on the edge of a vessel (n=154) is one of the earliest types of decoration and occurs in many different forms, ranging from impressed designs to painted bands (Table 2). Patterns of impressed, embossed, or molded leaf patterns on the edge of wares were common in the early 1700s on through the end of the 1800s (Noel Hume 1969b; Miller 1989). The most common types of edge decoration found in America are vessels that have curved or straight impressed lines and scalloped rims. Collectively this type of edge decoration was known as shell edged wares. Colored bands on shell edged wares, include blue, green, or red colored slip. Shell edged decoration types were most common on pearlwares and early whitewares, roughly dating from the 1780s to the 1850s.

Table 2. Refined Ceramic Types and Edge Decorations.

Type/ Edge Decoration	White-ware	Rough Porcelain	Pearl-ware	Porcelain	White Granite	Unident.	Total
Banded	7	5	0	0	0	2	**14**
Embossed (Relief)	7	5	0	1	0	0	**13**
Molded Leaf-late	1	0	0	0	1	0	**2**
Unscal. Impressed	33	1	0	0	1	0	**35**
Scalloped	20	1	1	3	6	4	**35**
Scalloped Emboss.	6	1	0	0	0	0	**7**
Scal. Impressed Curved Lines	32	0	0	0	0	2	**34**
Scal. Impressed Straight Lines	10	0	0	0	0	0	**10**
Rocco	1	0	0	0	0	2	**3**
Gilted	0	0	0	1	0	0	**1**
Total	**117**	**13**	**1**	**5**	**8**	**10**	**154**

Embellishment of the vessel body also evolved over the years (Table 3). One of the most common forms of early decoration on the main parts of the vessel was transfer printing (n=448). These decorations consisted of printed designs that were transferred from copper engravings to various tablewares. The patterns were usually very elaborate, depicting scenes or having geometric or floral motifs. Transfer prints were available in several colors during the nineteenth century. They include black (n=8), brown (n=6), blue (n=73), red (n=10), purple (n=4), polychrome (n=1), and green (n=19) (Samford 1997). Transfer printed decorations had been developed in 1756, but were not frequently used until the end of the 1700s (Noel Hume 1969b). Transfer prints were most popular from the 1830s to the 1850s and had a small resurgence in the 1870s and 1880s (Miller 1991).

Similar to transfer prints are flowed decorated ceramics that have the appearance of a smeared transfer print where the coloring runs together. During the firing of transfer printed wares, a volating solution was added, which created the flowed effect (Samford 1997). Flowed decoration (n=15) usually occurs in the color blue or black and was used throughout the 1800s.

Handpainted designs are common on ceramic vessels throughout the Historic period. Handpainted (n=91) decorations typically reflected floral motifs in a variety of colors. Blue handpainted vessels were common, as were polychrome designs that utilized green, gold, blue, and red colors. Many banded designs (n=25), which involved the application of slip bands around the edges and body of a vessel, were used as a cheaper form of embellishment. During much of the 1800s mocha style decoration (n=10) referred to a brown dendritic fern-like design concocted from a mixture of tobacco juice and urine (Noel Hume 1969b). However, this term has come to include several different decorative types usually referred to as "dipped" decoration, most notably annular banded wares that utilized colored glaze, often a brown, pale green, or blue glaze, into which ceramic vessels were dipped (Miller 1991). A worm pattern or cable design is

often associated with dipped mocha wares. It refers to the worm-like circular designs created on the ceramic vessel, also known as finger-painted wares.

Table 3. Refined Ceramic Types and Decorations*.

Decoration	Earthen ware	Unident.	Pearl ware	Porcelain	Rough Porc.	White Granite	White-ware	Total
Applique	0	0	0	0	1	0	0	**1**
Banded	0	4	0	0	0	1	20	**25**
Colored Glaze	0	1	0	10	7	2	11	**31**
Decal	0	0	0	0	0	0	2	**3**
Dipt (Dipped)	0	0	0	1	0	1	0	**2**
Embossed	0	1	0	1	1	0	4	**7**
Flowed	0	1	0	3	5	0	5	**14**
Gilt	0	1	2	13	0	1	2	**18**
Gilt and Relief	0	0	0	3	1	0	0	**4**
Handpainted	0	4	0	25	20	5	35	**89**
Mocha	0	0	0	0	0	0	10	**10**
Luster/Relief	0	0	0	0	0	0	1	**1**
Slipped	0	0	0	0	0	0	1	**1**
Sponged	0	1	0	0	2	0	29	**31**
Transfer Printed	0	17	6	9	31	6	375	**442**
Transfer & Relief	0	0	0	1	4	1	5	**11**
Transfer & H.P.	0	0	0	1	17	2	4	**24**
Other	0	0	0	10	1	0	13	**24**
Pattern Molded	0	4	1	17	10	13	23	**68**
Incised	0	0	0	1	0	0	0	**1**
Impressed	0	0	0	0	0	0	1	**1**
Water Drop	5	0	0	0	0	0	0	**5**
Unidentified	0	265	1	24	11	0	51	**351**
Total	**5**	**299**	**10**	**119**	**111**	**32**	**592**	**1,163**

*Table includes only tableware, which excludes Fixture Porcelain and some Earthenware.

Pattern mold designs (n=71), which were used through out the nineteenth century, consisted of decorative patterns that were molded directly into a ceramic vessel and then overglazed. Pattern molding is often used to create paneled designs on the vessels, which were very common on whiteware and white granite of the late 1800s. This is similar to impressed, incised, and embossed decorative patterns of various designs used during the 1700s and 1800s.

Water Drop Ware (n=5) is a decoration type that is described as droplets of brown slip on an unglazed earthenware body (Figure 9). It was typically used to decorate teapots or chocolate pots produced in Japan from around 1868 to 1917. They were imported to America during a time of increased interest in Japanese goods and decorative arts (Beaudry 2004).

Decal decorations (n=3), which consist of a decal applied to a ceramic vessel, were developed in the later decades of the nineteenth century. This development allowed more intricate designs to be used on table wares and reduced the cost of highly decorated

ceramics that would otherwise have to be handpainted or transfer printed. Decal decorations were first introduced in the 1890s, but did not become fully mass-produced until 1900 (Adams 1980). Decal decorations are still widely used today.

Figure 9. Sherd of Water Drop Ware.

Coarse Ceramics

Coarse ceramics (n=603) include types, such as redware, stoneware, yellow ware, and terra cotta, that were not typically used in the production of dinner wares and tended to be used in the manufacture of utilitarian vessels, such as crocks, bowls, and jars (Table 4). In addition to vessels, the manufacturing of ceramic pipes used for water drainage and plumbing related activities, sometimes known as, drainware (n=6) was common during the later half of the nineteenth century. Smoking pipes also were widely manufactured from coarse ceramics. Although most coarse ceramics found in America were produced locally, some were imported from England, particularly yellow wares (Gallo 1985). Because these ceramics tended to be produced locally, they were relatively inexpensive.

Redwares (n=59) named after their distinctive red paste, were the predominant coarse ceramic from the 1750s to the 1850s, but continued to be manufactured into the 1900s. Because redware became less desired after 1850, it is generally considered to be a primarily late-eighteenth century to mid-nineteenth century ceramic. Typically, redware consisted of a clear lead glaze or alkaline slip glaze with very little decoration. However, colored glazes (predominantly green) also were used. Some redware, particularly English varieties and types produced by Moravian potters along America's East coast, are highly decorative with slip-trailed designs (Noel Hume 1969b; Thomas 1994).

Table 4. Decorated and Undecorated Coarse Ceramic Types and Glazes*.

Glaze Type\ Decoration	Buff Stoneware	Gray Stoneware	Redware	Yellow Ware	Unknown	Total
Clear glaze, banded	0	2	0	13	0	15
Clear glaze, mocha/dipt	0	0	0	2	0	2
Clear glaze, Pattern mold	3	0	0	0	0	3
Clear glaze, Undecorated	70	31	15	35	0	151
Clear glaze, Unident.	0	0	1	1	0	2
Colored glaze	1	0	0	1	9	11
Rockingham Glaze	1	0	0	22	0	23
Salt glaze, Undecorated	58	58	0	1	0	117
Salt glaze, Unident.	1	0	0	0	0	1
Salt Glaze, Banded	7	4	0	0	0	11
Slip glaze, Mocha	0	0	0	2	0	2
Slip glaze, Undecorated	55	3	39	18	0	115
Slip glaze, Unident.	5	0	0	0	0	5
Slip glaze, Other	0	0	0	2	0	2
Unglazed, Undecorated	28	17	1	5	0	51
Unglazed, Unident.	0	1	0	1	0	2
Unglazed, Other	0	0	0	1	0	1
Unglaze, Banded	0	2	0	0	0	2
Unident Glaze/Décor	26	15	3	0	0	44
Total	**255**	**133**	**59**	**104**	**9**	**560**
* Does not include Drainware and Terra Cotta						

By the 1850s, more durable coarse ceramics known as stonewares (n=388) had taken over the market for utilitarian wares (Ketchum 1983). Stonewares were typically undecorated, consisting of only a glazed surface. While clear glazes were the most frequently used, salt and slip glazes also were popular (Table 4). The addition of salt to the glaze results in a pitted exterior surface that is formed during the firing process. Stonewares consisted of two basic paste colors, including buff (n=255), a tan to brown paste stoneware, and gray (n=133).

Yellow ware (n=104) production began in the 1830s, but these ceramics found their greatest popularity in the late 1800s and early 1900s (Ketchum 1983). By the late-nineteenth century it was the most popular nineteenth century American ceramic type, although a substantial amount was imported from England, as well. This ceramic was called yellow ware because of the yellow color of its paste. When covered with a clear glaze this type of paste produced a vessel with a deep mustard colored yellow. This term also refers to white-bodied wares that have a yellow glaze. Unlike many redwares and stonewares, yellow ware could be used to make very thin walled vessels. Common decorations on these vessels were slipped bands, worm patterns (swirled patterns), dendritic patterns, and pattern molded/relief designs. Rockingham (n=22) is a brown glaze that is usually applied to yellow ware vessels in spatter like designs (Gallo 1985). Decorated yellow wares were extremely popular during the late 1800s. Everything from mixing bowls to wall plaques were made from it.

Terra cotta is characterized by its orangish red paste and is similar to redware. Terra cotta has been produced for hundreds of years and is still quite common today. Most terra cotta is unglazed and undecorated, but occasionally it was made with impressed or relief designs. Terra cotta (n=37) was and is most commonly used for flowerpots; although in some countries and parts of the United States it has frequent use as roofing tiles. Flowerpots have been common at American sites since the 1600s (Noel Hume 1969b). Terra cotta also was used in the manufacture of drainage tiles and pipe from the late nineteenth to early twentieth centuries (Deiss 1992). Several terra cotta drainpipe segments were associated with Feature 10, which is discussed later in this report.

While many ceramic sherds were classified as unidentified due to severe burning, weathering, staining, and other factors, some represent unknown types. One such unknown type was found at the washhouse consisted of a thin red-bodied stoneware with a white interior glaze and a clear exterior glaze (n=9) (Figure 10). After consulting archaeologists with an expertise in ceramics, it was determined that this type has been found at other sites around the country, but there was no consensus as to how it should be classified. The only known ceramic type that resembles the unknown type found at the washhouse is called Astbury ware. Astbury ware has a fine red stoneware body that was decorated with white slip trailed designs. It was manufactured from 1725 to 1750 (Miller 2000). This date range is much too early for Riverside and historic sites in Kentucky. It is possible that the washhouse specimens could represent an heirloom piece, but it is unlikely. However, it is most likely that the specimens from the washhouse, as well as those found at other sites represent an unknown Astbury revival period during the late 1800s or they may represent a ceramic type that has yet to be researched and described in the literature.

Figure 10. Red-Bodied Ceramic with Clear Exterior Glaze and White Interior Glaze.

Ceramic Vessel Forms and Objects

Since most of the ceramics recovered from this site are highly fragmented it is difficult to identify the type of vessel or object that the sherds represent; thus most of the ceramic assemblage was unidentified for vessel form. However, some vessel forms could be identified. Most of the identifiable forms or objects are related to domestic activities, such as those associated with the kitchen functional group (Table 5). These include cups (n=18), storage jars (n=55), and plates (n=29). Furniture group artifacts, such as chamber pots (n=2) also were found. Other objects, such as dolls/doll parts (n=38), marbles (n=11), and smoking pipes (n=6) are associated with the personal or entertainment groups.

Table 5. Ceramic Vessel Forms and Objects.

Vessel/Object Form	N=
Architecture	
Drain Pipe	6 (4)
Insulator, Electric	1 (1)
Floor Tile	3 (1)
Door Knob	1 (1)
Clothing	
Button	27 (25)
Furniture	
Chamber Pot	3 (2)
Figurine	2 (2)
Flower Pot	24 (18)
Kitchen	
Bottle, unidentified	4 (3)
Bowl	91 (49)
Cup	21 (18)
Dish	2 (1)
Lid	6 (2)
Mixing Bowl	1(1)
Other	1 (1)
Plate	41 (29)
Saucer	7 (5)
Storage Jar/Crock	83 (55)
Personal	
Bead	1 (1)
Smoking Pipe	6 (6)
Cosmetic	10 (2)
Entertainment	
Doll/Doll parts	38 (27)
Marble	11 (11)
Total	**390 (265)**

Most of the marbles were made of undecorated earthenware (n=8). Some were likely handmade American marbles (1692-1920). However, others were probably made in Germany from 1850 to 1910 (Gartley and Carskadden 1987). Three of the marbles recovered from the washhouse were decorated. A refined earthenware marble (n=1) decorated with color parallel lines (or plaid design) dates from 1890 to 1910 (Figure 11b.) (Gartley and Carskadden 1987). An unglazed handpainted earthenware marble dates from 1860-1914 (Figure 11a.) (Gartley and Carskadden 1987). A mottled brown glazed stoneware marbles also was found and dates from 1886 to 1914 (Figure 11c.) (Gartley and Carskadden 1987).

The smoking pipe fragments recovered from the washhousee were quite small and most exhibited no decoration. Decorated pipes made of buff stoneware (n=1) and earthenware (n=1) exhibited molded ribs and molded geometric designs. These types of pipes date from 1840 to 1900 (Lenick 1970).

The ceramic doll fragments recovered from the site represent several parts of dolls, such as legs, arms, and heads (Figure 12). The fragments were made of porcelain or a variant of porcelain called bisque that was handpainted or color glazed. These dolls are often referred to as china dolls (Young 1967). Although china dolls were made throughout the nineteenth century, most of the doll fragments recovered from the washhouse date to the 1880s and 1890s based on hairstyle and foot elements (Young 1967:130). One fragment exhibited part of an inscription that read "…383 German." The inscription was likely a maker's mark, as most ceramic dolls were made in Germany from the late 1800s to early 1900s. This particular mark dates to after 1891, because the country of origin is included, which was required by U.S. law after that date (Young 1967).

Ceramic clothing artifacts also were found, such as buttons (n=25). Ceramics buttons, also known as Prosser buttons were manufactured from the 1840s to the 1950s (Sprague 2002). Most of the Prosser buttons found at the Washhouse site were undecorated, however some exhibited colored glaze (n=2) and handpainting (n=1).

Others ceramic objects were associated with the architecture of buildings, such as drainpipes (n=4), a doorknob (n=1), and flooring tiles (n=3). The doorknob was made of white porcelain, which was common in the late 1800s.

GLASS

A total of 11,565 glass artifacts were recovered from the site. Like ceramics, glass bottle manufacturing technology has evolved over the years. Glass bottles were all hand blown or blown into molds prior to the 1800s, with the first American production of bottles occurring in the mid-1700s (Noel Hume 1969b). Although hand blown bottles continued to be produced throughout the 1800s, the nineteenth century was a time of rapid advancement in bottle making technology (Jones and Sullivan 1989).

Figure 11. Undecorated (a.), Plaid Design (b.), and Mottled Glazed (c.) Earthenware Marbles.

Figure 12. Porcelain Doll Leg and Portion of a Head.

In the 1810s the three-piece or Rickets mold was developed, which improved bottlemaking efficiency. The three-piece mold would remain a common manufacturing technique until the 1890s (Newman 1970). Additional bottle manufacturing techniques that were developed during the 1800s included the two-piece mold (n=2) (1845), turn/paste mold (1870), and the snap case (1855) (Jones and Sullivan 1989; Newman 1970). In 1867 the letter plate mold was developed for molding lettering (n=204) onto bottles, a process that is still used today. Several semi-automatic bottle-making machines were introduced in the 1880s, but they still were partially made by hand (Jones and Sullivan 1989). In 1903 Michael J. Owens developed the first fully automatic bottle-making machine, which injected molten glass into a mold from the base and then cut the base.

Even after the three-piece mold was developed, many aspects of bottles (i.e., bottle finish or lip) continued to be made by hand and had their own form of evolution (Table 6). Some early manufactured bottles had lips that were formed by folding (n=9) over excess glass to form an edge. On other bottles the neck was simply smoothed by applying heat in a process called fire polishing (n=2), which produced no lip at all. Applied lips (n=97), were made by adding extra glass to the neck of a bottle (1840s-1870s), made a lip that was better for pouring or accommodating a stopper. Different types of applied lips were used from ca.1840 to 1913 (Newman 1970). The first applied lips (n=11) were nothing more then small strings of glass placed on the neck to form a rim (n=86). However, later (1850s-1870s) a lipping tool was used to shape a lip into a desired shape (Newman 1970). By 1875, improved lipping tools (n=75) were used directly on the neck itself, bypassing the need to apply additional glass. Applied and improved tooled lip techniques were common until 1903, after which new molds (n=38) and machines (n=114) that formed the lips at the same time as the body were developed (Deiss 1981).

The base of a bottle also went through an evolutionary process (Table 6). Early hand blown bottles could only be made with the aid of a pontil (n=18), a long iron rod that was attached to the molten glass in order to hold it in place for shaping. When the pontil was removed a mark of rough glass was left on the base of the finished bottle (Jones and Sullivan 1989). Later pontil marks (1840) were improved by grounding them down (n=2), which left a smoothed base. (Newman 1970). Typically bottles made with a pontil had a base that was pushed up to form a kind of dome, this base form became so familiar on wine bottles that even after the advent of machine made bottles, manufacturers still made bottles with these types of bases (n=33). Another form of base involved dipping molten glass into a mold in a process known as dip molding (n=2). This was a common practice in the 1800s and is still in use today. Some bottle bases were molded as a separate piece and are known as plate bottom molds (n=3) (Jones and Sullivan 1989). As mentioned above Michael J. Owens developed the first fully automatic bottle-making machine, which injected molten glass into a mold from the base. The glass base was then sheared off, leaving what is referred to today as an Owen's scar (n=2), where the glass was cooled by the shear. By the 1910s this form of bottle making was predominant and was used until the 1940s. During the same time period, other bottle making machines left scars on the base that were formed from the use of a valve to inject

glass into the molds. After 1840 better machines were invented that did not leave a scar (n=94) (Fike 1987; Jones and Sullivan 1989; Kendrick 1964).

The manufacture of glass jars was significantly linked to technological advancements made in bottle production. Many of the techniques used to produce bottles were applied to the creation of better jars. The publics growing concern over sanitary food storage stimulated the need for glass jars. In 1810 a contest sponsored by the French government was held in order to find a why to perfect long-term food preservation. The contest, won by Nicholas Appert, created a trend in home canning. However, it was not until the 1850s when tinsmith John Mason developed a metal screw cap for preserving jars, that the jars were widely produced (Sives 1991). Utilizing the new technologies for producing bottles, jar manufacture increased greatly by the end of the 1800s. In 1869, a lid liner (n=1) made of glass and porcelain was developed for Mason's metal screw caps, which greatly enhanced their preservation effectiveness.

Table 6. Identifiable Glass Lip and Base Types.

Manufacture Type	**N=**
Lip/Rim	
Applied	11
Applied, Tooled	86
Cut-off or Fire Polished	2
Folded	9
Improved Tool	75
Machine	113
Molded	38
Base	
Dip Bottom Mold	2
Machine Made	94
Molded	15
Owen's Process	2
Plate Bottom Mold	3
Pontil	16
Pontil, Push Up	2
Push Up, No Pontil	33
Two Piece Mold	2
Two Piece Mold, Improved	2
Total	**505**

Other technological advances in making bottles involved techniques for developing new colors of glass and decorations for containers. Glass is naturally a blue tinted or green tinted color depending on the natural contaminants that occur in the material (Table 7). To obtain additional colors or to make glass clear, chemicals must be added. Early container glass colors included blue tint (n=1,019) and green tint (n=264), black (n=16), or a dark olive green (n=171). Cobalt was used to manufacture blue colored (n=94) glass prior to the 1800s, and after the 1860s it was used to make an aqua colored glass (n=88). The cobalt glass was then mass-produced for medicine bottles including such popular products as "Phillips Milk of Magnesia" and "Bromo Seltzer." Brown glass (n=435) was also made prior to the 1800s, but became more popular for

bottling beer and household chemicals in the late 1800s. Clear or colorless glass had been produced prior to the 1800s through the manufacture of soda-lime and lead glass (Jones and Sullivan 1989). More and more consumers wanted to see the contents of the bottles they were buying, thus creating a demand for transparent colorless glass (Kendrick 1964). Tablewares typically made of colorless glass, also became popular at this time. However, an inexpensive and dependable means to mass-produced clear glass required the addition of chemicals to remove contaminants that altered color. By 1875 clear glass (n=4,055) bottles had attained widespread use (Fike 1987).

Table 7. Glass Colors*.

Color	N=
Amber	74
Amethyst	168
Aqua	88
Black	16
Blue	94
Blue Tint	1,019
Bright Green	17
Brown	435
Clear	4,055
Dark Green	5
Emerald green	13
Gold	1
Gray Tint	1
Green	27
Green Tint	264
Milk Glass Other	2
Milk Glass White	148
Olive	171
Other	5
Pink	27
Polychrome	1
Purple	1
Red	2
Yellow	1
Yellow Tint	8
Total	**6,643**
*Does not include window glass	

Attempts to make clear glass coupled with the lack of the necessary chemicals to make it created two very distinct glass colors. Amethyst colored glass (n=168) is a byproduct of attempts to make clear glass by adding manganese to the glass in order to bleach-out the natural impurities. Although amethyst glass was clear at the time of manufacture, when exposed to the sun the glass turned purple due to the manganese. This glass was only made for a short time from the 1870s to 1914 (Kendrick 1964; Newman 1970; Jones and Sullivan 1989). Amber (n=74) or straw colored glass (not to be confused with brown colored glass) was the result of the use of a substitute chemical (selenium) used to bleach-out the glass, because manganese was scarce during World War I. This type of glass was generally produced from 1914 to 1930 (Kendrick 1964).

Other glass colors include milk glass and swirled mixed colored glass. Milk glass was most often opaque white in color; however, other opaque colors are often classified as milk glass. Milk glass (n=150) was most popular after the 1860s and was used for a wide variety of vessels and objects. Although some bottles were made of it, milk glass was used mostly for decorative dishes in the early 1900s. Milk glass also was extensively used for buttons and canning jar lid liners, replacing more expensive porcelain ceramics. Lid liners were used to line the inside of zinc metal canning jar lids by the 1870s and their use continued into the 1910s. Swirled or polychrome colored glass (n=1) consisted of different colored glass swirled together. This type of glass was popular in the production of machine made marbles, which were first produced in 1902 (Gartley and Carskadden 1987). Prior to this, glass marbles were made of blown glass or fired clay. Games using marbles were a favorite past time for children in the 1800s and 1900s. In addition to those mentioned above, a wide array of other colors were used through out the Antebellum period as glass production increased, creating a great deal of diversity.

Much like the ceramic assemblage, the glass assemblage was highly fragmented and most could not be identified for vessel or object. However, some could be identified (Table 8). Most of the identifiable glass vessels and objects are associated with the kitchen group. Among them were cups (n=3), tumblers (n=2), a canning jar (n=1), and an unidentified jar (n=1). Also assigned to the kitchen group are bottles. Although most bottle fragments were unidentified for form, a variety of bottle functions were identified, such as medicine (n=7), beer (n=6), soft drink/water (n=5), liquor (n=3), and condiment (n=2). Most were modern containers that were discarded in the washhouse area and are not likely associated with the washhouse.

Figure 13. Clear Glass Perfume Jar.

A large amount of furniture group glass artifacts were recovered from the washhouse. Most were parts oil lamp globe covers (n=145). Oil lamps became a primary source of light in homes by 1859 (Thuro 1976). They were replaced with light bulbs (n=6) as more homes were wired with electricity at the turn of the century. Machine-made light bulbs were developed in 1895 (Scoville 1948). Other glass vessels and objects were assigned to the entertainment, personal, and clothing groups. Machine-made marbles (n=3) (1902-present) comprise the entertainment group artifacts (Gartley and Carskadden 1987). Milk glass (n=3) and black glass jet (n=1) buttons were the only clothing group artifacts found.

The personal group artifacts included beads (n=2) and a clear glass cosmetic jar from the Janus J. Smith Co., a perfumer (Figure 13). One of the beads was faceted and blue in color (Figure 14). Although such beads are common at most historic sites, they are typically found in African-American contexts. Some archaeologists believe that they have significance in African-American beliefs (Sine et al. 1996). A similar bead was found during excavation of a slave house at Farmington Plantation (15Jf571) located in Louisville (Slider 1998).

Unlike container glass and glass objects, which were put to a wide range of uses, flat glass is normally considered window glass, thus having an architectural function. Window glass generally occurs in three colors, blue tinted, green tinted, or clear (Table 9). All are highly transparent. The blue or green tints are a result of the natural color of glass. They are difficult to distinguish from one another without viewing the edge of a pane or sherd and have no real bearing on glass chronology. It is understood that truly clear window glass is an indication of later time periods, most likely after 1900s.

Figure 14. Faceted Blue Glass Bead.

Table 8. Glass Vessel Forms and Objects.

Vessel/Object Form	N=
Clothing	
Button	4 (4)
Entertainment	
Marble	3 (3)
Kitchen,	
Bottle, Beer	16 (6)
Bottle, Condiment	2 (2)
Bottle, Liquor, Case	3 (3)
Bottle, Medicine	12 (7)
Bottle, Soft Drink/Water	102 (5)
Bottle, Unidentified	1,129 (326)
Canning Jar	14 (1)
Cup	5 (3)
Dish	11 (6)
Dropper/Syringe	1 (1)
Jar, Unidentified	83 (40)
Jug	3 (1)
Lid	1 (1)
Lid-Liner	120 (57)
Platter	1 (1)
Stopper	8 (2)
Storage Jar/Crock	4 (1)
Tumbler	7 (2)
Vial	1 (1)
Furniture	
Door Knob	1 (1)
Lamp	4 (1)
Lamp Globe	756 (145)
Light Bulb	8 (6)
Mirror	1 (1)
Miscellaneous	
Car Part	2 (2)
Personal	
Bead	3 (2)
Cosmetic	1 (1)
Total	**2,306 (632)**

Table 9. Window Glass Color.

Color	N=
Blue Tint	3,351
Green Tint	1,054
Clear	439
Total	**4,844**

METAL

A total of 14,777 metal artifacts was found at the washhouse, they were primarily manufactured from iron (n=14,227). However, additional types of metal, such as aluminum (n=69) and copper alloy (n=253) also were used. While a great majority of the metal objects found were nails (n=13,402), a wide array of forms were recovered. Some of these include clothing artifacts, such as buckles (n=33), buttons (n=5), straight pins/needle (n=8), a thimble (n=1), a hat decoration (n=1), and rings (n=2) (Table 10).

Most of the metal buttons (n=5) were related to the military (n=4). Three were identified for type and date. A Kentucky State Seal button found dates from 1866 to 1893 (Figure 15a.) (Alberts 1976:147). Also, a general services button dates from 1860 to 1870 (Figure 15b.) (McGuinn and Bazelon 1984:88).

During the late 1860s, one of Alanson Moremen's sons, Richard attended Washington Military College located in Virginia (later became Washington and Lee). It is possible that some of the military buttons may be associated with his school uniforms. Currently, there is no information about military service in the Moremen family.

Figure 15. Metal Kentucky Seal Button (a.), General Services Button (b.), and Rubber Goodyear Button (c.).

Jewelry, in the form of two rings, also was recovered from the washhouse. They consisted of a thin copper alloy ring and a gold wedding band. The wedding band was not inscribed, but based on its size it likely belonged to a male.

Table 10. Metal Forms and Functional Groups.

Form/Functional Group	N=
Activities	
Auto/Wagon Part	1
Battery	2
Bolt/Nut	36
Chain	6
Clasp/Clip	4
Drill Bit	1
Electrical Hardware	1
Handle	1
Hardware	23
Horse Shoe	1
Pencil/Pencil Parts	13
Staple	29
Tool, Hand	2
Washer	43
Weather Vane	1
Wheel	2
Wire	331
Architecture	
Door knob	1
Electrical Hardware	3
Fuse	1
Hinge	1
Nail, Machine Cut, Late	4,039
Nail, Unidentified	4,969
Nail, Wire	4,450
Nail, Wrought	15
Plumbing Hardware	3
Screw	35
Spike	5
Spring	5
Tack	2
Arms	
Bullet/Shot	49
Shell Casing/Cartridge	66
Clothing/Sewing	
Buckle/Clasp	33
Button	5
Cuff Link	2
Hat decoration	1
Hook and Eye	4
Needle/Pin	8
Safety Pin	4
Thimble	1
Zipper	3

Table 10. Continued.

Form/Functional Group	N=
Furniture	
Address Number	1
Furniture Hardware	1
Handle	8
Hinge	3
Lamp/Lighting	14
Lock	3
Lock cover	1
Extension plug	1
Kitchen	
Bottle Lip	1
Can/Container	7
Cap/Lid	80
Knife/Knife Handle	6
Pull Tab	28
Sugar Shaker	1
Spoon	1
Utensil Handle	1
Personal	
Barrette	1
Coin	14
Jewelry	2
Key	4
Watch/Watch Part	1
Entertainment	
Toy Car	1
Fish Hook	1
Total	**14,325**

An unusual metal artifact recovered from the washhouse was a flat impressed copper alloy object (Figure 16). It has a scalloped edge and comes to a point on one end. A heart shaped hole is located near the pointed end. A small crest is impressed in the center of the object. This artifact is most likely some type of a hat decoration used in conjunction with a hatpin or feather. Decorative hats with feathers and plumes were popular from the late 1800s to early 1900s (Figure 17).

Other interesting metal artifacts included coins (n=14), part of a weather vane (n=1), a clip (n=1), and a lock cover (n=1) (Figure 18). The weather vane fragment was made of brass and was the arrow portion of the device. Perhaps, one of the outbuildings in the area was outfitted with this device. A small clip, possibly for holding papers, was made of a copper alloy in the shape of a shoe. It consisted of two parts and was spring loaded. It also appeared to have an impressed mark that resembled a registry mark commonly found on English pottery. However, the mark could not be identified. The lock cover exhibited an engraved bird on a crown with an "F" (Figure 18). These markings are a combination of American and British symbols and probably represent a maker's mark. No information on this mark was found.

Figure 16. Possible Metal Hat Decoration.

878 SEARS, ROEBUCK & CO. (Inc.), Cheapest Supply House on Earth, Chicago. CATALOGUE No. 110.

No. 62874 A Fine Quality Black English Felt Short Back. On upper and lower edge of brim is a row of fine twisted jet and two rows around crown. A folded trimming of black velvetta is brought around top of side crown. **In front is a jaunty trimming of two black jetted quills,** with knotted effect and pointed ears of black velvetta. A large gilt buckle and violet trimmed bandeau complete this pretty hat. Can be ordered in black or colors. Price....**$1.85**

No. 62875 A Very Stylish Velvetta Hat with Tucked Brim, slightly drooping in the front and back, a beautiful crown of velvetta, and trimmed in light blue taffetine rosettes. Two quills on either side complete this very nobby hat. Can be ordered in black and colors.
Price, each **$1.55**
If you are not pleased with any Hat received from us, send it back and we will refund money.

No. 62876 Black Velvetta Made Hat, "Shephe Style," has large bow of black satin ribbon loops, two fancy wings with quills complete trimming for the front; on the side is a ful of black satin ribbon drawn over the brim and on the crown with a bow of black satin ribbon hat is black, but can be ordered trimmed colors.
Our special price, each ..... $

Figure 17. Advertisement for Decorative Hats in the 1900 Sears and Roebuck Catalog.

Figure 18. Metal Lock Cover.

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Some of the modern artifacts recovered from the site are diagnostic. Of the 80 metal bottle and jar caps recovered, most were severely rusted and unidentified for type (n=60). The identified caps included zinc canning jar screw caps (n=17) and crown bottle caps (n=3). The mason jar caps date from 1858 to present (Toulouse 1969). Crown caps, better known as modern bottle caps, were developed 1895 (Newman 1970). A zipper also was found, which became widely used by 1913 (Panati 1987).

Nails

Hand wrought nails (n=15), or simply wrought nails, are handmade nails forged by a blacksmith. Typical wrought nails had a square shaft, a flat point, and an irregular shaped head formed by the blacksmiths hammer. Wrought nails were invented during last few decades of the seventeenth century and were still in use during the early part of the nineteenth. Machine cut nails (n=4,025) are nails that have been cut from flat sheets of metal, called nail plates (Wells 1998) by a machine; they have a more rectangular shape, with later ones having square or rectangular heads. Wire nails (n=4,449) are the same kind of nails that are used today. They are cut from a linear metal wire. Each of these nail types have chronological significance with respect to a particular time period during which they were manufactured.

Prior to 1800, nails had to be made by hand, which made them a rather expensive item to purchase. Because nails were fairly expensive, techniques that limited the amount of nails needed for construction prevailed, like log and stone buildings. Wrought nails were consistently made throughout the 1800s, despite the development of machine

made nails. By 1800, cut nails had been developed, which allowed for the mass production of nails and the lowering of their price (Smith 1975; Nelson 1968). Although machine cut nails were cheaper than wrought nails, they were still an expensive item, particularly when they were not manufactured locally. Despite the fact that machine cut nails could be mass-produced, they did not become commonplace in construction until after the 1830s, when large nail factories were opened (Nelson 1968). Machine cut nails would be the preferred nail type throughout most of the 1800s.

Although the United States Patent Office granted the first patent for wire nails strong enough for heavy construction in 1877 (Loveday 1983; Wells 1998), they were used primarily for the construction of packing cases until the last two decades of the nineteenth century. However, by around 1890, wire nails had become the preferred nail for all construction, being even more inexpensive to produce than the cut nails (Smith 1975). Preiss (1973:90) suggests that an effective beginning date for the use of wire nails in building construction is 1880. By 1913, machine cut nails accounted for less than 10 percent of all nails produced in the United States (Loveday 1983).

BONE/SHELL

Animal bone and shell (n=124) are typically recovered from historic archaeological sites. The primarily represent the disposal of food remains used by people (n=1,988). While food was the most common use for animals during the 1800s, a variety of items were produced from animal products. Many of these items, such as fur and leather garments, do not survive in the archaeological record. However, animal bones also were used to produce items that are frequently found at archaeological sites. These items include buttons (n=18), pins (n=1), and awls (n=1) (Table 11). Just about anything could be carved from bone, making it the nineteenth century equivalent to plastic.

Although buttons were commonly made of metal, ceramic, and glass during the 1800s, they were often made from bone (South 1964). With the exception of ornately carved buttons, most bone buttons (n=9) were generally used for casual or work clothing, since they were rather inexpensive to produce and bone was readily available. As with the bone buttons, shell buttons were also made throughout the 1800s (South 1964). While freshwater mussel shells from America's rivers were ample and inexpensive, domestic production of shell buttons did not occur until the 1890s. Most of the shell buttons (n=9) used in America during the 1800s were made from marine mussel shell imported from Europe (Claassen 1994). While bone buttons became less popular towards the end of the 1800s and the beginning of the 1900s, shell buttons became increasingly popular. The reason for this may have been that shell buttons were considered to be much more elegant than bone buttons. Even the simplest shell buttons produced a bright white and iridescent appearance, commonly called mother-of-pearl that was often associated with formal clothing. Prior to the mass production of shell buttons in America, European shell buttons were rather expensive.

In addition to bone and shell plant material also was recovered from the washhouse. Most of these were burned corn cobs (n=5).

Table 11. Organic Materials and Forms.

Material/ Form	Bone	Egg Shell	Mussel Shell	Shell Unident.	Oyster Shell	Wood/ Plant	Total
Button/ Disk	9	0	0	9	0	0	18
Charcoal	0	0	0	0	0	2	2
Faunal	1,951	2	103	8	1	0	2,090
Awl/Pin	2	0	0	0	0	0	2
Fan	0	0	1	0	0	0	1
Jewelry	1	0	0	0	0	0	1
Corn Cobs	0	0	0	0	0	5	5
Unident.	0	0	0	0	0	1	1
Total	**1,988**	**2**	**104**	**17**	**1**	**8**	**2,120**

OTHER ARTIFACTS

The remaining artifacts recovered include stone (n= 5,635) and synthetics (n=187). The stone artifacts mostly consisted of prehistoric chert artifacts (n=5,197) and rock (n=483) (Table 12). Other stone artifacts included slate (n=39). The prehistoric artifacts will not be discussed in this report and will be reported on separately.

Table 12. Stone Types and Form.

Stone Form	Brick/Mortar/ Plaster	Chert	Rock	Slate	Total
Prehistoric					
Biface	0	21	0	0	21
Core	0	10	0	0	10
Fire Cracked Rock	0	0	460	0	460
Flake, BTS*	0	1	0	0	1
Flake, Primary	0	5	0	0	5
Flake, Secondary	0	15	0	0	15
Flake, Unidentified	0	5,023	0	0	5,023
Flake, Utilized	0	26	0	0	26
Pestle	0	0	1	0	1
Projectile Point	0	23	0	0	23
Scraper	0	4	0	0	4
Architecture					
Construction Related	11	0	0	0	11
Activities					
Tools, Unidentified	0	0	6	0	6
Writing Board	0	0	0	29	29
Total	**11**	**5,128**	**467**	**29**	**5,635**
*Bifacial Thinning and Shaping Flake					

All of the slate fragments were parts of writing boards. One of the writing boards exhibited writing. It read "…men 1901…alley Station" (Figure 19). This artifact likely belong to one of the Mormen family members and dates to 1901. Valley Station was the closest town to Riverside.

Other stone artifacts included building materials such as concrete, mortar, and brick. The presence of these building materials, such as brick and mortar was noted but the artifacts were not collected. Two types of mortar were identified: lime mortar and Portland cement. Lime mortar was generally used prior to the 1900s, while Portland cement became predominant in 1899 (Cleland 1983).

Figure 19. Slate Writing Board with Writing Dated 1901.

Synthetic artifacts, including plastic (n=162), rubber (n=13), and asphalt shingles (n=7), also were found (Table 13). One of the first synthetics developed was hard rubber or Vulcanized rubber. Objects, such as buttons and combs were made of hard rubber. A hard rubber button from the Goodyear Co. (n=1) was recovered (Figure 15). Goodyear buttons were patented in 1851 (Luscomb 1967). Softer rubber was developed by 1871 and was used for bottle stoppers, garden hoses, and gaskets (Panati 1987).

A majority of the synthetics were unidentified plastic. The presence of these artifacts was noted with a small sample being collected. Synthetic objects included plastic toys (n=15), beads (n=3), and buttons (n=20). Although plastic was developed in the late 1800s it was not widely used until after 1900. The development of Pyralin plastic in 1915 led to the wide spread use of plastics for objects, such as toothbrushes, toys, combs, pens, etc. (Wolfe 1945). Plastic buttons (n=19) began to replace ceramic Prosser buttons by the 1940s (Sprague 2002). Plastic shotgun shells (n=2) were developed in 1958 (Bussard 1993). Asphalt shingles were developed in the early 1900s, but were not widely marketed until 1917 (Luetkemeyer Co. 1917).

Table 13. Synthetic Material and Forms.

Materials/ Form	Plastic	Rubber	Asphalt	Unidentified	Total
Bead	3	0	0	0	3
Belt	0	0	0	1	1
Bottle Cap	4	0	0	0	4
Button	19	1	0	0	20
Condiment	1	0	0	0	1
Shingle	0	0	7	0	7
Gaming Piece	2	0	0	0	2
Lid/Lid Liner	6	0	0	0	6
Pencil	1	0	0	1	2
Plate	1	0	0	0	1
Shot Gun Shell	2	0	0	0	2
Straw	1	0	0	0	1
Toy	13	0	0	2	15
Vehicle Part	2	0	0	0	2
Vial	1	0	0	0	1
Washer	0	1	0	0	1
Total	**56**	**2**	**7**	**4**	**69**

STRATIGRAPHY AND FEATURES

The stratigraphic profile documented at the washhouse was quite complex due to the intensive use of the area over time and its close proximity to the detached kitchen area. Due to these factors, a variety of stratigraphic profiles were documented throughout the washhouse area. In order to describe the complex stratigraphy found at the washhouse, it was divided into three distinct stratigraphic areas. They include the Hearth Area, Washhouse South, and Washhouse North (Figure 20). These designations represent areas of the washhouse that exhibit a similar stratigraphic profile.

Although these areas exhibit distinct stratigraphic profiles, there were several strata that were associated with more than one of the designated areas (Table 14). These strata include: a backfill layer (Stratum 1), a topsoil layer (Stratum 2), a brick included layer (Stratum 3), a coal layer (Stratum 4), a historic/prehistoric interface layer (Stratum 5), and a prehistoric layer (Stratum 6) (Figure 21). The backfill and topsoil strata (Strata 1 and 2) overlaid most or all the entire washhouse site. The historic/prehistoric interface and prehistoric strata (Strata 5 and 6) was found underlying the entire washhouse area. The brick included layer (Stratum 3) was identified primarily in the southern half of the washhouse site, which then was replaced by a coal layer (Stratum 4) along the western edge of the site. Each of these strata are described and discussed below followed by a description and discussion of the strata and features found in the three designated areas.

A total of 16 features were identified during the excavations of the washhouse. These features were found an all areas of the site and represent its various uses from the early nineteenth to mid twentieth century (Figure 20). The features identified at the washhouse will be described within the three designated areas.

Table 14. General Strata Found in Multiple Areas.

Stratum	Name	Characteristics	Association
1	Backfill	Mottled clay fill	Late 20th century archaeology and utilities backfill
2	Topsoil	Dark humus	Early to late 20th century use of the washhouse area.
3	Brick Included Layer	Brick inclusions	Occupation and demolition of the washhouse.
4	Coal Layer	Dense coal	Occupation and demolition of the washhouse.
5	Prehistoric/Historic Interface	Brick flecks	Predates washhouse, first historic use of the washhouse.
6	Prehistoric Layer	All prehistoric artifacts	Prehistoric use of the washhouse.

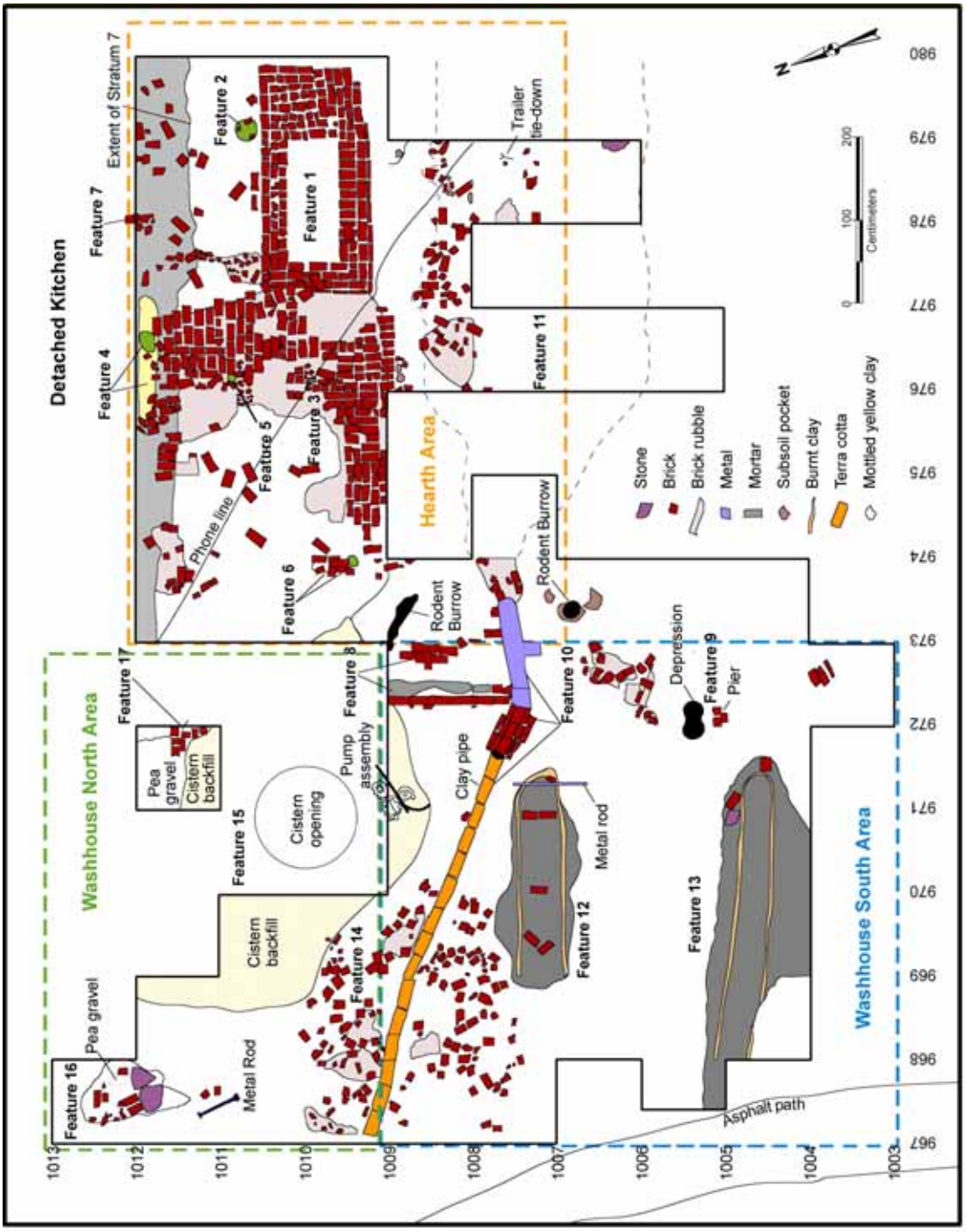

Figure 20. Site Map of the Washhouse Excavations Showing The Three Designated Areas.

GENERAL STRATIGRAPHY

Stratum 1 (Backfill)

Stratum 1 was a 5 to 15 cm thick mottled brown yellow silty clay loam soil that was created from archaeological backfill associated with the detached kitchen excavations adjacent to the washhouse and excavation of a sewer line just south of the washhouse. This stratum was found in patches throughout the entire washhouse area and was often incorporated into the topsoil (Stratum 2).

A total of 782 artifacts was recovered from Stratum 1 (Table 15). Most included modern artifacts that date within the last 30 years, such as various plastic items (post 1900), pull tabs (1965-1985), wire nails (1870-present), and light bulb (1895-present). However, some late nineteenth and early twentieth century artifacts also were recovered, including machine cut nails (1800-1880), whiteware (1830-1890), and redware (1750-1870) (Table 16). Also, several fragments of a slate writing board were found in Stratum 1, which exhibited an inscription that included the date "1901" (Figure 19). All of these artifacts likely originated from deposits in the area disturbed during backfilling activities, associated with the construction of utilities.

Stratum 2 (Topsoil)

Stratum 2 was a 10 to 15 cm thick dark brown silt loam topsoil. It was found covering most of the washhouse area and represents the accumulation of deposits from the early to late 1900s, including the use and demolition of the washhouse structure. The topsoil was overlaid in some places by Stratum 1. In some cases Stratum 2 was absent, leaving only Stratum 1 overlying the other deposits (Figure 21).

A total of 9,505 artifacts was recovered from Stratum 2 (Table 15). Most were assigned to the architecture (53%) and kitchen (29.3%) groups, which indicates that some artifacts could have originated from the demolition of the washhouse building. Other functional groups represented in the topsoil artifact assemblage included the activities, furniture, miscellaneous, clothing, arms, entertainment, and personal groups (Table 15). Faunal remains (n=253) and prehistoric artifacts (n=351) also were recovered.

Since Stratum 2 represents the topsoil, it is one of the most recent deposits in the yard. However, it contained artifacts that ranged from the early 1800s to the late 1900s, indicating that a considerable amount of mixing with other deposits had occurred. Pearlware (1780-1830), whiteware (1830-1890), white granite (1842-1930) ceramics (Table 16), a General Service metal button (1860-1870) (Figure 15) (McGuinn and Bazelon 1984), and machine cut nails (1800-1880) represent some of the nineteenth century artifacts found in the topsoil. However, wire nails (1870-present), a great seal metal button (post 1902) (Wyckoff 1984), various plastics (post 1900), coins, light bulbs (1895-present), machine made glass containers (post 1903), rubber gasket rings/washers (1871-present), crown bottle caps (1895-present), zipper (1913-present), plastic shot gun shell (1958-present), and others are indicative of the early to late twentieth century.

Table 15. Artifacts from Strata 1 - 5.

Functional Group/Material/ Artifacts	Stratum				
	1	2	3	4	5
Activities					
Auto part	0	0	0	1	0
Battery	0	2	0	0	0
Bolt/Nut	1	11	11	4	7
Buckle	0	1	0	0	0
Car Window	1	0	0	0	0
Chain	4	1	0	1	0
Clip	0	0	0	2	0
Drill Bit	1	0	0	0	0
Electrical Hardware	1	0	0	0	0
Handle	0	1	0	0	0
Hand tool	0	1	1	0	0
Hardware	0	11	4	5	2
Pencil	0	5	0	2	0
Pencil sharpener-plastic	0	1	0	0	0
Plastic cap	0	1	0	0	0
Plastic headlight	0	1	0	0	0
Spring	0	0	0	0	1
Staple	0	24	3	1	0
Washer-metal	0	30	1	0	1
Washer-rubber	0	1	0	0	0
Wire	13	293	7	11	2
Weather vane	0	0	0	1	0
Writing Board	6	5	0	0	4
Total	**27**	**389**	**27**	**28**	**17**
Architecture					
Brick sample	0	0	0	0	1
Ceramic tile	3 (1)	0	0	0	0
Door knob	0	0	1	0	0
Drain pipe	0	3	3	0	0
Electrical hardware	0	1	1	0	0
Electrical insulator-ceramic	0	0	1	0	0
Hinge	0	1	0	0	0
Mortar sample	0	0	0	0	4
Nail, Machine Cut, Late	36	789	570	527	340
Nail, Unid.	47	682	1,090	942	339
Nail, Wire	87	2,060	402	1,114	111
Nail, Wrought	0	8	0	7	0
Plaster fragment	0	0	3	0	0
Plumbing Hardware	1	0	2	0	0
Screw	2	26	1	4	1
Shingle-asphalt	0	0	0	2	0
Spike	0	3	2	0	0
Spring	0	1	0	0	0
Synthetic construction material	0	2	0	2	1
Tack	0	1	0	0	0
Window glass	98	1,467	708	476	264
Total	**274**	**5,044**	**2,748**	**3,074**	**1,061**

Table 15. Continued.

Functional Group/Material Artifacts	Stratum				
	1	**2**	**3**	**4**	**5**
Arms					
Bullet	0	30	3	5	3
Shell Casing/Cartridge	4	36	4	14	0
Plastic shot gun shell	0	2	0	0	0
Total	**4**	**68**	**7**	**19**	**3**
Clothing					
Bone button	0	2	2	1	0
Buckle	0	17	2	4	0
Ceramic button	2	8	5	5	2
Hook and eye	3	1	0	1	0
Metal Cuff link	0	2	0	0	0
Metal button	1	31	10	3	0
Straight pin	0	2	0	0	1
Safety pin	0	1	0	0	0
Plastic button	0	10	2	3	0
Zipper	0	3	0	0	0
Total	**6**	**77**	**21**	**20**	**3**
Entertainment					
Ceramic doll part	0 (0)	11 (3)	1	9 (8)	2 (2)
Ceramic marble	1	3	2	1 (1)	2
Gaming piece	0	2	0	0	0
Glass marble	0	1	1	0	1
Golf ball	0	1	0	0	0
Fish Hook	1	0	0	0	0
Toy Hot Wheel Truck	1	0	0	0	0
Toy Wheel-plastic	1	0	0	0	0
Toy-Unidentified plastic	0	11	2	0	0
Total	4	**29**	**6**	**10**	**5**
Furniture					
Address label-metal	0	0	1	1	0
Door knob-glass	0	0	0	1	0
Chamber pot	0 (0)	0 (0)	2 (1)	0 (0)	0 (0)
Clasp-metal	0	1	0	0	0
Extension cord	0	1	0	0	0
Figurine	0	1	0	1	0
Flowerpot	1 (1)	14 (11)	0	1 (1)	0
Hinge	0	2	0	0	0
Latch	0	1	0	0	0
Lamp Globe	9	297	97	136 (21)	13
Light Bulb	1	4	0	1	0
Lock	0	1	0	0	1
Lock cover	0	1	0	0	0
Metal Lamp part	1	4	2	1	0
Metal handle	0	4	0	0	0
Mirror	1	7	0	0	0
Total	**13**	**338**	**102 (26)**	**142**	**14**

Table 15. Continued.

Functional Groups/ Material/ Artifacts	Stratum				
	1	2	3	4	5
Kitchen					
Ceramic					
Bowl	3 (3)	16 (8)	15 (4)	12 (6)	21 (11)
Cup	0 (0)	2 (2)	2 (1)	5 (3)	2 (2)
Mixing bowl	0 (0)	1 (1)	1 (1)	0 (0)	0 (0)
Plate	0 (0)	4 (4)	5 (4)	1 (1)	3(3)
Storage Jar/Crock	4 (2)	28 (18)	12 (8)	13 (9)	4 (4)
Unidentified	59 (41)	538 (343)	420 (224)	419 (206)	727 (339)
Glass					
Bottle, Beer	1 (1)	5 (1)	6 (2)	4 (2)	19 (15)
Bottle, Liquor case	0 (0)	0 (0)	1 (1)	2 (2)	0 (0)
Bottle, Medicine	0 (0)	4 (2)	1 (1)	6 (3)	0 (0)
Bottle, Soda	0 (0)	102 (5)	0 (0)	0 (0)	0 (0)
Bottle, Unid.	70 (18)	479 (106)	136 (55)	138 (45)	0 (0)
Cup	0 (0)	1 (1)	0 (0)	1 (1)	0 (0)
Dish	7 (2)	1 (1)	0 (0)	1 (1)	0 (0)
Dropper/syringe	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Jar, Unid.	3 (3)	62 (22)	12 (9)	2 (2)	0 (0)
Lid	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)
Lid-Liner	7 (4)	37 (20)	5 (5)	44 (13)	5 (5)
Platter	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)
Stopper	0 (0)	2 (1)	6 (1)	0 (0)	0 (0)
Storage Jar	4 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Tumbler	0 (0)	5 (1)	0 (0)	0 (0)	0 (0)
Unidentified	139 (47)	1,454 (322)	861 (150)	738 (159)	150 (80)
Vial	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)
Metal					
Bottle lip	0	1	0	0	0
Can	0	2	0	0	0
Cap/Lid	1	15	9	26	7
Container, unidentified	0	0	0	0	4
Knife	0	0	0	0	1
Pull Tab	4	22	0	2	0
Spoon	0	0	0	0	1
Sugar shaker	0	1	0	0	0
Utensil Handle	1	0	0	0	0
Synthetic					
Plastic Cap	1	2	0	0	0
Plastic lid	0	3	0	0	0
Plastic lid liner	0	2	0	0	0
Straw	0	0	0	0	0
Vial	0	1	0	0	0
Subtotal	**304**	**2,791**	**1,292**	**1,423**	**944**
Miscellaneous					
Corn cobs	0	0	0	5	0
Unidentified ceramic	0	3	0	1	3
Unidentified glass	0	0	4	4	0
Unidentified metal	0	92	56	49	5
Unidentified plastic	1	57	8	3	0
Unidentified stone	1	0	0	1	0
Total	**2**	**151**	**68**	**62**	**8**

Table 15. Continued.

Functional Group/ Material/ Artifacts	Stratum				
	1	**2**	**3**	**4**	**5**
Personal					
Coins	0	11	1	2	0
Glass bead	0	2	0	0	0
Glass cosmetic container	0	0	1	1	0
Metal barrette	0	1	0	0	0
Metal key	0	0	0	2	0
Metal ring	0	0	0	0	1
Metal Watch part	1	0	0	0	0
Smoking pipe-ceramic	0	0	1	1	2
Synthetic bead	0	0	2	1	0
Total	**1**	**14**	**5**	**8**	**3**
Faunal					
Bone	29	237	172	150	359
Mollusk, Mussel Shell	1	14	4	16	7
Unidentified shell	0	2	0	0	2
Total	**30**	**253**	**176**	**166**	**368**
Prehistoric artifacts	**80**	**351**	**509**	**313**	**2,468**
Total	**782**	**9,505**	**4,961**	**5,271**	**4,894**

A total of 11 coins were recovered from the topsoil and range in date from 1929 to 1998, representing the period of topsoil deposition. A large amount of prehistoric artifacts also were recovered from the topsoil, which provides more evidence that it had been mixed with some earlier deposits. Stratum 2 was most likely formed during the early 1900s through present day. Nineteenth century and prehistoric artifacts became re-deposited in the topsoil, as some earlier deposits were likely disturbed during the twentieth century.

Stratum 3 (Brick Included Layer)

Stratum 3 (Brick Included Layer) was a 5 to 18 cm thick dark brown silt loam with brick inclusions and occasional inclusions of coal (Figure 21). This stratum was found primarily in the south half of the washhouse area, underlying Stratum 1 (Backdirt) and/or Stratum 2 (Topsoil). Towards the western edge of the site, dense inclusions of coal signified a transition of Stratum 3 into Stratum 4 (Coal Layer).

A total of 4,961 artifacts was recovered from Stratum 3. Most were assigned to the architecture (55%) and kitchen (26%) functional groups (Table 15). Other functional groups represented included activities, arms, clothing, entertainment, furniture, miscellaneous, and personal (Table 15). Faunal remains (n=176) and prehistoric artifacts (n=509) also were found in Stratum 3.

Table 16. Ceramic Types Recovered from Strata 1 - 5.

Ceramic Type/ Decoration	Stratum				
	1	2	3	4	5
Agateware					
Undecorated-lead glaze	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)
Buff Stoneware					
Banded-salt glaze	0 (0)	1 (1)	6 (2)	0 (0)	0 (0)
Bristol-slip glaze	0 (0)	0 (0)	0 (0)	4 (2)	0 (0)
Pattern molded-lead glaze	0 (0)	1 (1)	0 (0)	0 (0)	1 (1)
Undecorated-lead glaze	6 (4)	20 (14)	11 (10)	9 (7)	10 (7)
Undecorated-salt glaze	0 (0)	11 (8)	11 (6)	8 (7)	5 (5)
Undecorated-slip glaze	0 (0)	21 (16)	6 (6)	7 (7)	9 (8)
Undecorated-unidentified	0 (0)	5 (3)	5 (3)	3 (3)	5 (3)
Undecorated-unglazed	0 (0)	9 (8)	1 (1)	2 (2)	1 (1)
Unidentified	0 (0)	2 (1)	1 (1)	0 (0)	8 (5)
Drainware					
Salt glaze	0 (0)	3 (2)	0 (0)	0 (0)	0 (0)
Unglazed	0 (0)	0 (0)	3 (2)	0 (0)	0 (0)
Earthenware					
Hand painted	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Pattern molded	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Undecorated	1 (1)	3 (3)	2 (2)	0 (0)	1 (1)
Unidentified	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Fixture Porcelain					
Undecorated	3 (1)	7 (4)	2 (2)	1 (1)	0 (0)
Gray Stoneware					
Banded	0 (0)	4 (2)	4 (1)	0 (0)	2 (1)
Undecorated-lead glaze	2 (2)	3 (3)	1 (1)	4 (2)	4 (3)
Undecorated-salt glaze	0 (0)	10 (9)	12 (9)	8 (7)	2 (2)
Undecorated-slip glaze	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)
Undecorated-unglazed	0 (0)	3 (2)	4 (3)	1 (1)	2 (2)
Undecorated-unidentified	0 (0)	6 (5)	4 (2)	1 (1)	1 (1)
Pearlware					
Transfer printed	0 (0)	0 (0)	2 (2)	0 (0)	2 (2)
Undecorated	0 (0)	6 (4)	15 (5)	16 (7)	3 (2)
Porcelain					
Colored glaze	1 (1)	2 (2)	2 (2)	2 (2)	1 (1)
Flowed	0 (0)	2 (2)	0 (0)	0 (0)	0 (0)
Flowed and gilt	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Gilted	0 (0)	1 (1)	1 (1)	0 (0)	9 (7)
Gilt and hand painted	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Gilt and relief	0 (0)	1 (1)	0 (0)	2 (1)	0 (0)
Hand painted	0 (0)	10 (7)	0 (0)	1 (1)	1 (1)
Pattern molded	0 (0)	8 (6)	3 (3)	1 (1)	1 (1)
Transfer printed	0 (0)	2 (2)	3 (2)	0 (0)	0 (0)
Transfer printed and relief	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Undecorated	6 (5)	43 (33)	25 (18)	44 (28)	23 (16)
Unidentified	0 (0)	11 (7)	1 (1)	15 (10)	2 (1)
Redware					
Undecorated-lead glaze	1 (1)	0 (0)	1 (1)	0 (0)	10 (7)
Undecorated-slip glaze	1 (1)	6 (5)	9 (7)	3 (3)	5 (4)
Undecorated-unidentified	0 (0)	8 (3)	0 (0)	0 (0)	2 (2)

Table 16. Continued.

Ceramic Type/ Decoration	Stratum				
	1	2	3	4	5
Rough Porcelain					
Colored glaze	0 (0)	3 (1)	1 (1)	2 (1)	0 (0)
Hand painted	0 (0)	1 (1)	2 (2)	2 (2)	2 (2)
Gilt and relief	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Pattern molded	0 (0)	0 (0)	4 (4)	3 (2)	1 (1)
Sponged	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)
Relief	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Transfer printed	0 (0)	1 (1)	4 (4)	0 (0)	1 (1)
Transfer printed and relief	0 (0)	0 (0)	0 (0)	3 (1)	0 (0)
Undecorated	1 (1)	27 (19)	23 (16)	32 (19)	16 (9)
Terra Cotta					
Unglazed	2 (2)	21 (18)	2 (2)	1 (1)	0 (0)
White Granite					
Colored glaze	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)
Edge	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Pattern molded	0 (0)	4 (2)	1 (1)	0 (0)	3 (1)
Transfer printed	0 (0)	8 (3)	1 (1)	0 (0)	1 (1)
Transfer printed and hand painted	0 (0)	1 (1)	4 (1)	10 (1)	1 (1)
Undecorated	0 (0)	21 (16)	27 (12)	9 (6)	8 (7)
Whiteware					
Banded	0 (0)	1 (1)	2 (2)	0 (0)	13 (8)
Colored glaze	1 (1)	5 (3)	0 (0)	0 (0)	1 (1)
Decal	0 (0)	0 (0)	0 (0)	2 (1)	0 (0)
Edge	2 (1)	0 (0)	2 (2)	1 (1)	2 (2)
Flowed	0 (0)	0 (0)	2 (2)	0 (0)	1 (1)
Gilt	0 (0)	2 (2)	0 (0)	0 (0)	1 (1)
Hand painted	1 (1)	4 (4)	2 (2)	2 (2)	18 (13)
Mocha	0 (0)	0 (0)	1 (1)	1 (1)	8 (1)
Pattern molded	3 (3)	1 (1)	1 (1)	6 (4)	1 (1)
Relief and hand painted	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Sponged	0 (0)	3 (3)	5 (5)	3 (3)	10 (6)
Transfer Printed	4 (4)	24 (23)	42 (35)	20 (17)	116 (86)
Transfer Printed and hand painted	0 (0)	2 (2)	0 (0)	0 (0)	0 (0)
Transfer Printed and relief	1 (1)	1 (1)	0 (0)	2 (2)	0 (0)
Undecorated	24 (15)	201 (86)	166 (44)	2 (2)	361 (87)
Unidentified	0 (0)	5 (5)	3 (3)	13 (7)	15 (5)
Yellow ware					
Banded	1 (1)	2 (2)	1 (1)	1 (1)	4 (4)
Mocha	0 (0)	0 (0)	2 (2)	1 (1)	1 (1)
Rockingham	0 (0)	0 (0)	2 (2)	0 (0)	8 (7)
Undecorated	2 (2)	15 (12)	8 (7)	6 (6)	1 (1)
Undecorated unglazed	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Unidentified	0 (0)	0 (0)	7 (1)	0 (0)	0 (0)
Unidentified					
Banded	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Flowed	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)
Relief	0 (0)	1 (1)	0 (0)	1 (1)	0 (0)
Transfer printed	0 (0)	4 (3)	1 (1)	0 (0)	5 (5)
Undecorated	1 (1)	12 (7)	21 (10)	3 (2)	2 (2)
Unidentified	10 (3)	46 (26)	26 (12)	7 (4)	43 (22)
Total	**73 (56)**	**632 (409)**	**503 (277)**	**231 (185)**	**761 (368)**

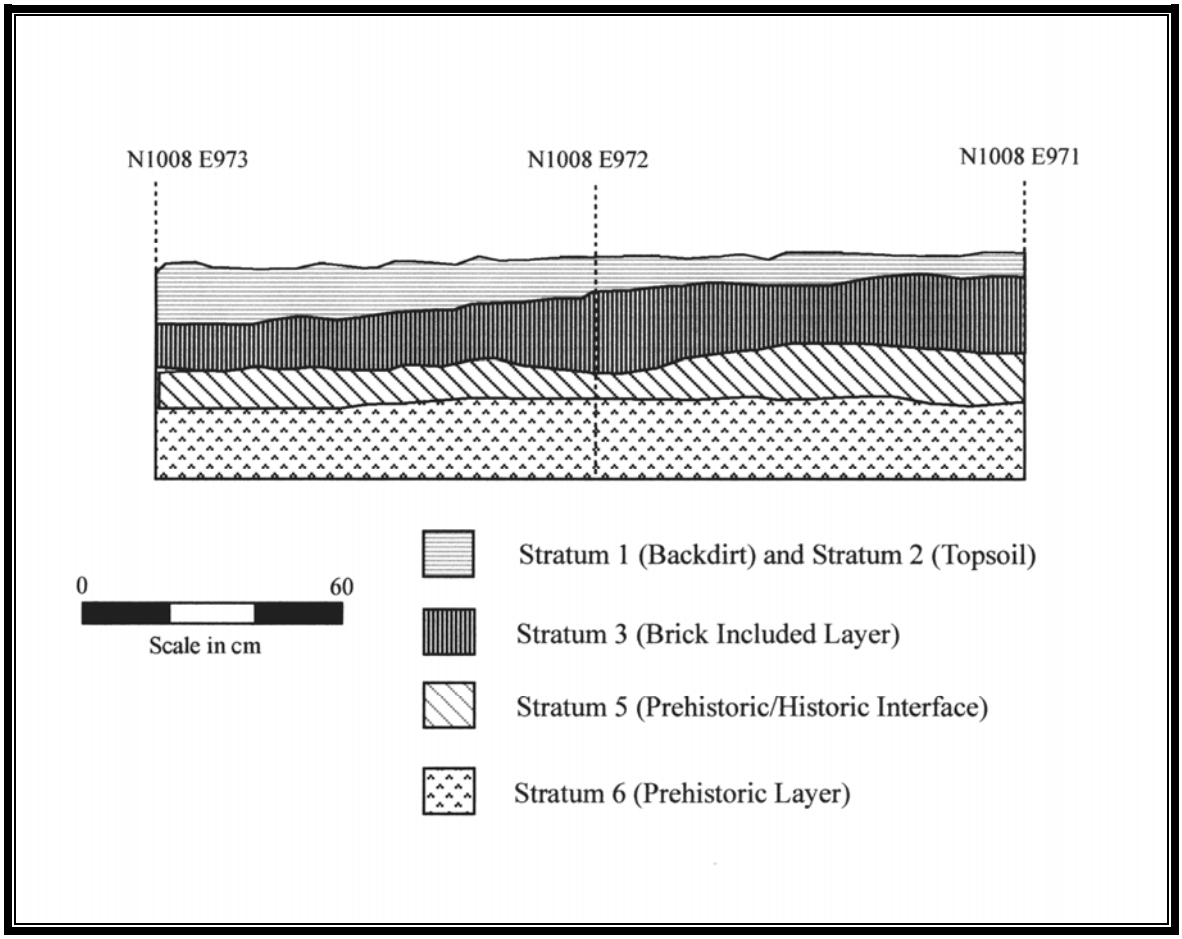

Figure 21. Soil Profile Showing the Strata Found in More than One Area of the Washhouse (Stratum 1 and 2 were combined in this profile).

Artifacts recovered from Stratum 3 date primarily from the mid nineteenth to the mid twentieth century. Most were ceramic sherds, such as whiteware (1830-1890), white granite (1842-1930), and yellow ware (1830-1940) (Table 16). Other diagnostic artifacts included applied (1840-1913), improved tooled (1870-1913), and machine made (1903-present) glass bottle lips, a pontil marked glass bottle base (1840-1880), clear (1875-present), brown (1860-present), amethyst (1880-1914), and milk (1860-present) colored container glass, and various types of plastic (post 1900). A Kentucky state seal button also was recovered from Stratum 3. It was manufactured by the Waterbury Button Co. and dates from (1866-1893) (Albert 1976:147) (Figure 15).

Based on the large amounts of architecture artifacts and the brick inclusions in the soil matrix, it is likely that Stratum 3 primarily represents the demolition of the washhouse building. However, it is possible that it also contains deposits associated with

the use of the building that were disturbed during demolition. The diagnostic artifacts are indicative of the use of the building during the late 1800s to early 1900s, as well as its demolition, which probably took place in the early 1900s.

Stratum 4 (Coal Layer)

Stratum 4 (Coal Layer) was a 5 to 15 cm thick black silt loam with dense coal inclusions mixed with brick fragments. This stratum was found primarily in the northwestern portion of the washhouse area. It appears to be contemporaneous with or the same as Stratum 3 (Brick Included Layer), but with large amounts of coal. Like Stratum 3, it was found underlying Stratum 2 (Topsoil).

A total of 5,271 artifacts was recovered from Stratum 4. Most were assigned to the architecture (58%) and kitchen (27%) functional groups (Table 15). Other functional groups represented include activities, arms, clothing, entertainment, furniture, miscellaneous, and personal groups (Table 15). Faunal remains (n=166) and prehistoric artifacts (n=313) also were found in Stratum 4.

The artifacts recovered from Stratum 4 ranged in date from the late nineteenth to early twentieth century. Most of the diagnostic artifacts were among the wide variety of ceramics recovered, such as whiteware (1830-1890), white granite (1842-1930), and yellow ware (1830-1940) (Table 16). Other diagnostic artifacts include machine cut nails (1800-1880), wire nails (1870-present), applied bottle lips (1840-1913), pontil marked bottle bases (1840-1880), two-piece molded (1845-1913) glass bottle fragments, machine-made (1903-present) bottle fragments, various types of plastic (post 1900), and clear (1875-present), brown (1860-present), amethyst (1880-1914), and milk (1860-present) colored glass. Also of the two coins recovered, only an 1899 penny exhibited a legible date.

As with Stratum 3, the large percentage of architecture artifacts is indicative of the demolition of the washhouse building. The diagnostic artifacts from Stratum 4 also are similar to those found in Stratum 3, representing the period when the washhouse was used and its subsequent demolition.

Stratum 5 (Prehistoric/Historic Interface)

Stratum 5 was a 4 to 15 cm thick light brown sandy clay loam that was characterized by a large amount of prehistoric lithic debris and lesser amounts of nineteenth century artifacts and brick fragments (Figure 21). This stratum represents the boundary between deposits originating from the Native American occupation and the beginning of the historic occupation. It is likely that Stratum 5 predates the construction of the washhouse and it is likely associated with the construction, occupation, and demolition of the detached kitchen during the early to late nineteenth century located adjacent to the washhouse.

A total of 4,894 artifacts was recovered from Stratum 5. Most were prehistoric (50.4%) (Table 15). The majority of the historic period artifacts (n=2,426) were assigned to the architecture and kitchen functional groups comprising 43.7 and 38.9 percent of the historic artifact assemblage respectively. Other functional groups included activities, arms, clothing, entertainment, furniture, miscellaneous, and personal (Table 15).

The historic period artifacts date primarily from the early to late nineteenth century. They include a variety of nineteenth century ceramic sherds (Table 16). A mean artifact date of 1853 and a T.P.Q. of 1842 was calculated from diagnostic artifacts with reliable beginning and ending manufacturing dates (Table 17). These dates suggest that the historic artifacts recovered from Stratum 5 date to the mid-to late nineteenth century and were deposited sometime after 1842, which coincides with the dates for the construction, use, and demolition of the detached kitchen. However, the presence of wire nails (1870-present) indicates that the deposition of at least some portions of Stratum 5 could have taken place after the 1870s. Stratum 5 represents the earliest historic period deposit at the washhouse

Stratum 6 (Prehistoric Layer)

Stratum 6 was an unexcavated light brown sandy loam that was characterized by inclusions of chert flakes and a lack of historic period artifacts (Figure 20). This layer represents the intact remains of the prehistoric occupation present at the site. The large amount of prehistoric artifacts (n=5,569) (Table 12) recovered from all strata identified at the washhouse, indicates that a significant portion of the prehistoric deposits have been disturbed by historic period activity at the site. Due to the logistical constraints, Stratum 6 was not excavated.

Table 17. Mean Artifact Date for Stratum 5.

Artifact	Date Range	Mean	T.P.Q.	*N=	Reference
Ceramics					
Pearlware-transfer printed	1795-1830	1812	1795	2	Smith 1983
Pearlware-undecorated	1780-1830	1805	1780	2	South 1977
Whiteware-banded	1830-1870	1850	1830	8	Smith 1983
Whiteware-flow	1830-1860	1845	1830	1	Price 1979
Whiteware-hand painted	1830-1870	1850	1830	13	Price 1979
Whiteware-mocha	1830-1870	1850	1830	1	Smith 1983
Whiteware-pattern molded	1830-1890	1860	1830	1	Smith 1983
Whiteware-scalloped imp. curved lines	1802-1832	1817	1802	1	Miller 1989
Whiteware-sponge	1830-1870	1850	1830	6	Smith 1983
Whiteware-transfer printed	1830-1860	1845	1830	80	Price 1979
Whiteware-undecorated	1830-1890	1860	1830	85	Smith 1983
White Granite-all decorations	1842-1930	1886	1842	11	Miller 2000
Total	**1795-1930**	**1853**	**1842**	**211**	
Glass					
Pontil	1840-1880	1860	1840	1	Newman 1970
Combined Total	**1795-1930**	**1853**	**1842**	**212**	
*The minimum number of vessels were used to calculate the mean dates.					

Hearth Area

Stratigraphy

The Hearth Area is roughly defined as the area immediately around the brick hearth and brick pavement located in the northwest corner of the washhouse excavation area. It extends from the N1007 line to the N1012 line and from the E973 line to the E980 line on the Riverside grid system (Figure 20). It is adjacent to the detached kitchen and contains deposits associated with both the detached kitchen and washhouse. The stratigraphic profile of the Hearth Area consisted of six strata (Table 18) (Figure 22). They consisted of an 8 to 10 cm thick dark brown silt loam topsoil (Stratum 2), a 5 to 20 cm thick brown silt loam with brick inclusions (Stratum 7), a 5 to 15 cm thick mottled tan and brown ashy silt loam with brick, charcoal, mortar, and rust inclusions (Stratum 8), a 3 to 7 cm thick light brown silty clay loam with brick inclusions (Stratum 4), and a light brown silty clay loam prehistoric/historic interface layer (Stratum 5). The interface between Stratum 7 and 8 was combined in some locations and was designated separately as Stratum 9. Excavations in the Hearth Area were halted at the prehistoric layer (Stratum 6).

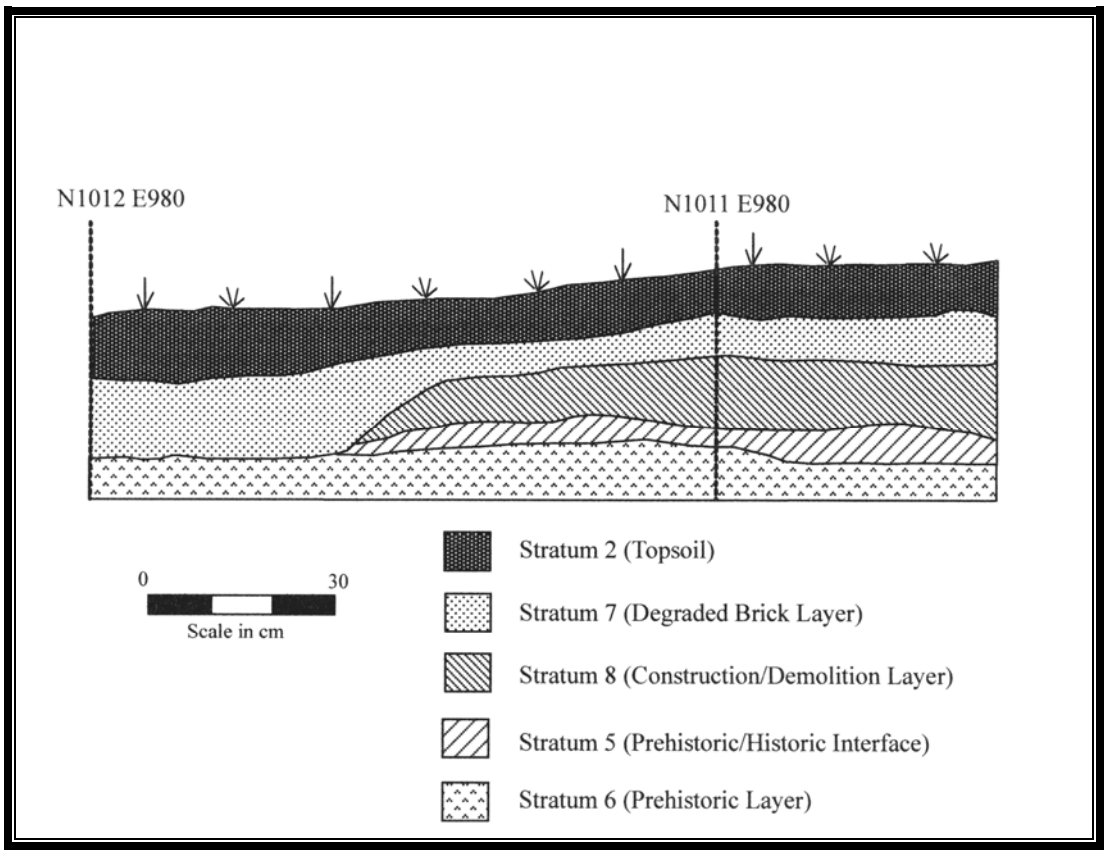

Figure 22. Soil Profile in the Hearth Area.

Table 18. Order of Stratigraphic Sequence in the Hearth Area.

Stratum	Name	Description
1	Backfill	Mottled brown silty clay loam
2	Topsoil	Dark brown silt loam
7	Degraded Brick Layer	Dark brown silt loam with brick, associated w/kitchen
9	Stratum 7 and 8 Interface	Mixed soil from Stratum 6 and 10
8	Construction/Demolition Layer	Mottled ashy fill associated with kitchen
5	Prehistoric/Historic Interface	Light brown sandy loam-increased prehistoric artifacts
6	Prehistoric Layer	Light brown sandy loam-exclusively prehistoric artifacts

Strata 2, 5, and 6 were discussed previously in the general stratigraphy section and they are not described here. However, other strata identified specifically in the Hearth Area (Strata 7, 8, and 9) are discussed below.

Stratum 7 (Degraded Brick Layer)

Stratum 7 was a degraded brick layer associated with the detached kitchen located adjacent to the area. This stratum was an extensive layer identified throughout the entire detached kitchen area that extends into the washhouse area (Stottman and Watts-Roy 2000). It was denoted as Stratum 3 (M6) in the detached kitchen report (Stottman and Watts-Roy 2000). A total of 1, 077 artifacts was recovered from Stratum 7 in the Hearth Area (Table 19). Most were assigned to the architecture (54%) and kitchen (23.4%) functional groups. Other functional groups represented included the activities, arms, clothing, entertainment, furniture, miscellaneous, and personal groups (Table 19). Faunal remains (n=45) and prehistoric artifacts (n=123) also were recovered from Stratum 7.

The large amount of architecture and the significant presence of kitchen artifacts recovered from Stratum 7 is indicative of a domestic outbuilding, like the detached kitchen (Stottman and Watts-Roy 2000). A wide variety of ceramics were recovered from Stratum 7, consisting mostly of mid-to late nineteenth century dinnerwares, such as whiteware, white granite, and porcelain (Table 20). Utilitarian ceramics including stonewares also were recovered and were likely used in conjunction with the kitchen.

Most of the diagnostic artifacts found in Stratum 7 were ceramics, thus they provide the best date ranges for mean dating (Table 21). The exceptions are two fragments of an applied tooled glass bottle lip (1840-1913). These artifacts were used to calculate a mean artifact date for Stratum 7. A mean date of 1864 was calculated, which was the mean age of the ceramics and diagnostic glass. The T.P.Q. for Stratum 7 was 1842, which indicates that the deposit was likely formed sometime after that date. Other diagnostic artifacts, such as wire nails (1870-present) and amethyst (1870-1914), and clear (1875-present) colored container glass indicated that the stratum was deposited later in the nineteenth century. These artifacts are similar to those recovered from Stratum 3 (M6) during the detached kitchen excavations (Stottman and Watts-Roy 2000). The presence of some modern artifacts like plastic buttons (ca. 1940s) and light bulb fragments (1895-present) may be contamination from the topsoil (Stratum 2) overlying Stratum 7.

Based on the recovered artifacts, Stratum 7 represents the use and demolition of the detached kitchen from ca. 1840 to ca. 1870s. While it is not necessarily a deposit associated with the washhouse, Stratum 7 is important for helping establish chronological relationship between the detached kitchen and the washhouse. The strata documented in the Hearth Area demonstrate that the use of the area in association with the washhouse took place after the construction, use, and demolition of the detached kitchen.

Table 19. Artifacts Recovered from Strata 7, 8, and 9.

Functional Group/ Artifacts	Stratum		
	7	**8**	**9**
Activities			
Bolt/nut	0	1	0
Hardware	1	0	0
Horseshoe	1	0	0
Pencil	1	0	0
Washer	0	2	0
Total	**3**	**3**	**3**
Architecture			
Nail, Machine Cut, Late	45	492	359
Nail, Unid.	259	206	183
Nail, Wire	23	50	88
Window	251	489	591
Total	**578**	**1,237**	**1,221**
Arms			
Bullet/Shot	2	0	1
Clothing			
Bone Button	0	1	2
Bone Pin	0	1	0
Buckle/clasp	1	1	1
Ceramic Button	0	1	1
Hook and Eye	0	0	1
Metal Button	1	1	0
Needle/Straight Pin	1	6	0
Plastic Button	3	0	2
Safety pins	1	0	0
Shell Button	0	7	1
Subtotal	**7**	**18**	**8**
Entertainment			
Ceramic Doll/Doll Parts	1 (1)	2 (2)	2 (1)
Faunal			
Bone	44	202	307
Egg Shell	0	0	2
Mollusk, Mussel Shell	1	20	5
Mollusk, Shell unidentified	0	0	1
Total	**45**	**222**	**315**
Furniture			
Chamber Pot	0 (0)	1 (1)	0 (0)
Flower Pot	4 (2)	0 (0)	2 (1)
Lamp Globe	52 (2)	8 (3)	6 (1)
Light Bulb	2	0	0
Metal Lamp part	2	0	1
Metal handle	0	1	1
Subtotal	**60**	**10**	**10**

Table 19. Continued.

Functional Group/ Artifacts	Stratum		
	7	**8**	**9**
Kitchen			
Ceramic			
Bottle	0 (0)	2 (1)	0 (0)
Bowl	1 (1)	6 (2)	2 (2)
Cup	0 (0)	2 (2)	4 (4)
Plate	0 (0)	20 (12)	6 (3)
Storage Jar/Crock	1 (1)	5 (4)	7 (3)
Unidentified	91 (44)	258 (121)	258 (130)
Glass			
Bottle, Condiment	0 (0)	0 (0)	1 (1)
Bottle, Unid.	16 (13)	19 (11)	43 (9)
Dish	0 (0)	0 (0)	1 (1)
Jar, Unidentified	0 (0)	0 (0)	1 (1)
Lid-Liner	6 (3)	0 (0)	4 (3)
Unidentified	129 (18)	110 (38)	84 (34)
Metal			
Cap/Lid	7	0	6
Knife	1	0	0
Total	252	**384**	**417**
Miscellaneous			
Unidentified-metal	5	14	7
Personal			
Bone Jewelry	0	1	0
Ceramic Smoking Pipe	1	0	1
Metal Key	0	0	1
Metal, Gold Wedding Ring	0	1	0
Total	**1**	**2**	**2**
Prehistoric			
Biface	0	1	0
Ceramic Unidentified	1	0	0
Fire Cracked Rock	3	5	9
Flake, Unidentified	119	179	339
Flake, Utilized	0	5	4
Groundstone Tool-unidentified	0	1	0
Projectile Point	0	2	2
Scraper	0	0	1
Total	**123**	**193**	**355**
Total	**1,077**	**2,123**	**2,338**

Table 20. Ceramics Recovered from Strata 7, 8, and 9.

Ceramic Type/ Decoration	Stratum		
	7	8	9
Buff Stoneware			
Pattern molded-lead glaze	1 (1)	0 (0)	0 (0)
Undecorated-lead glaze	0 (0)	3 (2)	1 (1)
Undecorated-salt glaze	2 (2)	4 (3)	3 (2)
Undecorated-slip glaze	1 (1)	1 (1)	1 (1)
Undecorated-unidentified	0 (0)	0 (0)	0 (0)
Undecorated-unglazed	0 (0)	7 (1)	1 (1)
Gray Stoneware			
Undecorated-lead glaze	1 (1)	0 (0)	6 (3)
Undecorated-salt glaze	4 (1)	10 (7)	3 (2)
Undecorated-slip glaze	0 (0)	0 (0)	2 (2)
Undecorated-unglazed	0 (0)	1 (1)	0 (0)
Undecorated-unidentified	0 (0)	0 (0)	1 (1)
Pearlware			
Gilted	0 (0)	0 (0)	2 (1)
Pattern molded	0 (0)	0 (0)	1 (1)
Transfer printed	0 (0)	0 (0)	2 (2)
Undecorated	0 (0)	4 (1)	26 (8)
Porcelain			
Colored glaze	0 (0)	1 (1)	0 (0)
Gilted	0 (0)	0 (0)	0 (0)
Hand painted	1 (1)	2 (2)	3 (2)
Transfer printed	1 (1)	1 (1)	0 (0)
Undecorated	5 (3)	8 (4)	6 (6)
Unidentified	0 (0)	0 (0)	0 (0)
Redware			
Undecorated-lead glaze	0 (0)	4 (2)	1 (1)
Undecorated-slip glaze	0 (0)	2 (2)	4 (4)
Undecorated-unidentified	0 (0)	0 (0)	1 (1)
Rough Porcelain			
Applique	0 (0)	0 (0)	1 (1)
Colored glaze	0 (0)	1 (1)	0 (0)
Hand painted	0 (0)	8 (5)	3 (3)
Sponged	0 (0)	1 (1)	0 (0)
Transfer printed	0 (0)	4 (3)	3 (2)
Undecorated	6 (4)	5 (3)	12 (9)
Terra Cotta			
Unglazed	5 (3)	0 (0)	2 (1)
White Granite			
Colored glaze	0 (0)	1 (1)	0 (0)
Hand painted	0 (0)	0 (0)	5 (2)
Transfer printed	0 (0)	0 (0)	1 (1)
Transfer printed and relief	0 (0)	0 (0)	1 (1)
Undecorated	12 (7)	16 (7)	6 (5)

Table 20. Continued.

Ceramic Type/ Decoration	Stratum 7	Stratum 8	Stratum 9
Whiteware			
Banded	0 (0)	0 (0)	1 (1)
Banded and relief	0 (0)	1 (1)	0 (0)
Edge	1 (1)	2 (2)	2 (1)
Flowed	0 (0)	0 (0)	1 (1)
Hand painted	0 (0)	2 (2)	3 (3)
Impressed	0 (0)	1 (1)	0 (0)
Pattern molded	0 (0)	5 (2)	0 (0)
Sponged	0 (0)	1 (1)	3 (3)
Transfer Printed	6 (6)	41 (28)	45 (25)
Transfer Printed and hand painted	0 (0)	0 (0)	2 (1)
Transfer Printed and relief	1 (1)	0 (0)	0 (0)
Undecorated	33 (9)	105 (36)	64 (20)
Unidentified	3 (1)	0 (0)	0 (0)
Yellow ware			
Banded	0 (0)	0 (0)	2 (1)
Rockingham	0 (0)	0 (0)	1 (1)
Undecorated	2 (2)	3 (3)	12 (7)
Undecorated unglazed	0 (0)	1 (1)	0 (0)
Unidentified			
Banded	0 (0)	3 (2)	0 (0)
Colored glaze	0 (0)	1 (1)	0 (0)
Hand painted	0 (0)	3 (2)	0 (0)
Sponged	1 (1)	0 (0)	0 (0)
Transfer printed	2 (2)	2 (2)	2 (2)
Undecorated	0 (0)	25 (8)	3 (3)
Unidentified	11 (2)	17 (5)	44 (14)
Total	**99 (50)**	**297 (146)**	**283 (147)**

Table 21. Mean Artifact Dating for Stratum 7.

Artifact	Date Range	Mean	T.P.Q.	*Count	Reference
Ceramics					
Whiteware-unscalloped impressed rim	1841-1857	1849	1841	1	Miller 2000
Whiteware-transfer printed	1830-1860	1845	1830	7	Price 1979
Whiteware-undecorated	1830-1890	1860	1830	9	Smith 1983
White Granite-all decoration	1842-1930	1886	1842	7	Miller 2000
Total	**1830-1930**	**1863**	**1842**	**24**	
Glass					
Applied tooled lip	1840-1913	1876.5	1840	2	Newman 1970
Combined Total	**1830-1930**	**1864**	**1842**	**26**	
*The minimum number of vessels was used to calculate the mean date.					

Stratum 8 (Construction/Demolition Fill)

Stratum 8 is a mottled ashy fill with extensive inclusions of charcoal, mortar, and brick. It was located underlying Stratum 2 (topsoil) and a brick pavement (Feature 2). Stratum 7 (degraded brick layer) overlays and cuts into a portion of Stratum 8 (Figures 22 and 23).

A total of 2,123 artifacts was recovered from Stratum 8. Most were assigned to the architecture and kitchen functional groups accounting for 58 percent and 18 percent of the Stratum 8 artifact assemblage, respectively (Table 19). Other functional groups represented included activities, arms, clothing, entertainment, furniture, miscellaneous, and personal groups (Table 19). Faunal remains, including bone and shell (n=222), also were recovered. A large amount of prehistoric artifacts (n=193) were found in Stratum 8 as well, indicating that the creation of the strata had disturbed some prehistoric deposits.

The large amount of architecture artifacts recovered from Stratum 8 indicates that is was likely associated with the construction or demolition of a building. Although the kitchen artifacts constituted a rather small percentage of the Stratum 8 artifact assemblage, they are still a strong indication of a domestic outbuilding. The kitchen group artifacts were largely comprised of ceramics and container glass. Ceramics included primarily mid-to late nineteenth century tablewares, such as whiteware, white granite, and porcelain (Table 20). Utilitarian wares such as stonewares, redware, and yellow ware, also were present.

Most of the diagnostic artifacts from Stratum 8 were ceramics, such as pearlware (1780-1830), whiteware (1830-1890), and white granite (1842-1942) (Table 22). Two glass bottle fragments that exhibited a pontil-marked base (1840-1880) also were found. A mean artifact date of 1856 was calculated for Stratum 8. A T.P.Q. of 1842 indicates that Stratum 8 was deposited sometime after this date. Other diagnostic artifacts, such as wire nails (1870-present) and brown (1860-present) and clear (1875-present) container glass, are more indicative of the late 1800s. It appears that Stratum 8 was deposited sometime in the late 1800s and was similar in age and deposition to Stratum 7.

Although Stratum 8 was only found in the Hearth Area of the washhouse, it does not appear to be directly associated with the washhouse. Based on the dates established for Stratum 8 it is likely that it was associated with the detached kitchen and predates the washhouse. The stratigraphic relationship of Stratum 7 to Stratum 8 indicates that Stratum 8 likely represents a remnant of intact detached kitchen deposits that survived the demolition of the structure represented by Stratum 7. Thus, Stratum 8 probably represents deposits associated with the detached kitchen prior to its demolition from ca. 1840 to ca. 1870s. Based on the large percentage of architecture artifacts, such as nails and window glass is most likely that Stratum 8 represents an earlier demolition associated with the detached kitchen, perhaps associated with repairs or alterations to the building. Such modifications to the kitchen probably took place when the Moremen family arrived at Riverside in 1860 (Stottman and Watts-Roy 2000).

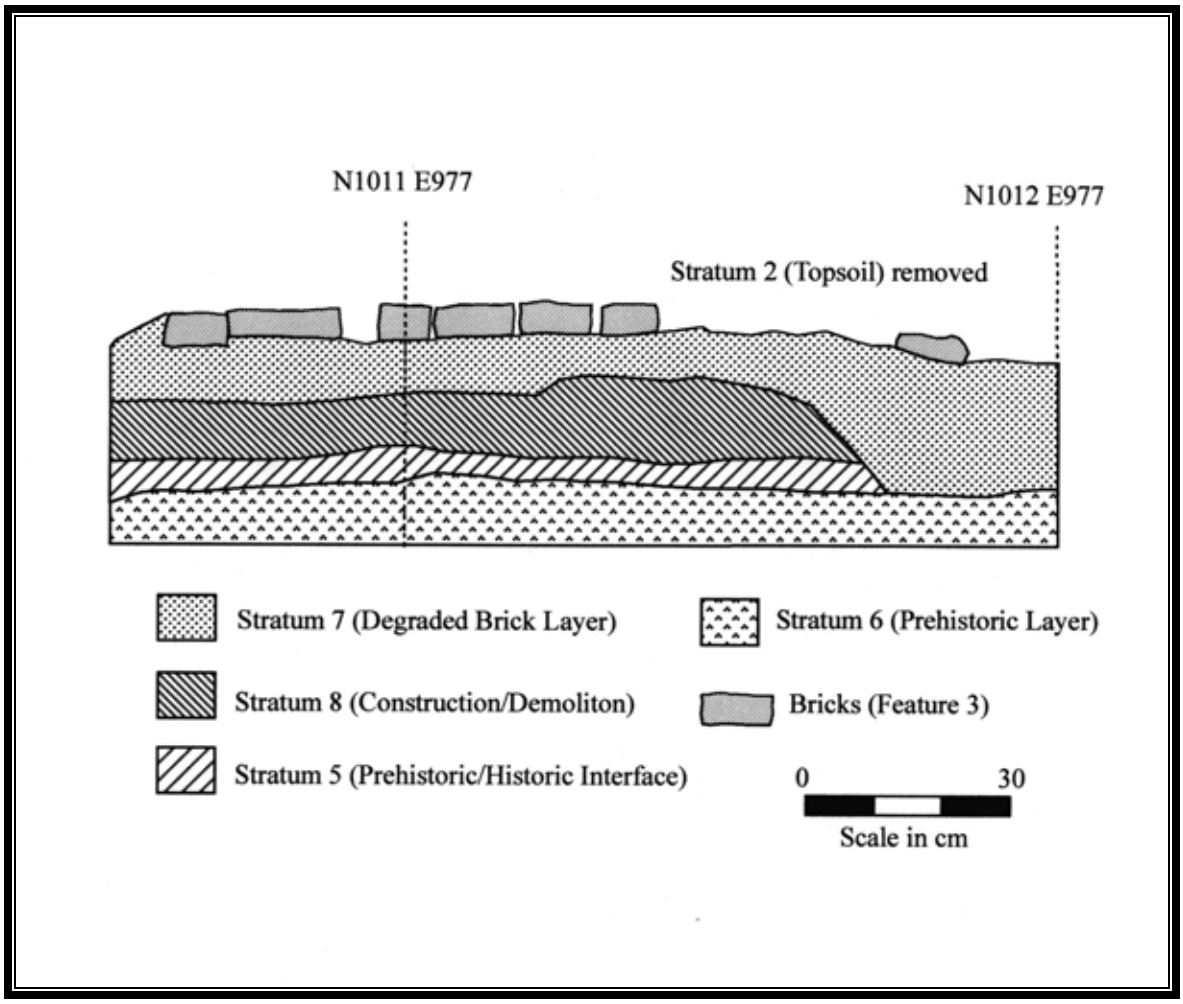

Figure 23. Soil Profile in Hearth Area with Bricks from Feature 3.

Table 22. Mean Artifact Dating for Stratum 8.

Artifact	Date Range	Mean	T.P.Q.	*Count	Reference
Ceramics					
Pearlware-undecorated	1780-1830	1805	1780	1	South 1977
Whiteware-hand painted	1830-1870	1850	1830	2	Price 1979
Whiteware-scalloped imp. curved lines	1802-1832	1817	1802	1	Miller 1989
Whiteware-scalloped imp. rim	1841-1857	1849	1841	1	Miller 1989
Whiteware-pattern molded	1830-1890	1860	1830	2	Smith 1983
Whiteware-sponged	1830-1870	1850	1830	1	Smith 1983
Whiteware-transfer printed	1830-1860	1845	1830	28	Price 1979
Whiteware-undecorated	1830-1890	1860	1830	36	Smith 1983
White Granite-all decorations	1842-1930	1886	1842	8	Miller 2000
Total	**1780-1930**	**1852**	**1842**	**80**	
Glass					
Pontil	1840-1880	1860	1840	2	Newman 1970
Combined Total	**1780-1930**	**1856**	**1842**	**82**	
* The minimum number of vessels was used to calculate the mean date.					

Stratum 9 (Strata 7 and 8 Interface)

Stratum 9 represents the interface between Stratum 7 and Stratum 8 where portions of the two strata were excavated as one context. Essentially, these two strata were mixed together during the excavation of some units where Stratum 7 cuts into Stratum 8.

A total of 2,338 artifacts was recovered from Stratum 9. The distribution of artifact functional groups was similar to that of Strata 7 and 8, with the majority of the artifacts being assigned to the architecture (52 percent) and kitchen (18 percent) groups (Table 19). Other functional groups represented included activities, arms, clothing, entertainment, furniture, miscellaneous, and personal groups (Table 19). A significant amount of faunal remains (n=315) and prehistoric artifacts (n=355) also were recovered from this stratum.

All of the diagnostic artifacts recovered from Stratum 9 were ceramics. They were used to calculate a mean artifact date of 1849 and a T.P.Q. of 1842. Based on these dates, it appears that this stratum was slightly earlier than both Strata 7 and 8 (Table 23). However, the lack of diagnostic glass used in the mean date and T.P.Q. can skew the dates to be earlier. Also, there was a larger presence of early ceramics, such as pearlware (1780-1830) in Stratum 9. It is possible that perhaps some of the earlier artifacts originated from Stratum 5, which could have been mixed with Stratum 9 during excavation. The elevated amounts of prehistoric artifacts recovered from Stratum 9, compared to Strata 7 and 8, could also be evidence of contamination from Stratum 5, a prehistoric and historic period interface underlying all of these strata that represents the earliest historic period deposits at Riverside.

Table 23. Mean Artifact Dates for Stratum 9.

Artifact	Date Range	Mean	T.P.Q.	*Count	Reference
<u>Ceramics</u>					
Pearlware-pattern molded	1780-1830	1805	1780	1	South 1977
Pearlware-transfer printed	1795-1830	1812	1795	2	
Pearlware-undecorated	1780-1830	1805	1780	8	South 1977
Whiteware-banded	1830-1870	1850	1830	1	Smith 1983
Whiteware-flowed	1830-1865	1847.5	1830	1	Price 1979
Whiteware-hand painted	1830-1870	1850	1830	3	Smith 1983
Whiteware-sponged	1830-1870	1850	1830	3	Smith 1983
Whiteware-transfer printed	1830-1860	1845	1830	26	Price 1979
Whiteware-undecorated	1830-1890	1860	1830	20	Smith 1983
White Granite-all decorations	1842-1930	1886	1842	9	Miller 2000
Total	**1780-1930**	**1849**	**1842**	**74**	
* The minimum number of vessels was used to calculate the mean date.					

Features

A total of seven features was identified in the Hearth Area (Figure 24). They include a brick hearth (Feature 1), a post hole for a kettle crane (Feature 2), a brick pavement (Feature 3), a post hole and small trench possibly associated with a gate (Feature 4), a post hole and possible brick pier (Feature 5), a small unidentified post hole (Feature 6), and a small possible brick pier (Feature 7).

Feature 1 (Brick Hearth)

Feature 1 was a rectangular shaped hearth made of handmade brick bonded with lime mortar (Figures 24 and 25). The brick used in its construction measured 21.5 x 10.2 x 5.7 cm (8.5 x 4 x 2.25 inches), which was the standard brick size in 1886 and frequently used by the Moremen family (Stottman and Watts-Roy 2000). The hearth measured 2.7 m (9 feet) east/west and 1.3 m (4.25 feet) north/south. It consisted of a firebox and a standing pad. The firebox measured 2.45 m (8 feet) east/west and 0.65 m (2 feet) north/south. At the east end of the hearth, a brick pad measuring 0.95 m (3 feet) east/west and 1.1 m (3.5 feet) north/south. The hearth extended to a depth of 25 cm below the ground surface cutting through Strata 7, 8, and 5. It was constructed on Stratum 6 (the prehistoric occupation layer).

A total of 367 artifacts was recovered from the excavation of deposits associated with Feature 1 (Table 24). Two deposits were associated with Feature 1, including a 12 to 15 cm thick black loam with cinder, ash, coal, brick, and mortar inclusions located inside of the firebox and a 10 cm deposit of the same description along the outside of the firebox at its southeast corner. Both were very similar and likely were part of same deposit. The deposit outside of the firebox may have been a spill over of the fill located inside of the firebox. A total of 161 artifacts was recovered from inside of the firebox. Most were assigned to the architecture (52 percent) and kitchen (12 percent) functional groups. Other functional groups represented include clothing, furniture, miscellaneous, and personal groups (Table 24). A significant portion of the artifacts recovered from the inside of the firebox consisted of prehistoric artifacts (n=32). Faunal remains also were recovered from these deposits (n=7).

A total of 206 artifacts were recovered from outside of the firebox. Like those recovered from inside the firebox, most of the artifacts were assigned to the architecture (66 percent) and kitchen (23 percent) functional groups. Other functional groups represented in the outside fill include activities, furniture, and miscellaneous groups (Table 29). Prehistoric artifacts (n=7) and faunal remains (n=4) were minimally represented.

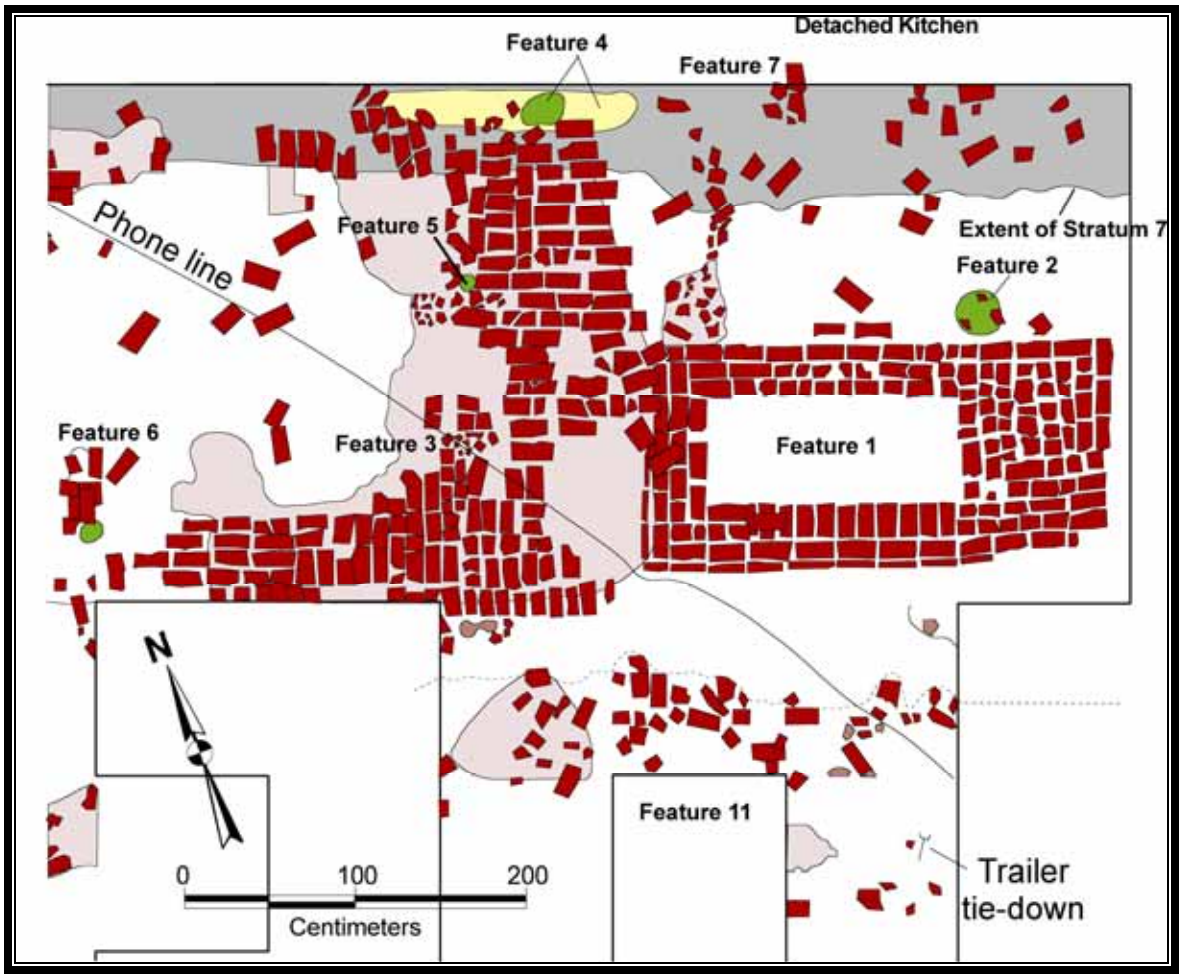

Figure 24. Planview of the Hearth Area and a Portion of the Washhouse South Area.

Both deposits contained a mix of nineteenth and early twentieth century artifacts such as, whiteware (1830-1890), white granite (1845-1930), machine cut nails (1800-1880), wire nails (1870-present), and clear container glass (1875-present). The outside deposits also included various types of plastic (post 1900). These diagnostic artifacts produced a T.P.Q. date of at least 1875 or 1880 based on the wire nails and clear bottle glass. The plastic pushes the T.P.Q. into the early 1900s. Although both deposits contained similar diagnostic artifacts, the inside fill had a wider diversity of ceramic decorations and more examples of nineteenth century ceramics (Table 24). The inside deposits also contained substantial more prehistoric artifacts. This dichotomy between the two deposits was likely due to mixing of Stratum 5 (Historic/Prehistoric Interface) deposits within the feature fill during the archaeological excavation.

Figure 25. Feature 1 (Brick Hearth).

Based on the dating of the bricks, stratigraphic relationships, and the diagnostic artifacts, it is likely that the brick hearth was constructed sometime in the late nineteenth century, probably post 1875. It was used from the late nineteenth century into the early to mid twentieth century.

Feature 2 (Kettle Crane Post Hole)

Feature 2 was a circular shaped posthole situated adjacent to and on the north side of the brick hearth (Figure 24). The fill associated with Feature 2 was identified as a dark brown silty clay loam with brick and mortar inclusions that extend into Stratum 6 (Prehistoric Layer). The posthole had a diameter of 25.4 cm (10 inches) and extended to a depth of 20 cm (7.8 inches) from the point of discovery. It is likely that the posthole originated in Stratum 5 (Historic/prehistoric Interface) or possibly Stratum 8 (Mottled Ashy Construction/Demolition Layer), but was not recognized during excavation until Stratum 6.

A total of 48 artifacts was recovered from Feature 2. Most were assigned to the architecture functional group (40 percent), and consisted of nails and window glass. Other functional groups represented included activities, furniture, and kitchen groups (Table 24). Faunal remains (n=2) and prehistoric (n=19) artifacts also were recovered.

Table 24. Artifacts from Feature 1 and Feature 2.

Functional Group/Artifacts	Inside Feat. 1	Outside Feat. 1	Feature 2
Activities			
Metal Washer	0	5	0
Metal Wire	0	1	0
Slate writing board fragment	0	0	1
Total	**0**	**6**	**1**
Architecture			
Window glass	13	32	7
Nail, Machine Cut, Late	48	40	7
Nail, Unid.	0	10	5
Nail, Wire	23	55	0
Total	**84**	**137**	**19**
Clothing			
Ceramic Button	1	0	0
Button, Bone	1	0	0
Metal Button	2	0	0
Total	**3**	**0**	**0**
Faunal			
Bone	6	4	2
Mollusk, Mussel Shell	1	0	0
Total	**7**	**4**	**2**
Furniture			
Flowerpot, terra cotta unglazed	0	0	1 (1)
Lamp Globe	0	2	0
Metal Handle	1	0	0
Total	**1**	**2**	**1**
Kitchen			
Ceramic			
Storage Jar, Buff stoneware-undecorated	1 (1)	0 (0)	0 (0)
Unidentified, Buff stoneware-undecorated	0 (0)	1 (1)	0 (0)
Unidentified, Flowed Porcelain	0 (0)	1 (1)	0 (0)
Unidentified, Flowed Rough Porcelain	0 (0)	4 (2)	0 (0)
Unidentified, Undecorated porcelain	1 (1)	0 (0)	0 (0)
Unidentified, Transfer print rough porcelain	1 (1)	0 (0)	0 (0)
Unidentified, Undecorated Unidentified	3 (1)	1 (1)	0 (0)
Unidentified, Banded White Granite	0 (0)	1 (1)	0 (0)
Unidentified, Undecorated White Granite	2 (1)	1 (1)	0 (0)
Unidentified, colored glaze whiteware	1 (1)	0 (0)	0 (0)
Unidentified, Undecorated Whiteware	5 (5)	6 (4)	0 (0)
Unidentified, Sponged Whiteware	1 (1)	0 (0)	0 (0)
Unidentified, Transfer Print Whiteware	4 (4)	1 (1)	1 (1)
Unidentified, Unidentified Unidentified	2 (2)	0 (0)	0 (0)
Glass			
Bottle, Unidentified Embossed	0 (0)	1 (1)	0 (0)
Bottle, Unidentified Pattern Molded	0 (0)	1 (1)	0 (0)
Bottle, Unidentified Undecorated	0 (0)	6 (2)	4 (1)
Jar, Unidentified Undecorated	0 (0)	1 (1)	1 (1)
Unidentified, Pattern Molded	1 (1)	1 (1)	0 (0)
Unidentified, Undecorated	6 (3)	22 (9)	0 (0)
Total	**29 (23)**	**48 (27)**	**6 (3)**

Table 24. Continued.

Functional Group/Artifacts	Inside	Outside	Feature 2
Miscellaneous			
Metal unidentified	4	0	0
Unidentified plastic	0	2	0
Total	**4**	**2**	**0**
Personal			
Bead, clear glass	1	0	0
Prehistoric			
Core	1	0	0
Fire Cracked Rock	0	2	1
Flake, unidentified	31	5	18
Total	**32**	**7**	**19**
Total	**161**	**206**	**48**

The artifacts recovered from Feature 2 date primarily from the mid-to late nineteenth century. The diagnostic artifacts included whiteware (1830-1890) and machine cut nails (1800-1880). Based on its stratigraphic position and the artifacts recovered, it is likely that Feature 2 is contemporaneous with Feature 1 (Brick Hearth) and served as a post hole for a kettle crane that was used to lift large kettles to and from the hearth.

Feature 3 (Brick Pavement)

Feature 3 was a dry laid brick pavement that covers a portion of the area west of the brick hearth (Feature 1) (Figure 24). Feature 3 was found within Stratum 2 (topsoil) just beneath the sod. It overlaid Stratum 7 (degraded brick layer associated with the demolition of the detached kitchen) and thus, post dates the formation of that stratum ca. 1870s (Figure 23). The pavement is largely comprised of whole and fragmented brick of various sizes and types. The brick types documented included construction brick and firebrick. The length of the bricks ranged in size from 19.1 to 21 cm (7.5 to 8.25 inches). The width ranged from 8.9 to 10.2 cm (3.5 to 4 inches). And the height of the bricks ranged in size from 4.4 to 6.3 cm (1.75 to 2.5 inches). These size ranges encompass the brick sizes that were typically used by both the Farnsley and the Moremen family (Stottman and Watts-Roy 2000). The presence of both Farnsley and Moremen bricks indicates that Feature 3 was most likely constructed from salvaged or recycled brick. Many of the bricks were severely degraded and were only distinguished by an orange residue within the soil. The pavement is largely disarticulated and shows little in the way of bonding pattern, although it is likely that a stretcher bond was the intent. Feature 3 was probably an "L" shaped brick path that was approximately 1.1 m (3.5 feet) wide and 6.2 m (20.5 feet) long.

A total of 314 artifacts was recovered from the soil associated with Feature 3. Most were assigned to the architecture (64 percent) and kitchen (22 percent) functional groups (Table 25). Other functional groups represented included clothing, furniture, and miscellaneous groups (Table 25). Faunal remains (n=23) and prehistoric artifacts (n=14) also were recovered.

The artifacts recovered from Feature 3 date from the mid to late nineteenth and early to mid-twentieth century artifacts. The diagnostic artifacts include whiteware (1830-1890), white granite (1842-1930), machine cut nails (1800-1880), wire nails (1870-present), clear bottle glass (1875-present), various types of plastic (post-1900), and electrical hardware (post-1880s). Based on the stratigraphic relationships, the diagnostic artifacts, and the brick sizes, it is likely that Feature 3 was constructed in the late nineteenth to early twentieth century during the Moremen family occupation at Riverside.

Feature 4 (Posthole and Trench)

Feature 4 was a posthole with a small shallow trench located along the north edge of Feature 3 (Brick Pavement) (Figure 24). The posthole was circular in shape with a diameter of 25 cm (10 inches) (Figure 26). It extended to a depth of 40 cm 15.7 inches below the surface of the feature. The posthole fill was a dark brown silt loam that became visible only after Stratum 8 (Construction/Demolition Layer) was removed.

A total of 157 artifacts was recovered from the Feature 4 posthole. Most were prehistoric artifacts (62 percent), consisting primarily of unidentified chert flakes (Table 25). The historic period artifacts were assigned to the architecture (n=30) and kitchen (n=11) functional groups (Table 24). Faunal remains (n=19) also were found in the posthole fill. The artifacts recovered from the Feature 4 posthole date from the mid to late nineteenth century. The diagnostic artifacts included whiteware (1830-1890), white granite (1842-1930), and machine cut nails (1800-1880). Based on the presence of white granite ceramics, the Feature 4 had a T.P.Q. of 1842, which indicates that the deposit had been formed sometime after that date.

The posthole intruded into a shallow trench feature that was 1.5 m (5 feet) in length and 20.3 cm (8 inches) wide (Figure 24). The trench fill was a mottled yellow and dark brown sandy clay loam, which extended to a depth of 5 cm (2 inches) from the surface of the feature. The trench feature was discovered at the removal of Stratum 8 (Construction/Demolition Layer), which indicates that it predates the demolition of a portion of the detached kitchen.

A total of 148 artifacts was recovered from the Feature 4 trench fill. Most were prehistoric artifacts (86 percent), which consisted primarily of unidentified chert flakes (Table 24). The historic period artifacts were assigned to the architecture (n=14) and kitchen (n=2) functional groups respectively (Table 30). Faunal remains (n=2) also were found in the trench fill. Only two diagnostic artifacts were recovered from the Feature 4 trench fill. They were yellow ware sherds (1830-1940). This ceramic type dates primarily to the mid-to late nineteenth century, but was produced into the mid-twentieth century. However, based on the fact that the Feature 4 trench predates the posthole and Stratum 8, it is likely that the it was formed sometime in the mid-to late nineteenth century.

Table 25. Artifacts Recovered from Feature 3, 4, and 5.

Functional Group/Artifacts	F. 3	F. 4 Post	F. 4 trench	F. 5
Architecture				
Window	98	13	6	0
Nail, Machine Cut, Late	36	11	0	0
Nail, Unid.	51	6	8	0
Nail, Wire	15	0	0	1
Screw	1	0	0	0
Total	**201**	**30**	**14**	**1**
Clothing				
Shell Button	1	0	0	0
Faunal				
Bone	23	19	4	0
Furniture				
Flower pot, terra cotta unglazed	0 (0)	0 (0)	0 (0)	0 (0)
Lamp Globe glass	4 (2)	0 (0)	0 (0)	0 (0)
Electrical Hardware-metal	1 (1)	0 (0)	0 (0)	0 (0)
Total	**5 (3)**	**0 (0)**	**0 (0)**	**0 (0)**
Kitchen				
Ceramic				
Bowl, Yellow ware banded	0 (0)	1 (1)	0 (0)	0 (0)
Unidentified, Buff Stoneware clear glaze	1 (1)	0 (0)	0 (0)	0 (0)
Unidentified, Buff Stoneware unglazed	2 (2)	0 (0)	0 (0)	0 (0)
Unidentified, Buff Stoneware unidentified	1 (1)	0 (0)	0 (0)	0 (0)
Unidentified Gray Stoneware salt glazed	2 (2)	0 (0)	0 (0)	0 (0)
Unidentified Gray Stoneware unidentified	1 (1)	0 (0)	0 (0)	0 (0)
Unidentified Pearlware undecorated	0 (0)	2 (1)	0 (0)	0 (0)
Unidentified Porcelain, handpainted	1 (1)	0 (0)	0 (0)	0 (0)
Unidentified Porcelain, undecorated	2 (2)	0 (0)	0 (0)	0 (0)
Unidentified Rough Porcelain, flowed	1 (1)	0 (0)	0 (0)	0 (0)
Unidentified Rough Porcelain, undecorated	1 (1)	0 (0)	0 (0)	0 (0)
Unidentified Rough Porcelain, transfer printed	1 (1)	0 (0)	0 (0)	0 (0)
Unidentified, Unidentified undecorated	1 (1)	0 (0)	0 (0)	0 (0)
Unidentified, Unidentified unidentified	1 (1)	2 (1)	0 (0)	0 (0)
Unidentified White Granite, undecorated	3 (2)	1 (1)	0 (0)	0 (0)
Unidentified Whiteware, undecorated	15 (7)	1 (1)	0 (0)	0 (0)
Unidentified Whiteware, transfer printed	5 (4)	1 (1)	0 (0)	0 (0)
Unidentified Yellow ware, Rockingham	1 (1)	0 (0)	1 (1)	0 (0)
Unidentified Yellow ware, undecorated	0 (0)	0 (0)	1 (1)	0 (0)
Glass				
Bottle, Unidentified, Embossed	2 (2)	0 (0)	0 (0)	0 (0)
Bottle, Unidentified, Undecorated	1 (1)	3 (2)	0 (0)	0 (0)
Unidentified, Undecorated	22 (11)	0 (0)	0 (0)	0 (0)
Metal				
Cap/Lid	4 (1)	0 (0)	0 (0)	0 (0)
Total	**68 (43)**	**11 (8)**	**2 (2)**	**0 (0)**
Miscellaneous				
Unidentified synthetic	2	0	0	0
Prehistoric				
Fire Cracked Rock	1	13	23	0
Flake, unidentified	13	84	105	5
Total	**14**	**97**	**128**	**5**
Total	**314**	**157**	**148**	**6**

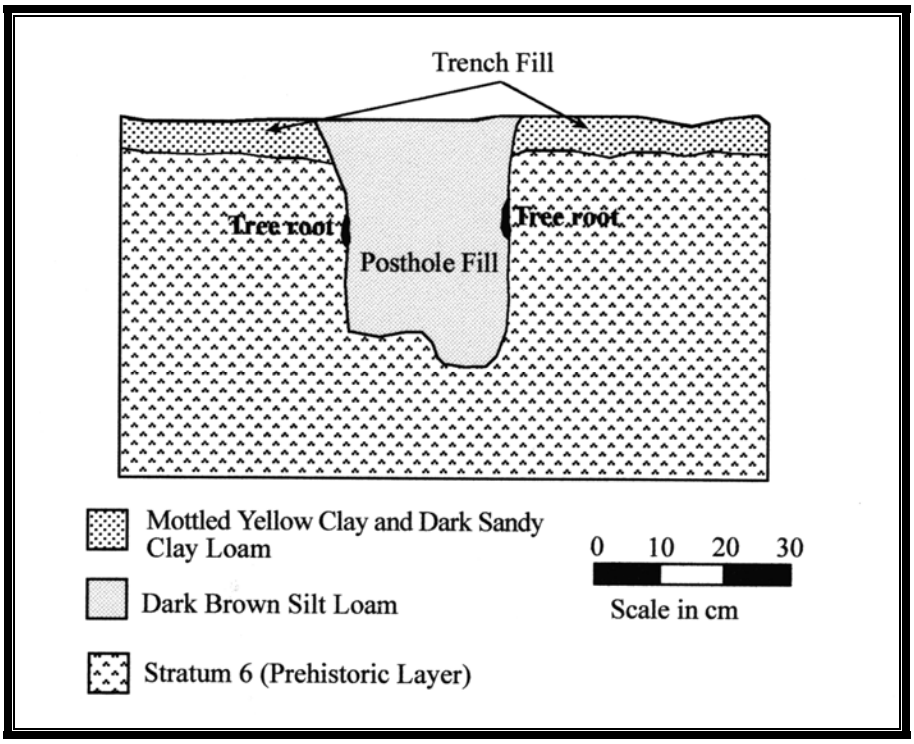

Figure 26. Soil Profile of Feature 4.

The function of Feature 4 is unknown. It is possible that the posthole represents a fence or gatepost, while the trench feature could be a dripline. However, it is most likely that Feature 4 was associated with the detached kitchen rather than the washhouse.

Feature 5 (Posthole)

Feature 5 was a small posthole located within Feature 3 (Brick Pavement) (Figure 24). It was circular in shape and had a diameter of 15.2 cm (6 inches). The posthole fill was a dark brown silt loam with mortar and brick inclusions. The posthole was discovered during the excavation of Stratum 5 (Historic/Prehistoric Interface) at depth of 38 cm below the ground surface. The posthole extended an additional 65 cm (2 feet) from the point of discovery.

A total of six artifacts was recovered from Feature 5. Most were prehistoric artifacts (n=5), consisting of chert flakes (Table 25). The only historic period artifact recovered was a wire nail (1870-present). The presence of the nail provides a T.P.Q. of 1870, suggesting that the posthole was dug sometime after that date. It is likely that Feature 5 was a small driven post whose function cannot be determined at this time.

Feature 6 (Pier and Posthole)

Feature 6 was a small posthole and pier located at the western edge of the Hearth Area and Feature 3 (Brick Pavement) (Figure 26). The pier consisted of seven whole and half bricks stacked in two courses without mortar on top of a small patch of pea gravel.

A total of 497 artifacts was recovered from the soil and gravel associated with the pier. Most were assigned to the kitchen (64 percent) and architecture (30 percent) functional groups (Table 26). Other functional groups represented included activities, arms, entertainment, and furniture groups (Table 26). Faunal remains (n=16) also were found.

The artifacts recovered from the soil associated with Feature 6 date from the mid-nineteenth to early twentieth centuries. The diagnostic artifacts include whiteware (1830-1890), white granite (1842-1930), machine cut nails (1800-1880), wire nails (1870-present), applied tooled bottle lips (1840-1913), improved tooled bottle lips (1870-1913), pontil marked bottle bases (1840-1880), brown container glass (1860-present), clear container glass (1875-present), and milk glass (1860-present). Based on the clear bottle glass, Feature 6 had a T.P.Q. date of 1875, which indicates that the deposits associated with the pier were likely formed sometime after this date.

A posthole was discovered 14 cm below the ground surface after the pier and pea gravel had been removed. The posthole was circular in shape and had a diameter of 15.2 cm (6 inches). The posthole fill was a dark brown silt loam with brick, charcoal, and wood inclusions.

A total of 10 artifacts was recovered from the Feature 6 posthole. Most were assigned to the architecture functional group (n=7) (Table 26). Other functional groups represented included the arms and kitchen group (Table 26). The diagnostic artifacts from the posthole included pearlware (1780-1830) and machine cut nails (1800-1880), which date from the early to late nineteenth century. Based on the stratigraphic relationships and the artifacts recovered, it is likely the Feature 6 posthole predates the pier. The function of Feature 6 is unknown. It may have been a support for a porch or overhang associated with either the washhouse or detached kitchen. However, it appears that both the pier and post served that same function, with one replacing the other.

Feature 7 (Pier)

Feature 7 was a small stack of whole and half bricks dry laid in four courses located along the north edge of the Hearth Area parallel to Feature 1 (Brick Hearth) that most likely served as a pier or support (Figure 24). A total of 11 artifacts was recovered from the soil associated with Feature 7. Most were assigned to the architecture (n=5) and kitchen (n=4) functional groups (Table 26). Faunal remains (n=1) and a prehistoric artifact (n=1) also were recovered. The artifacts recovered from Feature 7 date primarily from the mid-nineteenth to early twentieth centuries. The diagnostic artifacts, included wire nails (1870-present), whiteware (1830-1890), and clear container glass (1875-present). The wire nails and clear bottle glass indicate that the pier most likely dates to the early 1900s. It is unclear what the pier supported, but it was likely associated with the brick hearth.

Table 26. Artifacts Recovered from Features 6 and 7.

Functional Group/ Artifacts	Feature 6		Feature 7
	Pier	Post	Pier
Activities			
Metal Washer	**3**	**0**	**0**
Architecture			
Window	0	2	3
Nail, Machine Cut, Late	16	1	0
Nail, Unidentified	115	3	0
Nail, Wire	20	0	2
Wood, post fragment	0	1	0
Total	**151**	**7**	**5**
Arms			
Bullet	0	1	0
Shell Casing/Cartridge	1	0	0
Total	1	1	0
Entertainment			
Ceramic Marble	**1**	**0**	**0**
Faunal			
Bone	**16**	**0**	**1**
Furniture			
Flower Pot, terra cotta unglazed	1	0	0
Lamp Globe glass	1	0	0
Lamp Part metal	3	0	0
Total	**5**	**0**	**0**
Kitchen			
Ceramic			
Bowl, Rough Porcelain, Transfer Print	1 (1)	0 (0)	0 (0)
Cup, Rough Porcelain, Undecorated	1 (1)	0 (0)	0 (0)
Plate, Unidentified, Unidentified	1 (1)	0 (0)	0 (0)
Unidentified, Buff Stoneware, clear glaze	1 (1)	0 (0)	0 (0)
Unidentified, Pearlware, undecorated	0 (0)	2 (1)	0 (0)
Unidentified, Porcelain, Pattern Molded	2 (1)	0 (0)	0 (0)
Unidentified, Porcelain, Undecorated	1 (1)	0 (0)	0 (0)
Unidentified, Rough Porcelain, Undecorated	6 (3)	0 (0)	0 (0)
Unidentified, White Granite, Undecorated	3 (3)	0 (0)	0 (0)
Unidentified, Whiteware, Colored Glaze	3 (1)	0 (0)	0 (0)
Unidentified, Whiteware, Handpainted	12 (1)	0 (0)	0 (0)
Unidentified, Whiteware, Pattern Molded	2 (2)	0 (0)	0 (0)
Unidentified, Whiteware, Undecorated	20 (1)	0 (0)	2 (2)
Unidentified, Unidentified, unidentified	1 (1)	0 (0)	0 (0)
Glass			
Bottle, Unidentified, Embossed	1 (1)	0 (0)	0 (0)
Bottle, Unidentified, Undecorated	154 (9)	0 (0)	0 (0)
Jar, Unidentified, Embossed	1 (1)	0 (0)	0 (0)
Lid-Liner, Embossed	5 (2)	0 (0)	0 (0)
Unidentified, Embossed	2 (2)	0 (0)	1 (1)
Unidentified, Pattern Molded	3 (2)	0 (0)	0 (0)
Unidentified, Undecorated	97 (8)	0 (0)	1 (1)
Metal Cap/Lid	3	0	0
Total	**320 (43)**	**2 (1)**	**4 (4)**
Prehistoric			
Flake, unidentified	0	0	1
Total	**497**	**10**	**11**

Washhouse South Area

Stratigraphy

The Washhouse South Area is defined as the southern half of the washhouse area, which is situated south of the N1009 grid line (Figure 20). While much of the southern half of the Washhouse area exhibited the general stratigraphic profile previously discussed, a slightly different profile was found in the western portion of this area (Table 27). The soil profile documented in this area consisted of a 5 to 15 cm thick dark brown silt loam topsoil (Stratum 2) with coal inclusions, a 5 to 18 cm thick black silt loam coal layer (Stratum 4), a 5 to 20 cm thick light brown sandy clay loam with brick flecks and pea gravel (Stratum 10), and a light brown sandy clay loam with brick flecks that represented the prehistoric/historic interface (Stratum 5). Excavations in this particular section of the washhouse area ended at Stratum 5 (Figure 27).

Table 27. Order of Stratigraphic Sequence in the Washhouse South Area West.

Stratum	Name	Description
2	Topsoil	Dark brown silt loam
4	Coal Layer	Black silt loam with dense coal inclusions
10	Pea Gravel Layer	Light brown sandy clay loam with brick and pea gravel
5	Prehistoric/Historic Interface	Light brown sandy clay loam with brick flecks

All of these strata are discussed in the general stratigraphy section of this report, with the exception of Stratum 10, which was the only stratum unique to the western portion of the Washhouse South Area.

Stratum 10 (Pea Gravel)

Stratum 10 was a light brown sandy clay loam with brick flecks much like Stratum 5 (Historic/Prehistoric Interface), but it also contained pea gravel inclusions (Figure 27). It was situated below Stratum 4 (Coal Layer) and above Stratum 5. Stratum 10 may represent the upper portions of Stratum 5 where pea gravel had been deposited on top of the layer. The pea gravel then could have become integrated into the upper portions of Stratum 5. The pea gravel may have been deposited in association with a pea gravel path or work area near the detached kitchen (labeled as Master Context 3 in the detached kitchen report) (Stottman and Watts-Roy 2000).

A total of 1,406 artifacts was recovered from Stratum 10. Most were assigned to the architecture (37 percent) and kitchen (23 percent) (Table 28). Other functional groups represented include the activities, clothing, entertainment, furniture, and miscellaneous groups (Table 28). A substantial amount of prehistoric artifacts (n=347) and faunal remains (n=155) also were found.

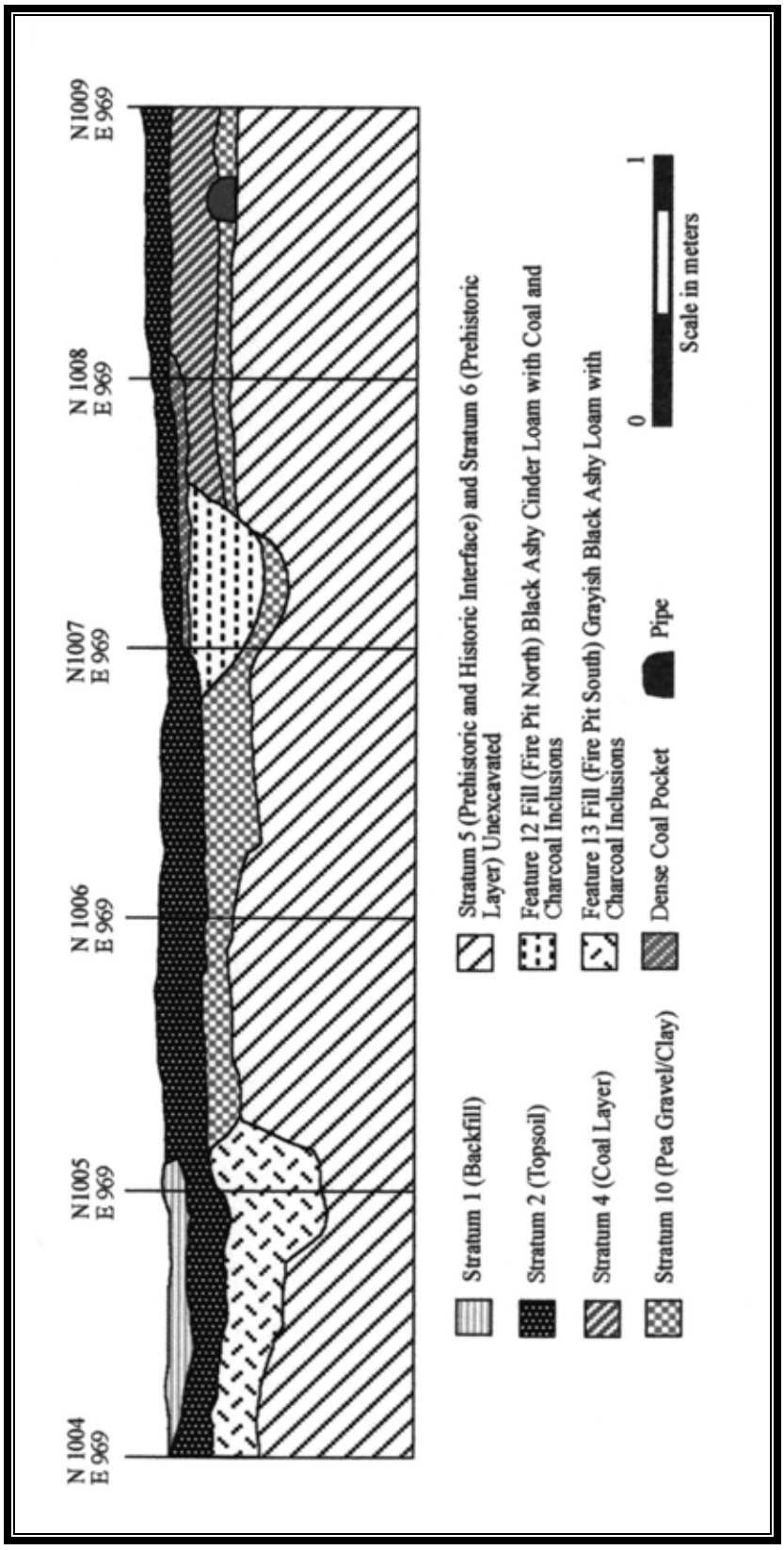

Figure 27. Soil Profile of the Washhouse South Area West and Features 12 and 13.

Table 28. Artifacts Recovered from Stratum 10.

Functional Group/ Artifacts	N=
Activities	
Metal Wire	3
Architecture	
Glass Window	52
Nail, Machine Cut, Late	186
Nail, Unid.	173
Nail, Wire	102
Vitrified Brick	2
Total	**515**
Clothing	
Metal Button	1
Total	**1**
Entertainment	
Doll/Doll Parts, Porcelain	8
Faunal	
Bone	133
Mollusk, Mussel Shell	20
Mollusk, Shell Unid	2
Total	**155**
Furniture	
Unidentified, Fixture Porcelain	1
Lamp Globe	21
Metal Door knob	1
Hinge	1
Total	**24**
Kitchen	
Ceramic	
Bowl, White Granite	1 (1)
Unidentified, Buff Stoneware	6 (6)
Unidentified, Gray Stoneware	4 (2)
Unidentified, Pearlware	4 (1)
Unidentified, Porcelain	5 (5)
Unidentified, Redware	3 (3)
Unidentified, Rough Porcelain	8 (8)
Unidentified, Whiteware	144 (61)
Unidentified, Yellow ware	8 (8)
Unidentified	13 (6)
Glass	
Bottle, Unid.	13 (7)
Lid-Liner	1 (1)
Unidentified	112 (49)
Synthetic	
Lid-Liner	1
Total	**323**
Miscellaneous	
Unidentified metal	30

Table 28. Continued.

Functional Group/ Artifacts	N=
Prehistoric	
Core	1
Fire Cracked Rock	13
Flake, secondary	4
Flake, unidentified	323
Flake, Utilized	2
Groundstone Tool, Unid.	1
Projectile Point	1
Unidentified	2
Total	**347**
Total	**1,406**

Most of the artifacts recovered from Stratum 10 date from the mid-nineteenth century to the early twentieth century. Diagnostic artifacts include mostly ceramics, such as whiteware (1830-1890), white granite (1842-1930), redware (1750-1870), and yellow ware (1830-1940) (Table 29). Glass bottle attributes, such as an improved tooled lip (1870-1913) and pontil-marked base (1840-1880) also were temporally diagnostic. These artifacts were used to calculate a mean artifact date (Table 30). The mean date for the ceramics was 1853; the mean date for the glass bottle attributes was 1873. The combined mean artifact date was 1854. A T.P.Q. of 1870 was derived from these artifacts, which indicates that Stratum 10 was deposited sometime after this date. Other diagnostic artifacts with wider date ranges, such as machine cut nails (1800-1880), wire nails (1870-present), and clear (1875-present), brown (1860-present), amethyst (1880-1914), and milk (1860-present) colored container glass, are indicative of both a late nineteenth century to early twentieth century date.

Stratum 10 represents a gravel pavement or path that was deposited sometime in the late nineteenth to early twentieth century. It was most likely deposited during the construction or use of the washhouse (ca. 1880-1920) as a path or work area. Later, after the demise of the washhouse building, the pavement was abandoned and Stratum 4 (Coal Layer) and Stratum 2 (Topsoil) accumulated over the area during the twentieth century.

Features

A total of seven features was identified in the Washhouse South Area. They include a mortared brick foundation (Feature 8), a brick and stone pier (Feature 9), a drainage system, consisting of piping and a gutter (Feature 10), a cesspool (Feature 11), two fire pits (Features 12 and 13), and an area of brick rubble (Feature 14) (Figures 27 and 28).

Table 29. Ceramics Recovered from Stratum 10.

Ceramic Type/ Decoration	N=
Buff Stoneware	
Undecorated-salt glaze	3 (3)
Undecorated-slip glaze	2 (2)
Undecorated-unidentified	1 (1)
Gray Stoneware	
Undecorated-lead glaze	3 (1)
Undecorated-salt glaze	1 (1)
Pearlware	
Undecorated	4 (1)
Porcelain	
Gilted	1 (1)
Gilted and Hand painted	1(1)
Hand painted	5 (1)
Undecorated	6 (4)
Redware	
Undecorated-slip glaze	3 (3)
Rough Porcelain	
Hand painted	2 (2)
Transfer printed	2 (2)
Undecorated	3 (3)
White Granite	
Undecorated	1 (1)
Whiteware	
Banded	1 (1)
Hand painted	1 (1)
Lustre and relief	1 (1)
Pattern molded	6 (3)
Sponged	1 (1)
Transfer Printed	25 (22)
Undecorated	104 (30)
Unidentified	5 (3)
Yellow ware	
Banded	2 (2)
Rockingham	1 (1)
Undecorated	3 (3)
Undecorated unglazed	1 (1)
Unidentified	
Undecorated	4 (2)
Unidentified	9 (4)
Total	**205 (56)**

Table 30. Mean Artifact Dating for Stratum 10.

Artifact	Date Range	Mean	T.P.Q.	*Count	Reference
Ceramics					
Pearlware-undecorated	1780-1830	1805	1780	1	South 1977
Whiteware-banded	1830-1870	1850	1830	1	Smith 1983
Whiteware-hand painted	1830-1870	1850	1830	1	Price 1979
Whiteware-pattern molded	1830-1890	1860	1830	3	Smith 1983
Whiteware-sponged	1830-1870	1850	1830	1	Smith 1983
Whiteware-transfer printed	1830-1860	1845	1830	22	Price 1979
Whiteware-undecorated	1830-1890	1860	1830	30	Smith 1983
White Granite-all decoration	1842-1930	1886	1842	1	Miller 2000
Total	**1780-1930**	**1854**	**1842**	**60**	
Glass					
Improved tooled lip	1870-1903	1886.5	1870	1	Deiss 1981
Pontil	1840-1880	1860	1840	1	Newman 1970
Total	**1840-1903**	**1873**	**1870**	**2**	
Combined Total	**1780-1930**	**1854**	**1870**	**62**	
* The minimum number of vessels was used to calculate the mean date.					

Feature 8 (Brick Foundation)

Feature 8 was a small section of a brick foundation located in the center of the northern edge of the Washhouse South Area adjacent to the drainage system (Feature 10) (Figure 28). The foundation was constructed of whole and half hand made brick that was laid in a common bond two courses wide with lime mortar. The whole bricks each measured 8.5 x 4 x 2.25 inches, which matches the size typically used by the Moremen family for construction. The foundation had been severely disturbed with one course being removed exposing only a layer of mortar. A small area of brick was located adjacent to the foundation. Together, the mortared brick and small area of brick may have been part of some steps or formed a threshold for a doorway of the washhouse building.

Soil associated with the foundation was excavated as part of Stratum 3 (Brick Included Layer), which is representative of the use and demolition of the washhouse building. Feature 8 was likely associated with the washhouse building itself.

Feature 9 (Pier-Southeast Corner)

Feature 9 consists of two small areas of brick and a small depression located in the southern portion of the Washhouse South Area in line with Feature 8 (Brick Foundation) (Figure 28). Feature 9 was identified under Stratum 3 (Brick Included Layer) within Stratum 5 (Prehistoric/Historic Interface). The depression was an irregular oval shaped feature that measured 50 cm east/west and 35 cm north/south (19.7 inches east/west and 13.8 inches). It consisted of a 10 cm thick brown silty loam fill with inclusions of pea gravel, brick, coal, and cinder. This fill was much like Stratum 3, which represents the demolition of the washhouse building, and Feature 9 may be associated with it.

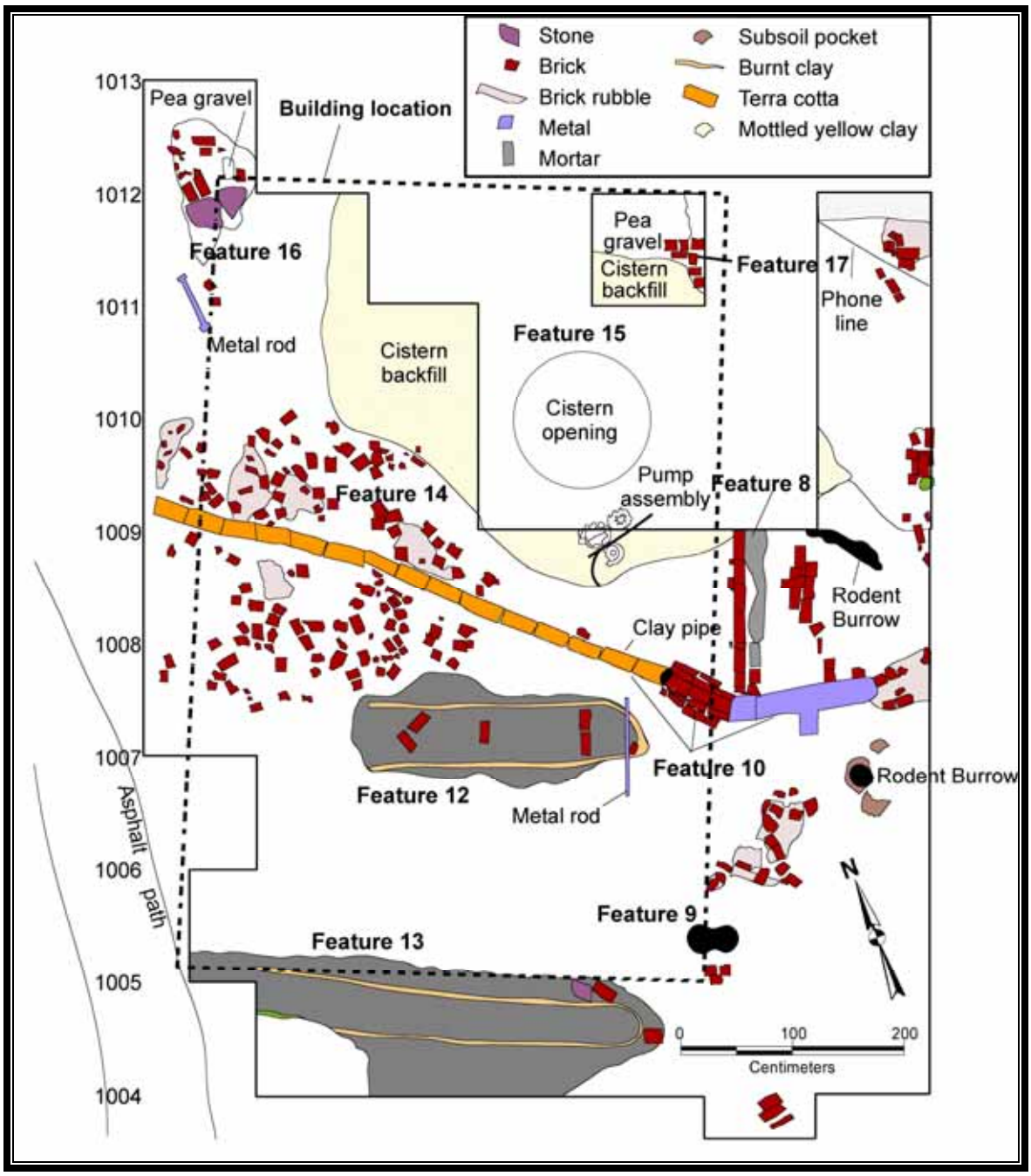

Figure 28. Site Map Showing Features Found in the Washhouse South and North Areas.

The brick areas each consisted of half and fragmented brick and were located on either side of the depression. The depression was most likely the remains of a robbed stone pier, while the brick areas were the remains of brick that would have been stacked on the stone as part of the pier construction. The pea gravel mixed with the fill might have been used as a base for the pier stone when it was placed in a shallow hole during

the construction of the pier. Based on the location of Feature 9, it is likely that it was a pier support for the southeast corner of the washhouse building.

A total of 14 artifacts was recovered from the depression fill associated with Feature 9. They included nails, faunal remains, prehistoric artifacts, and a ceramic sherd (Table 31). The artifacts recovered from Feature 9 date from the early to late nineteenth century. The diagnostic artifacts included machine cut nails (n=4) (1800-1880) and a sherd of undecorated whiteware (1830-1890). Feature 9 was probably destroyed and the stone robbed out during the demolition of the washhouse building in the early to mid-1900s.

Table 31. Artifacts Recovered from Features 9, 10, and 11.

Functional Group/ Artifacts	Feature		
	9	**10**	**11**
Architecture			
Window	0	0	10
Nail, Machine Cut, Late	4	1	7
Nail, Unid.	0	2	0
Brick	0	0	1
Total	**4**	**3**	**18**
Furniture			
Lamp Globe	0	2	2
Kitchen			
Ceramic			
Unidentified, Buff Stoneware, Undecorated	0 (0)	0 (0)	1 (1)
Unidentified, Pearlware, Undecorated	0 (0)	0 (0)	2 (2)
Unidentified, Whiteware, Transfer Printed	0 (0)	1 (1)	0 (0)
Unidentified, Whiteware, Undecorated	1 (1)	1 (1)	6 (1)
Glass			
Unidentified, Embossed	0 (0)	0 (0)	1 (1)
Unidentified	0 (0)	0 (0)	7 (4)
Total	**1 (1)**	**2 (2)**	**17 (9)**
Miscellaneous			
Unidentified metal	0	2	0
Faunal			
Bone	5	3	0
Prehistoric			
Fire Cracked Rock	0	0	28
Flake, unidentified	4	3	43
Total	**4**	**3**	**71**
Total	**14**	**15**	**108**

Feature 10 (Drainage System)

Feature 10 consists of a drainage system that extended through the washhouse building in the northeast portion of the Washhouse South Area (Figures 28 and 29). This drainage system was comprised of round terra cotta pipe segments, a small brick drain/gutter, and an iron gutter.

The pipe section of the drainage system was comprised of 15 round single-hole extruded terra cotta pipe segments that abutted each other without the use of a bonding agent. Each pipe was approximately 30 cm (1 foot) in length and had a hole diameter of 15 cm (6 inches). All of the pipe segments were made of unglazed terra cotta ceramic. The exposed section of the pipeline extended from the western most extent of the washhouse excavation area towards the east before terminating at a brick drain/gutter. The unexposed section of the pipeline extends west from the washhouse area for an unknown distance under unexcavated ground towards the south side of the main house.

Figure 29. Feature 10 (Drainage System) and Feature 8 (Brick Foundation).

The brick drain/gutter was comprised of six whole bricks laid in two rows on edge with three whole bricks laid face up between the two rows to form a box like gutter at the end of the pipeline. The bricks each measured approximately 8.5 x 4 x 2.25 in., the size brick that was typically used by the Moremen family. The sidewalls of the brick gutter were shored up on either side by half and whole bricks. The top of the gutter was open, which enabled it to not only lead water, but also to drain water. Thus, the brick portion of the drainage system was most likely a gutter and a drain.

The metal gutter was a single piece of concave cast iron that measured 3.5 ft. (1.1 m) long and 8 in. (20 cm) wide. A small metal tab that measured 20 x 15 cm (8 x 6 inches) was attached to the center portion of the south side of the gutter. The purpose of this tab is unknown; it may have served to stabilize the concave gutter. The metal gutter was open at the top except for the western end of the gutter, where it joined the brick

drain/gutter. An 20 x 20 cm (8 x 8 inches) iron plate covered this end of the gutter where it abutted the brick foundation (Feature 8). The eastern end of the metal gutter was rounded and flattened out to allow water to spill onto the ground towards a low area.

Feature 10 was identified below the topsoil (Stratum 2) within Stratum 3 (Brick Included Layer) and Stratum 4 (Coal Layer) depending on what part of the washhouse area was being excavated. Much of the drainage system was built on top of a mottled yellow clay fill that represented backdirt from the construction of a nearby water cistern (Feature 15). Other sections of the system, particularly on the west end, were built on top of Stratum 5 (Prehistoric/Historic Interface) and cut through Stratum 7 (Clay and Pea Gravel) (Figure 27).

A small sample of fill from the trench that the pipeline was laid in was excavated. A total of 15 artifacts was recovered from the pipe trench fill. They included nails, glass, ceramic, faunal remains, and prehistoric artifacts (Table 31). The artifacts recovered from the pipe trench date from the mid-to late nineteenth century. The diagnostic artifacts included a machine cut nail (1800-1880) and whiteware ceramics (1830-1890) (n=2).

Based on stratigraphic evidence, the pipeline is contemporaneous with the deposition of Stratum 3 and 4, which represents the use and demolition of the washhouse building from the late 1800s to early 1900s. The drainage system also postdates the construction of the cistern (Feature 15). The type of pipe used in the pipeline was most commonly used between the 1880s and 1920s (Deiss 1992). The drainage system was probably installed when the washhouse was constructed in the 1880s, but after the cistern was constructed.

Feature 11 (Cesspool)

Feature 11 is a low area that extends from the east end of the drainage system to the eastern extent of the washhouse area and covered the east half of the Washhouse South Area (Figures 24 and 28). This particular feature was not fully exposed, but several units were excavated to sample the deposits. These excavations revealed that historic period deposits were generally 10 to 20 cm deeper in the Feature 11 area than in the rest of the washhouse area (Figures 30 and 31). Based on its association with the drainage system (Feature 10), it appears that Feature 11 was a collection area or retention basin for wastewater from the washhouse and perhaps other outbuildings from the late 1800s to mid-1900s. This feature is essentially what is known as a cesspool. Cesspools were vaults or retention areas that collected wastewater and then allowed the liquid to naturally seep into the ground or evaporate.

Most of the deposits from the cesspool area were excavated as part of Stratum 2 (topsoil) and the Stratum 3 (brick included layer) before they were recognized as a part of a feature. These particular strata were at least 10 cm thicker in Feature 11 than documented elsewhere in the washhouse area. However, a sample of the deposits was

separated from Strata 2 and 3 in one unit when they were recognized as a part of Feature 11.

Figure 30. Deposits in the Cesspool (Feature 11).

A total of 108 artifacts was recovered from the sample of Feature 11 deposits. Other artifacts associated with Feature 11 were included with Strata 2 and 3. Most of the artifacts from the sample were prehistoric (66 percent). The majority of the historic artifacts were assigned to the architecture (n=18) and kitchen (n=17) functional groups (Table 31). Since such a small sample was recovered from Feature 11, few of the artifacts were diagnostic. They included machine cut nails (1800-1880), whiteware (1830-1890), and pearlware (1780-1830), which are indicative of the early to late 1800s. However, the sample was taken from the lowest levels of the deposits and may represent a transition to Stratum 5 (Prehistoric/Historic Interface). A large metal mobile home tie down stake was found within the Feature 11 deposits, which was associated with a mobile home that had been parked at the location during the late 1980s.

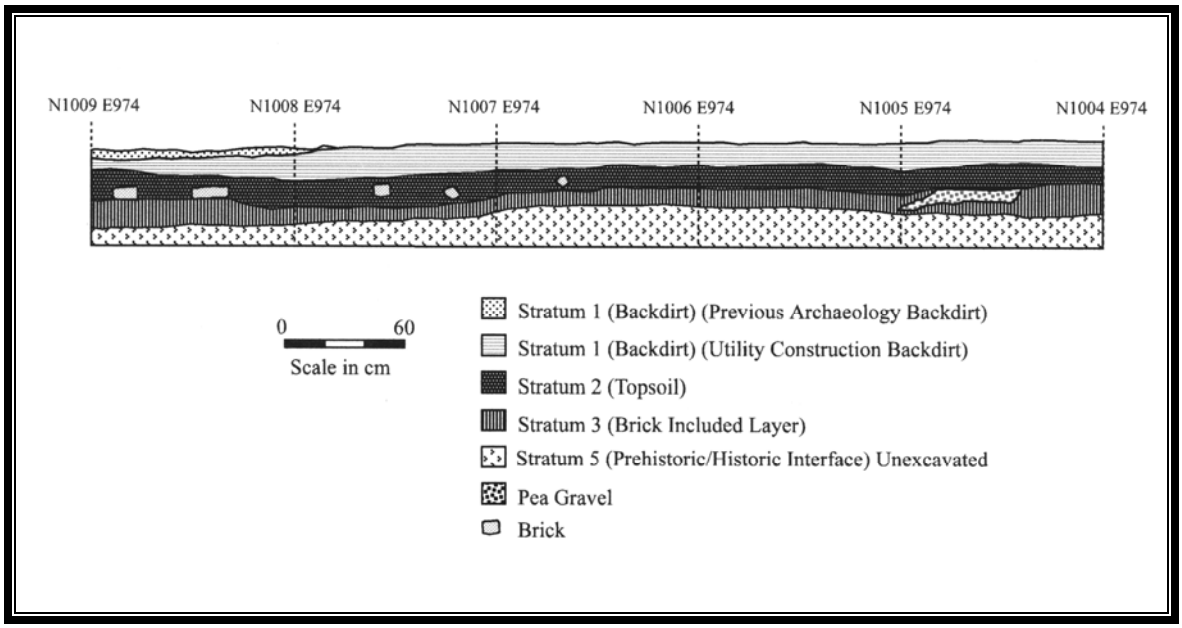

Figure 31. Soil Profile in the Western Portion of Feature 11 (Cesspool).

It appears that most of the cesspool area was filled with Stratum 3 (Brick Included Layer), representing the use and demolition of the washhouse from the late 1800s to early 1900s and later topsoil (Stratum 2) accumulated over the area. With the demise of the washhouse, it appears that the cesspool was no longer used and was subsequently filled.

Feature 12 (North Fire Pit)

Feature 12 was a trench-like fire pit located in the western portion of the Washhouse South Area adjacent to the drainage system (Feature 10) (Figure 28). The trench was linear in shape with amorphous edges and measured 8.5 ft. (2.6 m) east/west and between 50 cm (1.6 feet) and 90 cm (3 feet) north/south. It had a "U" shaped profile that extended to depth of 40 cm (1.3 feet) below the point at which the feature was identified (Figure 27).

The Feature 12 fill consisted of a black ashy cinder loam with coal and charcoal inclusions (Figure 32). The coal and cinder were concentrated near the surface of the feature, while the ash and charcoal were concentrated more towards its base. These two layers were excavated separately as cinder fill (Level 1) and charcoal fill (Level 2). The remnants of a large burnt log were situated next to the feature within spillover deposits from the fill. Feature 12 was identified below Stratum 2 (Topsoil) and intrudes into Stratum 4 (Coal Layer), Stratum 10 (Clay/Pea Gravel), and Stratum 5 (Prehistoric/Historic Interface) (Figure 27).

Near the base of Feature 12 burned clay encircled the inside of the feature. Six whole bricks were found at the base of the feature arranged with two on each end and one in the middle. Each brick measured approximately 8.5 x 4 x 2.25 inches, the size

typically used by the Moremen family. It appears that the bricks were arranged to support logs for burning.

Figure 32. Feature 12 (Fire Pit-North) and Feature 10 (Drainage System).

A total of 583 artifacts was recovered from the ashy cinder fill (Level 1) in Feature 12. Most were assigned to the architecture (65 percent) and kitchen (16 percent) functional groups. Other functional groups represented included the arms, clothing, furniture, and miscellaneous groups (Table 32). Faunal remains (n=10) and prehistoric artifact (n=23) also were recovered. In addition, a large wrought iron bar was found at the east end of Feature 12. Most of the artifacts from Level 1 date from the mid-nineteenth to the early twentieth centuries. The diagnostic artifacts included machine cut nails (1800-1880), wire nails (1870-present), pearlware (1780-1830), whiteware (1830-1890), redware (1750-1880), clear bottle glass (1875-present), and an unidentified synthetic material. Level 1 was probably deposited sometime after the 1870s.

A total of 322 artifacts was recovered from the charcoal fill (Level 2). Most were assigned to the architecture (65 percent) and kitchen (11 percent) functional groups. Other functional groups represented included activities, entertainment, and furniture groups (Table 32). A significant amount of prehistoric artifacts (n=46) were recovered. Faunal remains also were found (n=6). The artifacts from Level 2 date from the mid-nineteenth to early twentieth centuries. The diagnostic artifacts included machine cut nails (1800-1880), wire nails (1870-present), whiteware (1830-1890), applied glass bottle lip (1840-1913), pontil marked glass bottle base (1840-1880), and clear (1875-present), and brown (1860-present) container glass. A large fragment of a white granite bowl that exhibited a maker's mark also was found in Level 2 (Figure 7). The decoration on the

bowl was a dark blue transfer print with hand painted polychrome in the Canton pattern (Figure 8). The maker's mark was a printed mark from the Petrus Regout and Co. pottery in Maastricht, Holland and dates from 1883 to 1900 (Kowalsky and Kowalsky 1999). These artifacts indicate that most of the artifacts date to the late 1800s and indicate that deposit was probably formed sometime in the late 1800s or later.

Although the artifacts recovered from Feature 12 date primarily from the late 1800s to early 1900s, the fact that it intruded into Stratum 4 (Coal Layer) indicates that the feature postdates the demolition of the washhouse ca. 1920s. It appears that wood was initially burned in the pit and then later it was filled in with an ashy cinder deposit.

Feature 13 (Fire Pit South)

Feature 13 was a trench-like fire pit located in the western portion of the Washhouse South Area just south of Feature 12 (Fire Pit North) (Figure 28). It had a linear shape with amorphous edges. This feature was similar Feature 12, but was larger, measuring over 4.2 m (13.5 feet) long and between 50 cm (1.6 feet) and 100 cm (3.2 feet) wide. Feature 13 had a "U" shaped profile that extended 40 cm (1.3 feet) below the below the point at which the feature was identified (Figure 27 and 33).

Table 32. Artifacts Recovered from Feature 12 and 13.

Functional Group/ Artifacts	Feature 12		Feature 13
	L. 1	L. 2	
Activities			
Slate Writing board	**0**	**1**	**0**
Architecture			
Window glass	12	5	17
Nail, Machine Cut, Late	150	39	83
Nail, Unid.	120	158	82
Nail, Wire	95	7	55
Total	**377**	**209**	**237**
Arms			
Bullet/Shot	**2**	**0**	**0**
Clothing			
Glass Button	1	0	0
Metal Buckle/clasp	1	0	0
Metal Button	1	0	1
Synthetic Belt Piece	1	0	0
Total	**4**	**0**	**1**
Entertainment			
Doll/Doll parts	0	1	0
Faunal			
Bone	10	6	26
Furniture			
Glass Lamp Part	4	0	0
Glass Lamp Globe	51	23	5
Total	**55**	**23**	**5**

Table 32. Continued.

Functional Group/ Artifacts	Feature 12		Feature 13
	L.1	L.2	
Kitchen			
Ceramic			
Bowl, Transfer Print/Handpainted Rough Porcelain	2 (1)	3 (2)	1 (1)
Bowl, Transfer Printed White Granite	0 (0)	2 (1)	0 (0)
Cup, Undecorated Rough Porcelain	0 (0)	1 (1)	0 (0)
Handle, Pattern Molded Porcelain	1 (1)	0 (0)	0 (0)
Storage Jar/Crock, Undecorated Buff Stoneware	1 (1)	0 (0)	0 (0)
Unidentified, Undecorated Buff Stoneware	3 (3)	0 (0)	4 (4)
Unidentified, Undecorated Gray Stoneware	0 (0)	0 (0)	1 (1)
Unidentified, Undecorated Porcelain	2 (2)	0 (0)	0 (0)
Unidentified, Transfer Printed Porcelain	1 (1)	0 (0)	0 (0)
Unidentified, Pattern Molded Rough Porcelain	1 (1)	0 (0)	0 (0)
Unidentified, Undecorated Pearlware	0 (0)	0 (0)	1 (1)
Unidentified, Undecorated Redware	0 (0)	0 (0)	1 (1)
Unidentified, Undecorated Whiteware	5 (5)	3 (3)	13 (7)
Unidentified, Sponge Whiteware	0 (0)	1 (1)	0 (0)
Unidentified, Transfer Printed Whiteware	1 (1)	1 (1)	3 (3)
Unidentified, Rockingham Yellow ware	1 (1)	1 (1)	0 (0)
Unidentified, Undecorated Yellow ware	0 (0)	0 (0)	1 (1)
Unidentified, Water Drop ware	0 (0)	0 (0)	2 (1)
Unidentified	5 (3)	0 (0)	3 (2)
Glass			
Bottle, Condiment Undecorated	0 (0)	1 (1)	0 (0)
Bottle, Unidentified Pattern Molded	1 (1)	0 (0)	0 (0)
Bottle, Unidentified Undecorated	1 (1)	0 (0)	3 (2)
Jar, Unidentified, Undecorated	0 (0)	0 (0)	0 (0)
Lid-Liner	1 (1)	0 (0)	2 (1)
Unidentified, Pattern Molded,	2 (2)	0 (0)	0 (0)
Unidentified, Undecorated	60	23 (7)	32 (12)
Metal			
Can	4	0	0
Total	**95**	**36**	**67**
Miscellaneous			
Unidentified Metal	23	0	3
Unidentified Plastic	0	0	1
Total	**23**	**0**	**4**
Prehistoric			
Biface	0	0	1
Fire Cracked Rock	1	4	3
Flake, secondary	2	0	0
Flake, unidentified	14	42	68
Groundstone tool, Unidentified	0	0	1
Unidentified	0	0	1
Total	**17**	**46**	**74**
Total	**583**	**322**	**414**

The Feature 13 fill consisted of a grayish black ashy loam with charcoal inclusions. It was sealed beneath Stratum 2 (Topsoil) intruded into Stratum 10 (Clay/Pea Gravel) and Stratum 5 (Prehistoric/Historic Interface) (Figures 27 and 33). As with Feature 12, Feature 13 also exhibited a ring of burned clay inside of the feature. While some brick fragments were noted throughout the feature fill, there were no articulated brick identified, which could have served as a support for logs. However, based on the evidence for burning and the ashy charcoal fill, it appears that the trench was used to contain fire.

Figure 33. Feature 13 (Fire Pit-South) and West Wall Stratigraphy.

A total of 414 artifacts was recovered from Feature 13. Most were assigned to the architecture (57 percent) and kitchen (16 percent) functional groups. Other functional groups represented included clothing, furniture, and miscellaneous groups (Table 32). A significant amount of faunal remains (n=26) and prehistoric artifacts (n=74) also were found. Most of the artifacts date from the mid-nineteenth to early twentieth centuries. The diagnostic artifacts included machine cut nails (1800-1880), wire nails (1870-present), whiteware (1830-1890), water drop ware (1868-1917), and clear (1875-present),

brown (1860-present) and milk (1860-present) colored container glass, and a piece of plastic (post 1900). These artifacts primarily date to the late 1800s, but the plastic provides a T.P.Q. of 1900, which indicates a deposition in the early 1900s. Based on the stratigraphic position of the feature, it appears that it predates Stratum 2 (Topsoil).

As with Feature 12, Feature 13 was a trench-like pit dug to contain a wood fire, perhaps to heat large kettles associated with washing or soapmaking. The pits were dug sometime from the very late 1800s to 1900s. However, the fact that both of these features were located partially under the washhouse building, suggests that they were created and used after the demolition of this structure. They were likely used for a short period of time and then abandoned during the early to mid 1900s.

Feature 14 (Brick Rubble)

Feature 14 was an area of brick rubble situated around the western half of the drainage pipeline (Feature 10) (Figure 28). It was identified in association with Stratum 5 (Prehistoric/Historic Interface). The rubble did not have a high density of brick and was rather spread out, consisting mostly of half or fragmented brick. Some whole or nearly whole bricks were identified and measured approximately 7.75 x 3.75 x 1.75 inches, the size of brick used in the construction of the main house and detached kitchen chimney, which was associated with Gabriel Farnsley's tenure. Artifacts associated with this feature were excavated as part of Stratum 5 and date from the early to late 1800s, representing the construction, use, and demolition of the detached Kitchen. It is most likely that Feature 14 is associated with the demolition of the detached kitchen and predates the construction of the washhouse building.

Washhouse North Area

Stratigraphy

The northern half of the washhouse area was highly stratified, particularly the northwest corner. This section of the excavation area exhibited a stratigraphic profile that was much different than the rest of the site. The soil profile documented in this area included a 12 cm thick dark brown silt loam topsoil (Stratum 2), a 5 to 7 cm thick black silt loam coal layer (Stratum 4), a 10 to 12 cm thick slightly mottled gray silty clay (Stratum 11), a 6 to 9 cm thick brown sandy clay loam with dense pea gravel (Stratum 12), a 2 to 7 cm thick mottled yellow and brown sandy clay (Stratum 13), an 8 to 14 cm thick light brown sandy clay loam with brick flecks, representing the prehistoric/historic interface (Stratum 5), and a light brown sandy clay loam prehistoric layer (Stratum 6) (Figure 34) (Table 33).

Several of the strata documented in the Washhouse North Area have been previously described in the general stratigraphy section of this report. They include Stratum 2 (Topsoil), Stratum 4 (Coal Layer), Stratum 5 (Prehistoric/Historic Interface), and Stratum 6 (Prehistoric Layer).

Table 33. Order of Stratigraphic Sequence in the Washhouse North Area.

Stratum	Name	Description
2	Topsoil	Dark brown silt loam
4	Coal Layer	Black silt loam with dense coal inclusions
11	Gray Clay Fill	Dense slightly mottled gray clay
12	Pea Gravel	Brown silt loam with pea gravel
13	Clay Lens	Thin mottled yellow and brown silty clay lens
5	Prehistoric/Historic Interface	Light brown sandy clay loam with brick and pea gravel
6	Prehistoric Layer	Light brown sandy clay loam with brick flecks

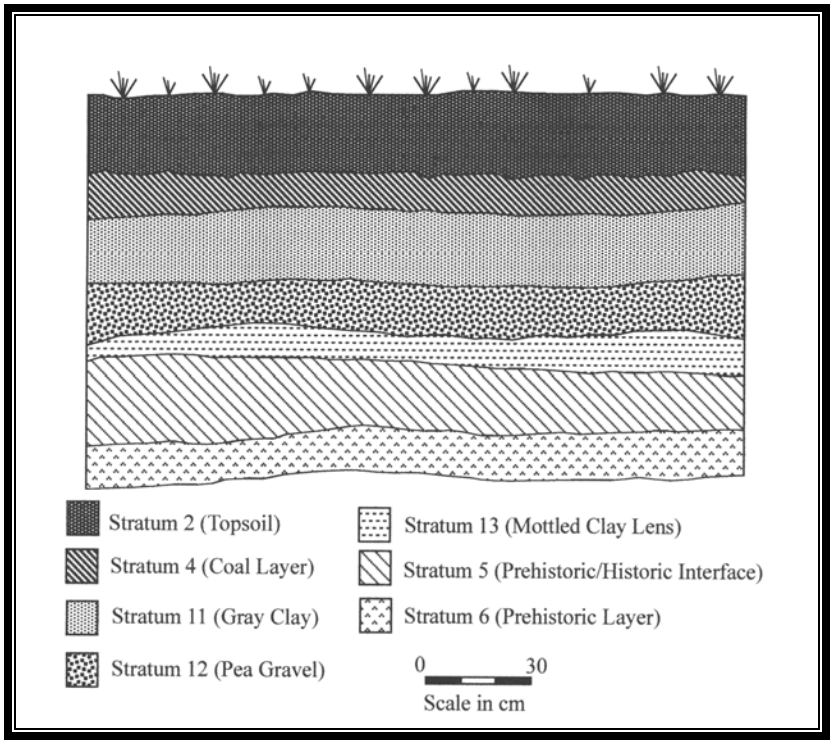

Figure 34. Soil Profile Exhibited in the Northwest Portion of the Washhouse North Area.

Stratum 11 (Gray Clay Fill)

Stratum 11 was a dense slightly mottled gray clay that was only documented in the northwest corner of the washhouse area. This type of soil is usually classified as subsoil. It can be re-deposited as a fill within and mixed with archaeological contexts during the excavation of deep pits or cellars. In the northwest corner of the washhouse it was situated just below Stratum 4 (Coal Layer) (Figure 34).

A total of 114 artifacts were recovered from Stratum 11. Most were assigned to the architecture (34 percent) and kitchen (31 percent) functional groups (Table 34). Other functional groups represented included activities, arms, furniture, and personal groups (Table 34). Faunal remains (n=10) and prehistoric artifacts (n=19) also were found.

The artifacts recovered from Stratum 11 date primarily from the mid-nineteenth to early twentieth century. The diagnostic artifacts, included ceramic sherds, such as transfer printed whiteware (1830-1865) and white granite (1842-1930) (Table 35), machine cut nails (1800-1880), wire nails (1870-present), improved tooled glass bottle lip (1870-1913), and clear (1875-present) and brown (1860-present) colored container glass. The wire nails, bottle lip, and colored glass all suggest a T.P.Q. in the 1870s, indicating that the soil was mixed with historic period deposits and then redeposited sometime after this time period.

Table 34. Artifacts Recovered from Strata 11, 12, and 13.

Functional Group/ Artifacts	Stratum		
	11	**12**	**13**
Activities			
Drill Bit	0	1	0
Metal Washer	0	0	1
Metal Wire	0	1	0
Pencil/pencil parts	0	5	0
Slate Writing Board	0	0	12
Staple	1	0	0
Total	**1**	**7**	**13**
Architecture			
Glass Window	13	104	4
Nail, Machine Cut, Late	7	86	1
Nail, Unid.	13	296	0
Nail, Wire	6	78	0
Total	**39**	**565**	**5**
Arms			
Bullet	0	2	0
Shell Casing/cartridge	1	0	0
Total	**1**	**2**	**0**
Clothing			
Ceramic Button	0	2	0
Metal Buckle	0	3	0
Metal Clothes Iron fragment	0	1	0
Total	**0**	**6**	**0**
Entertainment			
Doll/Doll Parts, Porcelain	0	1	0
Marble, Ceramic	0	1	0
Total	**0**	**2**	**0**
Faunal			
Bone	10	125	4
Mollusk, Mussel Shell	0	13	0
Total	**10**	**138**	**4**
Furniture			
Lamp Globe	0	20	0
Metal handle	1	0	0
Total	1	**20**	**0**

Table 34 Continued.

Functional Group/ Artifacts	Stratum		
	11	12	13
Kitchen			
Ceramic			
Bowl, Porcelain	0 (0)	1 (1)	0 (0)
Dish, Porcelain	0 (0)	2 (1)	0 (0)
Storage Jar/Crock, Buff Stoneware	0 (0)	5 (2)	0 (0)
Storage Jar/Crock, Gray Stoneware	0 (0)	1 (1)	0 (0)
Unidentified, Buff Stoneware	0 (0)	4 (4)	0 (0)
Unidentified, Gray Stoneware	0 (0)	6 (5)	1 (1)
Unidentified, Pearlware	0 (0)	6 (3)	0 (0)
Unidentified, Porcelain	1 (1)	7 (6)	0 (0)
Unidentified, Redware	0 (0)	2 (2)	0 (0)
Unidentified, Rough Porcelain	0 (0)	16 (9)	0 (0)
Unidentified, White Granite	1 (1)	15 (8)	1 (1)
Unidentified, Whiteware	1 (1)	72 (32)	0 (0)
Unidentified, Yellow ware	0 (0)	2 (2)	0 (0)
Unidentified	2 (1)	12 (6)	0 (0)
Glass			
Bottle, medicine	1 (1)	0 (0)	0 (0)
Bottle, Unid.	10 (3)	26 (12)	0 (0)
Cup	0 (0)	3 (1)	0 (0)
Dish	0 (0)	1 (1)	0 (0)
Lid-Liner	0 (0)	3 (2)	0 (0)
Unidentified	17 (7)	135 (45)	1 (1)
Metal			
Cap	0	2	0
Total	**35**	**322**	**3**
Miscellaneous			
Unidentified metal	0	18	0
Unidentified plastic	0	4	0
Total	**0**	**22**	**0**
Personal			
Bead, ceramic	0	1	0
Cosmetic container, porcelain	9 (1)	0 (0)	0 (0)
Metal key	1	0	0
Total	**10**	**1**	**0**
Prehistoric			
Fire Cracked Rock	2	7	0
Flake, unidentified	17	130	0
Total	**19**	**137**	**0**
Total	**114**	**1,242**	**22**

Stratum 12 (Pea Gravel Layer)

Stratum 12 was a layer of dense pea gravel that was found in the northwest portion of the washhouse area. It may be associated with a pea gravel paved work area or path previously documented in the area between the main house and the detached kitchen (designated Master Context 3) (Stottman and Watts-Roy 2000). Stratum 12 was found underlying Stratum 11 (Gray Clay Fill) (Figure 34).

A total of 1,242 artifacts was recovered from Stratum 12. Most were assigned to the architecture (45 percent) and kitchen (26 percent) functional groups (Table 34). Other functional groups represented include activities, arms, clothing, entertainment, furniture, miscellaneous, and personal groups (Table 34). A substantial amount of faunal remains (n=138) and prehistoric artifacts (n=137) also was found.

Table 35. Ceramics Recovered from Strata 11, 12, and 13.

Ceramic Type/ Decoration	Stratum		
	11	12	13
Buff Stoneware			
Undecorated-lead glaze	0 (0)	1 (1)	0 (0)
Undecorated-salt glaze	0 (0)	4 (1)	0 (0)
Undecorated-slip glaze	0 (0)	3 (3)	0 (0)
Undecorated-unglazed	0 (0)	1 (1)	0 (0)
Earthenware			
Undecorated unglazed	0 (0)	1 (1)	0 (0)
Gray Stoneware			
Undecorated-lead glaze	0 (0)	2 (2)	1 (1)
Undecorated-salt glaze	0 (0)	2 (2)	0 (0)
Undecorated-unglazed	0 (0)	3 (2)	0 (0)
Pearlware			
Undecorated	0 (0)	6 (3)	0 (0)
Porcelain			
Colored glaze	0 (0)	1 (1)	0 (0)
Gilted	0 (0)	1 (1)	0 (0)
Hand painted	0 (0)	1 (1)	0 (0)
Pattern molded	0 (0)	1 (1)	0 (0)
Transfer printed	1 (1)	0 (0)	0 (0)
Undecorated	9 (1)	9 (7)	0 (0)
Redware			
Undecorated-slip glaze	0 (0)	2 (2)	0 (0)
Rough Porcelain			
Transfer printed	0 (0)	1 (1)	0 (0)
Undecorated	0 (0)	16 (9)	0 (0)
White Granite			
Pattern molded	0 (0)	5 (2)	0 (0)
Undecorated	1 (1)	10 (6)	1 (1)
Whiteware			
Hand painted	0 (0)	2 (2)	0 (0)
Sponged	0 (0)	1 (1)	0 (0)
Transfer Printed	1 (1)	15 (9)	0 (0)
Undecorated	0 (0)	54 (20)	0 (0)
Unidentified	0 (0)	1 (1)	0 (0)
Yellow ware			
Undecorated	0 (0)	2 (2)	0 (0)
Unidentified			
Transfer printed	0 (0)	1 (1)	0 (0)
Undecorated	0 (0)	7 (2)	0 (0)
Unidentified	0 (0)	4 (3)	0 (0)
Total	**14 (5)**	**157 (88)**	**2 (2)**

The artifacts recovered from Stratum 12 date primarily from the early nineteenth to the early twentieth century. The diagnostic artifacts included ceramic sherds, such as pearlware (1780-1830), whiteware (1830-1890), white granite (1842-1930), redware (1750-1880), and yellow ware (1830-1940) (Table 35). Other artifacts dating to this period consisted of machine cut nails (1800-1880), wire nails (1870-present), clear (1875-present), brown (1860-present), amethyst (1880-1914), and milk (1860-present) colored container glass, and various types of plastic (post 1900). While the ceramics are indicative of a mid-nineteenth century date, the presence of wire nails and colored glass suggests a T.P.Q. date in the 1870s. However, the presence of plastic may indicate that Stratum 12 was deposited around the turn of the twentieth century at the earliest.

A total of 22 artifacts was recovered from Stratum 13. Most were assigned to the activities (59 percent) functional group, which included primarily fragments of a slate writing board (n=12) (Table 34). Other functional groups represented included the architecture and kitchen groups. Faunal remains (n=4) also were found in Stratum 13. Only two ceramic types were present in the artifact assemblage (Table 35). They consisted of white granite (1842-1930) and gray stoneware (post-1850), both of which date from the mid-nineteenth to mid-twentieth century. A machine cut nail (1800-1880) was the only other diagnostic artifact recovered from Stratum 13. These diagnostic artifacts suggest a deposition date from the late nineteenth century to early twentieth century.

Features

A total of three features were identified in the Washhouse North Area. They include a cistern (Feature 15), a brick and stone pier (Feature 16), and a brick pier (Feature 17) (Figure 28).

Feature 15 (Cistern)

Feature 15 was a brick-lined water cistern situated at the western edge of the Washhouse North Area adjacent to the drainage system (Feature 10) in the Washhouse South Area (Figure 28). It was a typical brick-lined cistern constructed in the beehive style with plastered interior walls. At the time of the washhouse excavations the cistern was intact and partially full of water. The feature's opening measured approximately 1.2 m (4 feet) in diameter and opened to a larger unknown diameter with depth. The opening had been covered with a large steel plate as a safety precaution since Riverside's initial restoration. The cistern was partially filled with water and extended to an approximate depth of 4.6 m (15 feet).

A large circular shaped deposit of yellow mottled clay was associated with the cistern (Figure 28). This clay represented the fill for the builder's trench that was dug to construct the cistern. This fill was well-defined around and much closer to the cistern (Figure 28). Stratum 2 (Topsoil), Stratum 3 (Brick Included Layer), and Stratum 3 (Coal Layer) sealed the cistern builder's trench, while the cistern cut through Stratum 5 (Prehistoric/Historic Interface) and Stratum 6 (Prehistoric). Some of the builder's trench

fill extended over a portion of the Washhouse South Area, where it was found under the pipeline associated with the drainage system (Feature 10) and represents overspill from the backfilling of the cistern's builder's trench.

A total of 287 artifacts was recovered from the excavated portions of the cistern builder's trench fill, and associated backdirt from its filling. Most were assigned to the architecture (46 percent) and kitchen (34 percent) functional groups. Other functional groups represented included the activities, clothing, and miscellaneous groups (Table 36). A significant amount of faunal remains (n=19) and prehistoric artifacts (n=24) also were found. Associated with the builder's trench fill was a group of large metal gears located near the cistern's opening (Figures 28, 29. and 35). These artifacts could be associated with the cistern pump. The 1908 Sears and Roebuck catalog illustrated several water pump types and it is most likely that the metal objects found near the cistern were part of a chain bucket style pump (Figure 36). However, it is also possible that these metal objects could be associated with a washing machine, like the ones depicted in the previously mentioned Sears catalog (Figure 37).

Most of the artifacts recovered date from the mid-to late nineteenth century. Diagnostic artifacts included machine cut nails (1800-1880), wire nails (1870-present), whiteware (1830-1890) and brown (1860-present) clear (1875-present), and milk (1860-present) colored container glass. Based on the stratigraphic position of the cistern fill and the diagnostic artifacts, it appears that the cistern was constructed sometime in the late 1800s and is contemporaneous with the construction of the washhouse building. It is likely that the cistern was the first element of the washhouse building to be constructed.

Figure 35. Metal Gear Parts Associated with Feature 15.

PERFECT IMPROVED PURIFYING PUMP, $4.48.

This is the pump advertised by some concerns as their greatest bargain in pumps and the prices they ask are much higher than those we quote for it. While it is an excellent pump for the money, we ask you to note our full line of pumps of all kinds of value equally as great as this one. We sell more pumps than all the other catalogue houses put together and our large sales enable us to buy in such great quantities that we get very close prices. Our qualities and prices have built up this enormous pump business.

Our Perfect Purifying Pump is of the simplest pump construction in the world for raising water and at the same time purifying it. It is adjustable to any well or cistern. It is of very durable construction and materials; operates with an endless chain made from the best of galvanized wire manufactured and tempered expressly for these pumps, to which water buckets of the best grade of galvanized iron are attached. These pumps are adapted to wells or cisterns not over 40 feet in depth, but we do not recommend them for use in wells or cisterns beyond 30 feet deep. For wells of greater depth, we urge you to purchase one of our iron pumps as described on pages 614 to 617 of this catalogue. You will note by the illustration that buckets and chains run through a bearing which hangs in the water at the bottom of the well and in ordering this pump you should order equipment which will reach within 2 feet of the bottom. This pump always furnishes the water from the bottom, as no water enters cups until after they have passed over the bearing at the bottom and begun the upward movement, when the air escapes and they are filled with the best and the coldest water. This pump is so constructed that none of the objections common to other pumps of somewhat similar construction can be urged against it. There are neither suckers nor valves, no wooden tubing to rot out or rusty iron to come in contact with the water, so that your water supply is always pure, sweet and wholesome. The pump comes complete with chain, cups, lower bearing, ready to be placed in wells of different depths, as indicated in price list below. Average weight, about 75 pounds.

No. 42K5442	Complete for 10-foot well.	Price	$ 4.48
No. 42K5443	Complete for 15-foot well.	Price	5.44
No. 42K5444	Complete for 20-foot well.	Price	6.29
No. 42K5460	Complete for 25-foot well.	Price	7.19
No. 42K5461	Complete for 30-foot well.	Price	8.09
No. 42K5462	Complete for 35-foot well.	Price	9.24
No. 42K5463	Complete for 40-foot well.	Price	10.25
No. 42K5445	Extra Galvanized Buckets and Chain.	Price, per foot.	.08½

Figure 36. 1908 Sears and Roebuck Catalog Advertisement for a Crank Water Pump.

$3.12 SCOTT'S WESTERN WASHING MACHINE

No. 3 Size. Extra Large.

This is the standard square tub, lever washing machine extremely well known and very much in demand, especially in the southern states. This machine is manufactured expressly for us in our big factory which is equipped with the very highest grade special machinery for the production of washing machine parts and the construction of the highest grade washing machines of the several styles illustrated and described in these pages, and we can say without fear of successful contradiction that in this machine which we offer at $3.12 we are giving you greater value than has ever been offered in a washer of this style. We build it in the one size, the No. 3 size, which is extra large, and we send it to you at this remarkably low price, all complete with wringer compartment and basket or tub stand just as shown in the illustration. This machine stands 29 inches from the floor to the top of the tub; the tub sides are 12 inches high 13-16-inch thick, and the tub measures 20½ inches wide, and 26 inches long outside. All the gearing and gear brackets are finished in aluminum bronze, and the entire machine is tastefully painted, ornamented and varnished. If you desire a washing machine of this type and the very best value you can get for the money, a machine exceptionally well built from the very best materials, a machine which has been inspected at the factory and which goes to you as a guaranteed washer, by all means send us your order, enclosing our $3.12 price, and we will send it to you from the factory in Southern Michigan, guaranteeing that it will please you.

No. 32K7529 Scott's Western Washing Machine. Shipping weight, 72 pounds. Price $3.12

$4.93 IMPROVED CURTIS WASHING MACHINE

The Curtis Washing Machine applies the rubbing principle in its operation the same as used by us in our Quick and Easy and the wonderful New-Way Washing Machines both described on this page, but it is a rotary tub machine and has two cylinders working in opposite directions with the same motion of the wood cylinders that cleaning the clothes over and over in a washboard, only with a much better action and in a thousandth part of the time. While it is well recognized that rubbing clothes over the washboard is a primitive method of washing and a great hardship on the housewife, nevertheless, it is a certain cleaning method. In an effort to provide an easier means of washing clothes, the open tub washing machines with the adaptation of the rubbing principle as used in our Quick and Easy and our wonderful New-Way Lever Washing Machines was invented. The next progressive step in the rubbing type of washer is this, the Curtis Washing Machine, and in applying this double rubbing principle, we have in this machine a washer which does the work very quickly and easily and at the price we quote it is really a wonderful value.

The Curtis Washer will not tear the clothes, and no amount of the balance wheel, the machine will work so easily that a child can operate it. This machine is made of selected Louisiana cypress, the exact model materials as are used in the very best grade washing machines manufactured, machines which sell at $50.00 to $75.00, and it is handsomely painted, ornamented and varnished. The balance wheel is painted, and all the trimmings are nickel plated and finished in gold bronze. This machine stands 31 inches high from the floor to the top of the tub cover, it measures 19½ inches wide outside, 28 inches long outside, and is mounted on the wringer compartment, and includes the wringer compartment is 34 inches long. The tub is 13½ inches deep at the center and the top has a depth of 7 inches. The bottom is made of heavy, non-rusting galvanized iron, and all the iron parts coming in contact with the water are heavily covered or galvanized to prevent rusting.

This is the highest type of rubbing machine now on the market, and we will be very glad to receive your order and ship the machine to you with the understanding and agreement that it must prove entirely satisfactory to you, front be better value than you can secure anywhere else in a machine of this type of it may be returned to us at our expense of transportation charges both ways and we will refund your money. This machine is shipped from factories in Western New York and Southern Michigan.

No. 32K7535 Improved Curtis Washing Machine. Shipping weight, 100 pounds. Price $4.93

Figure 37. 1908 Sears and Roebuck Catalog Advertisement for Washing Machines.

Table 36. Artifacts Recovered from Features 15, 16, and 17.

Functional Group/ Artifacts	Feature 15	Feature 16	Feature 17
Activities			
Metal Pencil/Pencil Parts	1	0	0
Architecture			
Window glass	42	9	0
Nail, Machine Cut, Late	72	0	1
Nail, Unid.	14	7	3
Nail, Wire	3	0	0
Total	**131**	**16**	**4**
Clothing			
Metal Thimble	1	0	0
Faunal			
Bone	16	11	0
Mollusk, Mussel Shell	3	0	0
Total	**19**	**11**	**0**
Kitchen			
Ceramic			
Bowl, Transfer Printed/Hand painted Rough Porcelain	1 (1)	0 (0)	0 (0)
Unidentified, Undecorated Buff Stoneware	2 (2)	0 (0)	0 (0)
Unidentified, Undecorated Gray Stoneware	2 (2)	0 (0)	0 (0)
Unidentified, Undecorated Pearlware	1 (1)	0 (0)	0 (0)
Unidentified, Embossed Porcelain	1 (1)	0 (0)	0 (0)
Unidentified, Transfer Printed Porcelain	1 (1)	0 (0)	0 (0)
Unidentified, Transfer Printed/Hand painted Rough Porcelain	2 (2)	0 (0)	0 (0)
Unidentified, Banded Whiteware	1 (1)	0 (0)	0 (0)
Unidentified, Transfer Printed Whiteware	2 (2)	0 (0)	0 (0)
Unidentified, Undecorated Whiteware	16 (7)	6 (2)	0 (0)
Unidentified, Unidentified Whiteware	5 (3)	0 (0)	0 (0)
Unidentified, Undecorated Yellow ware	0 (0)	1 (1)	0 (0)
Unidentified, Undecorated Unidentified	1 (1)	0 (0)	0 (0)
Unidentified	1 (1)	0 (0)	0 (0)
Glass			
Bottle, Unid.	12	0 (0)	0 (0)
Lid-Liner	1	0 (0)	0 (0)
Unidentified	49	2 (1)	1 (1)
Total	**99**	**9 (4)**	**1 (1)**
Miscellaneous			
Unidentified Metal	9	0	0
Unidentified Synthetic	3	0	0
Total	**12**	**0**	**0**
Prehistoric			
Fire Cracked Rock	3	0	0
Flake, secondary	1	0	0
Flake, unidentified	18	3	1
Flake, Utilized	1	0	0
Groundstone Tool, Unid.	1	0	0
Total	**24**	**3**	**1**
Grand Total	**287**	**39**	**6**

Feature 16 (Brick and Stone Pier-Northwest Corner)

Feature 16 was a collapsed brick and stone pier located in the northwest corner of the Washhouse North Area (Figure 28 and 38). The pier primarily consisted of two limestone slabs that measured 30 cm x 30 cm (12 x 12 inches) and 30 x 20 cm (12 x 8 inches). Several whole and half bricks were situated near and around the stone slabs. The bricks exhibited two different sizes, 8.5 x 4 x 2 inches and 7.75 x 3.75 x 1.75 inches, which represented the brick size used by the Moremen and Farnsley families at Riverside. The stone and brick pier lay on top of a small patch of pea gravel.

Figure 38. Feature 16 (Pier-Northwest Corner).

Feature 16 was identified on top of the yellow mottled clay from the cistern builder's trench backfill (Feature 15). Strata 2, 4, and 11 sealed the pier and its associated soil. A total of 39 artifacts was recovered from the soil and pea gravel associated with the brick and stone pier (Table 36). Most were assigned to the architecture (41 percent) and kitchen (23 percent) functional groups. No other functional groups were represented. However, faunal remains (n=11) and prehistoric artifacts (n=3) also were recovered. The only diagnostic artifact found was whiteware (1830-1890), which is indicative of a mid-to late nineteenth century date. Based on the stratigraphic position of Feature 16 and its function, it was probably built in association with the construction of the washhouse building in the late 1800s, serving as the northwest corner of the structure.

Feature 17 (Brick Pier-Northeast Corner)

Feature 17 was a collapsed brick pier located at the northeastern edge of the Washhouse North Area (Figure 28). The pier consisted of a small concentration of whole and half bricks lying on a layer of pea gravel. The bricks consisted of both Farnsley and Moremen era sizes and were in line with the northwest pier (Feature 16) and the brick foundation (Feature 30). Feature 17 was found within a large pea gravel patch adjacent to the mottled clay of the cistern backfill (Feature 15). Strata 2 and 3 overlaid the pier and its associated soil.

A total of six artifacts was recovered from Feature 17 (Table 36). They mostly consisted of nails (n=4). However, a sherd of green tinted container glass and a prehistoric artifact also were recovered. The only diagnostic artifact was a single machine cut nail (1800-1880), which suggests a nineteenth century date for the feature. Based on its stratigraphic position, its function, and location, Feature 17 was most likely constructed as part of the washhouse building in the late 1800s, serving as the northeast corner of the structure.

Washhouse North Area Interpretations

The close proximity of the Washhouse North Area to the detached kitchen, a work area in front of the kitchen, and the rear of the main house may have created the unique deposits there. Excavation activities associated with the construction of the cellar for the main house and the construction of an adjacent water cistern could have facilitated the secondary deposition of clay deposits in this area. Also, the construction, use, and demolition of the detached kitchen in the late nineteenth century may have resulted in the deposition of materials and soils in this area.

Based on the dates obtained for each of the strata, it appears that most were deposited sometime during the late nineteenth to early twentieth centuries. Stratum 5 (Prehistoric/Historic Interface) was associated with the earliest historic period deposits in the area, which are related to the construction and use of the detached kitchen, during the mid-nineteenth century. A thin lens of clay (Stratum 13) was deposited over Stratum 5 sometime near the turn of the twentieth century. This lens of clay probably served as a base for a pea gravel pavement (Stratum 12) that was likely laid during the same general time period.

The general area between the detached kitchen and the main house was paved with pea gravel to serve as either a path or work space in the mid-to late 1800s. The use of a pea gravel pavement was likely extended to the washhouse after the demolition of the detached kitchen. This paved area was later abandoned when a dense gray clay (Stratum 11) was deposited over it. Since Stratum 11 postdates the construction of the main house, it is unlikely that it represents backdirt associated with the excavation of the large cellar under the main house. However, it is possible that the soil originated from the construction of a large water cistern (Feature 15) located within the washhouse building. This sequence may indicate that changes were made to the washhouse area

over time, including the addition of a water cistern and a building. However, the gray clay could have originated from other parts of Riverside, as well.

The Washhouse North Area was later covered with deposits that accumulated over the area during the demolition of the washhouse (Stratum 4) and after its demolition (Stratum 2).

SUMMARY

A total of 13 strata and 17 features were identified during the washhouse excavations. The strata found in the washhouse area included Stratum 1 (Backfill), Stratum 2 (Topsoil), Stratum 3 (Brick Included Layer), Stratum 4 (Coal Layer), Stratum 5 (Prehistoric/Historic Interface), Stratum 6 (Prehistoric), Stratum 7 (Degraded Brick Layer), Stratum 8 (Construction/Demolition Layer), Stratum 9 (a mixed interface between Strata 7 and 8), Stratum 10 (Pea Gravel), Stratum 11 (Gray Clay), Stratum 12 (Pea Gravel), and Stratum 13 (Mottled Clay) (Table 37).

The stratigraphic sequence at the washhouse area allows for an examination and interpretation of the cultural development of this portion of the site (Figure 39). Each stratum identified at the washhouse area will be discussed and interpreted in chronological order beginning with the earliest. The earliest deposit identified was Stratum 6 (Prehistoric). Prehistoric occupation and use of the area from approximately 8,000 B.C. to A.D. 1400 formed this deposit. A portion of the Stratum 6 was disturbed by several successive historic period occupations and activities. Stratum 5 (Prehistoric/Historic Interface) represents the interface between the undisturbed prehistoric and the early historic period deposit. This stratum is the earliest historic period deposit found in the washhouse area. It was associated with the construction, occupation, and demolition of the detached kitchen, which dates from ca. 1840 to ca. 1875. Both Stratum 5 and 6 underlay the Washhouse and Detached Kitchen.

Although several strata overlay Stratum 5 and Stratum 6, the earliest of these was Stratum 8 (Construction/Demolition Layer) located in the Hearth Area. This stratum dates to the mid-1800s and was associated with the construction, use, and demolition of the detached kitchen. Partially overlaying Stratum 8 was Stratum 7 (Degraded Brick Layer). This stratum was identified during excavation of the detached kitchen and represents its demolition around the 1870s. Stratum 9 is a mixed context consisting of the interface between Strata 7 and 8.

Three other strata were deposited over Strata 5 and 6. They included Stratum 10 (Pea Gravel) at the southwestern edge of the area, Stratum 3 (Brick Included Layer) in the southern half of the site, and Stratum 13 (Mottled Clay) in the Northwestern section of the area. Stratum 10 dates from the late 1800s to early 1900s and represents part of a pea gravel path or pavement associated with the washhouse building. Stratum 4 (Coal Layer) was deposited over Stratum 10 during the early to mid-1900s and represents the demolition of the washhouse building.

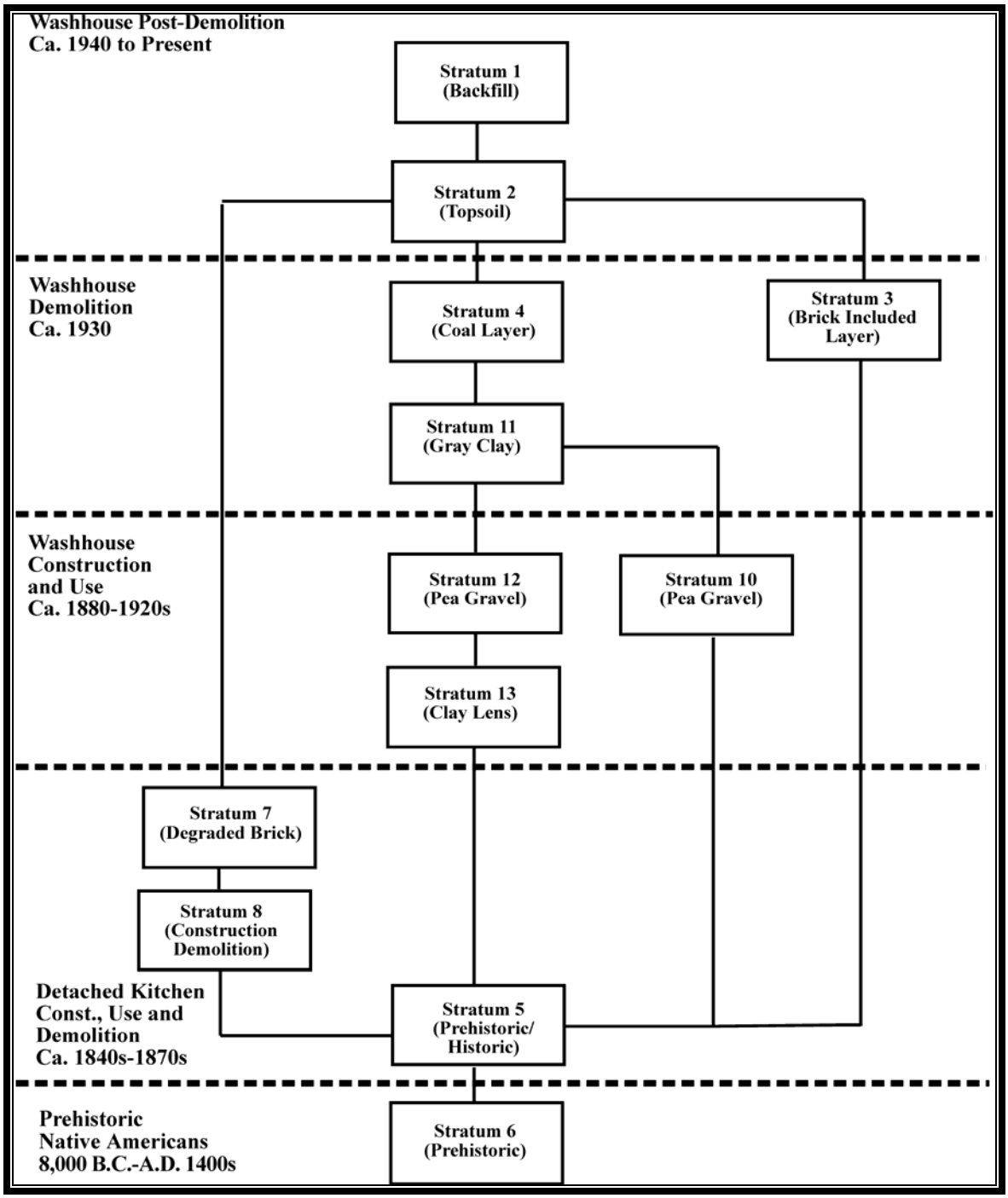

Figure 39. Diagram Showing Stratigraphic Relationships and Time Periods of the Washhouse Area.

Stratum 3 was deposited during the early to mid-1900s over Strata 5 and 6 and represents the occupation and demolition of the washhouse building. Stratum 13 (Mottled Clay) also was deposited over Strata 5 and 6. It dates from the late 1800s to the early 1900s and represents a thin clay base foundation for Stratum 12 (a pea gravel path

or pavement). Stratum 11 (Gray Clay) and Stratum 4 (Coal Layer) covered Stratum 12 during the early to mid-1900s.

Strata 1 (Backfill) and 2 (Topsoil) sealed all of the strata identified within the washhouse area. Stratum 2 represents the accumulation of deposits from the mid-to late 1900s after the demise of the washhouse building. During the late 1900s backfill soil (Stratum 1) from utility construction and archaeological excavations was deposited over portions of the washhouse area.

Table 37. Strata Identified in the Washhouse Area.

Stratum	Name	Location	Date Range	Association
1	Backfill	All areas	Late 20th century	Utility construction & arch.
2	Topsoil	All areas	Mid to late 20th century	Post washhouse yard
3	Brick Included	South	Early to mid 20th century	Occup. & demo of washhouse
4	Coal	South & North	Early to mid 20th century	Demo of washhouse
5	Prehist./Hist.	All areas	Mid 19th century	Occupation of kitchen
6	Prehistoric	All areas	8,000 B.C. to 14th cent.	Archaic to Mississippian
7	Degraded Brick	Hearth area	Mid to late 19th century	Occup. & demo of kitchen
8	Const./Demo	Hearth area	Mid to late 19th century	Const/Demo of kitchen
9	Interface (7 & 8)	Hearth area	Mid to late 19th century	Mixed Stratum 7 & 8
10	Clay Pea Gravel	South	Late 19th to 20th century	Gravel pavement washhouse
11	Gray Clay	North	Early to mid 20th century	Redeposited subsoil
12	Pea Gravel	North	Early 20th century	Gravel pavement washhouse
13	Mottled Clay	North	Late 19th to 20th century	Redeposited subsoil

With the exception of Features 12, 13, and 14, the features identified in the washhouse area represent the architecture and activities associated with the washhouse at Riverside during the late 1800s to the early 1900s. Feature 12 and Feature 13 (Fire Pits) were associated with yard activities, possibly soapmaking, after the demolition of the washhouse. Feature 14 (Brick Rubble) was associated the detached kitchen and Stratum 5, representing the demolition of the nearby detached kitchen.

A total of seven features was found near the brick hearth (Feature 1) (Table 38). All were found within Stratum 2 (Topsoil) and overlying or intruding into the mid-to late 1800s deposits associated with the construction, occupation, and demolition of the detached kitchen (Strata 7, 8, and 9). This stratigraphic relationship indicates that all these features post-date demolition of the detached kitchen and were contemporaneous with the washhouse building. Most of the features were associated with activities performed in the yard of the building, such as laundry duties and soapmaking.

Features related to the architecture of the washhouse building consisted of piers, a foundation, a drainage system, and a cistern (Table 38). Stratigraphically and chronologically, the cistern (Feature 15) was the first element of the washhouse building constructed. Once the cistern had been constructed, the brick and stone piers were constructed upon a base of pea gravel to form the building's foundation. Additionally, a brick foundation and the drainage system was constructed. The frame building was then erected.

Table 38. Features Identified in the Washhouse Area.

Feature	Name	Location	Date Range	Association
1	Brick Hearth	Hearth Area	Post 1875	Washing & soapmaking activities
2	Posthole-kettle crane	Hearth Area	Post 1875	Hearth, for lifting kettles
3	Brick Pavement	Hearth Area	Early 20th century	Washhouse and Hearth
4	Posthole & Trench	Hearth Area	Late 19th century	Fence or gate post
5	Posthole	Hearth Area	Early 20th century	Unknown driven post
6	Pier & Posthole	Hearth Area	Post 1875	Possible porch support-washhouse
7	Pier	Hearth Area	Early 20th century	Unknown
8	Brick Foundation	South Area	Post 1875	Washhouse, door threshold or stair
9	Southeast Pier	South Area	Post 1875	Washhouse, southeast corner pier
10	Drainage System	South Area	Post 1875	Washhouse, drainage system
11	Cesspool	South Area	Early 20th century	Drainage, wastewater collection
12	North Fire Pit	South Area	Early 20th century	Soapmaking in yard
13	South Fire Pit	South Area	Early 20th century	Soapmaking in yard
14	Brick Rubble	South & North	Late 19th century	Occupation & Demo of kitchen
15	Cistern	North Area	Post 1875	Washhouse, construction
16	Northwest Pier	North Area	Post 1875	Washhouse, northwest corner pier
17	Northeast Pier	North Area	Post 1875	Washhouse, northeast corner pier

The stratigraphy and features identified in the washhouse area were associated with two major buildings and functions at Riverside, the detached kitchen and the washhouse. The chronology and stratigraphic relationship of the kitchen and washhouse deposits indicates that the construction, occupation, and demolition of the kitchen (ca. 1840-1870s) predated the washhouse. Shortly after the demise of the kitchen, construction began on the washhouse (ca. 1880). The use of the washhouse building and surrounding yards appears to have taken place from the 1880s to the 1920s. The demolition of the washhouse probably took place sometime in the 1920s. The washhouse area continued to be used as a yard after the demise of the building.

Stratum 12, a pea gravel pavement, and Feature 15, backfill from the construction of the cistern, are associated with the construction and use of the washhouse building. They likely date from the 1880s to 1920s. Stratum 3 (Brick Included Layer) and Stratum 4 (Coal Layer) also date from the 1880s the 1920s and represents the use of the building. Features 12 and 13 were fire pits that were dug and used after the demolition of the washhouse in the 1920s. Stratum 2 (Topsoil) represents the development of soil and use of the yard space after the demolition of the washhouse from the 1930s to present. The stratigraphic relationship of these strata and features indicates that it is unlikely that they are all contemporary.

The strata and features identified in the washhouse area demonstrate the complexity of the deposits. Existing deposits associated with prehistory and the nearby-detached kitchen was disturbed by the construction of the washhouse building and its use. The demolition of the washhouse further disturbed the existing deposits. Finally, mid-twentieth century activities, such as the excavation of fire pits for soapmaking, in the location of the former outbuilding disturbed many of the existing deposits, all of which was sealed by topsoil that has accumulated since then.

ANALYSIS AND INTERPRETATIONS

WASH HOUSE ARCHITECTURE

While oral history and photographic evidence revealed much about the architecture of the washhouse, some important information is lacking. For instance, the exact location and size of the building could not be determined from these resources. Three sides of the building could not be seen in the photograph and thus, little was known about window and door locations. The foundation and framing system used in the construction of the building also was not known. Therefore, the archaeological investigations of the washhouse had the potential to provide insights into the construction and use of the washhouse.

Architectural Features

Several architectural features were located during the washhouse excavations, including piers, a mortared door threshold, a drainage system, a cistern, paths, and a hearth. A total of three ephemeral pier locations was identified during the excavations. It appears that all were collapsed and severely deteriorated piers made of unmortared brick and stone. The pier locations indicate that the building measured approximately 6.1 m (20 feet) along the east and west sides and 4.6 m (15 feet) along the north and south sides. A row of mortared brick along the east wall of the building most likely represents a threshold for a doorway. This feature indicates that there was a door on this side of the building.

Other architectural features were associated with the building's water supply and drainage. A prominent feature of the washhouse is the brick water cistern located within the north half of the building, which provided access to water in the building. The overhead gutter visible in a historic photograph appears to have emptied into this cistern (Figure 40). Also located inside the structure was a drainage system. This system consisted of clay pipe segments, a brick drain/gutter, and a metal trough. The pipe segments extend from beyond the west end of the excavation area to an area just east of the building location. They were probably located under the floor of the building and based on the direction from which the pipe originated, the pipe most likely drained the second detached kitchen that was once located to the west of the washhouse near the main house. The pipes appear to originate at the location of the second detached kitchen, which later became the location of the attached kitchen.

The brick drain/gutter is directly associated with the washhouse. Its open top would have allowed wastewater from activities in the washhouse to drain into the system and out of the building. The metal trough connected to the brick gutter would have directed the water out of the building. The trough was primarily open at the top, except for a small metal plate that covered a portion of it. The position of this plate corresponds to the line of mortared brick that forms the door threshold. The sill of the building most likely sat on top of the metal plate to help support the building where the drainage system

exited. The trough led the wastewater to a shallow depression, which served as a cesspool, located southeast of the building. Based on the presence of the cistern and the drainage system, the building was designed to supply water and drain wastewater, which is consistent with the needs for domestic washing activities.

Figure 40. Enlarged View of the Washhouse ca. 1890.

The architectural features identified outside of the washhouse building consisted of a brick hearth, paths, and postholes. The presence of the associated brick hearth and a posthole for a kettle crane suggests that large kettles were used to boil water for laundry or soapmaking outside and behind the washhouse building. Another posthole and pier situated closer to the washhouse building may represent a support for a rear porch or overhang.

A brick pavement located near the hearth appears to form part of a path that extended east from the building to the hearth and then to the north towards the location of an early twentieth century yard fence line. This fence line was found during the detached kitchen excavations and appears in a historic photograph of the washhouse (Figure 40) (Stottman and Watts-Roy 2000). The presence of this path suggests that the washhouse building and the other features situated outside of the building were connected through the activities that took place there. The path extends to the fence indicating that there may have been a gate in the area, which provided access from the hearth area to other parts of the yard. A posthole and a shallow trench like feature located at the north end of the brick pavement could represent the location of such a gate.

Strata 10 and 12 (layers of pea gravel), which were situated at the front of the washhouse building (west side), likely represent a path or paved work area that likely connected the washhouse to the main house. The area in front of the washhouse (west side) contained architectural features identified during the washhouse excavations, such as a building, paths, and a hearth that together functioned as an activity area, most likely dedicated to washing and/or soapmaking.

Architecture Artifacts

Analysis of artifacts related to the architecture of the washhouse can provide details about the building that are not available from historic photographs. The location of windows and doors can be identified and insights into how the building was constructed can be obtained through an analysis of window glass, nails, and architectural hardware.

Door Hardware

The historic photograph of the washhouse shows that a double swinging door was located on the west wall of the building. However, other doors also may have been present (Figure 40). A total of six artifacts related to door hardware was found. They consisted of a metal doorknob, a ceramic doorknob, and four metal hinges. This hardware was recovered primarily from units located along the west wall of the building and units situated just beyond the east wall of the building. One hinge was found near the cistern. The presence of door hardware along the west wall verifies the location of the door depicted in the historic photograph. The distribution of door hardware beyond the east wall supports other evidence for a door at that location, as represented by the previously discussed mortared brick threshold and a brick path.

Window Glass

Though the historic photograph of the washhouse does not show any window locations on the west side of the building, it is likely some windows were associated with this structure (Figure 40). Examination of the distribution of window glass within the excavation area resulted in the identification of four large concentrations to the east of the building and a smaller concentration along its west side (Figure 41). Of these, three (C-1, C-2, C-5) may correspond to the location of windows associated with the washhouse. Concentration C-1 could indicate the location of a window along the east wall near the cistern. Concentration C-2 points to the presence of a window near the southeast corner of the building, either on the east or south walls. Concentration C-5 may represent a small window located near the southwestern corner of the building. Other window glass concentrations (C-3 and C-4) could be associated with the detached kitchen, which was located nearby. Concentration C-3 could be associated with a window located in the south wall of the detached kitchen. Concentration C-4 may represent a dumpsite for architectural debris, such as old or broken windows.

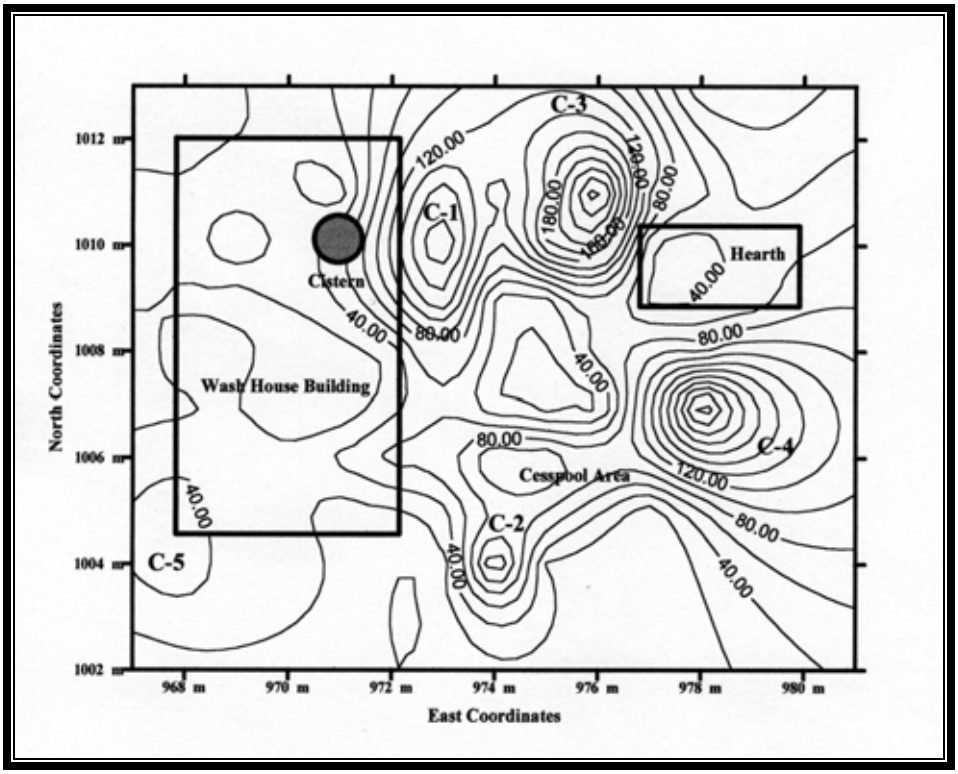

Figure 41. Distribution of All Window Glass at The Washhouse Area.

The distribution of window glass by thickness can provide some chronological information concerning the placement or replacement of the washhouse windows (see discussion of window glass thickness in the Research Methods section). The distribution of the thinnest window glass ($\leq$1.19 mm) recovered from the washhouse area, shows one large concentration and two small concentrations (Figure 42). The large concentration corresponds to C-1, a possible window location along the east wall in the north half of the building. Smaller concentrations of this glass size were located along the east wall in the south half of the building near C-2 and just north of the hearth near the location of Concentration C-3 (Figure 42). This distribution of window glass $\leq$1.19 mm in thickness indicates that the window represented by Concentrations C-1 and C-2 were manufactured prior to 1845. This date is much earlier than the construction of the washhouse, which suggests that these windows were salvaged from earlier outbuildings, possibly the detached kitchen (constructed ca. 1840 and demolished ca.1880). It also confirms that Concentration C-3 was probably associated with the detached kitchen.

The distribution of window glass thicker than 1.58 mm shows two main concentrations that correspond to Concentrations (C-1 and C-4) and a light previously undefined concentration (C-6) (Figure 43). This distribution indicates that these concentrations contain glass that was manufactured after 1845. Since Concentration C-1 also contains window glass that dates prior to 1845, the distribution of window glass thicker than 1.58 mm suggests that an early window in that location could have contained replacement glass from a much later time period. The second main concentration was

identified near Concentration C-4 in the possible dump area of the cesspool (Figure 43). This distribution suggests that glass deposited in the dump was made after 1845.

The light concentration of glass thicker than 1.58 mm does not correspond to any previously identified concentration and was thus, designated C-6. It could represent a small window that dates sometime after 1845.

The distribution of window glass that measures between 1.19 and 1.58 mm shows three main concentrations, corresponding to Concentrations (C-2, C-3, and C-5) (Figure 44). Window glass within this thickness range has no specific date range, but is considered to be rather thin and likely date to at least to the mid-1800s or earlier. These concentrations indicate that some of the representative glass probably dates to the mid-1800s. This distribution suggests that the washhouse windows represented by Concentrations C-2 and C-5 were salvaged from an earlier outbuilding, such as the detached kitchen. It also confirms that window glass represented by Concentration C-3 was likely associated with the detached kitchen.

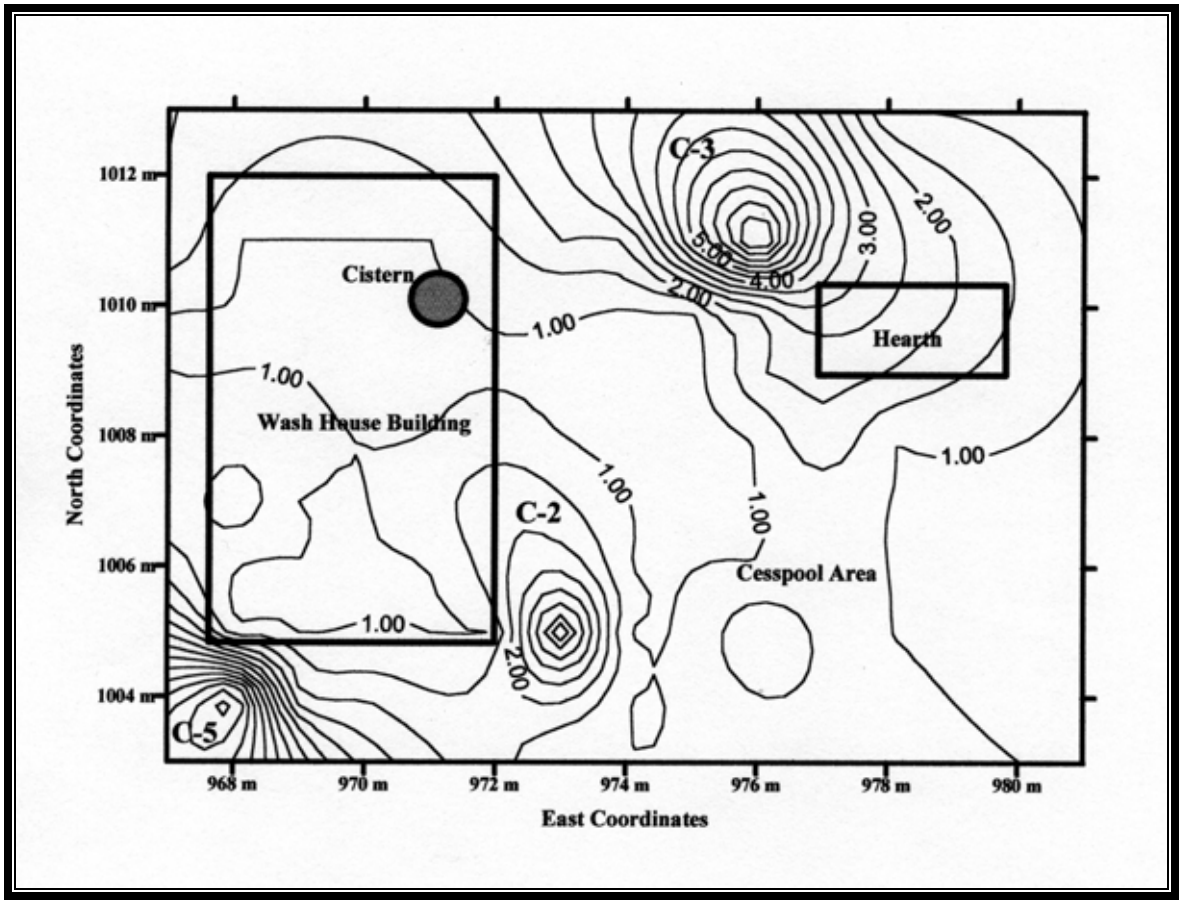

Figure 42. Distribution of Window Glass ≤ 1.19 mm Thick.

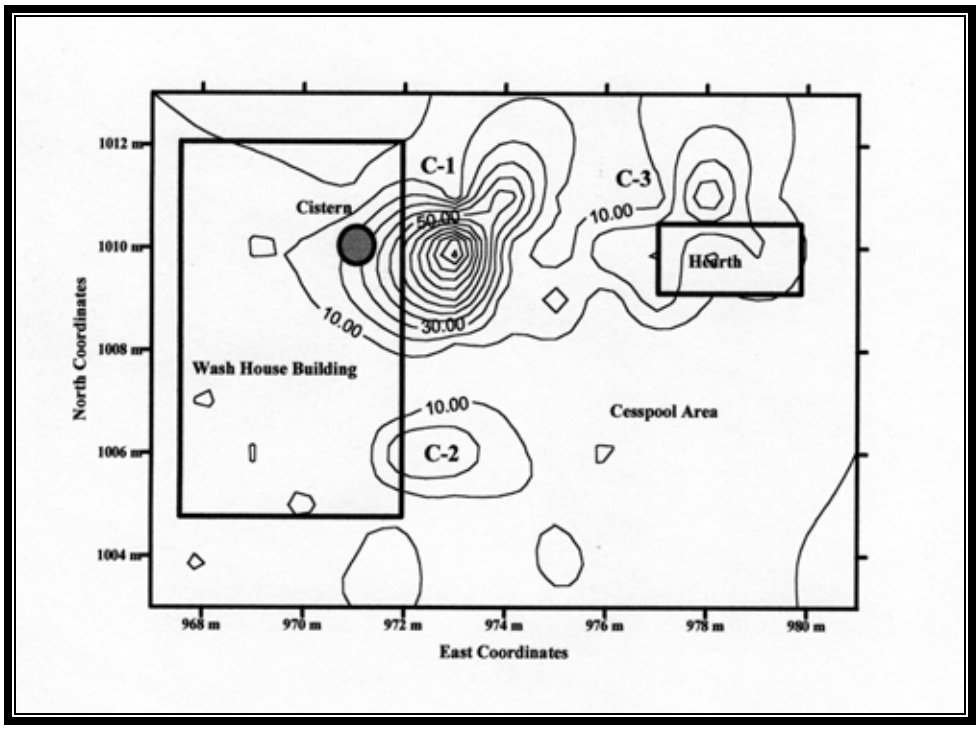

Figure 43. Distribution of Window Glass ≥ 1.58 mm Thick.

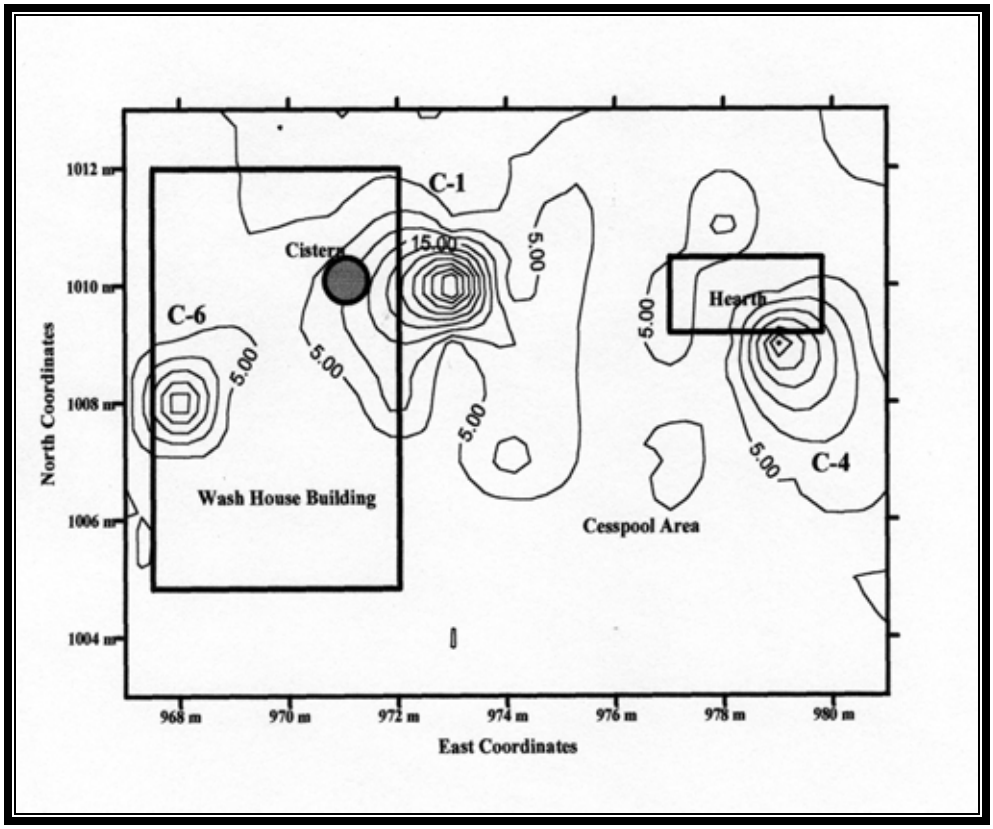

Figure 44. Distribution of Window Glass Between 1.19 and 1.58 mm Thick.

The distribution of the glass by thickness provides information about window chronology and replacements or repairs. A very large concentration (C-1) of window glass was located along the east wall of the building to the north of the doorway defined by the brick threshold near the location of the cistern. Based on the large concentration of thin window glass (<1.19 mm) it is likely that rather early window glass dating prior to 1845 was used in a window at this location. However, based on a large concentration of much thicker window glass (>1.58 mm) at that same location, the window was either replaced entirely or many of the panes had been replaced to repair it later in time (McKelway 1992).

Another large concentration of window glass (C-2) was located along the east wall on the south side of the doorway. Most of the glass in this concentration was rather thin (<1.58 mm), indicating that glass dating to the mid-1800s was used in this window. However, very little thick window glass (>1.58 mm) was found, which suggests that few of the panes had been replaced.

Since the archaeological data and the oral history has placed the construction of the washhouse in the 1880s, it is possible that the windows that date to the early to mid 1800s were salvaged from an earlier outbuilding elsewhere on the property, such as the detached kitchen, and reused in the washhouse. The two windows in the east wall of the building also were likely salvaged from another structure. Furthermore, a window located at the southwest corner of the building, which dates to the mid 1800s, also could have been a window salvaged from an earlier outbuilding.

Summary

Overall, the window glass data indicates the possible locations for several windows in the washhouse and provides a chronology for them. Although no windows are visible along the west wall of the building in the historic photograph, windows do appear to have been located along the east and possibly south wall. It is most likely that a window was located along the east wall near the northeast corner of the building adjacent to the cistern. It also is possible that other windows were located near the southeast corner of the building along the east wall and along the south wall. A small window also may have been located on the west wall near the door, according to Concentration C-6, but it was not visible in the historic photograph.

The window glass data also suggests that most of the window glass used in the washhouse was probably recycled from older outbuildings in the area, most likely the detached kitchen. However, the presence of some late nineteenth century window glass indicates that perhaps some of the panes in the window were replaced at that time.

Some of the window glass concentrations may not be directly associated with the washhouse. A window glass concentration located near the area of the detached kitchen (C-3) was probably associated with that structure and not the washhouse. Also, a concentration near the brick hearth (C-4) suggests that the cesspool may have been used as a dump for some window glass during demolition of the washhouse.

Nails

The historic photograph of the washhouse provides abundant information about the construction and look of the washhouse (Figure 40). Examination of this photograph indicates that the washhouse was a wood frame building with horizontal clapboard siding and possibly a wood shake roof. An analysis of the nails recovered from the washhouse area provides additional information concerning when and how the building was constructed.

A total of 13,417 nails and nail fragments was recovered. Sixty-three percent of the nails were identified for type, while 37 percent were unidentified. The identified nails consisted of nearly an equal amount of wire nails (52 percent) and machine cut nails (47 percent). A small amount (1%) of the nails were identified as wrought. The large amount of wire and machine cut nails indicate that both types were extensively used to construct the washhouse.

Machine cut nail production drastically dropped from the 1880s to 1905, as the production of wire nails increased (Adams 2002). Based on the high percentages of machine cut and wire nails associated with the washhouse, it is likely that the construction of the building took place during the transition between the two types in the late nineteenth century. This date is consistent with the oral history, which indicates that it was built in the 1880s.

Another explanation for the high percentages of both nail types is that the machine cut nails originated from the detached kitchen located next to the washhouse. It is possible that the debris field from the demolition of the detached kitchen extended into the area where the washhouse was built. However, the percentages of machine cut (50%) and wire nails (50%) from the northern portion of the washhouse area were nearly identical to the percentages for the entire washhouse area, with slightly more machine cut nails. The percentages of nail types from the washhouse area were drastically different than percentages for the detached kitchen area, which consisted overwhelmingly of machine cut nails (94%) (Stottman and Watts-Roy 2000). These proportions suggest that most of the nails recovered from the washhouse area were associated with the washhouse building.

The spatial distribution of machine cut nails shows high concentrations within the location of the washhouse building toward the south half of the building and to the east of the building near the brick hearth (Figure 45). The distribution of wire nails indicate that the highest concentrations are located within and southwest of the washhouse (Figure 46). The concentration within and south of the washhouse is most likely associated with debris from the demolition of the building. This distribution indicates that debris from the washhouse was likely deposited in a southward direction when it was demolished. The concentrations of machine cut nails in this area indicate that these nails were likely used in the construction of the washhouse. The concentration of machine cut nails

located east of the washhouse near the brick hearth also was likely associated with the washhouse building, but also could have originated from the debris associated with the demolition of the detached kitchen, which may account for the slightly elevated percentages of machine cut nails in that area. The distribution of wire nails shows no concentration in that area of the site, which suggests that they were primarily associated with the washhouse.

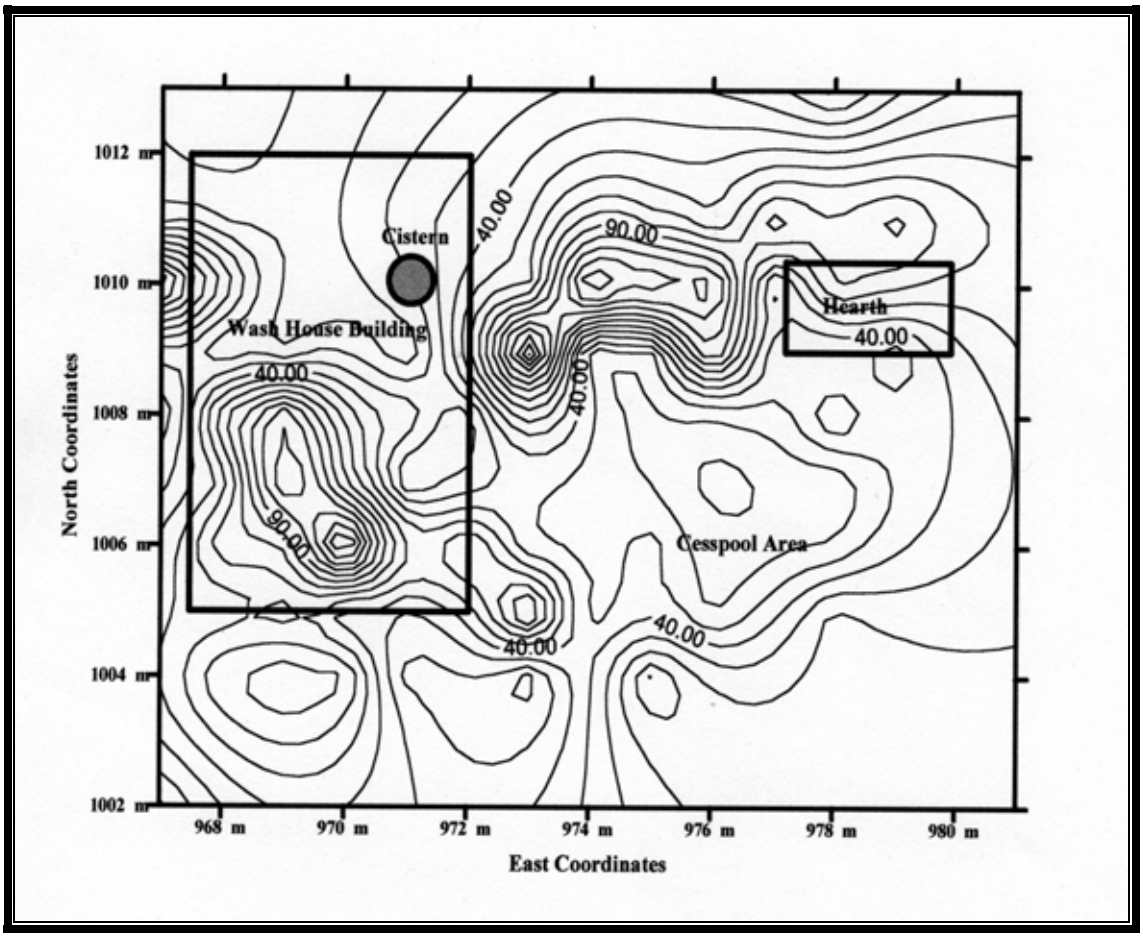

Figure 45. Distribution of Machine Cut Nails.

Examination of the spatial distribution of whole nails by functional categories provided important information concerning the construction of the washhouse building. A total of 2,981 whole nails was recovered from the washhouse excavations. They ranged in size from less than 2d to 80d (Table 39). Almost one third of the nails were classified as siding nails and about one quarter were roofing nails. The remaining nails were associated with framing and flooring (Table 40).

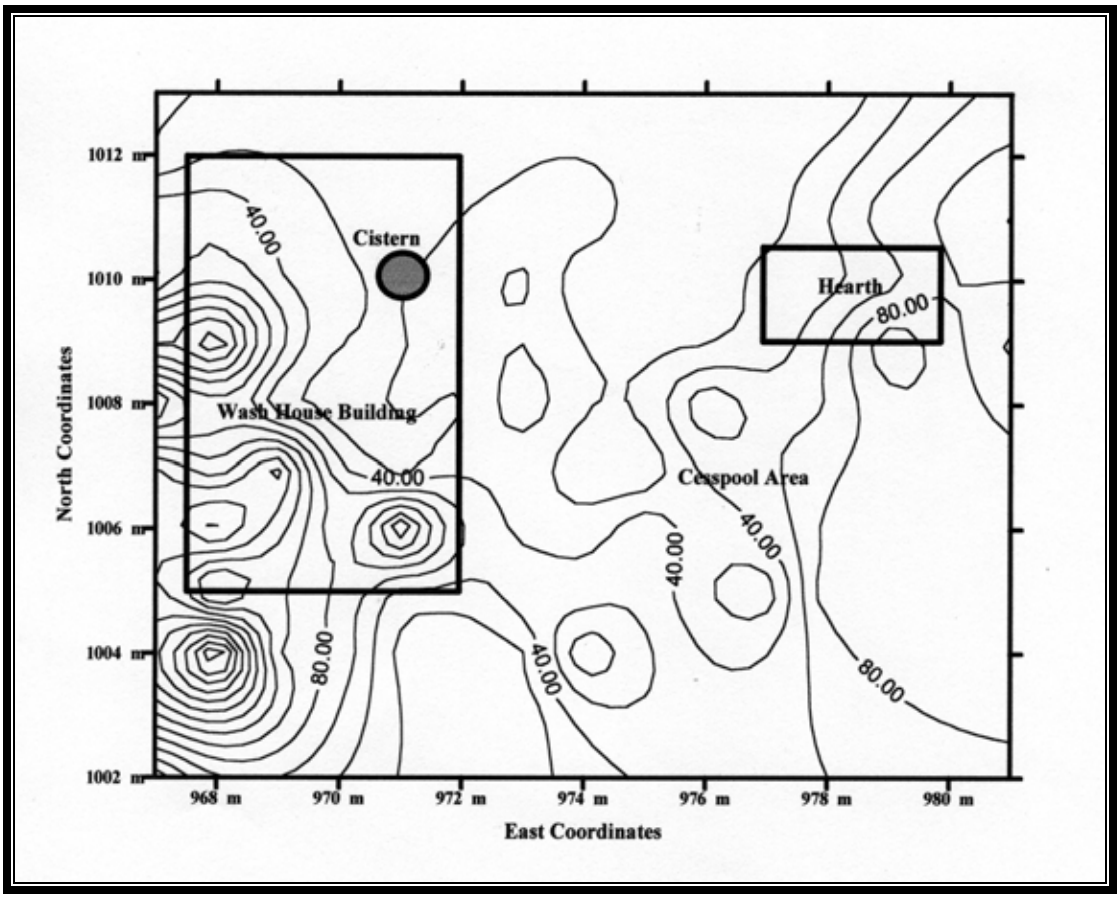

Figure 46. Distribution of Wire Nails.

Table 39. Whole Nail Sizes.

Nail Size (Penny Weight)	Number of Whole Nails	Percentage
2d	213	7.1
3d	147	4.9
4d	201	6.7
5d	226	7.6
6d	390	13.0
7d	231	7.7
8d	362	12.1
9d	399	13.4
10d	183	6.1
12d	177	5.9
16d	155	5.2
20d	163	5.5
30d	83	2.8
40d	19	0.6
50d	20	0.7
60d	1	<.1
70d	9	0.3
80d	2	0.1
Total	**2,981**	**99.8**

Table 40. Whole Nail Categories.

Nail Category	Number of Whole Nails	Percentage
Roofing (2d-5d)	787	26.4
Siding (6d-8d)	983	33.0
Flooring (9d-10d)	582	19.5
Framing (12d-80d)	629	21.1
Total	**2,981**	**100.0**

The large amount of siding nails verifies the presence of siding, as depicted in the historic photograph (Figure 40). In the nineteenth century it was common for frame outbuildings to have wood siding, particularly horizontal or vertical siding. The large amount of roofing nails was expected, as most buildings required a large number of nails to hold individual roof shingles in place. It is also possible that roofing type nails are over represented in the whole nail assemblage, as shorter nails would probably be less likely to break than longer nails. However, the abundance of roofing nails suggest that the roof was most likely made from wood shingles, as they required a large number of nails to attach each small shingle to the roof. This evidence verifies the roof type depicted in the historic photograph.

While the percentage of flooring nails is less than the roofing or siding types, it still represents a large number (n=582) of nails. The large number of flooring nails, coupled with the absence of a hard packed dirt floor surface, and the lack of a brick floor suggests that the washhouse had a wood floor. Also the style of construction, with the building supported by piers, suggests the presence of a wood floor. This type of floor also would be necessary to cover the clay drainpipe that ran under the building.

The historic photograph of the washhouse suggests that it was a frame structure. The large amount of framing nails recovered from the washhouse area indicates that the building was constructed using the balloon framing technique.

The spatial distribution of whole nails can provide information that aids the interpretation of nail category percentages. Concentrations of nails representative of particular nail categories may be indicative of specific building features, such as a door or window framing (McKelway 1994). Also, the distribution of nail size categories could provide additional information concerning the presence of flooring, siding, and roofing. During this discussion, it must be kept in mind that the observed nail distribution patterns are representative of the time after the washhouse was demolished. The process of demolition certainly has an effect on where nails are discovered in the archaeological record. Thus, the spatial distribution of nails may provide some insight into the demolition of the building.

The spatial distribution of roofing nails is consistent with the placement and use of nails on the roof of a structure. Roofing nails recovered during the excavations were distributed fairly evenly throughout the washhouse area, except along its northern edge, which had fewer roofing nails (Figure 47). The smaller number of roofing nails located along the northern edge tends to confirm the orientation and style of roof used on the structure, as depicted in the historic photograph (Figure 40). It shows that the roof was

slanted from the north to south. It is possible that the orientation of the roof would have produced higher concentration of nails towards the south, down the slant during demolition. The observed pattern could indicate that the structure collapsed towards the south during demolition. A similar distribution of roofing nails was documented in association with the detached kitchen (Stottman and Watts-Roy 2000).

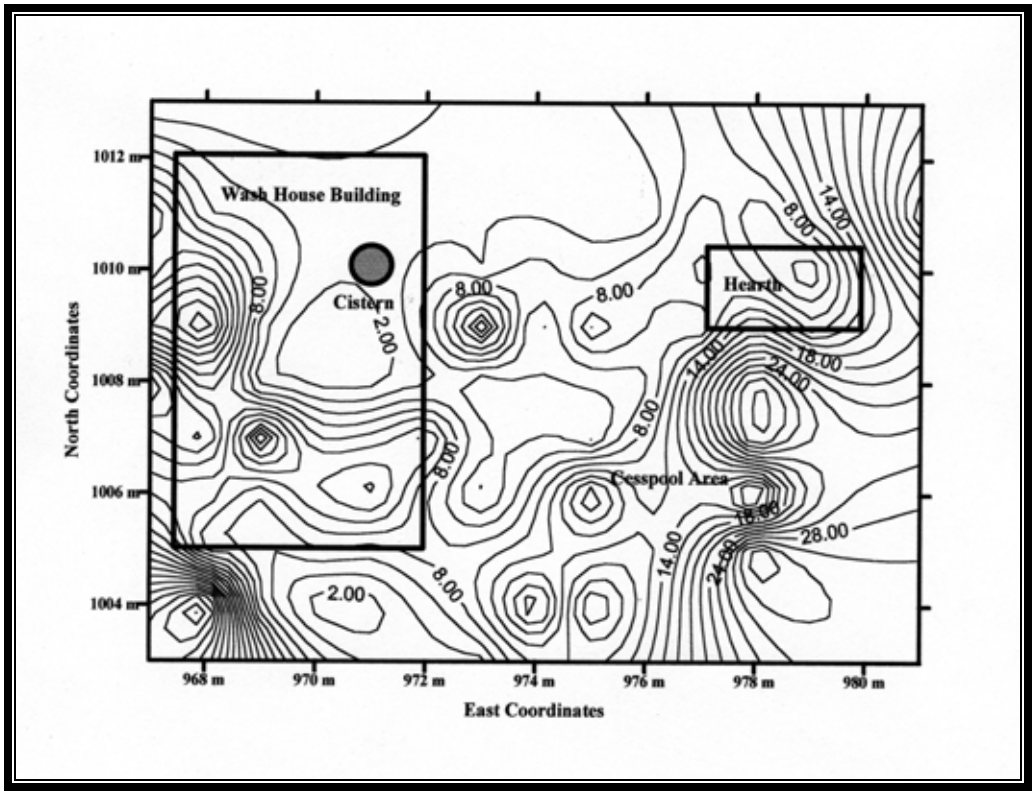

Figure 47. Distribution of Roofing Nails.

The distribution of siding nails across the washhouse area indicates that most of these nails were concentrated around the location of the building's walls, particularly along the western and southwestern sides (Figure 48). Like the roofing nails, it was expected that siding nails would be widely distributed across the site because of their use around the entire structure. The higher concentrations of siding nails close to the washhouse location and towards the southwest may be a result of the demolition of the building. It is likely that the washhouse collapsed towards the southwest, which resulted in the depositing of the siding nails in that area. However, a concentration of siding nails along the eastern wall of the building suggests that parts of that wall may have collapsed in place. The distribution also shows a large amount of siding nails in the southeastern portion of the washhouse site away from the location of the washhouse building. It is possible that these nails were associated with a dump area or even another outbuilding. A nineteenth century smokehouse was located near this portion of the washhouse area. This building appears in the historic photograph, which shows that it had wood siding (Figure 4). A large number of roofing nails found in this area also may be associated with the smokehouse (Figure 47).

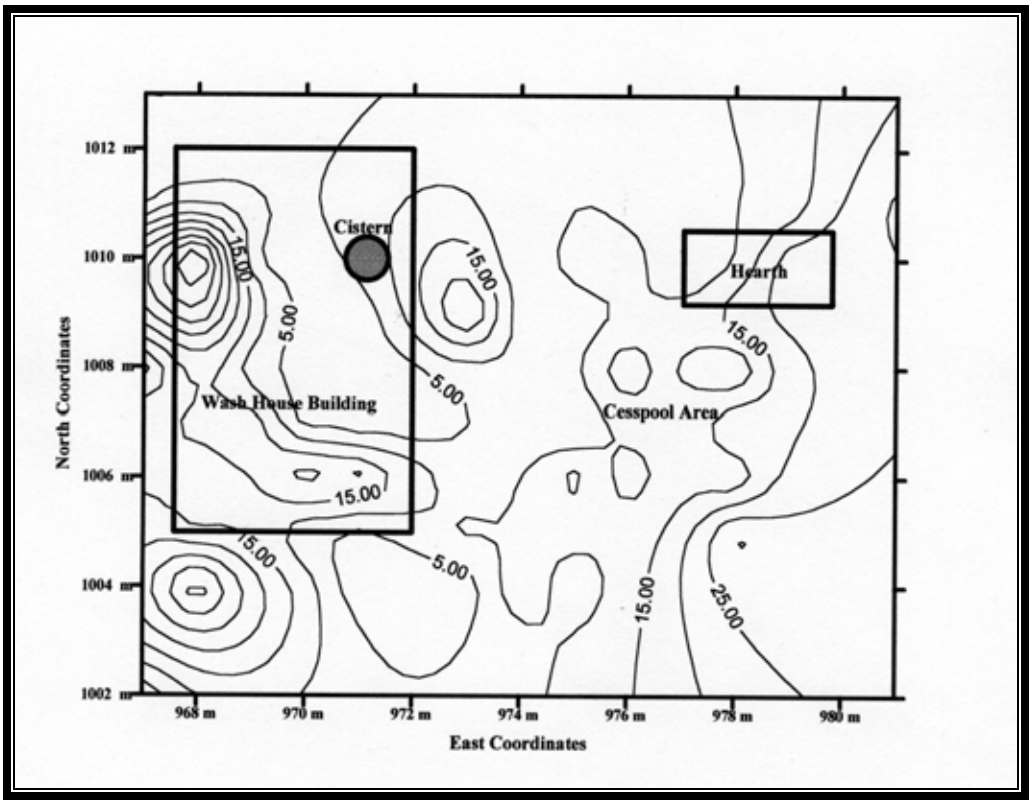

Figure 48. Distribution of Siding Nails.

Flooring nails were found throughout the washhouse area, with concentrations located within the washhouse and near its southwest corner (Figure 49). Flooring nails would be expected within the building, but not outside of it, as was the case for the siding and roofing nails. Since flooring nails are predominately used for the floor, they were placed rather low on the building and concentrations within the immediate washhouse area are directed towards the south and southwest, as were the other nail groups. The concentration of flooring nails within the building lends more evidence to the possibility of the washhouse having a wood floor. As with other nail category distributions, the primary concentrations were towards the southwest, possibly indicating that the washhouse collapsed in that direction during demolition. However, as with the roofing and siding nails a large number of flooring nails were located in the southeastern portion of the washhouse area, which may be associated with dump area for architectural debris from the demolition of the washhouse or with smokehouse.

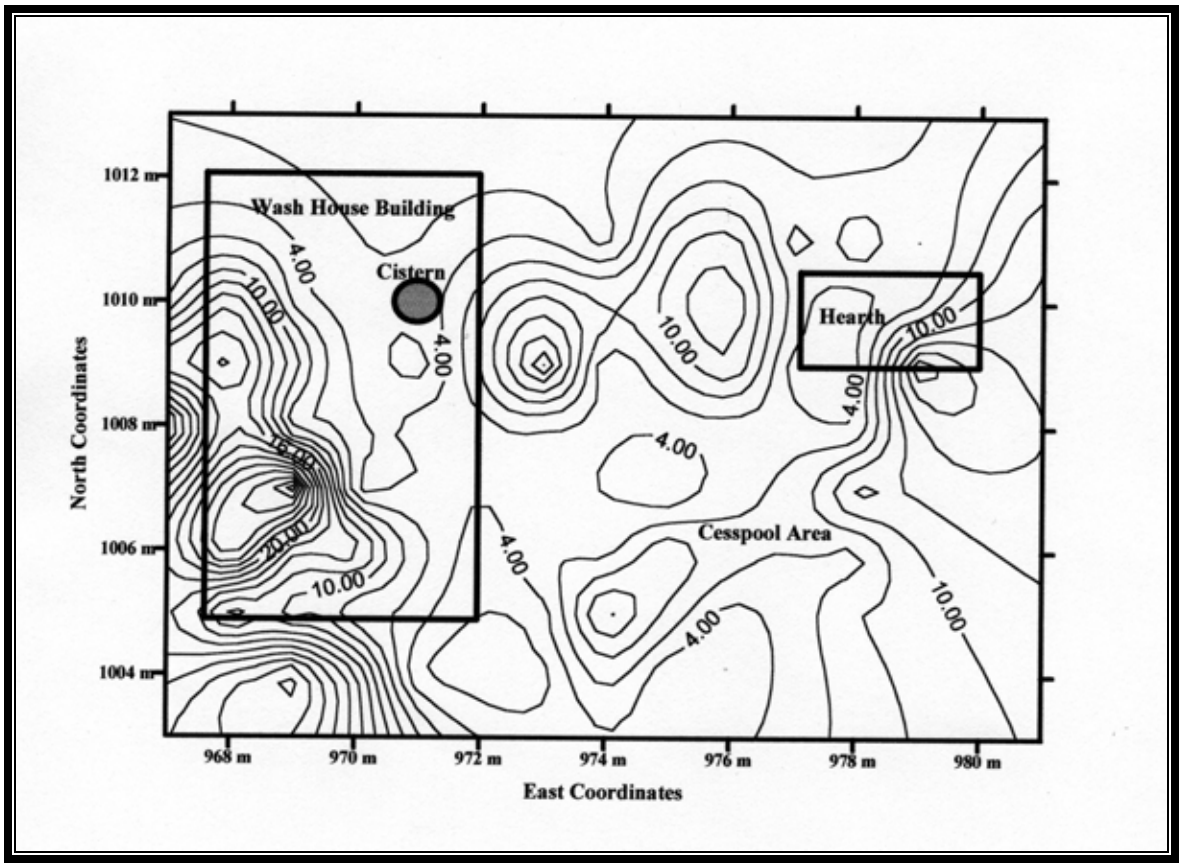

Figure 49. Distribution of Flooring Nails.

The distribution of framing nails shows that concentrations were located along the western wall, southwestern corner, and south wall of the washhouse building (Figure 50). A large number of the framing nails were likely used in the framing of the building, particularly at the corners and along the walls. However, the distribution of the nails is likely more indicative of the collapse of the building towards the south and southwest during its demolition. The concentration of framing nails along the east wall of the building may represent the location of a door or window, which would have been framed out within the wall, most likely using larger framing nails.

A large concentration of framing nails also was located adjacent to the hearth located to the east of the washhouse. This concentration may be representative of a wooden kettle crane or other apparatus used in washing activities. As with the other discussed nail types, a relatively large number of framing nails were found in the southeastern portion of the washhouse area. They also may have originated from a dump area or the nearby smokehouse.

Summary

Overall, the nail data recovered from the washhouse area has provided important information concerning the construction and demolition of the washhouse. The nail types recorded indicate that the washhouse was constructed sometime from the 1880s to 1900 with both machine cut and wire nails. It is possible that some of the older machine cut nails were recycled from other outbuildings. Some of the machine cut nails could have been associated with the demolition of the detached kitchen and possibly the smoke house both located nearby. However, it is possible that the southeastern portion of the washhouse area was used as dump site for architectural debris during the demolition of the washhouse.

Based on the nail functional category data, the washhouse building was probably a balloon frame structure, with a wood floor, siding, and shake roof. This data confirms what is known from the historic photograph of the building. Spatial concentrations of some of the framing nails may correspond to a kettle crane in the area of the brick hearth and the presence of a door or window along the east wall, which corroborates the interpretations from other archaeological data.

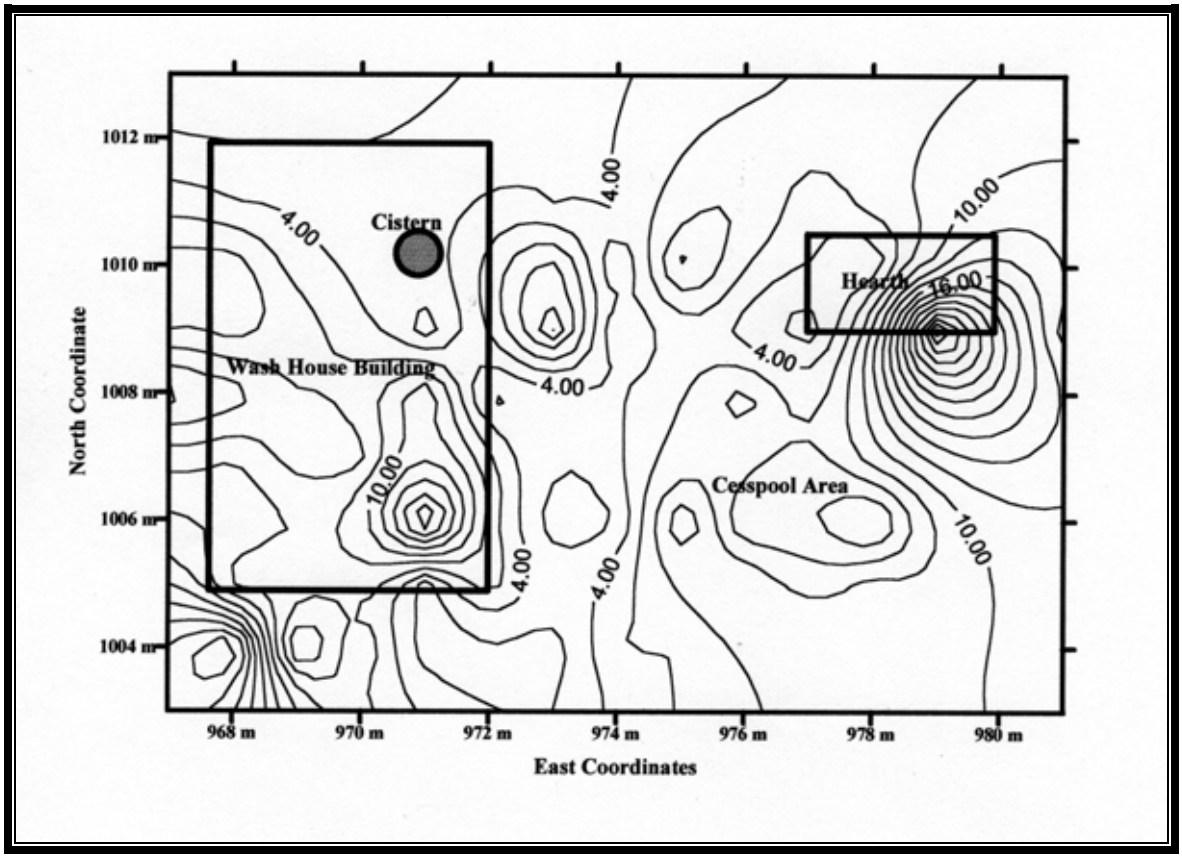

Figure 50. Distribution of Framing Nails.

Architectural Summary and Interpretation

The archaeological architectural data corroborated what was already known about the building from photographic and oral history sources. The washhouse was probably constructed sometime during the 1880s and demolished by the 1920s, with much of the debris falling towards the southwest. The washhouse was a balloon frame building with a wood floor, horizontal siding, and wood shake roof. The building measured approximately 6.1 x 4.6 m (20 x 15 feet). It had a primary foundation of dry-laid brick and stone piers, but also included a partial lime mortared brick foundation.

Doors were located in the middle of the west and east walls. Examination of the photograph indicates that the west wall door was a double swinging door with strap hinges. Based on the length of the mortared brick threshold, the door in the middle of the east wall also was a double door entrance. Windows were located along the east wall near the northeast and southeast corners. A small window also may have been located along the south wall near the southwest corner of the building. A water cistern was located inside of the building, which according to the photograph was fed by an overhead gutter from the main house.

The building included a subfloor drainage system that served not only the washhouse, but also another unknown outbuilding that was located to the west of the washhouse. Though this building may have been the second detached kitchen, this could not be determined. A shallow depression located south of the hearth and east of the building seems to have been an important part of the washhouse complex. This depression was most likely a cesspool that retained wastewater from the drainage system under the washhouse. A subfloor drainage gutter was found at a washhouse excavated at Shakertown of Pleasant Hill (McBride 1995), which represents the only other known washhouse excavation in Kentucky. Perhaps, such drainage systems were common features of washhouses in the Ohio Valley.

Recycled materials obtained from other outbuildings were probably used to construct the washhouse including nails, windows, hardware, wood, and brick. Many of these materials were probably recycled from the detached kitchen, which was demolished just prior to the construction of the washhouse.

Among the other architectural features associated with the washhouse were a brick outdoor hearth and areas of brick pavement. While the brick pavement would have been a walkway that connected different buildings and work areas, the presence of the hearth indicates that outdoor work activities were associated with the building. The brick hearth was rectangular with a brick pavement at the east end. It was large enough to accommodate a very large kettle or possibly two smaller kettles. A pavement at the east end of the hearth may have been a standing pad for workers or could have been a foundation for a small chimney. A posthole located adjacent to the northeast corner of the hearth is most likely the remains of a wooden kettle crane, which indicates the use of

large kettles. A concentration of framing nails located in this same area may be associated with the crane or another wooden apparatus used near the hearth. The brick pavement connected the east doorway of the building to the outdoor hearth. The pavement extended from the hearth towards the north and the location of a fence. A small trench feature with a posthole was found at the terminus of the brick pavement. This feature may be related to fencing visible in the photograph of the washhouse and smoke house, possibly representing the location of a gate.

THE WASH HOUSE COMPLEX

While oral history has always referred to the building in the historic photograph as the "washhouse," the archaeological excavations conducted at the site suggest that in addition to washing activities it also was used for other activities.

The historically known and most obvious function of the washhouse complex is as a laundry. The artifacts associated with this function were assigned primarily to the clothing functional group. This group includes not only parts of clothing, but also items related to the manufacture, repair, and embellishment of clothing. Most of the clothing group artifacts (n=182) were buttons (n=72). The buttons were very diverse in materials, styles, and function. Materials used in their manufacture included bone (n=9), ceramic (n=25), glass (n=4), shell (n=9), metal (n=5), rubber (n=1), and plastic (n=19). Most of the ceramic and glass buttons were probably associated with under garments or women's garments, while others were likely associated with men's shirts, pants, and coats. The variety of buttons may be an indication of the laundry function of the washhouse complex, as clothing from all members of the Moremen household would have been washed, pressed, and mended there. Other clothing artifacts recovered included buckles, clasps, hook and eyes, belt fragments, straight pins, safety pins, part of a clothes iron, and a thimble.

The recovery of other artifact groups, suggests that other domestic activities were undertaken in the washhouse area. The large amount of kitchen group artifacts (n=2,783) is somewhat unexpected at a laundry. These artifacts included mostly glass bottle and jar fragments, and ceramic sherds. Large amounts of these artifacts are typically associated with kitchens and other areas of houses, where dinning and food preparation took place. Perhaps some of the kitchen items, such as stoneware crocks or glass bottles and jars, were used in association with a laundry to store soaps, detergents, or sewing supplies. However, the large amount of kitchen group artifacts is probably more indicative of the area's use for washing dishes. In fact, it is likely that most washing activities took place in the washhouse area, including washing clothes and dishes, and possibly personal bathing. It also is possible that many kitchen group artifacts were dumped in the washhouse area when the building was demolished.

Other artifacts, such as personal and entertainment items, which included marbles and doll parts, were recovered from the washhouse area. The presence of these artifacts suggests that perhaps activities related to childcare also took place in the vicinity of the washhouse. Overall, the artifacts from the washhouse seem to represent a wide range of

activities and functions, which are probably more indicative of a work yard, than a building with a specific function. The archaeological evidence indicates that the washhouse had several functions and was not dedicated solely to washing. In essence, the washhouse is most viewed as a domestic outbuilding that served a variety of functions.

To summarize, the archaeological evidence indicates that washing activities at Riverside during the late nineteenth century were not confined solely to the building and extended to the yard spaces around it. The outdoor hearth suggests that a large part of the washing duties, such as heating water, took place beyond the building. The large amount of domestic artifacts, such as kitchen, personal, and activities group artifacts, suggests that the area was used for much more than a laundry. It is likely more appropriate to refer to the washhouse and its yard area as the washhouse complex.

This lack of an exclusive washhouse building seems to be common in the historical literature concerning washing and laundry activities (Kennedy and Macintire 1999). As previously mentioned, a small frame outbuilding was identified as a possible washhouse on the Issac Miller Farm in Spencer County, but buildings labeled as such are rare. Even at the Pleasant Hill Shaker community in Mercer County, where each family group had its own washhouse, other activities, such as making soap and candles, are indicated in the documentary and anthropological records as having taken place at the washhouse (McBride 1995). Washing and laundry activities were usually incorporated into other outbuildings, like kitchens and springhouses. The previously mentioned springhouse at the John Herr House in Jefferson County is a prime example of an outbuilding with an incorporated laundry (Figure 5). Vlach (1993) illustrated several examples of laundries in his discussion of plantation outbuildings, but he makes no mention of buildings specifically used for that purpose. Instead Vlach (1993:34) discusses laundry activities in the context of the plantation yard. He states:

> Because the structures surrounding the yard routinely included at least the kitchen, dairy, smokehouse, and well, it follows that cooking meals and cleaning up were the most common chores preformed there. Furthermore, given the scale of cooking and cleaning on the larger plantations, much of that work had to be done in the yard. The yard, then, served as an extension of the kitchen and laundry.

At nineteenth century domestic sites, it is likely that the laundry activities were conducted just about anywhere water and a place to heat it was available. This may answer a question that arose when conducting this research, where was the washing done at Riverside prior to the construction of the washhouse in the 1880s? The detached kitchen and surrounding yard most likely served as the Antebellum laundry facility. The kitchen provided a place to heat water and the adjacent yard the space to do the work. Artifacts associated with this activity, such as, a large amount of clothing artifacts (buttons, pins, clasps, and buckles) and a part of a clothes iron was recovered from the detached kitchen site (Stottman and Watts-Roy 2000). After the demolition of the detached kitchen the cooking and cleaning aspects of domestic work were separated, as a

new detached kitchen was built south of the main house and the former kitchen area became the washhouse complex.

With this in mind, it is unlikely that the so-called washhouse at Riverside was dedicated exclusively for laundry activities. It is more likely that the structure was an elaborate superstructure for the cistern, where occasionally some washing could be done. The bulk of the laundry activities probably took place behind the structure in the yard. Rachel Moremen, the daughter of Israel and Nannie Moremen, described her home at Riverside in the early 1900s. Her description provides a rather romanticized view of work undertaken in the vicinity of the washhouse:

> As one rides down the lane, one can catch a glimpse of the red roof of the house over the green tree tops and the many outhouses, which give one the idea that there is a little village, or that the time before the Civil War has come back, with the pickininnies playing about the door steps and their mothers crooning a doleful melody over their washtubs (Moremen 1904).

Inherently connected to laundry activities and the yard was the task of making soap. "The yard was the place where big jobs, such as, soapmaking and candlemaking was done" (Vlach 1993:34). "Soapmaking also required a collective effort; a gang of slaves was needed to lift the kettles, to keep fires burning, and to carry out the various stages of production." A former slave (Marie Askins Simpson) in Missouri, recalled the process (Rawick et al. 1977:231-232; Vlach 1993:34):

> The ash-hopper was made of boards, a sort of trough that was set slant-wise over a big iron kettle. The wood ashes from the fireplace were dumped into this hopper. Hot water was poured over the ashes and they drained down into the kettle. It dripped slowly. When we though the lye was strong enough, we got a turkey feather…and if the lye from the hopper was strong enough it would eat up the turkey feather. Then the fire was started under the kettle. Into this big kettle of boiling ash-lye, we stirred in "cracklin". This was the fried out fats left over from hog killin'. Old meat rinds, old meats that had turned strong, any kind of fat meat that was not used to eat, was thrown in to this hot boiling lye. When the meat did not melt any more we know that there was enough fat in the lye to make soap. This was boiled down until it got "ropey". We tested it by dripping some of it in cold water. If it floated on top, it wasn't done. If it sunk to the bottom, we pulled the fire from under it and let get cold. That was called hard soap. Next day, it was cut into chunks, placed on boards and put in the smoke house or attic to dry.

There is a long history of soapmaking at Riverside. The Moremen family was known to make large amounts of soap to trade with passing riverboats, which inspired Riverside's nickname of "Soap Landing." A 1890s family cookbook featured two recipes for making soap (Linn and Neary 1999). In a memoir, Horace Moremen (n.d.:2)

describes his mother Rachel's soap making operation at Glen Fount, the Moremen's first home in Brandenburg.

> We had what was called an ash hopper in a little house to itself and all the ashes from all the fires were brought and put in that ash hopper. It was wide at the top and came to a point a the bottom and under it was trough to catch the lye and carry it to a barrel and at the proper time for making soap, water was poured on the ashes and the lye was boiled in the kettle till it was strong enough to make soap and my mother always had barrels of soap, both hard and soft.

It is probable that the hearth behind the washhouse served as the main soap making area at Riverside, as Rachel continued the Moremen soap making tradition. However, it is also possible that the two fire pit features (Features 12 and 13) could have served as hearths for kettles used in soapmaking. Vlach (1993:34) notes: "the soap made on plantations was, of course, intended to be used for washing clothes or dirty dishes. Much of this washing would be done in the same iron kettles used to make the soap or in large wooden tubs kept in the yard." The fire pits were both linear and featured a line of burned clay, indicating that they were used to contain fire. The northern most fire pit (Feature 12) contained remains of a large charred log, and bricks arranged in such a manner as to support the burning wood. Figure 51 is a photograph of a plantation yard in Texas, which shows how kettles could have been hung over linear fire pits.

Figure 51. Kettles Over a Linear Fire Pit at Seward Home in Texas (Vlach 1993).

The fire pits may have been used in addition to the brick outdoor hearth to accommodate the large volume of soap that was to be made. However, since these features date to the twentieth century, they also could have been used to produce wood ash to make lye as part of the soap making process. At that time, coal was the main fuel for Riverside's fireplaces and wood ash may not have been as plentiful on the farm as it was during the nineteenth century. These two features illustrate the continual evolution and use of the yard as a laundry and soapmaking facility.

Washhouse Complex Summary

While the archaeological investigations of the Riverside washhouse area have generated new information concerning the architecture of the washhouse, this research also indicated that the task of washing was not exclusive to this building. Several features, such as the brick hearth (Feature 1) and two fire pits (Features 12 and 13), suggest that washing activities also took place outside. The washhouse and associated activity area might be more appropriately referred to as the washhouse complex, which included a building, water source, a heat source, and space to do the work. Architectural studies of plantation outbuildings indicate that it was rare for washing activities to be housed in a structure dedicated for that purpose (Kennedy and Macintire 1999; Vlach 1993). Washing activities or laundries were often housed in buildings used for other purposes, such as kitchens or springhouses, or took place in the yard (Vlach 1993). It appears that washing activities at Riverside took place within a building and in the yard. However, it is not likely that the washhouse was exclusively used for washing. This building was probably a multipurpose work building that was mainly used for washing, hence its designation as "washhouse" by generations of Moremen family members.

Aside from washing tasks, such as washing clothes and dishes, the washhouse complex was the location for a variety of other work. The outdoor hearth and fire pits were likely associated with soapmaking, as well as, washing. The Moremen family was known for their soapmaking and it is believed that it was an important activity at Riverside. Furthermore, clothing related artifacts found in the washhouse area suggests that the mending and pressing of clothes was done there. The presence of children's toys indicates that the washhouse area also functioned as a regular yard where children played or were minded by workers. Based on the historic photograph of the washhouse (Figure 40), it appears that the yard around the building also was used for keeping fowl.

WORKING AT THE WASHHOUSE

Historical accounts indicate that washing was one of the most arduous chores on a plantation. A slave from Georgia recalled: "We took the clothes out'n the suds, soaped'em good and put'em on the block and beat'em with a battlin' stick, which waz made lak a paddle. On wash days you could hear them battlin' sticks pundin' every which way" (Fox-Genovese 1988:168; Vlach 1993:35). The task of doing laundry on a plantation was typically assigned to slave women. In many cases, the work of washing and ironing clothes was so demanding that it left little time for other tasks and had its

own title. The title laundress was commonly used for those who performed the washing and ironing duties. Ironing clothes was a particularly skilled task. Buttons were easily broken off during ironing and it was demanding work to press clothing to the standards of the plantation mistress (Fox-Genovese 1988:165). The duties of the laundress also included sewing on buttons and mending clothing in general. While the plantation mistress participated in many aspects of the domestic work, particularly the manufacturing of clothing, they did not typically do laundry or wash dishes (Clinton 1982:26).

In the Antebellum South, the task of washing was the work of enslaved African-American women. This was likely the case at Riverside prior to the construction of the washhouse. Riverside's slaves likely performed washing in or around the detached kitchen and associated yard. Several of Farnsley's (n=14) and later Moremen's (n=23) enslaved African Americans probably did this work. After the demise of the detached kitchen, sometime in the 1870s, the task of washing at Riverside changed. The washhouse complex was created, and there were no longer slaves to do the unwanted chore of washing. However, the title and work of the laundress often followed slaves into the world of Postbellum America. African-American women washed clothes for a living in the cities, farms, and occasionally on their former plantations. Despite being paid for the work, washing was still a task that was not desired by most women and it was very difficult to make a living by doing it.

> Although laundering involved little in the way of equipment or initial investment, it hardly paid a woman a reasonable wage for her considerable expenditure of energy. Most women made no more than a couple of dollars a week for work that was exceedingly heavy and hot, and especially unpleasant in the South's already steamy climate. A woman would usually collect clothes on a Monday from two or three families. She set up a large pot in the yard of her house and instructed the children to help her draw water. The clothes had to be boiled in the pot, scrubbed on a washboard, rinsed, starched, wrung out, hung up and ironed (Jones 1985:125).

Paid servants or tenants likely did washing at Postbellum Riverside. However, it is unclear to what extent the former plantation mistress, Rachel Moremen, participated in this activity (Figure 52). There is evidence that Mrs. Moremen did not shy from the domestic tasks at Riverside. In the 1880 U.S. Census, Rachel Moremen was listed as 68 years old and keeping house. Moremen family members recalled her domestic abilities. "My mother was not quite sixteen when she married but she knew about cooking, weaving, and spinning, knitting, and sewing" (Horace Moremen n.d.:1). Rachel also had recipes for making soap. These recollections demonstrate that Rachel, at least had knowledge of the domestic work. Whether she actually performed much of the work herself or not, she at least wanted to give the impression that she did. The family history and photographs seem to suggest that domestic work was a part of life for Moremen women and that it was a part of her identity. The photograph of Rachel in the yard with

her fowl, and the washhouse and smokehouse in the background (Figures 4 and 40) certainly give the impression of her domestic work.

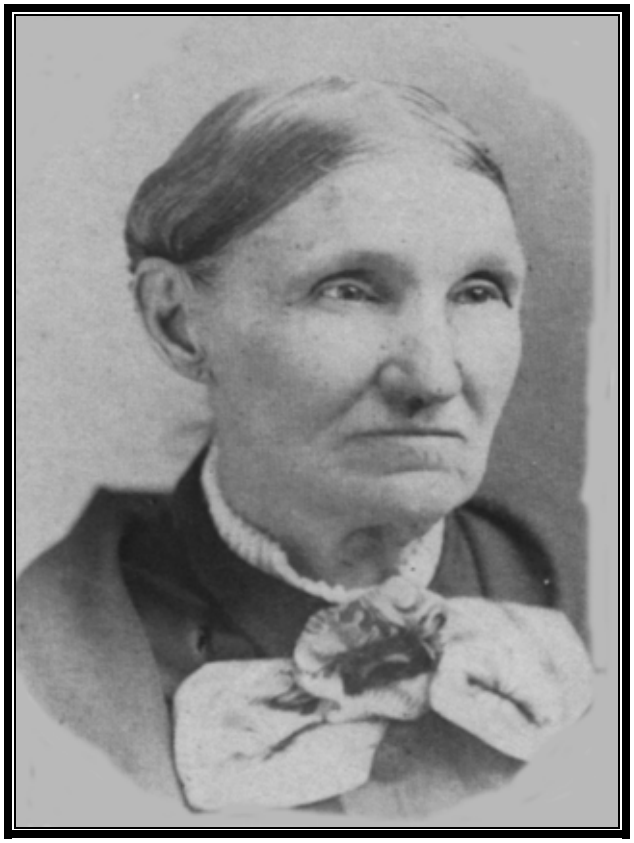

Figure 52. Photograph of Rachel Moremen ca. 1870.

Historical records and oral history suggest that Mrs. Moremen enlisted the help of family members and servants to help with the daily domestic and agricultural tasks associated with running a farm. In 1880, there were a variety of people who could have assisted her (Table 41). Although Alanson and Rachel were rather elderly (76 and 68 years old, respectively) at this point in time, some of their children and grandchildren were living at Riverside. Son, Israel Putnam Moremen helped, if not, ran the agricultural operation. He eventually owned the property by 1886 shortly after his marriage to Nannnie Storts in December of 1885. Elizabeth Graham, a daughter of Alanson and Rachel, also lived on the farm. Her husband Robert was listed in the 1870 U.S. Census as a tobacco grower on Moremen's property. It is possible that Robert passed away and Elizabeth stayed with her parents at Riverside, along with her youngest child Roberta. It is likely that both Elizabeth and Roberta would have helped with the daily domestic chores. Additionally, Nannie Storts also would have helped and even taken charge of the domestic chores, as Israel took control of the farm. A ca. 1900 photograph of Nannie with a mixing bowl near the icehouse (Figure 53) implies that she too participated in the domestic work. The photographs of both Rachel and Nannie present a domestic image for the Moremen family women, which seem to be a part of their identity on the farm.

Table 41. 1880 U.S. Census for Riverside.

Name	Race	Sex	Age	Notes
Alanson Moremen	W	M	76	Farmer
Rachel Moremen	W	F	68	Wife, keeping house
I.P. Moremen	W	M	24	Son, Farmer
Elizabeth Graham	W	F	47	At home
Roberta Graham	W	F	12	Daughter of Elizabeth
Kittie Thomas	B	F	41	Servant, Illiterate
Dick Thomas	B	M	44	Farm Laborer, Illiterate
Bettie Thomas	B	F	15	Daughter at home
Ana Thomas	B	F	13	N/A
Willis Thomas	B	M	11	Illiterate, has tuberculosis
Lulu Bell Thomas	B	F	9	Illiterate
Charlie Thomas	B	M	5	Illiterate
Kate Thomas	B	F	4	Illiterate
Rosaela Thomas	B	F	2	Illiterate

According to the Census, several of Alanson and Rachel's oldest children lived and farmed on other parts of the Moremen Family's sprawling 1,500-acre farm. While these children were important to the agricultural operation, they probably had little to do with the domestic activities at their parent's house. Although the Moremen women likely performed domestic work, African-American servants likely performed the bulk of the domestic chores at Riverside.

Figure 53. Ca. 1900 Photograph of Nannie Storts Moremen in the Yard Near the Icehouse.

According to the 1880 U.S. Census, there were nine African-Americans living with the Moremen family at that time. All of them were members of the Thomas family headed by Dick and Kittie (Table 41). It is possible that Dick and Kittie were once slaves owned by the Moremen family (Figure 54). Moremen family oral history refers to Kittie as Kittie (Kitty) "Moremen" Thomas, which is an indication of her close connection to the family. She also appears in the signature Moremen family photograph from ca. 1870 (Figure 3) and a subsequent family photo (Figure 55). This information demonstrates that there was a long connection between the Thomas and Moremen families that may have been established through slavery. Kittie was listed as a servant in the Census records and likely performed domestic work, such as cooking and washing. While Dick Thomas was listed in the Census as a farm laborer and probably worked with Israel in the agricultural operation, he also may have been a servant. A 1890s photograph of an African-American male servant at Riverside could have been Dick Thomas or one of his sons (Figure 56). According to Rachel Nannie Moremen, her mother (Nannie Storts Moremen) described the man pictured as the "cook" who made meals for the Moremen family from the 1880s to the turn of the century.

In sum, the reality of domestic work, particularly washing, at Riverside after slavery required the work of non slaves. Servants and family members likely performed the domestic duties and the most undesirable of those was probably washing. It is quite possible that Kittie Thomas and perhaps some of her children took on washing tasks. Kittie was possibly a former slave at Riverside who ascended to family status amongst the Moremen family. However, such status did not preclude the Thomas family from doing the most undesirable work on the farm.

Figure 54. Ca. 1910s Photograph of Possibly Dick and Kittie Moremen Thomas.

Figure 55. The Moremen Family in 1907, Kittie Moremen Thomas is Seated at Far Left.

Figure 56. Ca. 1890s Photograph of an African-American "Cook" or Servant.

CONCLUSIONS

Archaeological research conducted at the Riverside washhouse has produced important information about the architecture of this building. During the course of this study much more was learned about the function of the building, the use of the associated yard, and the people who once worked in this area. Furthermore, this research generated new insights into the transition from plantation and slavery to Postbellum farm life without slavery. The washhouse excavation represents the second phase of a long-term research project that is focused on understanding and interpreting Riverside's outbuilding complex.

Based on the architectural features found, such as pier supports and a brick door threshold, and the analysis of nails and window glass, the washhouse building was a wood frame structure that measured 6.1 x 4.6 m (20 x 15 feet). It was built in the 1880s and was probably demolished in the 1920s. A sub-floor drainage system and a cistern within the building are indicative of its function for washing. However, other outdoor features, such as linear fire pits, a brick path, brick hearth, post holes, and cesspool, indicate that washing and other activities, such as soapmaking also took place in the yard surrounding the building. In essence, the washhouse and associated yard was a washhouse complex that included the building, outdoor hearth, a cesspool, and workspace.

Furthermore, the information indicates that members of the Moremen family and their African-American tenants performed the many duties that took place in the washhouse complex.

With the abundance of information available, it seems that it would be relatively easy to reconstruct an accurate facsimile of the washhouse at its original location. The abundant archaeological data and a photograph of the building provide enough information to accurately represent not only the size, materials, and construction of the washhouse building, but also its look and style. However, there are some issues that make the reconstruction and interpretation of this structure more difficult within the context of the Riverside outbuilding complex. The proximity of the detached kitchen to the washhouse complex, the dates of the building, and multifunctional aspects of the complex will need to be considered in deciding how to reconstruct and interpret the washhouse area.

Based on the archaeological data, the washhouse building and its yard features were not contemporaneous with the nearby detached kitchen. The washhouse complex post-dates the detached kitchen and archaeological evidence. The window glass and nail analysis, suggests that parts of the washhouse were likely constructed with salvaged materials from the detached kitchen. So, this begs the question of should the washhouse building be reconstructed and how should the washhouse complex be interpreted?

Issues that should be considered in deciding whether or not to reconstruct and interpret the washhouse complex are presented here:

1. The detached kitchen and washhouse building never existed contemporaneously. Should their reconstructions exist contemporaneously?

2. Should these two buildings be reconstructed in their original location, which would essentially put the buildings very close to each other?

3. Can and should the washhouse complex outdoor brick hearth be displayed and interpreted, although it is located very close to the reconstructed detached kitchen's south wall?

4. If nothing from the washhouse complex is reconstructed, how can it be interpreted and presented to the public?

5. Since the washhouse complex represents the post-1880s period, how does it fit with Riverside's overall interpretation? How should this period be interpreted and presented, if at all?

6. The washhouse complex contains evidence of soapmaking at Riverside. Should this evidence, and soapmaking in general at Riverside, be interpreted for the public?

While there is a precedent for the interpretation of non-contemporaneous buildings or structures at Riverside (kitchen and windmill are examples), the close proximity of the washhouse to the reconstructed detached kitchen presents some major logistical and interpretive problems. If reconstructed, the washhouse would be located in very close proximity to the reconstructed detached kitchen and may in places obscure the kitchen. This would present problems during the reconstruction and the result could affect the condition of the detached kitchen. The close proximity of the detached kitchen could inhibit the construction of the washhouse. Conversely, the reconstruction of the washhouse could affect drainage in the area and promote water wicking and rot in the detached kitchen.

The reconstruction also would affect the interpretive context of the detached kitchen. With the washhouse so close to the kitchen, sight lines would be obscured and the awkward appearance of the structures together would have to be explained to the public. Thus, the reconstruction of the washhouse may not contribute to the interpretation and presentation of the Riverside's outbuilding complex.

As with the reconstruction of the washhouse building, the display of the outdoor brick hearth also presents some logistical problems. While its close proximity to the south wall of the detached kitchen does not significantly affect the sight lines and interpretive context of the kitchen, it could affect drainage and the condition of the structure. Furthermore, the close proximity to the kitchen's drip line may adversely affect the display of the hearth through erosion and degradation of the brick. However,

despite some potential problems, it is possible to display the outdoor brick hearth, if the logistical concerns are addressed.

With regards to the interpretation of the washhouse complex, it is quite possible to interpret and exhibit the washhouse area and its rich history without reconstructing the building or displaying archaeological features. An effective method for discussing the washhouse complex is through the use of signage. A well-conceived and constructed sign in the area of the washhouse could utilize simple text and interesting images to tell the story of the washhouse, the Postbellum period, and the people who worked there. It is important to tell the whole story of the outbuildings, although the turn of the twentieth century period may not be the focus of Riverside's interpretation. A sign could help visitors understand how Riverside changed following the end of the Civil War, without disturbing the Antebellum feel of the detached kitchen. The highlight of the signage could be soapmaking, which has historical and archaeological correlates. Riverside was known, as "soap landing" for a time in the late nineteenth century and soapmaking seems to be an important feature of the Moremen family's tenure at the site. This aspect of Riverside's history could be enhanced with soapmaking demonstrations in the washhouse area, where it historically took place. Supplemental signage could focus on the soapmaking process. Furthermore, modern signage would be consistent and could be complimentary to the modern pathway system installed between the kitchen and main house. It is hoped that the information presented in this report will help assist everyone involved with Riverside in making informed decisions concerning how to interpret and manage this important historic and archaeological property.

Although this report is focused on the research conducted in the washhouse area, archaeology at Riverside is as much about public involvement as it is about recovering information. As with the detached kitchen archaeological research and architectural reconstruction project, the investigation of the washhouse involved the public. The entire washhouse was excavated during archaeology weekends, heritage festivals, and the Building Blocks of History educational program. Thousands of school children and adult volunteers worked diligently to complete the excavations. Through the project, the public developed a vested interest in the washhouse and the Kentucky Archaeological Survey's research. The washhouse project demonstrates that the innovative public programming developed during the detached kitchen project can be continued and expanded upon with great success. The public continues to be an integral part of the research conducted at Riverside, which in turn connects them with their history.

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