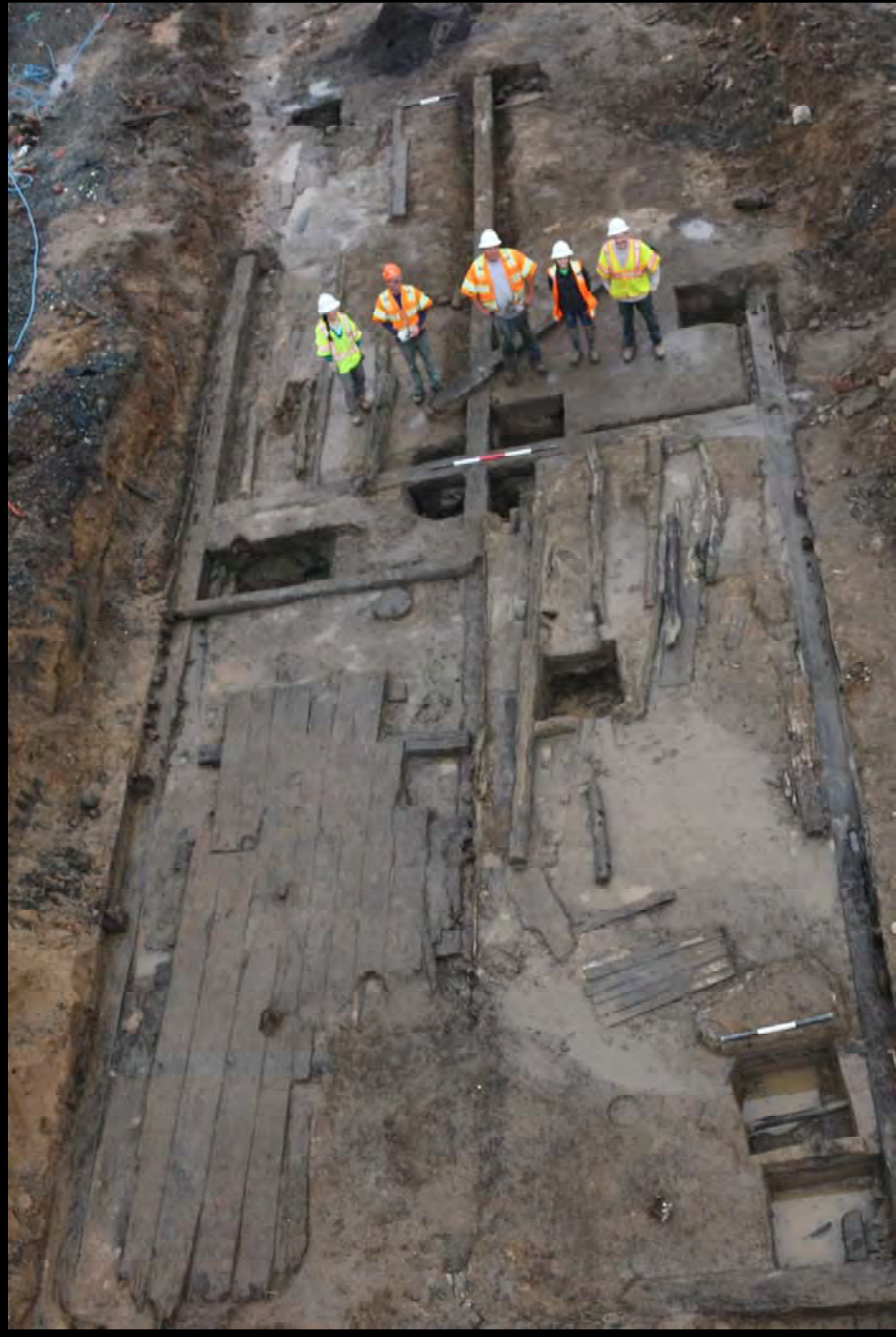

Archeological Evaluation and Mitigation of Hotel Indigo (220 South Union Street)

Daniel Baicy, M.A., RPA, David Carroll M.A., RPA, and
Elizabeth Waters Johnson, M.A.

Volume I

Thunderbird Archeology
A Division of Wetland Studies and Solutions, Inc.®
a DAVEY company

Hotel Indigo
(220 South Union Street)

Alexandria, Virginia

WSSI #22392.02

Archaeological Evaluation and Mitigation at Site 44AX0229

September 2017
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ABSTRACT

The City of Alexandria is one the more compelling history destinations in the country, due in no small part to the City's decision to integrate historic preservation into the revitalization and development. After decades of planning and delays from numerous lawsuits, redevelopment of the City of Alexandria waterfront at Point Lumley moved forward. The waterfront originally consisted of high bluffs overlooking the Potomac, stretching northwards from this Point along a shallow crescent-shaped bay. By 1798, these high bluffs had been cut down and spread out on the tidal flats in order to improve access to the deep-water channel. Point Lumley was the location of numerous industries, warehouses and residences during the late 18th and 19th centuries, including shipbuilders, blacksmiths, carpenters, coopers, iron foundries, and commission merchants. Improvements to the Alexandria waterfront began soon after the town was established in 1749. By 1798, the tidal flats along the Potomac River had been infilled and the new shoreline was dominated by wharves and warehouses.

Archeological excavations at the Hotel Indigo site along the original shoreline revealed evidence of this engineered infilling: the remnants of a bulkhead wharf and a mid- to late 18th-century ship that were used as a framework to create new land. The foundations of one of the earliest buildings found in Alexandria to date- the 1755 public warehouse - were uncovered only a few feet away. House foundations, a brick-lined well, four privies dating to the late 18th /early 19th century, and factory and warehouse foundations from the late 19th and 20th century were also discovered and documented.

Note: The identification and date of the contact molded glass sherds (to 1810) need additional research.

ACKNOWLEDGMENTS

The staff archeologists at Thunderbird Archeology would like to thank Michael Miller, Pam Cressey, Steven Shephard, and all the historians and archeologists that have laid the groundwork for our research into the early beginnings of Alexandria, with special gratitude to Ted Pulliam, who compiled research pertinent to the early history of the Point Lumley and the Alexandria waterfront and graciously shared the information with us.

We would also like to thank everyone who assisted in our research efforts, the staff at the Office of Historic Alexandria and Alexandria Archaeology, including Francine Bromberg, Garrett Fesler, Ben Skolnik, Ruth Reeder and Eleanor Breen; Nichole Doub and the conservators at the Maryland Archaeological Conservation Laboratory; George Schwarz and staff at the Underwater Archaeology Branch of the Naval History and Heritage Command; and the specialists who conducted our specialized analyses: Michael Worthington and the Oxford Tree-Ring Laboratory; Susan Trevarthen Andrews with IDBones; Linda Scott Cummings, Ph.D. with PaleoResearch Institute, Inc.; Kathy Puseman with Paleoscapes Archaebotanical Services Team (PAST); and Ryan Scott with VIKA Virginia, LLC.

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CHAPTER ONE: INTRODUCTION

This report presents the results of an *Archaeological Evaluation* and *Archaeological Excavation* (mitigation) study at Site 44AX0229, located at the Indigo Hotel (220 S. Union Street and 210 The Strand) project site within the City of Alexandria, Virginia (Figure 1). Thunderbird Archeology, a division of Wetland Studies and Solutions, Inc. (WSSI), of Gainesville, Virginia, conducted the study described in this report for Carr City Centers of Washington DC. John P. Mullen, M.A., RPA served as Principal Investigator for Archeology and edited the report. Daniel Baicy, M.A., RPA conducted the archeological fieldwork with the assistance of Glen Carson, Kelly Cummings, Mark Eschle, Caitlin Homan, Leah Izzett, Kathleen Jockel, Edward Johnson, Vincent Gallacci, Grace McCroskey, Kate Mott, Daniel Osbourne, Adam Said, Manuel Larsen Santos, Jeremy Smith, Michael C. Smith, Steven Sykes, Benita Voran, and Justin Warrenfeltz. The WSSI survey team included Eric Aufmuth, Eric Calladine, Brian Hollinger, Chad Laskaris, Davis Madden, Jeff Monaco, and Paul Szarowicz. Elizabeth Waters Johnson, M.A. served as Laboratory Manager and conducted the artifact analysis with the assistance of Jennifer Laqualia, Amber Nubgaard, Lily Sipe, and other previously listed archeological field staff.

The project was required under the City of Alexandria Archaeological Protection Code prior to development of the property and followed a Scope of Work for the *Archaeological Evaluation* (Volume II: Appendix I) and approved Resource Management Plan (RMP) addenda for the archeological mitigation (Volume II: Appendix II). The purpose of the archeological evaluation was to record subsurface features and assesses the potential for any buried intact historic surfaces or contexts below the construction fill, particularly in areas documented as high potential during the previous documentary study. The purpose of the archeological mitigation was to make a record of the significant site features prior to their destruction and to recover sufficient data from the site to address defined research questions.

Environmental Setting

Alexandria is located within the Coastal Plain, which is underlain by sediments that have been carried from the eroding Appalachian Mountains to the west, and includes layers of Jurassic and Cretaceous clays, sands and gravels. These are overlain by fossiliferous marine deposits, and above these, sands, silts and clays continue to be deposited. The Coastal Plain is the youngest of Virginia's physiographic provinces and elevations range from 0 to 200/250 feet above sea level (a.s.l.). It is characterized by very low relief broken by several low terraces. The province runs west to the Fall Line, a low escarpment at ±200 feet a.s.l., which formed where the softer sedimentary rocks of the Coastal Plain abut the more resistant rocks of the Piedmont. Where rivers cross this juncture, rapids or falls have developed.

The project area is situated on developed land on Alexandria's Potomac River waterfront. Historically, most of the area now encompassed by the parcels was inundated by the Potomac River until additional land was created by filling in the 18th and early 19th centuries. The property contained mid-20th century buildings on concrete pads that were demolished prior to the archeological investigations (Figure 2).

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Figure 1
Vicinity Map

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Figure 2
Spring 2017 Natural Color Imagery

CHAPTER TWO: PROPERTY HISTORY

As a prerequisite of the archeological investigation, the City of Alexandria required a Documentary Study for both the hotel site located at 220 South Union Street and an adjacent parcel owned by the City, located at 210 The Strand (Carroll and Mullen 2014). Portions of the Documentary Study are summarized and presented below; the properties' Chain of Titles are presented in Appendix III (Volume II).

Establishment of Alexandria

The town of Alexandria began as a tobacco trading post on Hugh West's land on the upper side of Great Hunting Creek. Located on what is now Oronoco Street and known as Hugh West's Hunting Creek Warehouse, this area included a tobacco inspection station as well as tobacco warehouses (Smith and Miller 1989:14). In the 1730s and 1740s, because of the presence of the tobacco warehouses and inspection station, the area was already a focal point for commerce, making it a good location for a town.

The three owners of the land that became Alexandria – Phillip Alexander, Jr., John Alexander, and Hugh West – all acquired their property from members of the Alexander family. The act for erecting the town on 60 acres of their land at "Hunting Creek Warehouse" was passed on May 11, 1749. The lots were directed to be laid out extending from the first branch above the warehouses down the meanders of the Potomac to Middle Point (Jones Point). A 1749 map shows the town lots primarily bounded by Duke, Royal, and Oronoko Streets stretching between two points of land on either side of a crescent shaped bay along the west bank of the Potomac (Figure 3).

The plan for enlarging the town of Alexandria was passed by an act of the Virginia Assembly approved at the November session of 1762 (Hening Volume VII, 1820:604-607). The town of Alexandria expanded two more times in the 1770s and 1780s. In 1774, John Alexander laid out and sold 18 new lots and gave the town land for Wilkes and St. Asaph Streets (Crowl 2002:124). The Alexander family further allowed for the extension of the town between 1785 and 1786 when they sold the adjoining tracts (Crowl 2002:124). The new streets within the expanded area were named for Revolutionary War heroes including Greene, Lafayette, Jefferson, Patrick Henry, Washington, and Wythe.

A second extension of the boundaries of Alexandria was approved on May 6, 1782, authorizing the mayor, recorder, aldermen, and common council to lay a wharfage tax and to extend Water and Union Streets, providing that the proprietors of the ground on which Union Street was extended would have the "… liberty of making use of any earth which it may be necessary to remove in regulating the said street" (Hening Volume XI, 1823:44-45).

In 1779, the town of Alexandria was incorporated, which allowed it to have its own local government, as opposed to being governed by the laws of the county. Nevertheless, the Fairfax County Courthouse remained in Alexandria (Smith and Miller 1989:51). In 1791, Alexandria and a portion of Fairfax County were ceded to the federal government to become part of the newly established District of Columbia.

L:\22000s\22300\22392.01\GIS\ARCH\DocumentaryStudy(Revised)\22392.01_03_1749 Alexandria Plan.mxd

Figure 3
A Plan of Alexandria, Now Belhaven - George Washington, 1749

Although Alexandria officially became part of the newly established District of Columbia on February 27, 1801, it continued to govern itself (Smith and Miller 1989:51). The Fairfax County Courthouse, however, remained in Alexandria until 1799 when a new site for the courthouse was selected in its current location, now within the City of Fairfax.

220 South Union Street and 210 The Strand

At the time of the city's founding in 1749, all of the 210 The Strand property and approximately half of the 220 S. Union Street property lay within the Potomac River, occupying a portion of Town Lot 69, as well as public land on Point Lumley. Nathaniel Harrison, of Brandon plantation in Prince George County, Virginia purchased Lots 69 and 70 for 46 pistoles from the Trustees of Alexandria in 1749 (Ring and Pippenger 2008: 120).

Soon after the establishment of the town, work began along the Potomac waterfront to improve the access of the town to the river, and vice versa, likely beginning with the extension of Duke Street onto Point Lumley circa 1751. The Alexandria Trustees directed John Carlyle, a prominent Scottish merchant and businessman of the town, to "have a good road cleared down to Point Lumley" (Pulliam 2006:4). Earth from the extension of Duke Street was most likely employed to fill the useable land to the north of Point Lumley within the study area.

In June 1755, The Alexandria Trustees once again called upon John Carlyle, this time to construct a public warehouse on Point Lumley:

> Ordered that John Carlyle Gent. do erect & build at Point Lumley in this Town a Warehouse of the following Dementions[sic] (Viz.) One hundred feet long twenty four feet wide thirteen feet Pitch'd To be three Divisions double strided, the sills to be rais'd four feet from the ground & so compleatley finished [Alexandria Board of Trustees, nd.:23]

In September of 1755, likely after the completion of the warehouse, the Trustees decreed that the public warehouse "be fill'd in with Land & Rubbish from the Point but in such a manner as not to prejudice the foundations" (Alexandria Board of Trustees, nd.:28). As new land was created, the boundary between Lot 69 and the public land at Point Lumley may have become unclear, as the Trustees of Alexandria ordered Lot 69 to be resurveyed. The original town surveyors met with the current town surveyor, John West, and "affixed posts to the corners of Lott numbered Sixty nine in or within a very few feet of the former and first corners ascertained by the original platt and survey in 1749" (Ring and Pippenger 2008:153). Given the establishment of the warehouse and wharf on the public land of Point Lumley was as early as 1755, it is likely that the "banking out" of the bluff at Lot 69 may have begun during Nathaniel Harrison's ownership of the property. A 1760 artist's interpretation of Point Lumley displays the warehouse and bluff (Figure 4).

Figure 4: Warehouse on Point Lumley, Circa 1760
Illustration by Elizabeth Luallen

In 1775, Harrison sold Lots 69 and 70, along with several others, to Richard Arell (Fairfax County Deed Book M:33). No historical reference for the utilization of Lot 69 during Arell's ownership was found in the documentary study. Richard Arell died in late 1795. According to Gilpin's 1798 map of Alexandria, there was no sign of the crescent bay remaining in that year and enough land had been created for the laying of Union Street along the waterfront. By the turn of the 19th century, the entirety of the 220 South Union Street parcel was usable land and the high bluff that had divided Lot 69 from Point Lumley had been leveled. Documentary evidence confirms other buildings besides the warehouse were present on the property by circa 1800.

Examination of 1810 tax records for properties lying within the original Lot 69 indicate that many of Richard Arell's various heirs received parcels along one or both sides of Union Street between Prince and Duke Streets; other lots had apparently been sold outside of the family during Richard Arell's lifetime, but Deed Book N, which included many of these transactions from 1778-1783, has since been lost (Ring and Pippenger 2008:60). Although specific details are lacking, it is clear that Lot 69 had been divided into numerous smaller parcels, including the portion of the lot within the study area (Figure 5).

One of the five parcels was on the corner of Union and Duke Streets; the first evidence of a structure in Parcel 1 appears in 1802 tax records, which indicate the presence of a brick house owned by George Coryell. According to 1810 tax records, the house was not occupied by Coryell but by Alice Coleman. The house was destroyed in a fire in 1810 (Alexandria Gazette

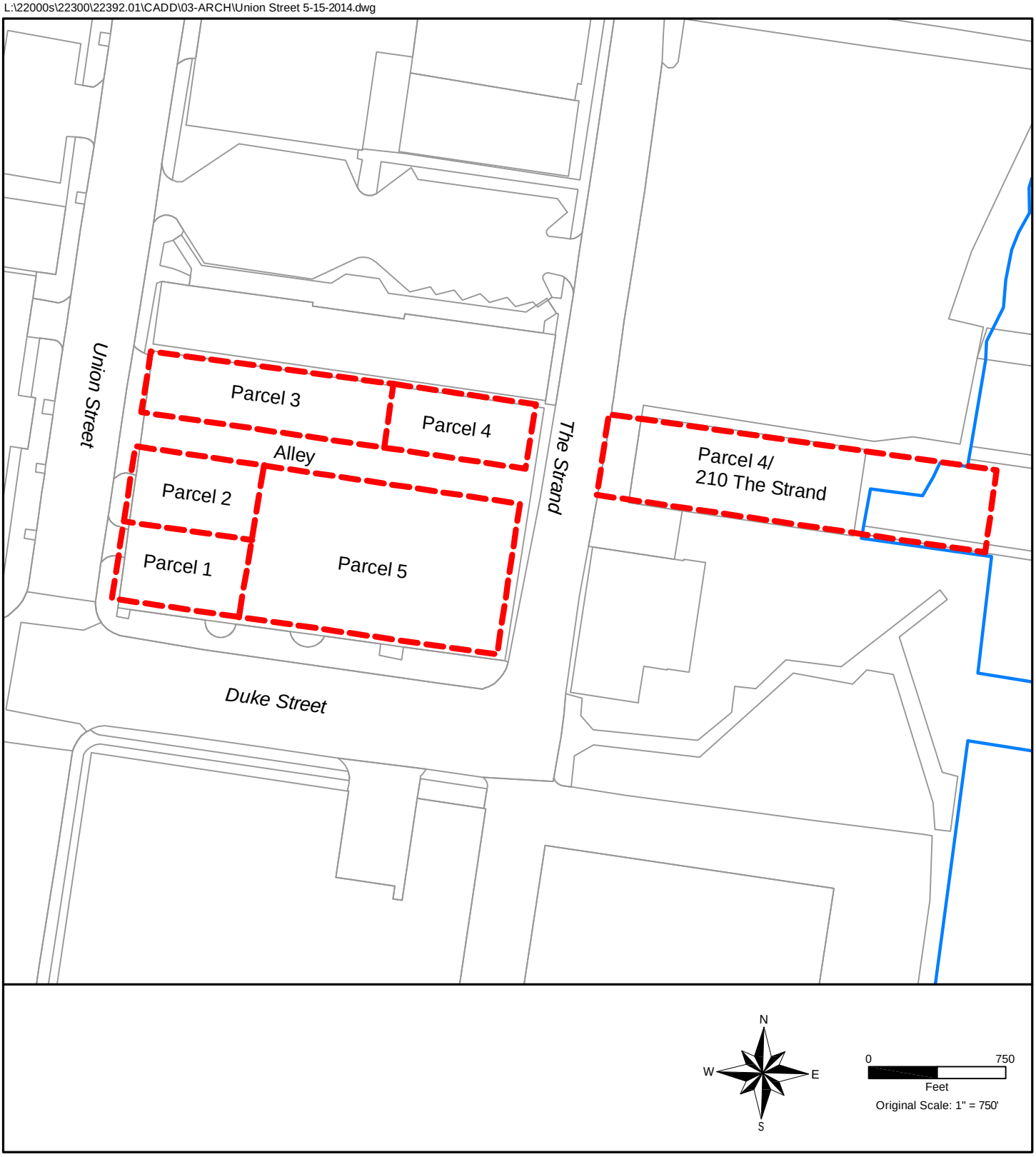

Figure 5
Reconstructed Parcel Map

[AG] 26 September 1810). Captain Ebenezer Bacon eventually purchased the parcel in 1851. Another fire occurred on the parcel in 1854, when Enoch Lyles, a cooper, resided at property. Of the fire, the Alexandria Gazette wrote that the "brick building at the corner owned by Capt. E. Bacon and occupied by Mr. Lyles had the shed and outhouses burned and was otherwise much injured" (AG 16 June 1854:3).

To the north of Parcel 1, along S. Union Street, was what will be called Parcel 2. In 1804, the northern half of Parcel 2 was leased to Thomas White, a blacksmith (Alexandria Deed Book H:497). The lease included terms for White to construct a building on the lot with a value of at least $150 by 1806. The blacksmith shop burnt down by a fire in 1810. In August of 1811, the entirety of Parcel 2 was leased to William Morgan and Moses Smith for a cooper's shop (Alexandria Deed Book U:124). 1830 tax records suggest a house was present on the parcel, and later 1850 tax records indicate the presence of a carpenter's shop on the property. In 1854, a fire started at the carpenter's shop, incinerating the building and damaging the adjacent structures within Parcel 1.

The third parcel, Parcel 3, existed in the northwest portion of 220 S. Union Street. By 1800, Phillip Marsteller operated a local vendue, or auction house, on the property but appears to have been leasing out to tenants rather than occupying it himself. An 1814 lease indicates that a two-story brick warehouse measuring 30 feet by 90 feet would be constructed (Alexandria Deed Book 322). An 1854 article in the Alexandria Gazette regarding the 1854 fire indicates the possibility of another two-story brick warehouse, replacing the one constructed after 1814. The article states "new brick warehouses to the north, belonging to Mr. R. H. Miller and Mr. R. G. Violett, were not materially injured" (AG 1854: 3).

Parcel 4 was located in the northeast corner of 220 S. Union Street and includes 210 The Strand. Parcel 4 was split from Parcel 3 sometime between 1814 and 1853. The parcel was sold by decree in the chancery suit *Cyrus C. Marsteller v. Marsteller et. al.* to Benjamin H. Lambert and Lewis McKenzie in July 1853; (Alexandria Deed Book P3:101). Tax records from 1850, though not conclusive, suggest that Lambert & McKenzie already did business from the property in that year. Lambert & McKenzie operated a shipping and commission merchant concern on the waterfront and owned or occupied several properties along South Union Street.

Parcel 5 was a city lot on the corner of Duke and The Strand. The City of Alexandria presumably continued to rent the lot of ground at the foot of Duke Street to various businesses. Confirmation for this practice during the early part of the 19th century proved difficult to attain from land taxes and other records. 1830 tax records identify Levi Pickering as leasing the "house only" on the Strand and Duke Street, adjacent to Capt. Henry Bayne's estate (Parcel 1). Following his death, his wife Sarah petitioned the city in 1835 to have the lease terminated (AG 6 June 1835:3).

Numerous industries, warehouses, businesses, and residences occupied the Union Street property during the late 18th and 19th centuries, including blacksmiths, carpenters, coopers, grocers, iron foundries, and commission merchants. Late in the 19th century, the Bryant Fertilizer Company manufacturing plant occupied the entirety of the Union Street property. Several disastrous fires, most notably in 1810 and 1897, destroyed multiple buildings on the

block during the 19th century. Prior to the property's recent redevelopment, 220 S. Union Street was a brick commercial building used as rented commercial space and as an art studio.

The property at 210 The Strand was not dry land until sometime in the mid-20th century. From the 1880s until 1922, the clubhouse of the Old Dominion Boat Club stood on piers in this location, accessed by a wooden foot bridge from The Strand. The clubhouse was destroyed by fire several times in the 19th and 20th centuries before the club moved to the foot of King Street. Prior to the property's recent redevelopment, 210 The Strand contained a small building resting on a concrete slab foundation.

CHAPTER THREE: FIELD AND LABORATORY METHODS

Mechanized Trenching

Two separate rounds of mechanized trenches were excavated diagonally across the project area, under the direction of archeologists from Thunderbird Archeology, using a backhoe equipped with a flat-bladed, smooth bucket. Each set of trenches was excavated prior to a site wide leveling or removal of soil, which was also done with an archeologist present and directing the excavations. The trenches were approximately four feet in width and totaled approximately 30-95 linear feet per round. Trench depth did not exceed the depth of the anticipated impacts of the proposed construction. All mechanical trenching followed OSHA guidelines to allow for safe hand excavation and evaluation. Trench placement was based on the results of the Documentary Study, as well as unforeseen circumstances such as large spoil piles of contaminated soils, construction changes, and the presence of archeological features. Deep trenches along the perimeter of the project area for driven pile foundations more than 8 feet below the grade of the first site leveling were also monitored and truncated in the case of archeological discoveries.

At least one soil strata column profile was drawn for every trench, except for the piling trenches due to safety concerns. Photographs were taken of the trenches and features. Trenches were backfilled after recordation of the soil profiles. Decisions regarding the significance of features and the need for additional testing were made in consultation with Alexandria Archaeology.

A detailed discussion of trench excavations and site levelling can be reviewed in Appendix IV (Volume II).

Test Unit Excavations

The hand excavation of ten 3- x 3-foot (0.91- x 0.91-meter) test units were required to test and evaluate Feature 41, the 1755 John Carlyle Warehouse, a potentially significant archeological find. The test units were required after consultation with Alexandria Archaeology staff after the discovery of the feature during machine excavation. The test units were excavated stratigraphically by natural or cultural levels or by arbitrary sub levels. All soils were screened through 1/4-inch mesh hardware cloth. Representative soil profiles were drawn using the Munsell Soil Color Chart designation. All work was documented by field notes, sketch plans and photographs.

Feature Excavations

Archeological features were discovered during the Trench Excavations and Site Leveling activities, many of which were excavated due to their potential significance. Feature excavations were conducted after consultation with Alexandria Archaeology staff and the preparation of separate resource management plans (Appendix II, Volume II). Most of the features that contained soil fill were completely exposed, survey located, photographed, bisected and hand excavated, and functionally categorized. All identified features were sampled through the excavation of at least 50% of the feature's fill; unless otherwise noted, the excavated soils were screened through 1/4-inch mesh hardware cloth. Soil samples for flotation or specialized analysis were recovered where appropriate. Large and/or deep shaft features, like privies and wells, were bisected and 50% of the feature's fill was dry screened through 1/4-inch mesh screen, while the remaining 50% was water screened through 1/16-inch mesh screen. Representative soil profiles were drawn and described using the Munsell Soil Color Chart designation and the United States Department of Agriculture soil texture triangle. All recovered artifacts were bagged and labeled by feature number and by soil horizon.

Archeological Monitoring

An archeologist was on site to monitor all ground-disturbing activities within the property including the removal of building foundations, and activities associated with underground utilities installation or removal. When features were encountered, those features were documented and mapped within the safety parameters governing the types of trenches. Alexandria Archaeology was consulted when potentially significant features or artifacts were encountered during monitoring.

Laboratory Work and Curation

Artifacts recovered from significant soil layers within the project area were retained, cleaned, cataloged, labeled, and packaged in accordance with the guidelines set forth in the *City of Alexandria Archaeological Standards*. Unless otherwise noted, a representative sample of recovered brick, mortar, oyster shell, charcoal/coal/coke and slag was retained for curation; the remainder was discarded after being counted and weighed. Archeological collections recovered as a result of the Alexandria Archaeology Resource Protection Code must be curated at a facility which meets Federal standards for archeological curation and collections management as described by 36CFR Part 79. The Alexandria Archaeology Storage Facility meets these standards, and the property owner was encouraged to donate the artifact collection to the City for curation. At the conclusion of the project, all images, field notes and forms and other field records will be submitted to Alexandria Archaeology in digital format. The full inventory of recovered artifacts is listed in Appendix V, Volume II.

Conservation

A significant portion of Feature 41, the 1755 Carlyle Warehouse, was removed for conservation at the Maryland Archaeological Conservation Laboratory (MAC Lab). The large beams, joists, sills, and other structural elements were removed under the direction of MAC Lab staff and transported via flatbed truck to their facilities at the Jefferson Patterson Park & Museum in St.

Leonard, Maryland. Thunderbird archeologists participated in the removal of Feature 41 and provided mapping and photo-documentation.

All of Feature 53, the portion of an 18th century sailing vessel, was removed under the direction of MAC Lab staff and archeologists with Naval History and Heritage Command (NHHC) Underwater Archaeology Branch (UAB). The ship was transported by the City of Alexandria via flatbed truck to Alexandria Archaeology facilities in Alexandria, Virginia prior to being transported to the Texas A & M University Conservation Research Laboratory in College Station, Texas for conservation. Thunderbird archeologists participated in the removal of Feature 53 and provided mapping and photo documentation of the process.

The City took immediate possession of the artifacts that went for conservation with the exception of the one copper alloy watch fob with glass intaglio recovered from Feature 36. The Conservation Report from the MAC Lab is presented as Appendix VI (Volume II).

CHAPTER FOUR: RESULTS OF ARCHEOLOGICAL INVESTIGATIONS

Archeological investigations at the Hotel Indigo project area uncovered tangible evidence of the domestic occupation and commercial and industrial use of the southern end of this city block. A total of 57 cultural features were identified as result of the archeological investigations (Attachment A). Archeological features and artifacts spanning the establishment of the Town of Alexandria in the 18th century through the 20th century were recorded as Site 44AX0229.

Feature 1, Brick Feature

A large brick feature, which measured 25.2 by 8 feet (7.7 by 2.4 meters) and was approximately three courses deep (0.90 feet/0.27 meters), was exposed 2.5 feet (0.76 meters) below the ground and ran roughly north to south (Figure 6). A fourth course was occasionally noted in the profile of Trench 1 but was typically within the areas containing portions of brick piers and supports. The entire feature was carefully exposed during the subsequent site leveling phase of construction. The feature was photographed, drawn, and bisected in two locations (Figure 7). The brick pad had been disturbed by 20th-century construction activities and was likely part of a much larger floor. Feature 1 had several small piers that consisted of a single course of brick above the floor; they were heavily mortared. The two bisections revealed the three courses on top of a historic [10YR 5/4] yellowish brown sand fill (Figure 8). Some of the lower bricks had either been burned or discolored from exposure to chemical corrosion or from other substance that turned portions of them black (Figure 9). No artifacts were recovered from soils or between the bricks during the two bisections.

Feature 1 potentially corresponds with the location of the Hoof warehouse constructed after an 1854 fire. The fire destroyed the previous building in the same location and may be related to the burned portions of the feature. This post-1854 building can be seen in a Civil War-era photograph of the block and is depicted on the 1877 Hopkins Map of Alexandria (Figure 10). The building was eventually subsumed into the Bryant Fertilizer complex in the late 19th century. The bottom floor of the warehouse was used as storage, whereas the mixing took place on the second floor.

Figure 6: Feature 1, View to the South

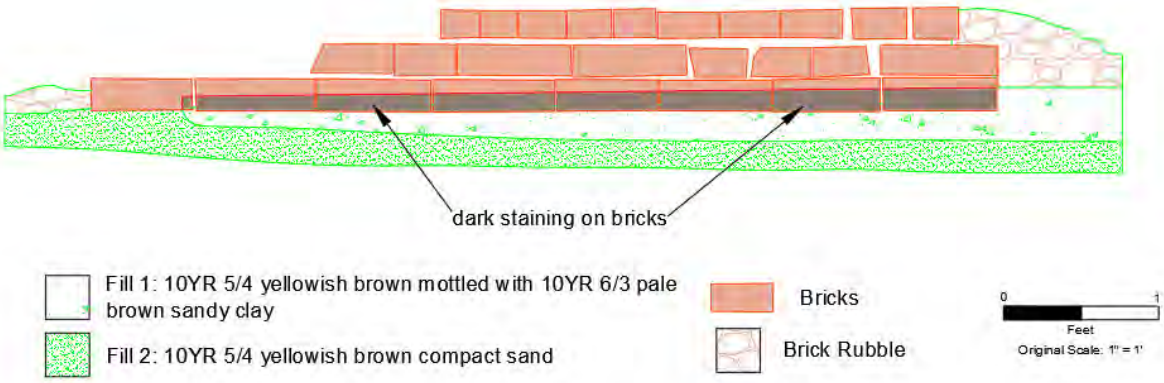

Figure 7: Feature 1, Bisection 1, North Profile Drawing

Figure 8: Feature 1, Bisection 1, North Profile Photograph

Figure 9: Feature 1, Possible Piers in Foreground, View to the North

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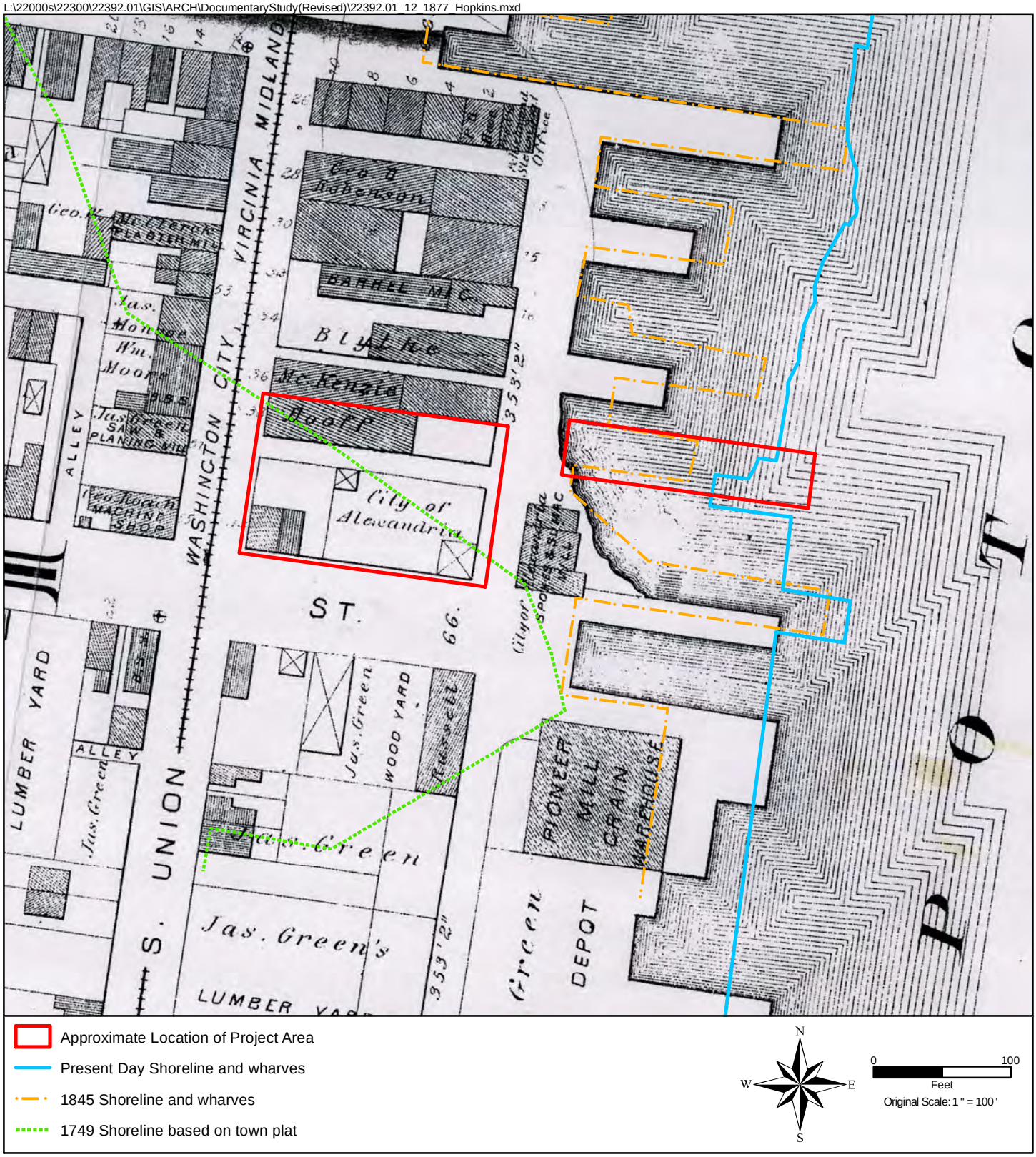

Figure 10
1877 Hopkins Map and Historic Shorelines

Feature 2, Concrete Slab

Feature 2 was exposed approximately 2.5 feet (0.76 meters) below the ground surface and consisted of a conglomerate of asphalt, tar, and building material pressed into a [10YR 3/4] dark yellowish brown sand fill (Figure 11). The feature was present across the site in Trench 1, 2, and 3 but became less dense to the east of Trench 1. No artifacts were recovered from Feature 2.

Figure 11: Trench 1, Feature 2, Plan, View to the East

Feature 3, Post

Feature 3 was exposed in the base of Trench 2, roughly 4.2 feet (1.28 meters) below ground surface and was interpreted as a post hole and mold (Figure 12). The post hole measured 1.5 x 1.8 feet (0.46 x 0.55 meters), and a post mold was present in the southeast corner. The post hole consisted of [10YR 5/3] brown sandy clay loam mottled with [10YR 5/6] yellowish brown sandy clay loam, while the post mold contained [10YR 3/2] very dark greyish brown sandy loam (Figure 13; Figure 14). The post hole portion of Feature 3 extended 9.6 inches (24.38 centimeters) into the fill soil below the base of Trench 2, and the post mold portion only extended 7.2 inches (18.30 centimeters) into the post hole fill. Several additional post holes were recorded during the first site leveling at the same approximate level and are discussed later.

Figure 12: Trench 2, Feature 3, Plan, View to the Southeast

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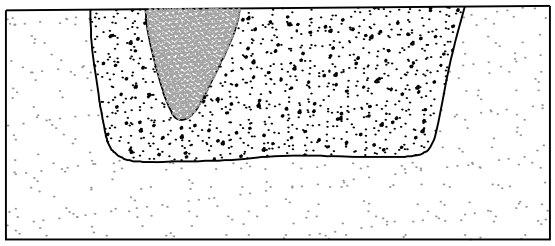

Post Mold: 10YR 3/2 very dark grayish brown sandy loam

Post Hole: 10YR 5/3 brown mottled with 10YR 5/6 yellowish brown sandy clay loam

Subsoil

0 1
Feet
Original Scale: 1" = 1'

Figure 13
East Profile of Feature 3 Bisection

Figure 14: Trench 2, Feature 3, West Bisection Profile

A total of 42 artifacts were recovered from Feature 3 (Table 1). The ceramics suggest a late 18th/early 19th century date for Feature 3, but the post was excavated into soil that was used to infill the area in the late 18th and early 19th century and Feature 3 was infilled with the same soil. The lack of 20th-century material does suggest that the post was installed prior to the Bryant Fertilizer Plant owning the parcel. Feature 3 may possibly be related to the 19th-century alleyway or associated with other nearby early 19th-century foundation features.

Table 1: Artifacts Recovered from Feature 3 and Feature 4

Artifact Description	Feature 3		Feature 4	
	East Bisection, Feature Fill	West Bisection, Feature Fill	North Bisection, Feature Fill	South Bisection, Feature Fill
Ceramics				
tin glazed earthenware (1700-1800)		1		
pearlware (1780-1830)		1	2	
whiteware (1820-1900+)				1
Glass				
bottle/jar			1	
bottle, bottle/jar, chilled iron mold (1880-1930)			5	2
unidentified blackglass (pre-1880)			1	
windowpane, potash (post-1864)				1
Metal				
nail, unidentified				1
unidentified ferrous metal				1

Table 1 (continued)

Artifact Description	Feature 3		Feature 4	
	East Bisection, Feature Fill	West Bisection, Feature Fill	North Bisection, Feature Fill	South Bisection, Feature Fill
Miscellaneous				
brick	14	13	33	4
coal	4		4	
coke	5		7	3
mortar		1		1
oyster shell			18	20
slag	2		1	
Prehistoric				
quartz primary reduction flake		1		
Total Features 3 and 4	**25**	**17**	**72**	**34**

Feature 4, Post

Feature 4 was exposed in the trench base of Trench 2, roughly 4.2 feet (1.28 meters) below the ground surface (Figure 15). The feature was a 1.4 x 1.1 feet (0.43 x 0.33 meters) post hole filled with a [10YR 3/3] dark brown sandy clay loam mottled with [10YR 5/4] yellowish brown sandy clay loam (Figure 16; Figure 17). Feature 4 extended 8.4 inches (21.3 centimeters) into the Fill 5 soil below the base of Trench 2. Several additional post holes were recorded during the site leveling at the same approximate level and are discussed later with other similar features within this section.

Figure 15: Trench 2, Feature 4, Plan, View to the Southeast

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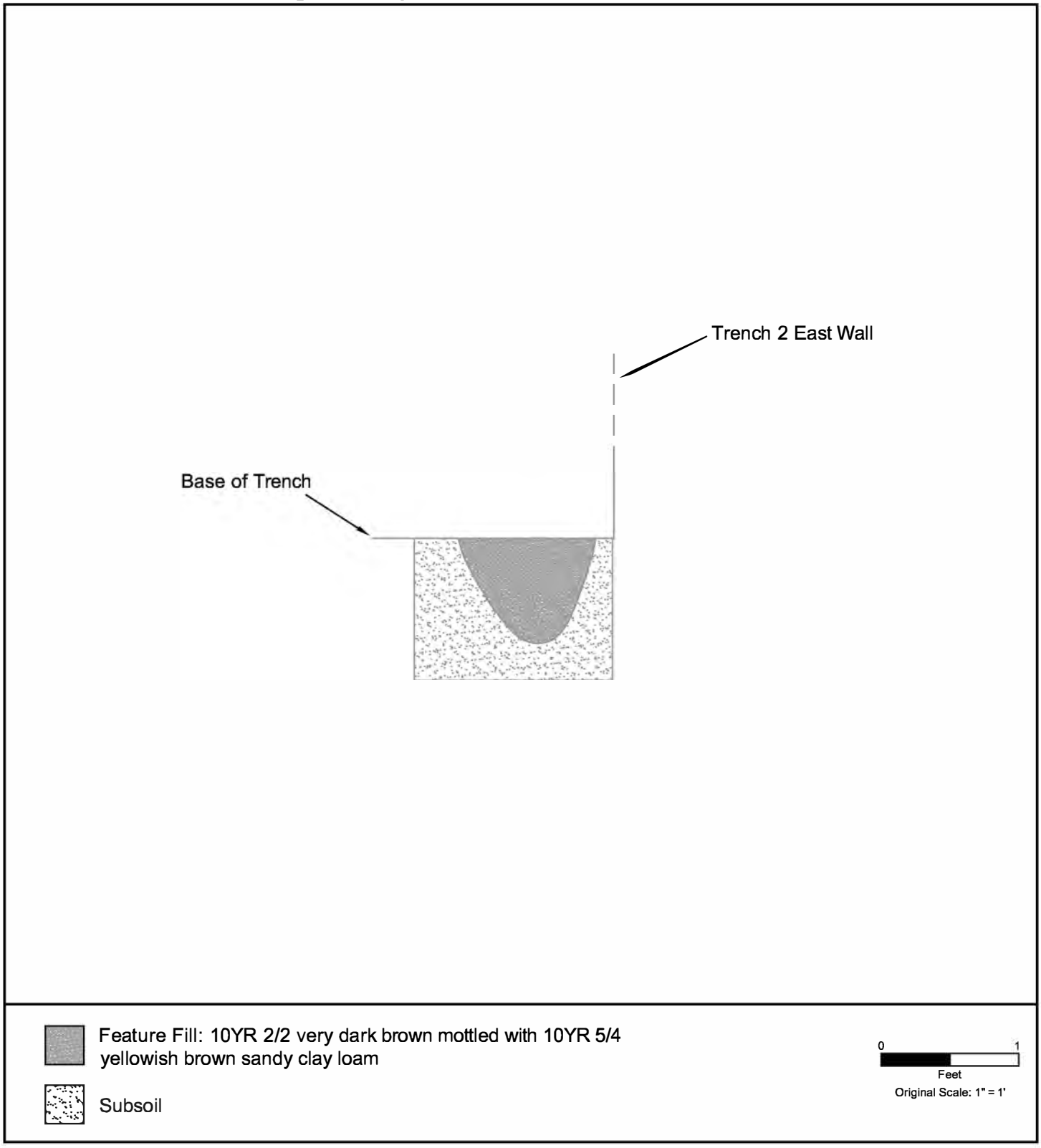

Figure 16
Trench 2, Feature 4, North Bisection Profile

Figure 17: Trench 2, Feature 4, North Bisection Profile

A total of 106 artifacts were recovered from Feature 4, the majority of which were brick, coal, slag, and oyster shell (see Table 1). The temporally diagnostic artifacts included one whiteware sherd, seven chilled iron mold glass fragments, and one potash windowpane fragment. The artifacts suggest a late 19th century date, as evidenced by the chilled iron mold glass fragments. Much like Feature 3, Feature 4 was excavated into, and thus infilled with, historic fill from the early 19th century, though the feature's *terminus post quem* is technically 1880.

Feature 5, Concrete Footer

Feature 5 was located in the south end of Trench 2 approximately 2 feet (0.61 meters) below the ground surface in the east wall (Figure 18). Feature 5 consisted of approximately four courses of cinder block on a very substantial concrete footer. There was no builder's trench or other soil feature associated with Feature 5. A total of six artifacts were recovered from Feature 5. The assemblage contained a mix of late 18th-/19th-century and 20th-century artifacts, including two pearlware sherds (1780-1830), wire nails (1890-present), and asphalt. This feature was associated with the interior walls of the 20th-century warehouse formerly located on the parcel.

Figure 18: Trench 2, Feature 5, West Wall Profile

Feature 6, Rail Spur

Feature 6 was exposed immediately under the concrete slab of the warehouse that was demolished prior to our investigation within Trench 2; the length of Trench 2 was truncated at its southern end to avoid damage to the feature prior to its documentation. Feature 6 consisted of the remnants of six concrete footers aligned east to west and was approximately 6 feet (1.83 meters) apart (Figure 19). The footers overlaid a pair of iron rails running north to south for approximately 30 feet (9.1 meters); both rails were broken and were no longer intact, but they were *in situ* or within their original context. Figure 20 shows the rails underneath the concrete footers along with wood fragments that were likely rail ties. Feature 6 was likely associated with an early 20th-century rail line. A 1902 Sanborn map shows a spur of rail line coming off the line in Union Street and into the Bryant Fertilizer factory and warehouse (Figure 21). However, by 1910 the rail line was removed. No artifacts were recovered from Feature 6.

Figure 19: Feature 6, Plan, View to the Northwest

Figure 20: Trench 2, West Profile of Feature 6

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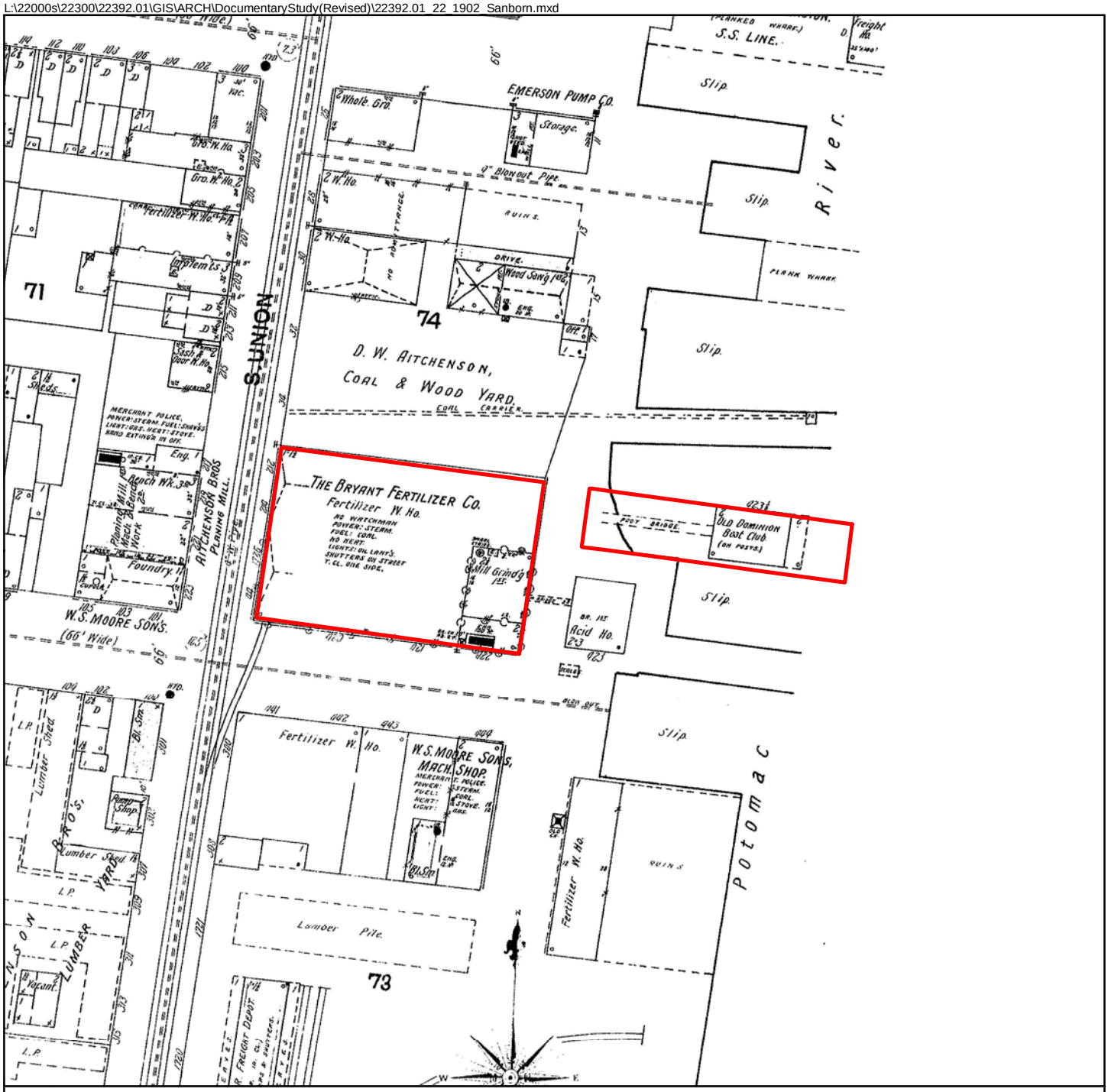

Approximate Location of Study Area

Map Source: "Sanborn Fire Insurance Map from Alexandria, Independent Cities, Virginia." Sanborn Map Company, July 1902. Sheet 14. Library of Congress Geography and Map Division Washington, D.C.

N
W E
S

0 100
Feet
Original Scale: 1 " = 100 '

Figure 21
Sanborn Fire Insurance Map - Alexandria 1902

Features 7, 8, and 9, 20th Century Footers

Three features (Features 7, 8, and 9) were located in Trench 3. Feature 7 was part of a large concrete pad or slab associated with the 20th century warehouse that was demolished prior to our investigation. Features 8 and 9 consisted of small depressions that had been filled with brick rubble. No artifacts were recovered from Features 7 and 9; however, a kaolin pipe stem fragment was recovered from Feature 8.

Feature 10, 20th Century Machine Footer

Feature 10 was identified in Trench 7 and was a 2.8 x 2.5 feet (0.8 x 0.76 meters) brick and concrete pier (Figure 22); the feature was likely associated with the early 20th-century warehouse. Specifically, it may have been associated with the engine room indicated on early 20th-century maps. Several other large brick piers were noted during the site leveling and piling trench excavations. Twentieth-century artifacts, including a wire nail fragment (1890-present) and four amber automatic bottle glass sherds (1907-present), were recovered from Feature 10.

Figure 22: Trench 7, Feature 10, East Profile

Feature 11, 20th Century Brick Refuse

Feature 11 was 0.6 x 0.7 feet (0.18 x 0.21 meters) small cluster of brick that was not *in situ* and had been displaced from its original context. The feature was found during the initial site leveling to 6 feet (1.8 meters) a.s.l. within the western wall of the project area (
Figure 23). The brick was photographed and drawn in profile but was not excavated. Feature 11 likely represents a portion of the 20th-century destruction layer associated with the overhauling of the block under the Bryant Fertilizer factory. No artifacts were recovered from Feature 11.

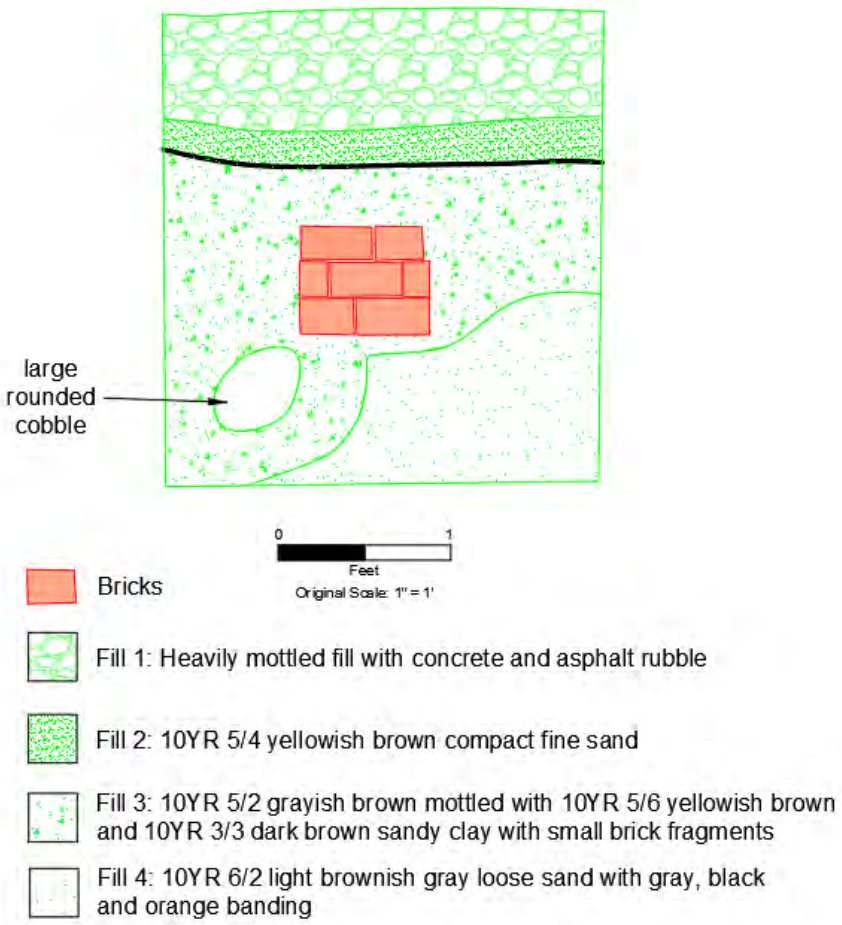

Figure 23: Feature 11, West Profile Drawing and Photograph

Feature 12, Unknown 20th Century Feature

Feature 12 was a large 3.3 by 3 feet (1 x 0.91 meters) square soil feature that was located during the initial site leveling on the western side of the project area (Figure 24). The feature fill soil consisted of a [10YR 3/2] very dark grayish brown loamy sand mixed with brick, charcoal, and coal slag within a historic [10YR 8/3] very pale brown sand fill (Figure 25). The feature was bowl shaped and roughly 1 foot (0.30 meters) in depth.

Figure 24: Feature 12, Plan, View to the East

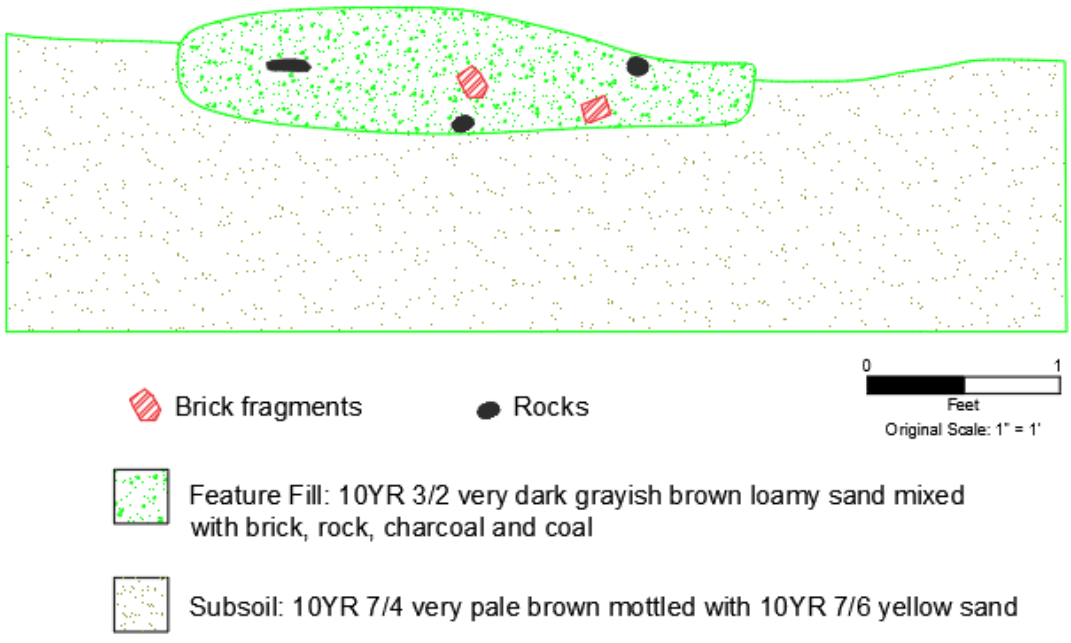

Figure 25: Feature 12 Profile Drawing

At total of 636 artifacts were recovered from the feature, 72% (n=456) of which were construction debris (brick, mortar, and slag) (Table 2). Temporally diagnostic artifacts included nine cut nails, four potash windowpane sherds, one contact mold glass fragment, 11 automatic bottle machine glass fragments, and one whiteware sherd.

Because Feature 12 intruded into historic fill, the earlier 18th- and 19th-century artifacts are likely from the historic contexts destroyed by the creation of Feature 12. The heavy concentration of modern fill materials and 20th-century glass suggests the feature is associated with a 20th-century iteration of warehouse that was demolished prior to the archeological work.

Table 2: Artifacts Recovered from Feature 12

Artifact Description	East Bisection, Feature Fill	West Bisection, Feature Fill
Ceramics		
kaolin pipe bowl		1
hard paste porcelain insulator	1	
whiteware (1820-1900+)	1	
refined white earthenware		1
redware	1	
Glass		
bottle, bottle/jar	14	20
bottle, contact mold (1810-1880)	1	
bottle/jar, clear manganese (1880-1915)	1	1
bottle, (ABM)* (post-1907)	11	
unidentified glass	23	15
windowpane, potash (pre-1864)	2	2
Metal		
bolt		2
brass wire	1	
nail, cut (post-1790)	6	3
nail, unidentified		7
screw		1
unidentified ferrous metal	11	2
unidentified lead		1
Miscellaneous		
asphalt	1	
Bakelite (post-1909)	1	
bone	1	1
brick	23	337
charcoal	9	
cinder	4	

Table 2 (continued)

Artifact Description	East Bisection, Feature Fill	West Bisection, Feature Fill
Miscellaneous		
coal	10	
flint ballast	1	
leather	1	
mortar	10	63
oyster shell	2	17
slag	8	15
unidentified composite	1	2
Total Feature 12	**145**	**491**

*automatic bottle machine (ABM)

Feature 13, Large Iron Box

Feature 13 was a large iron box located during the initial site leveling on the western side of the project area (Figure 26). The iron box was recorded in place, but was not removed until the second phase of site leveling. The iron box was riveted in the corners with iron bolts and was approximately 7 feet x 6 feet (2.1 x 1.8 meters) and 3.5 feet (1.1 meters) deep. Feature 13 was surrounded by and sitting on what appeared to be the natural sandy soil of Point Lumley. According to construction workers on site, the box was approximately at the same location as the several concrete knock-out panels on the most recent warehouse configuration that was demolished prior to the archeological investigations, and so Feature 13 most likely dates to the 20th century. The feature was full of sand, wood, and burned material. The feature fill was not excavated due to potentially contaminated industrial soils and the box was removed from the site, and no artifacts were recovered.

Figure 26: Feature 13, Iron Box, View to the North

Features 14-23, 25, 26, and 30-34A-B, Posts

After the initial site leveling down to six feet (1.8 meters) a.s.l., a total of 17 features were recorded as post holes or potential posts, 13 of which were excavated. Unexcavated features 16, 16A, 23, and 26 were largely destroyed during site leveling leaving very little soil to excavate, though the posts themselves were still extant. They were photographed and survey located. The remaining features were all bisected. Features 31 and 32 were initially thought to be post holes but were later determined not to be posts and were not sampled; likely these features were small depressions, either filled in by people or created through bioturbation from small rodents or root activity. Finally, Feature 25 was determined to be a post hole, but excavation was discontinued because of the possible presence of asbestos. However, the remainder appeared to be standard post holes, many with post molds or portions of the post still in place. The sizes, depths, excavation, and estimated time periods of these features, based on recovered artifacts, are presented in Table 3.

Table 3: Features 14-23, 25-26, 30-34A-B

Feature #	Size (feet)	Depth (feet)	Excavated?	Estimated Time Period
14	1.5 x 1.0	1.4	Yes	Late 18th-Early/Mid-19th Century
15	1.0 x 1.0	0.75	Yes	Early/Mid-19th Century
16	1.3 x 1.0	N/A	No	N/A
16a	1.2 x 1.0	N/A	No	N/A
17	2.0 x 2.0	1.0	Yes	Early-Mid 19th Century
18	1.5 x 1.5	1.0	Yes	Post 1880
19	2.0 x 2.0	1.0	Yes	Post 1880
20	1.5 x 1.5	1.0	Yes	Late 18th-Early 19th Century
22	2.0 x 2.0	1.0	Yes	Early-Late 19th Century
23	0.8 x 0.6	N/A	No	N/A
25	1.5 x 1.5	0.2	Yes	N/A
26	1.8 x 1.5	N/A	No	N/A
30	1.0 x 0.84	0.1	Yes	Late 18th-19th Century
31	2.1 x 2.0	0.1	Yes	Late 18th-Mid-19th Century
32	1.0 x 1.0	0.2	Yes	N/A
33	1.6 x 1.4	N/A	No	N/A
34a	2.0 x 1.5	1.3	Yes	Post 1820
34b	1.5 x 1.4	1.0	Yes	Post 1820

The post features of Features 14, 16, 16A, 15, 17, 18, 20, 22, 23, 25, 26, 30, 33, 34A, and 34B exhibited similar physical characteristics: an approximately 1-2 feet (0.31 to 0.61 meters) wide post hole with smaller circular post mold (some with posts still present) excavated into historic 18th- and 19th-century sandy fill. The plan and profile for Feature 22 is a typical example of these features (Figure 27; Figure 28). The posts followed an east to west line, with Features 16 and 16A creating a line running to the north. The postholes consisted of a mottled soil ([10YR 4/3] brown mottled with [10YR 5/6] yellowish brown sandy loam) with a darker soil mold ([10YR 3/2] very dark grayish brown sandy loam mixed with decayed wood), occasionally the post molds consisted of extant wood (see Figure 28).

Figure 27: Feature 22, Plan, Typical Post Hole and Mold, View to the North

Figure 28: Feature 22, North Bisection Profile, Typical Post Hole Profile

Pearlware was the most numerous temporally diagnostic ceramic recovered from the post holes, but later whiteware and ironstone were intermixed with the pearlware in many cases (Table 4). The glass artifacts from post features present similar large date ranges including potash windowpane sherds, contact mold, clear manganese, and various other tableware elements from the mid- to late 19th century and early 20th century. It is unclear whether the later 19th-century artifacts reflect later contamination of earlier features that occurred during repeated demolition and construction throughout the 19th and 20th centuries, or if they reflect artifacts present during the creation of the features. As a result, assigning dates to the post hole features is problematic.

Table 4: Artifacts Recovered from Post Hole Features

Artifact Description	Feature									
	14	15	17	18	19	20	22	30	31	34A & B
Ceramics										
kaolin pipe bowl			1							
hard paste porcelain										1
white salt glazed stoneware (1720-1805)										1
pearlware (1780-1830)	1		1	2	6	8			3	15
buff bodied earthenware (1792-1809)				1						
whiteware (1820-1900+)			3	3	2		1			5
ironstone (1840-1900+)			10							
refined white earthenware					1					
redware		1	2	1	1				1	7
stoneware					1					
Glass										
bottle	1		6	2	2					1
bottle/jar	1		8	1	7		2		1	4
button		1								
tableware			1	1	1					1
tableware (post-1827)					1					
bottle, contact mold (1810-1880)			3	1			1		3	4
bottle/jar, clear manganese (1880-1915)				1	2					
unidentified glass	3	1	7	10	8		2			2
windowpane, potash (pre-1864)	2	1	4	1	5	1			1	10
windowpane, soda (pre-1864)				1						
Metal										
bolt				1						
brass button				1						
ferrous metal spike						1				
nail, wrought					1					
nail, cut (post-1790)			1	6	7	1		1		13
nail, cut, machine headed (post-1830)					1					
nail, wire (post-1890)										1
nail, unidentified									1	4
unidentified ferrous metal			2		2					1
wire				1	2					

Table 4: (continued)

Miscellaneous										
bone			1	4	11	4			1	4
brick			1	43	7	14	1	1	6	81
charcoal				1						
cinder			2			23				
coal				6		20		1	1	6
coke				8		10	1			
egg shell				1						
flint ballast										1
mortar				1	3			10	2	4
oyster shell				21				4		97
plastic comb										2
plastic jewelry inlay					1					
slag				4		71		3	6	
slate										1
Prehistoric										
chert primary reduction flake					1					
chert primary reduction flake, utilized			1							
quartz decortication flake					1					
quartz primary reduction flake			2		1					
quartz biface thinning flake			2							
quartz primary reduction flake, utilized					1					
Total Post Holes	**8**	**4**	**58**	**123**	**76**	**153**	**8**	**20**	**26**	**266**

Feature 21, Fill Above Feature 39

Feature 21 was an amorphous circular soil stain in the northwest corner of the site after the site was leveled to 6 feet (1.8 meters) a.s.l. (Figure 29). The feature measured 6 x 5 feet (1.8 x 1.5 meters), went about 6 inches (15.2 centimeters) deep from the site level, and contained [7.5YR 4/6] brown sandy loam mottled with [10YR 6/2] light brownish gray and [10YR 3/2] very dark grayish brown loam. The feature was initially bisected and excavated until a semi-circle of bricks was noted (Figure 30); that semi-circle was immediately identified as a well and given a new feature number (Feature 39, discussed later). The remainder of Feature 21 was excavated, but soil samples were not retained. The profile exhibited several layers of fill mixed with ash, mortar, and loose brick. At the end of Feature 21's excavation, some small bits of plaster and fiber were identified. The fiber was tested and confirmed as asbestos. All artifacts and samples from Feature 21 were disposed of for safety reasons. Feature 21 was clearly industrial fill that had settled into the depression created by a historic well.

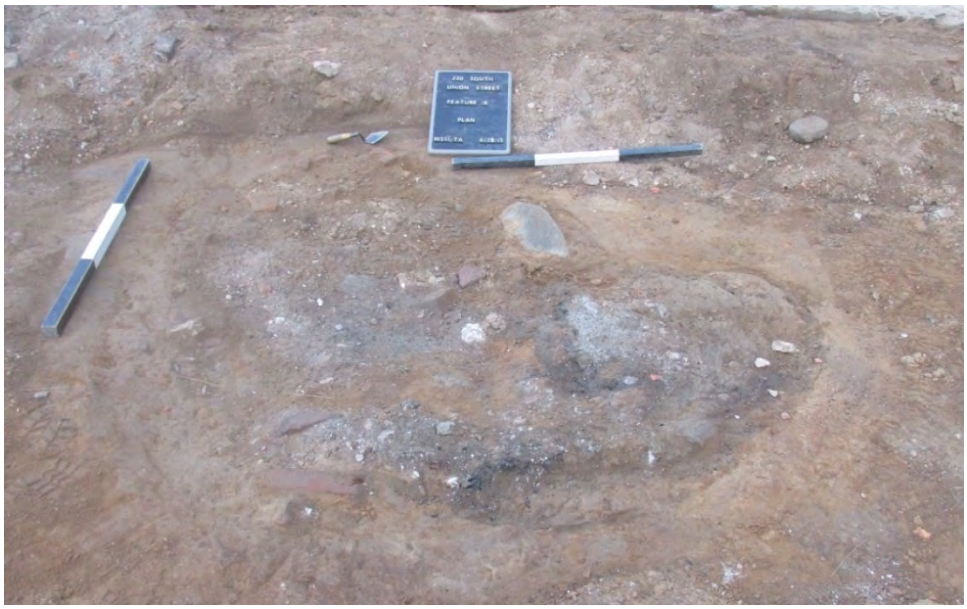

Figure 29: Feature 21, Plan, View to the West

Figure 30: Feature 21, West Bisection Profile, Includes Feature 39

Feature 24, Foundations

Feature 24 was exposed partially by the backhoe during the initial site leveling process in the northwest corner (Figure 31). Several intact schist blocks were noted and due to their fragility, the remainder of the feature was excavated by hand. Feature 24 was a schist foundation, approximately

1-2 courses thick and 18 x 2.5 feet (5.5 x 0.8 meters) in size. The longest axis ran north to south, with a small east to west dogleg on the south end. The corner was located, but most of the structure had not survived.

Figure 31: Feature 24, Plan, View to the North

Two bisections were removed to obtain profiles and surrounding soils were screened. Feature 24 was likely associated with the well at Feature 39, which was approximately 9 feet (2.7 meters) to the east. The profiles exhibited 1-2 courses of schist surrounded by mortar and some loose brick. Bisection 1 exhibited an ephemeral layer around the foundation that is likely a builder's trench (Figure 32). That layer blended into the surrounding soil, which was historic infilling that was created and/or stabilized the land beyond Point Lumley. There was not enough soil to retain a proper soil sample from both bisections and most of the surrounding soil was mixed with historic fill.

Few artifacts were picked from the immediately surrounding soils of what was possibly the builder's trench and within the loose mortar and brick in between the stones (Table 5). Two undecorated creamware sherds were the only temporally diagnostic items recovered during the excavations. The foundations were likely part of a small house built after 1798 and occupied during the early 19th century and is generally aligned with Parcel 3. It is likely that the brick well, discussed later within this chapter, was associated with the occupation of this structure.

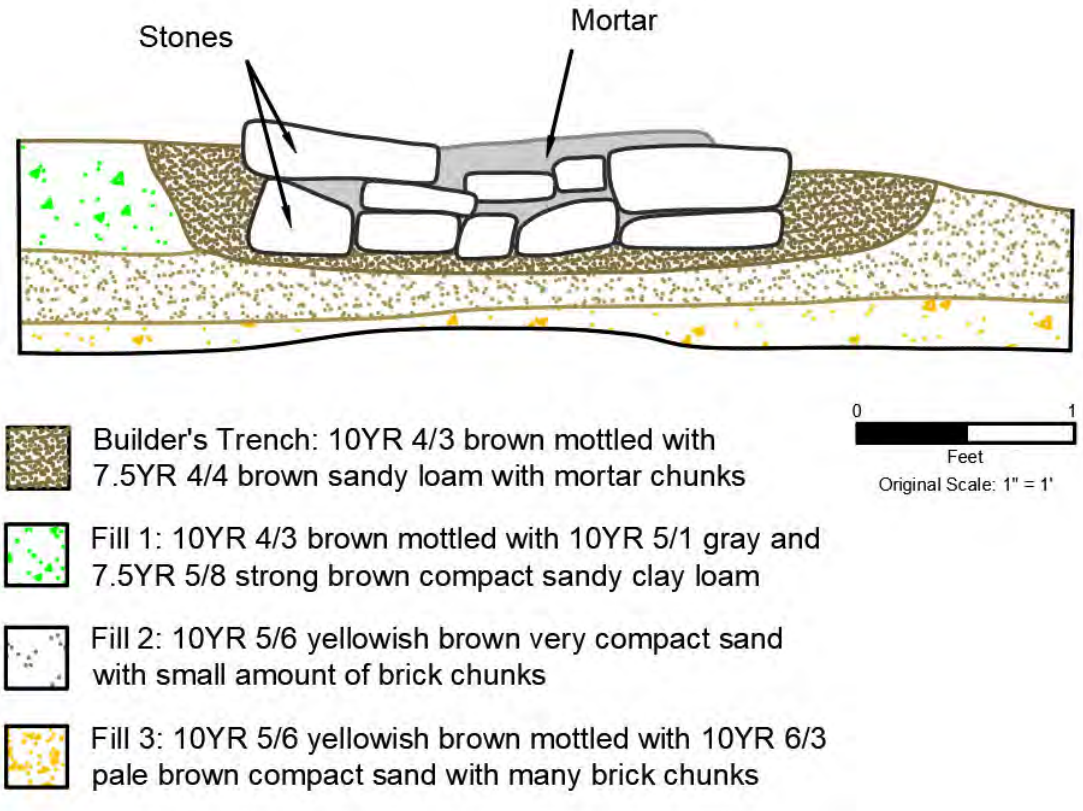

Figure 32: Feature 24, Bisection 1, South Profile Photograph and Drawing

Table 5: Artifacts Recovered from Feature 24

Artifact Description	Builder's Trench Fill	Feature Fill
Ceramics		
creamware (1762-1820)	1	1
Glass		
bottle		3
unidentified glass		1
Miscellaneous		
bone		1
brick	4	6
mortar	3	
Total Feature 24	**8**	**12**

Feature 27, Builder's Trench

Feature 27 was a 17 x 1.5 foot (5.2 x 0.45 meter) brick and mortar wall extending east and west on the north side of the former alley and was found after the initial site leveling to 6 feet in elevation (Figure 33). The wall was no longer intact, but the line of brick and mortar rubble clearly indicated the presence of the former alignment, which likely continued east and west of the defined feature. Along the south side of the wall was a builder's trench, approximately 12 inches (30.5 centimeters) in width. Two large sections of the wall and builder's trench were excavated and the artifacts from both sub-features were kept separated. The wall rubble and builder's trench extended only 3.6 inches (9.1 centimeters) into historic sand fill. A portion of Feature 27 was also recorded in the second phase of Trench 3 (Figure 34). The feature seemed to disappear or was damaged beyond the excavation limits of Trench 3.

Figure 33: Feature 27, Plan, View to the North

Figure 34: Feature 27, Plan, In Progress, East Section

A total of 288 artifacts were recovered from Feature 27, including 57 from the wall and surface and 231 from the builder's trench (Table 6). The majority (86.5%, n=249) of the artifacts included coal slag, oyster shell, brick, and mortar fragments. Both sections of the feature contained pearlware fragments (1780-1830), cut iron nails (post-1790, one post-1830), potash windowpane sherds (pre-1864), contact mold glass (1810-1880), and a prehistoric quartz biface thinning flake. Though historic fill in which the feature was built contains late 18th-early 19th century material, it is possible that older material mixed in with the feature during construction. Feature 27, like Feature 28, was likely associated with the 19th century warehouses that stood on the property.

Table 6: Artifacts Recovered from Feature 27

Artifact Description	Builder's Trench Fill	Feature Fill
Ceramics		
pearlware (1780-1830)	7	2
Redware	3	
Glass		
Bottle	1	4
bottle, contact mold (1810-1880)	1	1
windowpane, potash (pre-1864)		2
Metal		
nail, cut (post-1790)	5	3
nail, cut, machine headed (post-1830)		1
nail, unidentified	3	2
unidentified ferrous metal	3	

Table 6 (continued)

Artifact Description	Builder's Trench Fill	Feature Fill
Miscellaneous		
bone	3	3
brick	69	13
charcoal		3
coal	6	1
mortar	3	14
oyster shell	53	5
slag	73	3
Prehistoric		
quartz biface thinning flake	1	
Total Feature 27	**231**	**57**

Features 28 and 29, Warehouse Foundations

Feature 28 and Feature 29 were located on the northern edge of the project site and were discovered during the removal of the large concrete footers of the modern warehouse (Figure 35). The concrete footers were poured directly onto both features, causing the features to stick to the footers as they were removed. Once located, the footers were removed with care. Feature 28 was a brick foundation running east to west along the northern border of the project area. Feature 29 was a schist and mortar foundation that ran parallel with Feature 28 on the north side of said feature. These features likely represent the abutting walls of the Hoof Warehouse, known to be a three-story brick structure, and the McKenzie Warehouse shown immediately to the north on the 1877 Hopkins map (see Figure 10).

Feature 28 was approximately 75 feet (22.9 meters) long, 1.5 feet (0.46 meters) wide, and five courses deep (roughly 2 feet/0.61 meters). It was a brick and mortar footer, which extended 1.35 feet (0.41 meters) below the modern warehouse footer. The western end, towards Union Street, appeared to have been removed, likely during the leveling process for the modern warehouse. On the east end, the brick wall continued all the way to The Strand. These eastern bricks seemed to be in better shape and may have been a potential extension to the Hoof warehouse or an abutting building. Since this feature was built into historic fill and there was no way to separate it from modern fill, no artifacts were recovered from Feature 28.

Feature 29 was approximately 147 feet (44.8 meters) long, approximately 2.4 feet (0.73 meters) wide, and 2.5 feet (0.76 meters) into historic fill. Feature 29 was difficult to identify and properly measure due to the fragility of the schist and mortar portions of the wall itself was underneath the standing building to the north of the project area. Like Feature 29, the wall appeared to have been intentionally removed to the west to aid in the leveling for the modern warehouse footers. Since this feature was built into historic fill and there was no way to separate it from the modern fill, no artifacts were recovered from Feature 29.

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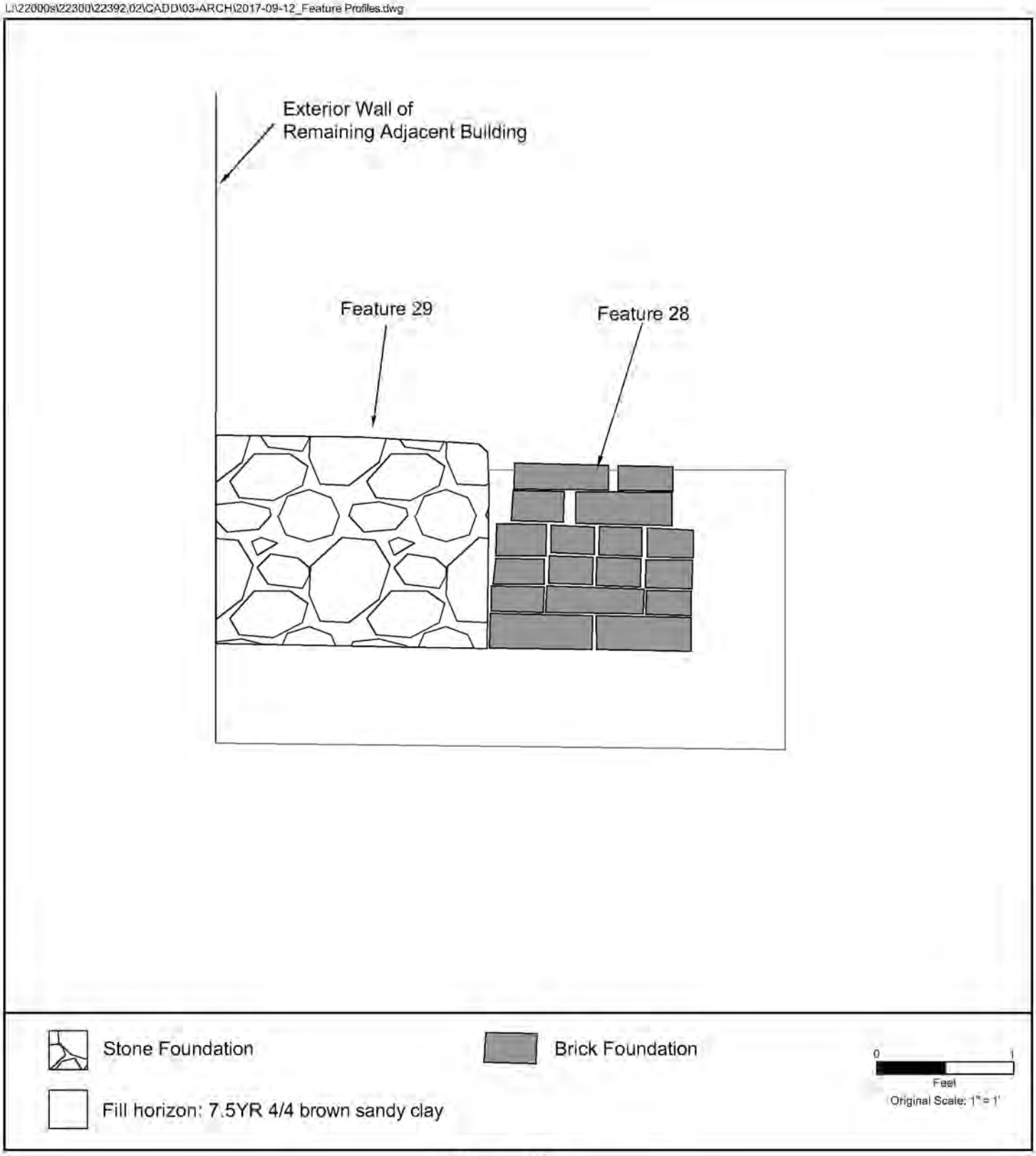

Figure 35
Features 28 and 29 - East Wall Profile

Feature 35, Barrel Privy

Feature 35 was a 2.5 x 2.5 foot (0.76 x 0.76 meter) circular stain located in the southwest corner of the project area during the first site leveling (Figure 36; Figure 37). The circular feature contained [10YR 4/4] dark yellowish brown sandy loam surrounded by [10YR 6/3] pale brown sand and was excavated into the [10YR 5/6] yellowish brown sand mixed with iron oxide staining, which seemed to be the native soil of Point Lumley (Figure 38). Feature 35 extended 1.1 feet (0.34 meters) into the sandy subsoil and was excavated as a single stratigraphic unit. Several artifacts including glass and ceramics were noted on the top of the feature and removed since excavation did not happen immediately. Both sides of Feature 35 were excavated, dry screened, and a soil sample was retained for analysis.

Figure 36: Feature 35, Plan, View to the East

Figure 37: Feature 35, West Bisection Profile

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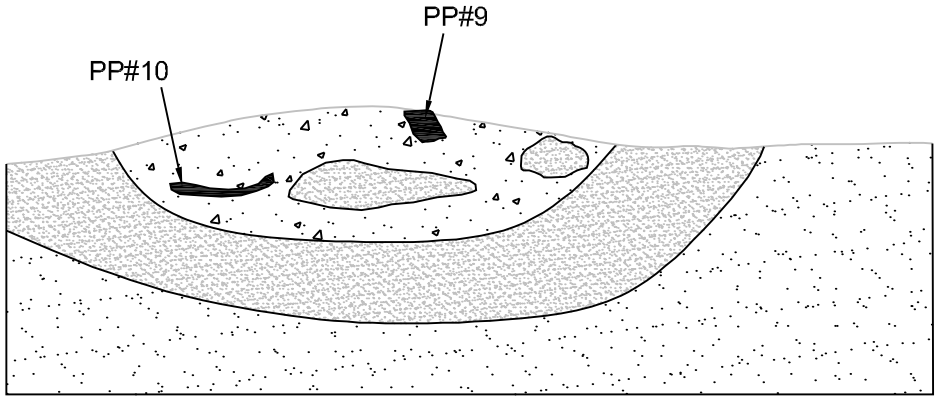


Fill 1 horizon:10 YR 4/4 dark yellowish brown sandy loam

Fill 2 horizon: 10YR 6/3 brown sand

Ceramic

Subsoil: 10YR 5/6 yellowish brown sand mixed with iron oxide staining

0 1
Feet
Original Scale: 1" = 1'

Figure 38
Feature 35 - East Profile of Bisection

A total of 262 artifacts were recovered from Feature 35 (Table 7). The temporally diagnostic artifacts suggest a very late 18th-century to early 19th-century date for the feature including pearlware, free blown glass, contact mold glass, one cut nail fragment, and one creamware fragment. The moderate number of artifacts from this feature suggest that it may have been a small privy associated with the dwelling/shop that occupied Parcel 1 and similar to Features 36 and 37, which were also late 18th/early 19th century privies on the neighboring parcel. Feature 35 was not water-screened due to not being immediately interpreted as a privy.

Table 7: Artifacts Recovered from Feature 35

Artifact Description	Feature Fill
Ceramics	
hard paste porcelain	1
creamware (1762-1820)	2
pearlware (1780-1830)	74
redware	5
stoneware	1
Glass	
bottle	5
tableware	17
bottle, freeblown (pre-1860)	3
tableware, freeblown (pre-1860)	2
stemmed wine glass, freeblown (pre-1860)	5
bottle, contact mold (1810-1880)	54
unidentified glass	19
windowpane, potash (pre-1864)	32
Metal	
brass button	1
nail, cut (post-1790)	1
Miscellaneous	
bone	2
brick	6
cinder	1
coal	5
coke	3
fish scale	5
mortar	15
oyster shell	3
Total Feature 35	**262**

Soil samples taken from Feature 35 were sent to Paleoscapes Archaeobotanical Services Team for macrobotanical analysis (Puseman 2016). The resulting report can be reviewed in Appendix VII (Volume II). Several fruit seeds were identified, such as raspberry (*Rubus*), grape (*Vitis*), fig (*Ficus carica*), strawberry (*Fragaria*), and cherry (*Prunus*). These may represent consumed fruit in the local area during the late 18th-early 19th century. Cattail seeds (*Typha*) were also recovered. Recovered charcoal included mostly oak, specifically white oak (*Quercus Leucobalanus*), and pine (*Pinus*). A few fragments of maple (*Acer*), hickory (*Carya*), and black locust (*Robinia pseudoacacia*) were also identified.

Soil samples from Feature 35 were sent to the PaleoResearch Institute for pollen, parasite, and phytolith analysis (Cummings 2016) (Appendix VIII, Volume II). Samples contained moderate amounts of oak tree (*Quercus*), pine tree (*Pinus*), weed (*Asteraceae*), grass (*Poaceae*), rose (*Rosaceae*), and cereal grain (*Cerealia*) pollen. Small amounts of other tree pollen were detected, including maple (*Acer*), birch (*Betula*), chestnut (*Castanea*), hickory (*Carya*), walnut (*Juglans*), cherry (*Prunus*), and juniper (*Juniperus*). Small amounts of plant pollen encompassed goosefoot (*Amaranthaceae*), wormwood (*Artemisia*), sunflower (*Asteraceae*), chicory (*Liguliflorae*), sedges (*Cyperaceae*), wild buckwheat (*Eriogonum*), legumes (*Fabaceae*), clover (*Trifolium*), prickly pear cactus (*Opuntia*), phlox (*Phlox*), buckthorn (*Rhamnaceae*), and cattails (*Typha angustifolia*). The pollen analyst concluded that the "pollen that likely represents food includes *Apiaceae*, *Brassicaceae*, *Cerealia*, *Lamiaceae*, *Vitis*, and *Zea mays* reflecting plants in the celery and mustard families, cereals such as wheat, plants in the mint family, grapes, and corn/maize, suggesting they were part of the diet" (Cummings 2016:12). Recovered phytoliths were mostly festucoid grasses, which include wheat and other cereals. Monocots (grasses and sedges) were also recovered but were in non-diagnostic forms. No starch or parasite eggs were observed.

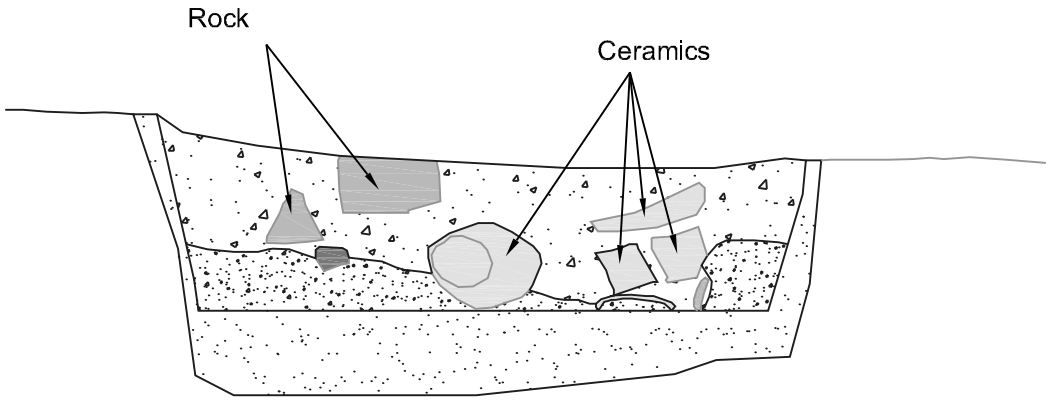
Faunal remains recovered from Feature 35 were sent to IdBones for analysis (Andrews 2016). The resulting report can be reviewed in Appendix IX (Volume II). Few faunal remains were recovered from this possible privy. Half of the assemblage was unidentifiable fish remains. Only eight bones could be identified and included bony fish (*Osteichythyes*), herring (*Clupeidae*), old world rat (*Rattus*), and Norway rat (*Rattus norvegicus).* The rat remains were likely scavenger remains, either killed and discarded or trapped within the privy, but the herring and bony fish remains likely represent food consumed or prepared by the occupants of the parcel in the late 18th/early 19th century.

Feature 36, Barrel Privy

Feature 36 was a 3.5 feet x 3.4 feet (1.1 meters x 1.0 meters) circular stain located in the southwest corner of the project area during the first site leveling (Figure 39; Figure 40). The feature contained [10YR 3/3] dark brown sandy loam overlying [10YR 4/4] dark yellowish brown and was excavated into the historic fill sand (Figure 41). Feature 36 extended 2.7 feet (0.82 meters) into the historic fill and was excavated in 6 inches (15.2 centimeters) arbitrary levels within natural zones. A mitigation plan was created in consultation with Alexandria Archaeology, which included bisection of the feature, dry screening the first half, retaining a soil sample, and water screening the remainder of the feature. The profile of Feature 36 shows the edges were wood-lined. The feature was determined to be a barrel privy.

Figure 39: Feature 36, Plan, View to the East

Figure 40: Feature 36, South Bisection Profile



Fill 1 horizon: 10YR 3/3 dark brown sandy loam

Fill 2 horizon: 10YR 4/4 dark yellowish brown sandy loam

Subsoil: 10YR 6/4 light yellowish brown loamy sand

Brick

Rock

Ceramic

0 1

Feet

Original Scale: 1" = 1'

Figure 41
Feature 36 - South Profile

A total of 2,281 artifacts were recovered from Feature 36 (Table 8). The temporally diagnostic artifacts suggest a late 18th-century to early 19th-century date for the feature, and include creamware, pearlware, locally produced redware, free blown glass, contact mold glass, and potash windowpane sherds. The high artifact count and the large number of glass artifacts recovered, particularly bottle glass, may suggest a not purely domestic use of the privy.

Soil samples taken from Feature 36 were sent to Paleoscapes Archaeobotanical Services Team for macrobotanical analysis (Puseman 2016). The resulting report can be reviewed in Appendix VII (Volume II). Some fruit seeds were identified, such as raspberry (*Rubus*), grape (*Vitis*), fig (*Ficus carica*), and strawberry (*Fragaria*). These may represent consumed fruit in the local area during the late 18th/early 19th century. The analyst concluded that "the small amount of seeds in this sample suggests that the feature was not used extensively as a privy" (Puseman 2016:11). A few cattail (*Typha*) and purslane (*Portulaca*) seeds were also recovered. Recovered charcoal included mostly oak (*Quercus*), and pine (*Pinus*). A ctenoid fish scale was identified. Ctenoid scales are found on bony fishes, such as perch, sunfish, bass, crappie, and many others.

Table 8: Artifacts Recovered from Feature 36

Artifact Description	Feature Fill		
	Level 1	Level 2	Level 3
Ceramics			
kaolin pipe stem	2		
hard paste porcelain	2	2	
hard paste porcelain (1775-1810)	1		
Jackfield ware (1740-1780)	1		
Whieldon ware (1740-1780)		1	
creamware (1762-1820)	167	65	
pearlware (1780-1830)	53	26	5
redware (1792-1809)	85	29	
redware	9	1	1
stoneware	3	1	
unidentified ceramic			1
Glass			
bottle	79	17	
tableware	179	28	1
intaglio/watch fob spinner	1		
lamp chimney	5		
tableware, blown pattern mold (1750-1850)	21		
bottle, freeblown (1760-1800)	7		
bottle, freeblown (pre-1860)	159	9	
case bottle, freeblown (pre-1860)	46		
tableware, freeblown (pre-1860)	71	12	

Table 8 (continued)

Artifact Description	Feature Fill		
	Level 1	Level 2	Level 3
Glass			
bottle, contact mold (1810-1880)	7		
unidentified glass	31	3	
windowpane, potash (pre-1864)	9		
windowpane, soda		1	
Metal			
brass flat disc button	1		
brass flat disc button (1760-1800)	1		
nail, wrought	29	3	1
nail, unidentified	7	4	
wrought spike	1		
unidentified ferrous metal	28	11	22
Miscellaneous			
bone	801	67	5
bone lice comb	1		
brick	25	10	
charcoal, coal, coke	7	3	1
fish scale	13	1	
leather shoe	9		
oyster shell	54	19	1
peach pit	1	1	
sandstone building material	3		
seed		1	1
slag	4		
slate	4		
Total Feature 36	**1927**	**315**	**39**

Soil samples from Feature 36 were sent to the PaleoResearch Institute for pollen, parasite, and phytolith analysis (Cummings 2016). The resulting report can be reviewed in Appendix VII (Volume II). Most of the pollen observed was grass (*Poaceae*), which may also represent cereals but the difference was indistinguishable. Samples contained moderate amounts of oak tree (*Quercus*), pine tree (*Pinus*), weed (*Asteraceae*), and rose (*Rosaceae*) pollen. Small amounts of other tree pollen were detected, including maple (*Acer*), hickory (*Carya*), juniper (*Juniperus*), basswood (*Tilia*), alder (*Alnus*), and helmlock (*Tsuga*). Small amounts of plant pollen indicate local growth of goosefoot (*Amaranthaceae*), wormwood (*Artemisia*), sunflower (*Asteraceae*), thistle (*Cirsium*), wild buckwheat (*Eriogonum*), legumes (*Fabaceae*), clover (*Trifolium*), and plantain (*Plantago*). Pollen representing foods included celery (*Apiaceae*), mustard (*Brassicaceae*), cereals (*Cerealia*), and corn (*Zea mays*). Recovered phytoliths were mostly festucoid grasses, which comprise wheat and other cereals. According to the analyst,

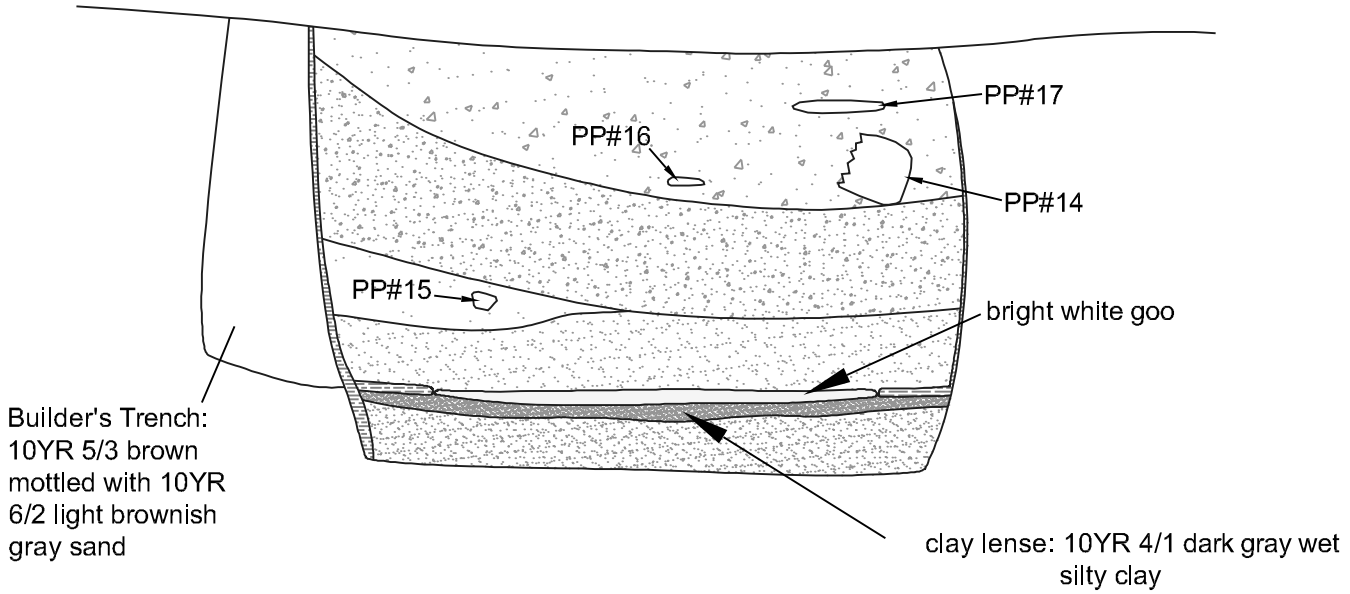
"the combined pollen and starch records indicate consumption and/or discard of cereals and corn, condiments such as celery seed and/or parsley and mustard or broccoli or a related plant (Cummings 2016:13). No parasites were observed.

Faunal remains recovered from Feature 36 were sent to IdBones for analysis (Andrews 2016). The resulting report can be reviewed in Appendix IX (Volume II). A total of 914 faunal remains was recovered from this late 18th/early 19th century privy. Identified species included bony fish (*Osteichythyes*), white catfish (*Ictalurus catus*), yellow perch (*Perca Flavescens*), white perch (*Morone americana*), duck (*Duck*), goose (*Goose*), chicken (*Gallus gallus*), rabbit (*Rabbit*), muskrat (*Ondatra zibethica*), rat (*Rat*), Norway rat (*Rattus norvegicus)*, pig (*Sus scrofa*), cow (*Bos taurus*), and sheep/goat (*Ovis aries/Capra hircus*). Seventeen butchered mammal bones, particularly cow and pig, were noted. The rat and muskrat remains were likely scavenger remains, either killed and discarded or trapped within the privy. The remainder of the faunal remains may represent food consumed or prepared onsite in the late 18th/early 19th century.

Feature 37, Barrel Privy

Feature 37 was a 3.6 feet x 3.5 feet (1.1 meters x 1.1 meters) circular stain located in the southwest corner of the project area during the first site leveling (Figure 42). The feature contained four layers of fills. Fill 1 contained [10YR 4/1] dark gray sandy clay loam and overlaid Fill 2 [10YR 5/2] grayish brown sandy clay, which overlaid Fill 3, a [10YR 6/2] light grayish brown sandy clay loam. Fill 3 overlaid Fill 4, a [10YR 3/2] very dark grayish brown sandy clay loam. These fills overlaid the historic fill sand that was present throughout the project area (Figure 43; Figure 44). Feature 37 extended 2.2 feet (0.67 meters) into the historic fill and was excavated in 6 inches (15.2 centimeters) arbitrary levels within natural zone. A mitigation plan was created in consultation with Alexandria Archaeology, which included bisection of the feature, dry screening the first half, retaining a soil sample, and water screening the remainder of the feature. The profile of Feature 37 shows the edges were wood-lined. The feature was determined to be a barrel privy.

Figure 42: Feature 37, Plan, View to the East



Fill 1: 10YR 4/1 dark gray mottled with 10YR 5/2 grayish brown and 10YR 3/2 very dark grayish brown sandy clay loam

Fill 2: 10YR 5/2 grayish brown mottled with 10YR 3/1 very dark gray and 10YR 5/4 yellowish brown sandy clay with iron concretions

Fill 3: 10YR 6/2 light brownish gray mottled with 10YR 5/3 brown sandy clay loam

Fill 4: 10YR 3/2 thinly banded with 10YR 2/1 black, and 10YR 4/1 dark gray wet sandy clay loam

Fill 5: 10YR 4/3 brown mottled with 10YR 5/6 yellowish brown loose sand with iron banding/leaching

Wood

PP# = Piece Plot Artifact

0 1
Feet
Original Scale: 1" = 1'

Figure 43
Feature 37 - East Profile of Bisection

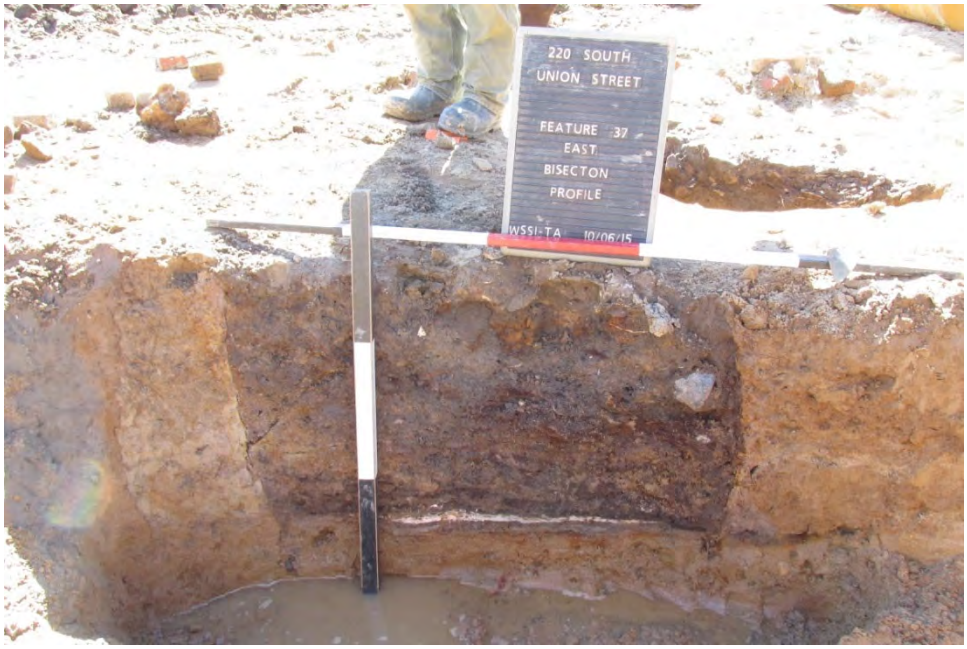


Figure 44: Feature 37, East Bisection Profile

A total of 1,426 artifacts were recovered from Feature 37 (Table 9). The diagnostic artifacts suggest a very late 18th century to early 19th century date for the feature including pearlware, white salt-glazed stoneware, free blown glass, contact mold glass, potash and soda windowpane, and creamware. The large volume of artifacts from this feature suggest that it may have been, along with Features 35 and 36, a small privy associated late 18th/early 19th century occupants of dwellings or shops on Union Street.

Table 9: Artifacts Recovered from Feature 37

Artifact Description	Feature Fill			
	Level 1	Level 2	Level 3	Level 4
Ceramics				
kaolin pipe bowl and stem	1			
kaolin pipe bowl	4	2	1	3
kaolin pipe stem		1	1	1
hard paste porcelain	4	1	1	
hard paste porcelain (1765-1810)		1		
hard paste porcelain (1775-1810)	2	1		
manganese mottled (1680-1780)		2		
Nottingham-type (1700-1810)	1	1		
Westerwald (1700-1775)				1
white salt glazed stoneware (1720-1805)			1	
creamware (1762-1820)	1	7	1	1
pearlware (1780-1830)	55	52	45	29

Table 9 (continued)

Artifact Description	Feature Fill			
	Level 1	Level 2	Level 3	Level 4
Ceramics				
whiteware (1830-1860+)	1			
refined white earthenware	3	4		1
buff bodied earthenware		1		
pink bodied earthenware		6		
refined redware (1800-1840)		1		
redware (1792-1809)		1		
redware	6	2	6	1
stoneware	1	1		
Glass				
bead		1		
bottle, bottle/jar	18	26	12	14
tableware	5	6		1
tableware/bottle	4			
lamp chimney	6	8		
bottle, freeblown (pre-1860)	4	8		2
tableware, freeblown (pre-1860)	2	6		2
bottle, contact mold (1810-1880)	4	5	4	13
ink well, contact mold (1810-1880)		1		
unidentified glass	22	13	6	8
windowpane, potash (pre-1864)	6	1		3
windowpane, potash/soda (pre-1864)				3
windowpane, soda (pre-1864)	1	4		1
windowpane, soda/potash (pre-1864)		3	2	
Metal				
brass flat disc button (1726-1776)		2		
lead shot				1
nail, wrought	24	22		36
nail, unidentified				1
unidentified ferrous metal	45	27	9	24
Miscellaneous				
bone	64	46	1	15
brick	27	26	20	38
charcoal		2	2	
cinder				1
coal	10	36	14	42

Table 9 (continued)

Artifact Description	Feature Fill			
	Level 1	Level 2	Level 3	Level 4
Miscellaneous				
coke	5	32	10	35
leather			1	
mortar	6	2		2
clam shell	4			
oyster shell	133	49	4	28
seed/pit		1	4	60
slag	1	9	1	17
slate		1		
Prehistoric				
jasper primary reduction flake				1
jasper biface thinning flake				2
quartz primary reduction flake				1
quartzite Savannah River broadspear (3000 BC-1000 BC)			1	
Total Feature 37	**470**	**421**	**147**	**388**

Soil samples taken from Feature 37 were sent to Paleoscapes Archaeobotanical Services Team for macrobotanical analysis (Puseman 2016). The resulting report is presented in Appendix VII (Volume II). The analyst concluded that “the macrofloral record suggests that this feature was also not extensively used” (Puseman 2016:11). Only a couple fruit seeds were identified, and all were grape (*Vitis*). Several cattail (*Typha*), purslane (*Portulaca*), and two clover (*Trifolium*) seeds were also recovered, indicating the types of nearby local vegetation. Recovered charcoalincluded mostly oak (*Quercus*), specifically white oak (*Quercus Leucobalanus*), and pine (*Pinus*). Uncharred wood fragments suggest the feature was lined with oak.

Soil samples from Feature 37 were sent to the PaleoResearch Institute for pollen, parasite, and phytolith analysis (Cummings 2016) (Appendix VIII, Volume II). Most of the pollen observed was grass (*Poaceae*), which may also represent cereals but the difference was indistinguishable. Samples contained moderate amounts of oak tree (*Quercus*), pine tree (*Pinus*), weed (*Asteraceae*), and rose (*Rosaceae*) pollen. Small amounts of other tree pollen were detected, including maple (*Acer*), juniper (*Juniperus*), birch (*Betula*), and walnut (*Juglans*). Small amounts of plant pollen indicate local growth of goosefoot (*Amaranthaceae*), sunflower (*Asteraceae*), wild buckwheat (*Eriogonum*), legumes (*Fabaceae*), and clover (*Trifolium*). Pollen representing foods included celery (*Apiaceae*), mustard (*Brassicaceae*), cereals (*Cerealia*), and corn (*Zea mays*). Recovered phytoliths were mostly festucoid grasses, which include wheat and other cereals. No parasites were observed.

Faunal remains recovered from Feature 37 were sent to IdBones for analysis (Andrews 2016). The resulting report can be reviewed in Appendix IX (Volume II). A total of 194 faunal

remains were recovered from this late 18th-early 19th century privy. Identified species included bony fish (*Osteichythyes*), white catfish (*Ictalurus catus*), perching bird (*Passeriformes*), duck (*Duck*), goose (*Goose*), chicken (*Gallus gallus*), old world rat (*Rattus*), Norway rat (*Rattus norvegicus)*, pig (*Sus scrofa*), cow (*Bos taurus*), and sheep/goat (*Ovis aries/Capra hircus*). The perching bird may represent food remains or a small pet songbird, which were known to be kept in cages at the time. Seven butchered mammal bones, particularly cow, were noted. The old world rat and Norway rat remains were likely scavenger remains, either killed and discarded or trapped within the privy. The remainder of the faunal remains may represent food consumed or prepared onsite in the late 18th-early 19th century.

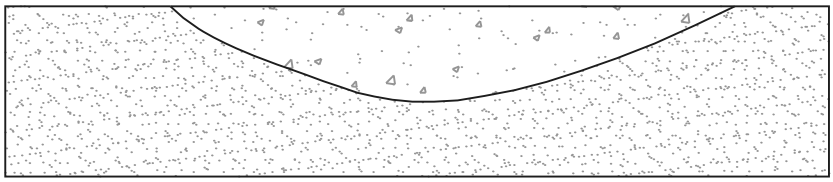
Feature 38, Possible Barrel Privy

Feature 38 was a 3 feet x 2.8 feet (0.91 meters x 0.85 meters) circular stain located in the western portion of the Point Lumley parcel during the first site leveling (Figure 45; Figure 46). The feature contained [10YR 3/2] very dark grayish brown sandy loam and was excavated into the historic fill sand. Feature 38 extended 9.6 inches (24.4 centimeters) into the historic fill and was excavated as a single stratigraphic unit. The feature did not exhibit the same shape, depth, and artifact assemblage as the nearby privy features (Feature 35, 36, 37). Therefore, Feature 38 was not excavated under the mitigation plan developed for the privy features. The feature was bisected, screened, and a soil sample was retained.

A total of 26 artifacts were recovered from Feature 38 (Table 10). The diagnostic artifacts included three sherds of pearlware, four sherds of creamware, and three cut nails. This suggests an early 19th century date for the feature. Feature 38's function is unclear but may be associated with the nearby late 18th/early 19th century privies (Features 35-37), or the feature could have been a depression filled in during the 19th century.

Figure 45: Feature 38, Plan, View to the North

L:\22000s\22300\22392.02\CADD\03-ARCH\2017-09-12_Feature Profiles.dwg



Fill 1 horizon: 10YR 3/2 very dark grayish brown sandy loam

Subsoil: 10YR 6/4 light yellowish brown loamy sand

0 1
Feet
Original Scale: 1" = 1'

Figure 46
Feature 38 - West Profile

Table 10: Artifacts Recovered from Feature 38

Artifact Description	Feature Fill
Ceramics	
kaolin pipe bowl	1
creamware (1762-1820)	4
pearlware (1780-1830)	3
redware	3
refined white earthenware	1
Glass	
bottle	3
Metal	
nail, cut (post-1790)	3
Miscellaneous	
mortar	1
slag	7
Total Feature 38	**26**

Feature 39, Brick-lined Well

Feature 39 was a 5.5 feet (1.7 meters) diameter ring of brick that was located beneath Feature 21 (Figure 47; Figure 48). This feature was recognized immediately as a well. A mitigation plan was developed in consultation with Alexandria Archaeology, which included bisection, water screening, and soil samples. Excavation was discontinued due to the presence of asbestos at the top of the well. An industrial hygienist and abatement team was used to excavate the well until no asbestos remained. Asbestos was found to be present throughout the fill soils within the well. Therefore, no artifacts were recovered from Feature 39. The presence of asbestos throughout the well fills suggests that the feature was filled in the late 19th or early 20th century, during the period of heavy industrial redevelopment of the site by the Bryant Fertilizer Company.

The well was approximately 12 feet (3.7 meters) deep below the top of the feature, which was at approximately 5 feet (1.5 meters) a.s.l. The outer edge of the well was lined with wooden boards and no builder's trench was discernable from the historic sandy fill (Figure 49). A hollow, but severely degraded, wooden post was noted in the center of the well (Figure 50). When that was removed, a wooden cylindrical pipe was recorded immediately below the square post. This pipe arrangement was similar to a well excavated by Thunderbird Archeology at King Street in Alexandria (Mullen et al 2009). These wooden pipes were used in conjunction with hand pumps to draw water out of the well in the 19th century. Photographs were taken at a safe distance during abatement (Figure 51). The contaminated fill was completely removed down to a small brick and wood ring at the base of the well excavation.

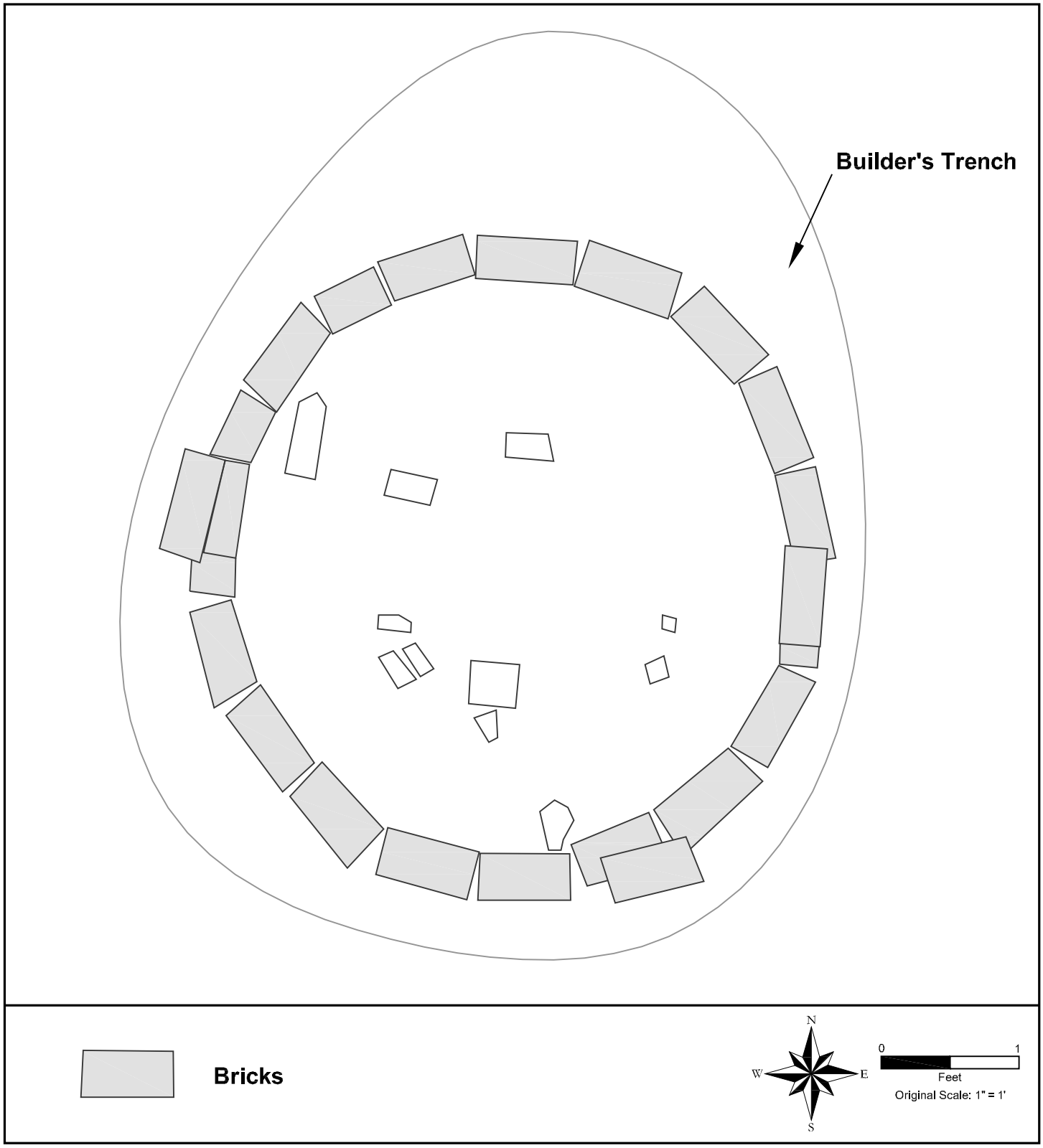


Figure 47
Feature 39 Plan View

Figure 48: Feature 39, Plan, View to the East

Figure 49: Feature 39, Exterior Well Wall

Figure 50: Feature 39, Central Wooden Pipe

Figure 51: Excavation of Feature 39

Feature 40, Brick Sidewalk

Feature 40 was recorded in the south wall along Duke Street after the first site leveling (Figure 52). The feature consists of two small brick pads one course thick recorded near the southern boundary of Parcel 1. These pads were likely portions of a late 19th -or 20th-century sidewalk that previously lined Duke Street. No further excavation was warranted, and no artifacts were recovered.

Figure 52: Feature 40, Plan, View to the North

Feature 41, Carlyle Warehouse

Feature 41 was located during the piling trench monitoring in the southeast corner of the property and encompassed the remains of a large building consisting of wooden sills and beams, floorboards, a stone foundation wall, a wooden pile, and one large stone pier (Figure 53). The sills outlined the footprint of the western end of a building 24 feet (7.3 meters) wide and at least 51 feet (15.5 meters) long with a crossbeam outlining an intact 33-foot (10 meters) western segment of the building. The area within the stone foundation walls beneath the structure was infilled with sand and soil during or shortly after the construction of the building. The eastern end of the feature appeared to have either been damaged by modern construction, scavenged after the building was decommissioned, or taken away by tides prior to the burial of the building remains beneath fill soil. Based on its location within the project area, the feature was identified as the remains of the public warehouse constructed by John Carlyle in 1755.

Figure 53: Overview of Feature 41, View to South

Feature 41 was excavated under a resource management plan created in consultation with Alexandria Archaeology, which consisted of complete recordation of the wooden components of the feature, the excavation of ten 3 x 3 foot (0.91 x 0.91 meters) test units (Test Units 1-10), the collection of ten soil samples for flotation, and assistance with the removal of the beams and portions of the structure designated for conservation (Appendix II, Volume II). The locations of the ten test units were determined after the entire structure had been exposed (Figure 54). Construction scheduling constraints and the rapid degradation of the exposed timbers necessitated a two-week time limit between exposure of the feature and its removal for preservation.

Following the completion of recordation and test unit excavation, the timber framing elements were removed under the direction of staff from the Maryland Archaeological Conservation Lab (MAC Lab). MAC Lab personnel labeled each piece of framing prior to removal, which was accomplished by Thunderbird Archeology staff excavating beneath the major timbers to free them from fill soils and allow the passage of lifting straps. Long beams were cut with a chainsaw operated by City of Alexandria staff into lengths of 12 feet (3.7 meters) or less to fit into the freezer used by MAC Lab for wood preservation. A backhoe provided by Anderson & Clark lifted the timbers onto a truck for transportation. Core samples were attempted to be extracted from Feature 41's wood beams for dendrochronological (tree-ring) analysis, but the samples were too soft and undergo the proper examination procedures. After the structural elements of the feature were removed, Test Unit 11 was excavated, and the remainder of the floor/foundation fill was excavated to below the base of the stone foundation walls to ensure no further deposits or features were present.

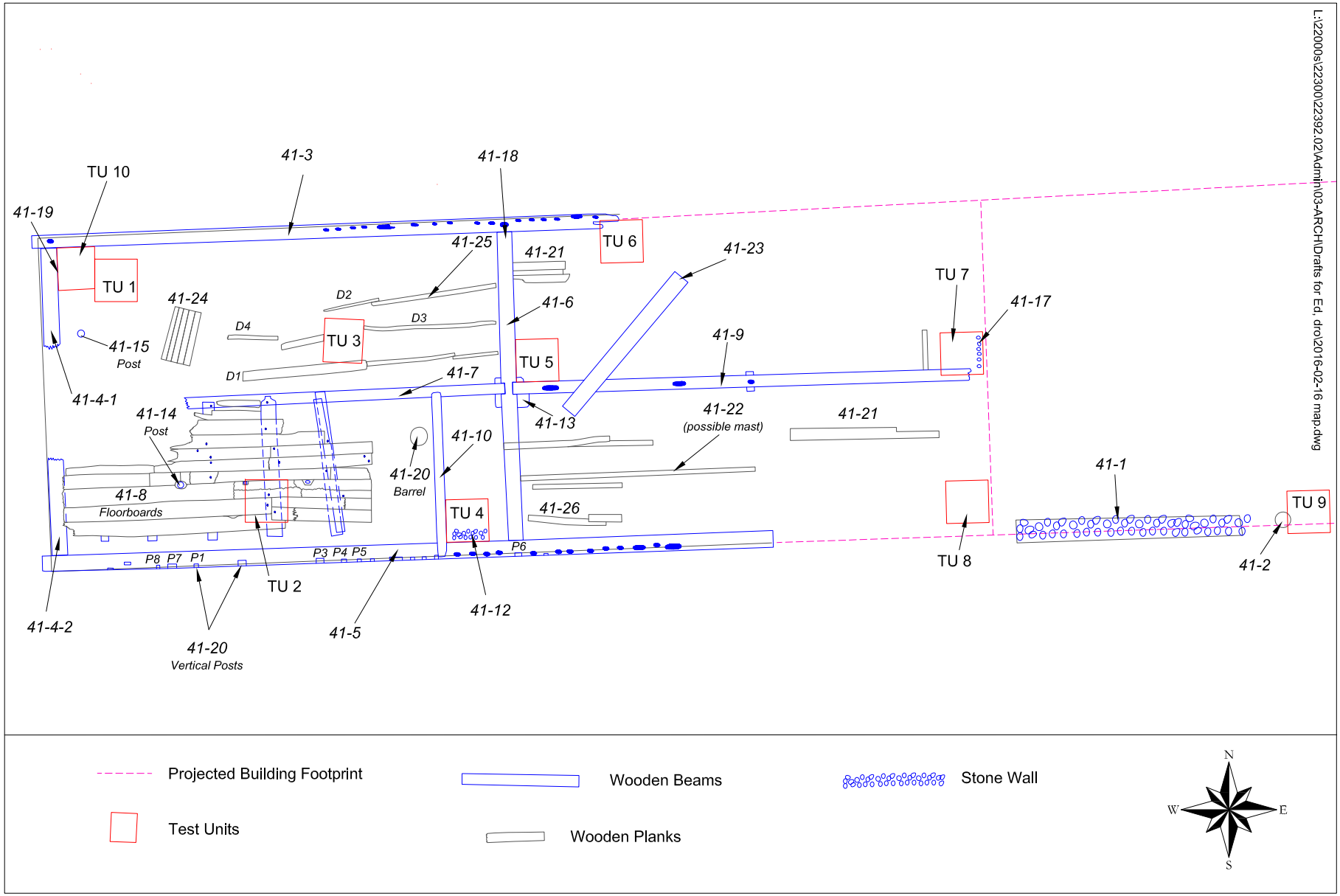


Figure 54
Feature 41 Plan View

The feature was fully exposed so that mapping and recording the feature could commence. A total of 256 artifacts were recovered during the exposure of the warehouse feature prior to individual sub-feature numbers were applied to the various architectural elements (Table 11). These artifacts represent a general collection of artifacts sampled from Feature 41. The temporally diagnostic artifacts included white salt glazed stoneware, Buckley, pearlware, freeblown glass, and contact mold bottle glass. These artifacts place the warehouse from its mid-18th-century origins and its likely ongoing use into the early 19th century.

Table 11: Artifacts Recovered from Feature 41, General Collection

Artifact Description	General Collection	East Third	Center Third	West Third
Ceramics				
kaolin pipe stem				2
kaolin pipe stem and bowl	1			
hard paste porcelain	1		2	2
British Brown (1690-1775)		1		
stoneware bottle (1690-1775)				1
tin glazed earthenware (1700-1800)		1		
white salt glazed stoneware (1720-1805)	1			5
Buckley (1720-1775)		2		
pearlware (1780-1830)	6	2	2	5
refined white earthenware			1	5
redware	4	2	2	5
stoneware				1
Glass				
bottle	3	1	4	9
bottle, freeblown (pre-1860)			2	6
tableware, freeblown (pre-1860)				1
bottle, contact mold (1810-1880)	1		2	1
bottle, chilled iron mold (1880-1930)				1
unidentified glass	7			6
windowpane, potash (pre-1864)				1
Metal				
ferrous metal nose auger (18th century)				1
ferrous metal ring	1			
ferrous metal wedge				1
hand wrought spike			1	
nail, wrought	3	7	6	6
spike				10
unidentified ferrous metal	1		2	8

Table 11 (continued)

Artifact Description	General Collection	East Third	Center Third	West Third
Miscellaneous				
bone	3	6	9	12
bone button (1726-1776)				1
brick				3
clam shell				1
flint ballast	1			
leather shoe	7	2		14
oyster shell				4
seed	29			
slate				1
wood				5
wood button			1	
wooden barrel head			3	2
wooden dowel				1
wooden tool handle, hammer			1	
wooden tool handle, hatchet			1	
wooden treenail				3
Total Feature 41 General Collection	**69**	**24**	**39**	**124**

Test Units Excavations

Feature 41: Test Unit 1

Test Unit 1 was placed in the northeast corner of the warehouse near the intersection of the Western Sill (Feature 41-4) and the Southern Sill (Feature 41-5) (see Figure 54Figure 55). It was placed in order to investigate the corner not covered with floorboards, as well as sampling the destruction fill above the feature since the area was intentionally left high for that purpose.

Test Unit 1 was excavated to a total depth of 2.0 feet (0.61 meters) below site level (-3.0 feet/-0.91 meters a.s.l.) within six levels of fill before being discontinued due to water. The profile consisted of six levels of sandy fill with slight color differences between each level (Figure 55; Figure 56). Fill 1 and Fill 2 represented accumulated sandy fill above the sills of the warehouse, likely deposited after general use of the feature had stopped. Fill 3 through 6 were deposited during the warehouse construction or during use. All levels contained historic artifacts.

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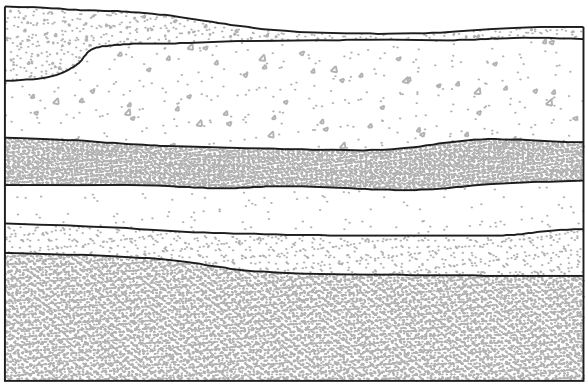

Fill 1: 10YR 4/3 brown sand mixed with mortar

Fill 2: 10YR 4/2 dark grayish brown loamy sand

Fill 3: 10YR 3/2 very dark grayish brown sandy clay

Fill 4: 10YR 4/3 brown sand

Fill 5: 10YR 4/2 dark grayish brown sandy loam

Fill 6: 10YR 3/2 very dark grayish brown sandy loam

0 1
Feet
Original Scale: 1" = 1'

Figure 55
Feature 41, Test Unit 1 - East Wall Profile

Figure 56: Feature 41, Test Unit 1, East Profile

Fill 1 horizon: 0-0.35 feet (0-0.11 meters) below site level – [10YR 4/3] brown sand mixed with mortar
Fill 2 horizon: 0.35-0.75 feet (0.11-0.23 meters) below site level – [10YR 4/2] dark grayish brown loamy sand
Fill 3 horizon: 0.75-1.00 feet (0.23-0.31 meters) below site level – [10YR 3/2] very dark greyish brown sandy clay
Fill 4 horizon: 1.00-1.20 feet (0.32-0.37 meters) below site level – [10YR 4/3] brown sand
Fill 5 horizon: 1.20-1.35 feet (0.37-0.41 meters) below site level – [10YR 4/2] dark grayish brown sandy loam
Fill 6 horizon: 1.35-2.00 feet (0.41-0.61 meters) below site level - [10YR 3/2] very dark grayish brown sandy loam
Water Table

A total of 116 artifacts were recovered during excavation of Test Unit 1 (Table 12). The artifacts were predominantly domestic and architectural and trend towards the latter quarter of the 18th century and the early part of the 19th century. All fill levels investigated in this test unit, except Fill 4, were positive for historic material dating to the occupation and use of the warehouse. The final level, Fill 6, before water caused the cessation of excavation, contained a portion of a barrel head. Ten prehistoric artifacts were also recovered from Fills 3, 5, and 6, all of which were quartz primary reduction and bifacial thinning flakes.

Table 12: Artifacts Recovered from Feature 41, Test Unit 1

Artifact Description	Level 1, Fill 1	Level 2, Fill 2	Level 3, Fill 3	Level 5, Fill 5	Level 6, BC
Ceramics					
kaolin pipe bowl				1	
Nottingham (1700-1810)				1	
white salt glazed stoneware (1720-1805)	1	1	2	2	
debased white salt glazed stoneware (1723-1795)		1			
pearlware (1780-1830)	1				
refined white earthenware			1		
redware		2	6	1	
stoneware	1	1			
Glass					
bottle	1	7	1		
bottle, freeblown (pre-1860)				20	
bottle, contact mold (1810-1880)	1		1		
unidentified glass	1	1			
Metal					
nail, cut (post-1790)				1	
nail, wrought		4		2	
Miscellaneous					
bone	1	5	4	4	
brick		1	1		
cinder		4			
coal			1		
fish scale				3	3
oyster shell		2	2		
peach pit		1	2	2	2
slag	1				
slate	1		1		
tar/slag attached to oyster shell	1				
wooden barrel head					1
wooden dowel		1			
Prehistoric					
quartz primary reduction flake			2		
quartz biface thinning flake			2		1
quartzite primary reduction flake			4		
quartzite biface middle stage		1			
Total Feature 41, Test Unit 1	**10**	**32**	**30**	**37**	**7**

Feature 41: Test Unit 2

Test Unit 2 was placed on the floorboard section in the northwest quarter of the Carlyle Warehouse (Feature 41) (see Figure 54). The soil above the floorboards in this location was not removed during cleaning of the feature in order to sample the soil strata above Feature 41.

Test Unit 2 was excavated to a total depth of approximately 0.5 feet (0.15 meters) below site level (-3 feet/-0.91 meters a.s.l.) within one level of fill (Figure 57; Figure 58). Test Unit 2 was discontinued at the floorboards because they were being saved for conservation and excavating through them would cause an unacceptable amount of damage. A single layer of sandy fill was removed from above the floorboards.

Fill 1 horizon: 0-0.25 feet (0-0.08 meters) below site level – [10YR 5/4] yellowish brown loamy sand
Fill 2 horizon: 0.25-0.50 feet (0.08-0.15 meters) below site level – [10YR 4/2] dark grayish brown clay loam
Floorboards

Figure 57: Feature 41, Test Unit 2, East Bisection Profile

A total of 55 artifacts were recovered during excavation of Test Unit 2, the majority of which were fish scale fragments (n=47) (Table 13). The remainder of the artifacts include five wrought iron nails, a reaming iron/wedge fragment, one piece of clear bottle glass, and a single jasper primary reduction flake. None of the artifacts were particularly diagnostic, though the wrought iron nails are a typical 18th-century building material.

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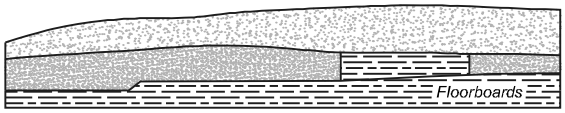


Fill 1: 10YR 4/3 brown sand mixed with mortar

Fill 2: 10YR 4/2 dark grayish brown loamy sand

Wooden Floorboards

0 1
Feet
Original Scale: 1" = 1'

Figure 58
Feature 41, Test Unit 2 - East Wall Profile

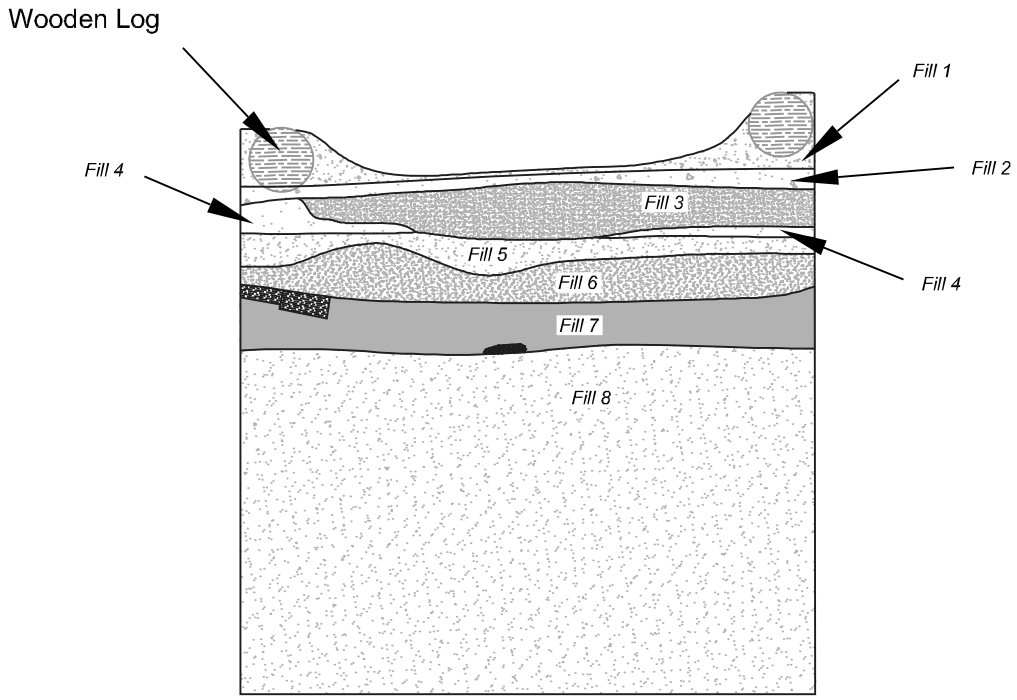
Table 13: Artifacts Recovered from Feature 41, Test Unit 2

Artifact Description	Level 1, Fill 1
Glass	
bottle/tableware	1
Metal	
hand wrought spike	1
nail, wrought	4
reeming iron/wedge	1
Miscellaneous	
fish scale	47
Prehistoric	
jasper primary reduction flake	1
Total Feature 41, Test Unit 2	**55**

Feature 41: Test Unit 3

Test Unit 3 was placed near the Summer Beam (Feature 41-7) in the western third of the Carlyle Warehouse among several of the loose wooden wall supports/rafters in order to investigate the fill in that area and check for more in situ deposits below the sills (see Figure 54). Test Unit 3 was excavated to a total depth of 3.25 feet (0.99 meters) below site level (-3 feet/-0.91 meters a.s.l.) within eight levels of fill (Figure 59; Figure 60). Test Unit 3 was terminated at the water table.

Figure 59: Feature 41, Test Unit 3, East Profile



Fill 1: 10YR 5/4 yellowish brown sand

Fill 2: 10YR 4/1 dark grey clay loam

Fill 3: 10YR 3/3 dark brown sandy loam

Fill 4: 10YR 2/1 black sand mixed with 10YR 5/1 gray clay

Fill 5: 10YR 3/1 very dark grey sandy clay loam

Fill 6: 10YR 4/2 dark grayish brown sand

Fill 7: 10YR 2/2 very dark brown compact clay loam

Fill 8: 10YR 5/1 gray sand mixed with 10YR 6/1 gray clay

Wooden Log

0 1
Feet
Original Scale: 1" = 1'

Figure 60
Feature 41, Test Unit 3 - East Wall Profile

The soil profile consisted several thin layers of sandy fill interspersed with clay lenses. Like Test Unit 1, the first two fill layers represented the soil fill on top of the sills and the remainders are from the fill adjacent to and below them.

Fill 1 horizon: 0-0.40 feet (0-0.12 meters) below site level – [10YR 5/4] yellowish brown sand
Fill 2 horizon: 0.40-0.50 feet (0.12-0.15 meters) below site level – [10YR 4/1] dark grey clay loam
Fill 3 horizon: 0.50-0.70 feet (0.15-0.21 meters) below site level – [10YR 3/3] dark brown sandy loam
Fill 4 horizon: 0.70-0.80 feet (0.21-0.24 meters) below site level – [10YR 2/1] black sand mixed with [10YR 5/1] gray clay
Fill 5 horizon: 0.80-0.95 feet (0.24-0.29 meters) below site level – [10YR 3/1] very dark grey sandy clay loam
Fill 6 horizon: 0.95-1.10 feet (0.29-0.34 meters) below site level - [10YR 4/2] dark grayish brown sand
Fill 7 horizon: 1.10-1.45 feet (0.34-0.44 meters) below site level – [10YR 2/2] very dark brown compact clay loam
Fill 8 horizon: 1.45-3.25 feet (0.44-0.99 meters) below site level - [10YR 5/1] gray sand mixed with [10YR 6/1] gray clay
Water Table

A total of 34 artifacts were recovered during the excavation of Test Unit 3 (Table 14). A total of six wrought nails were recovered form Fills 1, 2, 5, and 6. Eleven prehistoric artifacts, including three quartz flakes, seven quartzite flakes, and one quartzite fire cracked rock fragment, were recovered from Fill 6. None of the artifacts recovered from the test unit contain diagnostic elements, though wrought iron nails are a typical 18th century building material, and the assemblage is representative of artifacts from other portions of the warehouse. It is interesting to note the recovery of rope fragments covered in pitch/tar, which were also photographed in the east wall profile. Pitch/tar rope had a variety of uses around the warehouse, particularly one situated partially in the water.

Table 14: Artifacts Recovered from Feature 41, Test Unit 3

Artifact Description	Level 1, Fill 1	Level 2, Fill 2	Level 3, Fill 3	Level 4, Fill 4	Level 5, Fill 5	Level 6, BC
Ceramics						
kaolin pipe bowl						2
Glass						
bottle			1			
Metal						
ferrous metal handle					1	
hand wrought spike					1	
nail, wrought	1	2			1	1
unidentified ferrous metal					1	

Table 14 (continued)

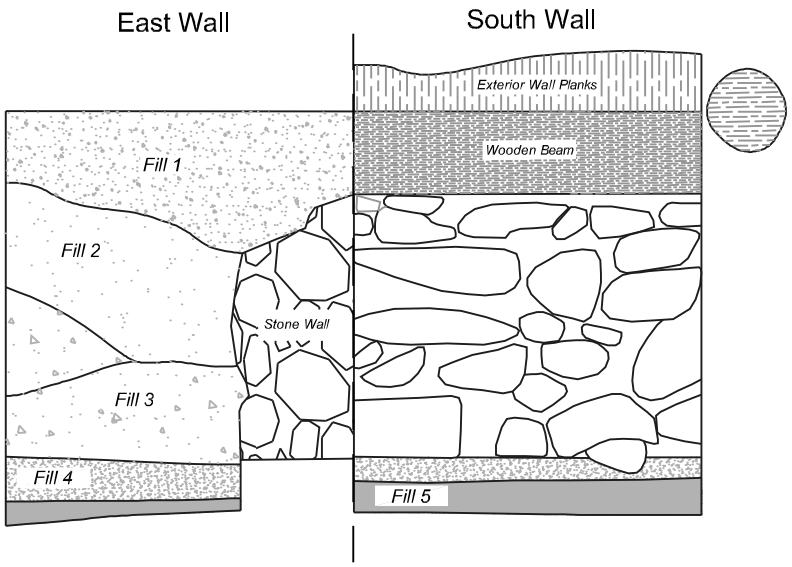
Artifact Description	Level 1, Fill 1	Level 2, Fill 2	Level 3, Fill 3	Level 4, Fill 4	Level 5, Fill 5	Level 6, BC
Miscellaneous						
bone					5	
brick				3		
rope with tar/pitch					1	
wood			1		1	
wooden bung					1	
Prehistoric						
quartz primary reduction flake						2
quartz biface thinning flake						1
quartzite primary reduction flake						6
quartzite biface thinning flake						1
quartzite biface middle stage						
quartzite fire cracked rock						1
Total Feature 41, Test Unit 3	**1**	**2**	**2**	**3**	**12**	**14**

Feature 41: Test Unit 4

Test Unit 4 was placed along the interior edge of the Southern Sill (Feature 41-5) at the joint where a crossbeam that joined the Southern Sill to the Summer Beam (Feature 41-7) is located (see Figure 54). The unit was placed to investigate potential support systems beneath the two beams, as well as to assess artifact and soil deposits.

Test Unit 4 was excavated to a total depth of 3.6 feet (1.10 meters) below site level (-3 feet/-0.91 meters a.s.l.) within five levels of fill (Figure 61; Figure 62); excavation within Test Unit 4 was discontinued due to inundation.

Fill 1 horizon: 0-1.0 feet (0-0.31 meters) below site level – [10YR 3/2] very dark greyish brown silty loam
Fill 2 horizon: 1.0-2.0 feet (0.31-0.61 meters) below site level – [10YR 4/3] brown sandy loam
Fill 3 horizon: 2.0-3.0 feet (0.61-0.91 meters) below site level – [10YR 5/2] grayish brown sandy clay loam
Fill 4 horizon: 3.0-3.4 feet (0.91-1.04 meters) below site level – [10YR 4/1] dark grey sandy loam
Fill 5 horizon: 3.4-3.6 feet (1.04-1.10 meters) below site level – [10YR 4/4] dark yellowish brown mixed with [10YR 4/2] dark greyish brown compact silty clay loam
Water Table



Fill 1: 10YR 3/2 very dark greyish brown silty loam

Fill 2: 10YR 4/3 brown sandy loam

Fill 3: 10YR 5/2 grayish brown sandy clay loam

Fill 4: 10YR 4/1 dark grey sandy loam

Fill 5: 10YR 4/4] dark yellowish brown mixed with 10YR 4/2 dark grayish brown compact silty clay loam

Wooden Log

Wooden Beam

Exterior Wall Planks

0 1
Feet
Original Scale: 1" = 1'

Figure 61
Feature 41, Test Unit 4 - East and South Wall Profiles

Figure 62: Feature 41, Test Unit 4, East Profile

The soil profile consisted of several initial layers of sandy fill underlain by much darker sandy clay that represented the original ground surface at the base of the foundation wall (Feature 41-12) (Figure 63). Aside from the foundation wall, one feature (Feature 41-11) was recorded in Test Unit 4 (Figure 64). Feature 41-11 consisted of a circular stain in the Fill 1 that contained some *in situ*, or undisturbed, wood chips and small fragments. It appeared to be the shadow of a barrel that had deteriorated into the soil. The feature was bisected but appeared to be less than 0.05 feet (0.15 meters) thick and a proper soil sample was unable to be furnished. Three wrought iron nails were recovered from the feature. All of the soil in the unit had a very strong tar/pitch smell, which was true of most of the building, but Test Unit 4 contained the more intensely scented earth.

Figure 63: Feature 41-12, Test Unit 4, South Profile

Figure 64: Feature 41-11, Test Unit 4, Plan

A total of 21 artifacts were recovered from non-feature fill soils in Test Unit 4, and a total of three artifacts were recovered from Feature 41-11 (Table 15). Two prehistoric artifacts, a chert flake and a quartz flake, were recovered from Fill 1, but the majority of the recovered artifacts were temporally non-diagnostic wrought iron nails, a treenail (or trunnel), some bone fragments, brick, oyster, and a seed. Fill 3 contained one wrought nail. Three wrought nails were recovered from Feature 41-11. These items are common within the warehouse feature and show the fill sands and Feature 41-11 are congruous with the use lifetime of the warehouse.

Table 15: Artifacts Recovered from Feature 41, Test Unit 4

Artifact Description	Level 1, Fill 1	Level 3, Fill 3	Feature 41-11
Metal			
nail, wrought	8	1	3
unidentified ferrous metal	1		
Miscellaneous			
bone	2		
brick	4		
oyster shell	1		
seed/pit	1		
wooden treenail	1		
Prehistoric			
chert decortication flake	1		
quartz primary reduction flake	1		
Total Feature 41, Test Unit 4	**20**	**1**	**3**

Soil samples taken from Test Unit 4 were sent to Paleoscapes Archaeobotanical Services Team for macrobotanical analysis (Puseman 2016). The resulting report can be reviewed in Appendix VI (Volume II). Several seeds from local wetland plants within the sedge family (*Cyperaceae*) were identified in the sample. Grass (*Poaceae*) remains and weed (*Polygonum* and *Rumex*) seeds were noted. Recovered charcoal remains contained oak (*Quercus*), pine (*Pinus*), and Virginian juniper (*Juniperus virginiana)*. Flower seeds were observed and included orchids (*Orchidaceae*) and the native amaranths (*Amaranthus*).

Feature 41: Test Unit 5

Test Unit 5 was placed against the joint where the two Summer beams (Feature 41-7, Feature 41-9) meant the central Crossbeam (Feature 41-6) (see Figure 54). The unit was placed to investigate the potential support structure beneath the joint, as well as potential artifact deposits and soil stratigraphy.

Test Unit 5 was excavated to a total depth of 3.3 feet (1.01 meters) below site level (-3 feet/-0.91 meters a.s.l.) within four layers (Figure 65; Figure 66). The soil profile depicted several layers of sandy loam and sandy clay fill underlain by a B/C horizon that was likely the mud flat that the warehouse was built on. This level was evident in the profiles for both foundation walls (Feature 41-18 and 41-12). One feature was initially recorded in the southwest corner wall of the test unit, which appeared to be a small pillar of support stones beneath the joint where the three beams meet. However, after excavation and documentation of the test unit was complete, Feature 41-13, a Central Stone Pier, was completely exposed and documented. The Central Stone Pier is discussed below under separate heading.

Figure 65: Feature 41, Test Unit 5, South Profile

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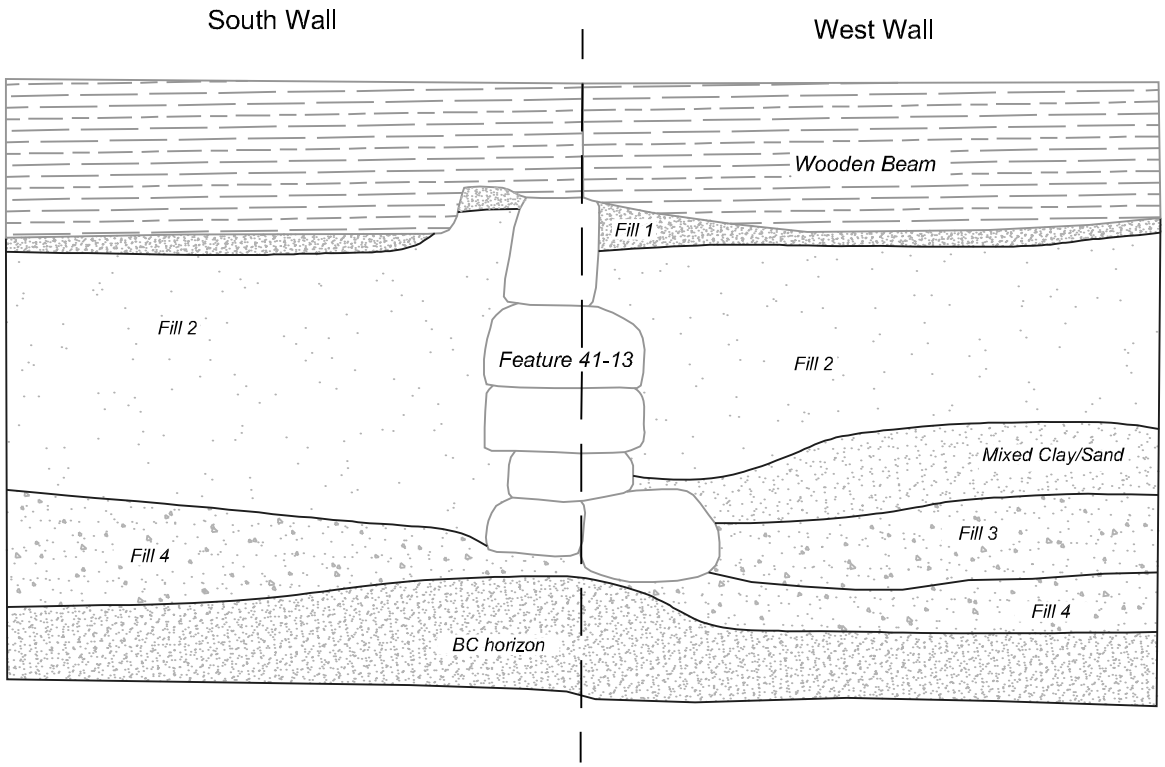

Fill 1: 10YR 3/2 very dark grayish brown heavy clay

Wooden Beams

Fill 2: 10YR 5/3 brown with 10YR 6/2 light brownish gray loose sand

Fill 3: 10YR 5/3 brown wet sand

Fill 4: 10YR 5/4 yellowish brown sandy clay

B/C Horizon: 10YR 4/2 dark grayish brown with 10YR 5/4 yellowish brown wet sandy clay

0 1
Feet
Original Scale: 1" = 1'

Figure 66
Feature 41, Test Unit 5 - South and West Profiles

Fill 1 horizon: 0-0.9 feet (0-0.27 meters) below site level – [10YR 3/2] very dark grayish brown heavy clay
Fill 2 horizon: 0.9-2.1 feet (0.31-0.64 meters) below site level – [10YR 5/3] brown with [10YR 6/2] light brownish gray loose sand
Fill 3 horizon: 2.1-2.4 feet (0.64-0.73 meters) below site level – [10YR 5/3] brown wet sand
Fill 4 horizon: 2.4-2.8 feet (0.73-0.85 meters) below site level – [10YR 5/4] yellowish brown sandy clay
B/C horizon: 2.8-3.3 feet (0.85-1.01 meters) below site level – [10YR 4/2] dark grayish brown with [10YR 5/4] yellowish brown wet sandy clay

A total of 52 artifacts were recovered from the fill soils in Test Unit 5 (Table 16). The diagnostic artifacts included one sherd of pearlware, two sherds white salt glazed stone ware, and one shard of olive green contact mold glass; ten wrought nails were recovered from the unit. This is consistent with the known period of use for the warehouse from the mid-18th century through the early 19th century. The B/C horizon yielded a single prehistoric quartzite primary reduction flake.

Table 16: Artifacts Recovered from Feature 41, Test Unit 5

Artifact Description	Level 1, Fill 1	Level 2, Fill 2	Level 4, Fill 4	Level 5, B/C
Ceramics				
kaolin pipe stem		1		
white salt glazed stoneware (1720-1805)	1	1		
pearlware (1780-1830)	1			
redware		2		
Glass				
bottle	1			
bottle, contact mold (1810-1880)		1		
Metal				
hand wrought spike	1			
nail, wrought		5	3	
unidentified ferrous metal	1			
wrought spike		1		
Miscellaneous				
bone		8	1	
brick		1		
coke		1		
leather shoe		3		
oyster shell		17		
seed/pit			1	
Prehistoric				
quartzite primary reduction flake, utilized				1
Total Feature 41, Test Unit 5	**5**	**41**	**5**	**1**

Feature 41: Test Unit 6

Test Unit 6 was placed at the broken end of the Northern Sill (Feature 41-3) (see Figure 54). The unit was placed to investigate the broken end, ascertain the presence of the foundation wall after it was identified in Test Unit 4, and continue to assess the stratigraphy beneath the foundation beams.

Test Unit 6 was excavated to a total depth of 3.65 feet (1.11 meters) below site level (-3 feet/-0.91 meters a.s.l.) within four soil levels, containing eight various fills (Figure 67; Figure 68). The soil profile exhibited jumbled sand fills, particularly in the vicinity of the Northern Sill, likely due not only to construction, but also the destruction of the warehouse. The northern sill may have been intentionally broken during dismantling of the structure to recycle some of the available building materials. Fill 2 likely represented the builder's trench or the immediate accumulation of fill around the Northern Sill after it was put in place. Fill 8 represented the B/C horizon present below the foundation walls. The wooden foundation wall was not present in the test unit but was present less than 1 foot (0.3 meters) to the west.

Figure 67: Feature 41, Test Unit 6, North Profile

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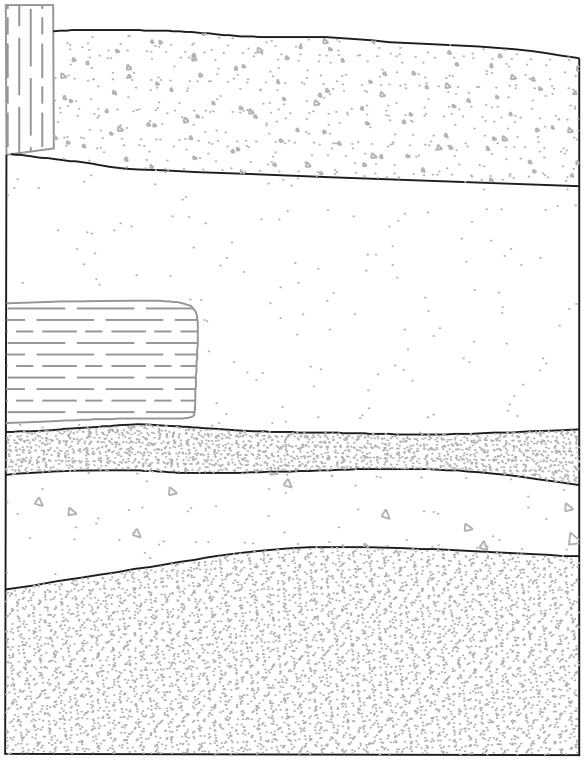


Fill 1: 10YR 4/3 brown clay loam

Fill 2: 10YR 4/2 dark grayish brown clay loam mixed with 10YR 3/2 very dark grayish brown sandy loam

Fill 3: 10YR 4/2 dark grayish brown sand

Fill 4: 10YR 3/2 very dark grayish brown loamy sand

B/C horizon: 10YR 2/1 black loamy sand

Wooden Beams

0 1
Feet
Original Scale: 1" = 1'

Figure 68
Feature 41, Test Unit 6 - North Profile

Level 1 horizon (Fills 1-3): 0-0.7 feet (0-0.21 meters) below site level – [10YR 4/3] brown clay loam
Level 2 horizon (Fills 3-5): 0.7-1.9 feet (0.21-0.58 meters) below site level – [10YR 4/2] dark grayish brown clay loam mixed with [10YR 3/2] very dark grayish brown sandy loam
Level 3 horizon (Fills 5-6): 1.9-2.4 feet (0.58-0.73 meters) below site level – [10YR 4/2] dark grayish brown sand
Level 4 horizon (Fills 6-7): 2.4-2.75 feet (0.73-0.84 meters) below site level – [10YR 3/2] very dark grayish brown loamy sand
B/C horizon (Fill 8): 2.75-3.65 feet (0.84-1.11 meters) below site level – [10YR 2/1] black loamy sand
Water Table

A total of 216 artifacts were recovered from Test Unit 6 (Table 17). The temporally diagnostic artifacts include three sherds of Buckley ware, two sherds of white salt glazed stoneware, and two olive green contact mold glass fragments. Several wrought nails were recovered. All the diagnostic artifacts were recovered in the sandy fills surrounding the broken end of the Northern Sill, suggesting that the removal of the beam and foundation wall likely happened in the early 19th century rather than being destroyed by modern disturbances, including the very large brick footers that were recorded in the vicinity. Like the other test units and small lithic assemblage was recovered in the lower sandy fills that appear to be a B/C horizon that represents water deposited sands within the mud flats of the Potomac River.

Table 17: Artifacts Recovered from Feature 41, Test Unit 6

Artifact Description	Level 1, Fill 1	Level 2, Fill 2	Level 2, Fill 3	Level 3, Fill 4	Level 4, Fill 5	Level 5, Fill 6
Ceramics						
kaolin bowl	2					
hard paste porcelain			1			
white salt glazed stoneware (1720-1805)	1		1			
Buckley (1720-1775)	3					
refined white earthenware	1	1	2			
redware	3		1	1		
Glass						
bottle	2	1	3			
tableware	1					
bottle, contact mold (1810-1880)	2					
unidentified glass			1			
windowpane, potash (pre-1864)			1			

Table 17 (continued)

Artifact Description	Level 1, Fill 1	Level 2, Fill 2	Level 2, Fill 3	Level 3, Fill 4	Level 4, Fill 5	Level 5, Fill 6
Metal						
nail, wrought	25	3	8	1		2
unidentified ferrous metal	2	1				
Miscellaneous						
bone	21	1	17			5
brick	18					
charcoal	1					
cinder	1					
coal			1			
fish scale	2		4			
flint ballast	1		1			
leather shoe						1
mortar	1					
nut						1
oyster shell	19	1	8	1		
peach pit	11		1			
seed			14			
seed/pit		4			1	
slag	1					
snail shell		1				
Prehistoric						
chalcedony primary reduction flake	1					
jasper biface thinning flake				2		
quartz decortication flake					1	
quartz primary reduction flake	1					
quartz biface thinning flake				2		
quartzite primary reduction flake				1		
Total Feature 41, Test Unit 6	**120**	**13**	**64**	**8**	**2**	**9**

Soil samples taken from Test Unit 6 were sent to Paleoscapes Archaeobotanical Services Team for macrobotanical analysis (Puseman 2016). The resulting report can be reviewed in Appendix VI (Volume II). Several uncharred seeds from a local succulent plant (*Portulaca oleracea*) were identified in the sample. Grass (*Poaceae*) remains and weed (*Polygonum*) seeds were noted, and recovered charcoal remains contained oak (*Quercus*), pine (*Pinus*), and ash (*Fraxinus)*. Flower seeds were observed and encompassed the native amaranths (*Amaranthus*) and two seeds of the *Solanum* genus, a genus which includes a wide range of plants, such as nightshades and horse nettles to crop foods, like potatoes and tomatoes.

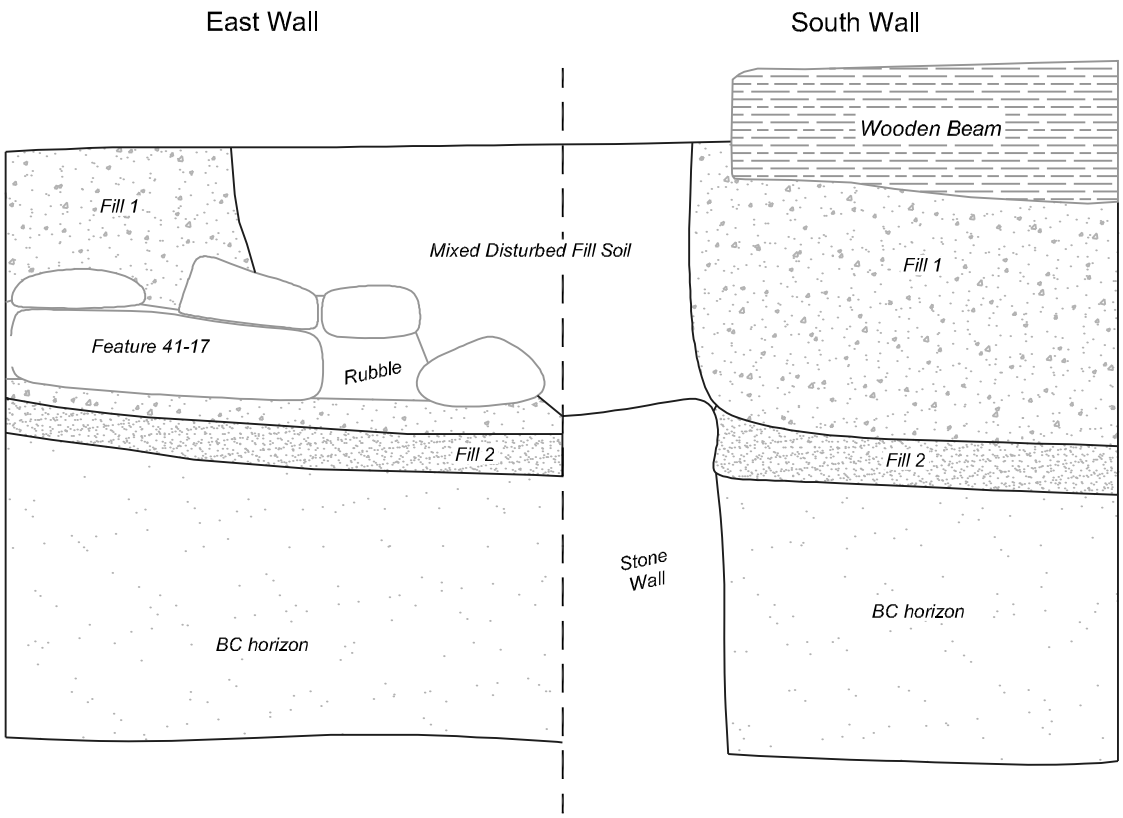
Feature 41: Test Unit 7

Test Unit 7 was placed at the end of the eastern Summer Beam (Feature 41-9) (see Figure 54). The unit was placed in order to investigate the potential for another stone pier or other support structures.

Test Unit 7 was excavated to a total depth of 3.2 feet (0.98 meters) below site level (-3 feet/-0.91 meters a.s.l.) within two fill levels and a B/C horizon (Figure 69; Figure 70). The soil profile was similar to Test Unit 6 with mixed sandy fill around the Summer Beam underlain by two sandy fill layers containing wood chips, bark, and other construction material. Finally, at the base of the test unit, approximately 3 feet (0.91 meters) below the beam, was a BC horizon of sand that likely represented the mud flats of the Potomac.

Fill 1 horizon: 0-1.5 feet (0-0.46 meters) below site level – [10YR 5/2] grayish brown mottled with [10YR 6/4] light yellowish brown sandy clay loam
Fill 2 horizon: 1.5-1.7 feet (0.46-0.52 meters) below site level – [10YR 3/2] very dark grayish brown mixed with [10YR 2/1] black silt loam with wood and oyster shell
B/C horizon: 1.7-3.2 feet (0.52-0.98 meters) below surface - [10YR 4/2] dark grayish brown loose sand

Figure 69: Feature 41, Test Unit 7, South Profile



Fill 1: 10YR 5/2 grayish brown mottled with 10YR 6/4 light yellowish brown sandy clay loam

Fill 2: 10YR 4/2 dark grayish brown sandy loam10YR 3/2 very dark grayish brown mixed with 10YR 2/1 black silt loam with wood and oyster shell

B/C horizon: 10YR 5/2 silty clay loam

0 1
Feet
Original Scale: 1" = 1'

Figure 70
Feature 41, Test Unit 7 - East and South Wall Profiles

One feature was identified within Test Unit 7; Feature 41-17, an Interior Curtain/Support Wall, was a small two course schist feature that may have served the purpose of provide leveling support to the Summer Beam as the warehouse extended out and off of Lumley point (Figure 71); subsequent backhoe stripping did not reveal any additional stones of this feature, which appeared to have been fully exposed in Test Unit 7.

Figure 71: Feature 41, Test Unit 7, East Profile

A total of 66 artifacts were recovered from Test Unit 7 (Table 18). Three temporally diagnostic artifacts, a sherd of white salt-glazed stoneware and two potash windowpane sherds, were recovered from Test Unit 7. The remaining assemblage is consistent with artifacts recovered from the Carlyle warehouse and the other test units. No modern intrusions were recorded, suggesting the east side of the warehouse likely was dismantled in the 19th century, prior to the placement of the large brick footers belonging to the 20th-century warehouse complex.

Soil samples taken from Test Unit 7 were sent to Paleoscapes Archaeobotanical Services Team for macrobotanical analysis (Puseman 2016). The resulting report can be reviewed in Appendix VII (Volume II). Several seed fragments from tulip poplar (*Liriodendron tulipifera*) were identified in the sample, revealing a possible nearby tree. Recovered charcoal remains contained oak (*Quercus*), pine (*Pinus*), and ash (*Fraxinus*). Some uncharred edible plant seeds were observed, including two *Ficus carica* seed fragments, two *Rubus* spp. seeds and a seed fragment, a *Sambucus nigra* seed fragment, two *Thymus vulgaris* seeds, a *Vaccinium* sp. seed fragment, and a *Vitis* sp. seed fragment. According to analysts, “these seeds reflect figs, a member of the raspberry group, elderberries, thyme, blueberries, and grapes” (Puseman

2016:24). These may represent the types of foods brought into the warehouse and/or the foods consumed by people within. Other identified seeds reflect local vegetation likely growing in Alexandria at the time, such as weeds (*Polygonum*) and succulents (*Portulaca oleracea*).

Table 18: Artifacts Recovered from Feature 41, Test Unit 7

Artifact Description	Level 1, Fill 1	Level 2, Fill 2
Ceramics		
kaolin pipe stem	2	2
hard paste porcelain	1	
white salt glazed stoneware (1720-1805)		1
refined white earthenware	1	
Glass		
bottle, bottle/jar	1	
tableware	1	
windowpane, potash (pre-1864)	2	
Metal		
nail, wrought	7	3
nail, unidentified	3	
spike	1	
unidentified ferrous metal	1	
unidentified lead	1	
Miscellaneous		
bone	4	1
brick	7	
coal		1
mortar	1	
oyster shell	20	
peach pit	3	1
slag	1	
Total Feature 41, Test Unit 7	**57**	**9**

Feature 41: Test Unit 8

Test Unit 8 was placed between the end of the Southern Sill (Feature 41-5) and a portion of the foundation wall (Feature 41-1) (see Figure 54). The unit was placed to determine if the foundation wall continues from the Southern Sill to the remnant portion in the eastern edge of the warehouse, to determine the potential length of the Interior Curtain/Support Wall (Feature 41-17) from Test Unit 7, and to investigate the stratigraphy and potential artifact deposits in this portion of the site.

Test Unit 8 was excavated to a total depth of 3.5 feet (1.07 meters) below site level (-3 feet/-0.91 meters a.s.l.). The soil profile consisted of six layers of sandy fill under lain by a darker sandy loam that appeared to correspond to the B/C horizon that represented the top of the muddy sand flats of the Potomac River (Figure 72; Figure 73). Fill 5 was a wood chip, saw dust, and bark laden soil that may have represented the construction floor of the warehouse. This level was present throughout the warehouse feature and outside of the feature (Feature 47, Trench 9 for instance).

Figure 72: Feature 41, Test Unit 8, East Profile

Fill 1 horizon: 0-0.5 feet (0-0.15 meters) below site level – [10YR 2/1] black mixed with [10YR 3/1] very dark gray clay loam

Fill 2 horizon: 0.5-1.0 feet (0.15-0.31 meters) below site level – [10YR 3/2] very dark grayish brown sandy clay loam

Fill 3 horizon: 1.0-1.6 feet (0.31-0.49 meters) below site level – [10YR 2/1] black sandy clay loam

Fill 4 horizon: 1.6-1.9 feet (0.49-0.58 meters) below site level – [10YR 5/2] grayish brown sand

Fill 5 horizon: 1.9-2.1 feet (0.58-0.64 meters) below site level – [10YR 4/1] dark gray

Fill 6 horizon: 2.1-2.4 feet (0.64-0.73 meters) below site level - [10YR 2/1] black clay loam

Fill 7 horizon: 2.4-3.1 feet (0.73-0.94 meters) below site level – [10YR 2/1] black sandy loam

B/C horizon: 3.1-3.5 feet (0.94-1.07 meters) below site level - [10YR 3/2] very dark grayish brown sandy loam

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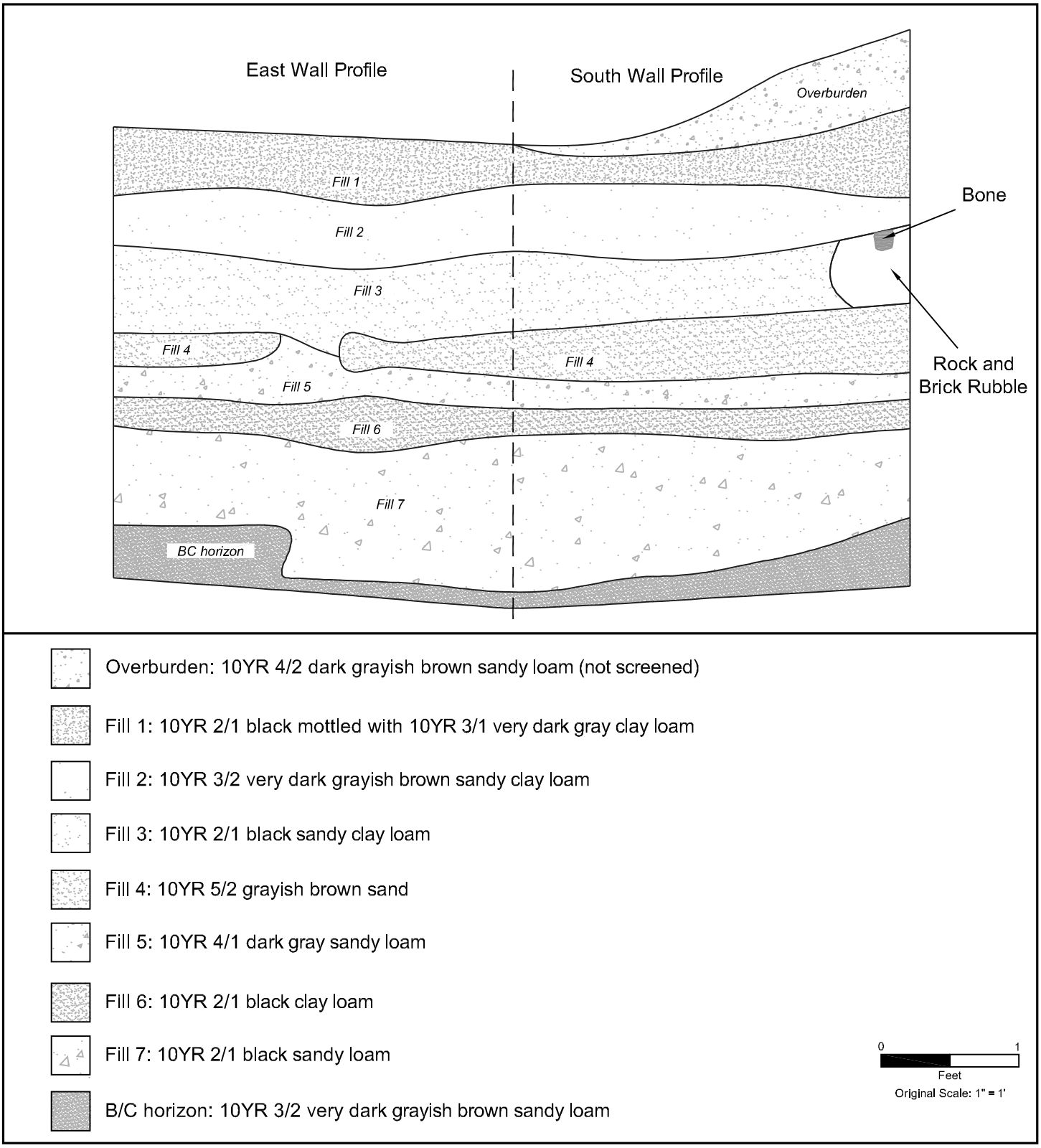

Figure 73
Feature 41, Test Unit 8 - East and South Wall Profiles

A total of 67 artifacts were recovered from the excavations at Test Unit 8 (Table 19). The temporally diagnostic artifacts include one sherd of British brown stoneware and one sherd of pearlware. Several wrought nails were also recovered. These artifacts were recovered from the first three fill levels, largely associated with the fill that was placed around the base of the warehouse post-construction. The remainder of the artifacts recovered are consistent with the total assemblage, though this unit did have a high number of iron artifacts including a portion of a chisel.

Table 19: Artifacts Recovered from Feature 41, Test Unit 8

Artifact Description	Level 1, Fill 1	Level 2, Fill 2	Level 3, Fill 3	Level 4, Fill 4	Level 5, Fill 5
Ceramics					
hard paste porcelain	1				
stoneware (1690-1775)	1				
pearlware (1780-1830)	1				
refined white earthenware	4	1	1		
redware			2		
stoneware	1	1	1		
Glass					
bottle, bottle/jar			1		
Metal					
ferrous metal chisel	1				
nail, wrought	13	3	6	4	4
spike		1			
Miscellaneous					
bone	1	1	3		1
brick	3	2		3	
mortar		1	2		
oyster shell	2				
slag	1				
Total Feature 41, Test Unit 8	**29**	**10**	**16**	**7**	**5**

Soil samples taken from Fills 5 and 6 of Test Unit 7 were sent to Paleoscapes Archaeobotanical Services Team for macrobotanical analysis (Puseman 2016) (Appendix VII, Volume II). Recovered charcoal remains contained oak (*Quercus*), pine (*Pinus*), and ash (*Fraxinus*). Several seeds from the mint family (*Thymus vulgaris*) were identified. A cherry (*Prunus*) seed and cherry seed fragments were observed. Grass (*Poaceae*) remains, weed (*Polygonum*) seeds, and local succulents (*Portulaca oleracea*) were noted. Flower seeds were documented and encompassed the native amaranths (*Amaranthus*) and roses (*Rosa*).

Feature 41: Test Unit 9

Test Unit 9 was placed at the east end of the warehouse feature (see Figure 54). The unit was placed to investigate the end of the schist Foundation Wall fragment (Feature 41-1) and the entire depth of the Large Wooden Pile (Feature 41-2). It was also placed to investigate the fill episodes on the eastern end of the warehouse, potentially where the warehouse met the water.

Test Unit 9 was excavated to a total depth of 3.0 feet (0.91 meters) below site level (-3 feet/-0.91 meters a.s.l.) within four levels. The soil profile consisted of three levels of historic fill, underlain by a probable B/C horizon that represented the muddy flats of the tidal Potomac River around the time of the warehouse construction (Figure 74; Figure 75). A series of vertical wooden boards were uncovered along the northern edge of the unit during excavation of Fills 1-3. The boards ended around the base of Fill 3 and were determined in-field not to be *in situ*, or in their original contexts. Later analysis considered the posts may have been part of the warehouse cribbing or infilling, but such assertions cannot be fully determined without additional evidence. There was a single feature recorded in the western wall of the test unit, a large wooden pile (Feature 41-2); the unit was placed purposefully to expose the feature (Figure 76). The Wooden Support Pile is discussed below under its own sub-heading but appears to have been excavated into the BC horizon and then fill was added around the post.

Figure 74: Feature 41, Test Unit 9, North Profile

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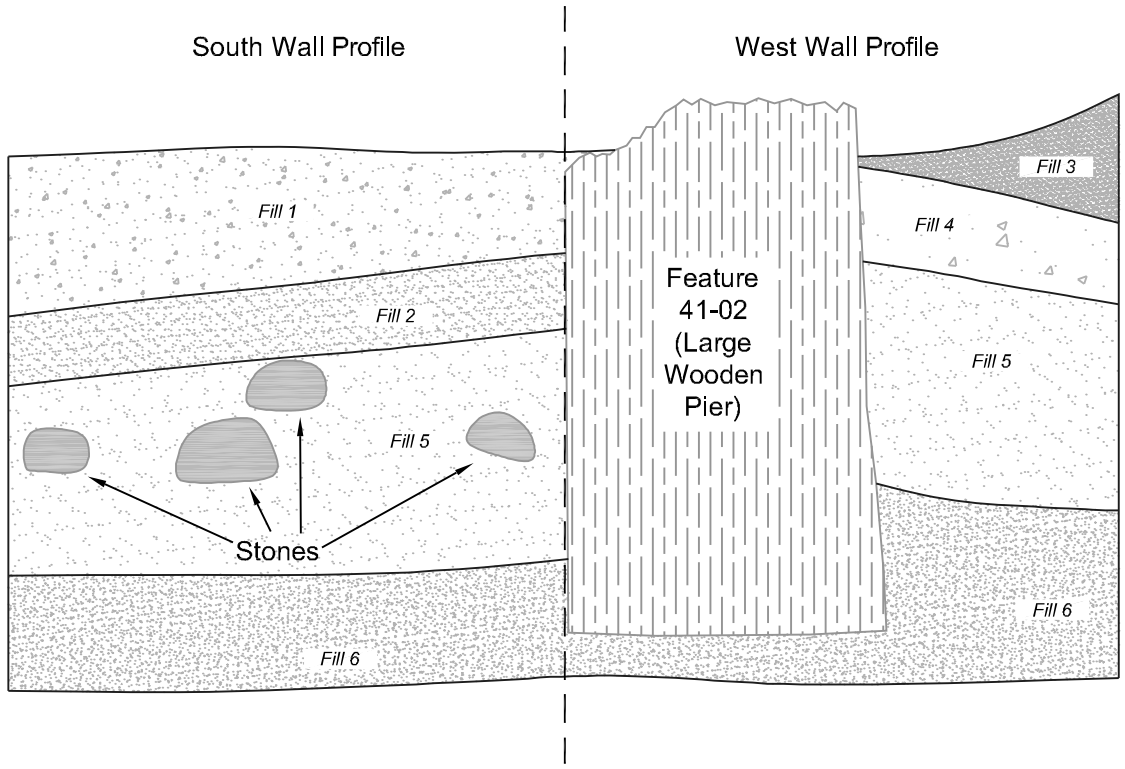

Fill 1: 10YR 5/3 brown mottled with 10YR 4/2 dark grayish brown sandy clay loam with wood and brick flecking

Fill 2: 10YR 4/3 brown mottled with 10YR 5/4 yellowish brown compact sand

Fill 3: 10YR 3/3 dark brown mottled with 10YR 5/4 yellowish brown sandy clay loam

Fill 4: 10YR 5/3 brown compact sand with wood flecking

Fill 5: 10YR 4/2 dark grayish brown sand with wood flecking

Fill 6: 10YR 5/4 yellowish brown loose sand

0 1
Feet
Original Scale: 1" = 1'

Figure 75
Feature 41, Test Unit 9 - South and West Wall Profiles

Figure 76: Feature 41, Test Unit 9, South Profile

Fill 1 horizon: 0-0.8 feet (0-0.24 meters) below site level – [10YR 5/3] brown mixed with [10YR 4/2] dark grayish brown sandy clay loam with wood flecking

Fill 2 horizon: 0.8-1.4 feet (0.24-0.43 meters) below site level – [10YR 4/3] brown mottled with [10YR 5/4] yellowish brown compact sand

Fill 3 horizon: 1.4-2.4 feet (0.43-0.73 meters) below site level – [10YR 4/2] dark grayish brown sand

B/C horizon: 2.4-3.0 feet (0.73-0.91 meters) below site level - [10YR 5/4] yellowish brown loose sand

A total of 217 artifacts were recovered from the excavations at Test Unit 9 (Table 20). The temporally diagnostic artifacts include a Buckley ware sherd, a creamware sherd, a pearlware sherd, one Westerwald sherd, two white salt glazed sherd, and nine potash windowpane fragments. These artifacts were recovered from Fill 1 and Fill 2, which are the layers added during and after construction of the warehouse. No artifacts were recovered from the BC horizon, in which the base of Feature 41-02 is intruding. The remainder of the artifacts from Test Unit 9 are consistent with the assemblage from the rest of the warehouse feature.

Table 20: Artifacts Recovered from Feature 41, Test Unit 9

Artifact Description	Level 1, Fill 1	Level 2, Fill 2	Level 3, Fill 3
Ceramics			
kaolin pipe bowl, kaolin pipe stem	1	1	
hard paste porcelain	4		
Westerwald (1700-1775)	1		
white salt glazed stoneware (1720-1805)	1	1	
Buckley (1720-1775)	1		
creamware (1765-1810)	1		
pearlware (1780-1830)	1		
refined white earthenware	38	2	
redware	4		1
stoneware	2		
Glass			
bottle, bottle/jar	3		1
windowpane, potash (pre-1864)	9		
Metal			
brass buckle fragment	1		
brass straight pin	3	1	
ferrous metal fencing staple	1		
ferrous metal ring	1		
hand wrought spike	4	4	
nail, wrought	36	29	4
unidentified cast iron		1	
unidentified ferrous metal	1	2	
wrought spike	1		
Miscellaneous			
bone	20	5	2
bone button (1800-1865)	1		
brick	1	1	
charcoal	2	1	
fish scale	1		
flint ballast	2	1	
seed/pit	13	2	
slag	1		
Prehistoric			
chalcedony biface thinning flake	1		
rhyolite primary reduction flake		2	
Total Feature 41, Test Unit 9	**156**	**53**	**8**

Feature 41: Test Unit 10

Test Unit 10 was placed in the northeast corner of the warehouse immediately adjacent to Test Unit 1 (see Figure 54). This unit was placed to investigate another potential location for a foundation wall or other support systems (e.g. stone pier, wooden pier, etc.), particularly along wooden beams (Feature 41-19 and Feature 41-4-1).

The test unit was excavated to a terminal depth of 2.0 feet (0.61 meters) below site level (-3 feet/-0.91 a.s.l.). The soil profile consisted of five thin layers of sandy fill (Figure 77; Figure 78); the BC horizon was not reached due to inundation in the unit after two feet (0.61 meters) of excavation. The profile did show a very thin course of schist stone underneath the Western Sill and Northern Sill. A foundation wall existed on this end of the warehouse, but appeared to have been used more as a leveling mechanism than any kind of support; wooden spacers are also present, but at a similarly smaller scale.

Figure 77: Feature 41, Test Unit 10, North Profile

Fill 1 horizon: 0-0.4 feet (0-0.12 meters) below site level – [10YR 4/3] brown sandy clay loam

Fill 2 horizon: 0.4-0.5 feet (0.12-0.15 meters) below site level – [10YR 4/4] dark yellowish brown sandy loam

Fill 3 horizon: 0.5-0.7 feet (0.15-0.21 meters) below site level – [10YR 3/2] very dark grayish brown silty sandy loam

Fill 4 horizon: 0.7-1.1 feet (0.21-0.33 meters) below site level – [10YR 4/3] brown sandy clay loam

Fill 5 horizon: 1.1-2.0 feet (0.33-0.61 meters) below site level – [10YR 4/2] dark grayish brown sandy clay loam

Water Table

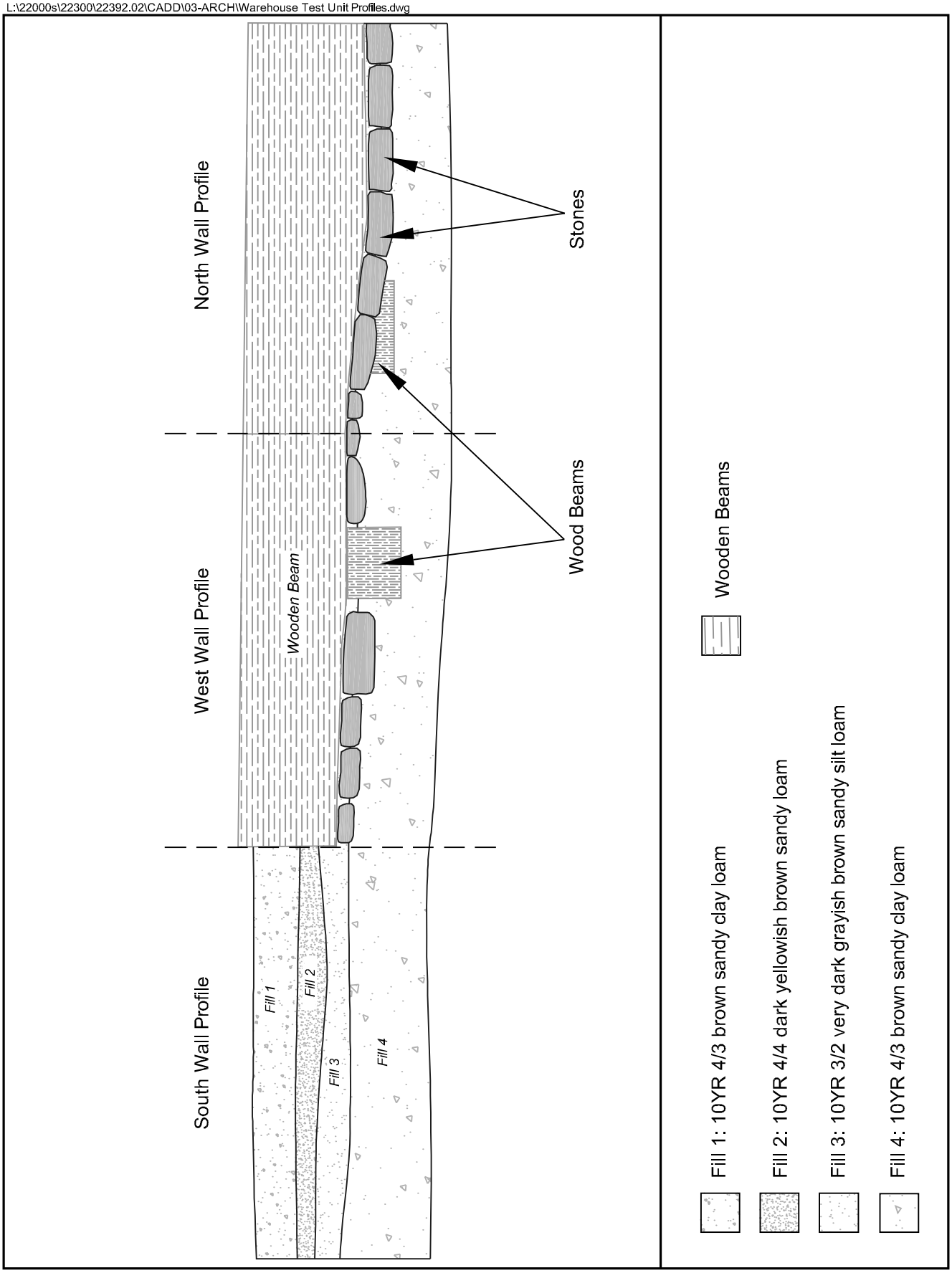

Figure 78

Feature 41, Test Unit 10 - South, West, and North Wall Profiles

A total of 25 artifacts were recovered during the excavation of Test Unit 10 (Table 21). The temporally diagnostic artifacts include one Westerwald sherd and one olive green freeblown bottle fragment. Both artifacts are from Fill 1, which represents fill accumulated around the warehouse foundation sills. The remaining artifacts are consistent with the assemblage associated with the warehouse. There are no modern intrusions within the fill soils surrounding the warehouse, suggesting that it had not been disturbed by modern construction in the area. Two quartz flakes were found within Fill 4.

Table 21: Artifacts Recovered from Feature 41, Test Unit 10

Artifact Description	Level 1, Fill 1	Level 3, Fill 3	Level 4, Fill 4
Ceramics			
Westerwald (1700-1775)	1		
redware	2		
Glass			
bottle	6		
bottle, freeblown (pre-1860)	1		
Metal			
ferrous metal button	1		
ferrous metal ring/washer		1	
nail, wrought	1	1	2
Miscellaneous			
bone	6		
peach pit			1
Prehistoric			
quartz primary reduction flake			2
Total Feature 41, Test Unit 10	**18**	**2**	**5**

Feature 41: Test Unit 11

As mentioned above, Test Unit 11 was placed immediately under the floorboards after the boards were removed for conservation (see Figure 54). The unit was placed to investigate the fills directly under the floorboards, as that area was not available until the boards were removed. In consultation with Alexandria Archaeology, only 1 cubic foot (0.3 cubic meters) worth of soil was excavated and screened due to time constraints associated with the removal of the feature wood for conservation.

The soil profile consisted of five layers of sandy fill beneath the floorboards (Figure 79). These layers represented the soil brought in to fill the underside of the warehouse, likely during construction or shortly after completion as well as accumulation of sediment during the lifetime of the structure. The sterile subsoil (BC horizon) was not reached during the excavation of Test Unit 11. Several soil samples were taken for further analysis.

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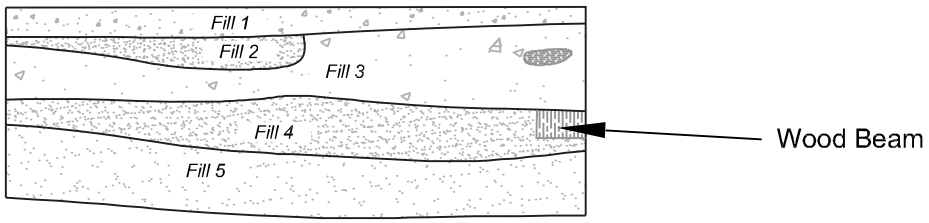

Fill 1: 10YR 5/2 grayish brown clay loam

Fill 2: 10YR 4/2 dark grayish brown sandy loam

Fill 3: 10YR 5/1 gray sandy loam

Fill 4: 10YR 5/2 silty clay loam

Fill 5: 10YR 5/1 sandy silt loam

0 1
Feet
Original Scale: 1" = 1'

Figure 79
Feature 41, Test Unit 11 - South Wall Profile

Fill 1 horizon: 0-0.2 feet (0-0.06 meters) below site level – [10YR 5/2] grayish brown clay loam
Fill 2 horizon: 0.2-0.3 feet (0.06-0.09 meters) below site level – [10YR 4/2] dark grayish brown sandy loam
Fill 3 horizon: 0.3-0.6 feet (0.09-0.18 meters) below site level – [10YR 5/1] gray sandy loam
Fill 4 horizon: 0.6-0.8 feet (0.18-0.24 meters) below site level – [10YR 5/2] grayish brown silty clay loam
Fill 5 horizon: 0.8-1.1 feet (0.24-0.34 meters) below site level – [10YR 5/1] gray sandy silt loam

No artifacts were recovered during the excavations at Test Unit 11.

Soil samples taken from Test Unit 11 were also sent to Paleoscapes Archaeobotanical Services Team for macrobotanical analysis (Puseman 2016). The resulting report can be reviewed in Appendix VII (Volume II). Recovered charcoal remains contained oak (*Quercus*), pine (*Pinus*), and ash (*Fraxinus*). A variety of seeds from local wetland vegetation was recovered, particularly from the sedge (*Carex*) family. Grass (*Poaceae*) remains, weed (*Polygonum*) seeds, and local succulent (*Portulaca oleracea*) were noted. A foreign weed found on the European continent was recovered and is known as stinking chamomile (*Anthemis cotula*). This strong-ordered and mildly toxic weed was likely brought over unwittingly by ship. Flower seeds were documented and encompassed the native amaranths (*Amaranthus*) and orchids (*Orchidaceae*). Seeds from the mint family (*Thymus vulgaris, Pycnanthemum,* and *Marrubium vulgare*) were identified. A cherry (*Prunus*) seed and cherry seed fragment were observed. Other recovered seeds from edible plants included watermelon (*Citrullus lanatus*), blueberry (*Vaccinium*), raspberry (*Rubus*), grapes (*Vitis*), and corn (*Zea mays*). These may represent additional types of foods brought into the warehouse and/or the foods consumed by people within.

Soil samples from Test Unit 11 were sent to the PaleoResearch Institute for pollen analysis (Cummings 2016). The resulting report can be reviewed in Appendix VIII (Volume II). Analysts noted mostly pollen from oak (*Quercus*) and pine (*Pinus*) trees in the samples. A small quantity of ragweed (*Asteraceae*) and grass (*Poaceae*) pollen was observed, primarily in the upper portion of the warehouse floor. Such pollen was likely blown in or dragged in from outside on people's shoes and clothing. Interestingly, analysts found a large amount of a New Jersey Tea (*Ceanothus*) pollen. The New Jersey Tea shrub grows all along the east coast and out into the Midwest. The shrub was used for medicinal purposes and as a substitute for tea by colonists during the Revolutionary War, though it contains no caffeine (USDA 2017). This suggests that certain type of tea was possibly prepared, drunk, and perhaps, spilled by people in the warehouse. Small quantities of food-related pollen were identified in most samples and included plants in the celery family (*Apiaceae*), cereals (*Cerealia*), and corn (*Zea mays*). Occasionally, pollen from plants in the mustard family (*Brassicaceae*) and grapes (*Vitis*) also appeared in samples. These may represent the types of foods brought into the warehouse and/or the foods consumed by people within.

Warehouse Framing and Foundation

To facilitate the removal of the surviving wooden framing for conservation, potential further study, and potential reconstruction, each major element of Feature 41 was given a sub-feature number (Table 22).

Table 22: Components of Feature 41, Carlyle Warehouse

Feature Component	Component Description
41-1	Schist Stone Foundation Wall, southeastern portion of excavation
41-2	Wooden Support Pile, associated with 41-1
41-3	Northern Sill
41-4	Western Sill
41-5	Southern Sill
41-6	Crossbeam
41-7	Western Summer Beam
41-8	Floorboards and Joists, southwestern portion of excavation
41-9	Eastern Summer Beam
41-10	Heavy Joist or Cross-Beam, between 41-5 and 41-7
41-11	Circular Feature within Test Unit 4
41-12	Schist Stone Foundation Wall, associated with 41-5
41-13	Stone Pier, intersection of 41-6, 41-7, and 41-9
41-14	Round Wooden Post, associated with 41-8
41-15	Round Wooden Post, northwest corner of excavation
41-16	Rectangular Wooden Post, associated with 41-8
41-17	Stone Foundation for missing crossbeam
41-18	Schist Stone Foundation Wall, associated with 41-3
41-19	Small Beam, associated with 41-4
41-20	Vertical Boards, associated with 41-5
41-21	Wooden Shingles
41-22	Possible Mast/Spar
41-23	Board, probable siding
41-24	Wooden Shingles
41-25	Notched Beam/Pole
41-26	Board, possible stud
41-27	Board
41-28	Barrel-head, with carved markings
41-29	Section of Beam, subfloor fill, southeastern portion of excavation
41-30	Section of Beam, associated with 41-18
41-31	Section of Beam, associated with 41-12
41-32	Section of Beam, associated with 41-18
41-33	Section of Beam, associated with 41-18
41-34	Section of Beam, associated with 41-12
41-35	Section of Beam, associated with 41-12
41-36	Section of Beam, subfloor fill, southwestern portion of excavation

In consultation with Alexandria Archaeology and MAC Lab staff, minor elements, including non-articulated shingles and other elements were not mapped. Elements were labelled as they were immediately removed. Figure 80 shows the locations of these sub-features following the removal of the main elements. The southwest corner of the Carlyle Warehouse contained *in situ*, or undisturbed, floorboards, which were also labelled individually and removed (Figure 81).

Stone Foundation Walls (Feature 41-1, 41-12, and 41-18)

Features 41-1, 41-12, and 41-18 were constructed of mortared, tightly packed schist and were encountered beneath portions of the Northern and Southern Sills (41-3 and 41-5). The stones of the foundation wall may have been intentionally coated with tar, or some other substance as a sealant against the waters of the Potomac, as the stones gave off a strong mineral odor when uncovered by excavators. After the wooden portions of Feature 41 were removed and transported for conservation, a backhoe with a flat-bladed bucket stripped the soil beneath the warehouse structure, exposing the entirety of what remained of the two stone foundation walls beneath the sills (Figure 81). Due to time constraints related to the ongoing construction schedule, the remnant walls were quickly drawn and photographed.

The portion of the Stone Foundation Wall (41-18) beneath the Northern Sill began 20 feet (6.1 meters) east of the northwestern corner of Feature 41 and continued eastward to the broken terminus of the Northern Sill. The portion of the Stone Foundation Wall (41-12) under the Southern Sill was similar but began 15 feet (4.6 meters) east of the southwest corner of Feature 41 and, once again, terminated at the east end of the Southern Sill. Stone Foundation Wall 41-1 was encountered 17.5 feet (5.3 meters) east of and in line with 41-12 and appeared to be a remnant associated with the removed eastern extension of the Southern Sill.

Feature 41-12 was approximately 35 feet (10.7 meters) long and varied in depth from 2.2-3 feet (0.67-0.91 meters) below the Southern sill (Figure 82). Feature 41-18 was approximately 41 feet (12.5 meters) long and varied similarly in depth as Feature 41-12 (Figure 83). Both features grew smaller with fewer courses towards the western end and became a single course of small schist rocks at the western sill. Both features occasionally incorporated sections of wooden logs or beams, usually 3 feet (0.91 meters) long, ranging from 1-2.5 (0.3-0.76 meters) in width, and about a foot (0.3 meters) thick. These beams were stacked two high and integrated into the stone foundation wall with the long edge protruding out from the wall and the inner edge flush; these wooden elements were given separate feature numbers and photographed, as well as incorporated into an overall drawing. Beams 41-31, 41-34, and 41-35 were associated with 41-12, and beams 41-30, 41-32, and 41-33 were associated with 41-18. Stone Foundation Wall 41-1 ran for 18.9 feet (5.76 meters), beginning at a point 16 feet (4.87 meters) east of the terminus of the Stone Foundation (41-12) and Southern Sill (41-5) and terminating at the Large Wooden Pile (41-2). It was similar in construction to the previously discussed foundation walls, being built of mortared schist, but lacked the log beam sections that characterized 41-12 and 41-18. Feature 41-1 was bisected to potentially recover temporally diagnostic artifacts as well as a profile of the wall's construction (Figure 84). Only two diagnostic artifacts were recovered from this bisection: a pearlware sherd (1780-1830) and a pre-1860 bottle glass sherd.

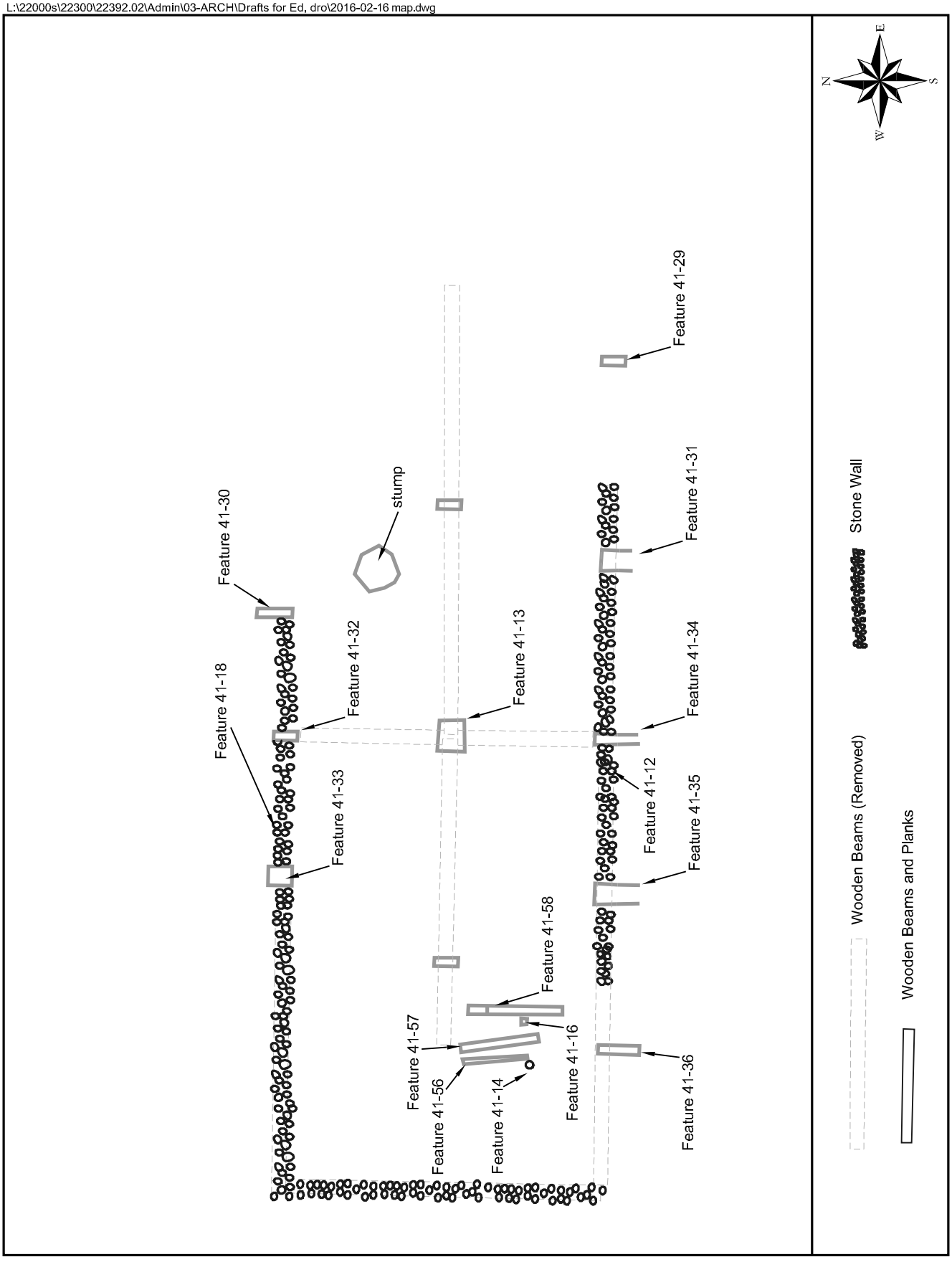

Figure 80

Feature 41 Plan View Sub-Features After Beam Removal

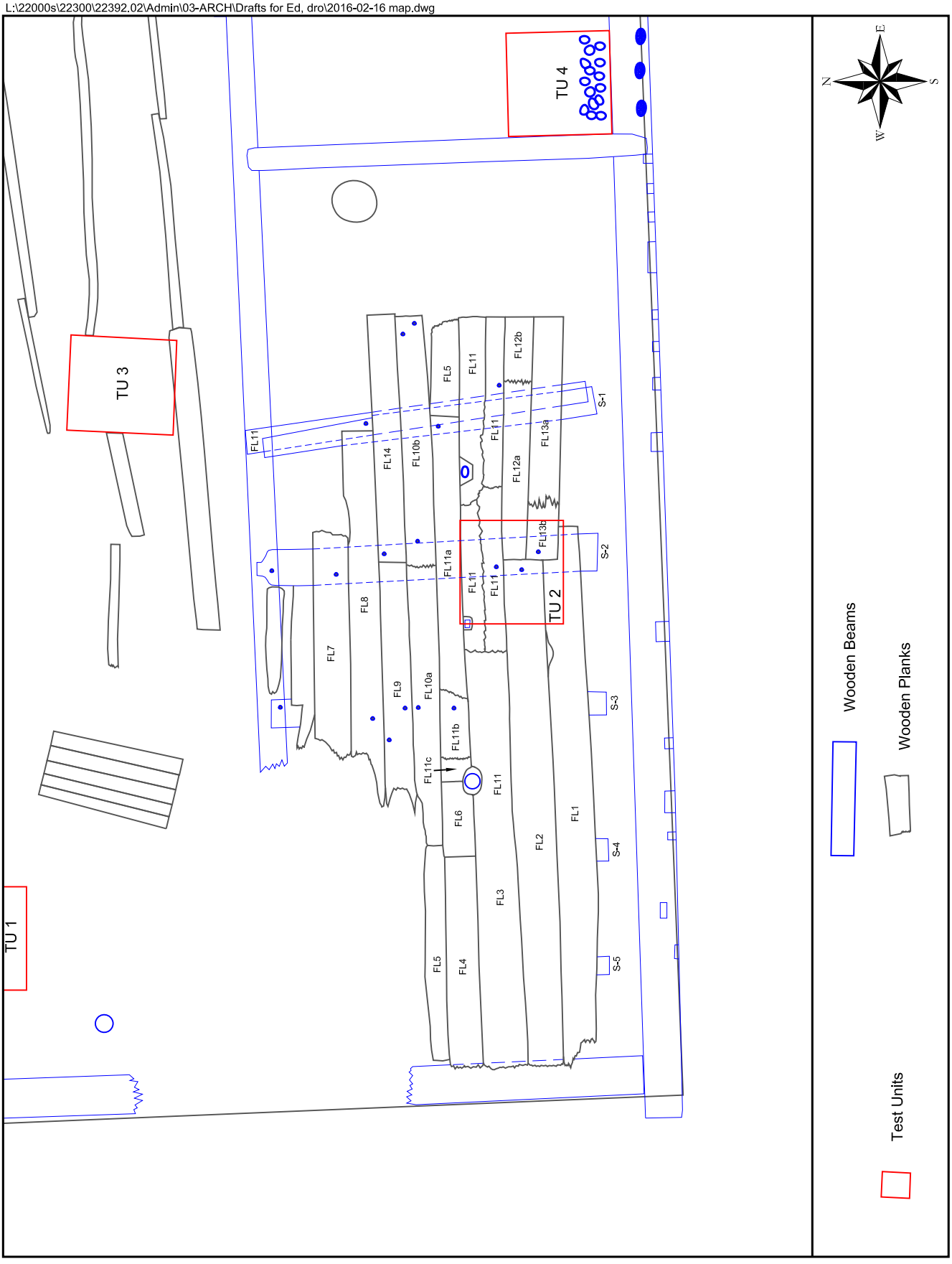

Figure 81
Detail View of Feature 41-8

Figure 82: Feature 41-12, Stone Foundation Wall, South Profile

Figure 83: Feature 41-18, Stone Foundation Wall, North Profile

Figure 84: Feature 41-1, Stone Foundation Wall, East Bisection Profile

Because the Stone Foundation Walls reached a height/depth of approximately three feet below its associated sill, it can be inferred that the floor of the eastern portion of the building rested approximately four feet above the historic ground surface of Point Lumley at the time of construction (with the one-foot [0.3 meters] sill beam atop the three-foot [0.91 meters] stone foundation wall). The western portions of the Northern and Southern Sills and the entirety of the Western Sill (41-4) were underlain by a single course of schist, suggesting that the western end of the building was closer to flush with the historic ground surface.

Large Wooden Pile (Feature 41-2)

The eastern end of the remnant southeastern Stone Foundation Wall (41-1) terminated at a large (1.6 foot/0.49 meters diameter) wooden pile (41-2) (Figure 85). Test Unit 9 was excavated to the east of the Pile to investigate it and the surrounding fill soils. The extant section of the Pile was 2.9 feet (0.88 meters) from the bedded end to the top, which appeared to have been cut off at or below the sill which would have originally rested upon it. The discussion of the soils and artifacts surrounding the pier is addressed in the results for Test Unit 9 above.

Figure 85: Feature 41-2, Large Wooden Pile, View to the West

Northern Sill (Feature 41-3)

The Northern Sill consisted of a 41.5 feet (12.6 meters) long hand-hewn beam. The beam was approximately one-foot-thick by one foot (0.3 meters x 0.3 meters) wide, and underlain by a Foundation Wall of schist stone (41-18) for most of its length, and ran along the north side of the foundation (Figure 86; Figure 87). In contrast to the Southern Sill (41-5), the eastern end of the Northern Sill appeared to be broken. Like the Southern Sill, the schist foundation wall (41-18) had been removed the far eastern point where the sill was broken. The foundation wall

beneath the Northern Sill thinned out to the west until it was largely gone prior to the intersection with the Western Sill (41-4). The foundation wall is discussed further under a subsequent heading. The sill had numerous mortises carved into it for framing timbers and wall studs, although the precise number is unknown due to the removal of the sill for preservation prior to full recordation. Fragments of several of the studs and frame timbers were still in place at the mortise joints.

Figure 86: Feature 41-3, Plan, Northern Sill, View to the Northwest

Figure 87: Feature 41-3, Plan, Northern Sill, View to the Northeast

Temporally diagnostic artifacts recovered from Feature 41-3 included: British brown stoneware sherds (1690-1775), white salt glazed stoneware sherd (1720-1805), and a mocha pearlware sherd (1799-1830). These artifacts continue to reflect the warehouse's mid-18th-/early 19th-century occupation. Test Unit 10 was placed in northwest corner of Feature 41, against Feature 41-4 and Feature 41-3, and Test Unit 6 was also placed on the far east edge of Feature 41-3 to further investigate Feature 41-3's structure (discussed above).

Western Sill (Feature 41-4)

The Western Sill consisted of two sections of a formerly 24 feet (7.3 meters) long beam that abutted both the Southern and Northern Sills (41-5 and 41-3) to form the western end of the structure (Figure 88). The central portion of the beam, including its junction with the Summer Beam (41-7), was destroyed and removed at the moment of initial discovery of Feature 41. The terminal ends of the Western Sill were cut to allow the Northern and Southern Sills to lie atop it. There were very few mortises on the western sill. There was no stone wall beneath the Western Sill nor did the walls (41-12, 41-18) extend to the joints where the Western Sill connected with the Northern and Southern Sills. The Floorboards (41-8) in the southwest corner appeared to rest on the western sill (Figure 89). In the northwest corner, a contact mold olive green bottle neck and lip with a flattened side string rim and cork attached (1810-1880) was recovered and mapped in place resting on the joint of the Western and Northern Sills. Test Unit 10 (discussed above) was placed northwest of Feature 41-4 to further investigate its structure; the investigation uncovered Feature 41-4's association with a small wooden beam (41-19).

Figure 88: Feature 41, Plan, Western Sill, Northwest Corner, View to the West

Figure 89: Feature 41, Plan, Western Sill, Southwest Corner, View to the West

Southern Sill (Feature 41-5)

The Southern Sill consisted of a 51.6 feet (15.7 meters) hand-hewn beam. The beam was 1.0 feet wide x 0.7 feet thick (0. 3 meters x 0.2 meters) and made up the south side of the foundation (Figure 90). On the eastern end, it appeared to have been cut rather than broken, suggesting the either a discontinuity in the sill, or that the eastern portion of the warehouse may have been intentionally dismantled. Most of this sill rested on a foundation of schist stone (Feature 41-12, discussed below) (Figure 91). The sill had numerous (n=29) mortises for wall studs and timber framing, many of which retained fragments of the timbers. The western portion of the sill also included remnants of what appeared to be long boards set on edge along the outer edge of the sill, likely the remains of clapboard siding (41-20). In the western section of the sill was an approximately five-foot (1.5 meters) gap flanked by two large studs that may have represented a doorway. The cross beam (41-6) was cut to lay underneath both the Southern Sill and the Northern Sill (41-3). A smaller cross beam (41-10) laid atop the Southern Sill and the Summer Beam (41-7).

Only two temporally diagnostic artifacts were recovered from Feature 41-5: a Buckley ware sherd (1720-1775) and an olive-green contact mold bottle sherd (1810-1880). These artifacts continue to reflect the warehouse's mid-18th-early 19th century occupation. The majority of artifacts recovered from the Southern Sill were architectural, such as metal grommets, wrought nails, wrought spikes, and metal stakes. Test Unit 4 was placed north of Feature 41-5 to further investigate its structure (discussed above).

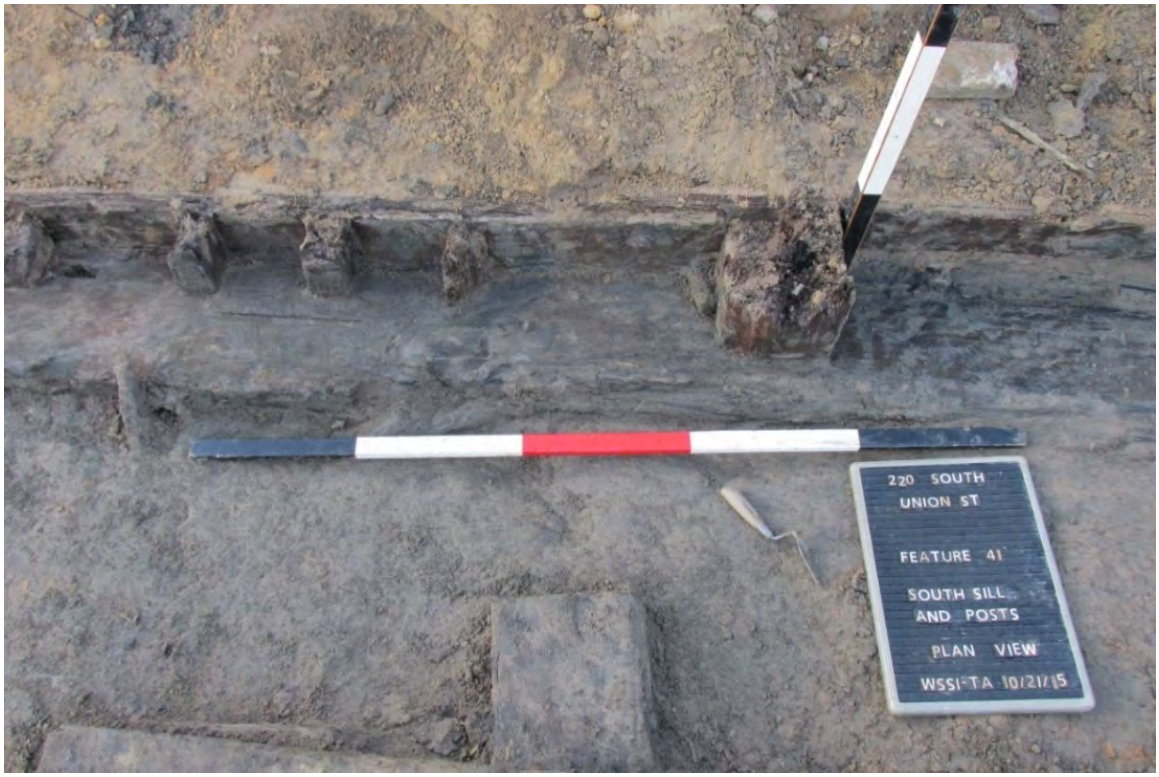

Figure 90: Feature 41, Plan, Southern Sill and Posts, View to the Southeast

Figure 91: Feature 41, Plan, Southern Sill, Center Section, View to the Southwest

Crossbeam (Feature 41-6)

The Crossbeam, at a length of 22 visible feet (6.7 meters), spanned the width of the 24-foot (7.3 meters) wide building between the Northern and Southern Sills (41-3 and 41-5) and 33 feet (10 meters) from the Western Sill (41-4) (Figure 92). The beam was approximately one-foot-wide and thick (0.3 meters x 0.3 meters). The beam was notched at its midpoint to create a joint with the sectional Summer Beam (41-7 and 41-9) (Figure 93).

A large Stone Pier (41-13), discussed below, supported the joint. The Crossbeam rested on the schist Stone Foundation Walls (41-12 and 41-18) where it intersected with the Southern and Northern sills. Tenons at the ends of the Crossbeam fixed into mortises on the Northern and Southern Sills (Figure 94). Test Unit 5 was placed against Feature 41-6's northeast corner to further investigate its structure (discussed above).

Figure 92: Feature 41-6, Plan, Crossbeam Center Section, View to the Northwest

Figure 93: Feature 41-6, Crossbeam

Figure 94: Mortise in Northern Sill (41-3) for Crossbeam (41-6)

Summer Beam (Feature 41-7 and 41-9)

The Summer Beam of Feature 41 was a multi-segmented beam running down the center of the building's long axis (Figure 95). The western 9.5 feet (2.9 meters) of the western Summer Beam segment (41-7) was destroyed at the time of Feature 41's discovery; the eastern end was joined to the Crossbeam (41-6), as discussed above (Figure 96). The eastern Summer Beam segment (41-9) extended from the Crossbeam joint east 32 feet (9.8 meters) where it terminated in an apparent break. The Summer Beam had very few mortises, so likely had very few studs, though there were axed out areas along the beam, particularly on the eastern end (Figure 97). The floating beams that supported the Floorboards (41-8) were nailed into the western segment of the Summer Beam, and in the same area, there were remnants of vertical wall boards attached to the beam segment's northern side. These features were attached to the Summer Beam via wrought iron spikes. Cleaning and thorough inspection during the preservation process may lead to more information about construction methods and joinery.

Only one temporally diagnostic artifact was recovered from Feature 41-7: a manganese mottled earthenware sherd (1680-1780). Temporally diagnostic artifacts recovered from Feature 41-9 included white salt glazed stoneware sherds (1720-1805). These artifacts continue to reflect the warehouse's mid-18th-/early 19th-century occupation. Test Unit 7 was placed at the far east edge of Feature 41-9 and Test Unit 5 was placed against Feature 41-9's far west edge where it meets the Crossbeam (41-6) to further investigate its structure (discussed above).

Figure 95: Feature 41-7, Plan, Central Sill, West Side

Figure 96: Feature 41-7/41-9, Plan, Summer Beam

Figure 97: Feature 41, Plan View, Central Sill, East Section

Floorboards (Feature 41-8)

The Floorboards consisted of 14 flat boards on top of five floating joists located exclusively in the southwestern corner of Feature 41 (Figure 99; Figure 98).

Figure 98: Feature 41-8, Plan, Floorboards, View to the East

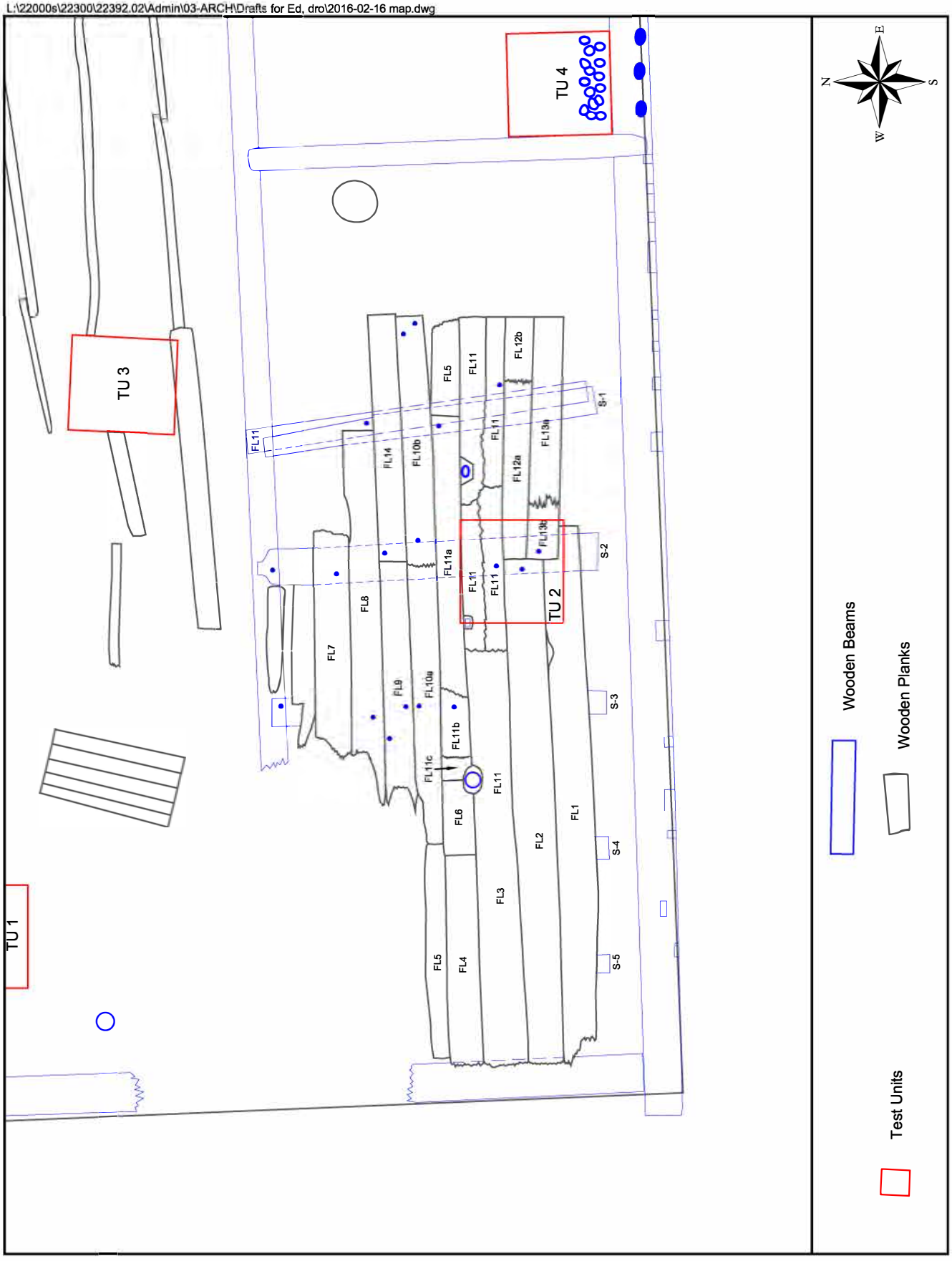

Figure 99
Detail View of Feature 41-8

The north ends of three of the floating joists rested on the Summer Beam (41-7); the remaining two joists may have done the same, but their northern ends, along with the section of floorboards they supported, were destroyed during the discovery of Feature 41. None of the floating joists rested on the Southern Sill, their ends lying one to two feet (0.3-0.6 meters) short of the Southern Sill (41-5). The joists rested directly on the approximately three feet (0.91 meters) of sand fill within the building's foundation and appeared to have simply offered an attachment point for floorboards and no structural function with regards to the building's framing. The floorboards were attached to the floating beams via wrought iron nails. Two stud posts (Features 41-14 and 41-16) were cut through the floorboards and portions of the posts were visible (Figure 100). The sand fill directly beneath the small (2.5 feet/0.76 meters) gap between the South Sill and the Floorboards produced a large amount of iron bars, tool parts, and nails when excavating the fill during the process of preparing the beam for removal. Test Unit 2 was placed in the south-central area of Feature 41-8 to further investigate (discussed above).

Figure 100: Feature 41-8, Plan, Southwest Corner, Post 1, View to the Northwest

Joist (Feature 41-10)

A single beam located east of the section of extant Floorboards (41-8) and west of the Crossbeam (41-6) likely functioned as a floor joist (Figure 101). This joist differed from the joists under the extant Floorboards in that it spanned the entire distance between the Summer Beam (41-7) and the Southern Sill (41-5), and was a rounded timber with a flattened top surface rather than a fully squared timber as found to the west beneath the Floorboards.

Figure 101: Feature 41-10, Plan, Center Section Beam and Joist, View to East

Central Stone Pier (Feature 41-13)

The Central Stone Pier was a large, pyramidal column of mortared schist that supported the joint of the Crossbeam (41-6) and the Summer Beams (41-7 and 41-9) (Figure 102). The pier was initially discovered during the excavation of Test Unit 5 and subsequently fully exposed. The fill sand around the pier was not screened during the full exposure due to time constraints. The pier is approximately 2.5 feet (0.76 meters) high with its base resting atop of the sandy B/C horizon, also notable at the bases of the Stone Foundation Walls (41-1, 41-12, 41-18) (Figure 103). Two trunnels, apparently functioning as shims, were found wedged between the pier and the southeast and southwest corners of the timber frame joint above. The large central pier was dismantled, labelled, and removed for conservation by Alexandria Archaeology.

Poles/Columns (Feature 41-14, 41-15, and 41-16)

Features 41-14 and 41-16 were likely stud posts and were cut through the floorboards and broken off near floor level (see Figure 100). Both features extended only 1 foot (0.3 meters) into the sand fill below the warehouse. Both features were excavated, though no artifacts were recovered, or samples retained. Feature 41-15 was a similar post remnant near the northwest corner of the foundation, which was excavated with similar results.

Interior Curtain/Support Wall (Feature 41-17)

Feature 41-17, an Interior Curtain/Support Wall, was uncovered during Test Unit 7 excavations (see Figure 71). Test Unit 7 was placed at the end of the eastern Summer Beam (Feature 41-9) to investigate for potential support structures. Excavation of Test Unit 7 revealed sandy fill 7.2

Figure 102: Feature 41-13, Central Stone Pier, View to the Northeast

Figure 103: Feature 41-13, Central Stone Pier

containing wood chips, bark, and other construction material below the Summer Beam. About inches (18.3 centimeters) into that fill, Feature 41-17 was found and determined to be a small two course schist feature that may have served the purpose of provide leveling support to the Summer Beam as the warehouse extended out and off of Lumley point in the mid-18th century. Subsequent backhoe stripping did not reveal any additional stones of Feature 41-17, which seemed to have been fully exposed in Test Unit 7.

Barrel Head (Feature 41-28)

A barrel head of approximately 1.25 feet (0.38 meters) in diameter was found adjacent west of the Joist (41-10) (Figure 104). This barrel head was largely intact and appeared to be resting atop the sand fill directly beneath where the level of the floorboards would have been prior to the building's destruction. The barrel head had several markings including "777" and the name "Godwin" scratched into its surface. Several other barrel heads were recovered during excavation of Feature 41, but the remainder were largely fragmentary and appeared to be incorporated into the fill covering the warehouse. The barrel was immediately released into City Possession

Figure 104: Feature 41, Plan, Center Section, Beam & Barrel, View to the East

Other Structure Elements

A diverse group of other wooden structure elements, including incomplete and displaced wooden beams and boards (e.g. 41-23, 41-25, 41-26, 41-27, and 41-29) and wooden roofing shingles (41-21 and 41-24), and various other wooden fragments were recovered from the footprint of the building at the top of the sand fill within the foundation, suggesting that they were deposited during the construction, use, or demolition of the building (Figure 105). Many of the beam fragments are believed to be wall or roofing elements of the building left behind after the destruction and likely removal for re-use of building materials was completed. Also noteworthy was a 16.5-foot (5 meters) round and smoothed timber tapering at each end (41-22) that is likely a ship's spar. The majority of these wooden elements were removed for preservation.

Figure 105: Feature 41 Overview, Showing Displaced Wood Fragments

Feature 42, Detritus Level

Feature 42 was located on the north end of Trench 3 during the second phase of sample trenching (Figure 106). The feature contained wood chip and bark laden soil stains in gray sandy soil. Closer investigation revealed Feature 42 as part of the stratigraphic level related to the tidal mud flats, making it a natural rather than a cultural feature. The feature was mapped and photographed but not excavated. No artifacts were recovered from Feature 42.

Figure 106: Trench 3, Part 2, Feature 42, Plan View, View to the Southwest

Feature 43, Brick Fill

Feature 43 was located in the northern terminus of Trench 9 during the second phase of sample trenching (
Figure 107). Feature 43 was approximately 10 feet (3 meters) long and disappeared into the eastern and western walls of Trench 9. The feature consisted of disarticulated and crumbling brick piled up on top of Trench 9's Fill 3, a [10YR 5/1] gray sandy loam mixed with natural and some worked wood chips. Feature 43's broken brick sloped significantly towards the north end of the trench. Two shovel tests, Trench 9 STP 1 and STP 2, were excavated into the brick to show approximately one foot (0.3 meters) of brick refuse underlain by Fill 3. Feature 43 may represent discarded architectural items used to infill the low parts of the reclaimed land at the beginning of the 19th century to bring the land up out above the level of inundation. Feature 43 sat approximately 5.5 feet (1.67 meters) above Feature 53 (discussed below): the two features do not appear to be related. No artifacts were recovered from Feature 43.

Figure 107: Trench 9, Part 2, Feature 43, Plan View, View to the South

Feature 44, Post

During the second phase of sample trenches, Feature 44 was located in the eastern wall of Trench 9, approximately 20 feet (6.1 meters) from the northern terminus (Figure 108). The feature was damaged by the excavation of Trench 9 and was profiled and photographed as part of Trench 9's east wall profile. The post hole feature measured approximately 1.5 feet (0.46 meters) wide and 2.3 feet (0.70 meters) deep excavated into Trench 9's Fill 2, a [10YR 4/3] brown sandy clay loam mottled with [10YR 6/2] light brownish gray sand lenses, mixed with brick flecks. Fill 2 was likely the soil used to infill the area in the late 18th and early 19th century.

Feature 44 was removed and screened, but no artifacts were recovered from the remaining portion. This post may have been related to the early 19th century use of the land following the in-filling of the mud flats by ca. 1782.

Figure 108: Trench 9, Feature 44, East Profile

Feature 45, Post

Feature 45 was a post hole located in the western wall of Trench 9 during the second phase of sample trenches, approximately 20 feet (6.1 meters) from the northern terminus (Figure 109). A large portion of the feature was not destroyed during the excavation of the trench. The post hole feature measured approximately 1.9 feet (0.57 meters) in width and was excavated 2.1 feet (0.64 meters) deep into Trench 9's Fill 1 and Fill 2. Fill 2 (a [10YR 4/3] brown sandy clay loam mottled with [10YR 6/2] light brownish gray sand lenses, mixed with brick flecks) was likely the soil used to infill the area in the late 18th and early 19th century. Feature 45's degrading wooden post was surrounded by [10YR 4/2] dark grayish brown sandy loam. A total of 128 artifacts were recovered during the excavation (Table 23). The temporally diagnostic artifacts include sherds of pearlware, whiteware, yellowware, contact mold glass, potash windowpane; wrought iron nails were also recovered. The artifacts suggest a post-1830 date for the feature, which places the post during the earliest use period of the reclaimed land.

Figure 109: Trench 9, Feature 45, West Profile

Table 23: Artifacts Recovered from Feature 45

Artifact Description	Feature Fill
Ceramics	
kaolin pipe bowl	1
kaolin pipe stem	1
hard paste porcelain	2
pearlware (1780-1830)	20
whiteware (1820-1900+)	12
refined white earthenware	1
redware	2
stoneware	2
yellowware (1830-1940)	2
Glass	
bottle	8
Glass	
bottle, contact mold (1810-1880)	3
unidentified glass	2
windowpane, potash (pre-1864)	12
windowpane, potash/soda (pre-1864)	2
Metal	
nail, wrought	16
Miscellaneous	
bone	40
fossilized coral	1
oyster shell	1
Total Feature 45	**128**

Feature 46, Post

During the second phase of sample trenches, Feature 46 was located approximately 10 feet (3 meters) from the northern terminus of the southern half of Trench 9 (Figure 110). Feature 46 was a remnant wood post resting on a large square piece of schist. Very little remained of the feature and not enough soil was present to warrant a soil sample. The feature was excavated into the historic sandy fill (Trench 9, Fill 2), a [10YR 4/3] brown sandy clay loam mottled with [10YR 6/2] light brownish gray sand lenses, mixed with brick flecks. Fill 2 was likely the soil used to infill the area in the late 18th and early 19th century. One piece of ceramic, a sherd of pearlware (1780 – 1830), was recovered from the feature near the schist stone's base. Feature 46 was probably related to the earliest use period of the reclaimed land during the early 19th century.

Figure 110: Trench 9, Feature 46, Plan, View to the South

Feature 47, Driftwood or Sawed Lumber

Feature 47 was a 5.3 x 1.3 feet (1.6 meters x 0.39 meters) log located in the base of Trench 9 (Figure 111). The log, oriented east to west, was sawed flat on one side and still had bark on the top side. The soil around the log was grey sand covered in sawdust and wood chips, which can be interpreted as evidence of a work area (Figure 112). The soil layers at this level across the site contained wood chips, some sawed, some driftwood, and some bark chips. This layer was particularly evident beneath Feature 41, the Carlyle warehouse. The same soil contained several *in situ*, or undisturbed, stumps of medium to large-sized trees, one of which is pictured and discussed with the warehouse feature. A small soil sample was taken, as well as a wood sample. Most of the soil in and around Feature 47 was screened, but no artifacts were recovered. Feature 47 possibly represents a small portion of the tidal mud flats that were late 18th-/early 19th-century work areas during the construction of Feature 41 and 56 and the infilling process at Features 53, 54, and 55 (discussed below).

Figure 111: Trench 9, Feature 47, Plan View, View to the Northwest

Figure 112: Trench 9, Feature 47, South Bisection Profile with Sawdust

Features 48-52, and 57 (Post Holes)

When the site was leveled for the second time from the 6 feet (1.8 meters) a.s.l. grade to -3 feet (-0.91 meters) a.s.l., more post hole features were uncovered (Table 24). Features 48, 49, 50, 51, 52, and 57 were all post holes with the posts still in them, as exhibited by Feature 49 (Figure 113). Feature 52 and 57 were damaged and disturbed and soil samples were not taken. Feature 51 did not possess enough soil to provide for a proper soil sample. All six features are similar at approximately 1-2 feet (0.31 to 0.61 meters) wide and went into the sandy subsoil, as exemplified in Feature 49's north bisect (Figure 114). These features' typical posthole fill contained a slightly darker soil [10YR 4/2] dark grayish brown sandy loam around the post with a larger [10YR 3/4] dark yellowish brown sandy clay loam post mold fill around it. Feature 49's post was representative of the wood posts grounded within these post hole features (Figure 115). The posts were very similar to the posts that were a part of the nearby late 18th-/early 19th-century bulkhead wharf (Feature 54, discussed below). Features 48, 49, 50, 51, 52, and 57 were likely part of the late 18th-/early 19th-century infilling process of the point, or an unknown very early use of the infilled area.

Table 24: Post Hole Features 48-52, 57

Feature #	Size (feet)	Depth (feet)	Excavated?	Estimated Time Period
48	1.8 x 1.2	1.8	Yes	Late 18th-19th Century
49	1.3 x 1.2	1.7	Yes	N/A
50	1.5 x 1.5	1.7	Yes	Pre-1864
51	2.5 x 1.7	0.8	Yes	N/A
52	2.0 x 2.0	0.55	Yes	N/A
57	1.0 x 1.0	2.2	Yes	Late 18th/Early 19th Century

Figure 113: Feature 49, Plan, View to the Northwest

Figure 114: Feature 49, North Bisection Profile

Figure 115: Feature 49, Wooden Post Removed

A total of 26 artifacts were recovered from Features 48, 50, and 57 (Table 25). Only two temporally diagnostic artifacts were recovered from these features: a white salt glazed stoneware sherd (1720-1805) from Feature 57 and a potash windowpane sherd (pre-1864) from Feature 50. The ceramic sherd potentially places Feature 57 in the late 18th/early 19th century, and the windowpane shard dates Feature 50 prior to the mid- to late 19th century. Though no temporally diagnostic artifacts were recovered from Feature 48, a kaolin pipe stem, a commonly recovered artifact from 18th-/19th-century fills, was obtained. Other temporally non-diagnostic artifacts were recovered from Features 50 and 57 that are also characteristic of historic 18th-/19th-century fills, such as a flint ballast and redware sherds. No artifacts were recovered from Features 49, 51, and 52.

Table 25: Artifacts Recovered from Post Hole Features 48, 50, and 57

Artifact Description	Feature 48	Feature 50	Feature 57
Ceramics			
kaolin pipe stem	1		
white salt glazed stoneware (1720-1805)			1
redware		1	2
stoneware		1	
Glass			
windowpane, potash (pre-1864)		1	
Miscellaneous			
bone	1		
brick	10	3	
charcoal		1	
flint ballast			1
leather shoe		1	
oyster shell		2	
Total Post Hole Features	**12**	**10**	**4**

Feature 53, Ship

Feature 53 was the partial remains of the hull of a wooden seafaring vessel, which in conjunction with Features 54 and 55, formed part of an ad-hoc wooden shore-retention bulkhead that was used to extend the shoreline of Alexandria eastward toward the deep channel of the Potomac in the late 18th century (see Chapter 5). Feature 53 was initially discovered with a backhoe during the final site excavation phase of the project, designed to level the site to -3.0 feet (-0.91 meters) in elevation. The feature was fully exposed by hand-excavation, revealing the starboard side remnant of a ship (Figure 116; Figure 117). The entire ship was constructed of white oak, and held together with wood spikes or trunnels, also known as treenails, although several ferrous metal spikes were located along the keel. The feature measured approximately 47 feet by 11 feet (14.3 meters x 3.4 meters).

In accordance with a Resource Management Plan (RMP) that was developed in consultation with Alexandria Archaeology (Appendix II, Volume II), the vessel was photographed, and scale drawing and profiles were prepared (Figure 118; Figure 119; Figure 120). Due to the fragility of the resource and the desire of Alexandria Archaeology to preserve the timbers, the ship hull was constantly kept moist and quickly excavated to allow for extraction. The section of ship consisted of a portion of the keel and one side of the ship, lying with the keel and outer hull down and the inner hull facing up. In addition to the keel and bow stem[1], the ship remains consisted of four distinct elements or "layers", presented in descending order of depth: the ceiling planks, the frame (floors and futtocks), the hull planking (strakes), and sacrificial planking (Cook and Rubenstein-Gottschamer 2011; VanHorn 2004). The keel or "spine" of the ship was treated as part of the hull "layer". Each of these elements is described below in greater detail.

Three-dimensional laser scanning was conducted on the ship from several vantage points to capture the entire vessel; this included color three-dimensional models produced from the laser scanning operations. A scan was conducted at the onset and three scans after each "layer" of wood (ceiling planks, the frame, hull) was dismantled and removed from the overall feature Figure 121; Figure 122; Figure 123; Figure 124). The sacrificial planking was not scanned. A photogrammetry model was also prepared by the Naval History and Heritage Command (NHHC) Underwater Archaeology Branch (UAB), independent of the work conducted by Thunderbird Archeology.

The soils underneath the ceiling planks and between frames and futtocks was archeologically excavated and screened for artifacts. Artifacts recovered did not appear to be directly related to the active phase of the ship's existence but were similar to those found in the surrounding soils that had been used for ground fill. The proveniences associated with these artifacts reflect the location of the ship elements that were being exposed and/or removed at the time of collection.

Five shovel test pits (STPs 1-5) were systemically excavated beneath Feature 53 after it was completely removed, to examine the stratigraphy and compare any recovered artifacts with

[1] The ship was initially interpreted by some of the experts as the stern post and port side, but later reinterpreted as the bow stern and starboard side.

those recovered in the sediments within the ship timbers. The few artifacts recovered are also interpreted as late 18th-century infilling of the Potomac River. The artifact assemblage associated with Feature 53 is discussed below in the *Materials Analysis and Discussion* section.

Figure 116: Feature 53, Overview, View to East

Figure 117: Feature 53, Overview, View to West

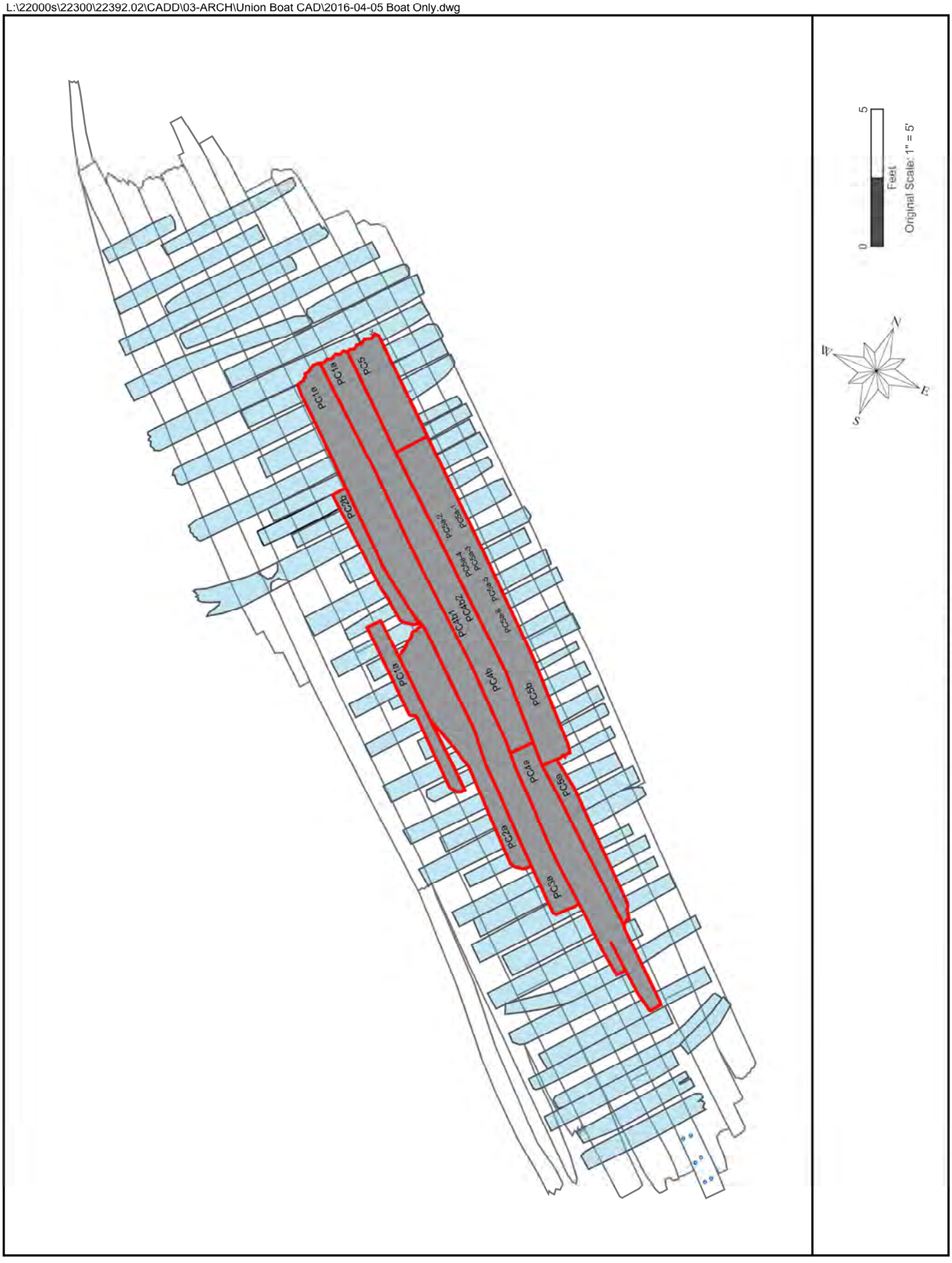

Figure 118
Overview of Feature 53, Ceiling Planks

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Figure 119
Overview of Feature 53, Hull

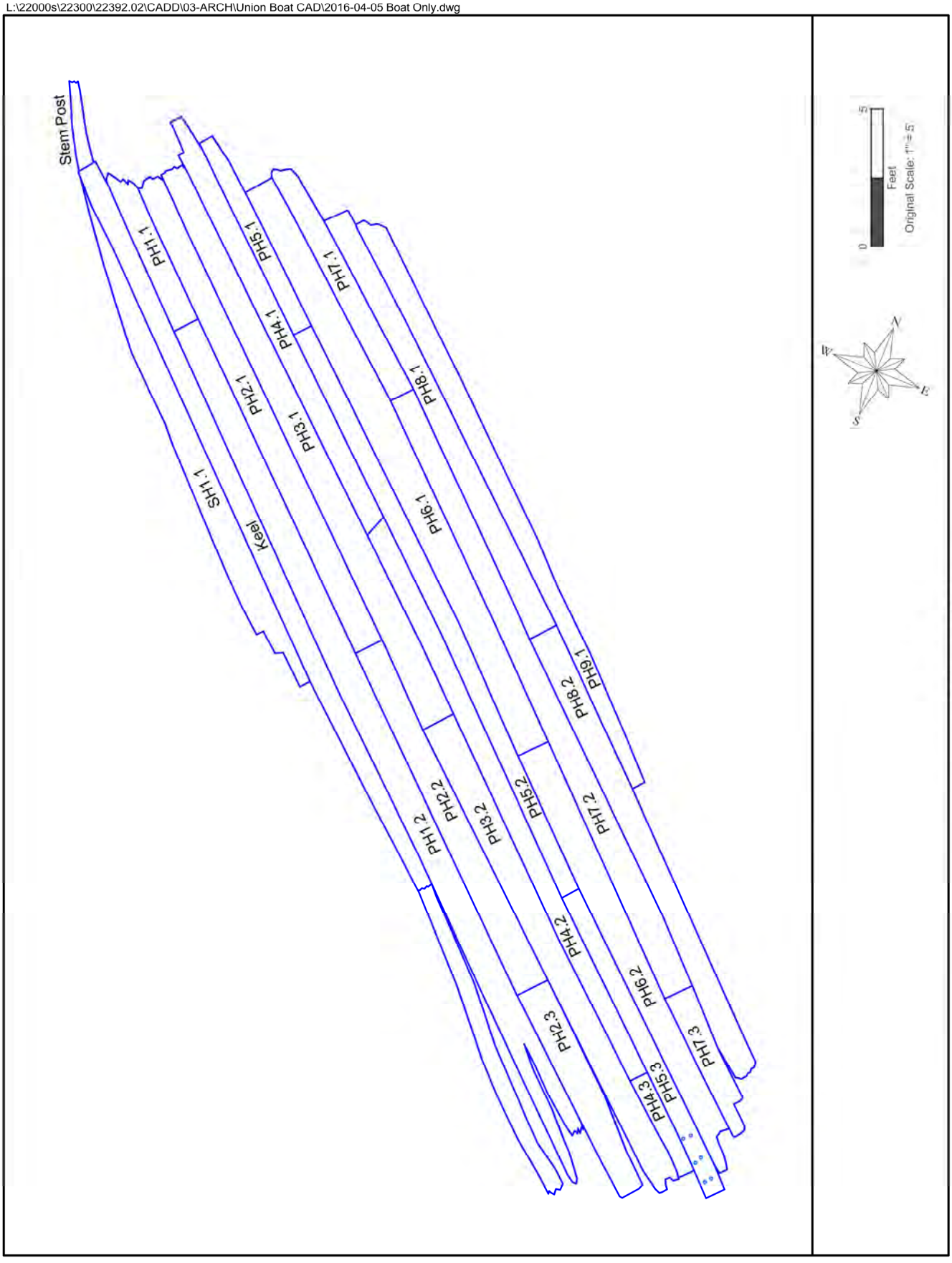

Figure 120
Overview of Feature 53, Hull

Figure 121: Feature 53, Overview, 3D Laser Scan, View to Southwest

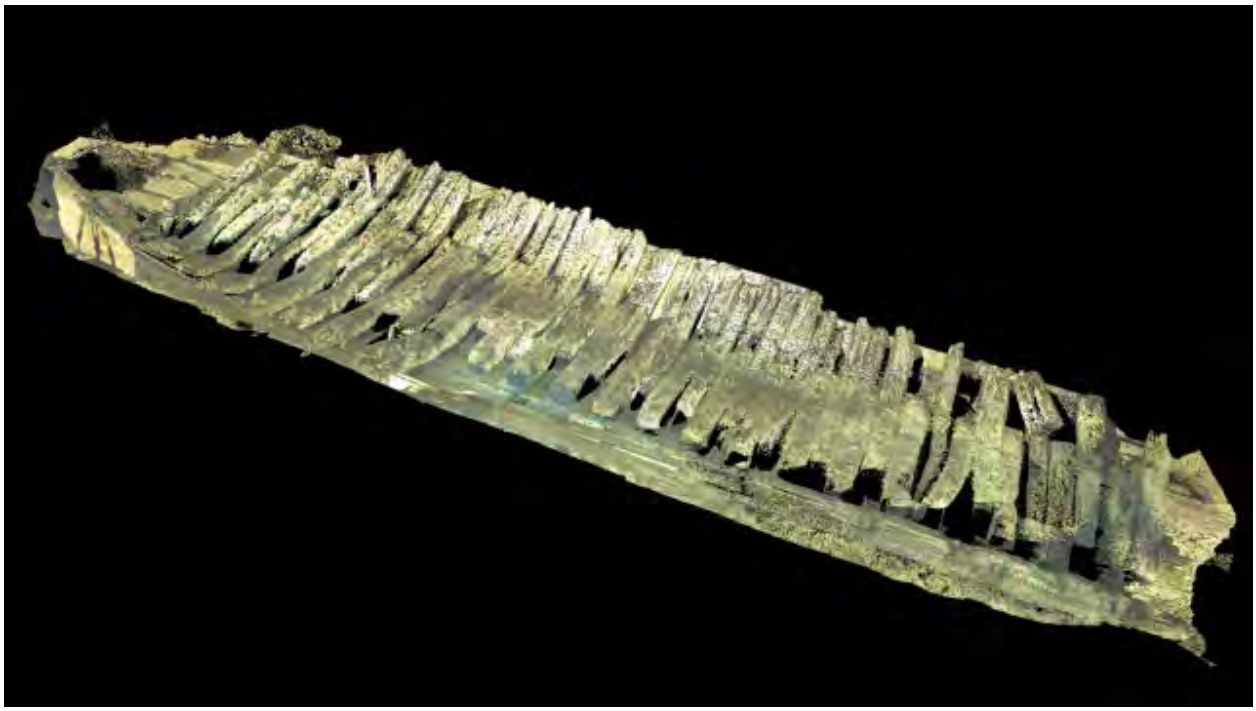

Figure 122: Feature 53, Frame, Overview, 3D Laser Scan, Looking Northeast

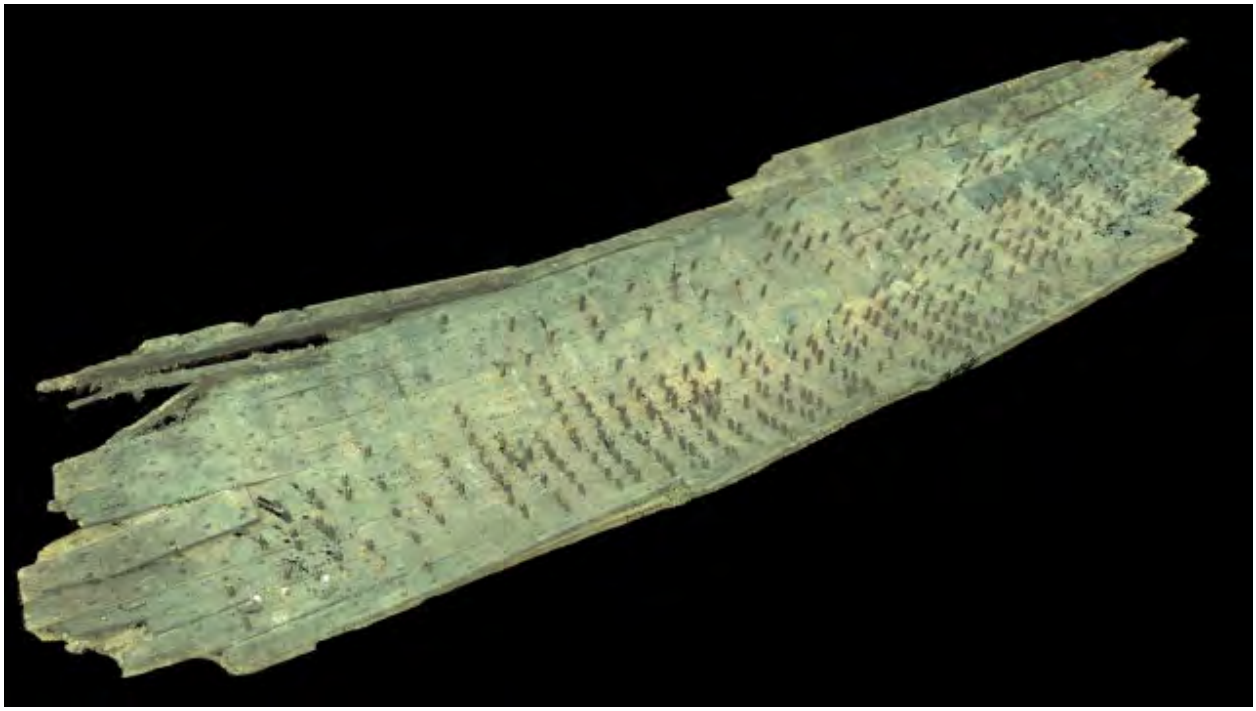

Figure 123: Feature 53, Hull, Overview, 3D Scan, View to Southwest

Figure 124: Feature 53, Hull, Overview, 3D Scan, Looking Northeast

Ceiling Planks

Ceiling Planks were planks attached to the ship's frame on the interior of the hull—the planks one would see on the walls and floors when below decks (see Figure 118 and Figure 121; Figure 125). The wooden planks ran lengthwise down the center portion of the ship, were attached with large wrought iron nails, and were broken on several ends. Large rocks rested on top of the planks, perhaps to help weigh the boat down during infilling (they are not interpreted as ballast). At the time of recovery there were nine ceiling planks in Feature 53, each affixed to the frames by wrought iron nails. The missing ceiling planks likely were either removed during the demolition of the ship or deteriorated over time.

Figure 125: Feature 53, Plan, Ceiling Planks, Facing Southwest

Frame

The frame of the ship was made up of the heavy timbers that form the "ribs" that give the hull its shape and strength (see Figure 119; Figure 122; Figure 126; Figure 127). Rather than single, massive timbers, each "rib" was made up of a double width of shorter curved sections of wood joined end-to-end with the seams alternating, like two courses of bricks on their sides. Each frame begins with a floor section, which straddled the keel, and to which were attached two futtocks—one mated to the side of the floor and one to its end. On a complete hull, additional futtocks would continue outward and upward to terminate at the gunwales (the uppermost edge of the side of a vessel).

Feature 53 included the partial remains of 24 floors, none of which were complete. The majority had been cut or broken at the keel of the vessel, with only F1 through F9 retaining any portion on the opposite side of the keel.

Figure 126: Overview of Feature 53, Frame, Facing West

Figure 127: Detail Feature 53, Frame, Facing West

Twenty-two first futtocks and 16 second futtocks were present in Feature 53. First futtocks were mated to the side of a floor and extend outboard from near the keelson (absent in Feature 53), a timber which ran parallel to and above the keel and frames at the bottom of the hull (see below). Second futtocks were mated to the end of a floor and extend outboard from that point; the joint between the floor and the second futtock was reinforced by the midsection of the first futtock, similar to the courses in brick masonry. Only a small portion of the inboard ends of the second futtocks were present in Feature 53; the remainder was cut or broken away when the upper portion of the hull was removed.

Keel and Hull Planks/Strakes

The keel is a heavy timber that forms the "spine" of the ship, running from fore to aft and occupying the bottom-most position on the hull (see Figure 120: Figure 123; Figure 124). Feature 53 included the forward 41.5 feet of the ship's keel and the lower portion of what is believed to be the bow stem post, which projected upward from the keel at the bow of the ship. Hull planks are boards running lengthwise down the outside of the ship's frame, forming the hull of the ship. These were typically made of hardwood and attached to the frame with treenails. A line of planks end-to-end from bow to stern of a ship was termed a strake.

Twenty-two whole or fragmentary planks representing portions of ten strakes were present in Feature 53 (Figure 128; Figure 129; see Figure 124). The hull planks/strakes were attached to the frame with their long edges abutting each other, forming a smooth hull surface referred to as 'carvel-built.' Two of the strakes, SH1 (SH1.1) and PH1 (PH1.1-1.2), are garboard strakes, specialized thicker strakes that attach to the keel with nails (Figure 130). SH1 is the single strake from the otherwise-absent port side of the hull, with strakes PH1 through PH 9 lying on the starboard side of the hull. Finally, the keel exhibited a partial scarf, but it was not noted until removal and the portions were immediately removed from the site.

Several of the more fragile planks split into pieces during the careful removal of the keel and hull planks/strakes; the keel and longer planks also had to be cut into shorter lengths in order to accommodate both transportation and the size of the freeze dryer at the conservation laboratory. Beneath the hull planking, sacrificial planking was encountered.

Figure 128: Feature 53, Hull, Overview Working Shot, View to the East

Figure 129: Feature 53, Hull, View to the West

Figure 130: Feature 53, Hull, Detail, Looking South

Figure 131: Feature 53, Working Shot of Hull Removal Showing Underlying Sacrificial Planking, View to the Northwest

Sacrificial Planking

Sacrificial planking, consisting of horizontal planks attached to the outside of the strakes, acted as a wood sheathing on ships to protect the hull from damage, such as shipworms and the elements (VanHorn 2004:198). Typically, pitch or pine tar coated the hull, then sacrificial planking was attached using small iron nails. In the case of Feature 53, the sacrificial planking was coated in pine tar mixed with hair to help it adhere to the hull (Figure 131). Sacrificial planking would take the brunt of any damage caused by ship worms (*taredo navalis)* and could be easily removed and replaced (Cook and Rubenstein-Gottschamer 2011:114). Feature 53's sacrificial planks appeared broken and worn (Figure 132; Figure 133) and the majority exhibited extensive ship worm damage (Figure 134). No artifacts were recovered in association with these planks.

Material Analysis and Discussion

The soils underneath the ceiling planks and between frames and futtocks were archeologically excavated and screened for artifacts (Table 26). The full inventory can be found in Appendix V (Volume II). A total of 131 artifacts were recovered while exposing the ship immediately on top of the ceiling planks ("Level 1" soils). Temporally diagnostic artifacts included: English brown stoneware sherds, Buckley ware sherds, creamware, and freeblown glass. These artifacts correlate to use of the ship in the late 18th century to infill the Potomac River. A total of 120 artifacts were recovered from each "level" in between the futtocks and hull planking. Temporally diagnostic artifacts included tin glazed earthenware, a Buckley ware sherd, creamware, freeblown glass, and pearlware sherds. Due to the missing ceiling planks, the artifacts are not likely associated with use of the vessel, but rather were likely deposited/fell in between the timbers during infilling.

After Feature 53 was completely removed, five shovel test pits (STPs 1-5) were systemically dug approximately 10 feet (3.1 meters) apart beneath the base of the ship. Testing went about 2 feet (0.61 meters) in depth. Only STP 1 and STP 5 generated artifacts. A total of 15 artifacts were recovered from shovel testing (see Table 26). The only temporally diagnostic artifacts recovered were tin glazed earthenware sherds. These artifacts likely date to the historic late 18th-century infilling of the Potomac River. The other STPs produced no artifacts and appeared to go into the natural sands of the near-shore riverbed, instead of historic 18th-century infilling.

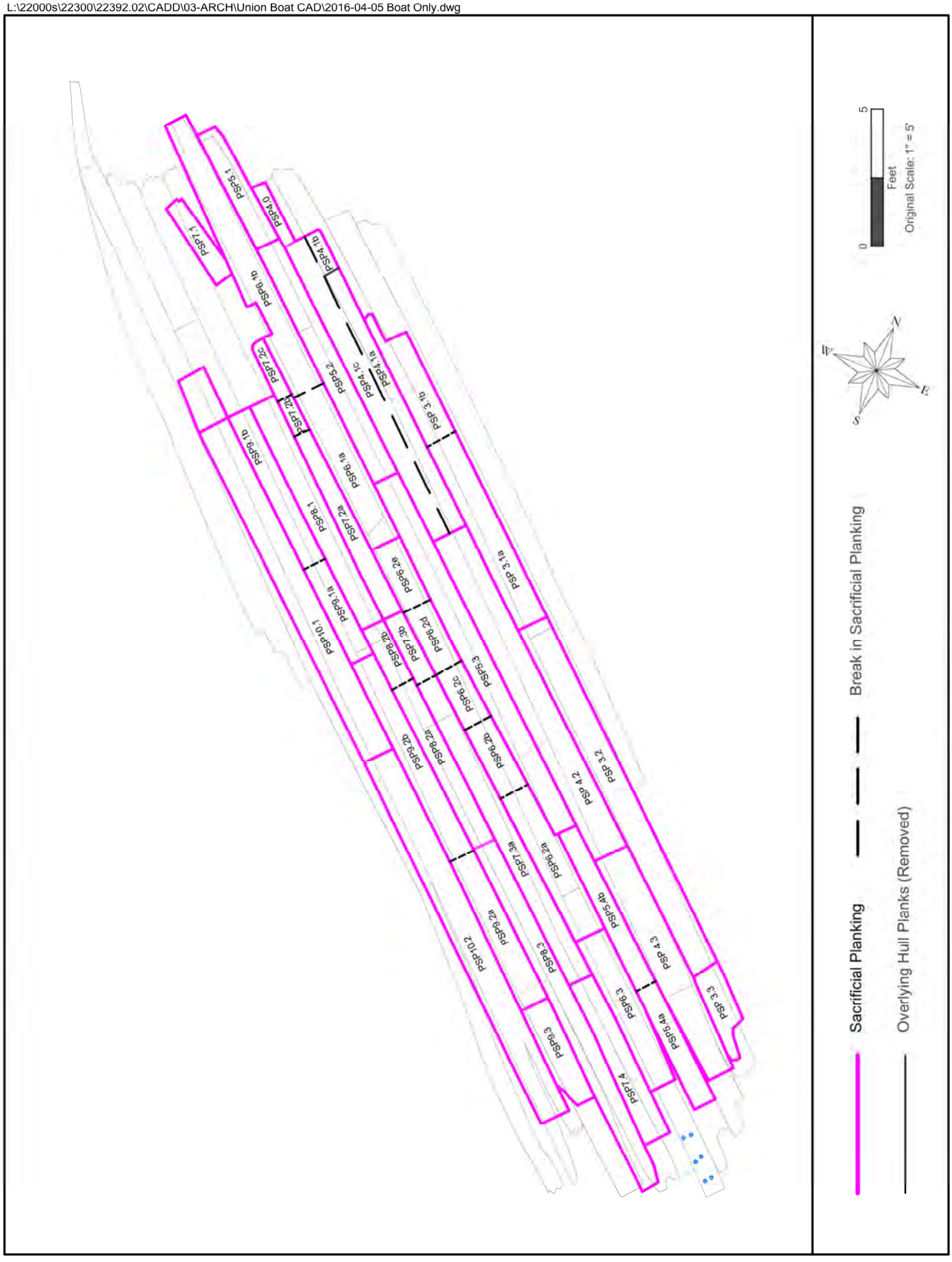

Figure 132
Overview of Feature 53, Sacrificial Planking

Figure 133: Feature 53, Sacrificial Planking, Overview

Figure 134: Feature 53, Sacrificial Planking on Keel, Showing Shipworm Damage

Table 26: Artifacts Recovered from Feature 53

Artifact Description	Shovel Test Pits (Excavated beneath ship)		Ceiling Planks	Frame	Hull
	Fill1	Fill 2	Level 1	Level 2	Level 3
Ceramics					
kaolin pipe bowl				1	
kaolin pipe stem		1	3	2	1
kaolin pipe bowl and stem				4	1
hard paste porcelain			4		
manganese mottled (1680-1780)			1		
English brown (1690-1775)			6		
Westerwald (1700-1775)					1
tin glazed earthenware (1700-1800)		5	3	2	
white salt glazed stoneware (1720-1805)			1		1
Buckley (1720-1775)			3	1	
creamware (1762-1820)			2	3	2
pearlware (1780-1830)				1	
refined white earthenware			6		1
red and gray bodied coarse earthenware			1	3	5
red bodied coarse earthenware				1	
redware		1	8	4	4
stoneware			3		1
Glass					
bottle	1		3	11	9
tableware				1	
bottle, freeblown (pre-1860)			6	12	17
tableware, freeblown (pre-1860)					1
bottle, blackglass (pre-1880)			1	2	1
windowpane, potash (post-1864)				1	
Metal					
ferrous metal rod				1	
nail, wrought			15	19	26
pewter utensil handle					1
unidentified ferrous metal			7	19	15
wrought spike			1	1	1
Miscellaneous					
bone		2	14	4	4
brick		1	5	8	12
cinder			1		
clam shell				1	

Table 26 (continued)

Artifact Description	Shovel Test Pits (Excavated beneath ship)		Ceiling Planks	Frame	Hull
	Fill1	Fill 2	Level 1	Level 2	Level 3
Miscellaneous					
Coal					2
flint ballast			13	4	1
fossilized coral					4
leather shoe			8		1
Mortar			2		1
nut/pit					1
oyster shell			8	10	6
wooden bung				1	
Prehistoric					
chert biface thinning flake		1			
quartz decortication flake			1	1	
quartz primary reduction flake			4	1	
quartz biface thinning flake			1		
quartzite primary reduction flake		3		1	
Total Feature 53	**1**	**14**	**131**	**120**	**120**

Macrobotanical

Soil samples taken from Feature 53 were sent to Paleoscapes Archaeobotanical Services Team for macrobotanical analysis (Puseman 2016). The resulting report can be reviewed in Appendix VIII (Volume II). Four samples were taken from different parts of the frame. From these samples, a variety of fruit seeds were recovered, including strawberries (*Fragaria*), huckleberries (*Gaylussacia*), mulberries (*Morus rubra*), raspberries (*Rubus*), watermelon (*Citrullus lanatus*), blueberries (*Vaccinium*), and grapes (*Vitis).* Other identified seeds included a tomatillo or groundcherry (*Physalis*), mint (*Lamiaceae*), and hop (*Humulus lupulus*). The remains of local vegetation were also found, such as sedges (*Carex*), spikerush (*Eleocharis*), cattails (*Typha*), weeds (*Chenopodium*, *Polygonum*, etc.), grass (*Poaceae*), and tulip popular (*Liriodendron tulipifera*). Recovered charcoal included mostly oak (*Quercus*), specifically white oak (*Quercus Leucobalanus*), pine (*Pinus*), ash (*Fraxinus*), and walnut (*Juglans*). Uncharred wood fragments further confirm that the ship was made of white oak.

Faunal

Faunal remains recovered from Feature 53 were sent to IdBones for analysis (Andrews 2016). The resulting report can be reviewed in Appendix VIII (Volume II). A total of 28 faunal remains was recovered from the ship. Identified species included chicken (*Gallus gallus*), pig (*Sus scrofa*), and cow (*Bos taurus*). Seventeen butchered mammal bones, particularly cow and pig, were noted. Some remains contained signs of being butchered with an ax. One cow rib had

gnaw-marks made by human teeth. These faunal remains likely reflect refuse mixed with the fill used in banking out Alexandria's waterfront.

Dendrochronology

Fifteen timbers from Feature 53 were sampled and sent out to the Oxford Tree-Ring Laboratory for dendrochronological (or tree-ring dating) analysis (Worthington and Seiter 2016). The resulting report can be reviewed in Appendix X (Volume II). All of the timbers were identified as white oak. The viable samples extracted from the timbers were sequenced and compared with each other. Three timbers matched and were combined to perform a fuller analysis of their tree rings and date the timbers. The timbers date from 1603-1726. Fifteen additional tree rings were seen in the sample but too distorted to measure reliably. According to analysts, this indicates "that the tree from which the timber was constructed was felled sometime after 1741 and thus that the ship was originally constructed sometime after this date" (Worthington and Seiter 2016:8). An unknown number of tree rings were removed from these timbers as a part of ship construction, which puts the construction of the ship probably/most likely around the mid-18th century. The tree-ring data from the ship was compared to 800 master chronologies from the east coast and was found to best match those from Massachusetts, suggesting that wood to make the ship had been harvested in New England.

The sacrificial planking exhibited damage from shipworms, and a sample was sent to Kevin J. Eckelbarger, Ph.D., Professor of Marine Biology at the School of Marine Sciences, Darling Marine Center, University of Maine. According to Dr. Eckelbarger, shipworms secrete calcium carbonate along the entire length of the burrow, which would be visible as a white trail (personal communication 2016). No evidence of this white lining was observed in the field, nor in the sample sent to the University. Dr. Eckelbarger concluded that the calcium carbonate had completely dissolved (personal communication 2016). Although speculative, it is possible that the later industrial use of the property affected the pH of the underlying soils and groundwater, causing the hard calcium deposits to dissolve.

Given the significance of the ship, the City of Alexandria wished to conserve the wood timbers for later display and use. Thunderbird staff consulted with the NHHC-UAB archeologists, conservators from the Maryland Archeology Conservation lab and other experts on the best way to dismantle the feature and assisted in the dismantling process. The ship timbers were removed from site and temporarily stored at a city warehouse. Staff and volunteers with Alexandria Archaeology thoroughly documented each timber before they were transported to Texas A&M University's Conservation Research Laboratory for conservation.

Feature 54, Bulkhead Wharf/Wall

Feature 54, a bulkhead wharf/wall section, is the second component of a late 18th-century shore-retention bulkhead that was discovered during the final site leveling phase of the project area to -3 feet (-0.91 meters) a.s.l (Figure 135). The three features, including the previously discussed ship (Feature 53) and an earth-filled barrel (Feature 55), were investigated in accordance with a Resource Management Plan developed in consultation with Alexandria Archaeology (Appendix II, Volume II).

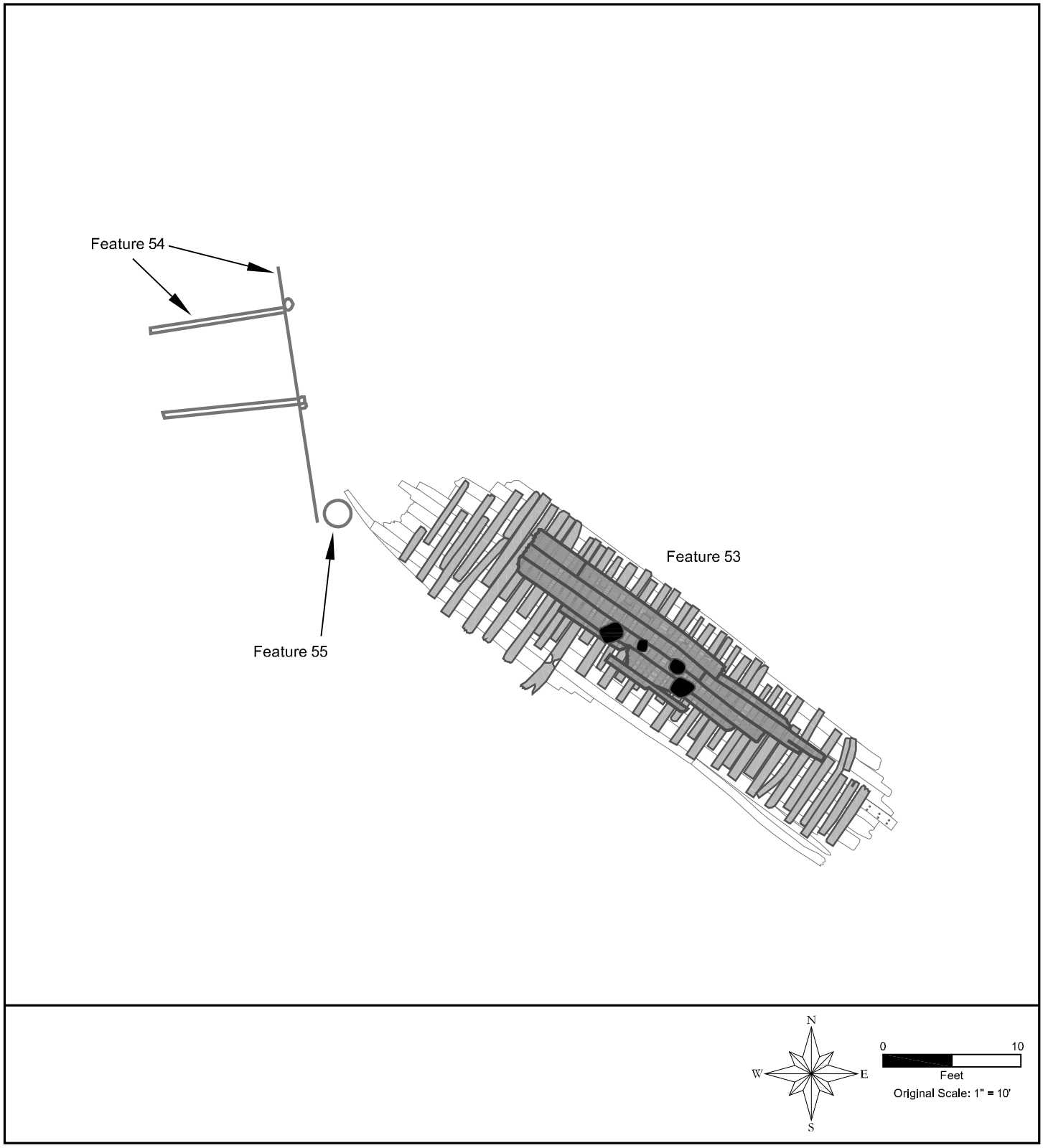

Figure 137
Plan View of Features 53, 54 and 55

The bulkhead (Feature 54) ran for approximately 21.5 feet roughly north to south and consisted of three piles at approximately 6-8 feet (1.8-2.4 meters) apart and driven into the natural sand angled to lean westward away from the river (Figure 136). Horizontal planks affixed with wrought nails were attached on the west (landward) side of the piles to form the main retaining element of the structure; the piles were driven into the river sediment to a depth approximately 2.5 feet deeper than the bottom plank (see Test Unit 2's profile below). The bottom two planks were essentially intact along the entire surviving section of the bulkhead, while a portion of a third plank remained on the south end but did not extend north of Post 3.

Each of the three surviving piles/posts of the bulkhead differed in description. Post 1, at the southern terminus of Feature 54, was a squared post measuring 3.6 inches (9.1 centimeters) in thickness. The horizontal planks of the bulkhead were nailed flush to the west/landward side of Post 1 with iron wrought nails. Post 2 was a pair of roughly squared posts, one of 3.6 inches (9.1 centimeters) in thickness, the other 2.4 inches (6.1 centimeters) feet thick. The southern of the two possible tie-back braces was set into a notch in the horizontal plank just north of Post 2. Post 3 was a large, partially squared post, the northernmost surviving post of Feature 54. It measured 7.2 inches (18.3 centimeters) in thickness. The horizontal planks extended 7.25 feet north of Post 3, terminating at broken ends likely damaged during previous construction in the late 19th or 20th century.

Figure 136: Feature 54, View to Southwest

Two east-west running wooden timbers were found with their pointed east ends adjacent to Post 2 and Post 3 and extending west from the bulkhead toward Union Street. The timbers were approximately 5-6 feet (1.5-1.8 meters) long. The east end of the southern timber rested in a notch in the uppermost horizontal board located directly north of Post 2; details of the junction of the northern timber with the bulkhead were unclear, as the third horizontal board was absent north of Post 3. These timbers appear to be tie-back struts that served to anchor the bulkhead into the fill soil to the west, but the precise methods by which the struts were connected to the bulkhead, as well as how they were anchored within the fill soil, have apparently not survived.

Feature 54's three white oak wooden piles/posts were sampled by the Oxford Tree-Ring Laboratory for dendrochronological (or tree-ring dating) analysis (Worthington and Seiter 2016; see Appendix X in Volume II). One of the Post 2 timbers "retained complete sapwood, which provided a precise felling date of the winter of 1773/4", suggesting that the bulkhead wharf was constructed around this time (Worthington and Seiter 2016:9).

Two test units were excavated in accordance with a mitigation plan approved by Alexandria Archaeology, one on inland side and one on the river side of the bulkhead.

Feature 54: Test Unit 1

Test Unit 1 was placed on the shore side of the bulkhead wharf to investigate the stratigraphy of the infilling, as well as the substructure of the feature (Figure 137; see Figure 135). Test Unit 1 was excavated to a total depth of 4.4 feet (1.34 meters) within seven levels of fill and one level of natural subsoil before being discontinued due to water inundation (Figure 138). Fills 1-7 may represent separate periods of filling or one fill episode with different types of fill dumped in behind the bulkhead wharf to build the area up. The two C horizons appeared to be sediment that accumulated shortly after activity within the mud flat had ceased. The BC horizon had a thin lens of wood chips similar to observed in several places within the small bay next to Point Lumley. The chips may have been driftwood or detritus from various construction activities in the area prior to the infilling. Historic and prehistoric artifacts were recovered from Fill 1 and Fill 6. Only prehistoric artifacts were recovered from Fill 7. Wood fragments were recovered from Fill 2. No artifacts were recovered from Fills 3-4.

Fill 1 horizon: 0- 1.0 feet (0- 0.31 meters) below surface – [10YR 5/6] yellowish brown sand
Fill 2 horizon: 0- 1.2 feet (0- 0.36 meters) below surface - [10YR 6/4] light yellowish brown sand
Fill 3 horizon: 0.8-1.6 feet (0.24- 0.49 meters) below surface – [10YR 5/6] yellowish brown sand
Fill 4 horizon: 1.5-2.0 feet (0.46- 0.61 meters) below surface - [10YR 2/1] black burned wood chunks
Fill 5 horizon: 1.6-1.8 feet (0.49-0.55 meters) below surface – [10YR 5/4] yellowish brown sand
Fill 6 horizon: 1.8- 2.4 feet (0.55-0.73 meters) below surface – [10YR 4/3] brown sandy clay
Fill 7 horizon: 2.4- 2.6 feet (0.73-0.79 meters) below surface – [7.5YR 5/8] strong brown sand
C1 horizon: 2.6- 2.8 feet (0.79- 1.07 meters) below surface – [10YR 6/3] pale brown sand mixed with [10YR 8/1] white sand and pulverized shell bits
C 2 horizon: 2.8- 3.8 feet (0.85- 1.16 meters) below surface – [10YR 6/4] light brown sand mixed with [10YR 5/8] yellowish brown sand.
BC horizon: 3.8- 4.4 feet (1.16-1.34 meters) below surface – [10YR 5/3] brown sand

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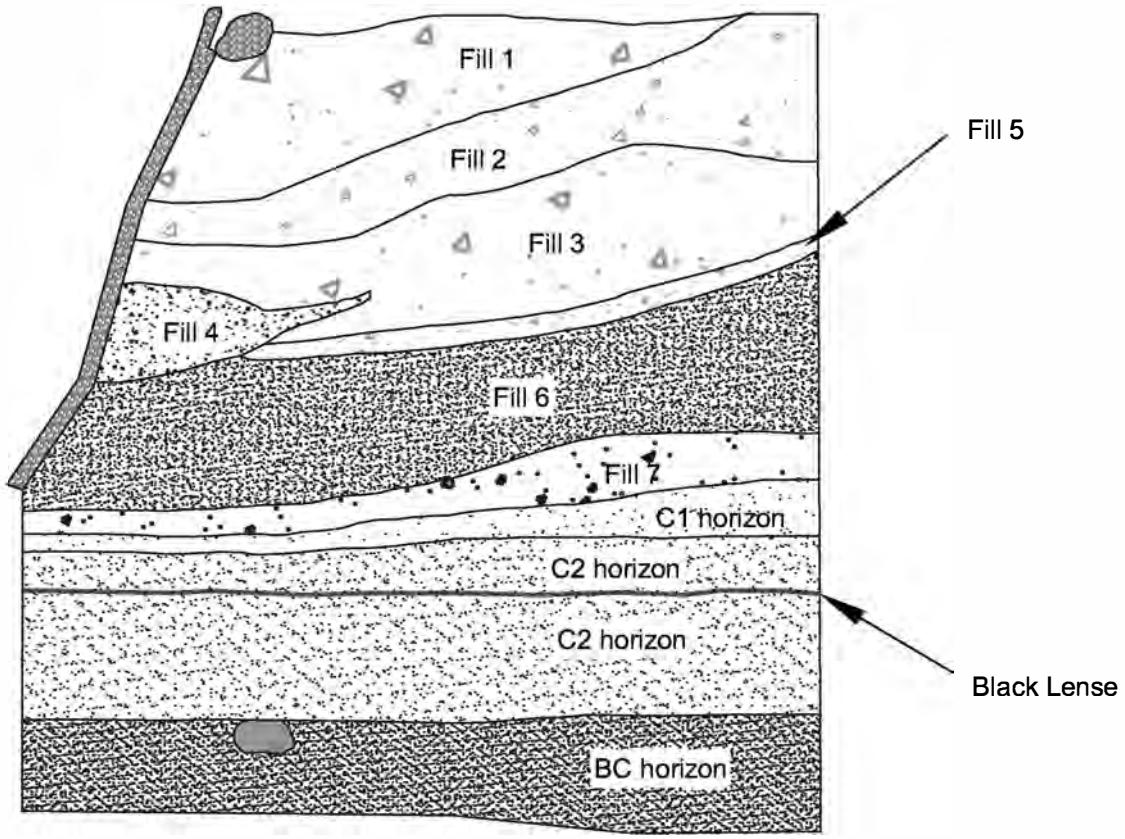

Fill 1: 10YR 5/6 yellowish brown sand

Fill 2: 10YR 6/4 light yellowish brown sand

Fill 3: 10YR 5/6 yellowish brown sand

Fill 4: 10YR 2/1 black burned wood chunks

Fill 5: 10YR 5/4 yellowish brown sand

Fill 6: 10YR 4/3 brown sandy clay

Fill 7: 7.5YR 5/8 strong brown sand

C1 horizon: 10YR 6/3 pale brown sand mixed with 10YR 5/8 yellowish brown sand

C2 horizon: 10YR 6/4 light brown sand mixed with 10YR 5/8 yellowish brown sand

BC horizon: 10YR 5/3 brown sand

Wood

Rock

Black Lense

0 1
Feet
Original Scale: 1" = 1'

Figure 138
Feature 54 Test Unit 1 South Profile

Figure 138: Feature 54, Test Unit 1, South Profile

A total of 66 artifacts were recovered during excavation of Test Unit 1 (Table 27). The artifacts reflect an 18th-century time period for the infilling behind the bulkhead based on the ceramic types recovered. Fills 5 and 6 were positive for historic material dating to the late 18th-century infilling of the Potomac River. Twenty prehistoric artifacts were recovered from Fill 7 and included chert, quartz, and quartzite flakes and a Middle Archaic quartzite projectile point (4800 BCE-4200 BCE).

Table 27: Artifacts Recovered from Feature 54, Test Unit 1

Artifact Description	Level 1, Fill 1	Level 2, Fill 2	Level 5, Fill 5	Level 6, Fill 6	Level 7, Fill 7
Ceramics					
kaolin pipe bowl			1		
refined red stoneware (1690-1775)				1	
tin glazed earthenware (1700-1800)			1		
white salt glazed stoneware (1720-1805)			2		
redware			3		
Glass					
bottle, freeblown (pre-1860)			5		
Metal					
nail, wrought			8	3	

Table 27: Feature 54, Test Unit 1 (continued)

Artifact Description	Level 1, Fill 1	Level 2, Fill 2	Level 5, Fill 5	Level 6, Fill 6	Level 7, Fill 7
Miscellaneous					
bone			1		
brick	2		8		
chert ballast			5		
wood		2			
Prehistoric					
chert decortication flake					1
quartz decortication flake					2
quartz primary reduction flake	2		2		6
quartz biface thinning flake					4
quartzite decortication flake					1
quartzite primary reduction flake					2
quartzite biface thinning flake					3
quartzite projectile point, Morrow Mountain Stemmed Type, (4800 BCE-4200 BCE)					1
Total Feature 54, Test Unit 1	**4**	**2**	**36**	**4**	**20**

*****General Collection, Overlying Feature Fill-** two freeblown bottle sherds (pre-1860)
*****West Profile, Near Post 3, General Fill-**one Westerwald sherd (1700-1775)

Feature 54: Test Unit 2

Test Unit 2 was placed on the Potomac side of the bulkhead wharf, in soils likely deposited as fill sometime after the wharf was constructed (see Figure 135). The unit was excavated to a total depth of 3.9 feet (1.2 meters) within four levels of artificial fill and two levels of natural infilling before being discontinued due to water inundation. The profile consisted of four levels of sandy fill with slight color differences between each (Figure 139; Figure 140).

Fill 1 horizon: 0- 1.0 feet (0-0.31 meters) below surface – [10YR 6/3] pale brown sand mixed with [10YR 5/8] yellowish brown sand
Fill 2 horizon: 1.0- 1.4 feet (0.31-0.43 meters) below surface - [10YR 5/4] yellowish brown sandy clay
Fill 3 horizon: 1.4-1.9 feet (0.43- 0.58 meters) below surface – [10YR 6/3] pale brown sand mixed with [10YR 5/8] yellowish brown sand
Fill 4 horizon: 1.9-2.4 feet (0.58-0.73 meters) below surface – [10YR 5/8] yellowish brown sand mixed with [10YR 6/3] pale brown sand
C (Fill 5) horizon: 2.4- 2.9 feet (0.73- 0.88 meters) below surface – [10YR 4/4] dark yellowish brown sand with decayed wood inclusions
BC (Fill 6) horizon: 2.9- 3.9 feet (0.88-1.2 meters) below surface – [10YR 4/2] dark grayish brown sand with decayed wood inclusions

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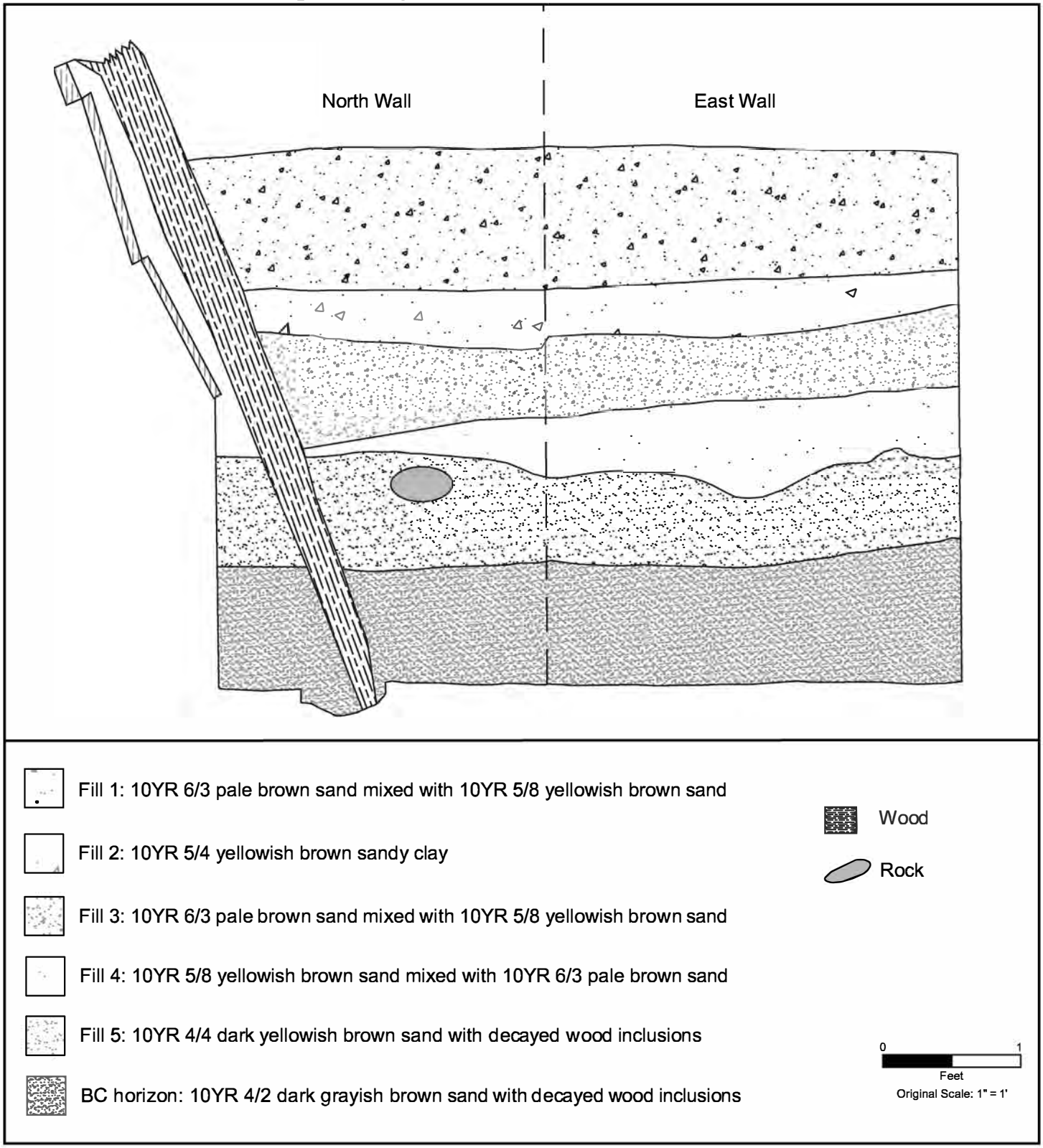

Figure 139
Feature 54, Test Unit 2 North and East Profiles

Figure 140: Feature 54, Test Unit 2, North Profile

Fills 1-4 represent the next phase of the infilling process after the bulkhead was constructed. Fills 5-6 likely represent natural sediment deposits and will be labelled as C and BC horizons respectively. The BC horizon had a thin lens of wood chips like several other places within the small bay next to Point Lumley. The C horizon also had decayed wood inclusions. likely driftwood from various construction activities in the area prior to the infilling. Historic artifacts were recovered from Fills 1-4. Only a small number of prehistoric artifacts were recovered from Fills 5-6.

A total of 20 artifacts were recovered during excavation of Test Unit 2 (Table 28). Very few temporally diagnostic artifacts were recovered, but the manufacture and use dates of the ceramic and glass recovered suggest that it was accomplished in the 18th century. All the fill levels investigated in this test unit, except for the excavated natural fill levels, were positive for historic material dating to the late 18th-century infilling of the Potomac River. Two prehistoric artifacts were recovered from Fills 5-6, both of which contained one quartz primary reduction flake each. The number of prehistoric artifacts recovered from TU2 was drastically lower than that from TU1 on the inland side of the bulkhead.

Table 28: Artifacts Recovered from Feature 54, Test Unit 2

Artifact Description	Level 1, Fill 1	Level 2, Fill 2	Level 3, Fill 3	Level 4, Fill 4	Level 5, Fill 5	Level 6, Fill 6
Ceramics						
redware	4			1		
white salt glazed stoneware (1740-1765)				1		
Glass						
bottle				1		
windowpane, potash (pre-1864)	1					
Metal						
unidentified ferrous metal		1		2		
Miscellaneous						
brick	1	1	2	1		
Miscellaneous						
coconut shell				1		
flint ballast	1					
Prehistoric						
quartz primary reduction flake					1	1
Total Feature 54, Test Unit 2	**7**	**2**	**2**	**7**	**1**	**1**

Feature 55, Barrel

Finally, a wooden barrel is the third component of a late 18th-century ad-hoc shore-retention bulkhead (see
Figure 135; Figure 141). Designated Feature 55, the barrel may have been used to stop the gap between the bulkhead wharf and the ship (see Chapter 5). All three features were discovered during the final site leveling to a depth of -3 feet (-0.91 meters) in elevation across the project area and were investigated according to a Resource Management Plan developed in consultation with Alexandria Archaeology (see Appendix II, Volume II).

The barrel was held together by with wooden hoops and was not sealed with a lid, but the number “32” was found carved into the underside /base of the barrel (Figure 142). The interior was excavated stratigraphically, but few artifacts were recovered from the five interior sandy fills, which differed in appearance and texture from the surrounding fill soils, which contained numerous cobbles and brick fragments (Figure 143; Figure 144).

Figure 141: Feature 55, Southern Face

Figure 142: Bottom of Barrel (Feature 54), Plan

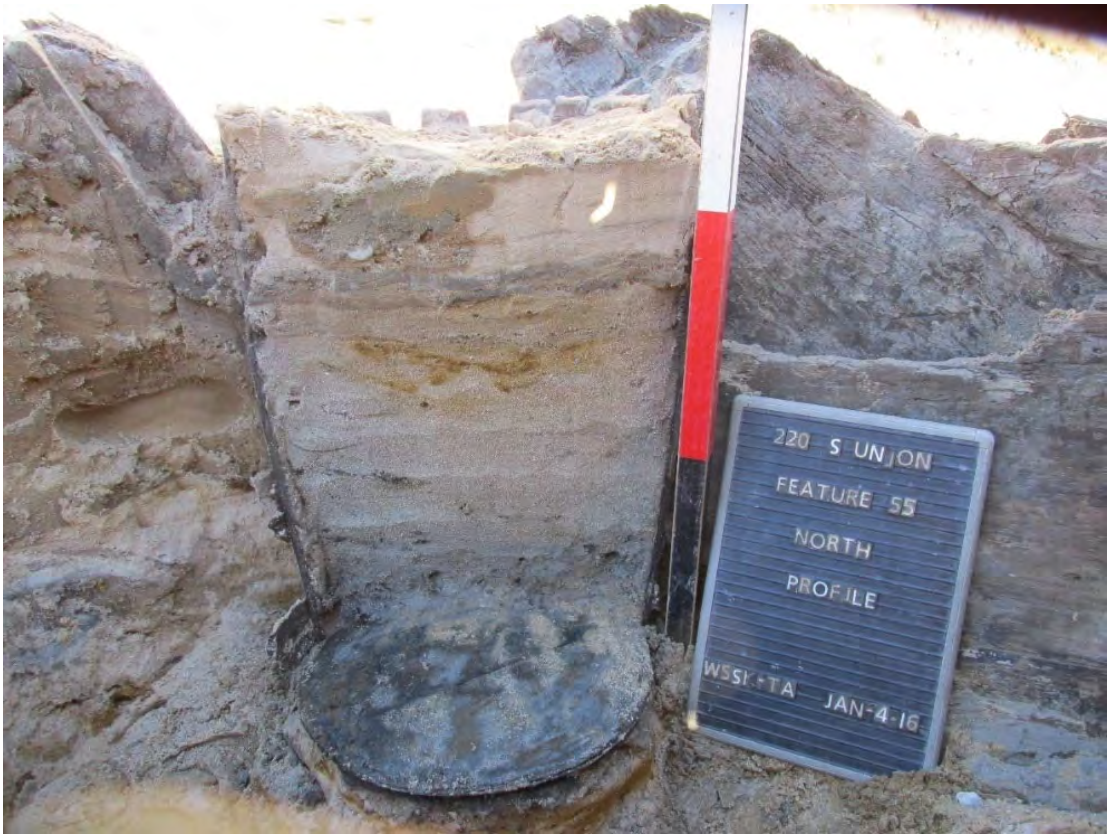

Figure 143: Feature 55, North Profile

A total of 33 artifacts were recovered from Feature 55 (Table 29). All the fill levels investigated in this barrel were positive for historic material dating to the 18th century. Three prehistoric artifacts were recovered from Feature 55, including quartz and chert flakes.

Table 29: Artifacts Recovered from Feature 55

Artifact Description	Level 1	Level 2	Level 3	Level 4	Level 5
Ceramics					
tin glazed earthenware (1700-1800)		1	1		
Metal					
nail, wrought	5			5	
unidentified ferrous metal	1				
Miscellaneous					
black walnut		1			
brick	1	1		1	
oyster shell	2		5	4	2
Prehistoric					
chert primary reduction flake	1				
quartz primary reduction flake				1	
quartz biface thinning flake	1				
Total Feature 55	**11**	**3**	**6**	**11**	**2**

Feature 56, Large Privy

Feature 56 was a large rectangular privy that was discovered during final site leveling to -3 feet (-0.91 meters) a.s.l. on the public lot at Point Lumley (Figure 144). The feature was located within the historic fill, covered by brick and stone rubble, rather than the natural sand of the Point and may have been contemporary with the later portion of the lifespan of the 1755 Carlyle public warehouse, which is discussed above under Feature 41. The privy was wood-lined and measured approximately 5.4 feet by 3.5 feet (1.65 meters x 1.07 meters) and 4.0 feet (1.2 meters) deep. The archeological data recovery plan for Feature 56, prepared in consultation with Alexandria Archaeology, consisted of bisecting the feature, dry screening one half and water screening the second portion, and collecting soil samples from each intact soil zone for specialized analysis (Appendix II, Volume II).

The profile of the large privy's fill consisted of five soil horizons (Figure 145; Figure 146). The first horizons (Fill 1 and Fill 2) consisted of mixed [10YR 4/2] dark grayish brown and [10YR 5/6] yellowish brown sandy loam soils with brick rubble and various artifacts associated with the destruction and ultimate filling in of the privy after use was discontinued. Fill 3 consisted of [10YR 3/2] very dark grayish brown sandy loam soils mixed with organics and waste ("night soil"). Fill 4 was less organic with [10YR 4/1] dark gray sand and brick rubble, but still contained privy soils from use of the necessary. Finally, Fill 5 contained [10YR 2/1] black sand but was much less organic and similar sandy soils beneath the warehouse (Feature 41).

Figure 144: Location of Feature 56 (Pedestalled Background) and Feature 53 (Foreground), View to the Southwest

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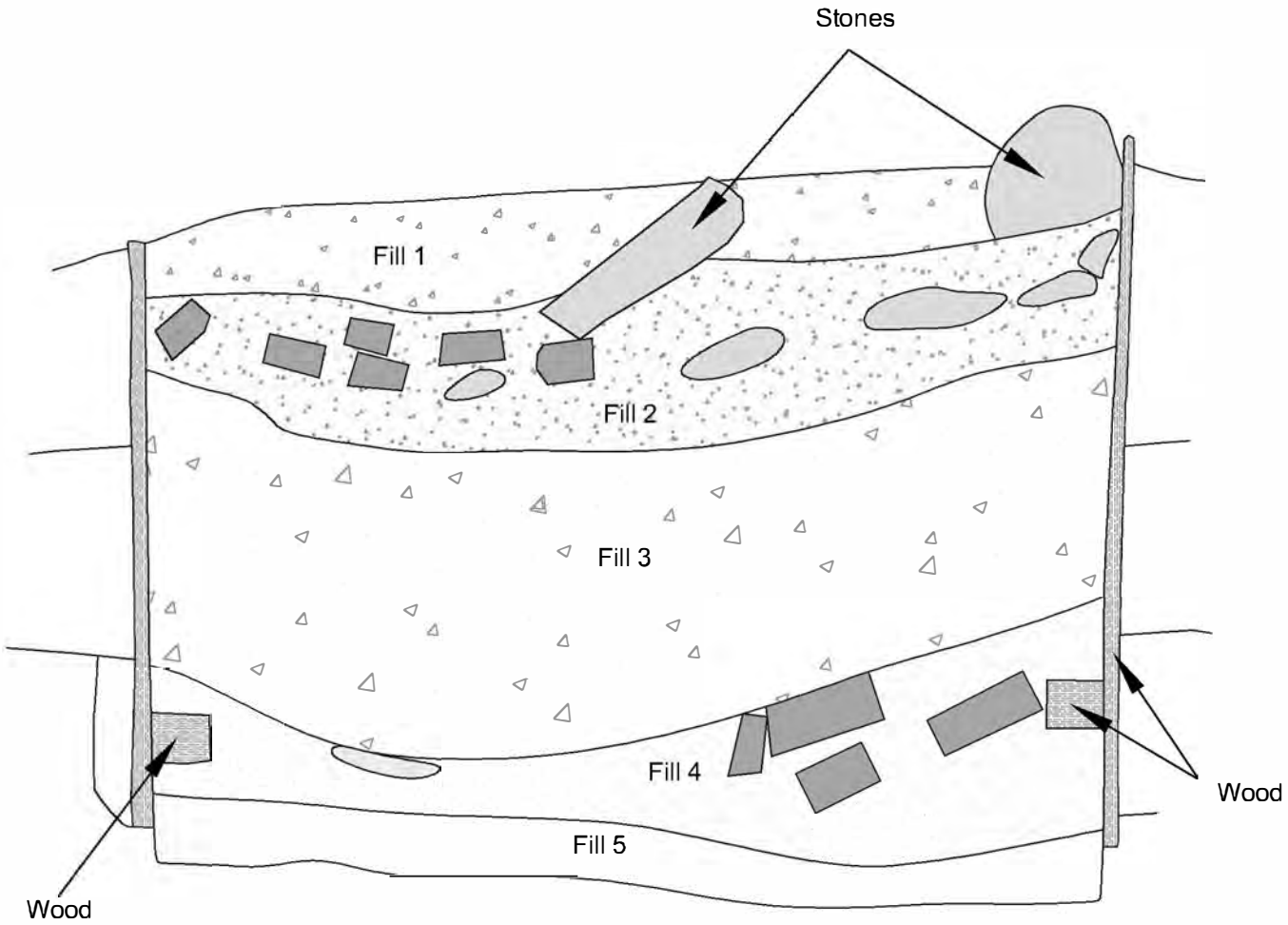

Fill 1: 10YR 4/2 dark grayish brown mottled with 10YR 5/6 yellowish brown sandy loam mixed with rock, oyster shell, brick and wood

Fill 2: 10YR 4/2 dark grayish brown sandy loam with stone and brick rubble and mortar

Fill 3: 10YR 3/2 very dark grayish brown sandy loam mixed with organics, wood, brick chunks and pockets of 10YR 6/2 light brownigh gray sand

Fill 4: 10YR 4/1 dark gray sand mixed with brick and glass

Fill 5: 10YR 2/1 sand

Wood

Brick

Rock

0 1
Feet
Original Scale: 1" = 1'

Figure 145
Feature 56 - South Profile of Bisection

Figure 146: Feature 56, South Profile

The entire feature was intact, including the wood lining the box, which had to be removed to facilitate excavation of the feature's first half (Figure 147). At the base of the feature, a support bar connected all the lining panels. This was also removed to facilitate excavation. Soil samples were taken from each stratigraphic zone of the profile prior to removal of the second half for water screening. Once all the soil was removed, the lining boards and supports were photographed and removed (Figure 148).

A total of 29,886 artifacts were recovered from Feature 56 (Table 30). The temporally diagnostic artifacts suggest a late 18th-century to early 19th-century date for the feature and included hand decorated hard paste porcelain, white salt-glazed stoneware, black basalt stoneware, creamware, pearlware, and local Alexandria earthenwares as well as blown pattern mold, freeblown, contact mold, potash and soda windowpane glass. Food remains, such as seeds, bones, and oyster shells, dominated the assemblage and were sent for specialized analyses. Three hundred and ninety-four leather shoe fragments were also recovered, none of which were subject to specialized conservation.

There does not appear to be a strong correlation between artifact manufacture date and stratigraphic position within the privy, suggesting that the privy was likely filled during one use period. The volume and nature of the artifacts from this feature suggest that it was a large privy likely available for public use whereas typical middle- and lower-class private privies during this time period were the similar sizes of the barrel privies like Features 35 through 38.

Figure 147: Feature 56, North Bisection in Progress, Facing South

Figure 148: Feature 56, End of Excavation

Table 30: Artifacts Recovered from Feature 56

Artifact Description	Top of Feature	Level 1, Fill 1	Level 2, Fill 2	Level 3, Fill 2	Level 4, Fill 3	Level 5, Fill 3	Level 6, Fill 3	Level 7, Fill 4	Level 8, Fill 5
Ceramics									
kaolin pipe stem		1	1	18	4			1	2
kaolin pipe stem (1750-1898)							1		
kaolin pipe bowl		3	2		1	4	1	1	
kaolin pipe bowl and stem				2					
hard paste porcelain		5	3	5	4	13	13	2	
hard paste porcelain (1700-1760)							1		
hard paste porcelain (1765-1810)		4	4	3	13	36	9	3	
hard paste porcelain (1775-1810)			3	1	2	2	1	2	
British brown (1690-1775)		1							
Nottingham (1700-1810)			1	1		1	1		
tin glazed earthenware (1700-1800)							1		
Westerwald (1700-1775)		1							
white salt glazed stoneware (1740-1775)								1	
Black basalt stoneware (1750-1820)			8			1	2		
creamware (1762-1820)		48	62	49	26	55	38	61	9
pearlware (1780-1830)	8	57	74	128	53	68	58	38	12
buff bodied earthenware (1790-1810)								1	
buff bodied earthenware (1792-1809)				2	1		5		
red bodied earthenware (1792-1809)							1		
ironstone (1840-1900+)	1	1							
refined white earthenware		2	3	2	6		4	2	7
redware		2	2	4	2	2		4	4
redware (1790-1810)				1					
redware (1792-1809)		4	10	8	5	5	3	26	
stoneware		1	2	8	1			2	

Table 30 (continued)

Artifact Description	Top of Feature	Level 1, Fill 1	Level 2, Fill 2	Level 3, Fill 2	Level 4, Fill 3	Level 5, Fill 3	Level 6, Fill 3	Level 7, Fill 4	Level 8, Fill 5
stoneware (1792-1809)				4					
Glass									
bead				1			1		1
bottle		11	17	18	3	3	21		12
lamp chimney			1	9	4	2			
tableware	1	15	6	5		3	7		1
decanter, blown pattern mold (1750-1850)							1		
tableware, blown pattern mold (1750-1850)		2	1	1	2	4	6	7	
bottle, freeblown (pre-1860)		1	5	10	23	13	21	198	25
case bottle, freeblown (pre-1860)								14	
decanter, freeblown (pre-1860)				6				2	
tableware, freeblown (pre-1860)		4	8	17	126	106	106	182	25
bottle, contact mold (1810-1880)		3				1	9		
bottle (pre-1880)									2
unidentified glass		19	34	62	95	46	182	142	6
windowpane, potash (pre-1864)		9	30	14	34	19	42	9	
windowpane, soda (pre-1864)		6	24	3	10	6	17	10	1
windowpane, soda/potash (pre-1864)				3		3			
Metal									
brass button								3	
brass button (1726-1776)				1				1	
brass concertina reed					3	1			
brass grommet						1			
brass spigot/tap						1			
brass straight pin							1		

Table 30 (continued)

Artifact Description	Top of Feature	Level 1, Fill 1	Level 2, Fill 2	Level 3, Fill 2	Level 4, Fill 3	Level 5, Fill 3	Level 6, Fill 3	Level 7, Fill 4	Level 8, Fill 5
chain link									1
ferrous metal hook			1						
ferrous metal rod with spike head				1					
ferrous metal screw		1							
ferrous metal shovel blade			6						
ferrous metal spike	1								
metal alloy spoon								2	
nail, wrought	1	47	74	34	3	7	15	6	3
strap iron			2		2				
unidentified brass						1			
unidentified ferrous metal		2	1	3		3	4	14	1
wire			3	2					
wrought spike							4		
Miscellaneous									
bean					1				
black walnut shell					4		34	3	
bone	4	56	110	167	315	294	535	240	30
bone button (1726-1776)		1	1	1	2		1	3	
bone utensil handle			1						
brick		59	31	24	17	18	31	22	
carved wood								1	
Miscellaneous									
charcoal, cinder, coal, coke		1	5	3	3	11	4	12	4
clam shell		1	4	4	6	1		2	
coral				1			1		
cork								1	

Table 30 (continued)

Artifact Description	Top of Feature	Level 1, Fill 1	Level 2, Fill 2	Level 3, Fill 2	Level 4, Fill 3	Level 5, Fill 3	Level 6, Fill 3	Level 7, Fill 4	Level 8, Fill 5
egg shell		4	9	18	3	6	21	8	4
fish scale		8	22	13	41	73	122	24	8
fruit peel					3	2			
husk					3		37	10	
kiln furniture						1			
leather/leather shoe		8		6	14	77	160	125	4
mortar		4	2		7		1	5	1
nut, nut shell					1	2	2		
oyster shell		3	20	15	4	2	28	8	1
oyster shell button blank								1	
peach pit		2	4	9	2		44	28	6
plaster		2			1				
pumpkin stem					1				
seed		1	27	615	3245	2066	5322	9412	2701
slag			1				4	23	
slate		2	3			1	1	1	
snail shell		1		1		1		11	
unidentified wooden tools					2				
wooden barrel head					1				
wooden bung			1			1	2		
Prehistoric									
chalcedony biface thinning flake				1					
quartz decortication flake								1	
Total	**16**	**403**	**629**	**1304**	**4099**	**2963**	**6926**	**10675**	**2871**

As previously mentioned, specialized analysis was done on the soil samples and faunal remains recovered from Feature 56. These studies maybe viewed in their entirety in Appendixes VII, VIII, and IX (Volume II), but are summarized below.

Paleoscapes Archaeobotanical Services Team performed the macrobotanical analysis on the recovered soil samples (Puseman 2016). The resulting report can be reviewed in Appendix VII (Volume II). Several fruits were identified from recovered seeds and pits, including figs (*Ficus carica*), strawberries (*Fragaria*), raspberries (*Rubus*), grapes (*Vitis*), cherries (*Prunus*), watermelon (*Citrullus lanatus*), huckleberries (*Gaylussacia*), blueberries (*Vaccinium*), mulberries (*Morus rubra*), apples (*Malus pumila*), plums (*Prunus*), peaches (*Prunus persica*), elderberries (*Sambucus nigra*), currants (*Ribes*), serviceberries (*Amelanchier*), cantaloupes (*Cucumis melo*), and persimmons (*Diospyros virginiana*). Vegetable seeds were also recovered, such as peppers (*Capsicum annuum*), cucumbers (*Cucumis sativus*), squash/pumpkin (C*ucurbita*), tomatoes (*Solanum lycopersicum*), and lettuce (*Lactuca sativa*). These likely represent fruits and vegetables consumed nearby in the late 18th-early 19th century.

Other potential food remains were found in macrobotanical analysis: black walnuts (*Juglans nigra*), possible coriander seasoning (*Coriandrum sativum*), and mint (*Lamiaceae*). Mint could have been used for food, tea, or as medicine. The presence of pokeweed (*Phytolacca americana*) might reflect its use for food or medicinal purposes or existence in the local vegetation. The recovery of rose (*Rosa*) seeds suggests the flowers may have been cultivated for ornamental reasons or wild roses were growing nearby. Macrobotanical evidence of local vegetation and wetland plants included cattails (*Typha*), purslane (*Portulaca oleracea*), amaranth (*Amaranthus*), weeds (i.e. *Polygonum*, *Chenopodium*, etc.), grass (*Poaceae*), and clover (*Trifolium*). Recovered wood and charcoal included pine (*Pinus*), including eastern white pine (*Pinus strobus*), and oak (*Quercus*), particularly red oak (*Quercus Leucobalanus*), as well as juniper (*Juniperus virginiana*) and tulip popular (*Liriodendron tulipifera*).

Soil samples from Feature 56 were also sent to the PaleoResearch Institute for pollen, parasite, starch, and phytolith analysis (Cummings 2016). The resulting report is found in Appendix VIII (Volume II). Most of the pollen observed were cereals (*Cerealia*) and grass (*Poaceae*), which may also represent cereals, but the difference was indistinguishable. According to the analyst, the quantity of cereals indicates "the importance of baked goods such as bread in the diet" (Cummings 2016:15). Samples contained moderate amounts of oak tree (*Quercus*), pine tree (*Pinus*), weed (*Asteraceae*), grass (*Poaceae*), and rose (*Rosaceae*) pollen. Small amounts of other tree pollen were detected, including maple (*Acer*), alder (Alnus), chestnut (*Castanea*), hickory, (*Carya*), sweetgum (*Liquidambar*), hemlock (*Tsuga*), elm (*Ulmus*), juniper (*Juniperus*), birch (*Betula*), and walnut (*Juglans*). Small amounts of plant pollen indicate local growth of goosefoot (*Amaranthaceae*), sunflower (*Asteraceae*), wild buckwheat (*Eriogonum*), legumes (*Fabaceae*), clover (*Trifolium*), holly (*Ilex*), phlox (*Phlox*), plantain (*Plantago*), New Jersey tea (*Ceanothus*), and cattails (*Typha angustifolia*). Besides cereal pollen, pollen representing foods also included celery (*Apiaceae*), mustard (*Brassicaceae*), blueberries (*Ericaceae*), strawberries (*Fragaria*), mint (*Lamiaceae*), grapes (*Vitis*), corn (*Zea mays*).

Recovered phytoliths were mostly festucoid grasses, which include wheat and other cereals. Recovered bilobates and crosses may be suggestive of corn leaves, and oblong phytoliths may represent discarded corn. Forms of a smooth legume (*Fabaceae*) pod may also be present. Additional phytoliths are suggestive of local vegetation, such as sedges and grasses. Sub-angular starches were abundant in the upper samples from this privy. This starch morphology may be indicative of corn or grasses. A notable number of whipworm parasite eggs (*Trichuris*) and a very large number of roundworm eggs (*Ascaris*) were recovered.

Faunal remains recovered from Feature 56 were sent to IdBones for analysis (Andrews 2016). The resulting report can be reviewed in Appendix XI (Volume II). A total of 2,015 faunal remains was recovered from this late 18th-early 19th century privy. Identified crustaceans included blue crab (*Callinectes sapidus*). Identified fish species included bony fish (*Osteichythyes*), sturgeon (*Acipenser*), herring (*Clupeidae*), sucker (*Catostomidae*), white catfish (*Ictalurus catus*), yellow perch (*Perca Flavescens*), temperate bass (*Morone*), and white perch (*Morone americana*). One reptile fragment of a water turtle (Slider or Cooter) was found. One family of wild bird was recovered: heron/egret (*Ardeidae*). Identified domestic birds included goose (*Anser anser*), turkey (*Meleagris gallopavo*), and chicken (*Gallus gallus*). Identified wild mammal species included eastern cottontail (*Sylvilagus floridanus*), eastern gray squirrel (*Sciurus carolinensis*), old world rat (*Rattus*), mouse (*Mouse*), and Norway rat (*Rattus norvegicus)*. Identified domesticated mammal species included dog (*Canis familiaris*), pig (*Sus scrofa*), cow (*Bos taurus*), and sheep/goat (*Ovis aries/Capra hircus*).

Ninety-two butchered mammal bones, particularly cow, pig, and sheep/goat, were noted. Butchery marks were consistent with axes, cleavers, and hand saws. The majority of butchered remains originated from the body, instead of the head or feet, which suggests cuts of meat were brought in from or purchased elsewhere. Only two fragments of wild heron/egret were recovered and probably represent discarded remains. The rat and mouse remains were likely scavenger remains, either killed and disposed of or trapped within the privy. Dogs were known to have been kept as pets at the time for companionship, hunting, herding, and protection. The remainder of the faunal remains may represent food consumed or prepared in the vicinity in the late 18th-early 19th century.

CHAPTER FIVE: DISCUSSION AND INTERPRETATION

Interpretation of Features 53-55, Ad-hoc Bulkhead Wharf including Ship, Barrel, and Bulkhead

Several components of a late 18th-century shore-retention bulkhead, used to extend firm land north and east from its original location, were located at the Hotel Indigo site. The bulkhead remnant measured in total about 68 feet (20.7 meters) in length, from the far eastern edge of the ship (Feature 53) to the broken northernmost end of the bulkhead wall (Feature 54). The feature roughly parallels the historic shoreline of Point Lumley, Lot 69, and is roughly perpendicular to Feature 41 (Figure 149). From the arrangement of the features, it appears that the ship hull section may have been dragged into place during or soon after the construction of the bulkhead wall, and an earth-filled barrel (Feature 55) was then used to stop the gap between the two larger wooden structures. Together, the three wooden elements form a portion of continuous bulwark

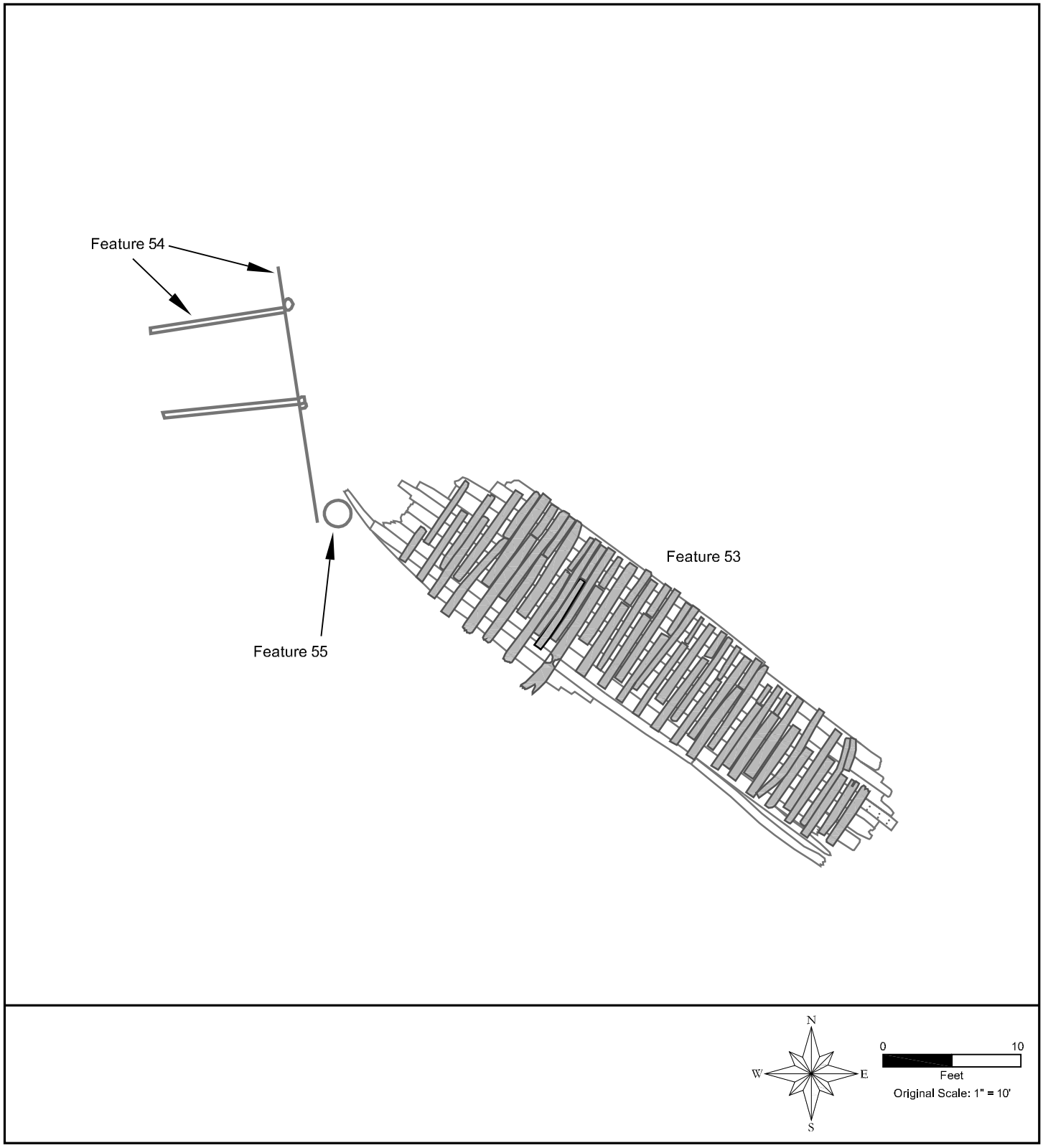

Figure 149
Plan View of Features 53, 54 and 55

that would have prevented the erosion of fill soils deposited behind the structure from washing into the Potomac River.

Date of Bulkhead Construction

Soon after the town of Alexandria was established in 1749, those who had purchased lots along the Potomac River took advantage of the "benefit of extending the said Lotts into the River as far as they shall think proper" and retained ownership of this newly created land (Ring and Pippenger 2008:139; Shephard 2006:4). Earth from the bluffs that overlooked the Potomac was brought down and used as infill to create the new waterfront land. By extending and "banking out" their land into the river, the lot owners increased the size of their property and improved Alexandria's overall access to the river. The ultimate goal for shoreline expansion between West Point in the north and Point Lumley in the south was to extend the shoreline to the deep channel of the Potomac to allow large vessels easy access to the waterfront (Shephard 2006:2).

Documentary evidence suggests a construction date for the bulkhead of ca. 1774. In that year, Richard Harrison and Co. was contracted to construct a wharf at Point Lumley which measured approximately 55.5 feet in width and extended 110 feet into the river from the foot of Duke Street (Shomette 1985:44); this would become known as the Long Wharf. Although the bulkhead composed of Features 53, 54, and 55 is clearly not part of that structure, the construction of the Long Wharf and the resulting increase in cargo volume at Point Lumley would have provided impetus to expand the waterfront adjacent to the wharf to capitalize on the increased activity.

Map evidence suggests that the bluffs overlooking the project area and Point Lumley were leveled and the majority of the crescent bay infilled between ca. 1774 and 1782. A 1774 plat map of Point Lumley indicates that some expansion of Point Lumley had begun by that year, as it shows the Carlyle Warehouse standing entirely on dry land (Ring and Pippenger 2008: Figure 12). The 1774 plat notably continues to depict Point Lumley as a projection of land into the Potomac; however, it is uncertain if the lines extending Duke Street into the Potomac River reflect the construction of the Long Wharf which occurred in that year.

A 1782 French army map depicts Alexandria's crescent bay as entirely filled in, with Points Lumley and West undiscernible on the town's shoreline. However, this map is problematic and may not be useful. The leveling of the bluffs by that time is further indicated by the establishment of Union Street at its current alignment and grade ca. 1782 (Claypool 2014:5).

A 1798 lease of what would become Parcels 3 and 4 from Elizabeth Copper to John Thomas Ricketts confirms that the shoreline had been extended eastward to at least the east side of what is now The Strand, described in the lease as "a passage by which to communicate with other parts of the Town and as a landing place into the River Potowmack" (Alexandria Deed Book A2:504). The presence of the bulkhead represented by Features 53 through 55 at a distance of up to 110 feet inland from the 1782/1798 shoreline demonstrates that the banking-out of the property was undertaken in stages, likely for reasons of manageability and expense.

The map evidence is supported by archeological data recovered from Features 53-55. The felling of one of Feature 54's posts can be positively dated through dendrochronology to the winter of 1773/1774, and the bulkhead was likely constructed shortly after the felling. Though the evidence is limited to a single test unit, the lack of late 18th-century refined earthenwares, such as pearlware, in the fills west of the bulkhead supports a likely construction date prior to ca. 1780, by which time such wares had become common and would likely have appeared in fill soils deposited in that period. Thus, dendrochronology and artifact data suggest a construction date for the bulkhead as between 1774 and ca. 1780.

Prehistoric lithic artifacts were recovered in relatively small numbers (n=42) from fill soils associated with the entirety of the Features 53-55; over half of these artifacts (n=24) were recovered from the fill soils of Feature 53, TU 1, the sole excavation unit on the west (inland) side of the bulkhead. While not conclusive, this suggests that the fills behind the bulkhead originated at least in part from the bluff tops overlooking Point Lumley, the former location of Native American habitation sites (Shephard 2006:10). This further suggests that the cutting of the bluffs may have begun about the time of the bulkhead's construction ca. 1774.

The documentary, map, and archeological data suggest that the bulkhead was constructed between 1774 and ca. 1780 and was part of the banking-out of land within the block that appears to have occurred between ca. 1774, when Point Lumley was an identifiable landscape feature on a plat dating to that year, and 1798, when Point Lumley was no longer visible on the Gilpin map. The block may have been filled in by ca. 1782 based on the French army map and the establishment of Union Street in the year. Regardless, this reflects a rapid and drastic established alteration of the local topography as the bluffs overlooking the river to the west were levelled and a significant portion of the river was reclaimed as dry land.

Bulkhead Structure Analysis and Comparison to Keith's Wharf

Several techniques were at the disposal of the residents of Alexandria to construct wharves and extend new land into the river. Two basic construction techniques have been archeologically observed on Alexandria's waterfront. Crib or cob construction involves creating square timber frames which are floated into position and filled with soil or stones to create a wharf, as has been documented at the 1759 Carlyle-Dalton wharf at the foot of Cameron Street (Heinztelman-Muego 1983; Shephard 2006:8). Bulkhead construction is accomplished by building a wall, typically of timber, on the riverbed and filling in the space between the bulkhead and the shoreline with fill soil to create new dry land. Bulkhead wharves have been documented in Alexandria at the 1785 Keith's Wharf, the 1785 Roberdeau's Wharf, and a pre-1780 wharf at Lee Street (Engineering Science 1993; Knepper and Prothro 1989; Shephard 2006:8-9). Of these, Keith's Wharf was most thoroughly excavated and documented, and will provide the basis of comparison for the bulkhead at Point Lumley.

Archeological investigations conducted for the development of the Ford's Landing site at the base of Franklin Street revealed the well preserved and intact remains of the ca. 1785 Keith's Wharf bulkhead, as well as numerous other features including nine derelict vessel hulls. The archeologists at Ford's Landing expected Keith's Wharf to be of cob/crib construction but found a bulkhead wharf measuring 400 by 500 feet (Engineering Science 1993). Because the bay was

shallow and located away from the fast-flowing Potomac River channel, a cob/crib structure was apparently considered unnecessary.

The remains of Keith's Wharf were found 6-13 feet (1.8-4.0 meters) below the modern surface. The 18th-century wharf timbers measured 10-17 inches (25.4-43.18 centimeters) in diameter and were connected by half-lap scarf joints reinforced with iron drift pins. Tie back braces were dovetailed and/or pinned to the bulkhead, extended up to 30 feet (9.1 meters) into the fill to support the bulkhead (Figure 150). While the remains of several vessels were encountered during the excavations, all of these remains post-dated the 18th-century wharf and were not incorporated into any organized structure, as Feature 53 had been at the Point Lumley bulkhead.

Figure 150: Keith's Wharf Bulkhead and Tie-Back Braces
Source: Engineering Science 1993, Courtesy of Alexandria Archaeology

The relatively ad-hoc nature of the bulkhead at Site 44AX0229 is worthy of some consideration, particularly in comparison to Keith's Wharf. Where Keith's Wharf was constructed of large timbers, Feature 54's bulkhead is of much lighter construction consisting of small-diameter piles and planks, and combined with the irregularity of the Feature 53 ship hull. The differences in construction between the two wharves reflect the key differences in the purpose of the two structures, as well as the motivations of the builders.

Keith's Wharf was intended for use as a commercial wharf, a permanent structure where vessels could dock for the loading and unloading of cargo, and upon which warehouses and other buildings could be constructed convenient to the docks. As such, a sturdy structure was required to resist the erosional forces of the Potomac over the long term, and the impacts from vessels during docking or as the result of storms and tides. The wharf would also require ample docking

area for vessels, necessitating regular, straight edges to allow ships of significant size or in greater numbers berth at the wharf. Finally, this work was initiated by the owner and occupier of the property who had a direct economic incentive for the wharf's construction.

The bulkhead at Site 44AX0229 differed in almost every respect from Keith's Wharf. The use of narrow diameter posts and planks in the bulkhead indicates a structure not expected to withstand the impacts and exposures that the heavy timbers of Keith's Wharf were designed to resist. The curve of the wharf line created by Features 53-55 to match the natural shoreline of Point Lumley and Lot 69 further indicate that this section of wharf was not intended for the docking and loading or unloading of cargo from vessels. Finally, as suggested by the terms of the 1798 lease of Lot 69, this bulkhead may have been constructed by a tenant who was compelled to expand the property in an arrangement that likely benefitted the landowner more than the lessee.

In sum, the materials and form of the wharf at Site 44AX0229 reflect its function as a simple, temporary retaining structure serving as one stage of the extension of riverfront property eastward toward the ultimate goal of the deep channel of the Potomac, not for maritime commercial use. It was understood that this bulkhead would serve only temporarily as a shoreline structure during the banking-out process, and therefore significant outlay for materials and craftsmanship were unnecessary. Salvaged material, such as the Feature 53 ship hull and possibly the planks and posts of the bulkhead (note the varying finish and forms of the three posts/piles of Feature 54) would have been appropriate and even preferable for the task.

Feature 53 Ship Hull

Abutting the bulkhead wall was the remnant of a large seafaring wooden vessel that had been used as the framework for engineered fill; the remnants of starboard side of the hull measured approximately 50 feet in length by 10 feet in width. Surviving portions of the hull consist of ceiling planks, framing, a keel and potentially part of a bow stem. Portions of the framing appeared to have been purposefully removed, as evidenced by hand hewed axe marks. Based on dendrochronology, the wood for the ship was harvested in Massachusetts sometime after 1741 (Worthington and Seiter 2016).

A full analysis of the ship was not part of the scope of this investigation due to time and budget constraints. However, given the significance of the ship, the City of Alexandria wished to conserve the wood timbers for later display and use; removal and preservation of the ship was the primary goal. Thunderbird Archeology consulted with archeologists from the Naval History and Heritage Command Underwater Archaeology Branch, conservators from the Maryland Archeology Conservation lab and other maritime history experts on the best way to document and then dismantle the vessel. Detailed analyses of the ship are forthcoming.

Interpretation of Feature 41 – Carlyle Warehouse

Feature 41 can be identified with high confidence as Alexandria's first public warehouse built by John Carlyle in 1755 due to the recorded location and description of the building available in 18th century records. The location of the warehouse can be seen in a 1788 plat, the aim of

which was to depict the original location of the shoreline and lot lines near Point Lumley (Figure 151). The warehouse is depicted with its southwest corner intruding slightly into the right-of-way of Duke Street and extending at an angle away from Duke Street and into the Potomac River. This location and alignment match that of Feature 41.

In June 1755, The Alexandria Trustees charged John Carlyle, a merchant and prominent figure in the town, to construct a public warehouse on Point Lumley:

> Ordered that John Carlyle Gent. do erect & build at Point Lumley in this Town a Warehouse of the following Dementions[sic] (Viz.) One hundred feet long twenty four feet wide thirteen feet Pitch'd To be three Divisions double strided, the sills to be rais'd four feet from the ground & so compleatley finished [Alexandria Board of Trustees, nd.:23]

The order directs John Carlyle in the construction of a warehouse building 100 feet long, 24 feet wide, and elevated four feet off the ground. The floorplan should be divided into three sections on the interior, and "double-strided" refers to a summer beam central support for the floor rather than the entire 24-foot width being spanned by unsupported joists. The "thirteen feet Pitch'd" refers to the required height of the attic story at the ridgeline. The four-foot elevation for the building's sill appears to be called for due to the location of the structure on the riverbank and straddling the original shoreline; the sill height would protect the building and its contents from damage at times of high water.

Although specifics are not provided in the original order to Carlyle, it appears that the original vision of the warehouse was of a building on piers, with free flow of air and water in the space between the sill and the ground or water surface beneath. However, in September of 1755, the Trustees decreed that the public warehouse "be fill'd in with Land & Rubbish from the Point but in such a manner as not to prejudice the foundations" (Ring and Pippenger 2008:136). In effect, the order was to convert the pier that formed the foundation of the warehouse into a wharf using earth cut from the bluffs that overlooked Point Lumley at that time.

Structure Analysis

The building remains in Feature 41 are not complete, but the surviving structure elements closely match the 1755 decree of the Alexandria Board of Trustees. The width was mapped at 23.89 feet at the western end and 24.09 feet at the surviving crossbeam, and the width was rendered "double-strided" with a central summer beam. Although the full length of the structure sills did not survive, a wooden pile (41-2) and section of curtain wall (41-1) were found 87 feet from the southwest (Duke Street) corner of the feature, indicating that the building extended at least that distance to the east. This pile roughly corresponds to the location of the historic shoreline of Point Lumley, which according to the 1788 plat intersected the southern wall of the warehouse a short distance west of the southeast corner of the building.

Further evidence of the building's full length can be inferred from the location of the crossbeam, which was 33.36 feet from the western sill. The Council's decree called for a building of 100 feet in length divided into three sections, and the location of the crossbeam (41-6) appears to represent a one-third portion of a 100-foot structure.

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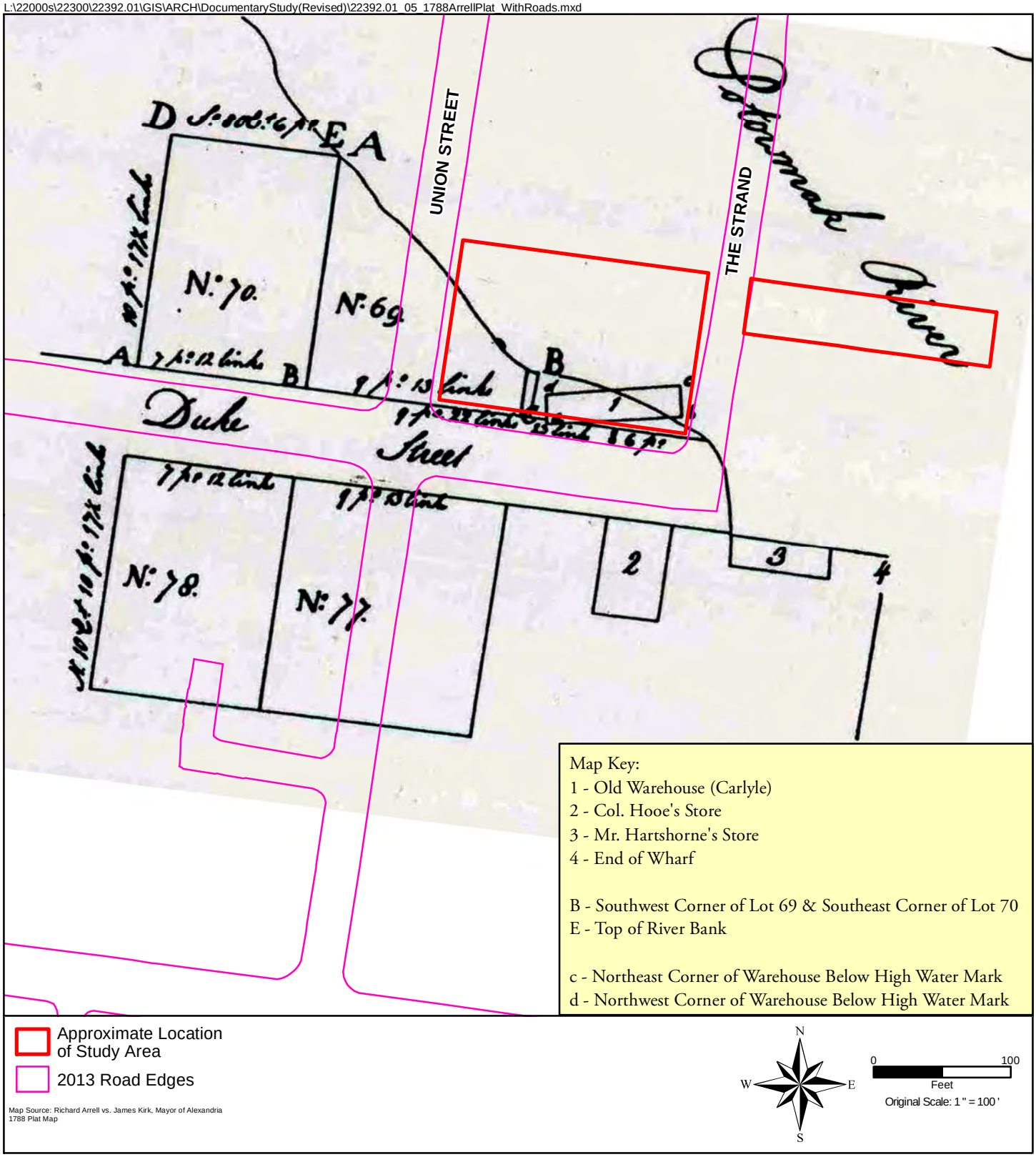

Figure 152
1788 Arrell Plat

Furthermore, 33.35 feet from the surviving crossbeam a line of stacked stones (Feature 41-17) was encountered in the east wall of TU 7 which appear to represent the remains of an under-beam support foundation for a missing crossbeam. The eastern summer beam (41-9) appears to have been broken or cut approximately one foot short of this missing crossbeam.

The as-built warehouse appears to have fallen short with regard to the four-foot sill height called for by the Council decree. Based on the sections of retaining wall and sills that were encountered during excavation, the height of the top of the sill does not appear to have reached more than just over three feet above the ground surface at the time of construction. The western end of the warehouse appears to have been at, or very slightly above, the existing grade at the time of construction, but it is uncertain whether the fill soil creating the ground surface in that area was already in place or deposited there for the construction of the warehouse.

Based upon the specifications given John Carlyle by the Trustees, other documentary evidence, and the archeological remains of the building, the Carlyle Warehouse likely resembled the conceptualization of the southern elevation presented below in Figure 152. The structural elements above the foundation, with the exception of the height of the roof, are based largely on speculation, particularly the height of the first floor and the size and placement of windows and dormers. Note also that the photographs of the foundation included in the drawing appear reversed as they were taken from the interior of the building foundation.

There are several factors worthy of mention in the manner in which the large warehouse sills were supported. During excavation, no additional supports, piers, or posts were found underneath the sills on the west side of the warehouse, nor was the stone foundation present at the westernmost end; this area rested on a single course of stones atop the soil of the existing grade. As the grade dropped in elevation moving east toward the river, the warehouse sills are supported primarily by the stone foundation; only two additional support elements encountered—the large stone pier (41-13) beneath the juncture of the crossbeam and summer beams, and the large wooden pile (41-2) at the extreme east end of the surviving remnants of the building.

The substantial stone pier (41-13) supporting the junction of the crossbeam and the summer beams was not repeated beneath the next such junction moving east; at this location, an interior curtain-wall-like foundation resting on fill sand (41-17) was noted beneath the projected location of the missing crossbeam. This is a strong indicator that the September 1755 decree of the Alexandria Trustees came during the construction of the warehouse. The planned warehouse-on-piers was apparently altered mid-construction to be a warehouse resting on an earth-filled wharf-like structure, negating the need for the construction of additional substantial piers at vital framing junctions. The reason for this change was not recorded in the decree but may have been due to budgetary concerns or a feeling that a wharf structure would more securely withstand damage from tide and flood. This also appears to confirm that the warehouse was still in the early stages of construction in September 1755 and was likely not finished until late 1755 or perhaps early 1756.

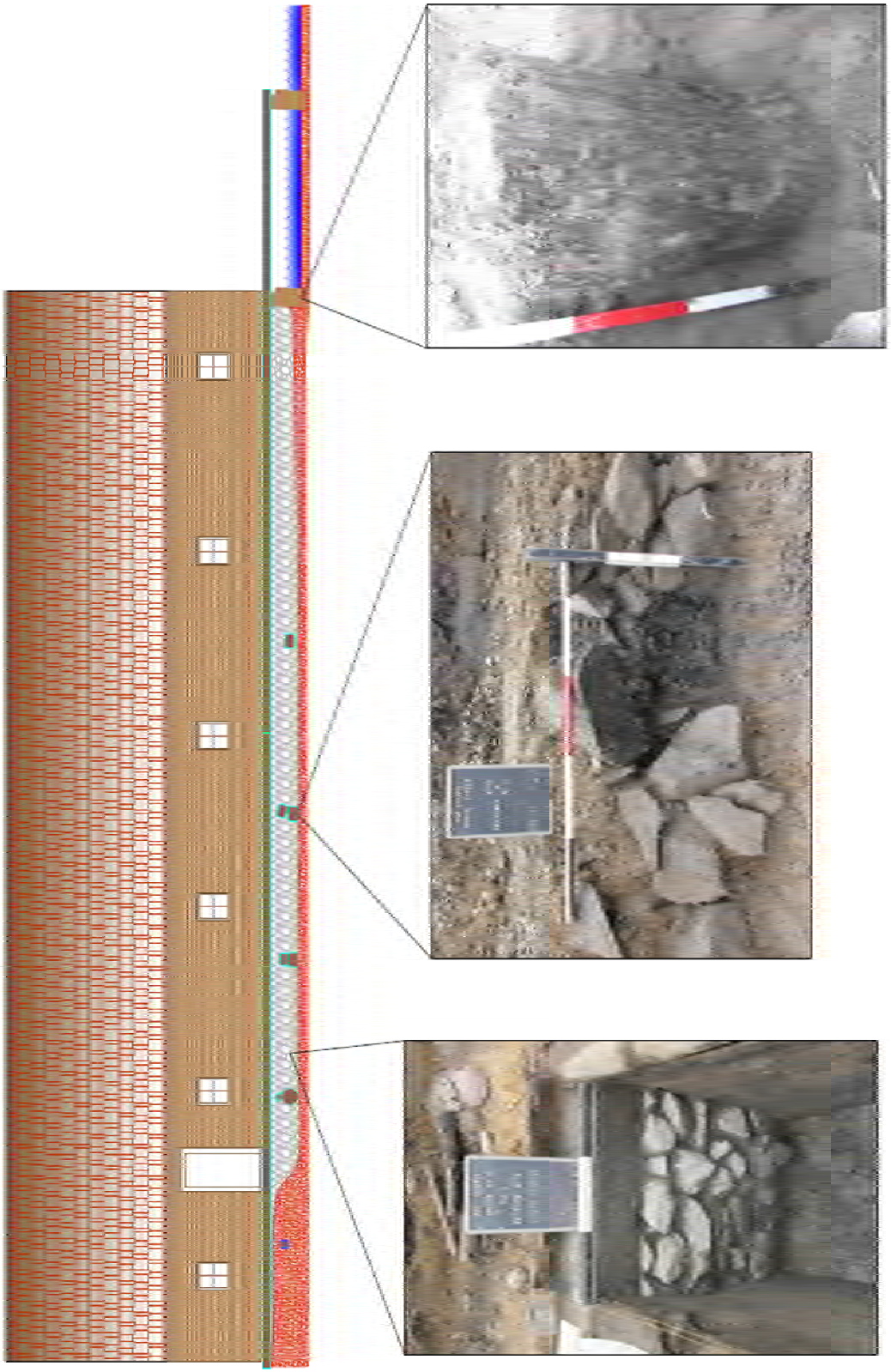

Figure 152: Conceptualization of the Carlyle Warehouse

When discovered, the wooden pile (41-2) at the eastern surviving end of the warehouse foundation was abutted on the west, but not the east, by foundation wall. It appears likely that the building was elevated on piles for the final 13 feet, but modern disturbance has destroyed the extreme eastern end of the building remains. The pile marks the approximate location where the building extended into the Potomac River based on the 1788 plat and suggests that the eastern terminal end of the warehouse that projected into the river was constructed as a pier rather than as a wharf. This cannot be confirmed as no support structures survived in the entire eastern half of the north side of the warehouse. Indications of a possible line of posts/piles noted in TU 9 were inconclusive with regard to the presence of additional substructure east of the large pile (Feature 41-2).

On the south side of the warehouse, a 16.6 foot (5.05 meter) gap is present between the two sections of foundation wall (41-1 and 41-12) that appears to be deliberate, based on the finished east end of the southern sill (41-5) that coincides with the end of the foundation wall. It appears likely, given the lack of a joint at the end of the sill, that a gap in the sill mirrored the gap in the foundation beneath. The most likely reason for this feature is an earthen ramp that would give direct access from Duke Street to a door in the warehouse's center section. No stone or timber framing for such a ramp was noted in the location, which might be expected given the erosional environment at the tidal edge of the Potomac, but excavation to the south of the warehouse sill was not conducted, as it was outside the impact area for the project.

An anomalous feature of the warehouse foundation walls is the presence of more-or-less regularly-spaced sections of wooden logs incorporated into the close-laid stones (Features 41-30 through 41-35). The logs are short sections of beam (most are at least partially hewn) inserted into the stones of the wall during construction and generally flush with the wall's interior and exterior faces. Features 41-31, 41-34, and 41-35 are located within the southern foundation wall (41-12), spaced 12 feet apart, and in each instance consist of two sections of beam stacked atop one another. Features 41-30, 41-32, and 41-33 are located within the northern foundation wall (41-18) and spaced 8-10 feet apart. Features 41-32 and 41-34 are placed directly beneath the junctions of the crossbeam (41-6) with the north and south sills (41-3 and 41-5).

The function of these log elements of the foundation is unclear. The use of log sections within stone foundations or walls in this manner does not appear to have been a common technique during the 18th century or any other period of American architecture. The apparent purposeful placement of log section directly beneath junction points of the frame suggest that they may have been intended as strengthening or supporting elements, but there appears to be little evidence to support such a usage in standard stonemasonry.

A further unusual element of the log sections is that they appear to occur independently of the presence of the stone foundation in at least two locations on the south side of the structure. Feature 41-36, a single, squared log section, is located 5 feet west of the western terminus of the southern foundation wall, positioned similarly to the logs within the foundation wall but surrounded by fill soil. Feature 41-29, also a single, squared log section, is located seven feet east of the eastern terminus of the southern foundation's western section (41-12) within the area believed to be a earthen access ramp, again similarly positioned to the foundation logs but entirely within fill soil. The function of these sections of beam is also unknown.

There are not many analogous warehouses from this time period to use as comparison. Most of the 18th and 19th century warehouses with wooden foundations in coastal or riverine environments have not survived to be excavated. This warehouse probably had more in common with pier and wharf construction at the substructure level than it does with warehouses. The superstructure, which we have only a few elements of, was similar to most 18th- and 19th-century frame buildings with vertical studs in mortice joints. Future inspection of the wood sills and superstructure elements, which was nearly completely removed and taken for preservation, may yield more information on the structural elements of the warehouse.

Use Life of the Carlyle Warehouse

While a specific use of the warehouse is not given in the Trustee's construction order, Robert Adam recollected at his deposition in the 1780s that the warehouse was built in order to store supplies from the Braddock expedition, who arrived in Alexandria in April 1755 and departed to assault Fort Duquesne at present-day Pittsburgh in May (Miller 1987:4). The order to construct the warehouse came in June, after the departure of Braddock's expedition, and may have been in response to the need to store such supplies as did not accompany the march to Pennsylvania. John Carlyle would have been responsible for the supplies, as he had been appointed Commissary of Stores and Provisions for the Virginia Regiment of colonial volunteers by Governor Dinwiddie in 1754, and served in that capacity for Braddock's expedition as well in 1755 (Pulliam n.d.).

It is uncertain how the public warehouse was utilized in the years between 1755 and 1769. In December 1768, The Trustees agreed to seek a renter for the Town Warehouse. The lease was awarded to Andrew Wales, brewer, in January 1769 for a five-year term:

> [the Trustees] did rent out the same warehouse for five years on the following conditions, vizt., Robert Adams for Andrew Wells [Wales], did agree to take the same for five years at thirty five pounds p. annum the trustees are to put the same in such repair as Wm Ramsay, Harry Piper & Thomas Fleming shall on viewing the same think necessary…& those that have any of the Rooms now in possession to remain till the expiration of the time they took them for… [Ring and Pippenger 2008:160-161]

The entry in the proceedings of the Trustees makes clear that various rooms within the warehouse had previously been rented to several individuals (according to accounts presented on the same page, Thomas Kirkpatrick and Trustee Harry Piper had recently paid warehouse rents) and were most likely used to store a variety of merchandise. The lease of the entirety of the public warehouse in 1769 may have been a new policy of the Trustees.

Prior to 1769, Wales had been a brewer for John Mercer of Marlborough Plantation in Stafford County. Mercer died in October 1768, and it appears that Wales continued to brew and sell beer from the plantation prior to the liquidation of the estate, apparently in late 1769 (Peck 2015:1-2). Based on Andrew Wales' lease of the public warehouse in January 1769, he was already executing a plan to relocate to Alexandria to continue his brewing career only two months after the death of Mercer.

Based on the surviving remains of the public warehouse at Point Lumley, it had ample storage for a brewer's raw materials (barley, hops, etc.) and finished product, but little to offer in terms of facilities for the brewing itself, which involved boiling cauldrons of water, malt, and hops to make wort (Peck 2015:6). No evidence of a hearth or chimney was noted in the surviving remains of the warehouse, and such a feature is very unlikely to have been located on the missing eastern end of the warehouse prior to the banking-out of Point Lumley ca. 1774. This is likely the reason that Wales gained permission from the Trustees to "build a shed to the Town warehouse at his own expense & to leave the same at expiration of his term" (Ring and Pippenger 2008:161) in October 1769, around the time of his relocation to Alexandria. The shed, the remains of which were not found during the archeological investigation of the property, were likely where Whales made his wort.

Wales did not brew beer at Point Lumley for long. In December 1771, Wales and his wife, Margaret, purchased land on Prince Street between Fairfax and Water (Lee) streets (described as portions of Lots 56, 57 and 58), and before the expiration of the lease on the town warehouse in 1774, the brewery had moved to the new location (Peck 2015:4).

William Hartshorne and Josiah Watson were the next lessees of the town warehouse. Their March 1774 ten-year lease agreement with the city provides additional, albeit vague, details of the warehouse's appearance and structure:

> Rented to William Hartshorn & Josias Watson the Town Warehouse on Point Lumley on the following terms, viz. to receive the said Warehouse in such order as Andrew Wales the former tenant should put it in conformable to their own agreement the Trustees who are renters of the said house to make the roof tight & to put on weather boards where wanted, also to underpin the said house where wanted to make good & sufficient doors and good lock & hinges where wanted – a pair of steps to be affixed to the West door, the attic story to be secured with props where wanted and necessary, but in that case the upper room or the attic story not to be contracted or made less; and the said house during the said term to be kept in tenantable repair, in consideration of which the said William Hartshorn & Josias Watson are to pay the sum of forty pounds per annum…note that the Trustees agreed to take away the dormer window or door from the north side of the roof & to put in two small windows without glass, but shutters to each, on the south side of the roof… [Ring and Pippenger 2008:171].

Hartshorne and Watson were Alexandria merchants who owned numerous properties in Alexandria from which they sold a staggering variety of goods (Miller 1991:191-193; Miller 1992:235-236). They were either wise or fortunate in their lease of the warehouse in 1774, for that year saw the construction of a large wharf at the foot of Duke Street and the expansion of the land at Point Lumley, as discussed previously. The establishment of a wharf on Point Lumley combined with the closing of Thomas Fleming's shipyard appears to have greatly increased mercantile activity in the vicinity. Hartshorne and Watson continued to own and lease properties on and near Point Lumley, as well as the rest of Alexandria and its vicinity, into the early 19th century. No information has yet been located with regard to additional lessees or sub-lessees of the warehouse after 1774.

The public warehouse stood until sometime after 1788, when it appeared on a plat surveyed for the chancery cause *Arell v. the Mayor of Alexandria*. Richard Arell brought the suit against Alexandria over the disputed location of the eastern boundary of Lot 69 with the western boundary of City of Alexandria land on Point Lumley. The fact that it was necessary to bring this suit to court suggests that the bank at the lot's original eastern edge, described by survey assistant Thomas Graffort as "very perpendicular and broken" had been significantly if not entirely reduced, rendering the precise location of Lot 69's eastern boundary unclear (Pulliam 2006:2,6). The location of the warehouse in relation to the bluff overlooking the Potomac at the time of its construction was a major factor in the case, with some deponents claiming there was little to no room between the bank and the western edge of the warehouse, and others claiming there was ample space to walk between the structure and the bank (Pulliam 2006:5). The case provides additional evidence that the bluffs of the Potomac at Alexandria had been leveled by the 1780s as well as demonstrating that the Point Lumley warehouse still stood in that year.

No record has yet been located documenting the date and manner in which the Carlyle Warehouse was demolished. It was certainly not standing in 1810. The tax records for that year were recorded in the order in which the tax collector encountered each property on his route, allowing researchers to create a crude reconstruction of streetscapes in Alexandria. In 1810, the tax records list William Hartshorne's warehouse on Harshorne's wharf (south of Duke Street and east of The Strand), immediately followed by George Coryell's house on Richard Arell's lot (Parcel 1) at the corner of Duke and Union streets, indicating that the tax collector encountered no taxable properties between Parcel 1 and the Potomac River. However, Thomas Preston is taxed for a house, but no lot, on a lumberyard in the vicinity which might reflect the use of the public land within the Indigo property.

By 1815, the public lot north of Duke Street appears to have been divided and leased to several parties. In that year, Levi Pickering, a carpenter and tavernkeeper (Miller 1992:34) was taxed for a house (and no lot, as it stood on public land) on Duke Street, as were Rebecca Mills and Thomas Preston. In 1818, the Alexandria Gazette ran an advertisement for a five-year lease of three lots on the Point Lumley parcel: one large unoccupied lot occupying the western 75 feet of the parcel, one lot occupying the corner of Duke and The Strand occupied by Mrs. Mills, and a third lot between Mrs. Mills' lot and the unnamed alley, occupied by Thomas Preston (AG 2 October 1818:2). The eastern parcel line of the unoccupied lot passes directly through the central segment of the warehouse ruins.

Interpretation of Privies (Features 35, 36, 37 and 56)

The privy, or necessary, is a common feature of urban archeological sites if they survive more modern development. Privy architecture typically consists of the superstructure, which is the above-ground framing, and the vault, which is the below ground receptacle. They varied in size and structure throughout time based largely on the need and the expense for the occupants of the area. Vaults could be simple pits, barrels (sometimes stacked), wood lined, or brick lined.

George Cress and Daniel Eichinger provide a succinct article about 19th century privy construction that contains excellent examples of these forms based on 350 examples excavated

during the Gunnar Site I/95 Improvements project (Cress and Eichinger 2016). Barrel Privies are a simple type of "necessary", beyond the unlined pit privies, consisting of a barrel, typically without a lid or bottom, buried as a receptacle beneath an above-ground superstructure. These either had to be cleaned regularly or simply abandoned once filled. Slightly more complex were the wood-lined vaults. These privies tended to be larger pits, approximately 4 x 4 feet to 4 x 8 feet (1.22 x 1.22 meters to 1.22 x 2.43 meters) and 4-6 feet (1.22-1.82 meters) deep. The pits are lined with boards aligned either vertically or horizontally and held together with iron nails or wooden pegs. Many urban privy examples from the late 18th and early 19th century, which is the time period relevant to the current excavations, have brick vaults. Commonwealth Heritage Group, Inc. conducted a Phase III data recovery in Philadelphia, like the Union Street excavations in conjunction with construction, in which they mitigated 50 features, at least 10 of which were privies (Yamin 2016). All of those privies contained brick-lined vaults. There are some exceptions, for example, a wood-lined large 5.75 feet x 4 feet (1.75 meters x 1.2 meters) box privy, two smaller box privies, and a barrel privy, dating around the 18th/19th centuries, were excavated in Boston by John Milner Associates, Inc. (Cook and Balicki 1996).

A privy may not contain artifacts associated with its entire use-life, as many privies were emptied regularly. In early to mid-19th-century New York, there was an entire class of workers known as "Nightmen," or "Scavengers" that removed and disposed of nightsoil (Geismer 1993). Alexandria passed an ordinance in 1810 (clarified in 1811) requiring all new privies to have aboveground storage boxes or buckets and a "night scavenger" was appointed to clean them between the hours of 11 pm – 4 am (Magid 2017: 140). Therefore, the archeological signature form privies that were cleaned on a regular basis, is an artifact assemblage that reflects the terminal period of use.

Feature 56 was a large rectangular privy, lined with wooden boards, and held together by wrought nails. It was discovered during final site leveling to -3 feet (-0.91 meters) a.s.l. on the public lot at Point Lumley. The feature was located within the historic fill mixed with organics and waste (also known as *night soil*), covered by brick and stone rubble, rather than the natural sand of the Point. The privy was wood lined and measured approximately 5.4 by 3.5 feet (1.65 x 1.07 meters) and went 4 feet (1.2 meters) deep. Recovered artifacts from Feature 56 suggest that it was a large late 18th-/early 19th-century privy, possibly available for public use and perhaps associated with the later occupation/use of the Carlyle warehouse (Feature 41).
Most of Feature 56 was intact, including the wood lining the box, which had to be removed to facilitate excavation of the feature's first half. At the base of the feature, a support bar connected all the lining panels. This was also removed to facilitate excavation. The samples were taken from each stratigraphic zone of the profile prior to removal of the second half for water screening. Once all the soil was removed, the lining boards and supports were photographed and removed.

The large privy is located on land that was set aside by the Trustees of Alexandria as public land, which housed public commercial interests like the Carlyle Warehouse. The portion of the public lot within the project area housed several businesses in the 18th and 19th century, though most were present at the Carlyle Warehouse.

Due to its proximity to Feature 41 (the Carlyle Warehouse), Feature 56 was initially thought to have been associated with the warehouse. The artifact assemblage indicated that the privy

was in use during the late 18th-early 19th century, thus it was possible that the privy was associated with the warehouse's last occupation period.

Sometime prior to 1775, Andrew Wales rented the warehouse for the use of his brewery (Riker 2008). The property is then rented by various individuals with little to no references as to what the land and warehouse was being rented for. The privy contained an tavern-pattern assemblage, suggestive of trash deposition from a nearby tavern, perhaps one located across the street or on this block (Johnson 2017). Because privies were regularly cleaned, Feature 56 probably did not contain artifacts from its entire period of use. Many cities had municipal laws governing the construction, maintenance, and destruction of privies (Carnes-McNaughton and Harper 2000; Roberts and Barrett 1980). Like the Nightmen, who were known to clean privies in 19th century New York, slaves likely cleaned out the privies in Alexandria (Geismer 1993).

Historic records show a tavern was located across the street from the public lot containing Feature 56 and the warehouse. Operating at the end of the 18th century, Lamb's Tavern or Union Tavern was positioned on the northwest corner of Union and Duke Streets. Given this information, Feature 56's artifact assemblage was analyzed and compared with known tavern assemblage characteristics, as defined by Kathleen Bragdon (Bragdon 1981). These attributes include: a large number of vessels, a large percentage of drinking vessels in relation to the ceramic assemblage, a large percentage of ceramic wares associated with drinking vessels, a large number of wine glasses, a specialized glassware, and a large number of pipe stems.

A large number of vessel fragments (n=991) were recovered from Feature 56. Vessel forms include tableware, teaware, drinking, eating and food preparation. There is a disproportionally high number of teaware sherds within the assemblage, more than any one family would probably own, thus supporting the interpretation that Feature 56 is a public privy containing refuse from many households, possibly even from a nearby tavern. More table and teawares fragments (n=876) were recovered than drinking, eating, and food preparation vessel fragments (n=115). The teaware is predominately comprised of Chinese porcelain, much of which has overglaze enamel hand-painted decoration (Volume II, Appendix XI, Plate 6). This is significant because teawares, particularly Chinese exports, have been cited as evidence of tavern assemblages (Brown et al 1990).

Feature 56's assemblage also includes local potters' earthenwares (n=102). Henry Piercy was a potter trained in the Philadelphia pottery tradition (Magid and Means 2003). He brought this knowledge to Alexandria and continued to make plain-glazed and slipped redware vessels for everyday purposes. This included food preparations, storage, informal dining as well as hygiene. Although full vessels are lacking for these local wares, their forms are distinguishable as typical tavern ware, more specifically aesthetically pleasing, cheap, and easily replaceable earthenware (Volume II, Appendix XI, Plate 39). These local earthenwares compose about 9% of the ceramic sherd assemblage and represent a majority of the utilitarian wares.

Although wares associated with drinking vessels were found, such as English brown, Westerwald, Nottingham, and the previously mentioned local earthenwares, such vessel fragments (n=115) are underrepresented in Feature 56, possibly because they would represent an earlier mid-18th century tavern assemblage. Feature 56 contained a high number of glass drinking vessel fragments (n=1050) with a fairly high number of wine glass fragments (n=39),

several rummers and goblets. Most are plain, trumpet style wine glasses, though there are a few more ornate pieces. Several had copper wheel-etched decorations as well as pattern mold wine glasses (Volume II, Appendix XI, Plate 36). A folded foot was not uncommon, and many were heavily stained from the night soil environment. There were a few stemmed wine glasses, but more tumblers and flip glass fragments (n=426) were recovered (Volume II, Appendix XI, Plates 20 and 22). These vessels comprised more than 40% of the glass assemblage, which exceeded even the number of bottle sherds. Many of the glasses were plain, though pattern mold and copper wheel-etched decoration were presented in these vessel forms as well.

Bragdon cites specialized glassware as another criterion for identifying tavern assemblages. Feature 56 contained several examples of such vessels. A minimum of three decanters are represented (Volume II, Appendix XI, Plate 37). Several glass-handled mug fragments (n=30) were recovered along with a handle fragment for an opaque white glass mug.

If there was a tavern using this privy, a large number of pipe stems would be expected. There are only 42 pipe fragments from the entire feature (Volume II, Appendix XI, Plate 23). Although the privy does not conform to this tavern characteristic, other indicators strongly suggest that by applying Bragdon's criteria, there is evidence of a tavern or, more likely, of a tavern using the public privy for refuse disposal.

The results of specialized studies of Feature 56 lend even further evidence, consistent with the tavern using the privy for refuse disposal. A total of 23,389 seeds were recovered from the large privy. These were predominately cherry seeds and probably squash/pumpkin seeds (Volume II, Appendix XI, Plates 34-35). There were a large number of peach pits (n=95) and black walnuts (n=41) as well. Also recovered were fruit peel/rind fragments (n=5) and a pumpkin stem (Volume II, Appendix XI, Plate 31). The excessive number of cherry seeds could indicate the local consumption of cherries or that the local tavern across the street was making Cherry Bounce, a popular drink of the time and allegedly one of George Washington's favorite drinks (George Washington's Mount Vernon 2017).

Results of the macrobotanical analysis indicate that a variety of fruits were eaten, including members of the raspberry group, grapes, figs, strawberries, cherries, plums, peaches, huckleberries, blueberries, mulberries, watermelons, apples, elderberries, currants, melons (like cantaloupe), serviceberries, and possibly persimmons (Puseman 2016). Black walnuts were also recovered. Fewer vegetable seeds were present and included squash/pumpkin, cucumber, peppers, tomatoes, and garden lettuce. Coriander seeds appeared to have been used as a flavoring and members of the mint family might have been used as flavoring, tea, or medicinal resources. The presence of pokeweed and the New Jersey tea plant might reflect their use for food, tea, or medicinal purposes or their existence in the local vegetation. The recovery of rose seeds suggests the flowers may have been cultivated for ornamental reasons or wild roses were growing near the privy. Microbotanical analysis revealed a high quantity of cereal pollen, indicating "the importance of baked goods such as bread in the diet" of those utilizing Feature 56 (Cummings 2016:15). Besides cereal pollen, pollen representing foods also included celery, mustard, blueberries, strawberries, mint, grapes, and corn. Recovered phytoliths were indicative of wheat, grasses, and possibly corn.

Meat, fish, eggs, and oyster were also present. Faunal analysis showed domestic mammals

including cattle, swine, and sheep/goat were the main contributors, making up 91.5% of the faunal assemblage's biomass (Andrews 2016). Unique to this feature was the biomass contribution of wild species to the assemblage at 5%, when typically, their contribution is less than one percent. This high rate is largely due to the reliance on fish. A total of 1,399 fish remains was recovered. Herring, freshwater catfish, and white perch were all found in large quantities. Some stuckers, sturgeon, bony fish, bass, and bony crab were also recovered. This is particularly interesting given that the tavern suspected of using the privy for refuse disposal was purportedly famous for their turtle soup, fish, oysters, and wild fowl (Miller 1993b: 194). Only one water turtle remain, two heron/egret remains, 81 oyster shell fragments, and 18 clam shell fragments were recovered. Compared to fish, a relatively small quantity of bird remains were recovered and mostly consisted of chicken but also included goose and turkey. Few wild mammals were also recovered, such as eastern gray squirrel and eastern cottontail rabbit. Both squirrels and rabbits were hunted for their meat. Dog remains were also identified and were known to have been kept as pets at the time for companionship, hunting, herding, and protection.

A second unique characteristic to this feature is evidence of the transition of butchering styles from hacking and chopping to sawing, which occurred in the late 18th/early 19th century. Ninety-two butchered mammal bones, particularly cow, pig, and sheep/goat, were noted. Butchery marks were consistent with axes, cleavers, and hand saws. The majority of butchered remains originated from the body, instead of the head or feet, which suggests animals were not butchered onsite and brought in from or purchased elsewhere.

The faunal analyst noted that "if this privy is associated with the warehouse that could have stored military supplies, these cattle remains might reflect evidence of barreled beef that could have been packed there for shipping purposes" (Andrews 2016:42).

The subconsultant that prepared the archaeobotanical analysis noted an unusually high density of parasite eggs in this feature, suggesting a heavy roundworm infestation and lighter whipworm infestation compared to other similar features analyzed by the consultant (Cummings 2016). Roundworm is a large parasite that commonly coexists along with whipworm in the intestine (University of Maryland Medical Center 2014). With such a high density of parasites recovered, people using the privy would have displayed symptoms such as fevers, coughing, and possibly even Ascariasis, a disease which happens when the larvae migrate into and through the lungs (Cummings 2016). Several medicinal bottles were recovered from the privy, perhaps indicating people sought treatment for their symptoms Additionally, as previously mentioned in the macrobotanical analysis, the mint and pokeweed within the privy perhaps were utilized for medicinal purposes. Interestingly, parasite eggs were not observed in any of the three other privies located within the project area, although night soil was not as evident in these features. Based on this evidence, a tavern may have contributed to the large public privy's refuse, and many of the local residents were infested with whipworm and round worm.

Expected personal items were recovered from the features, including a number of brass and bone buttons, three glass beads, one brass straight pin, bone and metal alloy flatware, as well as brass concertina reeds from an accordion. Though relatively few pipe stems were recovered, 394 leather shoe fragments were recovered further suggesting the assemblage was contributed

to by numerous public sources. Although historic documents do record both a cobble and a shoe manufacturer in Alexandria during this period, each are located at least six blocks from this public privy at Union Street. Therefore, it is very unlikely that the shoes are the results of these individuals. Despite what seems like a large number of shoe fragments, it most likely represents regular use and discard of worn out or out of style footwear in an urban environment.

The archeological evidence indicates that if the privy was associated with the Carlyle warehouse, the artifacts were most likely cleaned out, leaving little evidence of that association. Though Feature 56 is lacking in a few of Bragdon's criteria for tavern assemblages, it may be that a tavern was using the privy for refuse disposal. Also likely, many public wharves were known to have had public privies or necessaries. Feature 56 was a likely public necessary with an interesting assortment of contributors.

Three additional 2.5-3.5 feet in diameter circular privies (Features 35, 36, and 37), ranging approximately 1 to 3 feet in depth, were identified during excavations of Site 44AX0229. All three were barrel privies associated with individual house lots. As discussed in the previous chapter, these features were located in the southwest corner of the project area during the first site leveling down to 6 feet (1.8 meters) a.s.l. Recovered artifacts date the privies from the late 18th/early 19th century.

According to historic research, the three barrel privies may have been located within outbuildings, present after the 1810 fire and before the 1854 fire at McKnight's carpentry shop (Carroll and Mullen 2014). They are most likely the privies behind the Morgan and Moses Smith cooper's shop between 1811 and 1822, or the Lowe house that was occupied by Samuel, Goddard, and James Hill in 1830. As discussed for Parcel 1, the privy features flank the parcel boundary and may have a general date range of 1800 to 1864, based on the historic literature. These are small privies for private use at these locations and the artifact assemblage corroborates this with most small utilitarian domestic items. Single-family privies were the most common types of privies and were often located on the sides or the backs of dwellings (Reggev 2011). There were likely several more of these within this parcel, but they did not survive later 20th century construction activities.

The contents of the three private barrel privies (Features 35-37) and the contents of the large public privy (Feature 56) make for an interesting comparison. Though the private privies yielded domestic assemblages and the public privy yielded a tavern-related assemblage, the artifacts suggest all four date to the same time period, from the late 18th to early 19th century. Each had samples sent out for faunal, macrobotanical, and mircobotanical analyses, which lend to a more in-depth comparative analysis of local diets. Macrobotanical and microbotanical analyses confirmed all four privies had pollen and plant remains of local vegetation, weeds, sedges, succulents, grasses, and wetland plants. Local tree pollen and wood fragments, such as oak and pine, were also present throughout all four privies. Each privy also included identified faunal remains, such as Norway rat, rat, and muskrat, representing scavengers that were either killed and discarded or trapped within the privies.

The ceramic assemblage of privy Features 35, 36, 37, and 56 all contain conventional patterns of hand painted hard paste porcelain and pearlware, as well as shell edge pearlware. Features 36, 37, and 56 all contain a particularly unique underglaze polychrome pearlware sponge painted pattern (Figure 153). The best example of this pattern is seen on the exterior of a pot recovered from Feature 36. Only a few small sherds with this pattern, most likely from similarly shaped vessels, were recovered from Features 37 and 56. Unfortunately, none of these sherds mended across features.

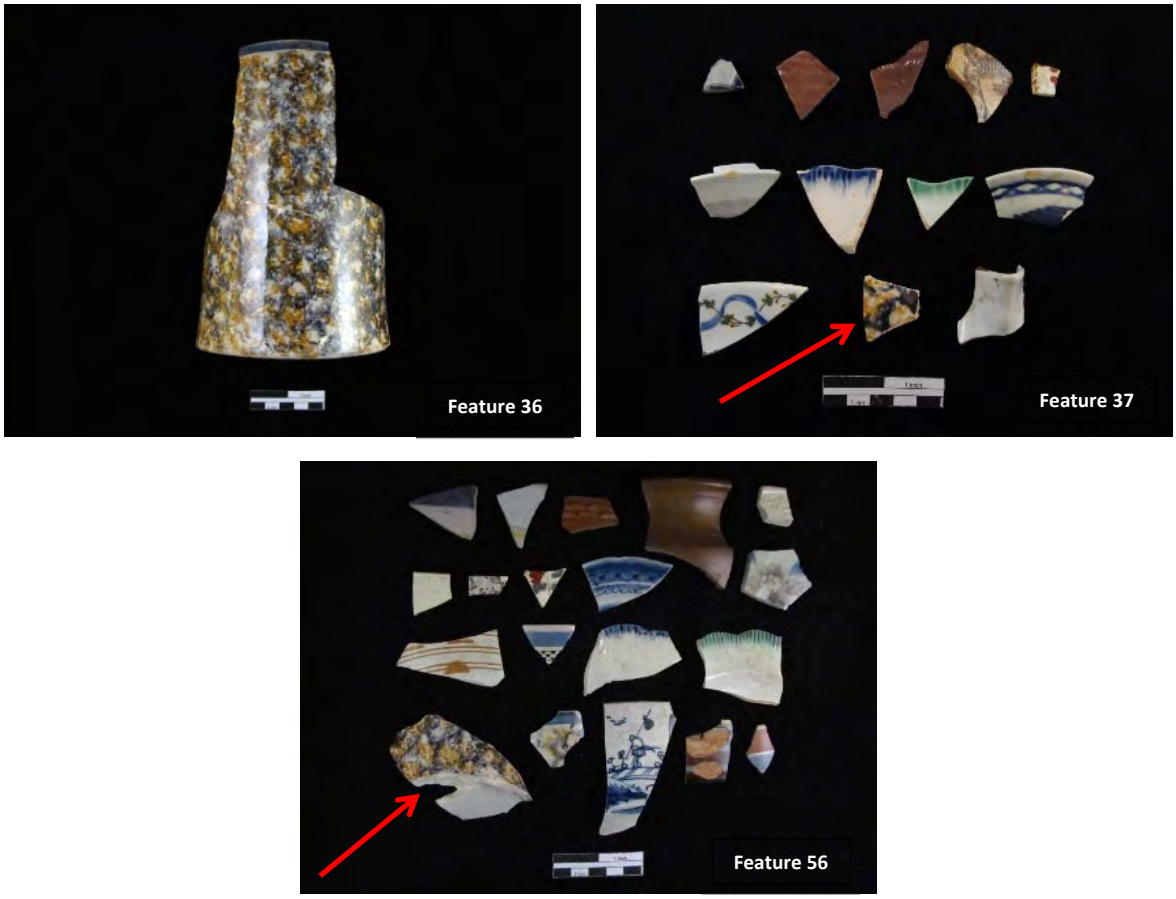

Figure 153: Examples of Sponge Decorated Sherds, Features 36, 37, and 56 (indicated by red arrow)

Features 36 and 56 share a second unique geometric pearlware pattern as well (Figure 154). A saucer with the underglaze polychrome geometric decoration on the interior rim was recovered from Feature 56, while the same pattern is seen on the exterior of a hollow vessel from Feature 36. Given the different vessel forms it is not surprising that the sherds do not cross-mend.

Figure 154: Examples of Geometric Decorated Sherds, Features 36 and 56 (indicated by red arrow)

Although none of these sherds cross-mend between the features, it is worth noting that they are unique patterns in general and found only within these three contexts at site 44AX0229.

In Feature 35, one of the barrel privies, several fruit seeds were identified, such as raspberry, grape, fig, strawberry, and cherry. These may represent consumed fruit in the local area during the late 18th-early 19th century (Puseman 2016). The pollen analyst concluded that the "pollen that likely represents food…reflecting plants in the celery and mustard families, cereals such as wheat, plants in the mint family, grapes, and corn/maize, suggesting they were part of the diet" (Cummings 2016:12). Identified faunal remains of consumed animals included bony fish and herring (Andrews 2016). These faunal remains may represent food consumed or prepared onsite in the late 18th/early 19th century.

In Feature 36, another barrel privy, some fruit seeds were identified, such as raspberry, grape, fig, and strawberry. These may represent consumed fruit in the local area during the late 18th/early 19th century. The macrobotanical analyst concluded that "the small amount of seeds in this sample suggests that the feature was not used extensively as a privy" (Puseman 2016:11). According to the pollen analyst, "the combined pollen and starch records indicate consumption and/or discard of cereals and corn, condiments such as celery seed and/or parsley and mustard or broccoli or a related plant (Cummings 2016:13). Identified faunal remains of consumed animals included bony fish, white catfish, yellow perch, white perch, duck, goose, chicken, rabbit, pig, cow, and sheep/goat (Andrews 2016). Seventeen butchered mammal bones, particularly cow and pig, were noted. Similar to those found in Feature 56, the butchered bones in this feature contained a combination of hack and saw marks, showing the transition from hacking in the late 18th century to the use of both cleavers and saws by the early 19th century.

In Feature 37, the third and final barrel privy, the macrobotanical analyst concluded that "the macrofloral record suggests that this feature was also not extensively used" (Puseman 2016:11). Only a couple fruit seeds were identified, and all were grape. Pollen representing foods included

celery, mustard, cereals, and corn (Cummings 2016). Identified faunal remains of consumed animals included bony fish, white catfish, perching bird, duck, goose, chicken, pig, cow, and sheep/goat. The perching bird may represent food remains or a small pet songbird, which were known to be kept in cages at the time. Seven butchered mammal bones, particularly cow, were noted. These faunal remains may represent food consumed or prepared onsite in the late 18th/early 19th century.

Except for Feature 35, from which very few faunal remains were recovered, cow, pig, and sheep/goat appear to be the greatest dietary contributors among the recovered faunal remains from these privies. Domestic mammal meat was supplemented in the diet with wild species, particularly fish. For Features 37 and 56, the majority of butchered faunal remains of cattle, pig, and sheep/goat originated from the body, indicating the animals were probably not killed onsite and butchered remains purchased elsewhere then brought onsite. In Feature 36, the recovered cattle, pig, and sheep/goat remains originated equally from the head and body. Because the head provides less meat and is thus less likely to be purchased, this may suggest onsite butchering occurred at Feature 36's associated private dwelling. Sometimes, privies and smokehouses were located within one outbuilding structure with a brick wall in-between to save on space and money (Reggev 2011:11). Perhaps, this sort of structure existed around Feature 36. Both Features 56 and 36 had butchered bones with combinations of hack and saw marks, showing the transition from hacking in the late 18th century to the use of both cleavers and saws by the early 19th century. Whether or not butchering happened onsite, the faunal remains recovered from these privies indicate domestic mammal meat was the chief dietary contributor and wild species, mainly fish, were supplemental for both private local residents of Site 44AX0229 and the general public of Alexandria in the late 18th/early 19th centuries.

Overall, the large public privy (Feature 56) and three private barrel privies (Features 35-37) indicate similar diets throughout the general public and local residents of Alexandria in the late 18th/early 19th century. Their meat intake of domestic mammals and fish was comparable. Mostly, the same varieties of fruits were consumed, such as raspberries, figs, and strawberries. Grape seeds were recovered from all four privies, and celery, mustard, cereal, and corn pollen were also identified in all four privies. Interestingly, no vegetable seeds were recovered from the three private privies, and the public privy only contained a small quantity of vegetable remains. No parasites were observed in the private privies, which indicates the residents were healthier and not infested with whipworm and round worm, unlike those using the public privy, which yielded a high density of parasite eggs. No shoes were recovered from the private privies, while the public privy contained many leather shoe fragments, further signifying its public use for discarding refuse. Of course, being a public privy, Feature 56 was exposed to a larger quantity and variety of waste and refuse. Again, depending on how frequently the privies were cleaned, the recovered content within them may only represent a brief period of time and usage, but the similarities between the four privies at least confirm a general diet amongst individuals in the Alexandria area in late 18th/early 19th century. The lack of nuts and exotic imported foods, scarcity of condiments, and an unvaried diet may indicate lower class residents were utilizing these privies (Yamin 2016:21-25).

Parcels

The discussion below addresses the interpretation of results of the archeological work at Site 44AX0229 as it intersects with the documentary record as currently understood. The discussion is presented by land parcel, and the archeological features are generally discussed in chronological order. Reference is made to the 2014 documentary study (Carroll and Mullen 2014) for a more complete general history of the property rather than reprinting that material here.

Parcel 1

Parcel 1 occupies the corner of Duke and Union Street and represents the southeastern corner of Town Lot 69. At Alexandria's founding, this parcel was located atop the bluff overlooking Point Lumley and the Potomac River. Based on documentary and archeological evidence discussed previously in the interpretation of Features 53-55, the bluffs were leveled to current grade between ca. 1774 and 1782. As a result, archeological remains found within the parcel date to no earlier than ca. 1774.

Three features were recorded in whole or in part within Parcel 1. Feature 35, a privy discussed in detail previously in this report, is located in the eastern portion of the parcel. Feature 40, a section of brick paving is located at the southern boundary of the parcel. Feature 6, a series of concrete footers overlying iron rails, is located in the western portion of the parcel adjacent to Duke Street and extends north into Parcel 2. No feature from the 18th- and/or 19th-century buildings that once stood on the parcel appear to have survived due to disturbances of the railroad spur (Feature 6), the 1890s and ca. 1900 Bryant Fertilizer Company buildings, and the large 20th-century warehouse that was demolished prior to the archeology fieldwork.

The Feature 35 privy is most likely associated with the structure erected by Richard Arell (II) after the 1810 fire. This same structure was likely the site of Henry Bayne's business, as well as Mrs. Imoher's. It is possible that it is the same structure occupied by Ebenezer Bacon and Enoch Lyles when the 1854 fire burned down the outbuildings, including the outhouses. The artifacts suggest that the deposition within the privies that were recorded ended around 1830.

Feature 40 appears to be a segment of brick-paved sidewalk, or perhaps a walkway connecting the sidewalk along Duke Street to a non-extant building on the parcel. The feature appears to span the property line between Parcel 1 and the 66-foot (20.11-meter)-wide right-of-way for Duke Street. A brick sidewalk appears to have been present along this portion of Duke Street as early as the 1860s, as it is visible in a photograph by Andrew Russell (Carroll and Mullen 2014: Figure 12)

Feature 6 represents the remains of a railroad spur off the main line on Union Street and into Parcel 1 for the purposes of unloading and loading train cars from the second Bryant Fertilizer Company, constructed ca. 1900. The spur appears to have been out of use by 1912 (Carroll and Mullen 2014:38-40). The narrow concrete slabs poured atop the rail spur appear to be footers for a portion of the 1950s warehouse that stood on the property into the 21st century.

Parcel 2

Parcel 2 is located north of Parcel 1 within Town Lot 69. At the time of the town's founding, this parcel was located partially atop the bluff overlooking Point Lumley and the Potomac River, with the northeast corner of the parcel lying within the river or on marshy land at the river's edge. As with other parcels within Site 44AX0229 located along Union Street, archeological remains found within the parcel are understood to date to no earlier than ca. 1774 due to the leveling of bluffs and banking-out of the riverfront.

A number of post features fall along the northern boundary of Parcel 2; these are discussed with the Unnamed Alley parcel below. Two post hole features lie entirely within Parcel 2: Feature 4, near the center, and Feature 23, in the northeast corner of the parcel. Feature 4 was a post hole of uncertain date, located within 18th- and 19th-century fill strata and containing artifacts ranging in manufacture date from the 18th through the early 20th centuries. The date and purpose of the post hole are unknown, and it is impossible to associate it with a particular occupation of Parcel 2. Feature 23 was a small-diameter post hole that was not archeologically investigated, and therefore no estimate of its date is available. It is located adjacent to Feature 19, a post hole discussed with the Alley parcel, and may be contemporary with that feature. Its purpose is unknown.

Feature 5 is a concrete footer associated with either the ca. 1900 Bryant Fertilizer Company warehouse, or with the 1950s warehouse that stood on the property into the early 21st century.

Feature 6, the late 19th century rail spur overlain with concrete footers discussed previously under Parcel 1, extends into the southwestern corner of Parcel 2.

Feature 13, a large iron box, was associated with the 1950s warehouse. The contents of the feature were not examined due to risk of asbestos or other hazardous soil contaminants.

Features 36 and 37 were privies and were likely outbuildings post-1810 fire, but before the 1854 fire at McKnight's carpentry shop. They are most likely the privies behind the Morgan and Moses Smith cooper's shop between 1811 and 1822, or the Lowe house that was occupied by Samuel, Goddard, and James Hill in 1830. As discussed for Parcel 1, the privy features fall on the parcel boundary (and could fall on either side) and have a general date range of 1800 to 1864.

Unnamed Alley

The Alley is located between Parcels 2 and 3 within the extension of Town Lot 69. At the time of the town's founding, this parcel was located almost entirely within the Potomac River or on marshy land at the river's edge, with only the extreme western edge located on dry land overlooking the river. Based on our current interpretation of the leveling of the bluffs and banking-out of the riverfront, the archeological remains found within the parcel located along Union Street, are understood to date to no earlier than ca. 1774.

The majority of Feature 53, the partial hull of a seafaring vessel used in creating a ca. 1774 shoreline bulkhead, lies within the Alley parcel. This feature is fully discussed earlier in this

report and was in place and likely superseded by a more easterly bulkhead prior to the creation of the other documented features within the alley parcel.

The Alley parcel is documented as early as 1798 in a lease agreement between the owner of Parcel 3, Elizabeth (Arell) Copper, and John Thomas Ricketts. Copper agrees in the lease that "the aforesaid Alley of Eighteen feet four Inches shall be immediately opened in every part except where the House of John Reardon is extended upon it and that the said house shall if required be removed in five years and sooner if it can be effected with convenience" (Alexandria Deed Book A2:506). It is unclear if this lease represents the establishment of the alley, or merely a commitment to re-open an existing right-of-way that had become blocked by encroaching structures, debris, etc. The alley appears to have remained open until 1899, when the Bryant Fertilizer Company acquired the entirety of the Hotel Indigo property and the intention to close the alley was included in the accompanying deeds (Carroll and Mullen 2014: 38). The ca. 1900 Bryant Fertilizer Company factory encompassed the entire property.

The posts represented by Features 14, 15, 33, 22, 17, 18, 19, 34A and 34B are positioned in a line that traces the approximate location of the parcel line between the alley and Parcel 2 to the south. By their position they clearly date to the establishment of the alley or sometime thereafter, but as discussed in the post hole feature discussion earlier in this report, dating the features based on artifact evidence is difficult. Features 14, 15, and 20 did not contain later 19th century artifacts, but Features 14 and 15 yielded fewer than 10 artifacts each, and Feature 20 yielded few temporally diagnostic artifacts.

It is likely that these post hole features are the result of a fence or similar barrier erected on the south side of the unnamed alley sometime during the 19th century. It is also possible that some or all of these along with other nearby post holes such as Features 3, 16, 16A, 20, 23, 25, and 26 may represent a portion of the "House of John Reardon" mentioned in the 1798 lease that intruded upon the alley. In documents from the period, the word "house" could be used to refer to warehouses, shops, and other buildings as well as dwellings. If so, Reardon's "house" was likely a post-in-ground building that housed a cooper's shop, as a John Reardon, cooper, appeared in Alexandria records between 1796 and 1800 (Miller 1992: 65). If this is the case, the building was built prior to 1798 and according to the lease was to be removed by 1803.

Feature 2 is likely associated with the demolition or construction of one of several buildings to occupy the parcel in the 19th and early 20th centuries. The feature may also be related to the surface of the alleyway that remained open for roughly the entirety of the 19th century.

Feature 9, a shallow depression infilled with brick rubble, is likely a remnant of the demolition of the 19th century brick warehouses that stood on the property. It does not appear to have been purposefully created or to have served any specific function.

Feature 12, a square depression filled with destruction debris and a mixture of artifacts dating from the 18th through the 20th centuries, was likely associated with the construction or demolition of the Bryant Fertilizer factory in the first half of the 20th century.

Features 43, located 5.5 feet above the Feature 53 ship hull, was a concentration of brick rubble from which no other artifacts were recovered. Based on stratigraphy and the known built

environment on the property, the feature is likely related to the demolition of the 19th century brick warehouses that once stood on Parcels 3 and 4.

Features 44, 52, and 57 form part of a cluster of post holes (also including Features 45 and 48 through 51) that straddles the line between the Unnamed Alley and the extended public land of Point Lumley to the south. These features are notable for containing few artifacts, this lack combined with those temporally diagnostic artifacts recovered suggest an 18th century date for the posts. The positioning of the posts does not suggest a building footprint, and they may be related to the expansion of the riverfront eastward into the Potomac, much like the nearby bulkhead discussed previously with Features 53, 54, and 55. These posts may have been used to help stabilize newly-infilled land or may be an incomplete remnant of an early pier or post-in-ground structure of which the remaining elements were destroyed during 20th century construction on the property.

Parcel 3

Parcel 3 is located between north of the unnamed Alley within Town Lot 69. At the time of the town's founding, this parcel was located almost entirely within the Potomac River or on marshy land at the river's edge, with only the extreme southwestern corner located on dry land at the river's edge. As with other parcels within Site 44AX0229 located along Union Street, archeological remains found within the parcel are understood to date to no earlier than ca. 1774 due to the leveling of bluffs and banking-out of the riverfront. The eastern end of the parcel lying east of the Feature 54 bulkhead post-dates the creation of the remainder of the parcel by up to eight years. Unlike Parcels 1 and 2, Parcel 3 (and its 'progeny' Parcel 4) were unrestricted in their eastern extent by the public land of Point Lumley.

Feature 24, a remnant of a schist stone foundation, is likely the earliest feature within the parcel, discounting the ca. 1774 bulkhead that helped create the land of Parcel 3, discussed previously. Feature 24 includes a remnant of the southeast corner of the vanished structure which appears to respect the southern parcel line. If the line of the foundation were extended north to the parcel boundary and west to Union Street, the size of the building would be approximately 30 feet by 36.5 feet. Two creamware sherds (1762-1820) are the only temporally diagnostic artifacts recovered from excavation of the feature.

The surviving portion of the foundation appears to reflect the requirements for a building to be constructed on Parcel 3 by John Thomas Ricketts under the terms of his 1798 lease of the parcel from Elizabeth Copper:

> …he the said John Thomas Ricketts will erect upon the said premises immediately fronting upon Union Street a Brick or Stone House not less than Thirty feet square two Stories High and finish the same in a strong and tenantable manner…" [Alexandria Deed Book A2:505]

John Thomas Ricketts was an Alexandria businessman and banker who did not personally occupy the property; he likely sub-leased the parcel and building to one or more other parties. In 1809, Ricketts' partner William Newton took over the lease, according to a re-negotiation of the lease in 1814. In that lease, which will be discussed in greater detail below with Feature 1,

it was noted that "the buildings erected upon the said piece of ground [Parcel 3] were consumed by fire" when the entire block was burned in 1810.

Tax records for the year 1810 are unclear with regard to the occupants of Parcel 3. Neither Ricketts nor Newton appears on the tax record for the block in 1810. Thomas White, a blacksmith who is known to have held a lease to the northern half of Parcel 2 in 1810 (Alexandria Deed Book H:497), is recorded as having seven occupants of his "houses and lot" on Union Street: Joseph Stroud, Jeremiah Price, James Shermandine, Ignatious Jarbo, Thomas Brooks, Nancy Gater, and Mrs. Gotier. It seems likely that there is either an error in the tax record or that Thomas White also subleased Parcel 3 from Newton, as it seems unlikely that these seven individuals could all share the 17.5 foot by 56-foot section of Parcel 2 with a functioning blacksmith shop.

Two occupants of "Thomas White's" holdings are of particular note. Jeremiah Price, backed by James Shermandine, was granted a tavern license in 1808 and 1809 (Miller 1992:56). As both men are listed as occupants in the 1810 tax records, they may have been operating a tavern or ordinary within the northern portion of the project area; if so, the most likely location for the enterprise would have been the stone or brick house built by John Thomas Rickets on Parcel 3. The other persons in the 1810 tax records' list of occupants may have occupied that house or the additional building or buildings alluded to in the 1814 lease. However, as no clear archeological evidence associated with the occupation of neither additional buildings on the parcel nor Ricketts' building has survived, this remains speculative. The presence of tavern-like assemblages in several privies in the immediate vicinity might be associated with Price's or another nearby establishment, which were apparently numerous.

Feature 39, a well, was located 9 feet to the east of Feature 24, and was most likely built in service to the occupants of that building. However, due to asbestos contamination the well could not be excavated and as a result, no information upon which to base the dates of construction, use, or abandonment is available.

Feature 1 is a section of brick masonry resembling a floor, in general three courses deep and including at least one apparent pier or similar support base. The construction of the feature appears very robust for a simple dwelling, and the south end of the feature does not respect the line of Feature 24's foundation; thus, Feature 1 is associated with a successor of Feature 24, likely one of two brick warehouses constructed successively on the property in the first half of the 19th century.

In 1814, William Newton re-negotiated his lease for Parcel 3 with Elizabeth Copper's heirs: Christiana Marsteller and her husband Philip, and Elizabeth Muncaster and her husband John. As noted in the lease and discussed above with Feature 24, the buildings on the parcel had been destroyed in the fire that swept the block in 1810, and the new lease agreement called for the construction by William Newton of a two-story brick warehouse measuring 95 feet by 30 feet. This building would likely have run from Union Street east 95 feet and would have included the area of Feature 1.

Going forward from 1814, the ownership and occupancy of Parcel 3 is uncertain until circa 1854. Sometime between the 1814 lease discussed above and 1854, the ownership or lease of

the parcel was apparently transferred to Robert G. Violett, an Alexandria businessman with significant land holdings in the city. No deed or other transfer recording Violett's acquisition of the property has been located. An Alexandria Gazette article from June 16, 1854 describing the 1854 fire notes that "new brick warehouses to the north, belonging to Mr. R. H. Miller and Mr. R. G. Violett, were not materially injured" (AG 1854: 3), indicating both that Violett likely owned or leased the property at that time, and that the circa 1814 two-story Newton warehouse had been replaced by a newer structure. Feature 1 is likely a remnant of either the 1814 Newton warehouse or the ca. 1853 Violett warehouse. The feature provides little evidence from which to contextualize its date of construction or the use of the building of which it was a part.

Feature 30 is a post hole of uncertain date, purpose, and association. It is located just north of Feature 27, discussed below, and 12 feet east of Feature 39, the well.

Feature 42 was determined to be a section of natural riverbed sediments that included dark sandy soil and wood chips. The feature was not excavated, and no artifacts were noted.

Feature 27 is a partial brick foundation remnant. Artifacts recovered from the associated builder's trench did not include whiteware (1820-1900+), suggesting that the foundation dates to the earlier portion of the 19th century. This appears to coincide with the construction of the Newton warehouse ca. 1814. However, it is also possible that the foundation is associated with the 1850s Violett warehouse, either by original construction or by re-use of the 1814 warehouse foundation. The bricks and masonry of the feature are in very poor condition, having been heavily damaged during later demolition and reconstruction of buildings on the property. Features 31 and 32 appear to be disturbances associated with the demolition of Feature 27's foundation.

Feature 28 is a brick foundation running along the northern parcel line, and directly adjacent to Feature 29, a schist stone foundation to the north. Feature 28 takes a turn to the south 120 feet east of the right-of-way of Union Street, at the boundary between Parcel 3 and Parcel 4. The positioning of Feature 28 makes plain that it is the foundation of the warehouse of Robert G. Violett, which was described as "new" when described as undamaged in an 1854 fire (AG 1854: 3). Violett's three-story brick warehouse is depicted in a Civil War-era photograph of the block, with a sign reading "P.H. Hooff's (illegible) Store" (Carroll and Mullen 2014: Figure 12). Tax assessment records for the year 1863 list Philip H. Hooff as a retail merchant who resided at 190 Prince Street. On Hopkins' map of 1877, "Hooff" continues to be the occupant of the building on the parcel (see Figure 10).

Features 7 and 8, along with Feature 9 in the Unnamed Alley, are brick stains likely associated with the demolition of the Violett Warehouse in the late 19th century.

Feature 29 is the schist stone foundation of the warehouse on the adjoining property to the north of Parcel 3. This building is identified as the McKenzie warehouse on the 1877 Hopkins map, and is likely the building depicted to the north of the Violett warehouse in the Civil War era Russell photograph (Carroll and Mullen 2014: Figure 12). As the building did not stand upon the Hotel Indigo property, it was not researched during this project.

Feature 11, a small cluster of stacked bricks located at the extreme western edge of the parcel, did not appear to be in situ and was likely a remnant of the demolition of one of the various brick buildings that once stood on the property. No artifacts were recovered in association with the feature, and its date is unknown

Parcel 4

Parcel 4 is located east of Parcel 3, and was split from that parcel in the mid-19th century. At the time of the town's founding, this parcel was located entirely within the Potomac River. The parcel lies east and north of the ca. 1774 bulkhead marked by Features 53-55, and thus came into existence as usable land sometime after the construction of that bulkhead.

At some time before 1853, Parcel 4 was split from Parcel 3. The Muncasters presumably retained Parcel 3, with 30 feet of frontage on Union Street and a depth of 120 feet, and the Marstellers received the eastern remainder running eastward from the Muncaster parcel into the river, and including the wharf and landing previously described in the 1814 description of the full lot. No record of the property split has been located.

Features 28 and 29, discussed above with Parcel 3, extend into Parcel 4. Feature 28 in this instance appears to represent the foundation of the small, somewhat dilapidated warehouse building depicted in the Russell photograph (Carroll and Mullen 2014: Figure 12). The building was likely demolished by 1877, as the Hopkins map of that year shows the parcel as vacant (see Figure 10).

No other features were recorded within Parcel 4, likely due to significant disturbance in this portion of the property during the construction of 20th-century buildings.

City Lot--Point Lumley

The early history of the City property at Point Lumley is the best-documented of the parcels within the Hotel Indigo property (Carroll and Mullen 2014:6-10). The southern third of the current parcel was a low-lying spit of land below the bluffs at the time of Alexandria's founding. In 1751, John Carlyle was directed by the Trustees to extend Duke Street onto the Point, and in 1755, to build the public warehouse as detailed previously in this report. As has been established in the discussion of the bulkhead composed of Features 53, 54, and 55, it appears that the banking-out of new land on Point Lumley occurred in earnest beginning ca. 1774 and was completed to the riverward side of what is now The Strand by ca. 1782. According to Gilpin's 1798 map of Alexandria, there was no sign of the crescent bay remaining in that year, and enough land had been created for the laying of Union Street along the waterfront.

The two major features on the parcel, Features 41 and 56, are discussed in greater detail in other sections of this report. It cannot be claimed with certainty that Feature 56's public privy stood as a contemporary of the Carlyle warehouse, largely because the date of the warehouse's demolition is currently unknown. The privy was certainly constructed at least two decades after the 1755 warehouse, as it was located in infilled land likely created ca. 1774 with the construction of the shoreline bulkhead.

The City of Alexandria presumably continued to rent the lot of ground at the foot of Duke Street to various businesses for which the waterfront location was desirable. Confirmation for this practice during the early part of the 19th century proved difficult to attain from land taxes and other records. Alexandria tax records for 1830 identify Levi Pickering as leasing the "house only" on the Strand and Duke Street, adjacent to Capt. Henry Bayne's estate (Parcel 1). Following his death, his wife Sarah petitioned the city in 1835 to have the lease terminated (AG 6 June 1835:3); however, she is still taxed for the building on "Corporation Property" in 1850. William Leman, Mary Lawson and James Green also occupied or leased portions of the public land in the vicinity. In 1850, the city agreed to pay Sarah Pickering $200 minus rent and taxes for the buildings located on Duke Street and the Strand.

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