12th High School Property

Prince William County, Virginia

WSSI #21303.10

Site 44PW1947 – Cemetery Investigations: Boundary Delineation and Archeological Removal of Human Remains

May 2014

Prepared for:
Prince William County Schools
14800 Joplin Road, Building #51
Manassas, Virginia 20112

DHR File Number 2012-4134

Prepared by:
Jeremy Smith, MSc, RPA and John P. Mullen, M.A., RPA

With Contributions by:
Dana D. Kollmann, Ph.D. Laurie Burgess, M.A.,
and Kathleen Furgerson, M.A., RPA

Thunderbird Archeology
A Division of Wetland Studies and Solutions, Inc.

5300 Wellington Branch Drive, Suite 100
Gainesville, Virginia 20155
Tel: 703-679-5600 Email: contactus@wetlandstudies.com
www.wetlandstudies.com

ABSTRACT

Cemetery investigations were conducted at site 44PW1947, which is located approximately 1900 feet south of the intersection of Hoadly Road (Route 642) and Independence Drive in southern Prince William County, Virginia. Thunderbird Archeology, a division of Wetland Studies and Solutions, Inc., of Gainesville, Virginia, conducted the studies described in this report for Prince William County Schools. The cemetery delineation was conducted in July 2013 and the archeological removal of human remains from the cemetery was conducted in November 2013.

The cemetery delineation resulted in the identification of 12 likely grave depressions and 12 fieldstone burial markers, which were recorded as site 44PW1947. Backhoe trenching along perimeter of these visible grave features resulted in the identification of one additional possible burial (GF13) and seven posthole features, which may represent the portions of an earlier enclosure for the cemetery.

A total of eleven burial grave features were identified at site 44PW1947 during the archeological removal of human remains excavation. The individuals located within the cemetery included four older male adults, at least two, but possibly four, older female adults, and three individuals of indeterminate sex (one sub-adult, one adult, and one of unknown age). Three of the individuals (GF1, GF2 and GF3) have possible African ancestry, but the population affiliation of the remaining individuals is indeterminate. No DNA testing could be conducted because of the incompleteness of the remains.

Based on the archeological evidence (artifact and coffin hardware analysis), the burials located within the cemetery date to the period post-1850 to post-1880. Archival records do not clearly mention the cemetery, its occupants, or its exact location, and the individuals at site 44PW1947 may never be positively identified. However, based on the available evidence, at least some of the individuals were likely associated with the family of William and Cordelia Lynn, who owned the land containing the cemetery during this time period, and/or possibly with the tenants that leased the property when the Lynn family moved to Washington DC.

TABLE OF CONTENTS

LIST OF EXHIBITS

LIST OF TABLES

LIST OF PLATES

ACKNOWLEDGEMENTS

We thank Dana Kollman, Ph.D. of Towson University; Laurie Burgess, M.A., Associate Chair of the Department of Anthropology at the Smithsonian Institution, and Kathleen Furgerson, M.A. for their assistance with specialized research necessary for completion of this project. Ms. Burgess volunteered her expert analysis of historic period coffin hardware. We also thank Ms. Charlotte Cain, a volunteer with the Ruth E. Lloyd Information Center for providing valuable insight into the history of the cemetery.

We would also like to express our gratitude to Francine W. Bromberg, M.A., Acting city Archaeologist, Alexandria Archaeology for permission to adapt contextual information regarding regional historic funerary traditions from the unpublished draft report *The Contrabands and Freedmen Cemetery Memorial, City of Alexandria, Virginia, Archeological Data Recovery at Site 44AX0179* prepared by Boyd Sipe, M.A., Thunderbird Archaeology, Francine Francine W. Bromberg, M.A., Alexandria Archaeology; Steven Shephard, Ph.D., Alexandria Archaeology; Pamela J. Cressey, Ph.D., Alexandria Archaeology; and Eric Larsen, Ph.D., Alexandria Archaeology.

We thank Ms. Joanna Wilson Green, Virginia Department of Historic Resources and most importantly, we acknowledge the professionalism and the many contributions made by staff of the sponsor of this project, Prince William County Schools (PWCS).

CHAPTER 1 – INTRODUCTION

This report presents the results of a cemetery delineation and archeological removal of human remains at site 44PW1947, located approximately 1900 feet south of the intersection of Hoadly Road (Route 642) and Independence Drive in southern Prince William County, Virginia (Exhibit 1). Thunderbird Archeology, a division of Wetland Studies and Solutions, Inc. (WSSI) of Gainesville, Virginia, conducted the archeological investigations described herein for Prince William County Public Schools (PWCS).

The organization of this report includes this introduction (Chapter 1), followed by a description of the field and laboratory methodologies (Chapter 2), a property history (Chapter 3), contextual information on historic funerary traditions in the region (Chapter 4), results of the archeological cemetery delineation (Chapter 5), results of the archeological recovery of human remains (Chapter 6), and finally, a summary and our conclusions (Chapter 7). Appended to this report are: the inventory of recovered artifacts (Appendix I), the report on the skeletal analysis (Appendix II), the report on the analysis of coffin hardware (Appendix III), the report on the analysis of coffin wood samples (Appendix IV), the partial chain of title for site 44PW1947, the permit for the archeological recovery of human remains issued by the Virginia Department of Historic Resources (DHR) on October 23, 2013 and the permit extension issued by DHR on May 6, 2014 (Appendix IV). The recovery of human remains from site 44PW1947 was completed under authority of said permit and extension.

Archeological recovery of human remains at site 44PW1947 was necessary due to the discovery of the site late in the development planning process. PWCS explored options to avoid and preserve the burial sites in place; however, avoidance proved impracticable due to budgetary and time constraints. The archeological recovery of human remains from the site was carried out under a permit issued by the Virginia Department of Historic Resources (DHR) on October 23, 2013. A permit extension was granted by DHR on May 6, 2014.

The cemetery delineation was conducted in July of 2013 by Associate Archeologist Jeremy Smith MSc, RPA, with the assistance of Andrés E. Garzón-Oechsle, Daniel Osborne, and Benjamin Pollack. The purpose of this investigation was to determine the absence or presence of any additional grave shaft features beyond the boundary of the visible cemetery indications (depressions and fieldstone markers).

Boyd Sipe, M.A., RPA served as Principal Investigator for the cemetery delineation and Project Manager for the entire project. John P. Mullen, M.A., RPA, served as Principal Investigator and Craig Rose, M.A., RPA served as Field Director for the archeological removal of human remains from site 44PW1947. The work was conducted in November 2013 with the assistance of Archeologists Catarina Conceicao, Andrés E. Garzón-Oechsle, Susan Grealy, Edward Johnson, Daniel Osborne, Benjamin Pollack, Michael Smith, and Claire Weatherall. Mark Eschle, Neil Gutherman and Drew Peterson also assisted with the excavations.

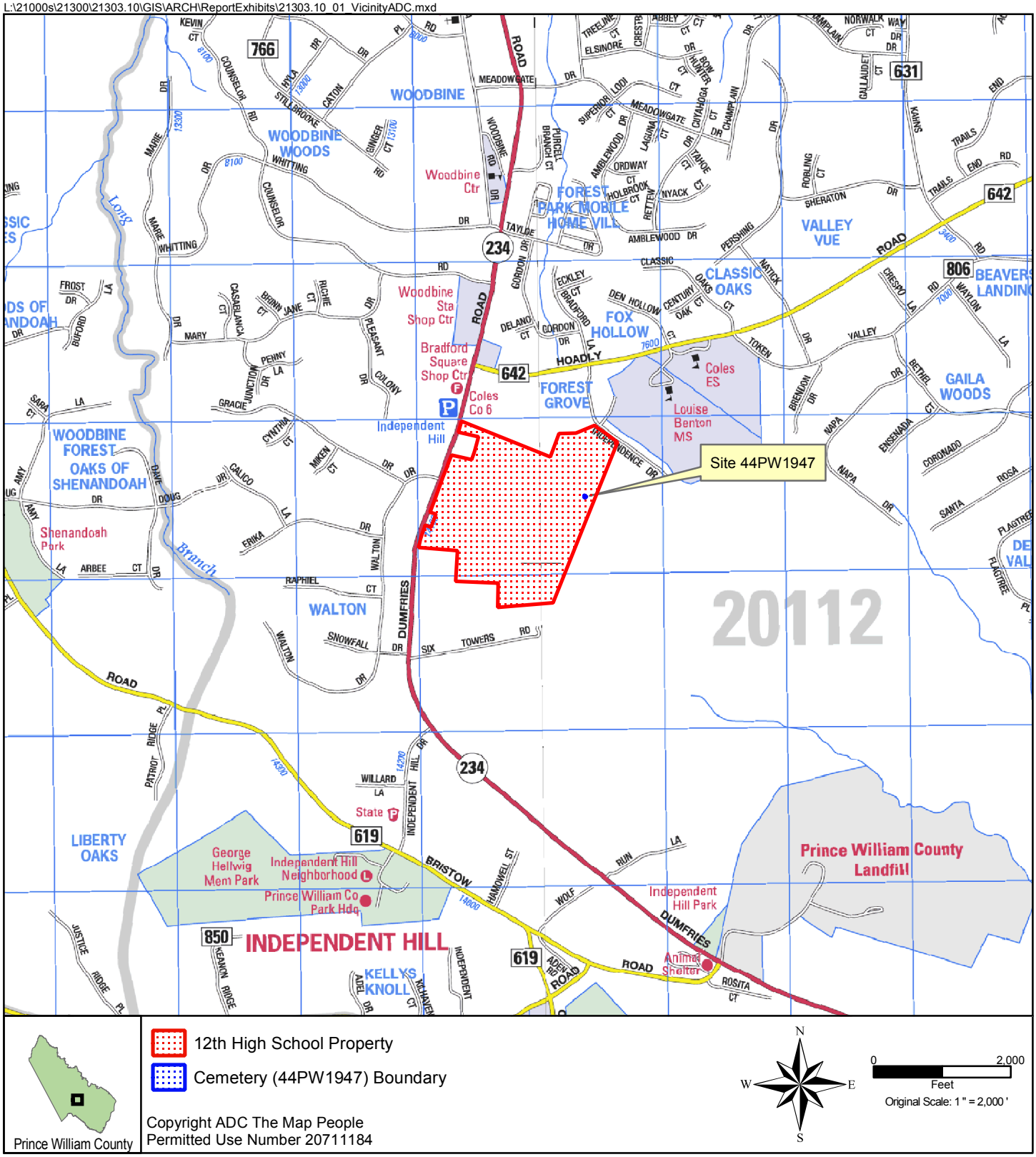


Exhibit 1
Vicinity Map

Tammy Bryant, M.A., RPA and Beth Waters Johnson, M.A., conducted the general artifact analysis and prepared the artifact inventory (see Appendix I). Recovery of skeletal remains was conducted under the supervision of Dana Kollman, Ph.D. of Towson University. Dr. Kollman examined and inventoried the skeletal remains and prepared the skeletal analysis report (see Appendix II). The coffin hardware analysis from the excavated burials at site 44PW1947 was conducted by Laurie Burgess, M.A., Associate Chair of the Department of Anthropology at the Smithsonian Institution. Identification of wood samples from the coffins was conducted by Kathleen Furgerson, M.A. Ms. Burgess prepared the report on the analysis of coffin hardware (see Appendix III), and Ms. Furgerson prepared the report on the analysis of the wood samples (see Appendix IV).

All research data and field data resulting from this project are currently on repository at the Thunderbird offices in Gainesville, Virginia.

Environmental Setting

Topographically, the site is located along the southeastern side of a north-south trending ridge situated between a stream valley to the west and a swale to the east (Exhibit 2). The site is low to moderate in relief, with elevations of about 395 feet above mean sea level at the cemetery location. Drainage is generally to the south into an unnamed tributary to Powells Creek.

Prior to the current investigation, the entirety of the site was densely wooded with a mix of immature and mature trees and saplings consisting predominantly of Virginia pines (*Pinus virginiana*) and an understory dominated by saplings of oak (*Quercus SPP*.), tulip tree (*Liriodendron tulipifera*), red maple (*Acer rubrum*), and American holly (*Ilex opaca*) (Exhibit 3; Plate 1); heavy needle and leaf litter are present on the forest floor within the site environs. Plate 2 shows the dense vegetation in the immediate vicinity of the site.

L:\21000s\21300\21303.10\GIS\ARCH\ReportExhibits\21303.10_02_USGS.mxd

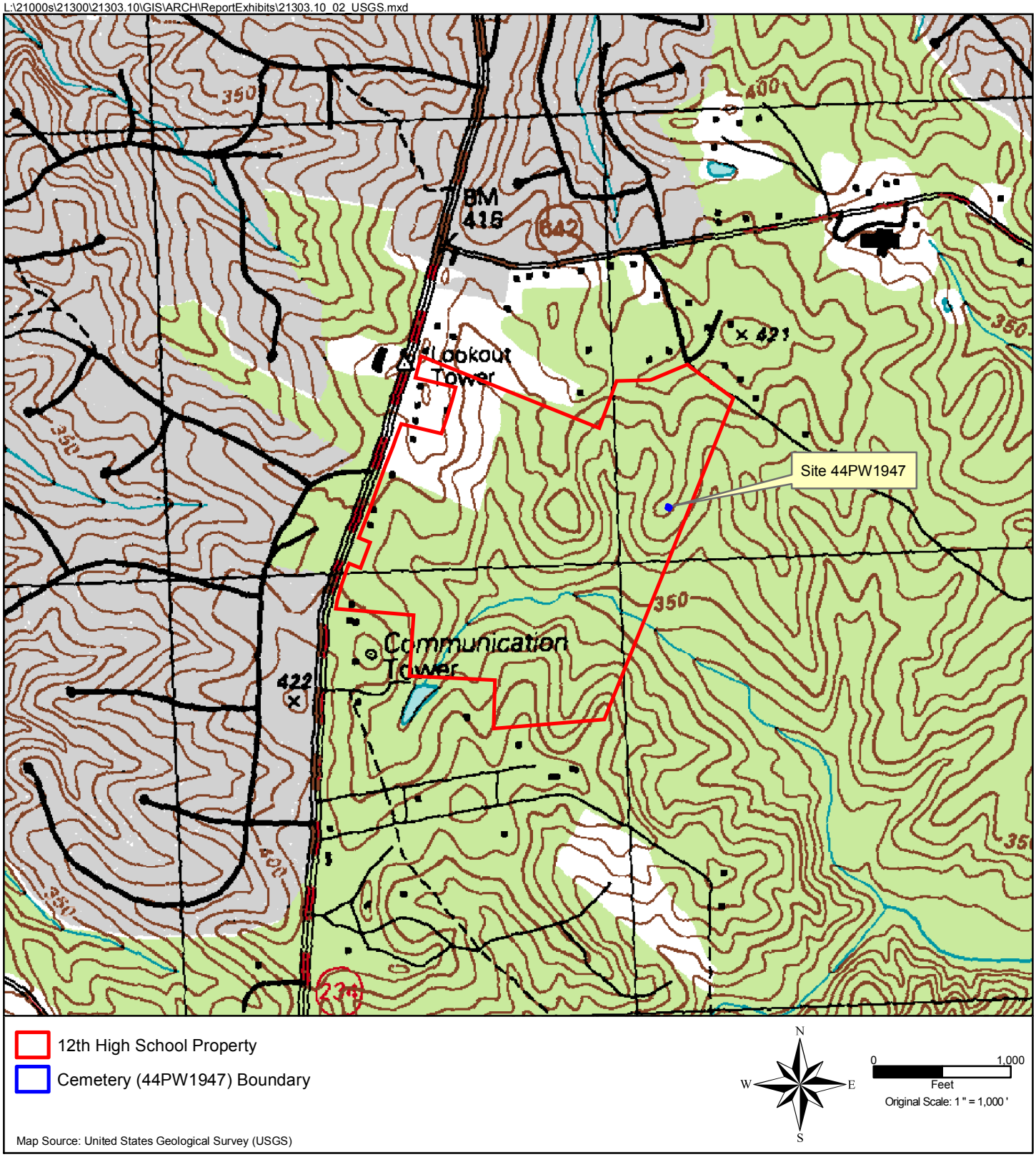


Exhibit 2
USGS 7.5' Quadrangle Map
Independent Hill, VA 1994

Site 44PW1947 Cemetery Delineation and Removal of Human Remains

L:\21000s\21300\21303.10\GIS\ARCH\ReportExhibits\21303.10_03_Aerometric2011.mxd

Exhibit 3
April 2011 Natural Color Imagery

Plate 1: May 2009 Oblique Aerial Image of the Proposed High School Site

Plate 2: Post Excavation Image of Site 44PW1947, Showing Dense Vegetation

CHAPTER 2 - METHODOLOGY

Cemetery Delineation Fieldwork (July 2013)

The first stage of the cemetery investigation involved a reconnaissance survey of the site, as one had not been previously conducted because of extremely dense vegetation. The cemetery environs was clear cut of all trees and then hand-cleared of all groundcover vegetation and leaf litter, both within the cemetery and within a 25 foot radius of its apparent limits, to expose and locate any and all cemetery-related features. All identified grave features were documented and survey located using conventional field survey methods.

The cemetery delineation involved the mechanical excavation of large areas or blocks around the apparent boundary of the cemetery (as indicated by the presence of cemetery related features, such as grave markers, grave depressions, old trees, etc.) using a backhoe equipped with a four-foot wide smooth bladed bucket. The block excavations began with the removal of the topsoil and continued down to the interface between the overburden soils and undisturbed subsoil (B horizon), to a depth below ground surface where any potential grave shafts could be identified.

When present, grave shafts excavated into the B horizon will show the disturbance as geometric, typically rectangular, soil anomalies. These anomalies are the result of refilling the graves with the mixed soils removed for the excavation of the grave. The fill within the grave shaft is identified by a different color and/or texture than the surrounding undisturbed soil matrix. The horizontal outline of an adult grave will generally be about six feet long and three feet wide; children's graves are generally smaller, depending upon the age of the child.

Horizontal control for the project area was established using a Leica Model 1200 GPS, using real time DGPS data, oriented to the VCS NAD 83 North Zone coordinate system. The location of all cemetery-related features were recorded using conventional field survey methods; block excavations were survey located at the completion of each day's fieldwork using conventional field survey methods.

Archeological Removal of Human Remains Fieldwork (November 2013)

The archeological removal of the human remains began with the removal of all grave marker fieldstones that had been mapped during the cemetery delineation. Any additional fieldstone markers located during the excavations were also mapped. All stones were removed and marked with provenience information for ease of re-interment. The topsoil and grave shaft backfill was then carefully removed using a combination of machine backhoe (outfitted with a smooth bucket) and hand scraping to expose the top of the interment (casket or coffin wood).

The depth of a grave shaft typically varies considerably by soil conditions, drainage, and bedrock depth, all of which often are related to the physiographic province. While six feet is assumed to be the most common depth, grave shafts are often more shallow; children, especially, are generally buried in shallow shafts. Once the shaft is excavated, the coffin is placed at the bottom of the shaft.

The coffin is circa two feet or more deep which leaves a maximum of four feet from the surface at the time of the burial to the top of the coffin. Through time, unless it is made of solid imperishable material, the coffin collapses and the organics, including the body, clothing, and the coffin, may completely disintegrate. Often the only materials left behind are imperishable items such as those made of metal, e.g., coffin nails and coffin handles. Coffin nails can occur at the bottom of the shaft or at the location where the coffin cover was, e.g., two-plus feet from the bottom of the shaft. In the absence of skeletal materials, graves are frequently defined on the basis of the presence of coffin nails and coffin hardware in conjunction with the soil anomaly caused by the grave shaft excavation. Organic staining is sometimes present.

Recovery of skeletal remains was conducted under the supervision of Dana Kollman, Ph.D. of Towson University. Articulated organic stains (incomplete skeletal remains in poor condition) were identified in several coffins; they were mapped and photographed by archeological staff. Dr. Kollman (with the assistance of archeological staff) documented burial attributes using standardized forms; attributes included articulation, body alignment, body position, head placement, arm and leg position, and burial container details.

The soils within the coffin or interment were then hand excavated and screened through ¼ inch hardware mesh cloth to recover human skeletal remains and/or artifacts. All recovered cultural materials (grave goods, coffin hardware, coffin wood, etc.) were bagged and labeled with provenience information. All fieldwork was documented with notes, drawings and photographs.

Horizontal control for the project area was established using a Leica Model 1200 GPS, using real time DGPS data, oriented to the VCS NAD 83 North Zone coordinate system. The locations of all cemetery-related features were recorded using conventional field survey methods. A vertical datum was established in the northwestern corner of the cemetery and all elevations were recorded in relation to this point.

Laboratory Analysis

Recovered human remains were collected by Dr. Kollman for specialized analysis. All recovered artifacts (including grave goods and coffin hardware) were dry-brushed, photographed and inventoried. Artifacts were entered into a Structured Query Language (SQL) Server database in order to record all aspects of an artifact description. For each artifact, up to 48 different attributes are measured and recorded in the database. Once

entered in the SQL Server database, users can create queries and reports through a Microsoft Access front end. Several pre-existing report templates are available, or users can create custom queries and reports for complex and unique analyses. The use of a relational database system to store artifact data permits a huge variety of options when storing and analyzing data. A complete inventory of all the artifacts recovered can be found in Appendix I of this report.

Additional specialized analyses of certain artifacts, including coffin hardware and wood coffin samples were also conducted, as noted below. All recovered artifacts and remains are to be reinterred.

Human Remains

Dr. Kollman inventoried and examined all skeletal remains that had been transferred to the Archaeology and Forensic Science Laboratory on the campus of Towson University in Maryland. This bioarcheological study was conducted using standardized techniques of bioarcheological and forensic anthropological analysis; the methodology used for the analysis can be found in Appendix II.

Coffin Hardware Analysis and Wood Identification

The coffin hardware analysis from the excavated burials at 44PW1947 was conducted by Laurie Burgess, Associate Chair of the Department of Anthropology at the Smithsonian Institution; the analysis is found in Appendix III. Wood identification was conducted by Kathleen Furgerson, M.A. and is found in Appendix IV. Methods utilized for each analysis can be found in their respective reports.

CHAPTER 3 – PROPERTY HISTORY

Due to missing, fragmentary and contradictory records, a complete chain of title for the land that includes site 44PW1947 on the proposed Prince William County 12th High School property could not be completed. The chain of title, as it is currently understood, is summarized within the property history below and contained within Appendix V. The following discussion also touches briefly on some of the unclear elements of the property's ownership history.

William and Cordelia Lynn owned the land containing the cemetery (site 44PW1947) during the latter half of the 19th century, although it is not clear which parcel originally included the cemetery. It is also not clear if the interments, which appear to date to this time period, are associated with the Lynn family or with the unknown tenants that leased the property when the Lynn family moved to Washington D.C.

William Lynn was born in 1818 to Moses and Elizabeth Lynn in Prince William County. The 1840 census indicates that in that year, he was married and had two children. The 1850 census, the first to provide names of all household residents, lists William Lynn as a resident of Prince William County married to wife Delia (Cordelia Keys, b. ca. 1824) and enumerated with seven children: John Henry (b. ca. 1840), Robert (b. ca. 1842), Lewellen (b. ca. 1844), Wallace (b. ca. 1845), Thaddeus (b. ca. 1846), Luther (b. ca. 1848), and James W. (b. ca. 1849). The 1850 slave schedule notes that William Lynn owned a single female slave, aged 23; however, he is not listed as a slave owner on the 1860 slave schedule and it is unclear if the slave died or was sold between these times.

By 1860, the Lynn family had expanded to include Ann (b. ca. 1851), Sophia (b. ca. 1852), Lucy (b. 1855), Fielder (b. 1856), and Seymour (b. 1858), twelve children in all. Later census records indicate that at least two more children, Mildred (b. 1860) and Joseph (b. 1862), were born to William and Cordelia Lynn prior to William's death in 1862.

On December 17, 1845, William Lynn purchased a 100 acre parcel from Alexander Cole, adjoining the land of Basil King's estate, Horace Cole, Elizabeth and Wady Cole, Manassa Russell, and Moses Arnold (Prince William County (PWC) Deed Book 19:252). The deed did not provide the exact location or metes and bounds for the property and only listed the names of the surrounding landowners. Previous owners or transfers of the property prior to Alexander Cole were not listed in the deed, which only noted that the 100 acres was land "not heretofore sold by said Cole." The Horace, Elizabeth and Wady Cole mentioned as neighboring landowners in the deed also purchased their land from Alexander Cole in 1845 (PWC Deed Book 19:151 and 19:177).

Alexander Cole does not appear to be taxed for the properties conveyed in these deeds in 1845 and the years prior; his father Matthias Cole's estate may be the source of this land, but his estate also does not appear to be taxed for these parcels in the years prior to 1845.

Based on the rudimentary description given in the 1845 deed, William Lynn's 100 acre purchase appears to have been located to the southeast of the location of the cemetery (site 44PW1947); however, the exact boundaries and location are unknown and, as will be discussed subsequently, the parcel may have included the cemetery. Lynn is not taxed for other property in Prince William County at this time. While it is possible that he resided on the property soon after purchasing it, no value is assessed for buildings on the property. This may indicate that the Lynn family resided at this time in a rudimentary log dwelling worth less than $100; no improvements for less than that amount were assessed within the tax district at that time and it is believed that houses below that value were not assessed (Don Wilson, personal communication 2013).

In 1851, William Lynn purchased 15 acres from his second cousin, Benson Lynn; the tract was noted as adjoining the land of William Lynn and Basil King, deceased (PW Deed Book 21:371). The metes and bounds given for the tract place it a short distance to the north of the cemetery (site 44PW1947). William Lynn is taxed for these two parcels, 100 and 15 acres accordingly, beginning in 1852.

The following year in 1853, Lynn is taxed for a third parcel of 79 acres "by deed from Robt. B. Merchant." A deed for this sale is not on record. The origin of the land deeded from Merchant is unknown, as he is not taxed for property in the vicinity. In 1852, Jacob Merchant's estate is taxed for 69 ½ acres on Powell's Run, described as lying six miles northeast of the courthouse at Brentsville. In 1853, this land continues to be recorded under the estate while the 79 acre parcel from Robert Merchant, five miles east of the courthouse, appears under William Lynn. Although possibly representing the same tract, the differences in the records suggest that these are not the same property.

The 1851 deed describing William Lynn's 15 acre land purchase indicates that the tract adjoined land already owned by William Lynn; this previously owned land almost certainly refers to a parcel that included the cemetery. Whether this land is the 100 acre tract purchased in 1845 or the un-deeded 79 acre tract for which Lynn was taxed beginning in 1853 is unclear. If the 1851 deed refers to the 79 acre tract, then Lynn purchased it at least two years before he was taxed for the parcel; if it refers to the 100 acre parcel purchased in 1845, then the supposed location to the southeast based on vague descriptions in the deed is in error.

Regardless of the uncertainties regarding the origin of William Lynn's properties, the tax records remain similar going forward from 1853, with Lynn taxed for three parcels of 100, 79 and 15 acres, respectively. Beginning in 1857, a value of $150 is assessed for buildings on Lynn's 100 acre parcel. As discussed previously, the Lynn family had likely resided on the property soon after its acquisition, and this assessment reflects the construction of a new or expanded dwelling for Lynn's growing family. Again, disparity in available records calls the location of the dwelling into question.

L:\21000s\21300\21303.10\GIS\ARCH\ReportExhibits\21303.10_04_McDowell_1862.mxd

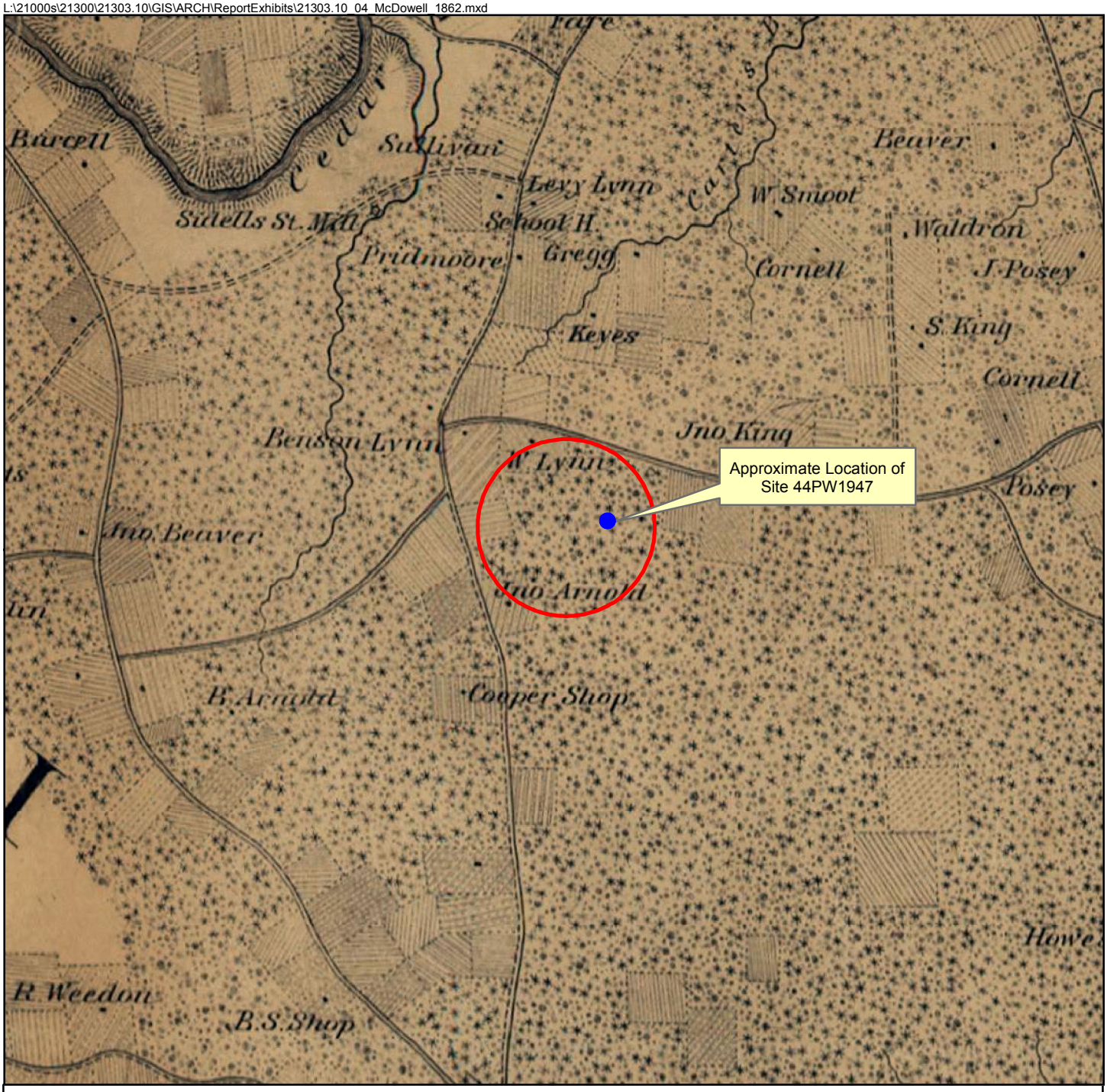


Exhibit 4
1862 McDowell Map

L:\21000s\21300\21303.10\GIS\ARCH\ReportExhibits\21303.10_05_1927USGS.mxd

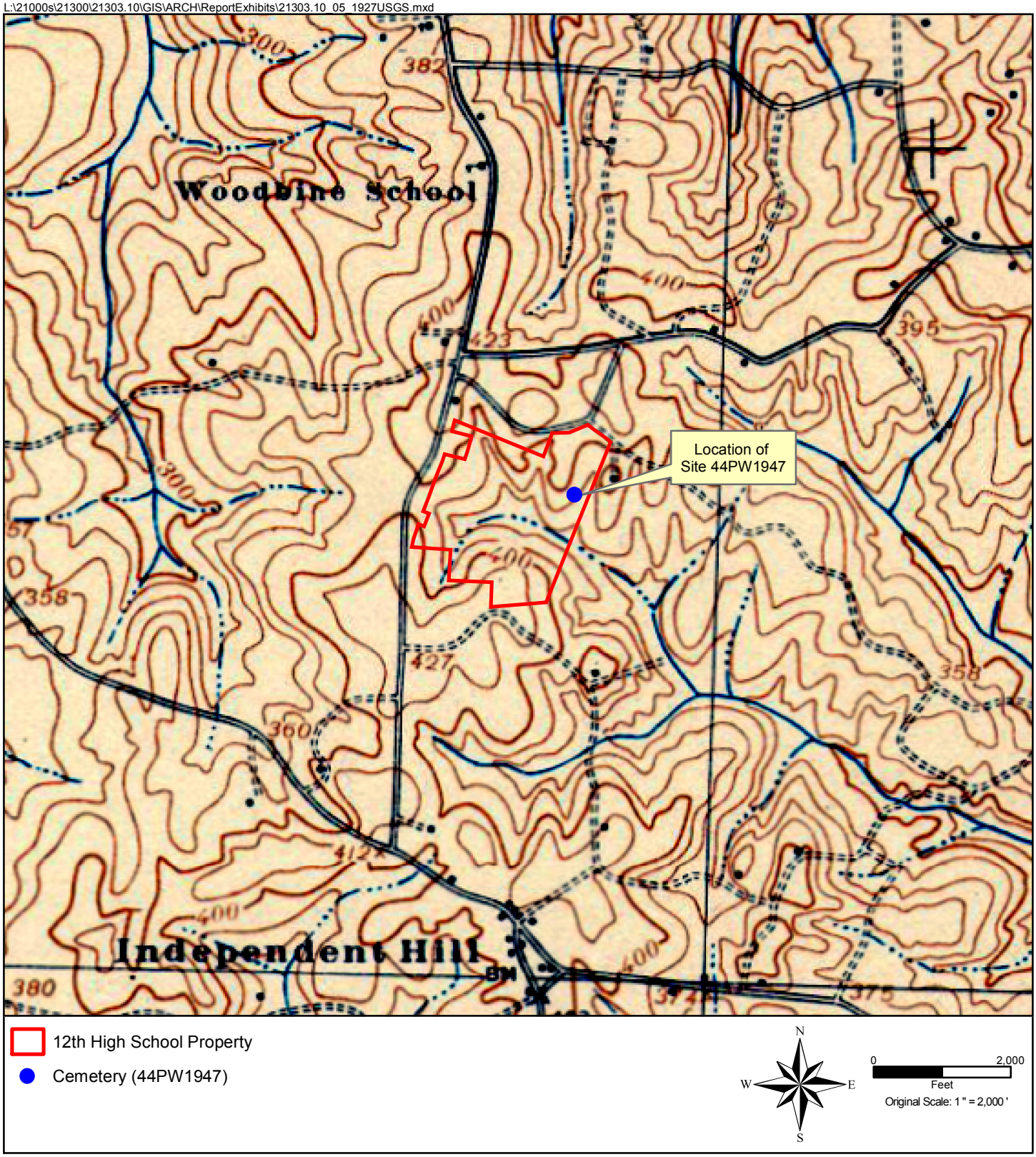


Exhibit 5
USGS Quad Map
Quantico VA-MD 1927

Site 44PW1947 Cemetery Delineation and Removal of Human Remains

McDowell's 1862 map places the dwelling of "W. Lynn" roughly 1 ½ miles north of Independent Hill and near the house of Benson Lynn (Exhibit 4) but, as previously discussed the deed suggests that Lynn's 100 acre parcel was located to the southeast of that location. William Lynn died in 1862 at the age of 44, and his name is no longer depicted on historic maps. Early 20th century maps do show a dwelling of unknown date approximately 600 feet east of the cemetery's location (Exhibit 5). This dwelling was located on land previously owned by William Lynn and may have been the Lynn's home; if this is the case, then the assumptions concerning the location of the 100 acre parcel are in error.

McDowell's map also shows cultivated land around William Lynn's dwelling (see Exhibit 4) and Lynn is enumerated in both the population and agricultural censuses as a farmer. According to the 1860 agricultural census, he owned 100 acres of improved land, 125 acres of unimproved land, livestock valued at $400 (four horses, three milch [sic] cows, two other cattle, and 25 pigs) and faming tools valued at $100 (Lynn was planting Indian corn and oats, and probably other crops).

William Lynn died intestate in 1862, at the age of approximately 44; the cause of death and place of burial are not given in the records. John H. Lynn served as administrator of his father's estate and was assisted by his mother Cordelia. Several chancery cases were brought before the Prince William County court to settle debts against William Lynn's estate. During the proceedings for these cases, the title for his real estate holdings was was not discussed; nor were the uses and features of his land. The result is that, although hundreds of pages of court documents are on file, none offer clues into the origin of Lynn's land, or address the nature of dwellings, presence of cemeteries, or other features and appurtenances on the property.

Lynn's estate inventory was recorded on October 16, 1865 and the estate sale was held on November 15th of that year (Tables 1 and 2). Land use on the estate is indicated by these inventories; the family's standard of living is also indicated in the list of household goods and furniture (PWC Will Book R:17; 29-30).

Table 1: William Lynn Estate Inventory Appraisal

5 head of cattle	$110	1 grind stone	$3
3 calves	$15	Pots and ovens	$3
6 head of sheep	$24	1 bed & furniture	$10
1 two-horse wagon	$50	1 bed & furniture	$10
1 cart	$8	1 bed & furniture	$30
2 double shovel ploughs	$6	1 bed & furniture	$30
1 no. 6 shovel plough	$3	1 chest	$3
1 man's saddle	$5	1 leaf table	$2.50
2 sets Wagon harness	$10	1 milk safe	$5
1 harrow	$4	1 book case & drawers	$10
1 wheat fan	$15	1 clock	$2
1 old stove etc.	$3.50	$114 dollars in state money	$12
			$374

Table 2: Articles from William Lynn's Estate Sale

1 Shovel Plough	$2.00	2 Bells	$0.25
1 McCormick Plough	$1.80	1 Stove and appendages	$1.80
1 Shovel Plough	$1.25	1 Grind stone	$5.25
1 Two-horse Plough	$1.00	1 skillet	$0.90
1 Harness	$2.10	1 man's saddle	$4.75
1 Wheat Fan and appendages	$8.25	1 Large Chest	$1.75
1 Cart and Harness	$10.75	1 Bay Horse	$20.00
1 Wagon	$57.50	1 Bureau and Book case	$2.50
1 set Wagon Breeching	$5.50	1Table	$1.50
2 Saws	$0.40	1 Safe	$2.00
2 Scythes	$0.50	1 Clock	$2.50
1 Hoe	$0.10	1 Bed & furniture with Bedstead	$5.00
1 Whitish Red Cow	$25.25	1 Bed & Bedstead with furniture	$5.00
1 White Black Cow	$20.00	1 Bed & Bedstead with furniture	$23.50
1 Red Cow with a wart	$23.00	1 Bed & Bedstead with furniture	$25.50
1 Brindled Cow with a white back	$25.00	To Beef	$20.00
1 Blackish Heifer	$9.00	1 Cupboard	$0.25
1 small Red calf	$4.25	1 Table	$0.25
1 Whitish calf	$4.50	1 Pot & Hooks	$0.25
1 Dark Red calf	$6.75	$112 Dollars in State money	$18.25
½ Red Bull	$3.50		$342.40
6 sheep	$25.00		

The estate sale shows Cordelia Lynn purchased the sheep, the wagon, several of the plows, the harrow, and the wheat fan, as well as the bulk of the furniture and household items (PWC Will Book R:29-30). She claimed 16 acres of her husband's estate, that included the "house, outhouses, garden and orchards," for her dower and a poor debtor's exception, but no mention of a cemetery was made (*Executors of Benoni E. Harrison vs Administrators of William Lynn*, Chancery Court Cause 1899-023, Prince William County Court Records). According to the 1870 agricultural census, Cordelia Lynn's farm was valued at $600 and contained 40 acres of improved land and 130 acres of unimproved land. Her animals/livestock included two horses, a mule, four milk cows, five other cattle, 20 sheep and three hogs. In 1879, the farm had produced 14 bushels of wheat, 125 bushels of corn and 15 bushels of oats, in addition to the garden and orchard produce.

Cordelia and her older children, perhaps assisted by relatives or hired hands, continued to live on and operate the Lynn farm until the family moved to Washington, D.C. circa 1873 (Duncan 2008). Possibly at that time, but at least prior to 1878, the Lynn property was leased under a court order, with 1/3 of the rents collected payable to Cordelia Lynn for the maintenance of the family, while the series of suits against the estate were ongoing.

No record of who leased the property has been located at this time; however, the 1880 agricultural census lists Alfred Payne as renting 170 acres of land (40 acres improved and 130 acres unimproved) in the Cole District of Prince William County. This is the same acreage as Cordelia Lynn's 1870 farm and it is possible that Alfred Payne was the tenant.

In 1880, federal population census records list Cordelia Lynn and her children Lewellen, Luther, James W., and Fielder as residents of Washington, D.C. Attempts to sell the Prince William County land at auction began in 1879, but did not succeed until 1899, when the property was sold out of the family (resolving all chancery suits against the estate). By this time, Cordelia Lynn and John H. Lynn, as well as the plaintiff in the chancery cause were deceased, and the sheriff had taken over management of the case. Cordelia had survived her husband and at least three of her children - Robert and Ann, who died of consumption in 1870 and 1872, respectively and John Henry Lynn, who died of a hernia in 1884, leaving his widow, Edna Ann.

Cordelia Lynn's death was noted in the Loudoun Mirror newspaper (Duncan 2008):

> Died. At her home in Washington D.C., on the 24th of May, 1889. Mrs. Cordelia Lynn, in her 67th year, of consumption. Widow of William Lynn of lower Prince William, where she spent all her life except the last 16 years, which had been spent in Washington. Elder Chick officiated at her funeral, interred at family burying ground in Prince William, near Independent Hill. She leaves 5 sons.

This notice is the first mention in the records of the family burying ground, and may possibly refer to site 44PW1947. She was survived by her sons, Luther, James W., Fielder and Thaddeus Lynn.

An 1899 deed records the sale of the deceased William Lynn's property to Henry Wise for $545.72 through Special Commissioner William E. Lipscomb (PW Deed Book 47:112). The deed notes that the property was assumed to contain 170 acres but upon survey by George Nutt, was found to contain only 139 ¼ acres. Full metes and bounds for the property are given on this deed that clearly show that the cemetery is located within the transferred property; however, no mention of houses, outbuildings, the cemetery, or other features of the property is made in the deed, and the location of the Lynn house still remains unknown.

Wise sold the property in November of 1900 to Jennie Kitchen for $600 (PWC Deed Book 54:98). Ms. Kitchen in turn sold the property in 1907 to Jerm A. Hill of Minnesota for $750 (PWC Deed Book 56:226). Jerm Hill and his family lived in a house (now demolished) a short distance east of the cemetery (see Exhibit 5); it is unknown if this house was constructed by the Hills or if it already stood on the property at the time of their purchase. If extant in the 19th century, this dwelling may have been the Lynn house (its location roughly matches that noted on McDowell's 1862 map) or a house occupied by tenants after the Lynns vacated the property in the 1870s. In any case, Jerm Hill and

family occupied the property at least until his death in 1935. Jerm Hill died intestate and divorced, so that his property consisting of two adjacent parcels (including the Lynn tract and a 101 acre parcel formerly belonging to Manassa Russell) passed to his five children; each heir received one-fifth undivided interest in the property. On August 28, 1935, four of the Hill heirs vested their brother Carleton Y. Hill with full ownership of the property. The conveyance from Frank E. and Myrtle M. Hill, Hope Hill Kraft, Howard H. Hill, Mae A. Goldberg and her husband, Abraham Goldberg, to Carleton Y. Hill included 101 acres, 2 roods, and 12 poles. (PWC Deed Book 96:52).

This conveyance included the parcel *(GPIN 7892-63-9714),* which contained site 44PW1947. About ten years later, on March 16, 1946, Carleton Y. Hill and his wife Virginia C. Hill conveyed the same acreage to the widow Harriet McKinley Baden (PWC Deed Book 118:376). To facilitate Baden's purchase, the land was placed in trust with Judge C. Lacey Compton (PWC Deed Book 118:377); however, within ten years Baden owned the land outright, as documented by a deed of release dated January 12, 1956 and executed between Compton and Baden (PWC Deed Book 197:320).

Although the specific conveyance has not been located, between 1956 and 1964, J.C. and Rosemary Lail acquired the circa 101 acre parcel. On July 12, 1964, J.C. and Rosemary Lail conveyed the same tract to Bradford Lowe (PWC Deed Book 326:253) who soon conveyed it to C. Lacey Compton by a deed dated November 10, 1964 (PWC Deed Book 400:85). C. Lacey Compton retained the land until his death. By his will, dated March 5, 1997, the land was conveyed to his heirs; C. Lacey Compton, Jr., Claude T. Compton, and Bettie L. Compton (PWC Will Book 91:1718). The Comptons organized a holding firm to manage their assets and subdivided the land, conveying the 21.5875 acre tract identified as Parcel 9 to this firm, CLC Family, LLC, on July 19, 1999 (PWC Instrument # 200302200033659). Two deeds dated October 25, 2006 record the conveyance of the parcel from CLC Family, LLC back to the Compton heirs (PWC Instrument # 200610300154471) and its subsequent sale to the Prince William County School Board (PWC Instrument # 200611020156650).

CHAPTER 4 – A CULTURAL HISTORICAL OVERVIEW OF DEATH

Archival and archeological investigations indicate that the cemetery (site 44PW1947) was likely used during the second half of the 19th century, i.e. from post 1850 through post 1880. This was a time of changing attitudes toward death and dying that had begun in the late 18th century and may have been associated with an increasing trend toward the idealization of death and heaven. Researchers have called this trend toward increased romanticism in funerary motifs, beliefs, and associations *the beautification of death movement*.

The changing attitudes associated with the beautification of death movement were reflected in the material objects that memorialized the dead; instead of the grim skeletons and personifications of death and time characteristic of the colonial period, mortuary artifacts began to incorporate the symbols of melancholy beauty of the Romantic era such as angels, urns, and foliage. These motifs appear on gravestones and decorative objects for use on coffins from the late 18th and 19th centuries. The coffins themselves began to function not only as receptacles for burial, but also for a more beautiful presentation of the dead at the funeral (Bell 1990:55-58; Farrell 1980; Stannard 1975).

18th Century Attitudes on Death

Essentially, the mortuary culture of colonial America was derived from European antecedents. Beginning in the 15th century, texts describing the *Ars Moriendi* or 'the art of dying' offered "rules of conduct for the moribund and their attendants: how to give up one's soul 'gladlye and willfully;' how to meet the devil's temptations of unbelief, despair, impatience, and worldly attachment; how to pattern one's dying on that of Christ; how to pray" (Faust 2001: 8). Throughout the 17th and 18th centuries, the increasing availability of printed texts resulted in the dissemination of these mortuary ideals. The publication of Jeremy Taylor's *the Rule and Exercise of Holy Dying* in 1651 marked the protestant codification of 'the art of dying' and this document, perhaps more than any other, shaped the mortuary culture of early America and instilled an ethic that life was, in essence, to be lived in preparation for death (Faust 2001:8). By the early 18th century, these behaviors had evolved into a 'cult of the dead in service of the living', in contrast to medieval traditions that represented the reverse. Anglican mortuary practices, including funeral attire, funeral sermons and liturgy, feasting and imbibing alcohol and the preparation of wills focused on comforting the living, preserving while containing the memories of the dead, and establishing and perpetuating lineages (Moll and Winner 2010:142-145).

The Anglican 'art of dying' exemplifies the dominant mortuary customs of the elite of Virginia in the 18th century; less is known of the customs of the middling Virginians, the poor and the enslaved. Likely, the tendencies of the middling classes to emulate the elites to the greatest degree possible were expressed in mortuary behaviors and the influence of the church across all strata of society and the ecclesiastical nature of deathways at this time might indicate that mortuary customs varied relatively little

between the elite planter and the tenant farmer. It has also been considered that mortuary behaviors of 18th century Virginians were determined to a great degree by the customs of the particular area of Britain (or Europe) from which they or their family originated and that contact with enslaved African Americans resulted in a creolization of deathways (Moll and Winner 2010:145).

Regionally, marked tendencies in the further evolution of mortuary behaviors occurring in the latter portion of the 18th century appear to include a laxity in manners associated with funerary customs and, in many instances, an expression, often in wills, of the desire that one's funeral should be a minimalist affair devoid of excessive pomp and revelry.

The location of burying grounds is a fundamental aspect of mortuary behavior. During the Colonial period in British North America, burial of the dead was usually and ideally kept to the churchyards. The regions of the Mid-Atlantic and the South particularly conformed to the preferential use of churchyard burying grounds during this period. Secular graveyards were more common in Puritan New England in the 17th century and early 18th century, as townships in these locations frequently set aside land for community burial grounds. The grim and mundane colonial symbolism of death is also associated foremost with puritan New England during this period when headstone images reflected the rejection of formal Christian iconography in favor of more secular exhibits, such as skulls representing the fate common to all men (Potter and Boland 1992).

Regional variability in the locations of burial grounds and evolving attitudes toward death appear to be closely linked with functions of settlement and status. Settlement in areas of the Mid-Atlantic and the South tended to be more dispersed as plantations spread populations outward along the navigable waterways. The Chesapeake, with 48 principle tributaries including several navigable for upwards of a hundred miles, represented an unsurpassed network of natural waterways that opened 10,000 square miles of hinterland to immediate settlement (Middleton 1984:39, 41). The plantation represented the nuclei of colonial settlement in the region as opposed to the townships of New England. Lacking the social organization that led to the secular community burying grounds of that region, an alternative solution in the Chesapeake was the establishment of family cemeteries on plantation grounds.

Although burial in churchyards was preferred by clergy, the widely distributed settlements often made this difficult. Large parishes were often served only by a single church and transportation relied upon waterways, making the timely movement of a dead body often difficult. Reverend Hugh Jones writing in 1724 remarked, "the Parishes being of Great extent (some sixty miles long and upward) many dead Corpses cannot be conveyed to the Church to be buried so that it is customary to bury in Gardens or Orchards, where whole Families lye interred together, in a spot generally handsomely enclosed, planted with evergreens, and the graves kept decently…" (Jones 1865:96-97). Additionally, home burial appears to have been preferential amongst the elite of colonial Virginia and came to be seen as an emblem of status. In the latter part of the 18th century, it was noted that "only the lower sort of people are buried at the church, for the

Gentleman have private Burying Yards" (Fithian and Farish 1968:41) and, with exceptions, those buried at churches were usually landless (Moll and Winner 2010:149-150, cited Butler 1998).

Family burial plots were typically placed on the edge of fields and at a high point of elevation on the property. The plots were often fenced and planted with trees for shade. The choice of a location of high elevation for these burying places likely included both symbolic and practical considerations as hilltop burials referenced the importance of mountains and high ground in biblical contexts and answered the practical concern of burying above the water table.

Family burial grounds were often carefully tended and maintained creating a garden-like space. Though family plots were born out of necessity, they eventually became traditional. Cultural/historical geographer, D. Gregory Jeane (1992) defines family plots of the type likely common in the region during the 18th century as part of the "Upland South Folk Cemetery Complex." Characteristics of his "pioneer model of the southern folk cemetery" include: hilltop location, scraped ground, mounded graves, east-west grave orientation, preferred species of vegetation, creative decoration, grave shelters, and evidence or practice of cults of piety (Jeane 1992:111).

19th Century Attitudes on Death

Regionally, the deathways of the 18th century certainly persisted into the early 19th century, particularly amongst the more conservative and elite elements of society. Within many American towns and cities, there was a push to create new cemeteries on lands on the peripheries of developing urban centers. Broadly, this trend is referred to as the rural cemetery movement.

Many such cemeteries adopted European philosophy in terms of gardening and landscape design. An early example, Mount Auburn Cemetery in Boston, Massachusetts, dating to 1825, attempted to reconcile the need for burial grounds with the city population's need for green space. The cemetery cultivated itself as a garden, planting trees, bushes, and flowers reflecting "the moral virtues and peace of the rural past" (Greene 2008:31). Following the success of Mt Auburn, cities throughout the United States began to create similar garden cemeteries such as Philadelphia's Laurel Hill Cemetery, New York's Greenwood, Baltimore's Green Mount, Richmond's Hollywood Cemetery, and Cincinnati's Spring Grove Cemetery. While these cemeteries experienced successes and considerable visitation, the cost of upkeep was significant. Over time, purposefully built public parks began to fill the urban need for green spaces.

Later in the 19th centuries, these garden cemeteries could come to be overshadowed by the "lawn cemeteries" or memorial parks that would continue on into the 20th century. Along with these changes in cemetery form, came a movement away from community ties to privately owned spaces cared for by professionals.

The beautification of death movement reached the pinnacle of its expression in the elaborate, ostentatious mourning rituals practiced by middle-class Victorians in the second half of the nineteenth century (Farrell 1980:34). Hallmarks of the period include elaborate mourning clothes, ornate grave markers, and highly decorated burial containers (Bell 1990:57; 1994:23). Americans of higher socio-economic status and those that wished to be perceived amongst their ranks customarily observed a formal period of mourning following the death of a loved one (Faust 2009:147).

As the Industrial Revolution progressed, the home and heaven were increasingly idealized to provide comfort in the face of the upheaval and uncertainties of the changing times (Pike and Armstrong 1980:17). The increased sentimentality with regard to the concepts of death and dying created a market for the trappings of the beautification of death, while improvements in technology and transportation enabled them to become affordable to all segments of the population, in turn fueling the pervasive acceptance of the concepts of beautification of death across multiple levels of American society (Bell 1990:57).

The practice of using native fieldstones as grave markers likely began in Virginia in the 17th century and persisted into the early 20th century in rural areas. Formal American During the 19th century, gravestones reveal diachronic beliefs about death, changing from grim, skeletal death's head to sweetly smiling cherubs and, later, from bright marble stones (often decorated with roses, urns, or columns) to grey granite family markers (Rainville 1999). In addition to symbolism, Americans began using euphemisms, replacing the word "dead" with "rest" or "sleep." Another documented pattern in American gravestones is an effort to mask social inequality. In the latter half of the 19th century, children were frequently commemorated with statues or engravings of baby animals, frequently lambs, or unopened flower buds to symbolize the end of their short lives.

Death and the American Civil War

While infant and child mortality were high and the death of a child was far more common than today, the 19th century's greatest health crisis came about with the American Civil War. Soldiers and civilians experienced tremendous health effects brought about by the conditions of war. At the time of the secession of the southern states, many felt that war was unlikely or that any potential conflict would be minor. United States Senator, signatory of the Constitution of the Confederate States of America, and Confederate States Army General James Chesnut Jr. promised to drink all the blood that would be spilled as a result of southern secession (Faust 2009:3). Soon it was evident that a bloody war would ensue and death was omnipresent in the Civil War era. The mortality rate during the war stood at about 2% of the population and was three times higher amongst Confederate men than amongst Union troops (Faust 2009:4). It was not unusual for a newly formed regiment of 1,000 men to lose half its number to illnesses within the first year (McPherson 1988:487).

The American Civil War, considering the scale of the conflict and the deadly new military technology that was introduced, resulted in a change in the American view of death and dying. The spread of disease, through exposure of so many to unhealthy environments and unsanitary conditions during the war, was unprecedented in American history. Childhood diseases, such as mumps and chicken pox, afflicted many men, especially those from remote rural areas who had never been exposed to these contagious diseases. Other, more dangerous, "camp diseases" included smallpox, malaria, and the largest killers – typhoid, typhus, and diarrhea/dysentery (Dammann 1988). Many "dead from wounds" suffered the results of pathogens, such as tetanus and gangrene, which entered and infected injuries. Throughout the years of the war, the number of soldiers' deaths from disease was twice the mortalities of the battlefield.

Letters sent from Lt. Col. Thomas Clark, encamped at Dumfries with the 29th Ohio Volunteer Infantry, dating to January 1863 include a description of the Quantico Church and cemetery and note that many Confederate soldiers may be buried in and around the cemetery and at other locations in the vicinity of Dumfries; Lt. Col. Thomas wrote:

> the old burying ground which is now in a thick growth of pine and oak. Some oak trees among the graves are 18 inches in diameter…some crumbling tombstones and tablets have dates as far back as 1684. The foundation of the old church is also very distinct among the trees. Last winter a large Rebel Force were encamped here and very many of them died. It is said that about a thousand of them died and were buried here while they occupied the place.
>
> I have been out this morning, to take another turn through the old burying ground in the woods. I found one grave made as late as 1846, but generally there have been scarcely any buried here since 1820, though sometime since 1750 it seems to have been a frequent burying place for some distance about here, but in another part of the yard, where the brush had been cut out. The new graves were thick-the head boards bore the name & Regt. That the sleeper belonged to-I found Texas Regts. quite numerous as also some from NC, SC, & Ala. Texas soldiers must have been very numerous here last winter or else the climate was very fatal to them-as there is another lot buried about a mile from this place on the heights where our forts now stand. I bet our secesh friends will have to work some if they ever remove them as our large Fort with heavy embankments is right on them [Lansing 2002 :14-16].

Stephen Elliott, a Confederate Episcopal bishop, observed in an 1862 sermon, "We all have our dead-we all have our Graves." Every age, he explained, must confront "like miseries" and seek "like consolation" (Faust 2001: 3). Despite the obvious veracity of the bishop's observation, clearly the American Civil War was a time unlike another in American society and with the war came a new relationship with death and new mortuary behaviors. A Union chaplain told his regiment "neither he nor they had ever lived and

faced death in such a time, with its peculiar conditions and necessities ....” and soldiers and civilians in both the North and South regularly distinguished “ordinary death” as had occurred in the pre-war years from the extraordinary deaths in camps and on battlefields (Faust 2001: 4). Vengeance and retribution for lives spent enslaved may have provided a rationale for the African American soldier during the Civil War and, as such, influenced his attitudes on death and dying in wartime. Writing from the front lines in Virginia, George Stephens, a reporter for New York’s *Weekly Anglo-African* newspaper wrote, “we don’t wish to make…[them] think that we are anxious to meet death on the battlefield…or to use the language of a contemporary, ‘go out gaily to meet death as to our bride” (Faust 2009:51).

Sites of recent battles became sites of morbid fascination crowded with civilians including relatives hoping to retrieve the remains of their kinsmen, scavengers seeking to rob the dead, enterprising coffin makers and embalmers, and the morbidly curious…. (Faust 2009:85). A decent burial became a sort of mitigation for suffering an extraordinary death and was common desire of all soldiers.

Burials, Embalming, Coffins and Caskets

A Union army surgeon after the Battle of Antietam, the bloodiest day of combat in American history with 23,000 dead Union and Confederate soldiers, reported that a week after the battle “the dead were almost wholly unburied…stretched along, in one straight line….at least a thousand blackened bloated corpses with blood and gas protruding from every orifice and maggots holding high carnival over their heads” (Faust 2009: 66-67).

A Trustee of the Antietam National Cemetery remarked in 1869 that “one of the striking indications of civilization and refinement among a people is the tenderness and care manifested by them towards their dead” (Faust 2009:63). Innovations in coffin styles, including the changes in the shape of the burial receptacle as well as the increased use of coffin hardware in the 19th century, have been linked both to changes in the attitude toward death and to changes in the economic base of the country with increasing trends toward mass production and specialization (Faust 2009:63).

The hexagonal coffin shape has often been related to the attitudes toward death prevalent in the 18th century as it conformed more to the shape of the body and, therefore, like the burial iconography of the period, was more suggestive of the grim reality of death (Habenstein and Lamers 1981:163). The relatively rare use of decorative coffin hardware or other expensive treatments, such as lead lining, in the 18th century served as an indicator and affirmation of high status and wealth. By the end of the 19th century, rectangular caskets were the preferred burial receptacles, and coffin hardware, often displaying the Romantic motifs of the beautification of death movement, was commonplace (Habenstein and Lamers 1981:168).

Even the terminology used in reference to burial containers reflects the change in attitudes toward death. While in modern parlance, the terms "coffin" and "casket" are often used interchangeably, they were historically different, with coffin referring to the hexagonal burial container and casket to the later 19th century rectangular form. Adoption of the term "casket," originally a term for a jewelry box, epitomized the sentimental approach to heaven and death associated with the beautification of death (Farrell 1980:10). The new rectangular shape of the casket emphasized presentation over mere encasement and avoided the unpleasant feelings associated with the hexagonal coffins that, by their very form, reminded mourners of the dead body inside (Lang 1984:31). Burial case manufacturer A.C. Barstow of Providence, Rhode Island, specifically recognized the changing attitudes at the time in an 1859 patent document:

> The burial cases formerly used were adapted in shape nearly to the form of the human body, that is, they tapered from the shoulders to the head, and from the shoulders to the feet. Recently, in order to obviate in some degree the disagreeable sensation produced by a coffin on many minds, the casket, or square form has been adopted [Habenstein and Lamers 1981:168].

Although claims for the earliest straight-sided burial containers go back to 1830, the first documented use of the term "casket" found to date comes from an advertisement in the 1849 Boston City Directory by "William Cooley, Funeral Undertaker and Coffin Manufacturer" for "Coffins, caskets and robes of every description" (Habenstein and Lamers 1981:169). The change in terminology, as well as form, was gradual. The generic term "burial case" was popular just before and after the Civil War. Use of the term "casket" increased after 1870 and, by the 1890s; it was the most frequently used word for burial containers in applications to the U.S. Patent Office (Habenstein and Lamers 1981:171).

Manufacture of Coffins in 19th Century

Coffin construction in early America was typically carried out by cabinetmakers, many of whom added undertaking to services they performed. They would measure the body, craft the appropriate size coffin, and often participate in the funeral (Habenstein and Lamers 1981:140-142).

As in other cities and towns around the newly developing country, cabinetmakers in the late 18th and early 19th century were involved in this trade and advertised their coffin manufacturing capabilities and undertaking services in the local newspapers. Among these advertisements are those of John Hubball, Upholsterer and Cabinet Maker, who gave notice in 1795 that he "commenced the UNDERTAKING of FUNERALS, upon the same plan as in England" (*Columbia Mirror and Alexandria Gazette* 1795). Another early 19th century cabinet maker, Joseph Spear, opened his business on Prince Street in 1811 (Kabler 1957:85). In addition to making and repairing "all kinds of Musical

Instruments, such as Piano Fortes, Bass Viols, Violins, Guittars [*sic*] &c.," one of Spear's early advertisements noted that he would "also furnish Mahogany Coffins for grown persons for seventeen dollars" (AG 1811a). By November of that year, Spear's price for mahogany coffins had dropped to fifteen dollars (AG 1811b); and, in 1815, Spear announced expansion of his ability to attend to funerary needs when he advertised that he had gotten "a new Hearse and stock to make Coffins, if called for" (AG 1815).

The Green family of cabinetmakers, who established their business in Alexandria in 1817 and went on to become the largest furniture makers in the city in the late 19th century, also advertised their ability to perform funerals (Fitzgerald 1986:5-6 cited *Alexandria Gazette,* July 4, 1823 and December 13, 1826). A post-script to an advertisement for one of Green's early competitors, brothers Charles and John S. Koones, indicates that they too would "undertake [funerals] at prices commensurate with the present times" (AG 1824). While no later advertisements for funerals by the Koones' family have been found, it is clear that they continued to perform these services throughout the first half of the 19th century. When Charles Koones died in 1857, his personal property was inventoried and sold at auction. It included a hearse and harness valued at $20.00, one pair of coffin stools, presumably used together as a stand or bier during the funeral, coffin fixtures, and three lots of veneers for coffin manufacturing (Alexandria Will Book R-3:158-163, September 5, 1856, cited in Hawes 1992:7, 28, 75-82).

It is probable that many of the local cabinetmakers persisted in the construction of the traditional hexagonal coffin shape throughout the 19th century. In rural areas, the coffin may have remained in use until about 1925 (Lang 1984:47; Farrell 1980:170; Clark 1964:228). The lists of funeral-related items of cabinetmakers from D.C. and Alexandria in the U.S. Census of Manufacturers for 1850, 1860, 1870 and 1880 do not include any reference to "caskets." Instead, the products manufactured are all identified as "coffins" (U.S. Census 1850, 1860, 1870a, 1870b, 1880). While it is possible that the term "coffin" is being used as a generic term for burial receptacle, the lack of reference to "caskets" may indicate that the rectangular shape was not as available or produced locally.

Whether producing hexagonal coffins or rectangular caskets, beginning about 1850, the local manufacturer undoubtedly began to have access to relatively inexpensive, mass produced coffin hardware. It is likely that the local coffin makers would have been familiar with the catalogs showing coffin hardware, such as Russell and Irwin (1980[1865]). This was certainly the case a decade after the war, as documented in an 1874 advertisement by J.T. Creighton & Son in the *Alexandria Gazette*:

> COFFIN MAKERS GOODS at 88 King street, Alexandria, Va. The subscribers keep on hand a large stock of UNDERTAKERS' GOODS, of the latest styles and best quality, consisting of Handles, Emblems for Masons, Odd Fellows, Red Men, Knights of Pythias, &c.; also Hinges, Screws, Tacks, Escutcheons, Lace, Fringes, and other goods in the same line, at prices to suit. [AG 1874].

In the beginning of the 19th century, some cabinetmakers in major urban centers, such as New York, began to specialize in coffin manufacturing, and coffin shops in these locations eventually evolved into coffin warehouses (Habenstein and Lamers 1981:161). By the second quarter of the 19th century, cabinetmakers in other areas had begun to advertise that they would "keep stuff for Coffins of all sizes...in such a state of preservation as to be able to furnish them at an hours notice, finished in the best possible manner" (Thomas Ogden, Chester County cabinetmaker 1827, cited in Schiffer 1990:176).

In the local region, this trend becomes apparent by the second half of the 19th century. A number of local companies in the District of Columbia appear to have been manufacturing and perhaps stockpiling ready-made coffins for sale by this time. The number of businesses that list coffins in their inventory of products sold grew from three in 1850, to 11 in 1860, to 15 by 1870 (U.S. Census 1850, 1860, 1870a). While a number of the local cabinetmakers continued to produce coffins and other furniture during the two decades after the middle of the 19th century, there was a clear trend toward specialization. In 1860, four local firms, M.M. White, J.W. Plant, M.E. Harvey & Company, and Henry Lee, reported sales of between 300 and 500 coffins and no longer appeared to be manufacturing any other products, signifying a probable specialization in coffin manufacture and funeral undertaking.

The U.S. Census of Manufacturers for Virginia does not list coffins separately as products of cabinetmakers in 1850 and 1860. However, it is likely that some companies in Alexandria also had coffin stockpiles and that individuals were beginning to specialize in undertaking. For instance, an 1864 advertisement in the *Alexandria Gazette* specifies that, "I. J. PEVERILL, EMBALMER AND UNDERTAKER,... Keeps constantly on hand all kinds of WOODEN AND METALLIC COFFINS, at the lowest cash price" (Alexandria Gazette [AG], 1864). The local cabinetmakers also remained active in undertaking, as evidenced by an 1857 advertisement to attend to funerals "at the shortest notice" by Benedict Wheatley, who is listed as a cabinetmaker in the 1850 census (cited in Hawes 1992:68). Even the large furniture company of Green and Brothers, run by steam power and employing 60 people, continued to participate in the funeral business in 1860. An advertisement in *Boyd's Washington and Georgetown and Alexandria Directory* specified that Green and Brothers were "Agents for Fisk's Metallic Burial Cases" (cited in Fitzgerald 1986:11). Thus, the Greens not only would have been

manufacturing wooden coffins, perhaps, given the technological advantage of steam power, some with steam bent sides, but would have also been ordering metal caskets for use by citizens.

By the middle of the 19th century, the set of tasks and functions necessary for the organization of a funeral had become consistent enough to be recognized as a service occupation known as "undertaking." It involved laying out the dead, preparing the coffin, and transporting the body to the cemetery. While sextons and municipal officers sometimes began to specialize in performing this service, undertaking was commonly the outgrowth of the cabinet making business. In the major cities, cabinetmakers had already begun to specialize in coffin manufacture and undertaking activities by the beginning of the century, but in most areas, undertaking remained a sideline of the furniture business. The concentration of all the tasks associated with the funeral led to the emergence of the funeral directing profession and set the stage for increased elaboration of funeral rituals in the later 19th century (Habenstein and Lamers 1981:139-155; Bell 1990:58-59).

The popularization of the casket form was due in large part to the innovations of Almond D. Fisk, who patented the Fisk Metallic Burial Case in 1848 (Slusser 1997). The Crane, Breed & Co. Catalog of 1858 described the metallic burial container as "an Air-tight Coffin of Cast or Raised Metal," claimed to preserve the body "for months and not infrequently for years, without any perceptible changes" (Habenstein and Lamers 1981:165-166). The manufacture of Fisk's casket by Crane, Breed & Co., also exemplifies the changing mode of production for burial containers to one of mass production and distribution to wide markets throughout the East and Midwest. Crane, Breed & Co. advertised their products through the publication of illustrated catalogs, which played a role in molding public tastes and opinions.

Aided by the impetus to preserve the remains of Civil War soldiers so that they could be shipped to their homesteads for burial, the mass production and widespread marketing strategies accelerated the popular acceptance of the rectangular casket shape (Habenstein and Lamers 1981:165-166, 169), which was touted by Crane, Breed as "entirely chaste, appropriate, and withal, convenient" (Slusser 1995:6, cited Crane, Breed & Co. Catalog 1858). With the popularization of the casket shape intrinsically linked to the mass production of Fisk's metallic burial receptacles by Crane, Breed & Co., the rectangular form also began to replace the hexagonal wooden coffins after about 1860.

Beginning about 1859, increasing industrialization also led to widespread access to relatively inexpensive, mass produced coffin hardware. Mass production of the hardware resulted from the use of inexpensive malleable alloys, such as white metal, with technologically improved metalworking machinery that rendered hand-finishing obsolete (Bell 1990:57). Like the mass produced caskets, hardware was marketed in trade or merchandising catalogs that simultaneously reflected and influenced popular taste. Design motifs such as angels, urns, drapery, and foliage, reflected the paradigms of the

beautification of death movement and became more varied and elaborate as the 19th century progressed (e.g., Russell and Irwin Manufacturing Company 1980 [1865]:330-335; Sargent & Co. 1871:261-282; Columbus Coffin Company 1882).

In the latter half of the 19th century, decorated coffins no longer served as markers of wealth and high social status, as they had in earlier periods when coffin hardware was more expensive, but revealed a pervasive, widespread cultural trend associated with the beautification of death (Bell 1990; 1991:254-283). The recovery of mass produced coffin hardware in a pauper's cemetery in archeological investigations in Uxbridge, Massachusetts, has led to the suggestion that the decorative, yet relatively inexpensive, coffin trimmings serve as an archeological horizon marker for the beautification of death, which is even evident in the burials of individuals of very low socioeconomic status including an almshouse graveyard (Bell 1990:50).

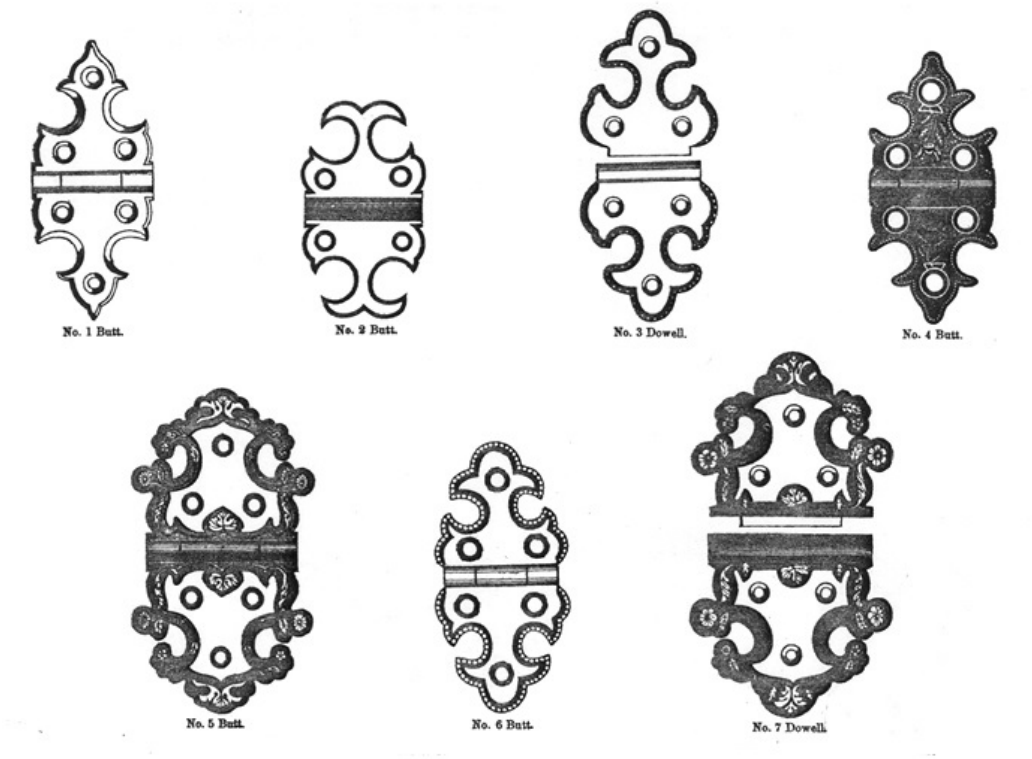


Plate 3: Decorative Casket Hinges
(Russell and Erwin 1865)

Although the coffin was perhaps the most basic requirement for a decent burial "…embalming, shipment home and a marked and honored grave were the privileges that Civil War Americans were most eager to provide their dead comrades and kin" (Faust 2009:80).

CHAPTER 5 – RESULTS OF CEMETERY DELINEATION

A total of 12 grave depressions or grave features (GFs) were identified within close proximity during the reconnaissance survey (Exhibit 6). The dimensions of all visible grave features are presented in Table 3; all the depressions were oriented along a generally east/west axis. Representative views of grave depressions are shown in Plate 4.

Table 3: Grave Depression Dimensions

Grave Feature Number	Length and Width (In Feet)	Grave Feature Number	Length and Width (In Feet)
1	7.9 X 4.2	7	7.7 X 2.5
2	9.4 X 4.0	8	7.3 X 3.1
3	6.6 X 3.5	9	9.4 X 3.2
4	6.2 X 3.8	10	6.7 X 4.0
5	4.9 X 3.6	11	8.0 X 3.3
6	5.8 X 2.2	12	7.0 X 3.1

A total of 12 fieldstone grave markers were identified in association with grave feature depressions during the reconnaissance survey of the cemetery (see Exhibit 6). None of the identified grave stone markers were inscribed with names or dates. Details of each grave stone are presented in Table 4 and a representative photograph is found in Plate 5.

Table 4: Grave Marker Dimensions

Grave Stone Number*	Length and Width (In Feet)	Height Above Ground Surface (In Feet)	Lithic Material
5-1	0.35 X 0.35 X 0.35	0.2	White quartz
5-2	0.8 X 0.5	Slightly buried	Diabase
7-1	0.55 X 0.35	0.4	Rose quartz
8-1	0.8 X 0.15	0.35	Diabase
8-2	0.85 X 0.2	0.125	Diabase
9-1	1.3 X 0.6	0.8	Quartz
9-2	0.4 X 0.2	0.2	Diabase
10-1	0.7 X 0.4	0.2	White quartz
11-1	0.7 X 0.35	0.4	Diabase
11-2	0.65 X 0.5	0.7	Diabase
12-1	0.45 X 0.45 X 0.45	0.45	Diabase
13-1**	0.6 X 0.2	0.25	Diabase

***The first grave stone number indicates the grave feature associated with the stone or stones.**
****Associated with a possible grave feature found during mechanical stripping (discussed below)**

.

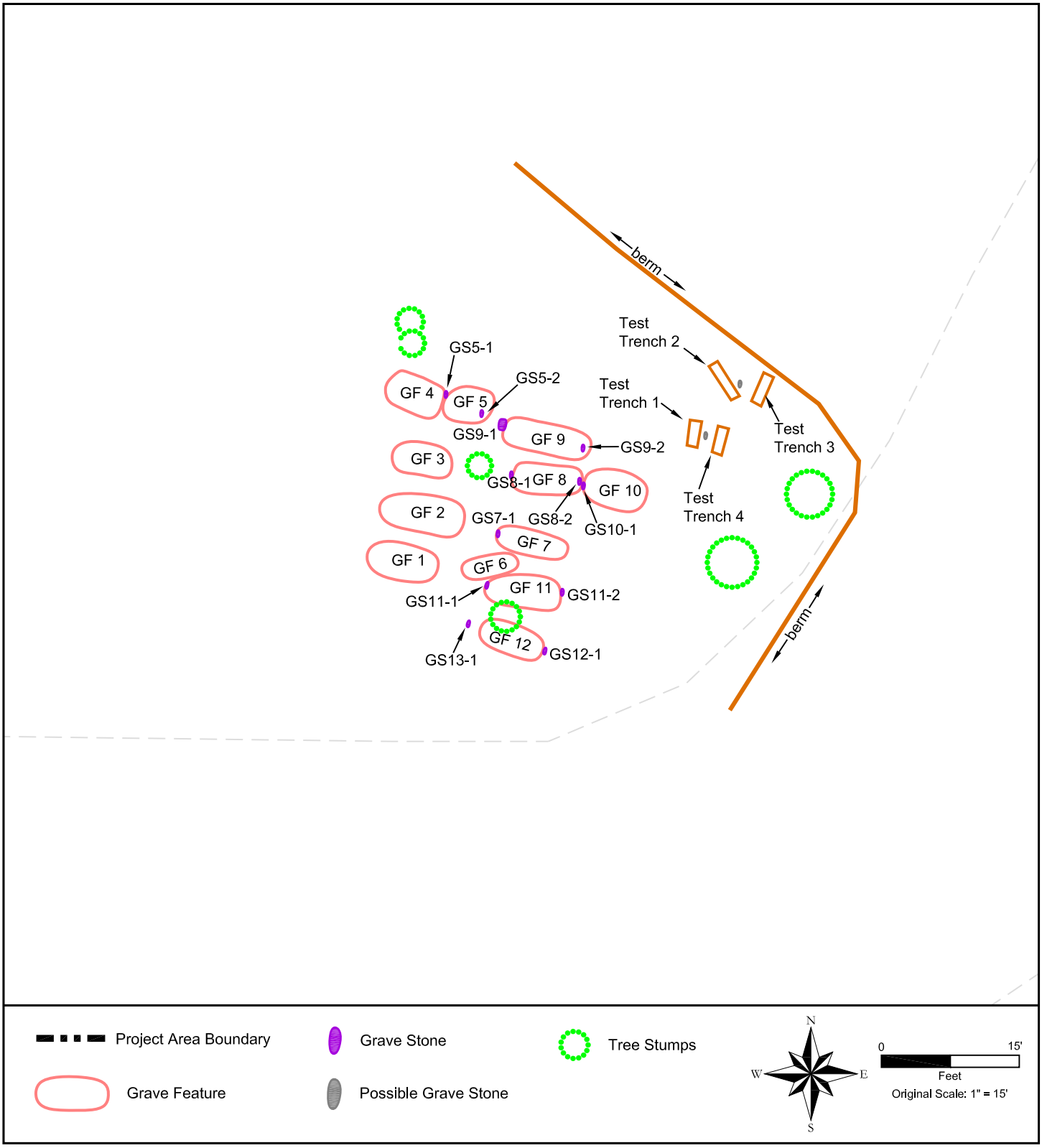


Exhibit 6
Overview of Project Area Prior to Machine Excavations

Plate 4: Representative View of Grave Depressions
(No graves were excavated during the July2013 investigation)

Plate 5: Oblique View of Grave Stone 12-1, View to East

Two possible fieldstone grave markers were located to the northeast of the main cluster of grave features, but did not appear to be associated with depressions (see Exhibit 6). Hand excavated trenches were opened to the west and east sides of each stone in order to determine if these stones marked the locations of burials. The stratigraphic profile of all four trenches exhibited a plowed stratum overlying subsoil (Plate 6); no graves were found in association with these two stones. As quartz was naturally occurring in this vicinity, the stones may be random fieldstones or displaced markers, but are not *in situ* grave markers.

Additionally, a landscape berm feature was clearly visible to the north and east of the main cluster of grave features (see Exhibit 6). Although not indicated by the Prince William County mapped topography, based on visual observations there was drop in elevation of between approximately six inches and one foot from the cemetery side of the berm and the topography to the north and east of the berm. The presence of this berm in association with the 12 grave features suggests that the cemetery may have been preserved and protected from past agricultural plowing activities conducted in the vicinity.

After all surface evidence of the cemetery had been identified and recorded, a series of trenches were excavated within a 20-25 foot radius outside the visible limits of the cemetery to determine the absence or presence of any additional grave shaft features, or other cemetery-related features; excavation trenches overlapped so as to expose approximately 100% of the subsoil within a 20-25 foot radius on all sides of the cemetery (Exhibit 7). No excavations were conducted within the apparent limits of the cemetery.

As Exhibit 7 illustrates, trenching along the western side of the cemetery cut across the western edge of the depression associated with GF4; no evidence of a grave shaft was observed within the portion of the trench adjacent to GF4. The absence of a grave shaft within the trench excavation suggests that the westernmost portion of the depression was likely caused by erosional forces; however, at the time of the delineation, it was felt that the absence of a grave shaft in the trench did not preclude the likelihood that the remaining portion of the depression may be associated with a burial.

During excavations along the southern limits of the cemetery, a thirteenth possible grave was observed northwest of GF12 (see Exhibit 7). Recorded as GF13, the possible grave shaft feature measured approximately 3.5- 4 feet in length and was seen cutting sharply into subsoil along the eastern edge of the grave feature in the northern profile of the excavation block (Plate 7); it appears that the excavation trench cut just outside the southern edge of the grave shaft, as no evidence of a shaft was seen in the plan of the trench cut at this location.

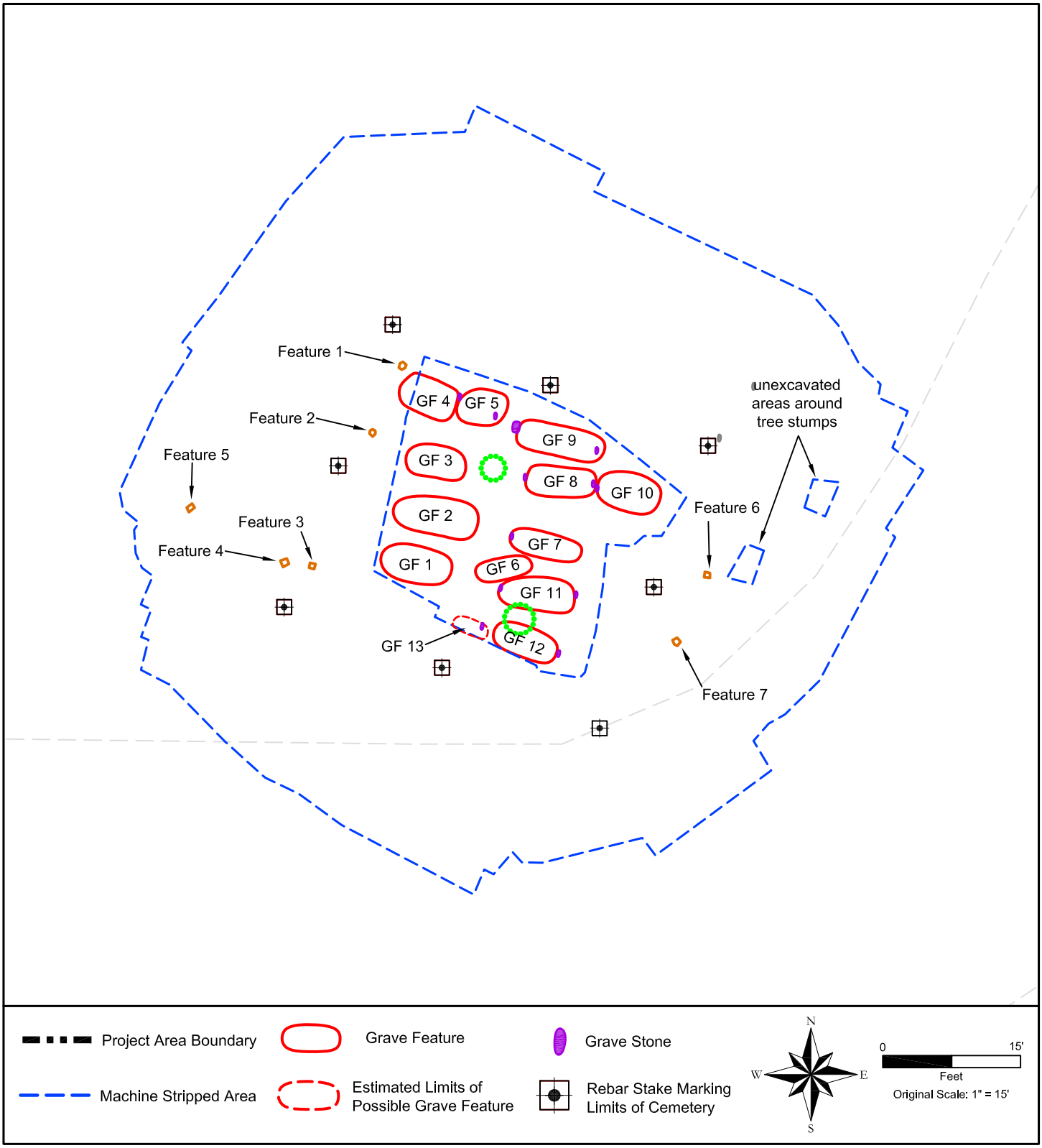


Exhibit 7
Overview of Cemetery Features

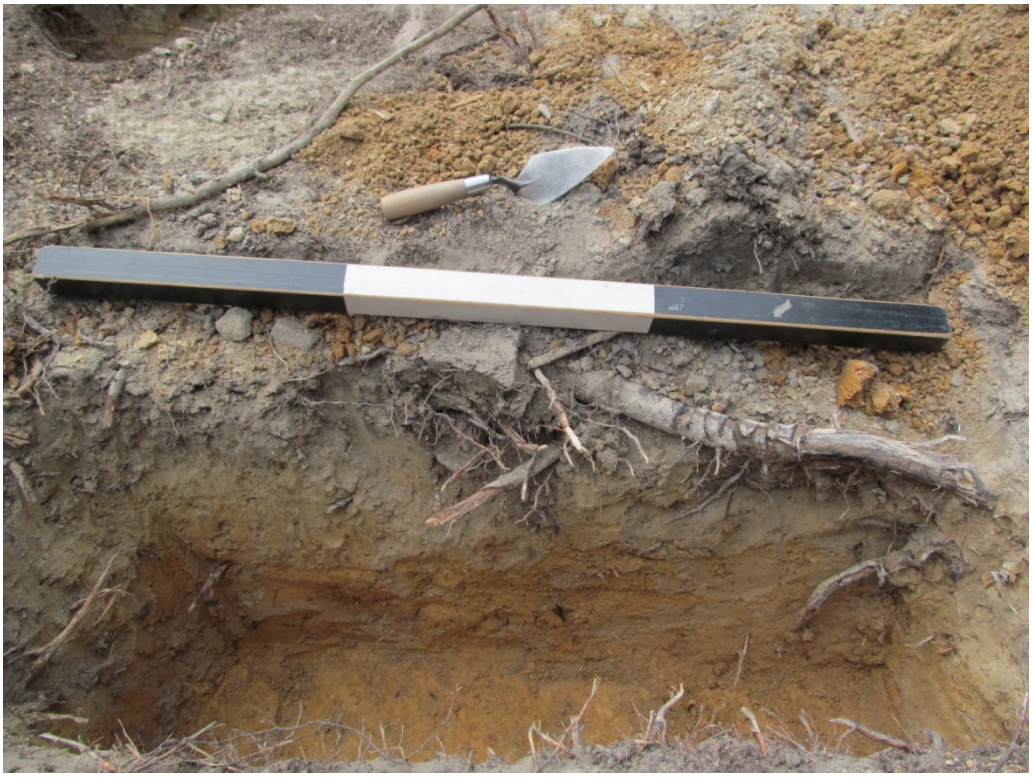


Plate 6: Representative Stratigraphy within Hand Trench, View to West

Plate 7: Profile of Grave Feature 13, Facing North

Although the photograph shows the feature extending only about 1.5 feet down to subsoil, which would be shallow for a burial, it is likely that the grave shaft tapers away from the excavation trench to the north and only the uppermost portion of the shaft was seen in the trench profile. Although no surface depression was seen in association with the possible grave shaft feature, a possible fieldstone grave marker (GS 13-1) was identified toward the eastern edge of GF13 (see Plate 7). Based on the observed apparent length of the feature, GF13 may represent a sub-adult or child burial.

No additional graves or potential graves, aside from the abovementioned 13 grave features, were identified during mechanical stripping excavations within a 20-25 foot radius of the cemetery. However, seven possible posthole features (Features 1-7) were seen cutting into the subsoil to the west and east of the cemetery (see Exhibit 5 and Plate 7 for a representative view). Features 1, 2, 3, 6, and 7 appear to be the remnant portions of two possible fence lines. Whether these two fence lines represent the remnant portions of an earlier enclosure for the cemetery is unknown; however, based on their alignment and proximity to the cemetery, the possibility certainly exists.

At the conclusion of the investigation, the boundary of the cemetery was marked with iron pipes, in four corners and at the mid-point of all four sides, at least four feet from the terminus of the closest confirmed burial (see Exhibit 7); the pipes were marked in such a manner so that a land surveyor can find and create a legal plat showing the cemetery's boundary, if needed.

Plate 8: Representative Plan of Probable Post Hole

CHAPTER 6 – ARCHEOLOGICAL REMOVAL OF HUMAN REMAINS

A total of 12 probable grave depressions was identified during the earlier cemetery delineation, along with seven post holes possibly representing a former fenced enclosure, and a berm feature that was interpreted as evidence of cemetery avoidance by past agricultural activities.

The grave shafts within the cemetery were exposed by machine backhoe during the next stage of archeological fieldwork, which resulted in the identification of eleven grave features (Exhibit 8 and Table 5). The depressions designated GF4 and GF5 overlay only one grave shaft, and were combined into one feature – Burial 4. No interments were associated with GF6 and GF13. However, one additional grave feature, designated Burial 14 (GF14), was identified during the archeological removal of human remains excavation. Additional unmarked fieldstone markers were also located beneath the surface and were mapped (see Exhibit 8).

The cemetery was arranged in three rows, with four interments in the first (western) row; five interments in the middle row; and two in the easternmost row. All burials were oriented east-west. The outlines of the coffins were visible as wood fragments /stains or were demarcated by the presence of nails and other coffin hardware (see Exhibit 8). All coffins were hexagonal in shape, although four were placed within wooden box vaults.

Table 5: Grave Features

Grave Feature	Dimensions of Grave Shaft (length x width)	Dimensions of Coffin (length x width)	Approximate depth below surface
1	8.3 x 2.0	Outer: 6.5 x 1.9 Inner: 6.2 x 1.9	4.8 feet
2	7.6 x 2.5	Outer: 6.25 x 2.0 Inner: 5.45 x 1.7	4.3 feet
3	6.5 x 2.0	N/A	3.2 feet
4	7.7 x 2.7	6.9 x 2.2	3.9 feet
7	5.1 x 1.6	N/A	4.3 feet
8	6.2 x 1.8	5.3 x 1.7	4.3 feet
9	7.8 x 3.0	Outer: 6.5 x 1.9 Inner: 6.2 x 1.9	4 feet
10	7.9 x 3.25	Outer: 6.2 x 1.8 Inner: 6.0 x 1.6	4.4 feet
11	Outer: 7.45 x 4.75 Inner: 7.4 x 2.0	6.0 x 1.75	4.3 feet
12	6.92 x 2.6	6.1 x 1.75	4.3 feet
14	N/A	N/A	3.3 feet

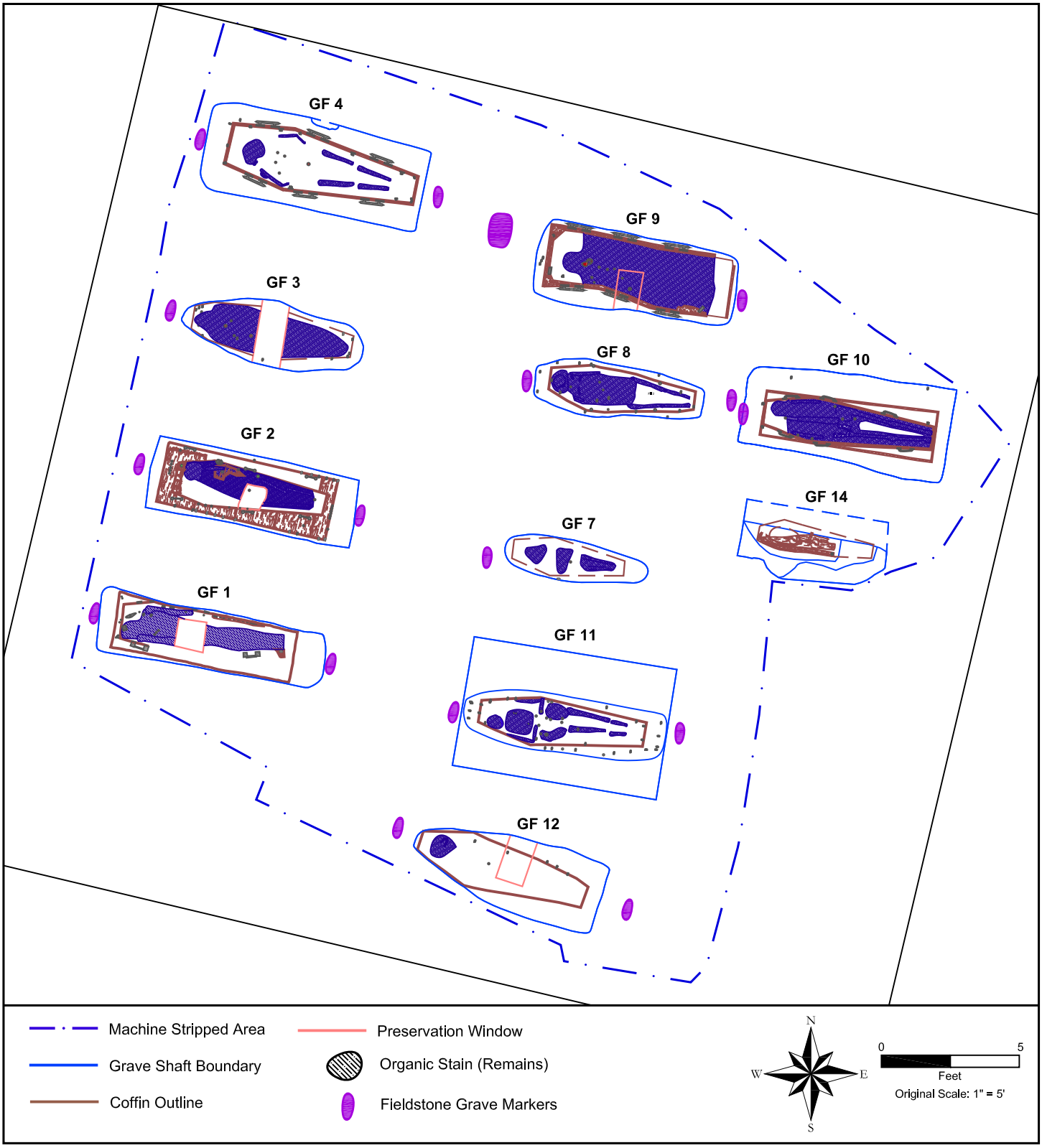


Exhibit 8
Overview of Grave Features Within Site 44PW1947

Burial (Grave Feature) Descriptions

Dana D. Kollmann, Ph.D. of Towson University assisted staff archeologists in interpreting and recording burial data and analyzed the skeletal remains; Kollmann's report in presented in Appendix II. The coffin hardware analysis was conducted by Laurie Burgess, Associate Chair of the Department of Anthropology at the Smithsonian Institution; her analysis included as Appendix III. Wood identification was conducted by archaeobotanist Kathleen Furgerson, M.A. (see Appendix IV). All three analyses are summarized in the burial description presented below.

Burial 1 (GF1)

Personal
Age/Sex: Adult/Indeterminate
Race/Ethnicity: Indeterminate, but possible African ancestry
Bone Preservation: Poor
Personal Artifacts: Three Prosser buttons (post 1840)

Surface Features
Depression: Yes
Grave Markers: Fieldstone

Interment Features
Grave Shaft Dimensions: 8.3 x 2.0 feet
Coffin Shape: Hexagonal
Coffin Dimensions: 6.2 x 1.9 feet
Coffin Material: Wood – Southern yellow pine

Outer Box Shape: Rectangular
Outer Box Dimensions: 6.5 x 1.9 feet
Outer Box Material: Wood

Coffin Hardware: six cut nails (post 1830); 123 cut nails fragments (post 1790); 22 brass tack fragments; 13 white metal coffin screws with brass decorative escutcheon plates attached (circa 1870 or later); six white metal handles (circa 1870 or later); two white metal butt hinges (circa 1865 or later); three white metal butt hinge fragments.

Burial 1 was located in the southwestern corner of the cemetery (see Exhibit 6). The coffin outline was exposed at four feet below surface, although a cut nail fragment was recovered from the edge of the grave shaft at three feet below surface. The feature consisted of a hexagonal coffin placed within an outer rectangular box[1] (Exhibit 9).

The wood was in poor condition, but a sample from the base of the coffin was identified as Southern yellow pine. The coffin hardware associated with GF1 dates post circa 1870 (Plates 9-14); however, the burial may date circa 1880 or later because the coffin handles were identified in an 1880 coffin catalog (Burgess 2014). The size of the bones was suggestive of an adult; however, they were too poorly preserved to allow for determination of sex. The individual's teeth exhibited a crenulated pattern, a feature possibly associated with African ancestry.

[1] The outer box may have been the shipping container for the coffin that was reused as a vault (see Burial Feature discussion section).

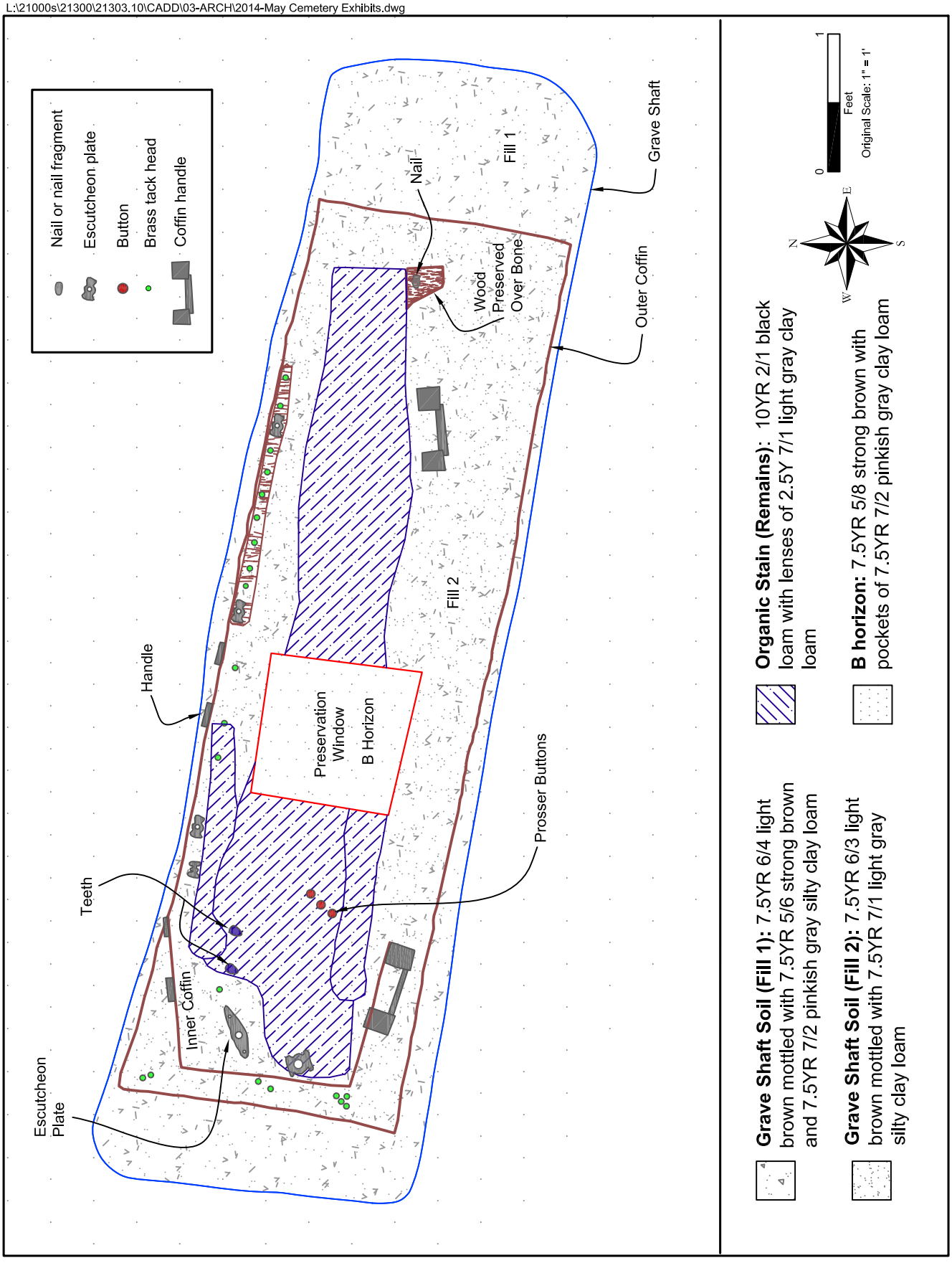


Exhibit 9
Burial 1 Plan

Plate 9: Burial 1, White Metal Double-Lug Short Bar Coffin Handles

Plate 10: Burial 1, White Metal Cylindrical Thumbscrew and Escutcheon Plate

Plate 11: Burial 1, Cut Nails and Nail Fragments

Plate 12: Burial 1, White Metal Butt Hinge and Hinge Fragments

Burial 2 (GF2)

Personal
Age/Sex: Older Adult Female
Race/Ethnicity: Indeterminate, but possible African ancestry
Bone Preservation: Poor
Personal Artifacts: Four Prosser buttons (post 1840)

Surface Features
Depression: Yes
Grave Markers: Fieldstone

Interment Features
Grave Shaft Dimensions: 7.6 x 2.5 feet
Coffin Shape: Hexagonal
Coffin Dimensions: 5.45 x 1.7 feet
Coffin Material: Wood – Southern yellow pine

Outer Box Shape: Rectangular
Outer Box Dimensions: 6.5 x 1.9 feet
Outer Box Material: Wood – Southern yellow pine

Coffin Hardware: four cut nails (post 1830); 80 cut nails fragments (post 1790); 16 brass tack fragments; seven white metal coffin screws - three with white metal escutcheon plates (circa 1870 or later); five brass escutcheon plate fragments (circa 1870 or later); six white metal handles (circa 1870 or later); four white metal hinges (circa 1865 or later); one white metal plate

---

Similar to Burial 1, the outline of the coffin feature was exposed at roughly four feet below surface; again, two nail fragments were also recovered from the grave shaft at three feet below the surface. The graft shaft for Burial 2 measured 7.6 x 2.5 feet and extended to an approximate depth of five feet below the surface.

Burial 2 also consisted of a hexagonal coffin placed within an outer rectangular vault box (Exhibit 10). The bottom (base) of both the coffin and the wooden vault box were well preserved; however, the sides were poorly preserved (primarily consisting of stains) and the tops were not apparent (Plate 13). Both coffin and vault box were constructed of Southern yellow pine. The coffin hardware was identical to that of Burial 1. The coffin handles were located *in situ*; as were two hinges. The edges of the casket were lined white metal bolts and copper headed upholstery tacks (see Exhibit 10 and Plate 14). Tacks were also located beneath the base of the coffin wood, suggesting that the casket may have been cloth covered wood or draped with cloth, prior to its lowering into the vault box.

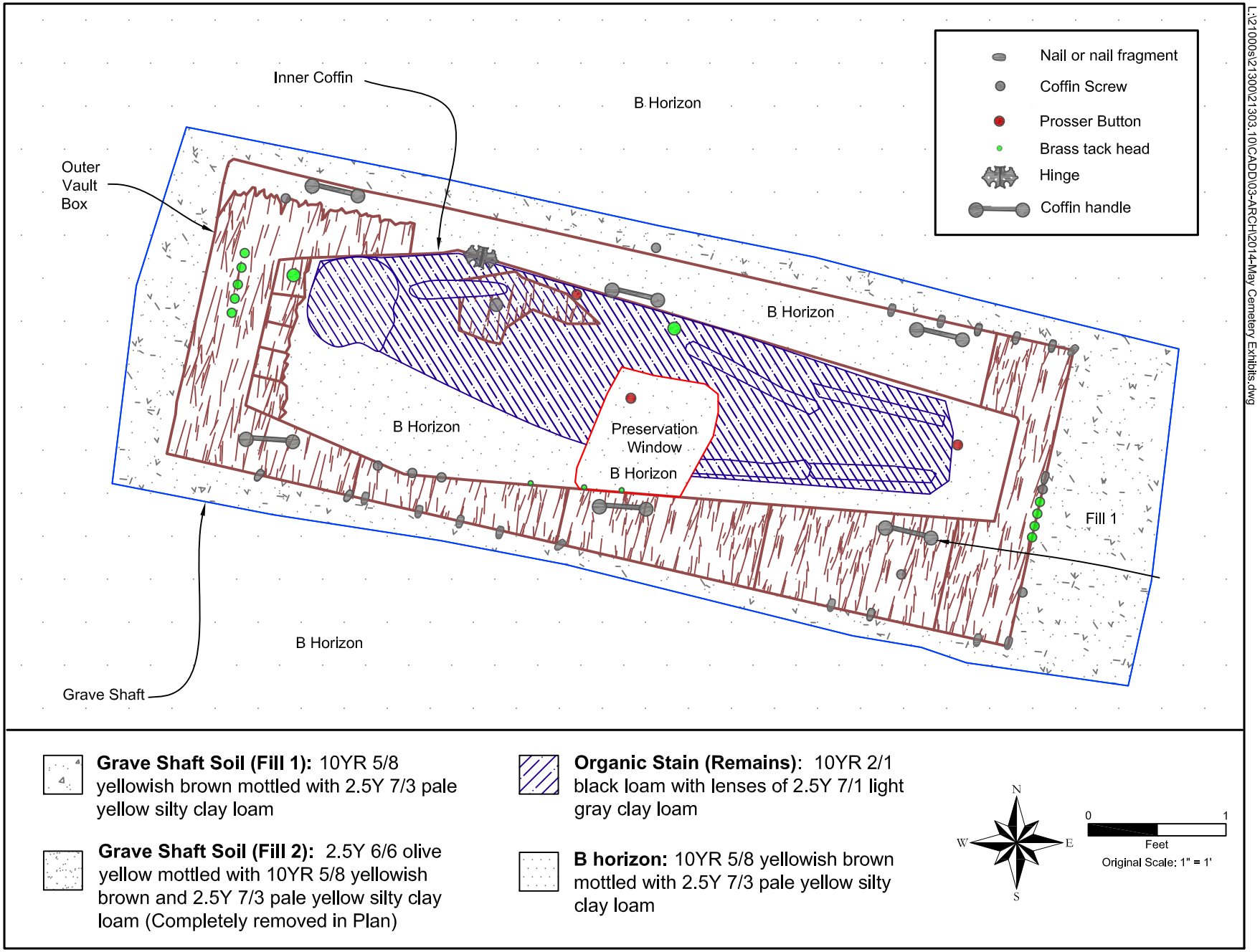


Exhibit 10
Burial 2 Plan

Plate 13: Plan of Burial 2

Plate 14: Burial 2, Brass Tack Fragments (some attached to coffin wood fragments)

Burial 3 (GF3)

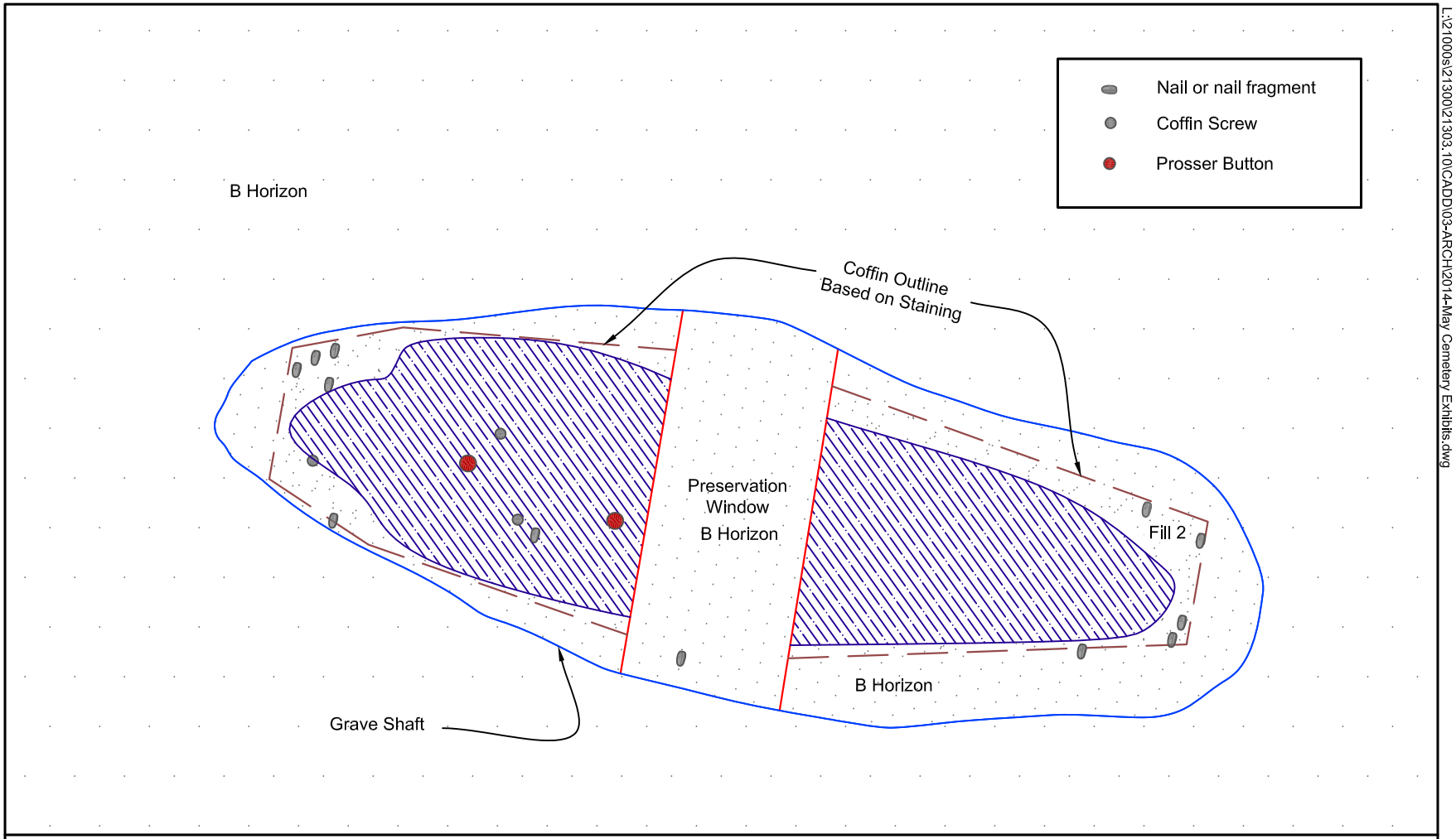
Personal
Age/Sex: Older Adult (Probable) Female
Race/Ethnicity: Indeterminate, but possible African ancestry
Bone Preservation: Poor
Personal Artifacts: Four Prosser buttons (post 1840); thread fragment

Interment Features
Grave Shaft Dimensions: 6.5 x 2.0 feet
Coffin Shape: Likely Hexagonal
Coffin Dimensions: 5.86 x 1.4 feet (based on recovered nails)
Coffin Material: Wood (based on organic stain)

Surface Features
Depression: Yes
Grave Markers: Fieldstone

Coffin Hardware: 64 cut nails/nail fragments (post 1790); eight coffin screws (circa 1850 or later)

The grave shaft associated with Burial 3 measured 6.5 feet in length and 2.0 feet in width and was clearly visible in the surrounding subsoil at 3.2 feet below surface. The outline of the coffin, however, was only evidenced by the presence of nails around the perimeter; no wood fragments were recovered (Exhibit 11 and Plate 15). The base of the coffin was visible only as a dark organic stain. Nails and coffin screws were the only hardware recovered (Plates 16 and 17), indicating a burial a date of circa 1850 or later. Although teeth and buttons were recovered from the upper half, preservation was extremely poor and no remains other than teeth were recovered. The size of the teeth was suggestive of a female individual, and the teeth showed crenulation, a feature possibly associated with African ancestry.



Grave Shaft Soil (Fill 1): 7.5YR 6/4 light brown mottled with 7.5YR 5/6 strong brown and 7.5YR 7/2 pinkish gray silty clay loam (Completely removed in Plan)

Grave Shaft Soil (Fill 2): 7.5YR 6/3 light brown mottled with 7.5YR 7/1 light gray silty clay loam

Organic Stain (Remains): 10YR 2/1 black loam with lenses of 2.5Y 7/1 light gray clay loam

B horizon: 10YR 5/8 yellowish brown mottled with 2.5Y 7/3 pale yellow silty clay loam

N
W
E
S

0 1
Feet
Original Scale: 1" = 1'

L:\21000s\21300\21303.10\CADD\03-ARCH\2014-May Cemetery Exhibits.dwg

Exhibit 11
Burial 3 Plan

Plate 15: Plan of Burial 3

Plate 16: Burial 3, Coffin Screws with White Metal Heads and Ferrous Metal Screw Shafts

Plate 17: Burial 3, Detail of White Metal Coffin Screw Showing Double Filigreed Pattern

Burial 4 (GF4)

Personal
Age/Sex: Older Adult Male
Race/Ethnicity: Indeterminate
Bone Preservation: Poor
Personal Artifacts: Six Prosser buttons (post 1840); unidentified material (cloth) fragments; one felt button cover

Surface Features
Depression: Yes
Grave Markers: Fieldstone

Interment Features
Grave Shaft Dimensions: 7.7 x 2.7 feet
Coffin Shape: Hexagonal
Coffin Dimensions: 6.9 x 2.2 feet
Coffin Material: Wood – Tuliptree; Willow

Outer Box Shape: Rectangular
Outer Box Dimensions: 7.0 x 2.3 feet
Outer Box Material: Wood

Coffin Hardware: Glass viewing plate (19th century, 2nd half); 12 cut nails (post 1830); nine cut nail fragments (post 1790); 10 white metal thumbscrews - six with decorative escutcheon plates attached (circa 1875 or later); 12 white metal handle lug fragments (circa 1870 or later); 20 rope fragments; a white metal coffin screw; three white metal decorative escutcheon plates; nine ferrous metal brackets

---

Burial 4 was located on the northern end of the first row of the cemetery (see Exhibit 8). The feature was originally recorded during the early delineation work as two separate grave depressions on either side of a small tree (see Exhibit 4). Only one grave shaft was revealed beneath the overlying soils and measured 7.7 by 2.7 feet. The sides of the hexagonal coffin were exposed at approximately 5.0 feet below surface and measured 6.9 x 2.2 feet (Exhibits12 and 13; Plate 18).

The coffin lid had collapsed into the interior but remained relatively intact; a portion of the wooden lid at the foot of the coffin was recovered in one piece and revealed beveled edges on three sides (Plate 19). The side of the coffin was constructed of willow while the coffin lid was made of tuliptree. A glass viewing plate was exposed at the head of the coffin, at roughly 5.9 feet below the surface (Plate 20). The glass fragments appeared to be covered with two layers of paint, which may have been transferred from the interior of the lid. Similar paint was observed on the exterior portion of the coffin lid. The exposed interior sides of the coffin exhibited kerfs at the shoulders; the kerfs are vertical cuts in the wood that allowed the wood to curve or bend in this location (Plate 21). Plate 21 also shows the reverse sides of two coffin handle lugs; several of which were stamped “821”, which likely refers to their catalog number. The coffin handle bars were fragile and had deteriorated, but appeared to have been wrapped in rope; fragments of the rope were recovered (Plates 22 and 23). Nine ferrous metal brackets were also recovered (Plate 24); it is not clear if they were associated with the coffin or outer box of the feature.

Based on the coffin hardware analysis, Burial 4 dates to circa 1880 or later.

Skeletal preservation was poor, but included the remains of the radii, ulnae, femora, tibiae, as well as cranial fragments and a partial mandible with several teeth. Based on the size of the coffin and skeletal remains, the individual within Burial 4 was identified as an adult male.

Exhibit 12
Burial 4 Plan, With Lid Removed

L:\21000s\21300\21303.10\CADD\03-ARCH\2014-May Cemetery Exhibits.dwg

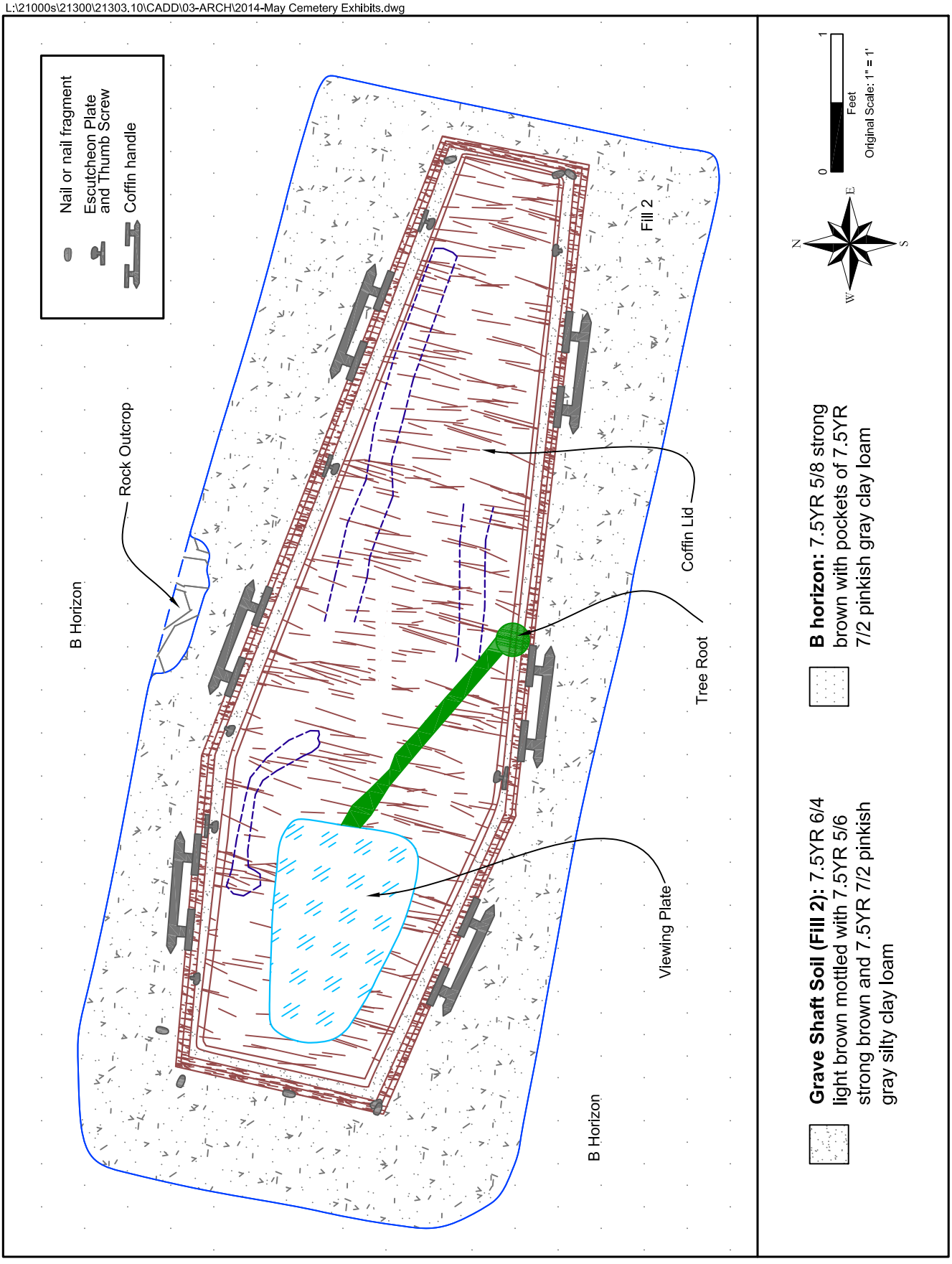


Exhibit 13

Burial 4 Plan Showing Lid and Coffin Hardware

Plate 18: Burial 4, Coffin Lid and Viewing Plate

Plate 19: Burial 4, Portion of Coffin Lid with Beveled Edges

Plate 20: Burial 4, Viewing Plate

Plate 21: Burial 4, Detail of *In Situ* Viewing Plate and Kerfing
Note the two lugs and fragments of rope/twine associated with the coffin handle

Plate 22: Burial 4, White Metal Double-Lug Short Bar Coffin Handle Lug and Arm Bracket

Plate 23: Burial 4, Rope/Twine Fragments Associated with Coffin Handle Bars

Plate 24: Burial 4, Ferrous Metal Brackets

Burial 7 (GF7)

Personal
Age/Sex: Sub-Adult (10-14 years of age)
Indeterminate Sex
Race/Ethnicity: Indeterminate
Bone Preservation: Poor
Personal Artifacts: Two Prosser buttons (post 1840)

Interment Features
Grave Shaft Dimensions: 5.1 x 1.6 feet
Coffin Shape: Indeterminate
Coffin Dimensions: Indeterminate
Coffin Material: Wood

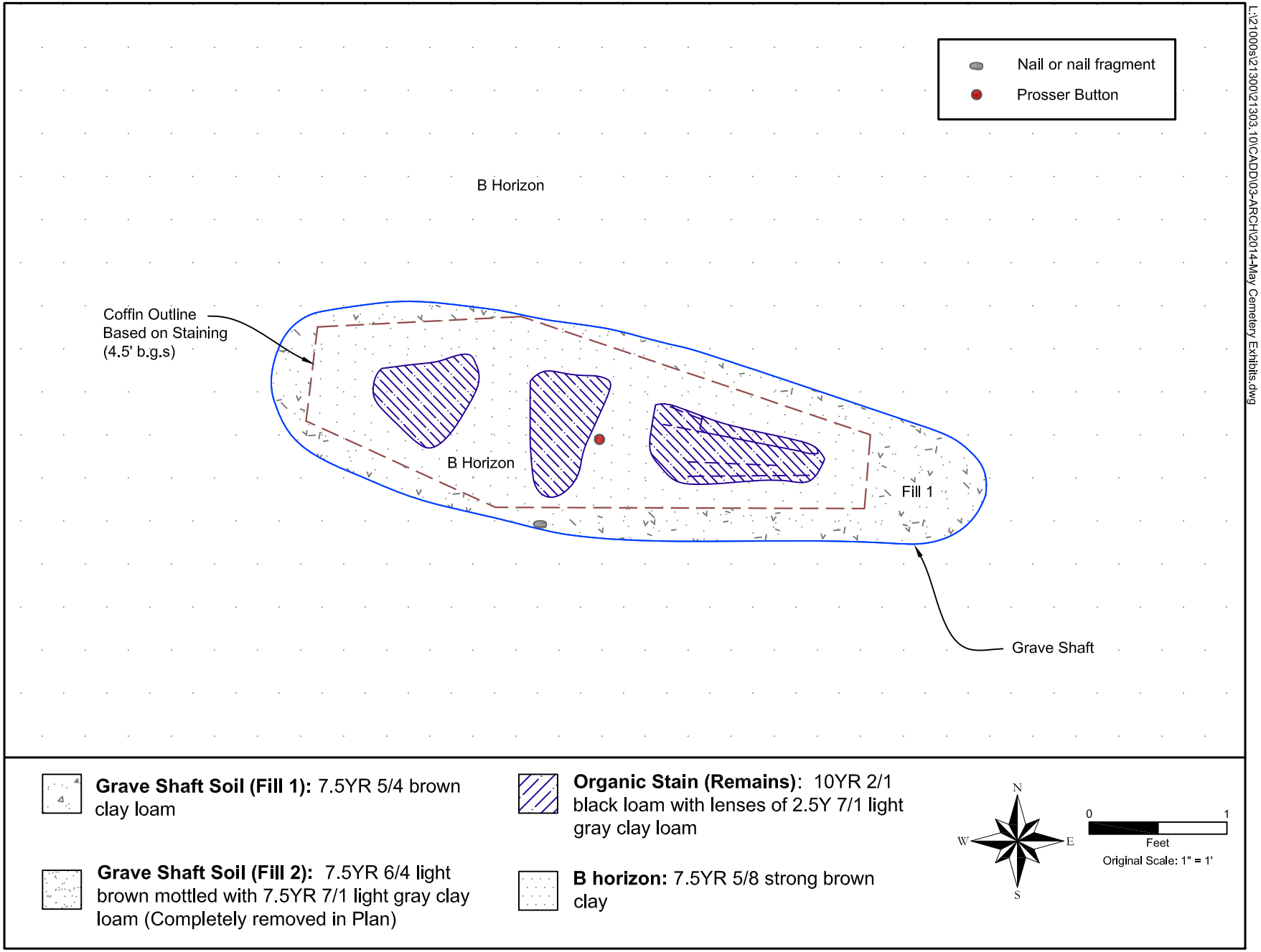
Surface Features
Depression: Yes
Grave Markers: Field Stone

Coffin Hardware: four white metal coffin screws (circa 1850 or later); six cut nails fragments (post 1830); 52 cut nail fragments

---

Burial 7 was located in the middle of the second row of the cemetery and was one of the smallest in size; the grave shaft measured 5.1 by 1.6 feet. A few nails were recovered from the outline of the coffin, which is assumed to have been hexagonal in shape (Exhibit 14). The base of the feature consisted of a dark organic soil, but no wood fragments were recovered (Plate 25). Skeletal preservation was extremely poor, but the faint outlines of the cranial area, crossed arms and femora were apparent within the dark organic matrix.

Two buttons, 58 cut nails and nail fragments, and four coffin screws were recovered from the burial feature (Plates 26 and 27).



L:\21000s\21300\21303.10\CADD\03-ARCH\2014-May Cemetery Exhibits.dwg

Exhibit 14
Burial 7 Plan

Plate 25: Plan of Burial 7

Plate 26: Burial 7, Coffin Screws

Plate 27: Burial 7, Cut Nails and Nail Fragments

Burial 8 (GF8)

Personal
Age/Sex: Older Adult (Probable) Female
Race/Ethnicity: Indeterminate
Bone Preservation: Poor
Personal Artifacts: Three Prosser buttons (post 1840); four ruby glass button insets

Interment Features
Grave Shaft Dimensions: 6.2 x 1.8 feet
Coffin Shape: Hexagonal
Coffin Dimensions: 5.3 x 1.7 feet
Coffin Material: Wood

Surface Features
Depression: Yes
Grave Markers: Fieldstone

Coffin Hardware: 14 cut nails/fragments; (post 1830); 42 cut nail fragments; 33 white metal coffin screws (circa 1850 or later)

The grave shaft associated with Burial 8 measured 6.2 feet in length and 1.8 feet in width. The hexagonal outline of the coffin, measuring 5.3 by 1.7 feet, was exposed at roughly four feet below ground surface, although several nails were recovered from the edge of the grave shaft before the coffin wood was visible (Exhibit 15 and Plate 28). In addition to 56 cut nails and nail fragments, 33 coffin screws were recovered, indicating a burial date of circa 1850 or later (Plate 29). Several white milk glass buttons and red glass button insets were recovered (Plate 30); only one of the red glass button insets was found *in situ* from the midsection (chest vicinity) of the coffin.

Skeletal prevention was poor; however, the outline/stains of the humeri, femora, and tibiae were apparent, as were poorly preserved cranial fragments and teeth (see Plate 28). The size and surface wear on the teeth was suggestive of an older adult female individual.

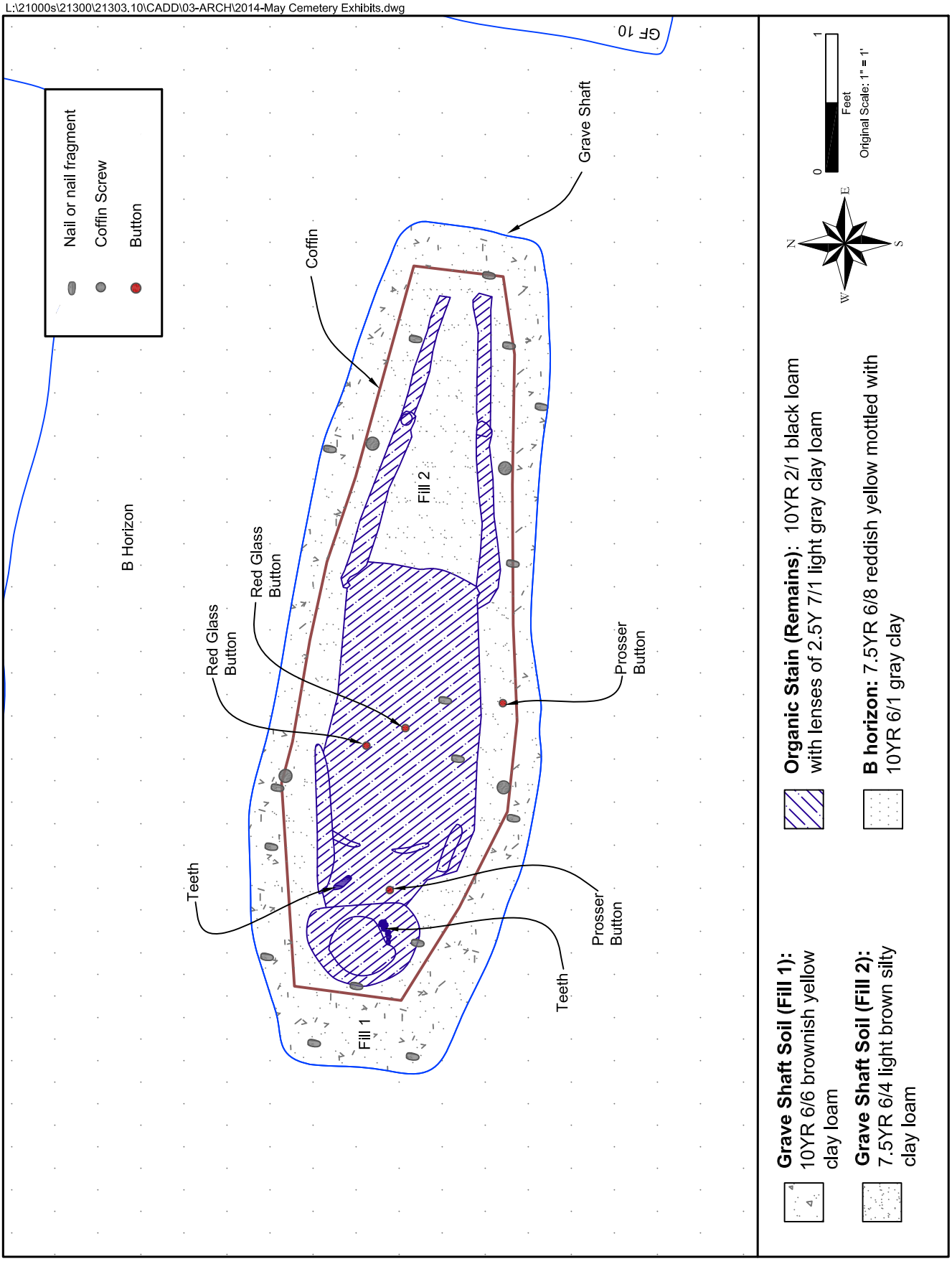


Exhibit 15
Burial 8 Plan

Plate 28: Plan of Burial 8

Plate 29: Burial 8, Ruby Glass Button Insets

Plate 30: Burial 8, Coffin Screws

Burial 9 (GF9)

Personal
Age/Sex: Adult Female
Race/Ethnicity: Indeterminate
Bone Preservation: Poor
Personal Artifacts: Ten Prosser buttons (post 1840); full set of vulcanized rubber dentures with porcelain teeth; gold plated finger ring

Surface Features
Depression: Yes
Grave Markers: Fieldstone

Interment Features
Grave Shaft Dimensions: 7.8 x 3.0 feet
Coffin Shape: Hexagonal
Coffin Dimensions: 6.2 x 1.9 feet
Coffin Material: Wood – Maple; Southern yellow pine

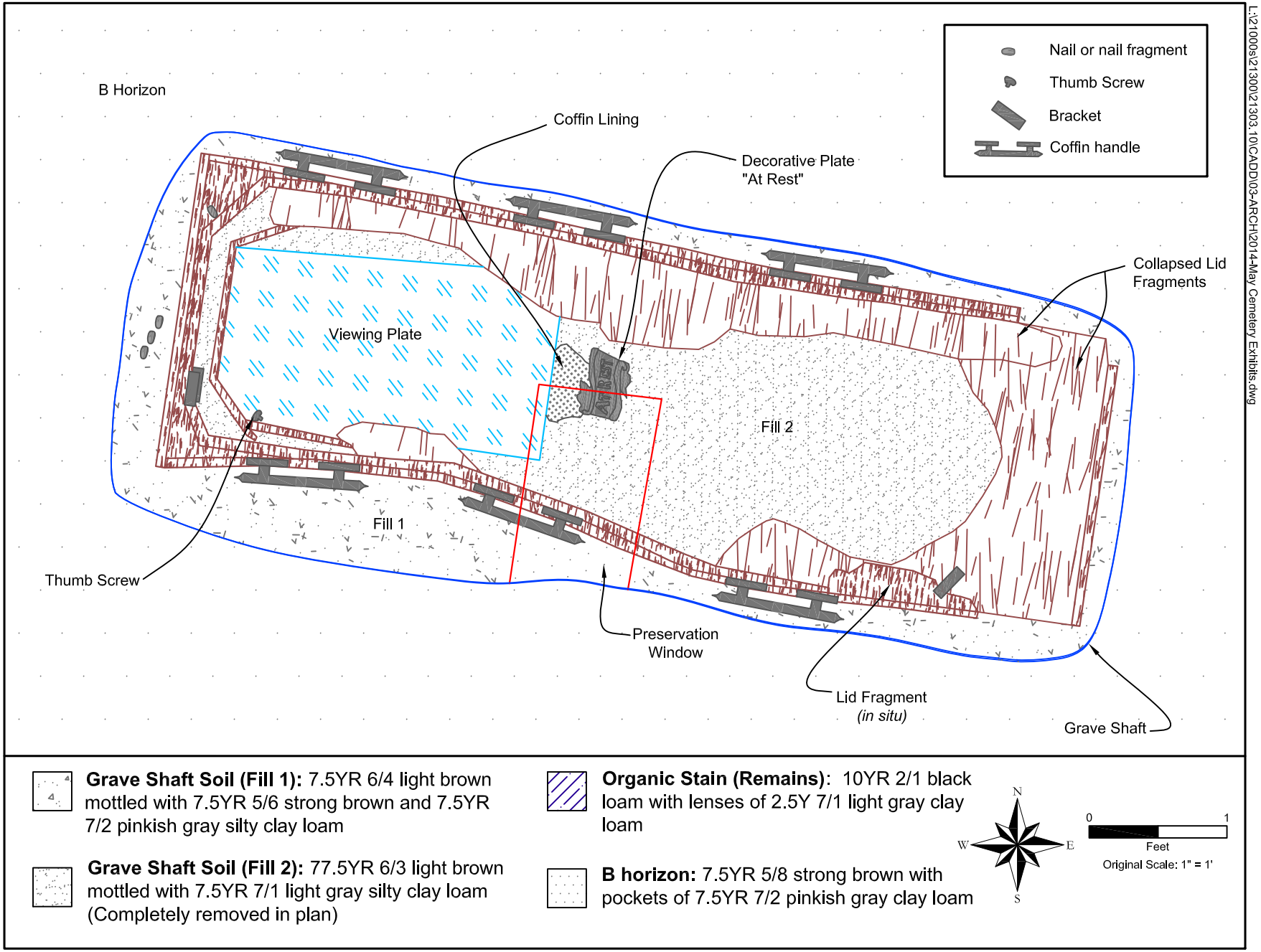
Outer Box Shape: Rectangular
Outer Box Dimensions: 6.5 x 1.9 feet
Outer Box Material: Wood – Tuliptree

Coffin Hardware: Glass viewing plate (19th century, 2nd half); three cut nails (post 1830); seven cut nail fragments; five white metal thumbscrews (one with decorative escutcheon plate attached) (circa 1875 or later); two white metal handles and 21 white metal handle fragments (post 1870); five ferrous metal brackets; one white metal coffin plate

---

Burial 9 was located on the northern end of the second row; the associated grave shaft measured 7.8 by 3.0 feet. The outline of the coffin was exposed at four feet below ground surface, and the feature consisted of a coffin placed within an outer vault box, both of wood construction (Exhibit 16 and Plate 31). The outer box was rectangular and measured approximately 6.5 by 1.9 feet; the inner coffin was hexagonal and measured 6.2 by 1.9 feet. The wood preservation was good and in slightly better condition than Burial 2. A sample of the side of the coffin was identified as hard maple. The exterior of the coffin may have been decorated, as evidenced by furring strips found attached to the wood (Plate 32). The furring strips were comprised of Southern yellow pine. Several large sections of the outer box, identified as tuliptree wood, were preserved; one section contained hand-stenciled lettering that was indecipherable (see Plate 32). It is possible that the outer box was the shipping container for the coffin.

The coffin lid had collapsed into the interior box into the interior of the coffin, as evidenced by the glass viewing plate, although individual pieces of the wooden lid were not distinguishable from the organic soils. Unlike Burial 4, the glass plate was rectangular and measured 2.4 feet in length and 1.3 feet in width (see Plate 31).



L:\21000s\21300\21303.10\CADD\03-ARCH\2014-May Cemetery Exhibits.dwg

Exhibit 16
Burial 9 Plan of Coffin With Lid

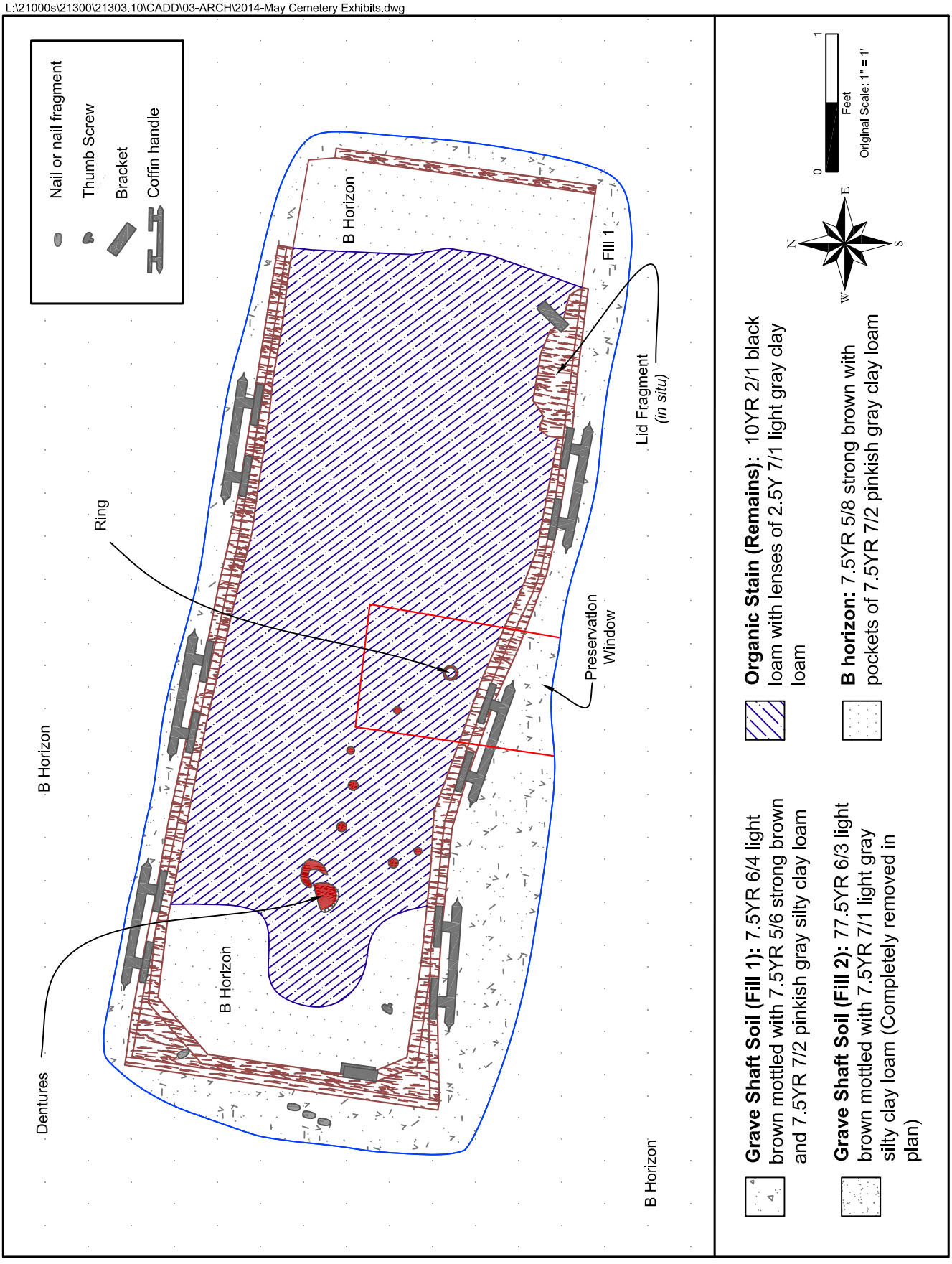


Exhibit 17
Burial 9 Plan With Lid Removed

Plate 31: Burial 9, Coffin Lid and Viewing Plate

Plate 32: Burial 9, Wood Samples Showing Furring Strips and Lettering

Situated at the base of the viewing plate was a white metal coffin plate, with the inscription, “At Rest” (Plate 33). Preserved beneath the glass plate were fragile cloth or lace fragments, along with several *in situ* buttons and a set of dentures, which could only be broadly dated (Plate 34). The base of the denture appeared to be Vulcanite, which was patented in 1851 and used in dentistry for nearly 100 years. The teeth appeared to be porcelain sections, which were used in the 19th century, rather than individual porcelain teeth, which would date the set of dentures to the 20th century (Scott Swank, personal communication, 2013). A gold plated ring was also mapped *in situ* within the midsection of the coffin.

The combination of personal artifacts and coffin hardware (Plates 35 and 36) date this burial to circa 1875 or later. Skeletal preservation was poor; however, the individual appears to have been an adult female.

Plate 33: Burial 9, White Metal/Lead Coffin Plate

Plate 34: Burial 9, Full Set of Vulcanized Rubber Dentures with Porcelain Teeth

Plate 35: Burial 9, White Metal Thumbscrew

Plate 36: Burial 9, White Metal Double-Lug Short Bar Coffin Handle

Burial 10 (GF10)

Personal
Age/Sex: Older Adult Male
Race/Ethnicity: Indeterminate
Bone Preservation: Poor
Personal Artifacts: Ten Prosser buttons (post 1840); three fragments of unidentified material

Surface Features
Depression: Yes
Grave Markers: Fieldstone

Interment Features
Grave Shaft Dimensions: 7.9 x 3.25 feet
Coffin Shape: Hexagonal
Coffin Dimensions: 6.0 x 1.6 feet
Coffin Material: Wood - Mahogany

Outer Box Shape: Rectangular
Outer Box Dimensions: 6.2 x 1.8 feet
Outer Box Material: Wood

Coffin Hardware: one cut nail (post 1830); two cut nails fragments; seven white metal thumbscrews (circa 1875 or later); six white metal double lug swing bail coffin handles (circa 1860 or later)

Similar to Burial 1, Burial 2 and Burial 9, this hexagonal shaped coffin was situated within an outer vault box of wood construction (Exhibit 18 and Plate 37). The grave shaft measured 7.9 by 3.25 feet and extended to a total depth of 5.75 feet below ground surface. The dimensions of the outer rectangular box were 6.2 by 1.8 feet and the inner coffin measured 6.0 x 1.6 feet. Hardware (thumbscrews and handles) was located *in situ* on the coffin; no hardware was associated with the vault box (Plates 38 and 39). The best preserved wood sample from the vault box was identified as mahogany. Based on the hardware, this burial dates to circa 1875 or later.

Skeletal preservation was poor; however, the outline (stained soil) of the femora, tibiae, fibula, and a section of vertebra were apparent (see Plate 37). Despite the poor conditions, an attempt to remove these remains, which were stained dark brown from contact with the coffin wood, was attempted. The skull cavity was observed during excavation of the soil that had collapsed into the feature; however, only insubstantial skull fragments were recovered.

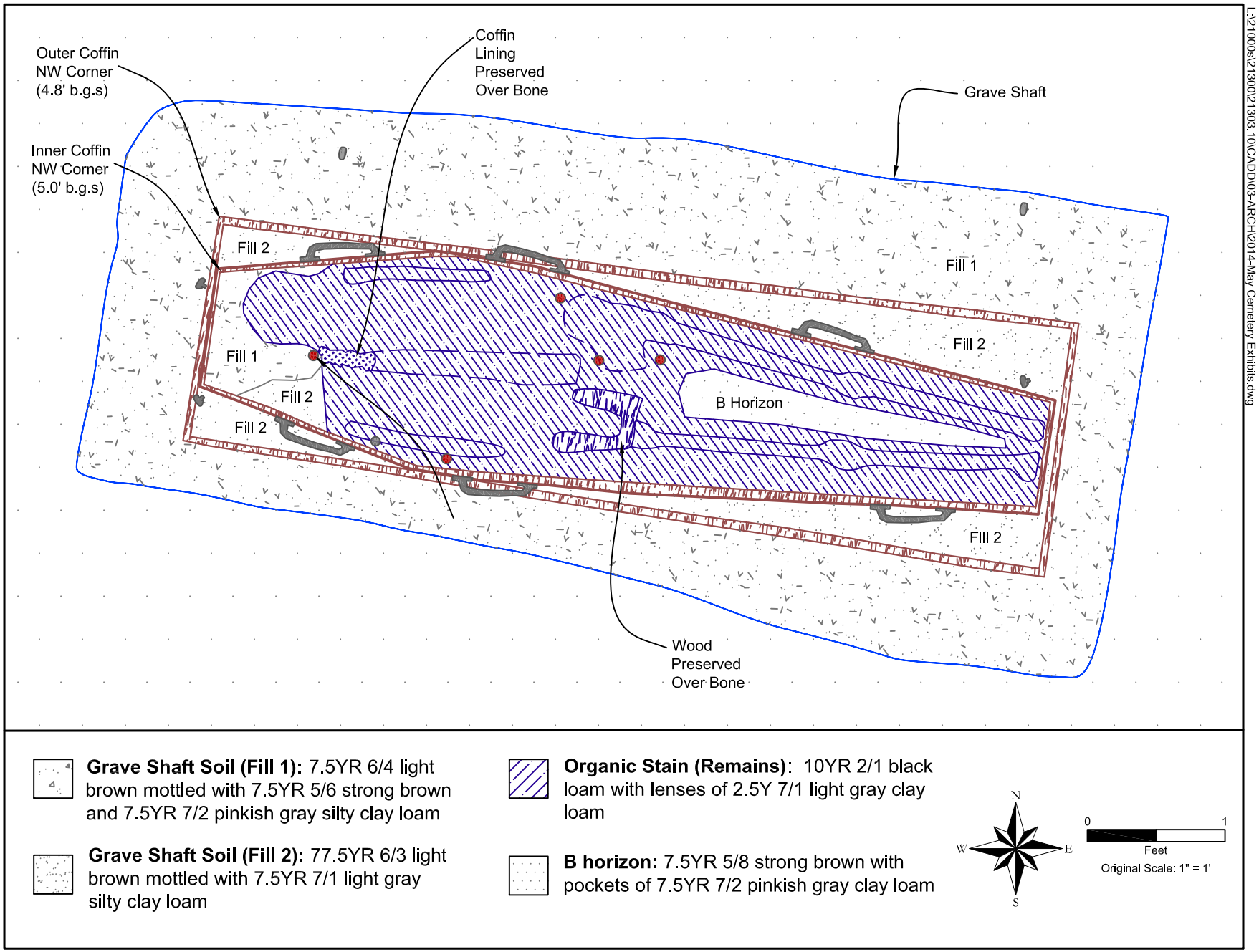


Exhibit 18
Burial 10 Plan

Plate 37: Plan of Burial 10 Showing Organic Stain (Remains)

Plate 38: Burial 10, White Metal Double-Lug, Swing Bail Coffin Handle

Plate 39: Burial 10, White Metal Thumbscrews

Burial 11 (GF11)

Personal

Age/Sex: Older Adult Male
Race/Ethnicity: Indeterminate
Bone Preservation: Poor
Personal Artifacts: Six Prosser buttons (post 1840); six Goodyear buttons (1855-1886); one vulcanite finger ring

Outer Grave Shaft Dimensions: 7.45 x 4.75 feet
Inner Grave Shaft Dimensions: 7.4 x 2.0 feet
Coffin Shape: Hexagonal
Coffin Dimensions: 6.0 x 1.75 feet
Coffin Material: Wood

Surface Features

Depression: Yes
Grave Markers: Fieldstone

Interment Features

Coffin Hardware: 87 cut nails/nail fragments (post 1830); 96 cut nails/nail fragments; nine white metal coffin screws (circa 1850 or later)

Burial 11 was the only interment that appeared to have an outer and inner grave shaft (Exhibit 19) which may represent evidence of "grave vaulting" at site 44PW1947. Davidson defines "grave vaulting" as the practice of excavating a smaller secondary shaft or niche into the base of the rectangular grave shaft, into which the coffin was placed; and the secondary shaft was then covered with boards (2012:88). The practice, Davidson argues, is of African mortuary tradition and was retained by enslaved Africans brought to America and by their descendants into the 20th century.

The outer shaft of Burial 11 measured 7.45 feet in length and 4.75 feet in width, and extended to a depth of 3.6 feet below the surface. The inner secondary shaft narrowed to 7.4 by 2.0 feet and extended 1.5 additional feet into the subsoil. The outlines of a hexagonal coffin, measuring 6.0 by 1.75 feet, were demarcated only by the presence of nails at the base of the outer grave shaft (Plate 40).

Skeletal preservation was poor; however, the remnants of the right humerus, radius, ulna, and tibiae were observed. A relatively large quantity of buttons was recovered from Burial 11 (Plate 41), including Prosser buttons that postdate 1840 (Sprague 2002) and Goodyear buttons manufactured by the Novelty Rubber Company, which was in operation between 1855 and 1886 (Cienna 2013). A brown vulcanite ring was also recovered from this individual grave feature (Plate 42).

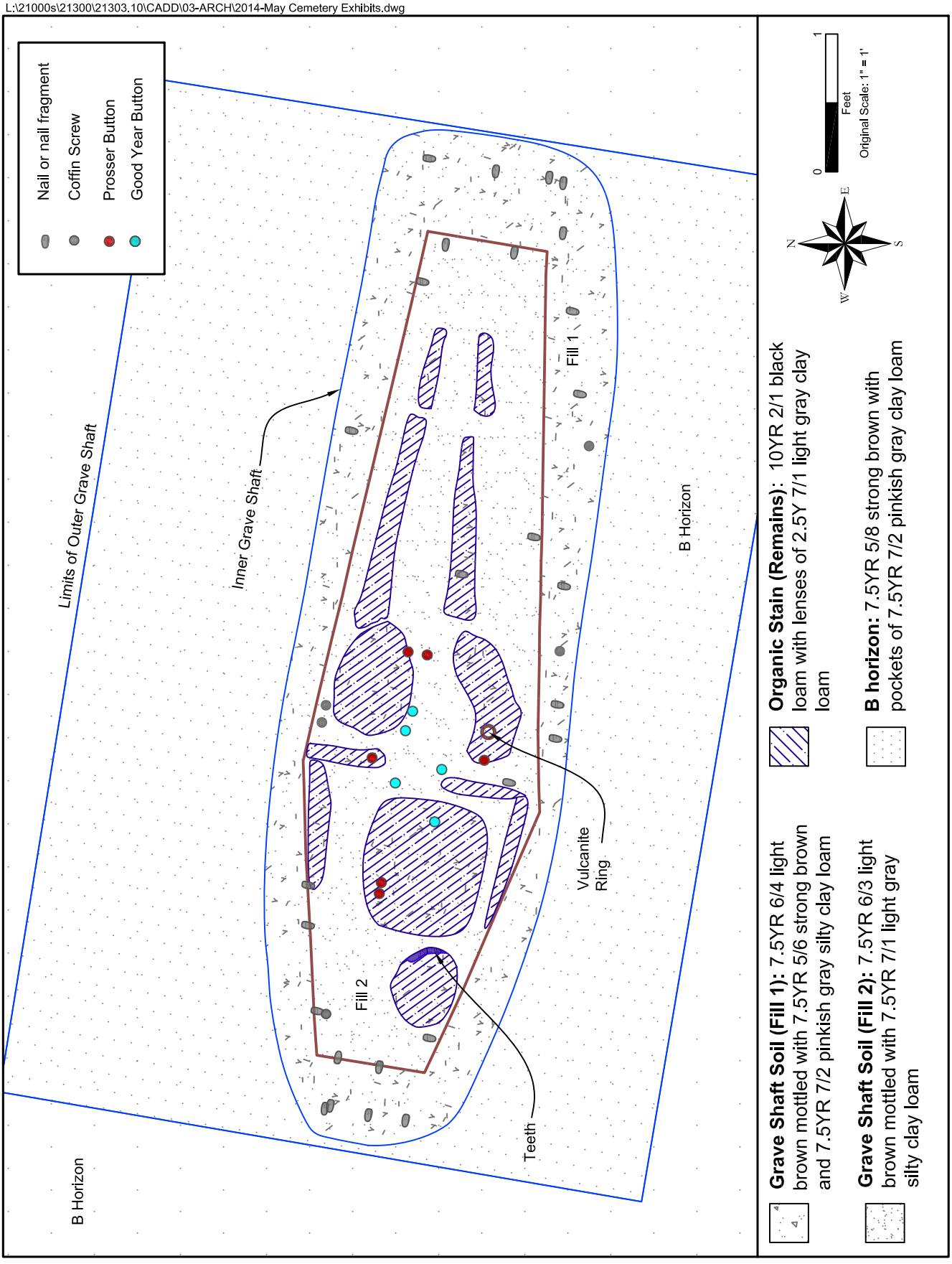


Exhibit 19
Burial 11 Plan

Plate 40: Plan of Burial 11 Organic Stain (Remains)

Plate 41: Burial 11, Buttons
Top Rows: Black hard rubber 2-hole sew through
Bottom Rows: hard paste porcelain Prosser buttons

Plate 42: Burial 11, Brown Vulcanite Ring

Burial 12 (GF12)

Personal
Age/Sex: Older Adult Male
Race/Ethnicity: Indeterminate
Bone Preservation: Poor
Personal Artifacts: Four Prosser buttons (post 1840)

Surface Features
Depression: Yes
Grave Markers: Fieldstone

Coffin Hardware: 179 cut nails/nail fragments (post 1790); 12 white metal coffin screws (circa 1850 or later); six unidentified ferrous metal fragments

Interment Features
Outer Grave Shaft Dimensions: 7.45 x 4.75 feet
Inner Grave Shaft Dimensions: 7.4 x 2.0 feet
Coffin Shape: Hexagonal
Coffin Dimensions: 6.0 x 1.75 feet
Coffin Material: Wood

Burial 12 was located on the southern end of the second row. The associated grave shaft was approximately 6.9 by 2.6 feet. The outline of the hexagonal coffin was exposed at 4.3 feet below surface and measured 6.1 x 1.75 feet (Exhibit 20). Wood preservation was poor and the base of the coffin was visible only as an organic stain. Based on the hardware, this burial dates to circa 1850 or later.

Skeleton preservation was similarly poor; insubstantial cranial bone fragments were noted at the head of the coffin, but were not recovered. Based on the size and surface wear on the teeth that could be recovered, this individual was an older adult male.

L:\21000s\21300\21303.10\CADD\03-ARCH\2014-May Cemetery Exhibits.dwg

Exhibit 20
Burial 12 Plan

Plate 43: Burial 12, Coffin Screws

Burial 14 (GF14)

Personal
Age/Sex: Indeterminate
Race/Ethnicity: Indeterminate
Bone Preservation: Poor
Personal Artifacts: None

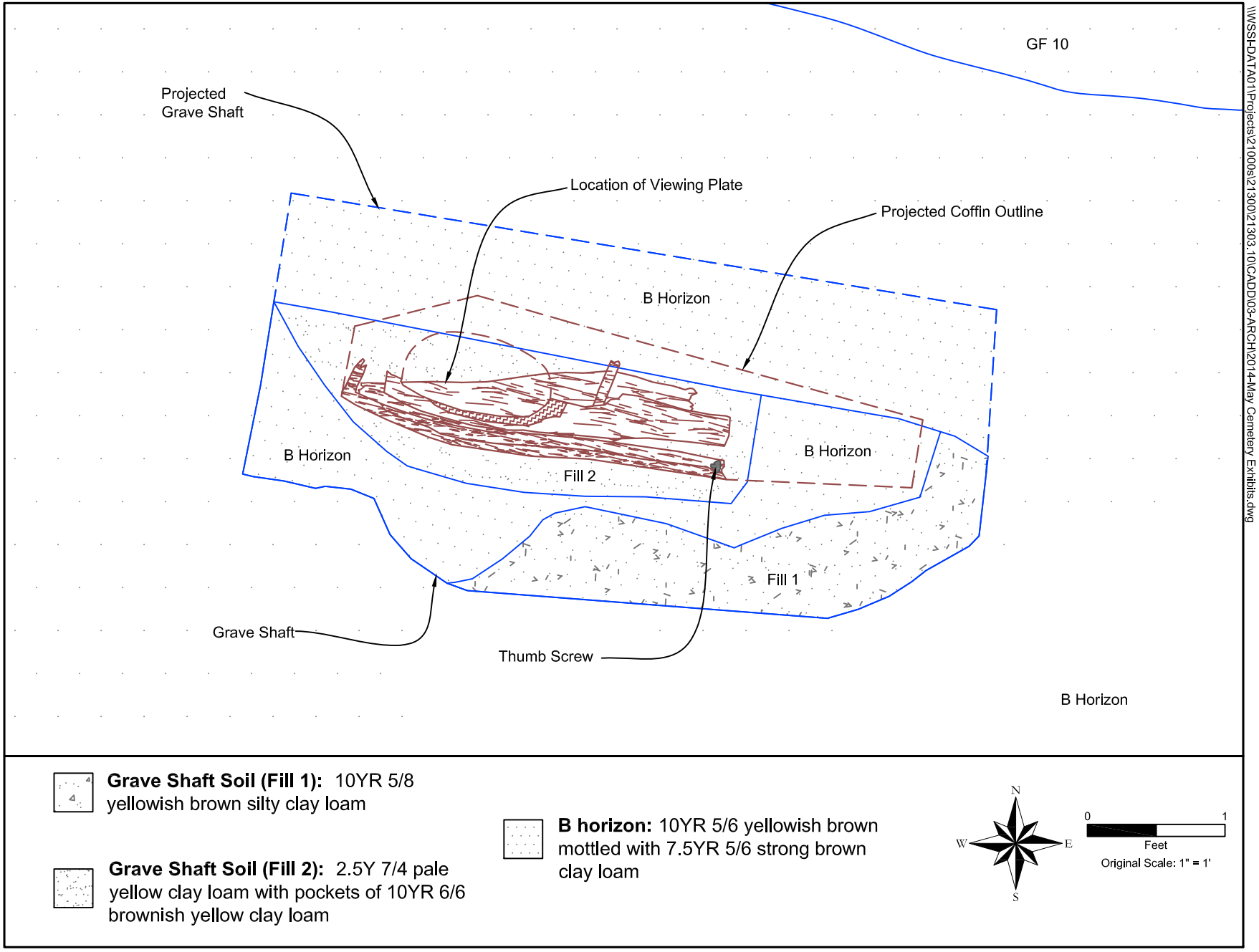
Surface Features
Depression: None
Grave Markers: None

Interment Features
Grave Shaft Dimensions: 7.45 x 4.75 feet
Coffin Shape: Hexagonal
Coffin Dimensions: 6.0 x 1.75 feet
Coffin Material: Wood – Southern yellow pine, willow and basswood

Coffin Hardware: Glass viewing plate (19th century, 2nd half), 20 cut nails/nail fragments (post 1790); one white metal thumbscrew (circa 1875 or later)

Burial 14 was located in the southeastern corner of the cemetery, approximately one foot south of Burial 10 (see Exhibit 8). No depression was apparent on the surface and no grave shaft was apparent until the coffin was exposed at 3.3 feet below ground surface. The western end of the cemetery contained larger trees that hindered the boundary delineation work; and it appears that Burial 14 was heavily disturbed by the subsurface roots. The coffin measured approximately four feet in length by one foot in width; however, only a portion of the coffin was found *in situ* (Exhibit 21). The coffin lid had collapsed completely onto the base of the coffin and a portion of a glass viewing plate was located at the head of the coffin (Plate 44). One decorative thumbscrew was also recovered along with the glass fragments (Plate 45). The thumbscrew was identical to those found in Burial 9.

Wood preservation was good in comparison with the rest of the cemetery features; samples were identified as Southern yellow pine, willow and basswood; the latter was used for construction of the viewing panel. No human remains were apparent.



\\WSSI-DATA01\Projects\21000s\21300\21303.10\CADD\03-ARCH\2014-May Cemetery Exhibits.dwg

Exhibit 21
Burial 14 Plan

Plate 44: Burial 14, Pale Green Coffin Viewing Plate Sherds

Plate 43: Burial 14, White Metal Thumbscrew

Burial Feature Discussion

Hacker-Norton and Trinkley identified seven types of coffin hardware: handles, thumbscrews, escutcheons, white metal screws or tacks, caplifters, decorative studs, and plates (1984:8). The coffin handle itself consists of four parts: the lug (the plate attached to the coffin); the arm bracket; the bar; and the tip (placed on the end of the bar). The handle can be stationary or of the swing variety depending on whether arm brackets are used (ibid.). The short bar coffin handle was connected to the lug via the arm bracket, as opposed to the earlier curved swing bail handles, which were attached directly to the lug. Based on archeological and documentary evidence, the short bar handle may have been in use from 1871 to 1921, although its use became popular starting in 1880 (Appendix III - Burgess 2014:131).

Coffin lids were secured with white metal coffin screws in the early 19th century, but were gradually replaced by thumbscrews by the latter half of the century (Pye 2007:63). An increased use of escutcheon plates[2] followed the introduction of thumbscrews in the 1870s (Davidson 2006:146-147). Thumbscrews and escutcheons also first appear together in hardware catalogs dating to the 1870s and were usually sold as "matched sets" (Hacker-Norton and Trinkley 1984:30, 46; Davidson 2004: 404). "Caplifters" were used to lift the coffin panels for viewing, but were made obsolete by hinged lids (Hacker-Norton and Trinkley 1984:11). Finally, engraved metal plates were often attached to the coffin lid with inscriptions such as "Rest in Peace" or "Mother" (ibid.).

Based on the dates provided in the coffin hardware analysis (see Appendix III), site 44PW1947 was in use during the second half of the 19th century. Five burials contained only white metal coffin screws (postdating ca. 1850), which suggests an earlier mid-19th century interment date; the absence of other hardware is also consistent with mid-19th century burial practices. The remaining six burials had coffin hardware that postdated 1875 and 1880 and a mixture that appeared to reflect the trend towards ornamentation during the beautification of death movement, which peaked in the second half of the 19th century. However other factors such as the socio-economic status of the surviving family members or the use of stockpiled coffin hardware may have influenced the choice represented at this cemetery.

Socioeconomic factors may have also influenced the types of wood used to construct the coffins at site 44PW1947. The visible portions of coffins (i.e. the lid) were often constructed from more expensive woods, such as mahogany; the less expensive woods were painted, varnished or even covered in cloth in an effort to mimic the appearance of the more expensive woods (LeeDecker et al. 1995; Pye 2010). Ferguson identified that the coffins at site 44PW1947 were primarily constructed with the less expensive softwoods, and only two examples of more expensive hardwoods (mahogany and maple) were identified (see Appendix IV). The viewing panel wood on Burial 14 appeared to be highly polished and exhibited evidence of paint; paint flecking was also observed around

[2] Davidson (2004:404) defined an escutcheon as the "decorative screw plate through";[o 1920+.

the viewing panel of Burial 4 during excavation. Burial 2 exhibited brass tack impressions between the base of the coffin and the vault box, which may be evidence that the coffin was covered in cloth.

Prior to the early 19th century, coffins were typically produced locally, at the time of need, by cabinetmakers, carpenters, or family members (Habenstein and Lamers 1955). Toward the second half of the 19th century, companies in the local Washington D.C. area began to specialize in coffin manufacture and funeral undertaking, and likely had stockpiles of coffins and hardware on hand. Most coffins were hexagonal in shape prior to the Civil War (Habenstein and Lamers 1955), however in rural areas; this coffin shape may have remained in use until about 1925.

Approximately half of the burials (Burial 1, Burial 2, Burial 4, Burial 9 and Burial 10) exhibited evidence of the coffin being enclosed within an outer box. The coffin was likely lowered into this outer box, which had been placed at the base of the grave shaft, and then sealed inside, as is the case in other historic cemeteries that have been archeologically investigated (Pye 2011: 81 c.f. Hacker-Norton and Trinkley 1984:10; Oster et. al. 2005:191). The outer box may have been the shipping container for the coffin that was reused as a vault.

Cemetery Individuals

Archival records do not clearly mention the cemetery, its occupants, or its exact location; however, the individuals may be associated with the family of William and Cordelia Lynn, who owned the land containing the cemetery during this time period, and/or possibly with the tenants that leased the property when the Lynn family moved to Washington D.C. William Lynn is also listed as owning a single slave in 1850 and the possibility of a slave burial cannot be discounted.

Based on the archeological evidence (artifact and coffin hardware analysis), the burials located within site 44PW1947 date to the period post-1850 to post-1880. The incomplete and poorly preserved skeletal remains of four older male adults, one older female adult (over the age of 35), two probable female (older) adults, and two individuals of indeterminate sex (one sub-adult and one adult of unspecified age) were identified (Table 6). One additional female older adult and one individual of indeterminate age and sex were also identified, but skeletal remains were not examined. Three of the individuals have possible African ancestry, but the affiliation of the remaining individuals is indeterminate. The 1850 slave schedule notes that William Lynn owned a single female slave, aged 23. He is not listed as a slave owner in the 1860 schedule and is unclear if the slave died or was sold between 1850 and 1860.

Table 6: Archeological Evidence from Site 44PW1947

Burial (GF#)	Age/Sex Estimate*	TPQ**	Explanation	Burial Date***
1	Adult/Indeterminate	1880	Based on appearance of specific coffin handles in 1880 catalogue	Post ca. 1880
2	Older Adult Female (35+ Years Old)	1880	Based on appearance of specific coffin handles in 1880 catalogue	Post ca. 1880
3	Older Adult (Probable) Female	1865	Based on coffin screws in 1865 catalogue	Post ca.1850
4	Older Adult Male	1880	Based on appearance of specific thumbscrew in 1880 catalogue	Post ca. 1880
7	10-14 Years Old /Indeterminate	1865	Based on coffin screws in 1865 catalogue	Post ca.1850
8	Older Adult (Probable) Female	1865	Based on coffin screws in 1865 catalogue	Post ca.1850
9	Adult Female	1875	Based on patent date for "third generation" thumbscrew	Post ca.1875
10	Older Adult Male	1875	based on patent date for "third generation" thumbscrew	Post ca.1875
11	Older Adult Male	1865	Based on coffin screws in 1865 catalogue	Post ca. 1850
12	Older Adult Male	1865	Based on coffin screws in 1865 catalogue	Post ca.1850
14	Indeterminate /Indeterminate	1875	Based on patent date for "third generation" thumbscrew	Post ca.1875

*** Based on Kolmann's analysis (see Appendix III)**
**** Terminus Post Quem (TPG) is the earliest time the burial may have happened**
***** Based on Burgess' interpretation and analysis (see Appendix IV)**

Although the individuals at site 44PW1947 may never be positively identified, an examination of the Lynn family genealogy and the archeological data was conducted in an attempt to assess the likelihood that individual interments could be linked to Lynn family members. At the time of his death in 1862, William Lynn had twelve children (see list on following page). His widow, Cordelia, and minor children likely continued to reside on the property until sometime after 1870; by 1880, Cordelia and family were living in the District of Colombia. As it would be unusual for husbands and wives to be buried in separate locations, it is possible that most individuals that may have been buried in this location were unmarried children of William and Cordelia Lynn.

Cordelia, Lewellen, Luther, James W., Fielder, Seymour and Mildred Lynn are listed in the District of Columbia death records; however, with the exception of Cordelia whose burial location is listed in her obituary and Lewellen who was reportedly buried in Manassas, the individual burial locations are not listed. Cordelia Lynn's death notice further clarifies that she was buried in the family burying ground near Independent Hill, which may possibly refer to site 44PW1947.

To summarize, the archeological information indicates that the interments include three older (post 35 years of age) adult females, two of which postdate 1865 and one of which postdates 1880; four older (post 35 years of age) adult males, two of which postdate 1865, one which postdates 1875 and one which postdates 1880; one adult female which postdates 1865; one indeterminate adult which postdates 1880; one burial of a 10-14 year old which postdates 1865 and one indeterminate burial which postdates 1875. Two of the older adult female burials and the adult indeterminate burial exhibited crenulated molars which may be indicative of African ancestry.

Based on the available information, the following presents the birth and death dates of the Lynn family members, as well as information concerning their burial place, if known:

William Lynn, 1818-1862
Cordelia Lynn, ca. 1824-1899, buried at family farm near Independent Hill/Manassas
John Henry, ca. 1840-1884
Robert, ca. 1842-1870
Lewellen, ca, 1844-1882, buried in Manassas
Wallace, ca. 1845- between 1860-1870
Thaddeus, ca. 1846-1929
Luther, ca. 1848-1901
James W., ca. 1849-1912, buried at District of Columbia
Ann, ca. 1851-1872
Sophia, ca. 1852-1862
Lucy, 1855-between 1870-1873
Fielder, 1856-1922, buried at Manassas Station
Seymour, 1858-1877
Mary Mildred, 1860-1877
Joseph, 1862-?, was alive in 1896 as indicated by the chancery case

The Prince William County cemetery survey lists three Lynn family cemeteries: Lynn on Andes, Lynn at Lawndale and Davis-Lynn. None of the Lynn family members listed above have marked stones within the Lynn on Andes and Lynn at Lawndale cemeteries although the Lynn at Andes cemetery has unmarked fieldstones as well. The cemetery survey does not individually list the graves at the Davis-Lynn cemetery. This cemetery is on private property and could not be accessed.

According to Charlotte Cain, a researcher with the Prince William County library system, the following represent possible interments within site 44PW1947: William, Cordelia, John H., Robert, Lewellen, Wallace, Ann, Sophia, Lucy, Seymour and Mary Mildred (Charlotte Cain, personal communication 2014). The possible interments were based upon a stated place of burial, a death certificate filed in Prince William County and the date of death; death dates after the turn of the 20th century were not considered to be potential interments.

The cost associated with burial expenses appears to have remained constant for the Lynn family in the latter half of the 19th century. Chancery records show that Cordelia Lynn purchased coffins in the amount of "twenty-five greenbacks" from Benjamin Cole on August 21, 1865 (*Exr. of Benoni E Harrison vs. Admr. of William Lynn Etc.*, Chancery Court Cause 1899-023, Prince William County [PWC] Court Records). Benjamin Cole was a local blacksmith according to federal census records, but reportedly constructed coffins for other Prince William County residents (Charlotte Lynn, personal communication, 2013).

An additional $25 in burial expenses was also paid by Cordelia in January of 1874 (*Exr. of Benoni E Harrison vs. Admr. of William Lynn Etc.*, Chancery Court Cause 1899-023, PWC Court Records). An account of the William Lynn's estate for the years 1872-1874 clarifies that this expense was paid to B. Cole for coffins (PWC Will Book R:675). Again, none of Cordelia's immediate family appears to have died in 1874; however, her daughter Lucy died circa 1870-1873.

John Henry Lynn's (d. 1884) estate account included the purchase of a coffin for $20, with $2 for burial clothes and $1 for grave digging. John's wife, Edna A. Lynne died nearly 20 years later; her burial costs similarly totaled $23 (Charlotte Lynn, personal communication, 2013).

CHAPTER 7 – SUMMARY

Cemetery investigations were conducted at site 44PW1947, which is located approximately 1900 feet south of the intersection of Hoadly Road (Route 642) and Independence Drive in southern Prince William County, Virginia. Thunderbird Archeology, a division of Wetland Studies and Solutions, Inc., of Gainesville, Virginia, conducted the studies described in this report for Prince William County Schools. The cemetery investigation/delineation was conducted in July 2013 and the archeological removal of individuals from the cemetery was conducted in November 2013.

Cemetery Delineation

The objective of the cemetery investigation and delineation was to determine the outer limits of a cluster of grave depressions and fieldstone burial markers identified within the northeastern portion of the 12th High School property. A backhoe equipped with a smooth-bladed bucket was used to cut trenches along the apparent boundary of the cemetery (as indicated by the presence of cemetery related features, such as grave markers, grave depressions, old trees, etc.) and within a 20-25 foot radius of all sides of the cemetery; no excavations were conducted within the visible limits of the cemetery. All cemetery stones, grave depressions, subsurface cultural features, limits of backhoe excavation, and delineated cemetery boundaries were surveyed located.

Twelve likely grave depressions and 12 fieldstone burial markers were documented within the cemetery, which was recorded as site 44PW1947. Backhoe trenching along perimeter of these visible grave features resulted in the identification of one additional possible burial (Burial 13) and seven posthole features, which may represent the portions of an earlier enclosure for the cemetery.

No markings or inscriptions were found on any of the (probable) fieldstone markers. Regionally, the use of local fieldstones as grave markers appears to have remained a common practice amongst Euro-American and African American groups, excepting the wealthy and elite, into the early 20th century.

Archeological Removal of Human Remains Fieldwork

A total of eleven burial grave features were identified at site 44PW1947 during the archeological removal of human remains excavation. The cemetery was arranged in three rows, with four interments in the first (western) row; five interments in the middle row; and two in the easternmost row (see Exhibit 6). All burials were oriented east-west and contained head and foot fieldstone markers. The outlines of the coffins were visible as wood fragments /stains or were demarcated by the presence of nails and other coffin hardware. All coffins were hexagonal in shape, although four were placed within wooden box vaults.

The individuals located within the cemetery included four older male adults, three older female adults, and adult female of unknown age, and three individuals of indeterminate sex (one sub-adult, one adult, and one of unknown age). Three of the individuals (Burial 1, Burial 2 and Burial 3) have possible African ancestry, but the affiliation of the remaining individuals is indeterminate. No DNA testing could be conducted because of the incompleteness of the remains.

Based on the archeological evidence (artifact and coffin hardware analysis), the burials located within site 44PW1947 date from post-1850 to post-1880. The mixture of coffin hardware at this cemetery site appears to reflect the trend towards ornamentation during the beautification of death movement, which peaked in the second half of the 19th century. However other factors such as the socio-economic status of the surviving family members or the use of stockpiled coffin hardware may have influenced the choice represented at this cemetery. The coffins at were primarily constructed with less expensive softwoods, with only (at least) two examples of more expensive hardwoods (mahogany and maple) utilized. However several coffins exhibit use of more expensive wood only on the coffin exteriors; this may be possible evidence of an effort to mimic the appearance of the more expensive woods.

Archival records do not clearly mention the cemetery, its occupants, or its exact location, and the individuals at site 44PW1947 may never be positively identified. However based on the available evidence, the individuals most likely were associated with the family of William and Cordelia Lynn, who owned the land containing the cemetery during this time period, and/or possibly with the tenants that leased the property when the Lynn family moved to Washington D.C.

REFERENCES CITED

Alexandria Gazette (AG) [Alexandria, Virginia]
1811a Advertisement, June 18.
1811b Advertisement, November 28.
1815 Advertisement, March 2.
1824 Advertisement, January 8.
1864 August 25: 2.

Cienna, Carol
2013 *Hard Rubber Buttons and Some Look-A-Likes*. Electronic Document. http://www.vintagebuttons.net/rubber.html, accessed December 31, 2013.

Clark, Thomas D.
1964 *Pills, Petticoats and Plows: The Southern Country Store*. University of Oklahoma Press, Norman, Oklahoma.

Columbia Mirror and Alexandria Gazette
1795 John Hubball, Upholsterer and Cabinet Maker, Notice. September 15.

Dammann, Gordon
1988 *Pictorial encyclopedia of Civil War medical instruments and equipment, Volume 2.* Pictorial Histories Publishing Co., Missoula, Montana

Duncan, Patricia B.
2008 *Genealogical abstracts from The Mirror: 1891-1899, Loudoun County Virginia*, Heritage Books, Westminster, Maryland.

Farrell, James J.
1980 *Inventing the American Way of Death, 1830-1920*. Temple University Press, Philadelphia, Pennsylvania.

Fithian, Philip Vickers and Hunter D. Farish
1968 *Journal and Letters of Philip Vickers Fithian 1773-1774: A Plantation Tutor*. University of Virginia Press, Charlottesville, Virginia.

Fitzgerald, Oscar P.
1986 *The Green Family of Cabinetmakers: An Alexandria Institution, 1817-1887*. The Lyceum, Alexandria, Virginia.

Faust, Drew Gilpin
2001 The Civil War soldier and the art of dying. *The Journal of Southern History.* 67(1): 3-38.

Greene, Meg
2008 *Rest In Peace: A History of American Cemeteries*. Twenty-First Century Books. Minneapolis, Minnesota.

Habenstein, Robert W. and William M. Lamers
1955 *The History of American Funeral Directing.* National Funeral Directors Association, Milwaukee, Wisconsin.
1981 *The History of American Funeral Directing* [2nd Revised Edition]. National Funeral Directors Association, Milwaukee, Wisconsin.

Hawes, Elaine
1992 Charles Koones and the Alexandria Furniture Trade, 1820-1860. *Alexandria History* IX.

Hurst, Gwen J.
1990 *U.S. Bottle Chronology.* B.P. Bishop Museum, Honolulu, Hawaii.

Jeane, D. Gregory
1992 The Upland South Folk Cemetery Complex: Some Suggestions of Origin. In *Cemeteries & Gravemarkers: Voices of American Culture*. Richard E. Meyer(ed.). Utah State University Press, Logan, Utah.

Jones, Hugh
1865 *The present state of Virginia: giving a particulor and short account.* Sabin's Reprints, New York, New York.

Jordan, Terry G.
1982 *Texas Graveyards: A Cultural Legacy*. University of Texas Press, Austin, Texas.

Kabler, Dorothy Holcombee
1957 Early Cabinet Makers. *Yearbook of Alexandria Association.* Alexandria Association, Alexandria, Virginia.

Lang, Kathryn Ann
1984 Coffins and Caskets: Their Contribution to the Archaeological Record. M.A. Thesis, Department of Anthropology, University of Idaho.

Lansing, Lee C. Jr.
2002 *Historic Dumfries VA. 1749*. Fourth Printing. Prince William Historical Commission.

Larkin, Jack
1988 *The Reshaping of Everyday Life, 1790-1840.* Harper and Row, New York, New York.

McPherson, James M.
1988 *Battle cry of freedom: the Civil War era.* Oxford University Press, New York, New York.

Middleton, Arthur Pierce
1984 *Tobacco Coast, A Maritime History of the Chesapeake Bay in the Colonial Period* (Originally printed in 1953). Johns Hopkins University Press, Baltimore, Maryland.

Moll, Rob and Lauren Winner
2010 *The Art of Dying: Living Fully Into the Life to Come*. Inter-Varsity Press, Downer's Grove.

Noel Hume, Ivor
1976 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York, New York.

Pike, Martha V. and Janice Gray Armstrong, editors
1980 *A Time to Mourn: Expressions of Grief in Nineteenth Century America*. Museums at Stony Brook, Stony Brook, New York.

Potter, Elisabeth Walton and Beth M. Boland
1992 Guidelines for Evaluating and Registering Cemeteries and Burial Places. National Register Bulletin. Available online http://www.nps.gov/history/nr/publications/bulletins/nrb41/nrb41_5.htm (accessed 18 June 2008).

Rainville, Lynn
1999 "Hanover Deathscapes: Mortuary Variability in New Hampshire Cemeteries, A.D. 1770-1920," Ethnohistory 43:3: 541-97.

Schiffer, Margaret Berwind
1990 *Furniture and Its Makers of Chester County, Pennsylvania.* Schiffer Publishing, Ltd., Exton, Pennsylvania.

Slusser, H. Robert
1997 The Quaker Cemetery Cast Iron Coffin in Relation to the Development of Coffins and Caskets in North America. *Alexandria Archaeology Publications, Number 121.* Alexandria Archaeology, Alexandria, Virginia.

Snyder, Kimberly and Boyd Sipe
2008 *Phase I Archeological Investigation of the ± 110 Acre 12th High School Property, Prince William County, Virginia.* Report prepared for Prince William County Schools, Manassas, Virginia by Thunderbird Archeology, a division of Wetland Studies and Solutions, Gainesville, Virginia.

Stannard, David E.
1975 *Death in America*. University of Pennsylvania Press, Philadelphia.

APPENDIX I

Artifact Inventory

SITE 44PW1947
ARTIFACT INVENTORY

Burial 1, Fill 2 horizon

Ceramics

- 3 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.0 cm diameter (post-1840, Sprague 2002)

Metal

- 15 brass tack fragments
- 63 cut nail fragments (post-1790)
- 6 cut nail fragments, machine headed (post-1830)
- 16 cut nail fragments, point tip (post-1790)
- 44 cut nail fragments, unidentified heads (post-1790)
- 3 white metal butt hinge fragments (post-1865, Russell and Erwin 1980)
- 2 white metal butt hinges, whole (post-1865, Russell and Erwin 1980)
- 13 white metal cylindrical thumbscrews, raised annular bands encircling the cylinder at top, middle and base (1869 Sargent & Company coffin hardware catalogue, Davidson 2006:133-134), attached to white metal escutcheon plates, lobed ends, floral decoration, some with coffin wood fragments attached (post-1870s, Burgess 2014)
- 6 white metal double-lug short bar coffin handles, straight bar, rectangular lugs, smaller rectangle inside with leaves and vines, handle shaft has stylized over-lapping leaf motif with pine cone ends, bracket ends are hands, "Fine Electro Silver Plated" decoration (number 88, catalogue 1880, Meridan Britannia:5) (1870s-1920, Hacker-Norton and Trinkley 1984:50; Burgess 2014; Woodley 1992:53)

Miscellaneous

- 1 coffin wood fragment, four brass tack fragments attached (representative sample)
- 1 coffin wood fragment, one brass tack fragment attached (representative sample)
- 1 coffin wood fragment, square ferrous metal impression (representative sample)
- 1 coffin wood fragment, two brass tack fragments attached (representative sample)
- 8 coffin wood fragments, brass tack impressions (sample)
- 11 unidentified material fragments
- 3 wood root or dowel fragments

Burial 2, Fill 2 horizon

Ceramics

- 1 hard paste porcelain (Prosser) 4-hole sew through button - 1.0 cm diameter (post-1840, Sprague 2002)
- 1 hard paste porcelain (Prosser) 4-hole sew through button - 1.4 cm diameter (post-1840, Sprague 2002)
- 2 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.5 cm diameter (post-1840, Sprague 2002)

Metal

- 13 brass tack fragments
- 21 cut nail fragments (post-1790)
- 4 cut nail fragments, machine headed (post-1830)
- 7 cut nail fragments, point tip (post-1790)
- 40 cut nail fragments, unidentified heads (post-1790)
- 12 cut nail fragments, unidentified heads, point tips (post-1790)
- 4 white metal butt hinge fragments (mend to two complete hinges) (post-1865, Russell and Erwin 1980)
- 2 white metal butt hinges, whole (post-1865, Russell and Erwin 1980)
- 3 white metal cylindrical thumbscrews, raised annular bands encircling the cylinder at top, middle and base (1869 Sargent & Company coffin hardware catalogue, Davidson 2006:133-134)
- 4 white metal cylindrical thumbscrews, raised annular bands encircling the cylinder at top, middle and base (1869 Sargent & Company coffin hardware catalogue, Davidson 2006:133-134), attached to white metal escutcheon plates, lobed ends, floral decoration, some with coffin wood fragments attached (post-1870s, Burgess 2014)
- 6 white metal double-lug short bar coffin handles, straight bar, rectangular lugs, smaller rectangle inside with leaves and vines, handle shaft has stylized over-lapping leaf motif with pine cone ends, bracket ends are hands, "Fine Electro Silver Plated" decoration (number 88, catalogue 1880, Meridan Britannia:5) (1870s-1920, Hacker-Norton and Trinkley 1984:50; Burgess 2014; Woodley 1992:53)
- 5 white metal escutcheon plate fragments, lobed ends, floral decoration (post-1870s, Burgess 2014)
- 1 white metal plate, brass tack fragment attached

Miscellaneous

- 2 coffin wood fragments, one brass tack attached (sample)
- 8 coffin wood fragments, one brass tack impression (sample)
- 3 teeth, molars
- 2 unidentified material fragments, possible wood

Burial 3, Fill 2 horizon

Ceramics

1 hard paste porcelain (Prosser) 4-hole sew through button - 1.1 cm diameter (post-1840, Sprague 2002)
1 hard paste porcelain (Prosser) 4-hole sew through button - 1.4 cm diameter (post-1840, Sprague 2002)
1 hard paste porcelain (Prosser) 4-hole sew through button - 1.6 cm diameter (post-1840, Sprague 2002)
1 hard paste porcelain (Prosser) 4-hole sew through button - 1.8 cm diameter (post-1840, Sprague 2002)

Metal

8 coffin screws, white metal head, double filigreed pattern along edge, domed, cylindrical, slotted, ferrous metal screw shafts (Type 1, catalogue 1877, Crane and Creed: 153) (1850-1910, Pye 2011: 19-20)
19 cut 8d nails, point tips (post-1790)
12 cut finishing/tacking nail fragments (post-1790)
1 cut nail fragment, clinched (post-1790)
32 cut nail fragments (post-1790)

Miscellaneous

1 coarse piece of thread
4 teeth, molars

Burial 4, Fill 2 horizon

Ceramics

1 hard paste porcelain (Prosser) 4-hole sew through button - 0.9 cm diameter (post-1840, Sprague 2002)
3 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.1 cm diameter (post-1840, Sprague 2002)
2 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.4 cm diameter (post-1840, Sprague 2002)

Glass

43 light aqua coffin viewing plate sherds (mend), flat, oval shaped, top - 6 inches, middle - 9.6 inches, bottom - 12 inches, height - 19.2 inches (1850-1900, Burgess 2014)

Metal

1 cut 10d nail, machine headed, point tip (post-1830)
9 cut nail fragments (post-1790)
11 cut nail fragments, machine headed (post-1830)
9 ferrous metal brackets, rectangular, bent
1 white metal coffin screw, flat head
12 white metal double-lug short bar coffin handle lug fragments, clover-shaped lugs, intricate floral decoration, stylized leaf overlay, partial straight bar fragments attached, ornate finial ends, mold mark "871" on back of several (1880-1920, Burgess 2014)
3 white metal escutcheon plates, parallelogram shaped, embossed horizontal lines, hole in center for thumbscrews, two small holes on either side to attach to coffin (post-1875, Davidson 2006:133)
4 white metal thumbscrews, flat, urn with draped fabric decoration (post-1875, Davidson 2006:133)
6 white metal thumbscrews, flat, urn with draped fabric decoration, attached white metal escutcheon plates, parallelogram shaped, embossed horizontal lines, hole in center for thumbscrews, two small holes on either side to attach to coffin, one with coffin wood fragment attached (post-1875, Davidson 2006:133)

Miscellaneous

1 felt or cardboard button cover fragment, circular
20 rope fragments, deteriorating
1 unidentified material fragment
3 unidentified material fragments, flat, rectangular, stitching one side

Burial 7, Fill 2 horizon

Ceramics

2 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.0 cm diameter (post-1840, Sprague 2002)

Metal

4 coffin screw fragments (two mend), white metal head, double filigreed, domed, cylindrical, slotted, ferrous screw shaft (1850-1910, Pye 2011: 19-20)
1 cut 5d nail, machine headed, point tip (post-1830)
1 cut 8d nail, machine headed (post-1830)
21 cut nail fragments (post-1790)
4 cut nail fragments, machine headed (post-1830)
9 cut nail fragments, point tip (post-1790)
22 cut nail fragments, unidentified heads (post-1790)

Burial 8, Fill 2 horizon

Ceramics

1 hard paste porcelain (Prosser) 4-hole sew through button - 1.1 cm diameter (post-1840, Sprague 2002)
2 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.0 cm diameter (post-1840, Sprague 2002)

Glass

4 ruby glass button insets, molded circular decoration, flat back, (missing inset base), unfinished rough edges - 1.1 cm diameter

Metal

12 coffin screw fragments (two mend), white metal head, plain, domed, cylindrical, slotted, ferrous metal screw shaft (1850-1910, Pye 2011: 19-20)
1 cut 4d nail, machine headed, point tip (post-1830)
1 cut 5d nail, machine headed, point tip (post-1830)
1 cut 6d nail, machine headed, point tip (post-1830)
1 cut 7d nail, machine headed, point tip (post-1830)
17 cut nail fragments (post-1790)
10 cut nail fragments, machine headed (post-1830)
14 cut nail fragments, point tips (post-1790)
9 cut nail fragments, unidentified heads (post-1790)
2 cut nail fragments, unidentified heads, clinched (post-1790)
21 white metal coffin screw head fragments, plain, domed, cylindrical, slotted (1850-1910, Pye 2011: 19-20)

Burial 9, Fill 2 horizon

Ceramics

1 hard paste porcelain (Prosser) 4-hole sew through button - 1.0 cm diameter (post-1840, Sprague 2002)
3 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.2 cm diameter (post-1840, Sprague 2002)
6 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.3 cm diameter (post-1840, Sprague 2002)

Glass

38 light aqua coffin viewing plate fragments (mend), rectangular shape with three-sided top, eight sherds with finished beveled edge, drilled hole in top center, width 15.6 inches, height 19.2 inches (1850-1900, Burgess 2014)

Metal

7 cut nail fragments (post-1790)
3 cut nail fragments, machine headed (post-1830)
3 ferrous metal bracket fragments, oval, bent, flat head screws
2 ferrous metal brackets, whole, oval, bent, flat head screws on ends
1 gold plated brass ring - 2.0 cm diameter
8 white metal double-lug short bar coffin handle lug fragments, rectangular, intricate geometric decoration (1880-1920, Burgess 2014)
5 white metal double-lug short bar coffin handle lug fragments, rectangular, screw holes, intricate geometric decoration (1880-1920, Burgess 2014)
8 white metal double-lug short bar coffin handle lugs, rectangular, intricate geometric decoration, X-shaped raised section from center to corners with scale decoration, plain final ends, brackets are stylized laurel leaves with intricate floral decoration, mold mark "1640" on back (1880-1920, Burgess 2014)
2 white metal double-lug short bar coffin handles, whole, rectangular lugs, intricate geometric decoration, X-shaped raised section from center to corners with scale decoration, plain handle shafts with final ends, brackets are stylized laurel leaves with intricate floral decoration, mold mark "1640" on back (1880-1920, Burgess 2014)
1 white metal thumbscrew, flat, fan-like shape with stylized lily of the valley decoration, inward facing diamond pattern along border, attached white metal escutcheon plate, circle in center with diamonds facing out on either side, embossed vertical lines in diamond (post-1875, Davidson 2006:133)
4 white metal thumbscrews, flat, fan-like shape with stylized lily of the valley decoration, inward facing diamond pattern along border, ferrous metal screw shaft fragments (post-1875, Davidson 2006:133)
1 white metal/lead coffin plate, "AT REST"

Miscellaneous

1 unidentified nut, possible Fagacea
2 vulcanized rubber dentures with porcelain teeth, full set (1864 patented and licensed by Goodyear Dental Vulcanite Company)

Burial 10, Fill 2 horizon

Ceramics

3 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.1 cm diameter (post-1840, Sprague 2002)

2 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.7 cm diameter (post-1840, Sprague 2002)

Metal

1 cut nail fragment, machine headed, clinched (post-1830)

2 cut nail fragments (post-1790)

6 white metal (probably silver plated) double-lug, swing bail coffin handles, handle consists of two decorative lugs with floral design on apex pin housing, series of intricately woven vines and floral decoration of the lug face, shield-shaped lug, central floral disk appears on the middle front face of the bail, reverse face of the bail in the central portion contains a mold mark "112" (appears in catalogs from 1880 - 1904, Pye 2011:7)

7 white metal thumbscrews, flat, fan-like shape with stylized lily of the valley decoration, inward facing diamond pattern along border, ferrous metal screw shaft fragments (post-1875, Davidson 2006:133)

Miscellaneous

1 tooth, molar

3 unidentified material, red in color

Burial 11, Fill 2 horizon

Ceramics

1 hard paste porcelain (Prosser) 4-hole sew through button - 0.9 cm diameter (post-1840, Sprague 2002)
1 hard paste porcelain (Prosser) 4-hole sew through button - 1.1 cm diameter (post-1840, Sprague 2002)
2 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.0 cm diameter (post-1840, Sprague 2002)
2 hard paste porcelain (Prosser) 4-hole sew through buttons - 1.7 cm diameter (post-1840, Sprague 2002)

Metal

9 coffin screws, white metal head, double filigreed pattern along edge, domed, cylindrical, slotted, ferrous metal screw shafts (Type 1, catalogue 1877, Crane and Creed: 153) (1850-1910, Pye 2011: 19-20)
1 cut 12d nail, machine headed, wood attached (post-1830)
1 cut 12d nail, unidentified head, point tip (post-1790)
1 cut 4 1/2d nail, unidentified head, point tip (post-1790)
1 cut 4d nail, unidentified head, point tip (post-1790)
3 cut 5d nails, unidentified heads, point tips (post-1790)
1 cut 6d nail, unidentified head, point tip (post-1790)
61 cut nail fragments (post-1790)
6 cut nail fragments, machine headed (post-1830)
28 cut nail fragments, unidentified heads (post-1790)

Miscellaneous

6 black hard rubber 2-hole sew through buttons, embossed "N.R. CO./GOODYEAR'S P=T", manufactured by Novelty Rubber Company - 1.4 cm diameters (1855-1886, Cienna 2013)
1 vulcanite ring, brown, 2.1 cm diameter

Burial 12, Fill 2 horizon

Ceramics

1 hard paste porcelain (Prosser) 4-hole sew through button - 1.4 cm diameter (post-1840, Sprague 2002)
1 hard paste porcelain (Prosser) 4-hole sew through button - 1.7 cm diameter (post-1840, Sprague 2002)
2 hard paste porcelain (Prosser) 4-hole sew through buttons- 1.1 cm diameter (post-1840, Sprague 2002)

Metal

12 coffin screws, white metal head, double filigreed pattern along edge, domed, cylindrical, slotted, ferrous metal screw shafts (Type 1, catalogue 1877, Crane and Creed: 153) (1850-1910, Pye 2011: 19-20)
3 cut 12d nails (post-1790)
1 cut 4 1/2 d nail (post-1790)
7 cut 5d nails, point tip (post-1790)
109 cut nail fragments (post-1790)
6 cut nail fragments point tip (post-1790)
53 cut nail fragments, unidentified heads (post-1790)
6 unidentified ferrous metal fragments, thin, flat

Miscellaneous

1 bone fragment, possible
8 teeth, molars
7 tooth fragments, molars
6 unidentified material fragments, flat, thin, rectangular

Burial 14, Fill 2 horizon

Glass

32 pale green coffin viewing plate sherds, flat, oval shaped, three sherds smoothed edges (1850-1900, Burgess 2014)

Metal

4 cut nail fragments (post-1790)

16 cut nail fragments, unidentified heads (post-1790)

1 white metal thumbscrew, flat, fan-like shape with stylized lily of the valley decoration, inward facing diamond pattern along border (post-1875, Davidson 2006:133)

APPENDIX II

Skeletal Analysis

ABSTRACT

This report details a bioarchaeological examination of human skeletal remains representing nine individuals that were recovered from the 12th High School Burial Ground (44PW1947) in Prince William County, Virginia. Additional burials were investigated in the field but did not yield skeletal or dental material. This poorly preserved collection contains four males, one female, two probable females, and two individuals of indeterminate sex. The age distribution includes one subadult, seven older adults and one adult of unspecified age. Taphonomic indices and archaeological context support a historic period temporal affiliation. Ancestry is indeterminate; however, three individuals have crenulated molar patterns. This is a trait that has been associated with individuals of African ancestry.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF PLATES

LIST OF APPENDICES

INTRODUCTION

As arranged by contractual agreement with Wetland Studies and Solutions, Inc., the collection of human remains recovered from the 12th High School Burial Ground (44PW1947) in Prince William County, Virginia was inventoried and examined to provide baseline bioarchaeological information. The specific objectives of this examination are as follows: (1) determine ancestry; (2) establish a minimum number of individuals; (3) record bone, joint surface, and dental inventories; (4) determine age and sex; (5) code and describe skeletal pathology (e.g., infection, arthritis, trauma); (6) code and describe dental pathology (e.g., caries, abscesses, periodontal disease); (7) describe taphonomy; (8) document occupational stress markers; (9) record cranial and postcranial metrics; (10) photograph standard views of the cranium, mandible, and dentition as well as unusual pathology and anomalies; (11) document non-metric traits; (12) obtain radiographs of pathological specimens as well as subadult dentation, femora and tibiae. DNA and stable isotope analyses, digitization of intact crania, and bone density (DEXA) scans were not part of this study.

The 12th High School burials were transferred from the field to the Archaeology and Forensic Science Laboratory (AFSL) on the campus of Towson University (TU) as the site was being excavated. This occurred in November, 2013. The examination of the remains and photography took place on the campus of TU in January and February, 2014. The remains were secured in the evidence room of the AFSL when not under study. The collection was returned to Wetland Studies and Solutions, Inc. in May, 2014.

Osteological and metric data has been entered into the Osteoware database. This is a standardized skeletal documentation software program made available by the Smithsonian Institution, National Museum of Natural History. Inclusion of these data into Osteoware facilitates comparative and statistical analyses of osteological and metric information.

The following pages detail the steps in the examination process and narrative descriptions of each skeleton. Skeletal narratives include bone inventories; rationale forming the basis for age, sex, ancestry, and temporal age determination; documentation of skeletal and dental pathology/anomalies; taphonomic alterations; and documentation of skeletal elements that were photographed.

METHODS

This study was conducted using standardized techniques of bioarchaeological and forensic anthropological analysis as reported in Buikstra and Ubelaker (1994) and Owsley and Jantz (1989). Using the Smithsonian Institution system of inventory, each bone (with the exception of carpals, metacarpals, most tarsals, metatarsals, and phalanges) and most joint surfaces are recorded as being either complete (66 percent or more is present) or incomplete (33 to 65 percent is present). Any bone represented by 32 percent or less is inventoried as a fragment and not included in total bone counts. The parietals, temporals, malars, maxillae, palatines, scapulae, clavicles, ribs, innominates,

patellae, tali, calcanei, humeri, radii, ulnae, femora, tibiae, and fibulae and associated joint surfaces are scored according to their anatomical position (i.e., left or right side). Scapulae are considered to be complete when they contain the glenoid cavities as well as the major portion of the bodies and complete innominates contain at least 66 percent of each primary unit (ilium, ischium and pubis). Vertebrae are inventoried as complete when at least 66 percent of the centra and neural arches are present, and for ribs to be considered complete, the head and neck must be present.

For the vertebrae, the inventory is divided among the cervical (C), thoracic (T), and lumbar (L) as follows: C1, C2, C3-6, T1-9, T10, T11, T12, and L1-5. For each single element category (e.g., C1), the bone is scored as either complete or incomplete. For a range of vertebrae (e.g., C3-6) the number present and the number of complete elements are recorded. The rib (R) inventory is conducted in a manner similar to that of the vertebrae and ribs are categorized as follows: R1, R2, R3-10, R11, and R12. A single rib is recorded as complete or incomplete, and for a range (e.g., R3-10), the total number present and the number of complete elements are recorded.

A more detailed format is used to document long bones (i.e., humeri, radii, ulnae, femora, tibiae, and fibulae). Each bone is divided into the proximal, middle, and distal third of the diaphyses. At least 66 percent of each third must be present for it to be scored as complete. Other long bone scoring options include proximal third missing only, middle third missing only, distal third missing only, proximal third present only, middle third present only, and distal third present only.

Also inventoried are the proximal and distal joint surfaces for each of the aforementioned long bones, as well as the temporomandibular joint, the acetabulae, and the auricular surfaces (or the sacro-iliac joints) of the innominates. These are scored as complete if at least 50 percent of the intact (uneroded) joint surface is present, and incomplete if less than 50 percent is present. Nothing is recorded if the joint is entirely eroded or missing.

This degree of detail in the skeletal inventory process produces accurate bone and joint surface inventories for each individual and facilitates the assessment and interpretation of the minimum number of individuals, trauma and pathology by providing baseline counts by element, side, age, and sex. These inventories can be tallied to assess the frequency of depressed cranial fractures on the frontal, for example, relative to the total number of frontals in a sample. It is also possible to examine the distribution of fractures among males and females, and by age to see if infants, children, young adults, or older adults are more susceptible to a particular type of trauma.

Dental inventories parallel bone inventories with regard to the level of detail. Each tooth is scored for presence (tooth only, tooth in socket, or partially erupted tooth) or absence (antemortem loss with socket only, antemortem loss with bone resorption, postmortem loss with socket only, unerupted, or congenital absence). Sockets are examined for periodontal and periapical abscesses as well as tooth loss that resulted from an abscess. Recent loss is distinguished from distant loss by the degree of alveolar resorption. The presence of caries on the occlusal, buccal, lingual, interproximal, and the crown enamel

junction of each tooth are also documented. If present, these lesions are assigned a numeric value of 1 through 5, with 1 representing a small pit lesion and 5 indicating complete destruction of the relevant enamel crown surface. Pulp exposure is also recorded and attributed to either caries or dental attrition. Calculus is scored on a severity scale of 1 through 6 and abrasion is scored according to its location on the crown. Alveolar resorption is measured for the permanent maxillary and mandibular molars.

For subadults and young adults, the degree of dental calcification for each deciduous and permanent tooth is documented. Coding options include cusp initial, cusps initial coalescence, cusps initial development, crown ½, crown $^{2}/_{3}$, crown ¾, crown complete, root initial, cleft initial, root ¼, root $^{1}/_{3}$, root ½, root $^{3}/_{4}$, root complete, apex ½, and apex complete. Occlusal surface attrition is recorded with regard to the stage of wear as defined by Smith (1984), as well as the plane of wear.

The next step in the examination process includes the assessment of taphonomy. Taphonomic changes are documented according to the system proposed by Behrensmeyer (1978). Each skeleton is assigned a weathering stage with the range extending from 0 (unweathered bone showing no sign of cracking) to 5 (extremely weathered, friable, splintered bone retaining little to no compact cortical surfaces). Other taphonomic considerations include bone color, staining, surface and shape changes, cultural modification, adherent materials, and museum preparation or modification.

Age, sex, and ancestry are determined according to standards presented in Bass (2005), Buikstra and Ubelaker (1994), Burns (2007), Byers (2011), Gill and Rhine (1990), Komar and Buikstra (2008), and Ubelaker (1980). Age is determined by both developmental and degenerative changes. When the age at death is less than 25 years, dental calcification, long bone growth, and epiphyseal union are the primary indicators of age. For older individuals, dental and skeletal degeneration and generalized morphological changes provide useful criteria. Adult age is assessed using principally the symphyseal regions of the pubic bones, the sternal rib endings, and the auricular surfaces of the ilia. Additional criteria include closure and subsequent obliteration of the cranial and palatal sutures, degeneration and osteophytic lipping on the joint surfaces, cortical bone density, and dental attrition and pathology.

Broad age categories are neonates or newborns under one-month of age; infants 2-11 months; children 1-4 years, 5-9 years, and 10-14 years; young adults 15-34 years; and older adults 35-plus years. The term subadult is used to refer to anyone less than 15 years of age. More specific ages are assigned whenever possible. The youngest coded age category is birth to 6 months. Due to established standards for epiphyseal union, long bone growth, and dental calcification, subadult age can be determined with a great deal of accuracy and age is assigned in one-year increments from 6 months through 19 years (Table 1). For adults, a broad age range that generally spans a 10-year interval (e.g., 35-44) is assigned, followed by a refined coded age in a 5-year increment.[3]

[3] An individual assigned the broad age range of 35-44 might be assigned code 24, indicating that they most likely fall into the 35-39 age range.

Table 1. Skeletal Age Coding

CODE	AGE	CODE	AGE
1	Birth - 6 months	19	17.5 - 18.5 years
2	6 months - 1.5 years	20	18.5 - 19.9 years
3	1.5 - 2.5 years	21	20 - 24 years
4	2.5 - 3.5 years	22	25 - 29 years
5	3.5 - 4.5 years	23	30 - 34 years
6	4.5 - 5.5 years	24	35 - 39 years
7	5.5 - 6.5 years	25	40 - 44 years
8	6.5 - 7.5 years	26	45 - 49 years
9	7.5 - 8.5 years	27	50 - 54 years
10	8.5 - 9.5 years	28	55 - 59 years
11	9.5 - 10.5 years	29	60-plus years
12	10.5 - 11.5 years		
13	11.5 - 12.5 years		
14	12.5 - 13.5 years		
15	13.5 - 14.5 years	96	Young adult (15 -34 years)
16	14.5 - 15.5 years	97	Old adult (35+ years)
17	15.5 - 16.5 years	98	Unknown subadult
18	16.5 - 17.5 years	99	Unknown adult

Sex determinations are based upon pelvic and craniofacial morphology, the development of muscle attachment sites, and sexual dimorphism in size. Pelvic morphology provides the most reliable indication of sex. Of particular importance are the shape and width of the sciatic notches, the presence or absence of preauricular sulci and parturition pits, auricular surface elevation, the width of the subpubic angle, shape and size of the obturator foramena, and the dimensions and morphology of the pubis and ischiopubic

rami. Cranial indicators include the size of the skull, the robusticity of the external occipital protuberance and temporal lines, the size of the malars and mastoids, development of the supraorbital ridge and supramastoid crests, the sharpness of the supraorbital rims, and the shape of the mental eminence and gonial angle of the mandible. Juvenile skeletons are not sexed, as there are no standards in place to perform this task accurately or reliably.

Principal features for determining ancestry include facial height, orbital shape, interorbital breadth, development and prominence of the nasal bones, width and shape of the nasal aperture, morphology of the inferior nasal margin, shape of the palate, maxillary alveolar prognathism, facial profile, and discrete traits of the dentition including cusp patterns on the occlusal surfaces of the molars and the presence of shovel-shaped incisors. The shape of the femora is also considered, especially with regard to anterior-posterior flattening (platymeria) and torsion of the proximal end.

Each bone and joint surface are examined for evidence of pathology, which may include conditions that result in bone loss (e.g., resorptive lytic lesions, bowing caused by rickets or disease, porosis, and osteopenia/osteoporosis), bone formation (i.e., radiographic findings of increased density/sclerosis, periostitis, osteomyelitis with medullary involvement, neoplasms, ossified cartilage, and ossified connective tissue such as ectopic bone, enthesopathy, myositis ossificans), and bone loss and formation. Other recorded pathological conditions include degenerative joint disease (e.g., osteophyte formation, porosis, bony ankylosis, and eburnation) Schmorl's depressions, spinal and sacral anomalies (e.g., spina bifida and spondylolysis), syphilis, tuberculosis, porotic hyperostosis, cribra orbitalia, osteoporosis, and evidence of trauma or dislocations (luxation or subluxation). For most conditions, the severity (mild, moderate, or severe), state (active or healed), degree of involvement (localized or widespread), and specific area affected with regard to the involved element are documented.

Bone fractures are scored according to their precise location on the element, severity (incomplete or complete), and state (no healing, healing, or healed). For cranial fractures, the shape of the defect (blunt/round, blunt/ovoidal, edged, crushing, and projectile entry or exit), the presence of radiating fractures, the severity (affected ectocranium and/or endocranium), maximum and minimum diameter of the defect, and the number of blows are recorded. Scoring options for long bone fractures include perimortem breaks, periostitis/callus formation, osteomyelitis, or pseudoarthrosis. Vertebral body fractures are recorded as compression fractures, single endplate depression breaks with or without wedging, single end-plate depression breaks, congenital/idiopathic wedged breaks, and biconcave breaks. Cranial and postcranial measurements are recorded for complete elements according to the standards outlined in Buikstra and Ubelaker (1994).

Cranial and postcranial measurements are recorded for complete elements according to the standards outlined in Buikstra and Ubelaker (1994). Radiographs of the femora and tibiae are obtained for subadults and young adults with intact elements. Additional radiographs are occasionally necessary to more closely examine bones displaying trauma or pathology and to assess the extent of dental calcification when teeth cannot be easily removed from the alveolus.

Each skeleton is documented in a narrative format with an emphasis placed upon the skeletal inventory and taphonomy; determinations of age, sex, and ancestry; skeletal anomalies and functional morphological alterations; and skeletal and dental pathology. Representative photographs are taken of the crania, occlusal surfaces of the dentition, pathology, trauma, and anomalies. Radiography is performed on subadult and young adult femora and tibiae to assess the presence of Harris lines or in cases when films are necessary to better evaluate pathology and/or dental calcification.

SKELETAL NARRATIVES

The remains of nine individuals were examined between January and February 2014 in Towson University's AFSL. These include grave features 1, 2, 3, 4, 7, 8, 10, 11, and 12. Each skeleton was assigned a unique burial identification code that is comprised of the site number, followed by the initials of this investigator, the year, and a sequential burial number that corresponds with the burial feature number assigned in the field. Table 2 provides an overview of burial data.

44PW1947-DDK-2014-001
Burial 1

This burial of an adult of indeterminate sex was not observed in the field. Submitted to the AFSL are two boxes containing only the femora and tibiae. The remains had been pedestalled and were removed from the grave in linear blocks of soil matrix. These blocks measure as follows: left femur: 45" x 13" x 4"; right femur: 46" x 10" x 4"; left tibia: 42" x 11" x 6"; right tibia: 19" x 11" x 9."

The bone is compressed between the lid and the floor of the coffin and small rootlets are growing through the mass of bone, wood, and soil (Plate 1). The subsoil is orange-tan in color and is very hard, complicating its removal from the bone and wood. Preservation is extremely poor. The bone is dry, friable and easily falls apart with handling. No compact bone remains. The majority of the bone that is present is granular and stained dark brown due to its association with the coffin wood. Remnants of brown colored fabric adheres to the mass of bone and wood (Plate 2).

Age and Sex: Adult age is indicated by the overall lengths of the bones and by the size of the grave. Cancellous bone density and age-related joint surface pathology cannot be assessed. Due to preservation, sex is indeterminate.

Ancestry: The occlusal surfaces of the M_2's are crenulated. This is a feature that has been associated with individuals of African ancestry.

Dentition: Four loose enamel crowns are present. These include the right maxillary M^1, and the mandibular right M_2, and the left M_1 and M_2. The teeth are stained brown from their association with coffin wood. All of the teeth are healthy and show no carious lesions or hypoplastic bands. There is no calculus development and occlusal surface wear is slight.

Cranial/Postcranial Measurements: The skeleton is not measurable.

Radiography: None

Photography: Occlusal surfaces of dentition.
Crenulated occlusal surfaces of the left and right M_2's.

Flotation:
Flotation bags are labeled, "Fill 2." Separated were heavy and light fractions as well as remaining sediment. One coffin nail was recovered.

Table 2. Summary of the 12th High School Burial Ground Skeletal Collection.

Comprehensive Identification Number	Sex	Age (in years)	Cranium	Posterania	Dentition	Joint Surfaces	Cranial Measurements	Posteranial Measurements	Copper Staining	Dental Pathology	Skeletal Pathology
44PW1947-DDK-2014-001	Indeterminate	Adult	X	√	√	X	N/A	X	X	X	X
44PW1947-DDK-2014-002	Female	Older Adult	X	X	√	N/A	N/A	N/A	X	X	N/A
44PW1947-DDK-2014-003	Probable Female	Older Adult	X	X	√	N/A	N/A	N/A	X	X	N/A
44PW1947-DDK-2014-004	Male	Older Adult	√	√	√	X	X	X	X	√	X
44PW1947-DDK-2014-007	Indeterminate	10 - 14	X	X	X	N/A	N/A	N/A	X	N/A	N/A
44PW1947-DDK-2014-008	Probable Female	Older Adult	√	√	√	X	X	X	X	X	X
44PW1947-DDK-2014-010	Male	Older Adult	X	√	√	X	N/A	X	X	X	X
44PW1947-DDK-2014-011	Male	Older Adult	X	√	X	X	N/A	X	X	N/A	X
44PW1947-DDK-2014-012	Male	Older Adult	X	X	√	X	N/A	X	X	X	N/A

There are no grave features 005, 006, or 013. Burials 9 and 14 were represented only by flotation samples. Burial 7 was examined in the field.

44PW1947-DDK-2014-002
Burial 2

This is the poorly preserved interment of an older adult female that was buried in a hexagonally- shaped wooden coffin. The grave was observed and documented in the field. It was oriented in an east-west direction. The head was at the western end of the grave and was rotated onto the left shoulder, with the face to the north. The burial was in an extended position. The arms were also extended, but positioned medially with the hands crossed over the pelvis. The skeleton was in extremely poor condition and was represented by nothing more than a dark colored soil stain containing granular remnants of cancellous bone. Due to poor preservation, no bone was removed from the field.

Age and Sex: An older adult age determination is based upon occlusal surface wear. Although wear is not significantly heavy, it is suggestive of an individual over 35 years of age. A female sex determination is based upon the small size of the teeth. The wooden coffin had a maximum length of 5'3" and the (in situ) estimated crown to heel measurement (an indicator of stature) was 4'11." As indicated by the shadow of bone in the grave, the build of this individual was slight.

Ancestry: All of the molars have crenulated occlusal surfaces (Plate 3). This is a feature that has been associated with individuals of African ancestry.

Dentition: Submitted for analysis were the mandibular left M_1 and left and right M_2's. Only enamel crowns (no roots or associated alveolar bone) are present. The teeth have been stained brown from their association with coffin wood. The teeth are all healthy and show no carious lesions or hypoplastic bands. The two M_2's were scored for flecks of calculus.

Cranial/Postcranial Measurements: The skeleton is not measurable.

Radiography: None

Photography: Occlusal surfaces of the dentition showing crenulated occlusal surfaces.

Flotation: One bag of flotation labeled, "Gr. 2 6/7" was submitted for processing. Heavy and light fractions as well as the remaining sediment were separated.

44PW1947-DDK-2014-003
Burial 3

This burial was not observed in the field. Only four teeth represent this this older adult (probable) female.

Age and Sex: An older adult age determination is based upon occlusal surface wear. Attrition on these teeth is not particularly heavy, but it is more pronounced than that

documented for 44PW1947-DDK-2014-002. The teeth are small and their size is suggestive of a female.

Ancestry: The occlusal surfaces of the molars are crenulated (Plate 4). This is a feature seen in individuals of African ancestry.

Dentition: Four loose teeth are present. These include the maxillary left and right M^1's, the right M^2, and the mandibular left M_1. The teeth have no roots and the crowns are stained brown from their association with coffin wood. The teeth are healthy and display no caries, linear enamel hypoplasias, or calculus.

Cranial/Postcranial Measurements: The skeleton is not measurable.

Radiography: None

Photography: Occlusal surfaces of the dentition.

Flotation: None submitted.

44PW1947-DDK-2014-004
Burial 4

Present is the poorly preserved burial of an older adult male that was interred in a hexagonally-shaped wooden coffin. The grave was oriented in an east-west direction with the head at the western end. Although deteriorated, the cranium appeared to be rotated slightly to the right with the face pointing to the south. The burial was in an extended position with the arms positioned at the sides of the body.

This individual is represented by fragments of the parietals and occipital, the incomplete mandible, the middle thirds of the radii and ulnae, and the complete femora and tibiae. No joint surfaces are present. The postcranial skeleton is flattened and compressed between the lid and the bottom of the coffin and small roots are growing through coffin and into the long bone diaphysis. The compression and root adhesions prevent the removal of bone from the surrounding matrix.

The skeleton is stained dark brown due to its association with coffin wood. The remains have a dry and woody surface texture and disintegrate with the slightest handling. There is little cortical bone remaining. The forearms are represented by granular remnants of cancellous bone. Remnants of fabric are associated with the remains.

Age and Sex: An older adult age determination is based on occlusal surface wear. Cancellous bone density and age-related joint surface pathology cannot be assessed. Sex is based on the morphology of the chin. Although deteriorated, the anterior horizontal ramus has a height of 22 mm. Although crown to heel measurements were not possible, the size of the coffin is consistent with a male.

Ancestry: Indeterminate. The occlusal surfaces of the teeth are not crenulated.

Dentition: The central portion of the mandible is present. The bone is fractured posterior to the right P_1 socket and posterior to the left P_2 socket. The bone is friable and in poor condition. Little cortical bone exists and the alveolar bone is eroded and has exposed the roots of the incisors, canines and first premolars (the crowns were fractured off postmortem). Eight crowns were also recovered. These include the mandibular right I_1, canine, and the left and right P_1, P_2, and M_1. The left P_1 and P_2 were scored for an interproximal pit carie. The right canine displays a faint hypoplastic band located 6mm superior to the cemento-enamel junction.

Cranial/Postcranial Measurements: The skeleton is not measurable.

Radiography: None

Photography: Occlusal surfaces of the dentition (Plate 5).

Flotation: Two flotation samples were submitted. One bag is labeled, "7/8" and the other is labeled "from coffin." A heavy and a light fraction were recovered from each of the bags. The original sediment was also saved.

44PW1947-DDK-2014-007
Burial 7

This is the poorly preserved skeleton of a subadult, (aged 10-14 years) of indeterminate sex. The burial, represented by nothing more than a granular soil stain, was examined in the field. The grave was oriented in an east-west direction with the head at the western end. It appeared that the head was rotated to the left, facing south. The burial was in an extended position. The humeri were extended but the forearms were bent medially at a 90-degree angle, and were crossed over the upper abdomen. No bone was removed from the field.

Age and Sex: Age is based on the size of the coffin, which had a maximum length of 4'6". Sex is indeterminate.

Ancestry: Indeterminate

Dentition: None recovered.

Cranial/Postcranial Measurements: The skeleton is not measurable.

Radiography: None

Photography: None (no bone was submitted for analysis)

Flotation: None submitted.

44PW1947-DDK-2014-008
Burial 8

Present is the incomplete and poorly preserved skeleton of an older adult (probable) female. This burial was documented in the field and was found interred in a hexagonally-shaped wooden coffin. The grave orientation was east-west, with the head at the western end. The face was rotated to the left and pointing to the north. The burial was in an extended position, with the left arm straight along the torso. The right arm could not be visualized.

This individual is represented by the parietals and occipital, the proximal $^{2}/_{3}$'s of the left femur, and the distal $^{1}/_{3}$'s of the tibiae. The legs of this individual were removed in pedestaled blocks of soil matrix. The dimensions of these pedestals are as follows: left femur: 40" x 6" x 5"; left tibia: 39" x 8" x 5"; right tibia: 37" x 9" x 3".

The bone is compressed and flattened between the lid and the base of the coffin. Removal of the coffin wood and the adherent soil causes the bone to spall and fracture. Little cortical bone is present and the skeleton has a dry and woody surface texture. Roots are growing through the wood and into the medullary cavities of the long bones, thus complicating their removal from the pedestalled blocks. The skeleton is stained dark brown due to its association with coffin wood . No joint surfaces are present for analysis.

Age and Sex: An older adult age assessment is based upon the degree of occlusal surface wear. A female sex determination is based on the size of the teeth. The estimated crown to heel measurement (in-situ) was 5'5".

Ancestry: Indeterminate. The occlusal surfaces of the teeth are not crenulated.

Dentition: The enamel crowns of the maxillary left canine, P^1, P^2, and M^1 are present as well as several smaller fractured pieces of enamel. The teeth are stained dark brown from their association with coffin wood. Although the teeth display no pathology, there are moderate deposits of calculus, particularly on the occlusal surfaces. Attrition is heavy relative to others in this series.

Cranial/Postcranial Measurements: The left femur has an estimated midshaft diameter of 25mm.

Radiography: None

Photography: Occlusal surfaces of the dentition (Plate 6).

Flotation: None submitted.

Artifacts: One nail was recovered from the soil matrix surrounding the bone. Also associated with the burial is an envelope containing a dark-colored hair measuring 16 mm in length. The hair appears to be contemporary.

44PW1947-DDK-2014-009
Burial 9

This burial was not observed in the field and no human remains were submitted for analysis. One bag of flotation, labeled "Fill 2," was submitted for processing. A heavy and a light fraction were recovered.

44PW1947-DDK-2014-010
Burial 10

This poorly preserved burial of an older adult male was initially documented in the field. The hexagonally shaped wooden coffin was oriented in an east-west direction. The head was at the western end of the grave and rotated on its left side, facing north. The burial was in an extended position with the arms at the side and the legs straight. This individual is represented by the right maxillary M^1, a section of vertebra, the right innominate, the right femur, tibiae, and left fibula. The remains were excavated in blocks of pedestalled soil. The dimensions of these pedestals are as follows: vertebra: 16" x 7" x 4"; right femur: 39" x 8" x 5"; right tibia: 36" x 6" x 6"; left tibia and fibula: 39" x 7" x 5".

As with the others in this collection, the bone is flattened and compressed between the lid and bottom of the coffin. The adherent soil from the pedestaled blocks is hard and complicates the removal of bone. The skeleton is friable and has a dry and woody surface texture. Handling causes the bone to splinter and break. Rootlets have penetrated the coffin wood and are growing through the long bone diaphysis.

Age and Sex: Age is based on occlusal surface wear and cancellous bone density. A male sex determination is based on the size of the M^1. The distal tibiae are moderately large, despite their postmortem erosion. The (in-situ) crown to heel measurement is 5'10".

Ancestry: Indeterminate. The occlusal surface of the M^1 is not crenulated.

Dentition: The right maxillary M^1 is the only tooth present. The tooth is represented only by the enamel crown (there is no root). Contact with coffin wood has stained the tooth grayish-brown. There is no pathology. Flecks of calculus are present and occlusal surface wear is moderate.

Cranial/Postcranial Measurements: The right femur has an estimated midshaft diameter of 25mm. The right tibia has an estimated anterior/posterior diameter of 30 mm and a medial/lateral diameter of 21 mm. The tibia is the best preserved bone in this collection.

Radiography: None

Photography: Occlusal view of the maxillary M^1 (Plate 7)
Preservation of right tibia (Plate 8)

Flotation: One bag of soil, labeled "Box 4" was submitted for processing. One heavy fraction and one light fraction were recovered.

44PW1947-DDK-2014-011
Burial 11

The burial of this poorly preserved older adult male was observed and documented in the field. The body was buried in a hexagonally-shaped wooden coffin that was oriented in an east-west direction. The head was at the western end of the grave. The body was extended with the legs straight and the arms at the sides.

This individual is represented by the proximal $^{2}/_{3}$ of the left humerus, and the middle $^{1}/_{3}$ of the right humerus, radius, ulna, and tibiae. These elements were removed in pedestalled blocks of soil matrix. The measurements of these pedestals are as follows: left humerus: 40" x 12" x 7"; right humerus: 49" x 10" x 7"; right forearm: 17" x 7" x 2"; left tibia: 13" x 9" x 3"; right tibia: 11" x 10" x 3". As with the other burials, the skeleton is compressed and flattened between the roof and base of the coffin. The bone is poorly preserved and contains masses of rootlets that have caused spalling and exfoliation of the cortical surfaces. No joint surfaces are present.

Age and Sex: An older adult age assessment is based on cancellous bone density. A male sex determination is based on the overall robust and large appearance of the skeleton. The deltoid tuberosity on the left humerus shows moderate development. The (in situ) crown to heel measurement of this individual is 5'7."

Ancestry: Indeterminate.

Dentition: No teeth or sockets are present for analysis.

Cranial/Postcranial Measurements: The skeleton is not measurable.

Radiography: None

Photography: None

Flotation: One bag of soil, labeled "GF11, Fill 2/Box 5" was submitted for processing. One heavy fraction and one light fraction were recovered.

44PW1947-DDK-2014-012
Burial 12

This burial was not observed or documented in the field. Present are the dental remains of an older adult male. No bone is present.

Age and Sex: An older adult age assessment is based on occlusal surface wear. A male sex determination is based on the size of the enamel crowns.

Ancestry: Indeterminate. The occlusal surfaces of the molars are not crenulated.

Cranial/Postcranial Measurements: Not applicable.

Radiography: None.

Photography: Occlusal view of the dentition (Plate 9).

Flotation: One bag of soil labeled "GF12 Box 2/2" was submitted for processing. One heavy fraction and one light fraction were recovered.

44PW1947-DDK-2014-014
Burial 14

This burial was not observed in the field and no human remains were submitted for analysis. One bag of flotation, labeled "GF14 2/3," was submitted for processing. A heavy and a light fraction were recovered.

Plate 1. 44PW1947-DDK-2014-001. Compressed and flattened bone, coffin wood, and subsoil with root mass depicting typical preservation for the 12th High School skeletal collection. This burial represents an adult of indeterminate sex.

Plate 2. 44PW1947-DDK-2014-001 (Burial 1). Fabric remnants adhering to bone of an adult of indeterminate sex.

Plate 3. 44PW1947-DDK-2014-002 (Burial 2). Occlusal surfaces of the dentition representing an older adult female. The occlusal surfaces of the mandibular molars are crenulated.

Plate 4. 44PW1947-DDK-2014-003 (Burial 3). Occlusal surfaces of maxillary and mandibular molars showing crenulation. The burial represents that of an older adult (probable) female.

Plate 5. 44PW1947-DDK-2014-004 (Burial 4). Occlusal surfaces of selected mandibular dentition of an older adult male.

Plate 6. 44PW1947-DDK-2014-008 (Burial 8). Occlusal surfaces of dentition of an older adult (probable) female.

Plate 7. 44PW1947-DDK-2014-010 (Burial 10). Occlusal surfaces of dentition of an older adult male.

Plate 8. 44PW1947-DDK-2014-010 (Burial 10). Right tibia of an older adult male showing the best example of bone preservation in this collection.

Plate 9. 44PW1947-DDK-2014-012 (Burial 12). Occlusal surfaces of dentition of an older adult male.

INTERPRETATION AND CONCLUSION

Human remains recovered from the 12th High School Burial Ground in Prince William County, Virginia were examined to establish baseline demographic information. As part of the examination process, the remains of nine individuals were sorted, coded, described, and photographed. This collection contains the very poorly preserved and incomplete remains of four males, one female, two probable females, and two individuals of indeterminate sex. The age distribution includes one subadult, seven older adults and one adult of unspecified age. The incomplete nature and poor preservation of the remains inhibits the collection of metric data, the calculation of stature (although crown to heel measurements were obtained in the field), and a detailed assessment of non-metric indices on the cranial and postcranial skeleton. Taphonomic indices (coffin wood staining and surface abrasion) and archaeological context and artifact associations support a historic period temporal affiliation. Three of the individuals are identified as having possible, but unconfirmed African ancestry. Population affiliation is indeterminate for the remaining six individuals. The construction of life tables to examine population mortality is not possible given the size of this sample.

Bone pathology was not documented for any individuals in this collection. The lack of intact bone and joint surfaces precludes an accurate assessment of bone pathology. Given the older adult age determination for seven individuals, it is very likely that disease was present, but no longer observable. Cause of death cannot be determined for any of the individuals in this sample.

In this collection, five of the nine individuals (55.5%) have crania, none of which are even moderately intact. Five individuals also have postcranial elements. Of the 108 long bones, only 25 (23.1%) are present (Table 3). Since degenerative changes on the joint surfaces are a common finding in adult remains, it is significant to note that none of the 208 adult joint surfaces (Table 4) and none of the 192 adult vertebrae are represented.

Dentition includes no deciduous and 33 adult teeth (Table 5). Of these teeth, two (6.1%) display carious lesions that are manifested as small interproximal pit lesions. These caries are present in the adjacent mandibular premolars representing an older adult male (44PW1947-DDK-2014-004). Neither of these lesions has exposed the pulp chamber (Table 6). Calculus is moderate. There are seven tooth sockets representing the nine adults in this collection (Table 7). Of these sockets, none were abscessing at the time of death or showed healing following the loss of the tooth. All of the sockets were contained in the alveolus of a mandible representing an older adult male (44PW1947-DDK-2014-004).

In conclusion, the bioarchaeological examination of these remains was inhibited by extremely poor preservation. For the bone that is present, it is flattened and compressed between coffin wood and contains masses of roots that have caused further spalling and erosion. There is very little compact bone left and the remains are friable and deteriorate with handling. While the sample is small, the teeth do not suggest this population was consuming an abrasive or highly cariogenic diet.

Table 3. Long Bone Inventory *

Comprehensive Identification Number	Sex	Age (in years)	Humerus	Radius	Ulna	Femur	Tibia	Fibula
44PW1947-DDK-2014-001	Indeterminate	Adult	0	0	0	2	2	0
44PW1947-DDK-2014-002	Female	Older Adult	0	0	0	0	0	0
44PW1947-DDK-2014-003	Probable Female	Older Adult	0	0	0	0	0	0
44PW1947-DDK-2014-004	Male	Older Adult	0	2	2	2	2	0
44PW1947-DDK-2014-007	Indeterminate	10 - 14	0	0	0	0	0	0
44PW1947-DDK-2014-008	Probable Female	Older Adult	0	0	0	1	2	0
44PW1947-DDK-2014-010	Male	Older Adult	0	0	0	1	2	1
44PW1947-DDK-2014-011	Male	Older Adult	2	1	1	0	2	0
44PW1947-DDK-2014-012	Male	Older Adult	0	0	0	0	0	0
		Total	2	3	3	6	10	1

*The number in each column indicates the total number of bones present. Not all bones are complete. There are no grave features (005, 006, or 013. Burials 9 and 14 were represented only by flotation samples. Burial 7 was examined in the field.

Table 4. Joint Surface Inventory.*

Comprehensive Identification Number	Sex	Age (in years)	TMJ	Humerus (Proximal)	Humerus (Distal)	Radius (Proximal)	Radius (Distal)	Ulna (Proximal)	Ulna (Distal)	Innominate (Acetabulum)	Innominate (Sacro - Iliac)	Femur (Proximal)	Femur (Distal)	Tibia (Proximal)	Tibia (Distal)
44PW1947-DDK-2014-001	Indeterminate	Adult	0	0	0	0	0	0	0	0	0	0	0	0	0
44PW1947-DDK-2014-002	Female	Older Adult	0	0	0	0	0	0	0	0	0	0	0	0	0
44PW1947-DDK-2014-003	Probable Female	Older Adult	0	0	0	0	0	0	0	0	0	0	0	0	0
44PW1947-DDK-2014-004	Male	Older Adult	0	0	0	0	0	0	0	0	0	0	0	0	0
44PW1947-DDK-2014-007	Indeterminate	10 - 14	0	0	0	0	0	0	0	0	0	0	0	0	0
44PW1947-DDK-2014-008	Probable Female	Older Adult	0	0	0	0	0	0	0	0	0	0	0	0	0
44PW1947-DDK-2014-010	Male	Older Adult	0	0	0	0	0	0	0	0	0	0	0	0	0
44PW1947-DDK-2014-011	Male	Older Adult	0	0	0	0	0	0	0	0	0	0	0	0	0
44PW1947-DDK-2014-012	Male	Older Adult	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total		0	0	0	0	0	0	0	0	0	0	0	0	0

*The number in each column indicates the total number of joint surfaces present. Not all surfaces are complete. There are no grave features 005, 006, or 013. Burials 9 and 14 were represented only by flotation samples. Burial 7 was examined in the field.

Table 5. Inventory of Teeth.*

Comprehensive Identification Number	Sex	Age (in years)	Deciduous Dentition												Adult Dentition																Total Deciduous Teeth	Total Adult Teeth
			Maxillary Teeth					Mandibular Teeth					Maxillary Teeth							Mandibular Teeth											
			di^1	di^2	dc	dm^1	dm^2	di_1	di_2	dc	dm_1	dm_2	I^1	I^2	C	P^1	P^2	M^1	M^2	M^3	I_1	I_2	C	P_1	P_2	M_1	M_2	M_3		
44PW1947-DDK-2014-001	Indeterminate	Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	2	-	0	4
44PW1947-DDK-2014-002	Female	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	0	3
44PW1947-DDK-2014-003	Probable Female	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	1	-	-	0	4
44PW1947-DDK-2014-004	Male	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	2	2	2	-	-	0	8
44PW1947-DDK-2014-007	Indeterminate	10 - 14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
44PW1947-DDK-2014-008	Probable Female	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	0	4
44PW1947-DDK-2014-010	Male	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	0	1
44PW1947-DDK-2014-011	Male	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
44PW1947-DDK-2014-012	Male	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	-	-	-	-	-	-	2	2	-	0	9
		Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	7	3	0	1	0	1	2	2	7	6	0	0	33

*The number in each column indicates the total number of teeth present. There are no grave features 005, 006, or 013. Burials 9 and 14 were represented only by flotation samples. Burial 7 was examined in the field.

Table 6. Dental Pathology.

Comprehensive Identification Number	Sex	Age (in years)	Caries										Total	Abscesses									Total	Antemortem Loss									Total
			Maxilla				Mandible							Maxilla				Mandible						Maxilla				Mandible					
			I	C	P	M	I	C	P	M				I	C	P	M	I	C	P	M			I	C	P	M	I	C	P	M		
44PW1947-DDK-2014-001	Indeterminate	Adult	-	-	-	-	-	-	-	-	0			-	-	-	-	-	-	-	-	0		-	-	-	-	-	-	-	-	0	
44PW1947-DDK-2014-002	Female	Older Adult	-	-	-	-	-	-	-	-	0			-	-	-	-	-	-	-	-	0		-	-	-	-	-	-	-	-	0	
44PW1947-DDK-2014-003	Probable Female	Older Adult	-	-	-	-	-	-	-	-	0			-	-	-	-	-	-	-	-	0		-	-	-	-	-	-	-	-	0	
44PW1947-DDK-2014-004	Male	Older Adult	-	-	-	-	-	-	-	-	0			-	-	-	-	-	-	2	-	0		-	-	-	-	-	-	-	-	2	
44PW1947-DDK-2014-007	Indeterminate	10-14	-	-	-	-	-	-	-	-	0			-	-	-	-	-	-	-	-	0		-	-	-	-	-	-	-	-	0	
44PW1947-DDK-2014-008	Probable Female	Older Adult	-	-	-	-	-	-	-	-	0			-	-	-	-	-	-	-	-	0		-	-	-	-	-	-	-	-	0	
44PW1947-DDK-2014-010	Male	Older Adult	-	-	-	-	-	-	-	-	0			-	-	-	-	-	-	-	-	0		-	-	-	-	-	-	-	-	0	
44PW1947-DDK-2014-011	Male	Older Adult	-	-	-	-	-	-	-	-	0			-	-	-	-	-	-	-	-	0		-	-	-	-	-	-	-	-	0	
44PW1947-DDK-2014-012	Male	Older Adult	-	-	-	-	-	-	-	-	0			-	-	-	-	-	-	-	-	0		-	-	-	-	-	-	-	-	0	
		Total	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	2	0	0		0	0	0	0	0	0	0	0	0	

I=Incisor, C=Canine, P=Premolar, M=Molar. There are no grave features 005, 006, or 013. Burials 9 and 14 were represented only by flotation samples. Burial 7 was examined in the field.

Table 7. Inventory of Tooth Sockets.*

Comprehensive Identification Number	Sex	Age (in years)	Maxillary Sockets										Mandibular Sockets									Total Adult Sockets
			I^1	I^2	C	P^1	P^2	M^1	M^2	M^3	I_1	I_2	C	P_1	P_2	M_1	M_2	M_3	
44PW1947-DDK-2014-001	Indeterminate	Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
44PW1947-DDK-2014-002	Female	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
44PW1947-DDK-2014-003	Probable Female	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
44PW1947-DDK-2014-004	Male	Older Adult	-	-	-	-	-	-	-	-	1	2	2	2	-	-	-	-	7
44PW1947-DDK-2014-007	Indeterminate	10 -14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
44PW1947-DDK-2014-008	Probable Female	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
44PW1947-DDK-2014-010	Male	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
44PW1947-DDK-2014-011	Male	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
44PW1947-DDK-2014-012	Male	Older Adult	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
		Total	0	0	0	0	0	0	0	0	1	2	2	2	0	0	0	0	7

*The number in each column indicates the total number of tooth sockets present. There are no grave features 005, 006, or 013. Burials 9 and 14 were represented only by flotation samples. Burial 7 was examined in the field.

REFERENCES CITED

Bass, W.M.
2005 *Human Osteology: A Laboratory and Field Manual*, 5th edition. Missouri Archaeological Society, Inc.: Columbia, Missouri.

Behrensmeyer, A.K.
1978 Taphonomic and Ecologic Information from Bone Weathering. Paleobiology 4: 150-162.

Buikstra, J.E. and D H. Ubelaker, eds.
1994 Standards for Data Collection from Human Skeletal Remains: Proceedings of a Seminar at the Field Museum of Natural History. Research Series Number 44. Fayetteville, AR: Arkansas Archeological Survey Press.

Burns, K R.
2007 Forensic Anthropology Training Manual. 2nd Edition. Pearson Education, Inc., New Jersey.

Byers, S.N.
2011 Introduction to Forensic Anthropology. 4th Edition. Prentice Hall: Boston.

Gill, G.W., and S. Rhine, eds.
1990 Skeletal Attribution of Race. Maxwell Museum of Anthropology, Anthropological Papers Number 4. Albuquerque, NM: Maxwell Museum of Anthropology.

Igbigbi, P.S. and B.C. Msamati
2000 Sex Determination from Femoral Head Diameters in Black Malawians. East African Medical Journal 77 (3): 147-151

Komar, D A. and J.E. Buikstra
2008 Forensic Anthropology: Contemporary Theory and Practice. Oxford University Press, New York.

Owsley, D.W., and R L. Jantz
1989 A Systematic Approach to the Skeletal Biology of the Southern Plains, from Clovis to Comanchero: Archaeological Overview of the Southern Great Plains. Research Series 35. Arkansas Archaeological Survey, Fayetteville.

Ubelaker, D.H.
1980 Human Skeletal Remains: Excavation, Analysis, Interpretation Manuals on Archeology, Number 2. Washington, DC: Taraxacum Press.

APPENDIX 1

DEFINITIONS OF KEY TERMS

Cortical excavations are lytic erosions of the bone surface located at the origins and insertions of muscles. These defects frequently reflect chronic, strenuous use of the associated muscles.

Cribra orbitalia refers to bilateral porosity in the superior orbital plates. Ectocranial porosis is represented by pits in the outer table of the vault, but is not accompanied by thickened diploe as occurs in porotic hyperostosis.

Dental Caries are a progressive infectious disease process that causes demineralization and subsequent destruction of the tooth structure. This may lead to abscesses and antemortem tooth loss.

Eburnation describes a degenerative bone condition often associated with osteoarthritis. Due to the loss of cartilage, bone rubs on bone and the effected surfaces take on a polished appearance.

Ectocranial porosis is represented by pits in the outer table of the vault, but is not accompanied by thickened diploe as occurs in porotic hyperostosis.

Enthesophytes are characterized by the abnormal ossification of tendon and ligament attachments and are the result of inflammatory, traumatic, and degenerative processes.

Granular fovea, also known as Pacchioni's pits or arachnoid granulations, are small protrusions of one of the three brain meninges into the venous sinuses for the release of cerebrospinal fluid. In the human skeleton, they are manifested as small depressions, usually along the sagittal suture.

Harris lines are transverse, opaque bands that are frequently observed radiographically on the proximal and distal femora and tibiae of infants, children, and young adults. These lines are formed during the recovery phase that follows temporary arrested development of longitudinal bone growth. These defects are often associated with metabolic insults such as illness or short-term dietary insufficiency.

Kneeling facets are occupational stress indicators that occur on the toes and result from habitual hyperextension of the metatarsal-phalangeal joints.

Linear enamel crown hypoplasias are represented by horizontally oriented bands or furrows that traverse the crowns of primarily the anterior dentition. These defects are caused by metabolic stress that causes a disruption in enamel formation. Unlike Harris lines that eventually remodel, are enamel hypoplasias are permanent.

Osteoarthritis is a disease that primarily affects the diarthrodial joints of the skeleton and is characterized by porosity, osteophytic development, and occasionally eburnation

of the affected joint surface. This condition causes pain, swelling, and a reduction in the range of motion of the involved joint.

Osteomyelitis, or the infection of bone, usually affects the periosteum, the cortex, and the medullary cavity and is characterized by the formation of sequestrum (necrotic bone), involucrum (new bone), and cloacae (channel for pus drainage). This disease may cause gross enlargement and deformation of the affected element along with abscess formation.

Periapical Abscess is the most common type of dental abscess that is characterized by a localized infection at the apex of the tooth root. Bacteria are introduced into the pulp of the tooth through caries, fracture or surface attrition.

Periodontal Abscess is a localized infection that occurs in the periodontal pocket that contains the tissues and structures that support the tooth. This infection typically results from periodontal disease and plaque formation.

Periostitis is an inflammatory condition that results in the formation of new woven bone that is loosely organized and plaque-like in its appearance. In its active state, this layer of bone is deposited on top of the cortical surface. When healed, the new layer of woven bone is incorporated into the cortical matrix below.

Plaque is a layer of abnormal bone that is typically the result of an infection and may be associated with periostitis.

Poirier's facets are located on the anterior aspects of the femoral necks and are caused by repeated and prolonged contact of the neck with the anterior margin of the acetabulum. This condition is associated with habitual squatting.

Porotic hyperostosis is characterized by increased porosity in the frontal, parietal, and occipital bones of the cranium. There is an associated thinning of the cortical surface of the vault and an increase in vault thickness due to expansion of the diploe.

Schmorl's depressions are compression defects of the superior and inferior vertebral endplates are most frequently observed in the lower thoracic and lumbar spine. These depressions are caused by herniation of the intervertebral disc.

Spondylolysis is a spinal condition characterized by fracture and separation of the neural arch from the main portion of the vertebral body, usually at the level of the fifth lumbar vertebra.

Squatting facets are occupational stress markers represented by small contact points located on the anterior margin of the distal joint of the tibia. These indicate repeated and prolonged flexion contact with the talus.

Trauma is defined as any injury or wound that affects skeletal or dental tissues.

APPENDIX III

Coffin Hardware Analysis

Coffin Hardware Analysis for 44PW1947

Laurie E. Burgess, Department of Anthropology
National Museum of Natural History, Smithsonian Institution

January 2014

Burials that date to the first half of the nineteenth century generally yield little or no coffin hardware and are characterized by the presence of nails and the occasional name plate. Around the mid-nineteenth century, coffin hardware, which was both decorative and functional, starts to appear in burials and the degree of ornateness and the frequency of this specialized form of material culture intensifies significantly as the century progresses, to the point where purely ornament elements appear (Garrow 1987:41; Kogon and Mayer 1995:156; Woodley 1991:48). For example, coffin screws, used to secure the coffin lid, evolve from functional white metal screws to elaborate and upright thumbscrews, accompanied by decorative escutcheon plates; coffin handles change from simple, fixed, single lug handles to swing bail handles and then to the even more ornate short bar handles.

Little et al. (1992) conducted a study of the Weir family cemetery in Manassas, Virginia, and demonstrated that the trend in increasingly elaborate coffin hardware was linked to the beautification of death movement of the latter half of the nineteenth century, which was most pronounced in the 1860s and 1870s. Despite the fact that the Weir family was in financial decline, coffin hardware used in the burials during this time period did not reflect the family's changed circumstance and instead appears to have been intended to keep up appearances, so to speak. Little et al. (1992:451) also demonstrated that "specific historical context, with all its attendant complexities, must be sought in the available data," taking into account both the larger social trend of the beautification of death and the declining circumstances of the family.

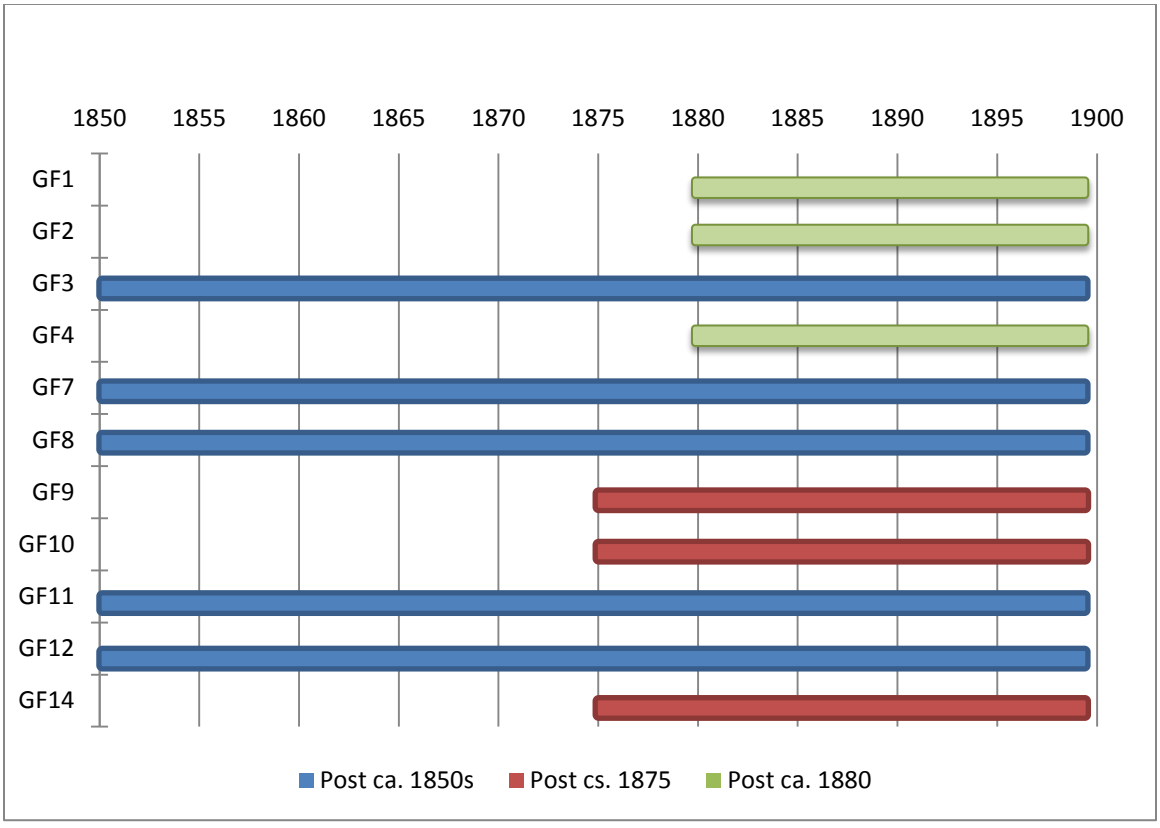
The coffin hardware from the 11 excavated burials from 44PW1947 was analyzed for dating purposes using a combination of nineteenth-century coffin hardware catalogues, published scholarly articles and archaeological reports. The analysis was conducted based upon high quality digital images of the mortuary material culture. Based on the types of coffin hardware recovered from each of the graves, site 44PW1947 was used during the mid-to-late nineteenth century.

The hardware recovered from each burial is discussed below and the coffin hardware terminology used in this report follows that of Hacker-Norton and Trinkley (1984) and Davidson (2006).

Table 1: Coffin Hardware from 44PW1947

Burial	Coffin Handle, Double Lug Swing Bail	Coffin Handle Short Bar	Thumb-screws	Escutcheon Plate	Coffin Screws	Viewing Plate	Hinge	Other
GF 1		●	●	●			●	
GF 2		●	●	●			●	
GF 3					●			
GF 4		●	●	●	●	●		
GF 7					●			
GF 8			●		●	●		
GF 9		●	●	●			●	Coffin plate
GF 10	●		●					
GF 11					●			
GF 12					●			
GF 14			●			●		

Table 2: Possible Date of Interments Based on Coffin Hardware



Grave Features 1 and 2

Short Bar Coffin Handle: Short bar coffin handles, which have a straight bar (which pall bearers could grasp) in lieu of the earlier curved, swing bail handles, first appear in the 1870s. They became popular around 1880 and remained so from 1880 to approximately 1920 (Hacker-Norton and Trinkley 1984:50). Other archaeologists have found short bar coffin handles with a patent date of 1879 and others that postdated 1878 (Kogon and Mayer 1995:190; Woodley 1991:58). Demonstrating their long duration, Garrow (1987) found short bar coffin handles in graves that dates from 1900 to 1921, and also in an 1879 burial. More recently, Davidson (2006:127) identified the date of their first occurrence through a review of coffin hardware catalogues and found that the earliest form of short bar handles appeared in two 1871 catalogues.

The short bar coffin handles from Graves 1 and 2 appear in the 1880 Meridan Brittania *Illustrated Catalogue and Descriptive Price List of Wm. M. Smith's Fine Silver, Bronze, Gold Plated and Oxidized Silver Casket Trimmings*. They appear under the heading "Fine Electro Silver Plated" as no. 88 and their price is given as "per dozen pairs $5.00" (Meridan Britannia 1880:5).

Thumbscrew: The white metal thumbscrew, while corroded, appears to be of the earlier form of cylindrical thumbscrew. Thumbscrews were used to secure the coffin lid; previously, beginning roughly at the middle of the nineteenth century, white metal coffin screws had served this purpose. Davidson (2006:133-134) refers to this type of thumbscrew as being "first generation" and found that it first appears in the 1869 Sargent & Co. coffin hardware catalogue, providing a *terminus post quem* of 1869. The thumbscrew from 44PW1947 looks like the form with two raised, annular bands encircling the cylinder (one at the top, one near the midpoint and a similar band encircles the base) and is illustrated in Davison's (2006:133) report on two historic cemeteries in Arkansas. It is interesting that this form of thumbscrew appears with a 1880s short bar coffin handle but as Hacker-Norton and Trinkley (1984) have shown, some purveyors maintained and presumably kept using stocks of older coffin hardware.

Escutcheon plate: The white metal escutcheon plate has lobed ends with what looks like a floral design in the center lobe; the earliest escutcheon plates first appear in the 1865 Russell and Erwin catalogue (Russell and Erwin 1980 [1865]:331) and tend to occur in simple, diamond-like shapes. The variety present here, with rounded ends and a design element is more consistent with slightly later forms. Hacker-Norton and Trinkley (1984:30, 46), in their review of nineteenth century catalogues, found that thumbscrews and escutcheons first appear together during the 1870s and Kogon and Mayer (1995) found that escutcheons postdate 1871. Davidson (2006:146-147) finds that escutcheon use increased with the introduction of thumbscrews in the 1870s.

Hinge: Butt hinge (similar to those shown in Russell & Erwin 1980 [1865])

Dating: The appearance of the coffin handles in the 1880 Meridan Britannia coffin hardware catalogue means that they were in use at that time; however, it could be that they were present in earlier catalogues. The combination of the short bar coffin handles, which first appear in catalogues in 1871, with the cylindrical, early form of thumbscrew, which has a *terminus post quem* of 1869, and the presence of a fairly ornate escutcheon plate would be consistent with an 1870s or later date. However, with the 1880 date of the catalogue, the most likely date for this burial would be ca. 1880 or later, although an 1870s date is possible as well (Table 1).

Grave Feature 3

Coffin screws: Davidson (2006:140), in his review of catalogues, found that coffin screws were available in the 1850s and were replaced by thumbscrews in the 1870s and 1880s as the primary means of securing the coffin lid. Despite this transition, he found that two early twentieth-century catalogues still contained white metal coffin screws. Davidson (2006:142) also found that, locally (in Arkansas, in this case), they may have stayed in use since they were recovered from graves dating to 1882 and 1890.

The Russell and Erwin 1865 catalogue (Russell and Erwin 1980 [1865]:332) provides examples of highly similar white metal coffins screws, described as "Fine White Metal Coffin Screws." While the absence of evidence is always to be treated carefully, the fact that the burial yielded only coffin screws and no other coffin hardware would be consistent with mid-nineteenth century burial practices where there was often little hardware present.

Dating: The presence of only white metal coffin screws in a burial indicates a post-ca. 1850 date for this burial since they appear in the mid-nineteenth century but have appeared as late as the early twentieth century in catalogues (Davidson 2006:142). However, the absence of any other coffin hardware suggests that this burial would date more closely to the middle of the century, rather than the final decades of the century.

Grave Feature 4

Short Bar Coffin Handle: see Description under Grave Features 1 and 2

Viewing plate: These date to the second half of the nineteenth century.

Thumbscrew: The white metal thumbscrews are flat and occur in the form of an urn draped with fabric. Davidson (2006:133) refers to these as the "third and final" generation of thumbscrews and cites a patent date of 1874 for this flat form, with a *terminus post quem* of 1875. This thumbscrew appears in the 1880 Meridan Britannia *Illustrated Catalogue and Descriptive Price List of Wm. M. Smith's Fine Silver, Bronze, Gold Plated and Oxidized Silver Casket Trimmings.* They appear as No. 13 and are shown on page 46 and on 47 with different escutcheon plates in each illustration. The escutcheon plates are not the ones found in Grave 4.

Escutcheons: Hacker-Norton and Trinkley (1984:30, 46), in their review of 19th century catalogues, found that thumbscrews and escutcheons first appear together during the 1870s and Kogon and Mayer (1995) found that escutcheons postdate 1871. Davidson (2006:146-147) finds that escutcheon use increased with the introduction of thumbscrews in the 1870s.

Dating: The coffin hardware, especially based on the patent date for this form of thumbscrew (Davidson 2006) and the appearance of the thumbscrews in the 1880 Meridan Britannia catalogue, indicate that this burial postdates ca. 1880.

(*No Grave 5 or 6*)

Grave Feature 7

Coffin screws: see Description under Grave Feature 3.

Dating: The presence of only white metal coffin screws in a burial indicates a post-ca. 1850 date for this burial since they appear in the mid-nineteenth century but have appeared as late as the early twentieth century in catalogues (Davidson 2006:142). However, the absence of any other coffin hardware suggests that this burial would date more closely to the middle of the century, rather than the final decades of the century.

Grave Feature 8

Coffin screws: see Description under Grave Feature 3.

Dating: The presence of only white metal coffin screws in a burial indicates a post-ca. 1850 date for this burial since they appear in the mid-nineteenth century but have appeared as late as the early twentieth century in catalogues (Davidson 2006:142). However, the absence of any other coffin hardware suggests that this burial would date more closely to the middle of the century, rather than the final decades of the century.

Grave Feature 9

Short Bar Coffin Handles: see Description under Grave Features 1 and 2.

Thumbscrew (flat, fan-like): The white metal thumbscrews are flat and occur in a fan-like shape with molded design elements. Davidson (2006:133) refers to this flat form as the "third and final" generation of thumbscrews and cites a patent date of 1874 for this flat form, with a *terminus post quem* of 1875. This thumbscrew, with a border of inward-facing triangles, is the same thumbscrew recovered from Grave 14.

Escutcheon plate: Hacker-Norton and Trinkley (1984:30, 46), in their review of nineteenth century catalogues, found that thumbscrews and escutcheons first appear together during the 1870s and Kogon and Mayer (1995) found that escutcheons postdate

1871. Davidson (2006:146-147) finds that escutcheon use increased with the introduction of thumbscrews in the 1870s.

Viewing Plate: Dates to the second half of the nineteenth century.

Other Items: "At Rest" plate, dentures, finger ring, ferrous hinge (possibly from shipping case).

Dating: The combination of coffin hardware, especially based on the patent date for this form of thumbscrew (Davidson 2006), most likely places this burial in the second half of the 1870s or the 1880s or 1890s.

Grave Feature 10

Double-lug swing bail handle: Forms similar to this swing bail handle - with similar lugs - appear in the 1865 Russell and Erwin catalogue as well as the 1880 Zanesville Coffin Company Illustrated Catalogue, so they were available in the 1860s, 1870s and the 1880s.

Thumbscrew: flat, fan-like with floral (perhaps lily of the valley?) stylized design element. The white metal thumbscrews are flat and occur in a fan-like shape with molded design elements. Davidson (2006:133) refers to this flat form as the "third and final" generation of thumbscrews and cites a patent date of 1874 for this flat form, with a *terminus post quem* of 1875.

Dating: The combination of coffin hardware, especially based on the patent date for this form of thumbscrew (Davidson 2006), most likely places this burial in the second half of the 1870s or the 1880s or 1890s.

Grave Feature 11

Coffin screws: see Description under Grave Feature 3.

Dating: The presence of only white metal coffin screws in a burial indicates a post-ca. 1850 date for this burial since they appear in the mid-nineteenth century but have appeared as late as the early twentieth century in catalogues (Davidson 2006:142). However, the absence of any other coffin hardware suggests that this burial would date more closely to the middle of the century, rather than the final decades of the century. The presence of the Goodyear button also supports this date.

Grave Feature 12

Coffin screws: see Description under Grave Feature 3.

Dating: The presence of only white metal coffin screws in a burial indicates a post-ca. 1850 date for this burial since they appear in the mid-nineteenth century but have appeared as late as the early twentieth century in catalogues (Davidson 2006:142). However, the absence of any other coffin hardware suggests that this burial would date more closely to the middle of the century, rather than the final decades of the century.

(*No Grave 13*)

Grave Feature 14

Thumbscrew: This thumbscrew is flat and fan-like in shape with a border of inward-pointing triangles. It is the same thumbscrew found in Grave 9. The white metal thumbscrews are flat and occur in a fan-like shape with molded design elements. Davidson (2006:133) refers to this flat form as the "third and final" generation of thumbscrews and cites a patent date of 1874 for this flat form, with a *terminus post quem* of 1875.

Viewing Plate (partial): Viewing plates date to the second half of the nineteenth century.

Dating: Based on the patent date for this form of thumbscrew (Davidson 2006), most likely places this burial in the second half of the 1870s or the 1880s or 1890s.

Conclusion

The coffin hardware from site 44PW1947 places the cemetery squarely in the second half of the nineteenth century. Five of the graves postdate ca. 1850, three postdate ca. 1875 and three postdate ca. 1880 (Table 2). The five graves postdating ca. 1850 only contained white metal coffin screws, which could suggest an earlier mid-nineteenth century date. However, the first suspected burial at the cemetery dates to 1862 (Boyd Sipe, 2014 personal communication).

A range of coffin hardware was already available during the 1860s and could be obtained in the region, as demonstrated by the Weir family cemetery in nearby Manassas where burials from an 1852-1862 time period had multiple forms of coffin hardware present. At the Weir cemetery, Little et al. (1992) found that coffin screws appeared in burials dating from 1852 to 1862, although they are known to occur during the second half of the nineteenth century so their presence in somewhat later burials would not be all that unusual. But they appear to have occurred along with other types of hardware, not as the sole form of mortuary material culture. Davidson (2006:142) has recovered white metal coffin screws from burials dating to the 1880s and 1890s, confirming that these items stayed in use for some time. In the absence of any other coffin hardware, it would be tempting to ascribe an earlier date to these five burials from site 44PW1947 or to suggest

that the presence of only white metal coffin screws indicates that these burials are transitional between the first half of the nineteenth century, when little or no hardware was present, and the second half, when increasing amounts were used.

Table 3: Graves By Date

Date	Grave
Postdates ca. 1850	**3**
Postdates ca. 1850	**7**
Postdates ca. 1850	**8**
Postdates ca. 1850	**11**
Postdates ca. 1850	**12**
Postdates 1875	**9**
Postdates 1875	**10**
Postdates 1875	**14**
Postdates ca. 1880	**1**
Postdates ca. 1880	**2**
Postdates ca. 1880	**4**

The "specific historical context" mentioned by Little et al. (1992:451) and the role of individual choice are likely the factors resulting in the presence of white metal coffin screws in an 1862 burial and the later burials. It was likely that the cemetery (site 44PW1947) was associated with the Lynn family, who at that time was facing a time of difficulties that included financial hardship (Boyd Sipe, 2014 personal communication). Therefore, it is very possible that the selection of white metal coffin screws - and no other coffin hardware, was an economic choice made by a family with limited or diminishing resources. It is the opposite strategy employed at the Weir cemetery, where the amount of hardware increased as the family's fortune declined, but it likely explains the presence of only white metal coffin screws in a time where other forms of hardware were being used.

The later burials, those that postdate 1875 and 1880, contain the expected mix of coffin hardware, which again could be a result of choices made the family at that time, regardless of circumstances. The trend of ornamenting coffins with a combination of functional and decorative items may have exerted a stronger influence at that time, one that overrode economic challenges or it could be that the circumstances of the family had changed somewhat.

Overall, the mortuary material culture found with the 11 excavated burials from site 44PW1947 is consistent with graves dating to the second half of the nineteenth century. The coffin hardware falls into three general groupings, most of which reflect the changes in ornamentation that took place as the century progressed. The group that postdates ca. 1850 also demonstrates that, in addition to the broader social trends of the time period, individual choice can shape the archaeological record, as seen in the different responses to both the trends of the day and to economic challenges shown by both the Weir family and the family buried at site 44PW1947.

References

Davidson, James M.

2006 Material Culture, Chronology and Socioeconomics. In *Two Historic Cemeteries in Crawford County, Arkansas,* Robert C. Mainfort, Jr., and James M. Davidson, editors, pp. 73-194. Arkansas Archeological Survey, Fayetteville, AR.

Garrow, Patrick

1987 A Preliminary Seriation of Coffin Hardware Forms in Nineteenth and Twentieth Century Georgia. *Early Georgia* 15(1-2):19-45.

Hacker-Norton, Debi, and Michael Trinkley

1984 *Remember Man Thou Art Dust: Coffin Hardware of the Twentieth Century.* Research Series 2. Chicora Foundation, Inc., Columbia, South Carolina.

Kogon, Stephen L., and Robert G. Mayer

1995 Analyses of Coffin Hardware from Unmarked Burials Former Wesleyan Methodist Church, Weston, Ontario. *North American Archaeologist* 16(2):133-162.

Little, Barbara, Kim M. Lanphear, and Douglas W. Owsley

1992 Mortuary Display and Status in a Nineteenth-Century Anglo-American Cemetery in Manassas, Virginia. *American Antiquity*, 57(3):397-418.

Luscomb, Sally C.

1992 *The Collector's Encyclopedia of Buttons*. Schiffer Publishing, West Chester, Pennsylvania.

Meridan Britannia

1880 *Illustrated Catalogue and Descriptive Price List of Wm. M. Smith's Fine Silver, Bronze, Gold Plated and Oxidized Silver Casket Trimmings.* Meridan Britannia, Meridan, Connecticut.

Owsley, Douglas W., William F. Hanna, Malcolm L. Richardson, and Laurie E. Burgess

2003 Bioarcheological and Geophysical Investigation of Unmarked Civil War Burials in the Soldier's Plot, Emmanuel Lutheran Church Cemetery, New Market, VA. *Quarterly Bulletin of the Archeological Society of Virginia, ASV Special Publication No. 41*. (Reprinted in 2003 with add'l info).

Russell and Erwin Manufacturing Company

1980 [1865] *Illustrated Catalogue of American Hardware of the Russell and Erwin Manufacturing Company*. New Britain, Connecticut. 1980 facsimile edition, Association for Preservation Technology, Ottawa.

Sprague, Roderick
2002 China or Prosser Button Identification and Dating. *Historical Archaeology* 36:2(111-127).

Tice, Warren K.
1997 *Uniform Buttons of the United States, 1776-1865.* Thomas Publications, Gettysburg, Pennsylvania.

Woodley, Phillip J.
1991 Coffin Hardware and Artifact Analysis. In *The Links That Bind: The Nineteenth Century Harvie Family Burying Ground,* edited by Shelley R. Saunders and Richard Lazenby, pp. 41-49. Occasional Papers in Northeastern Archaeology, No. 5. Copetown Press.

APPENDIX IV

Identification of Wood Samples

Prepared by Kathleen Furgerson, Archaeobotanist

Site 44PW1947 is a nineteenth-century family cemetery located in Prince William County, Virginia. The site was investigated by Wetland Studies and Solutions, Inc. (WSSI), who requested identification of the wood remains recovered from nine of the grave features. Sixteen wood samples were submitted for analysis and include both coffin and vault wood. The results of the analysis are presented below.

Methods

The wood samples removed during excavation were wrapped in newspaper and plastic to keep them damp and inhibit further decay. These were unwrapped and allowed to slowly air dry for analysis. Weight and dimensions (length, width, and thickness) were recorded prior to analysis (Table 1); in addition, photographs were taken of each sample. A unique identifier was assigned to each wood fragment for analysis.

Table 1: Wood Samples Submitted for Identification

Wood Sample #	Grave Feature #	Description	Weight (ounces)	Dimensions (inches)*		
				Length	Width	Thickness
WS001	1	Base of coffin	3.54	7.50	4.00	0.50
WS002	2	Base of inner coffin	3.16	8.00	3.25	0.50
WS003				9.00	2.50	0.50
WS004	2	Base of outer vault	5.95	6.50	6.00	0.50
WS005				4.50	7.50	0.50
WS006	4	Top of coffin	2.15	7.50	5.00	0.50
WS007				8.75	2.25	0.50
WS008	4	Side of coffin	4.07	13.00	5.25	0.25
WS009	9	Coffin wood	3.43	6.00	7.25	0.50
WS010		Furring strip	2.34	8.50	0.38	0.19
WS011		Furring strip	2.31	8.25	0.38	0.19
WS012	9	Outer box with painted letters	3.15	9.00	5.50	0.50
W013	10	Coffin side (?)	1.24	4.50	2.50	0.50
WS014	14	Piece from viewing panel	1.63	12.00	1.25	0.50
WS015		Coffin wood	1.03	6.75	2.00	0.25
WS016		Coffin wood	0.45	1.00	4.00	0.50

* Length measured parallel to the wood grain; width measured perpendicular to length

Taxonomic identification was completed using a trinocular, stereo-zoom microscope at 10.5x–45x magnification illuminated with a fiber-optic lamp. Wood taxa were identified by comparison of transverse sections with a comparative collection of modern wood samples as well as reference texts (Hoadley 1990; Panshin and de Zeeuw 1970) and online photographic databases. All nomenclature follows USDA, NRCS (2014a) conventions.

Sections for identification were obtained by one of two methods. First, the transverse ends of the wood fragments were shaved with a single-edge razor blade to produce a clean surface for viewing under the microscope. In many cases this was sufficient to reveal enough diagnostic detail to identify species. Second, for specimens where shaving the ends did not produce an adequate exposure, large sections were removed and broken to expose transverse surfaces away from the edges of the wood fragments.

Results

Six wood taxa were identified from the 16 samples (Table 2). With the exception of the mahogany (native to Central America), the wood species identified are native to eastern North America (Burns and Honkala 1990; Forest Products Laboratory 1999; USDA, NRCS 2014b). Of the 16 samples, 50 percent were southern yellow pine (n=8), followed by tuliptree (n=3), willow (n=2), American basswood (n=1), hard maple (n=1), and mahogany (n=1).

Table 2: Wood Taxa

Wood ID Sample #	Grave Feature #	Description	Wood Taxa	
			Common Name	Latin Name
WS001	1	Base of coffin	Southern yellow pine	*Pinus* sp.
WS002	2	Base of inner coffin	Southern yellow pine	*Pinus* sp.
WS003			Southern yellow pine	*Pinus* sp.
WS004	2	Base of outer vault	Southern yellow pine	*Pinus* sp.
WS005			Southern yellow pine	*Pinus* sp.
WS006	4	Top of coffin	Tuliptree*	*Liriodendron tulipifera*
WS007			Tuliptree*	*Liriodendron tulipifera*
WS008	4	Side of coffin	Willow	*Salix* sp.
WS009	9	Coffin wood	Hard maple	*Acer* sp.
WS010		Furring strip	Southern yellow pine	*Pinus* sp.
WS011		Furring strip	Southern yellow pine	*Pinus* sp.
WS012	9	Outer box with painted letters	Tuliptree*	*Liriodendron tulipifera*
WS013	10	Coffin side (?)	Mahogany	*Swietenia* sp.
WS014	14	Piece from viewing panel	Basswood	*Tilia americana*
WS015		Coffin wood	Willow	*Salix* sp.
WS016		Coffin wood	Southern yellow pine	*Pinus* sp.

*Tuliptree also known as tulip-poplar, yellow poplar, tulip magnolia

American basswood

American basswood is a large, native deciduous tree that typically grows in deep, well-drained soils (USDA, NRCS 2014a). This species grows fast and reaches heights between 60–125 feet and diameters from 2–5 feet (Britton and Brown 1970; Burns and Honkala 1990; Forest Products Laboratory 1999; Jones 1968; USDA, NRCS 2014b). The wood is soft and unsuitable for building; however, it was used for a variety of purposes in the nineteenth and early twentieth century, including boxes, cabinetry, crates, farming implements, furniture, millwork, as well as a variety of other uses (Henderson 1890; Kellogg 1914; Porcher 1869). Jones (1968) noted the use of basswood for coffins.

Maple

Maples are trees or shrubs; there are over 100 species worldwide (Britton and Brown 1970). Fourteen species are native to North America (USDA, NRCS 2014a). Maples grow in a variety of habitats and are grown as ornamentals for their bright autumn foliage. Maples, especially the sugar maple (*A. saccharum*), are known for their sap which is made into maple syrup. Kellogg (1914) and Von Mueller (1888) list a variety of uses for maple, including boxes, cabinetry, crates, flooring, furniture, implements, turnery, as well as a variety of other items.

Maples are divided into hard maples and soft maples (Hoadley 1990). Hard maples include sugar maple (*A. saccharum*) and black maple (*A. nigrum*), and were preferred over soft maples for woodworking. While individual species of maple cannot be identified microscopically, they can be placed within the hard or soft maple groups. The maple from 44PW1947 is a hard maple.

Mahogany

Mahogany is native to the Americas, and consists of three species (*Swietenia humilis*, *S. macrophylla*, and *S. mahagoni*). *S. mahagoni* is found in the American West Indies and "was the premiere wood for fine furniture cabinet work and shipbuilding in Europe as early as the 1600s" (Forest Products Laboratory 1999:1-25). Mahogany and is found from southern Mexico south to Bolivia (Forest Products Laboratory 1999; Longwood 1971). Kellogg (1914) noted the use of mahogany for coffins and caskets.

Southern Yellow Pine

The pine family includes approximately 10 genera and 200 species mostly located in the northern hemisphere (eFloras.org 2014). The southern yellow pine group includes four species native to North America: loblolly (*Pinus taeda*), longleaf (*P. palustris*), shortleaf (*P. echinata*), and slash (*P. elliottii*) pines. These pines grow in a variety of habitats, and range in height from 80–150 feet and have diameters ranging from 2.5 – 5 feet (Britton and Brown 1970; USDA, NRCS 2014a). The southern yellow pines were used for a variety of purposes, including baskets, boxes, cabinetry, clapboards, coffins, crates, farming implements fencing, fixtures, flooring, furniture, ice boxes, interior finishes,

ladders, refrigerators, shipbuilding, tent poles, and washing machines (Kellogg 1914; Von Mueller 1888).

Tuliptree

The Tuliptree is a rapid-growing tree that thrives in moist, well-drained soils; this species grows to heights of 80–120 feet with trunk diameter of 2–5 feet (Burns and Honkala 1990; USDA, NRCS 2014a, 2014b). Tuliptree is light, fine-grained, and compact, making it a desirable wood for a variety of purposes (Porcher 1869; Von Mueller 1888). In the nineteenth century, Tuliptree was used for boat building, boxes, cabinetry, crates, furniture, millwork, ornamental work, as well as coffins and caskets (Kellogg 1914; Porcher 1869).

Willow

The willow family includes over 50 genera and 1,000 species worldwide (eFloras.org 2014). There are dozens of species that grow in North America that include native and introduced species (USDA, NRCS 2014a). Of these, black willow (*S. nigra*) "is the largest and the only commercially important willow" (Burns and Honkala 1990:1477). Microscopically, the individual species of willow cannot be distinguished; however, it is likely the site 44PW1947 samples are black willow given its prominence over other willows in the timber industry. Willow was used for a variety of purposes including boxes, cabinetry, crates, farming implements, furniture, millwork, as well as a variety of other utilitarian items (Kellogg 1914; Von Mueller 1888). Willow was also used for caskets (USDA, NRCS 2014d).

Coffin wood in context

In the early twentieth century, annual coffin and casket construction in the United States amounted to approximately 150 million feet of lumber (Kellogg 1914). Principal species included American chestnut, cypress, and white pine, which constituted 75 percent of the lumber supply for coffins and caskets. The remaining 25 percent was represented by 30 other wood species, including American basswood, southern yellow pine, and Tuliptree. Kellogg (1914) further noted that coffin exteriors consisted of birch, cedar, cypress, mahogany, red oak, redwood, white oak, or yellow poplar, and that outer boxes often were constructed of shortleaf pine (southern yellow pine group), white pine, and yellow poplar. While this information relates to coffin and casket industry of the late nineteenth and early twentieth century, the diversity species likely did not change drastically over time and therefore serve as examples of the types of wood used in throughout the nineteenth century.

A brief survey of archeological literature highlights the variety of wood species used for coffins:

- A nineteenth century cemetery in Uxbridge, Massachusetts contained coffins constructed from pine and yellow poplar (Bell 1990).

- The cemetery at St. Mary's City, Maryland contained a variety of wood coffins (in addition to the well-known lead coffins). Researchers noted that "numerous species of wood were used for different parts of the coffins" (Historic St. Mary's City 2013:4).
- The Catoctin Cemetery in Frederick County, Maryland contained coffins constructed from American chestnut and oak (Burnston 1981).
- The Tucson City Cemetery in Tucson, Arizona contained coffins constructed from black walnut, chestnut, cypress, juniper, and red cedar (Pye 2010).

LeeDecker et al. (1995) asserted that the types of wood used to manufacture coffins varied widely due to local availability and socioeconomic status. Before the funeral industry blossomed later in the nineteenth century and into the twentieth century, coffins were made by local carpenters or cabinetmakers who likely relied on materials in stock and made coffins to order, especially in remote or rural areas (Pye 2010).

Pye (2010) asserted that as with cabinet or furniture making, less expensive softwoods (e.g., basswood, pine, or Tuliptree) were used to construct unseen parts of coffins, such as bases, while the lids were constructed of more expensive hardwoods such as mahogany. Paint, stain, varnish, wax, and even cloth, were used to cover or mimic the more expensive woods (LeeDecker et al. 1995; Pye 2010). An 1831 price list published by the Columbia Cabinetmaker's Society (based in Washington, DC) shows pricing for poplar and mahogany wood and notes the mahogany coffins are polished while the poplar coffins are stained and polished. Pye (2010:48-49) noted that the "poplar was not stained due to a physical requirement; instead, the practice developed through a process of socially elevating negotiation whereby the lighter colored softwood was transformed into something more reminiscent of an expensive hardware."

The wood assemblage from site 44PW1947 appears to support the assertions of other researchers regarding woods used for coffin making as well as finishing. Of the 16 fragments, 14 are of softwoods (basswood, Tuliptree, southern yellow pine, and willow) while two are of hardwoods (mahogany and maple). Of the softwood samples, two fragments exhibit painted surfaces (GF 9 and GF 14), four fragments are from the base or side of the coffins or vault (GF 1, GF 2, and GF 4). The southern yellow pine furring strips from GF 9 and the Tuliptree coffin top fragments from GF 4 may have been painted or stained, although no evidence for either was detected on the wood.

Three coffins (GF 4, GF9, and GF 14) were constructed from multiple wood types. The wood from GF 10 was identified as mahogany; this sample, along with the hard maple coffin wood from GF 9, appears to be the only "expensive" hardwoods present in the sample. Other than the two painted pieces from GF 9 and GF 14, no evidence for painting or staining were detected on the wood samples.

References

Bell, Edward L.
1990 The Historical Archaeology of Mortuary Behavior: Coffin Hardware from Uxbridge, Massachusetts. *Historical Archaeology* 24(3):54-78.

Britton, Nathaniel L. and Addison Brown
1970 *An Illustrated Flora of the Northern United States and Canada*. 3 volumes. Dover Books, New York.

Burns, Russell M. and Barbara H. Honkala
1990 *Silvics of North America*. Volume 2, Hardwoods. Agricultural Handbook 654. USDA, NRCS, Washington, DC.

Burnston, Sharon Ann
1981 *Archaeological Data Recovery at Catoctin Furnace Cemetery, Frederick County, Maryland*. Prepared for Orr and Sons, Consulting Archaeologists, Arlington, Virginia by Mid-Atlantic Archaeological Research, Inc., Newark, Delaware. Manuscript on file at Maryland Historical Trust, Crownsville, Maryland.

Forest Products Laboratory
1999 *Wood Handbook—Wood as an Engineering Material*. Gen. Tech. Rep. FPL–GTR–113. USDA, Forest Service, Forest Products Laboratory, Madison, Wisconsin.

Henderson, Peter
1890 *Henderson's Handbook of Plants and General Horticulture*. Peter Henderson & Company, New York.

Historic St. Mary's City
2013 A Collaboration Between Archaeology and Conservation: The Lead Coffin Project. Electronic document, http://www.stmaryscity.org/research/publications/. Accessed 1 March 2014.

Hoadley, R. Bruce
1990 *Identifying Wood: Accurate Results with Simple Tools*. Taunton Press, Newtown, Connecticut.

Jones, George Neville
1968 *Taxonomy of American Species of Linden (Tilia)*. Illinois Biological Monographs 39. University of Illinois Press, Urbana.

Kellogg, Royal S.
1914 *Lumber and Its Uses*. U.P.C. Book Company, New York.

LeeDecker, Charles H., Jonathan Bloom, Ingrid Wuebber, and Marie-Lorraine Pipes and Karen Rosenberg.
1995 *Final Archaeological Excavations at a Late 18th-Century Family Cemetery for the U.S. Route 113 Dualization, Milford to Georgetown, Sussex County, Delaware*. DelDOT Archaeology Series No. 134. The Cultural Resource Group, Louis Berger & Associates, Inc., East Orange, New Jersey, with Karen R. Rosenberg, Department of Anthropology, University of Delaware. Submitted to U.S. Department of Transportation, Federal Highway Administration, and Delaware Department of State, Division of Historical and Cultural Affairs, Bureau of Archaeology and Historic Preservation. Prepared for Delaware Department of Transportation, Division of Planning, Location and Environmental Studies Office.

Longwood, Franklin R.
1971 *Present and Potential Commercial Timbers of the Caribbean*. Agriculture Handbook 207. USDA, Washington, DC.

Panshin, Alexis J. and Carl de Zeeuw
1970 *Textbook of Wood Technology*. McGraw-Hill, New York.

Porcher, Francis P.
1869 *Resources of the Southern Fields and Forests, Medical, Economical and Agricultural*. Walker, Evans & Cogswell, Charleston, South Carolina.

United States Department of Agriculture, Natural Resources Conservation Service [USDA, NRCS]
2014a The PLANTS Database. Electronic document, http://plants.usda.gov, accessed 1 March 2014.

2014b Plant Fact Sheet: Tulip Poplar, Liriodendron tulipifera L. Electronic document, http://plants.usda.gov, accessed 2 March 2014.

2014c Plant Guide: Basswood, *Tilia ame*ricana L. Electronic document, http://plants.usda.gov, accessed 2 March 2014.

2014d Plant Guide: Black Willow, *Salix nigra* Marsh. Electronic document, http://plants.usda.gov, accessed 2 March 2014.

Von Mueller, Baron Ferdinand
1888 *Select Extra-Tropical Plants, Readily Eligible for Industrial Culture or Naturalisation, With Indications of Their Native Countries and Some of Their Uses*. Robert S. Brain, Melbourne, Australia.

APPENDIX V

Partial Chain of Title

Parcel 7892-63-9714 – Includes site 44PW1947

2006, October 25
C. Lacey Compton, Jr. — Prince William County School Board — 21.5875 ac.
Claude T. Compton
Bettie L. Compton
Betty Jean Eller
(Prince William County Instrument # 200611020156650)

2006, October 25
CLC Family, LLC — C. Lacey Compton, Jr. — 21.5875 ac.
Claude T. Compton
Bettie L. Compton
(Prince William County Instrument # 200610300154471)

1999, July 19
C. Lacey Compton, Jr. — CLC Family, LLC — 21.5875 ac.
Claude T. Compton
Bettie L. Compton
(Prince William County Instrument # 200302200033659)

1997, March 5
C. Lacey Compton — C. Lacey Compton, Jr.
Claude T. Compton
Bettie L. Compton
(Prince William County WB 91:1718)

1964, November 10
Bradford Lowe — C. Lacey Compton — 101 acres,
Stella Mae Lowe — 2 roods, 12 poles
(Prince William County DB 400:85)

1964, July 12
J.C. Lail — Bradford Lowe — 101 acres,
Rosemary Lail — 2 roods, 12 poles
(Prince William County DB 326:253)

1956, January 12
C. Lacey Compton — Harriet McKinley Baden — 101 acres,
2 roods, 12 poles
Release (Prince William County DB 197:320)

1946, March 16
Harriet McKinley Baden — C. Lacey Compton — 101 acres,
2 roods, 12 poles
Trust (Prince William County DB 118:377)

1946, March 16		
Carleton Y. Hill Virginia C. Hill (Prince William County DB 118:376)	Harriet McKinley Baden	101 acres, 2 roods, 12 poles
1935, August 28		
Frank E. Hill Myrtle M. Hill Hope Hill Kraft Howard H. Hill Mae A. Goldberg Abraham Goldberg (Prince William County DB 96:52)	Carleton Y. Hill	101 acres, 2 roods, 12 poles
1907, February 23		
Jennie Kitchen (Prince William County DB 56:226)	Jerm A. Hill	139 ¼ acres
1900, November 24		
Henry Wise (Prince William County DB 54:98)	Jennie Kitchen	139 ¼ acres
1899, April 17		
William E. Lipscomb [Spcl Commissioner] (Prince William County DB 47:112)	Henry Wise	170 acres surveyed to 139 ¼
1865-1870		
William Lynn Estate (Prince William County Land Taxes)		Three parcels
1853-1860		
William. Lynn (Prince William County Land Taxes)		Three parcels

APPENDIX VI

Burial Excavation Permit

COMMONWEALTH of VIRGINIA

Department of Historic Resources

Douglas W. Domenech
Secretary of Natural Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

October 23, 2013

Mr. Warren Thompson, Supervisor of Construction
Prince William County Schools
14800 Joplin Road, Building #51
Manassas, VA 20112

Re: Application for the Archaeological Recovery of Human Remains Located Within an Unnamed Cemetery at the 12th High School Property, Prince William County, Virginia
DHR File No. 2012-4134

Dear Mr. Thompson:

Enclosed please find the requested permit. Please be aware that there are several conditions that must be met in order to satisfy the permit requirements, and these are listed on the second, third, and fourth pages of the permit. The permit is valid for a period of six months from today's date, which should allow ample time to complete all requirements. Before the permit expires on March 31, 2014, all work associated with the permit including the technical report should be complete. If you find that extenuating circumstances render you unable to meet this schedule, please contact the Department to discuss an extension.

If you have any questions regarding our comments or this permit, please do not hesitate to contact me. We look forward to working with you on this project.

Sincerely,

Joanna Wilson Green

Joanna Wilson Green, Archaeologist
Office of Preservation Incentives
804-482-6098
joanna.wilson@dhr.virginia.gov

COMMONWEALTH of VIRGINIA

Department of Historic Resources

Douglas W. Domenech
Secretary of Natural Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

October 23, 2013

Mr. Warren Thompson, Supervisor of Construction
Prince William County Schools
14800 Joplin Road, Building #51
Manassas, VA 20112

Re: Application for the Archaeological Recovery of Human Remains Located Within an Unnamed Cemetery at the 12th High School Property, Prince William County, Virginia
DHR File No. 2012-4134

Dear Mr. Thompson:

In accordance with Section 10.1-2305 of the *Code of Virginia*, final regulations adopted by the Virginia Board of Historic Resources and published in the Virginia Register on July 15, 1991, and following review by the Department, the Department of Historic Resources on this 23rd day of October, 2013, hereby grants to Mr. Warren Thompson of Prince William County Schools permission to recover human remains buried within unmarked graves located within an unnamed cemetery on the 12th High School property in Prince William County, Virginia. This permit is to be considered effective as of today's date.

The granting of this permit signifies that:

1. The Department has received from the Permittee and has approved a statement detailing the goals and objectives of the project;

2. The Department has reviewed the vitae of the individuals who will supervise the proposed work and has found them qualified to complete the work;

3. The Department has received accurate information as to the location of the unnamed cemetery within the 12th High School property;

4. The Department understands that disinterment is required in order to complete planned construction of the 12th High School;

5. The Department has received assurances that there are adequate resources to carry out the recovery and respectful reburial of all human remains located in the unmarked graves. The Department further understands that a reburial site has not been selected as of the date of this permit;

6. The Department has received confirmation of public notice, and understands that responses to that notice included no objections to the proposed relocation;

7. The Department is aware that the recovery is part of the 12th High School project, which is under review by the Office of Review and Compliance (DHR Project Review No. 2012-4134). The Department further understands that the cemetery was identified following completion of the Section 106 review process, and is being treated as a post-review discovery.

This permit is granted subject to the following conditions:

1. The Permittee shall proceed with the archaeological investigation and recovery of all unmarked interments identified during an earlier delineation. Recovery shall proceed in accordance with the approved methodology as proposed in the permit application. Any changes to this methodology must receive the prior written approval of the Department;

2. Any and all human remains encountered during this permitted recovery shall be subjected to standard field analysis, and shall be photographed and mapped prior to removal from the burial context. Any and all associated funerary objects, including coffins or other containers, shall be photographed and mapped prior to removal from the burial context. An artifact catalogue, osteological and other maps and recording forms, and any additional associated records shall be presented as part of the final archaeological/anthropological report;

3. The Department understands that any and all human remains recovered during this process will be transported to the Department of Sociology, Anthropology, and Criminal Justice at Towson University in Maryland for anthropological analysis. The Permittee is responsible for obtaining any necessary transportation permits for this purpose;

4. The Department understands that the Permittee intends that any and all remains recovered during this process will be reinterred in an appropriate location. Associated

5. burial items shall be reburied with the remains. The Permittee shall submit a reburial plan to the Department for review and approval, with copies to identified interested parties for review and comment. If the reburial site is not within a chartered cemetery, the Department may require that the proposed reburial site be investigated by the Permittee's consultant to ensure that no archaeological sites or preexisting graves are disturbed during the reburial process;

6. In the event that the reburial site is not within a chartered cemetery, the Permittee shall ensure that the reburial location is recorded in the land records of Prince William County as a cemetery;

7. The Permittee shall inform the Department in writing of the completion of field work involving the recovery of human remains and/or associated funerary artifacts, and the completion of the final disposition of those remains and associated artifacts, within two (2) weeks of implementation;

8. The Permittee shall ensure that the architectural and archaeological resource forms, mapping, and other archival data associated with this property are updated and accepted by the Department prior to submittal of the final report;

9. The Permittee shall provide for storage and maintenance of all human remains in a proper and dignified manner until such time as final disposition has been made;

10. Prior to March 31, 2014, the Permittee shall prepare a technical report(s) of the field investigations involving the recovery of human remains conducted under this permit and submit two copies of it (them) to the Department for review and approval, with a copy to identified interested parties for review and comment. One copy of the report shall be provided to any respondent to the public notice as well. All reports shall meet the federal standards entitled *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (48 FR 44716-44742, September 29, 1983) and the Department's *Guidelines for Preparing Identification and Evaluation Reports for Submission Pursuant to Sections 106 and 110, National Historic Preservation Act, Environmental Impact Reports of State Agencies, Virginia Appropriations Act, 1992 Session Amendments* (June 1992). All comments received within thirty (30) days of report receipt shall be addressed in the final report(s).

11. All archaeological materials (with the exception of human remains and associated funerary or ceremonial objects) resulting from investigations conducted under this permit, including

artifacts, field records and photographs, shall be placed in the Department's collections upon completion of the study and shall be curated (with the exception of any items used for appropriate exhibit purposes) in accordance with the Department's *State Curation Standards*.

This permit shall be valid for six (6) months from the date of issuance. This permit is not transferable.

Sincerely,

Kathleen S. Kilpatrick
Director

Administrative Services
10 Courthouse Ave.
Petersburg, VA 23803
Tel: (804) 862-6416
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Office
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way 2nd Floor
Newport News, VA 23608
Tel: (757) 886-2807
Fax: (757) 886-2808

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5428
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7031
Fax: (540) 868-7033

COMMONWEALTH of VIRGINIA

Department of Historic Resources

Molly Joseph Ward
Secretary of Natural Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director
Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

May 6, 2014

Mr. Warren Thompson, Supervisor of Construction
Prince William County Schools
14800 Joplin Road, Building #51
Manassas, VA 20112

Re: Application for the Archaeological Recovery of Human Remains Located Within an Unnamed Cemetery at the 12th High School Property, Prince William County, Virginia
DHR File No. 2012-4134

Dear Mr. Thompson:

We have received information indicating that illness has caused an unexpected delay in the completion of analysis required by the above referenced permit. We further understand that we may expect a draft of the technical report as well as a formal reburial proposal from your office within the month. As you know, the terms of your permit require that the technical report be distributed to all identified interested parties as well as respondents to the public notice, and that all comments received within 30 days must be addressed in the final document. The reburial plan must also be provided to the interested parties for their review and comment. Given that this process will require additional time, we hereby grant your request for an extension of the above-referenced permit. Prior to August 31, 2014, all human remains and associated burial artifacts must be respectfully reburied according to an approved reburial plan, and the final technical report must be submitted to DHR.

If you have questions regarding this permit, its remaining requirements, or our comments, please contact Joanna Wilson Green at 804-482-6098 or joanna.wilson@dhr.virginia.gov.

Sincerely,

Julie V. Langan

Julie V. Langan, Director
Department of Historic Resources

Administrative Services
10 Courthouse Ave.
Petersburg, VA 23803
Tel: (804) 862-6408
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way
2nd Floor
Newport News, VA 23608
Tel: (757) 886-2818
Fax: (757) 886-2808

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033