5.0 RESULTS

5.1 7NC-F-122 – SANDY BRANCH PREHISTORIC

Archival Results and Historical Land Use

Evaluation of 7NC-F-122 was not expected to produce significant historic cultural resources, so archival research on this prehistoric site focused on historic modifications of the land. The previous Phase IA studies (Grossman-Bailey and Hayden 2009 and Burrow et al. 2009) included extensive reviews of historic maps, including the Rumsey Family Papers housed at the Library of Congress. The land use results for the site location will be summarized in brief.

No houses or plantations were shown near the site on the 1673 Hermann map (Grossman-Bailey and Hayden 2009). Manwaring Hall was patented in 1678 and contained 400 acres. Site 7NC-F-122 was part of land added to Manwaring Hall after Lord Baltimore granted a special warrant to Dr. Hugh Matthews to resurvey the property and adjacent excess lands (Cecil County Circuit Court, Unpatented Certificate 217, Maryland State Archives, in Burrow et al. 2009 Figure 4.7). The property was re-surveyed in 1731 and was expanded to 1,000 acres (Grossman-Bailey and Hayden 2009). The site was between two stream branches in 1731; the location and orientation of the streams appear to be essentially unchanged from their modern conditions as intermittent tributaries of Sandy Branch. The site was near the southeast corner of the 1,000-acre parcel, to the west of a north-south oriented property boundary line.

The Rumsey family, who owned Bohemia Landing nearby in Cecil County, Maryland, purchased a number of tracts in the area, including portions of Manwaring Hall in the 1730s and 1740s. A plat prepared in 1748 depicts the project area, although the surviving plat has portions missing. The boundary line between this plantation and the plantation to the northeast named Indian Range is shown (Rumsey Family Papers Box 5 Folder 2.1 in Burrow et al. 2009 Figure 4.1). The site was located on a parcel of 87-1/2 acres immediately south of Indian Range. The modern-day road southeast of the site, now known as Route 299 or Route 301, was present by 1748 and was labeled the "Road from Sasafras to Appoquinime" (Rumsey Family Papers Box 5 Folder 2.1 in Burrow et al. 2009 Figure 4.1). The 1731 and 1748 plats do not show the locations of buildings or structures on the project area parcel.

The property remained in Rumsey family hands until the 1830s. William Rumsey III prepared a draft will in 1834, leaving income or rent from several properties including Manwaring Hall, together with improvements that may be on the properties, to his niece Julia Rumsey Brinckle (Rumsey Family Papers 1834 in Grossman-Bailey and Hayden 2009). This suggests the property was a tenant farm. However, this will was never executed, and William Rumsey III sold the New Castle County part of his property, comprising approximately 971 acres, to William Polk in 1836. Rumsey was living in Philadelphia, Pennsylvania, at the time of the 1836 deed and Polk resided in Cantwell's Bridge, Delaware (Odessa).

In William Polk's will, written in 1852, he divided Rumsey Farm between his daughter, Eliza (Polk) Cochran (the wife of John P. Cochran) and son, Charles T. Polk. His daughter, Eliza, received the northeastern half of the farm, 416 acres, including the project area. Eliza and her husband, John P. Cochran, had built a home known as "Cochran Grange" in 1842 on the southeast side of Route 299/301; this house (Resource No. N00117) is still standing, well east of the project corridor. By 1849, Cochran had added a house to the Rumsey Farm on the northwest side of Route 299/301; this house, labeled "J.P. Cochran" on the Rea & Price 1849 map of the area, is no longer standing but would have been the closest known farmstead to the site. Another farmhouse was built on Eliza's portion of the Rumsey Farm in 1854; this house, labeled "Chas. Cochran" on the 1868 Beers map (Figure 5-1), was on the northwest side of Route 299/301 and is still standing (Resource No. N00113). The Charles Cochran farmhouse was placed at the north end of a driveway, and is the closest know house to the site; it lies to the south of the site, on the opposite side of Sandy Branch.

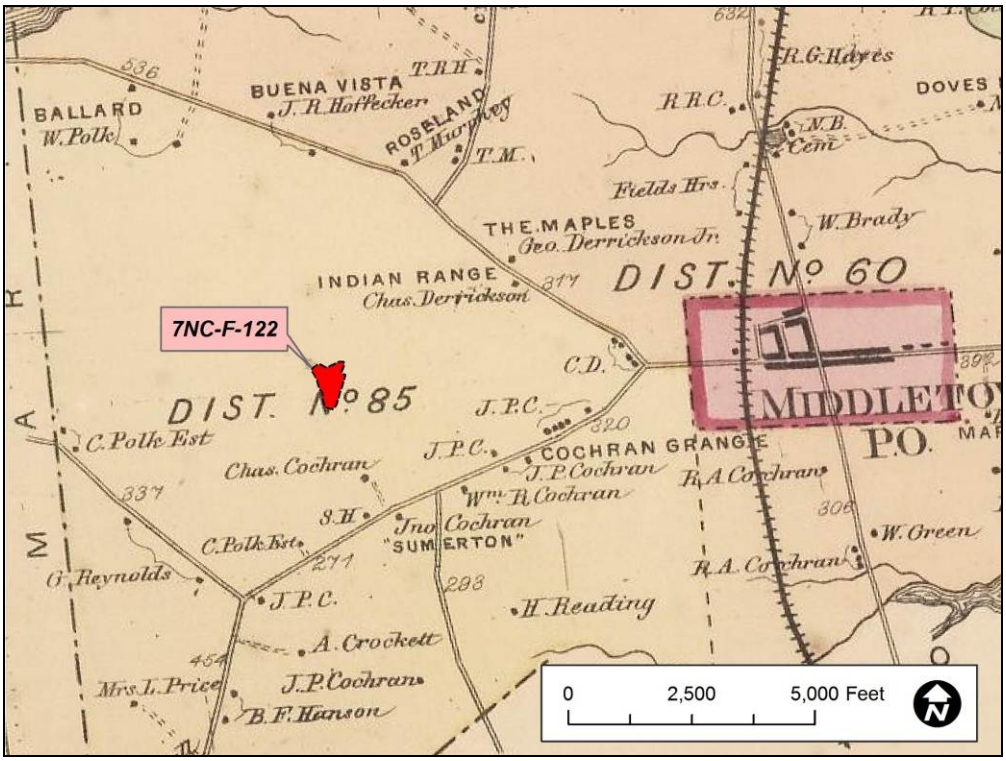


Figure 5-1. Map of the Site 7NC-F-122 Area in 1868.
(Beers 1868 Plate 31)

A second house – likely a tenant house – was added to the Rumsey Farm by the early 1880s; it is shown on the 1881 Hopkins and 1893 Baist maps as also belonging to Wm. R. Cochran (Figure 5-2). No later maps were found depicting a structure on the site itself (USGS 1931 Smyrna 15-minute quadrangle; USGS 1946 Cecilton 7.5-minute quadrangle; USGS 1953 Middletown 7.5-minute quadrangle; USGS 1993 Middletown 7.5-minute quadrangle), suggesting that the land was used for growing crops or grazing livestock. Aerial photographs from the 20th century show the site within agricultural fields (Figures 5-3 and 5-4).

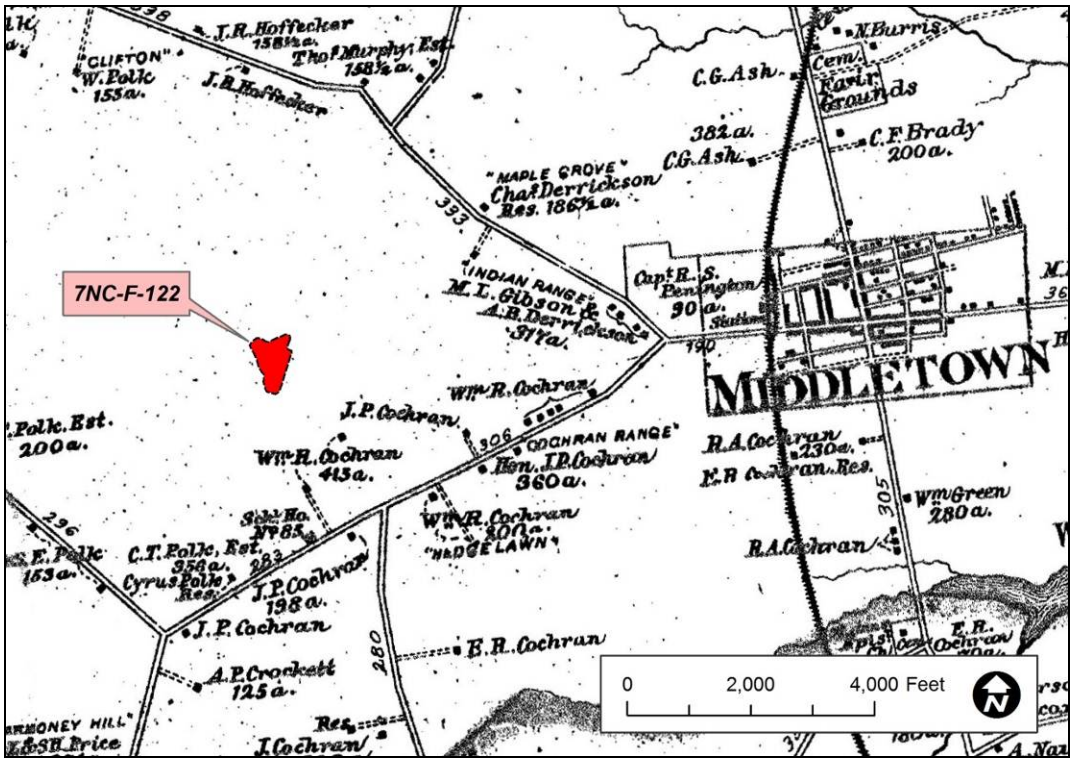


Figure 5-2. Map of the Site 7NC-F-122 Area in 1881.
(Hopkins 1881)

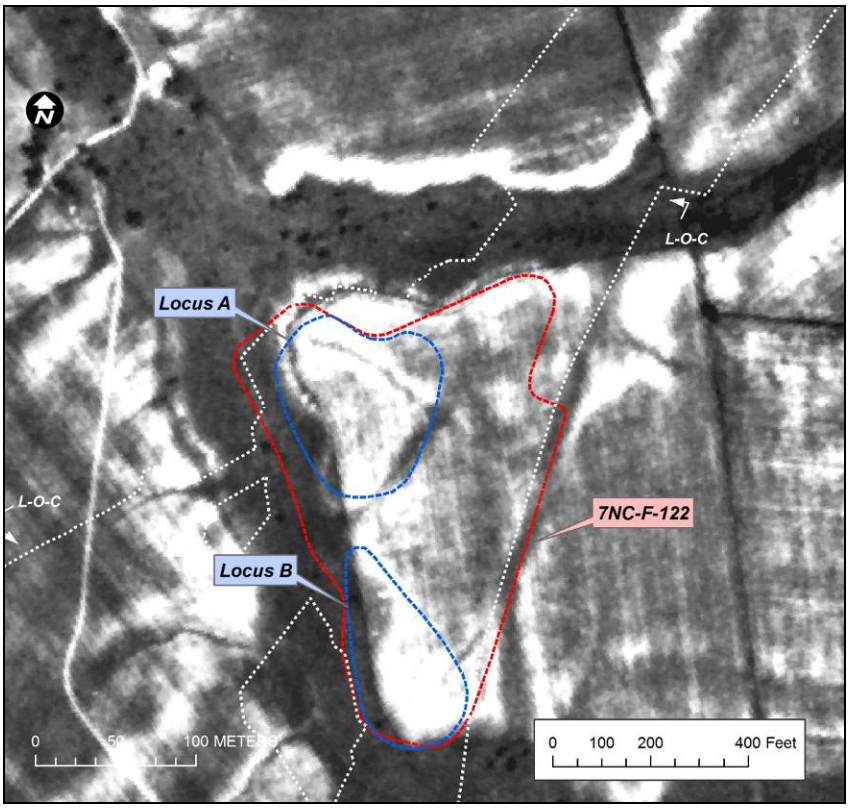


Figure 5-3. Site 7NC-F-122 Illustrated on 1937 Aerial Imagery.
(USDA 1937)

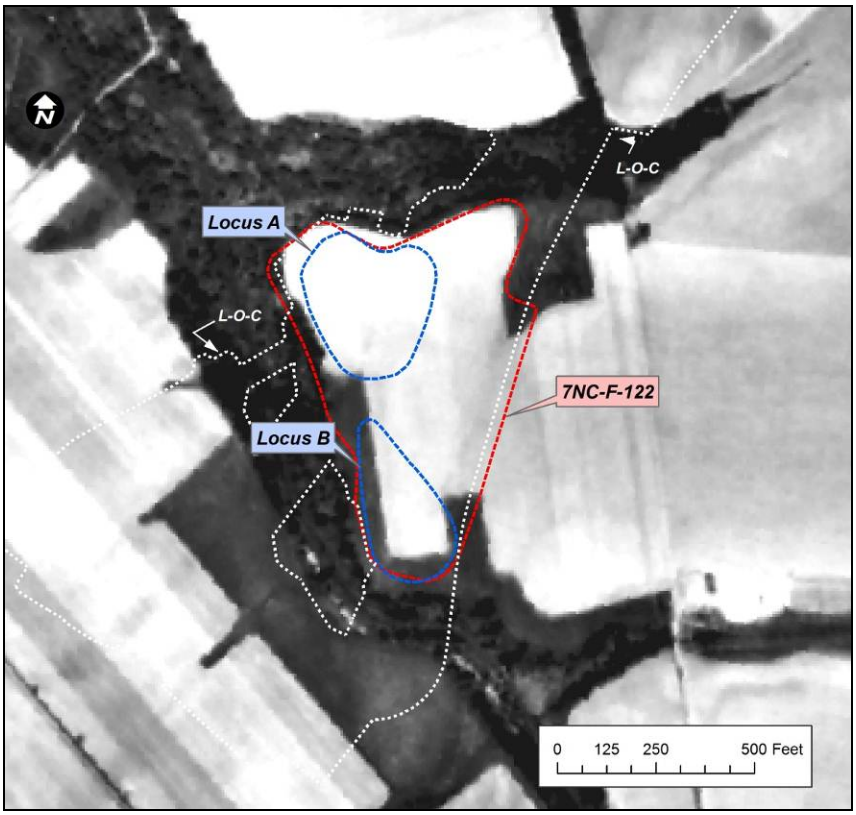


Figure 5-4. Site 7NC-F-122 Illustrated on 1968 Aerial Imagery.
(USDA 1968)

Archaeological Field Results

Fieldwork at site 7NC-F-122, Sandy Branch Prehistoric, took place from June 6 through 17 under the direction of Mackenzie Caldwell Rohm. The site was defined by Hunter to include a total approximately 9 acres (Liebeknecht and Burrow 2010). Within this site area, two loci were further delineated (Figure 5-5). Of these, only Locus A was recommended for further testing as it was the "more dense of the two" (Liebeknecht and Burrow 2010). The site location was in green wheat during the time of excavations (Figure 5-6).

A total of 27 1x1 m test units were excavated within the approximately 1.5 acre (0.6 hectare) Locus A of site 7NC-F-122. Test unit placement was determined in consultation with DelDOT and DE SHPO prior to the commencement of field work (Figure 5-7). Units were placed using a tight (10 m) to moderate (20 m) grid based on surface collection densities as recorded by Hunter during Phase IB survey work (Liebeknecht and Burrow 2010). This generally involved tighter testing at the southernmost portion of the site locus, on the terrace above Sandy Branch, and loosening to a more moderate interval moving north and away from the greatest Phase IB surface densities.

The grid datum was set at N1000/E500 at the southern tip of the site and the baseline was laid out roughly parallel to the right-of-way centerline as staked by Century Engineering running north to south (24/204^{o}) through the site locus.

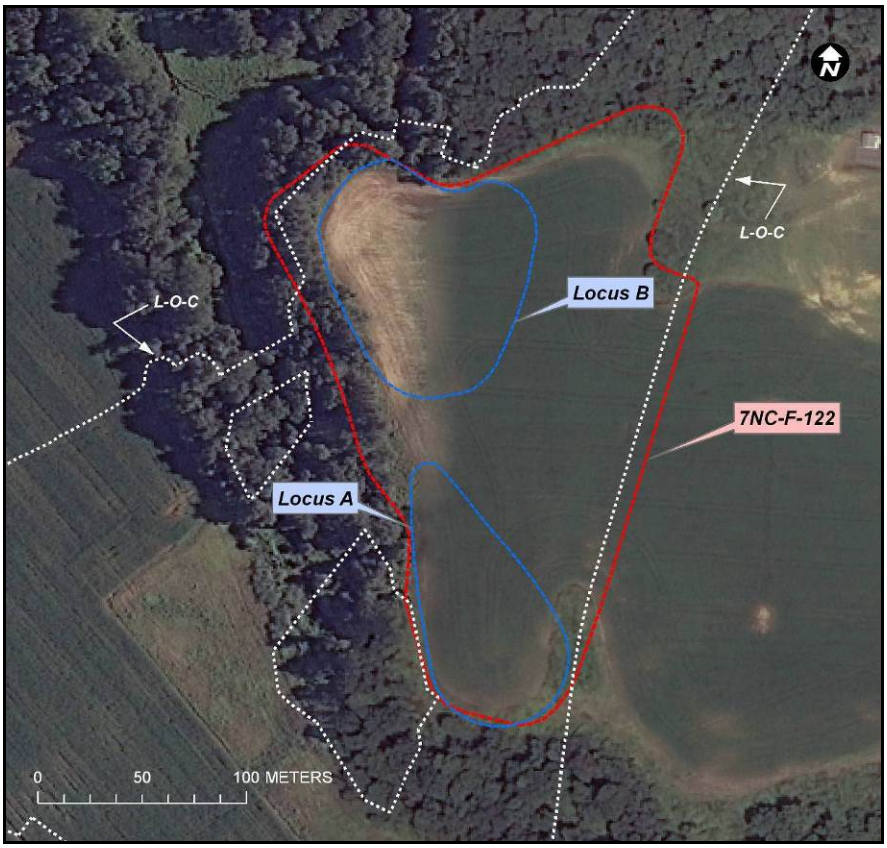


Figure 5-5. Site 7NC-F-122 Illustrating Site Boundary, Locus A (Focus of Phase II Excavation) and Locus B.

Figure 5-6. Site 7NC-F-122 Illustrating Site Conditions and Excavation Facing Southeast.

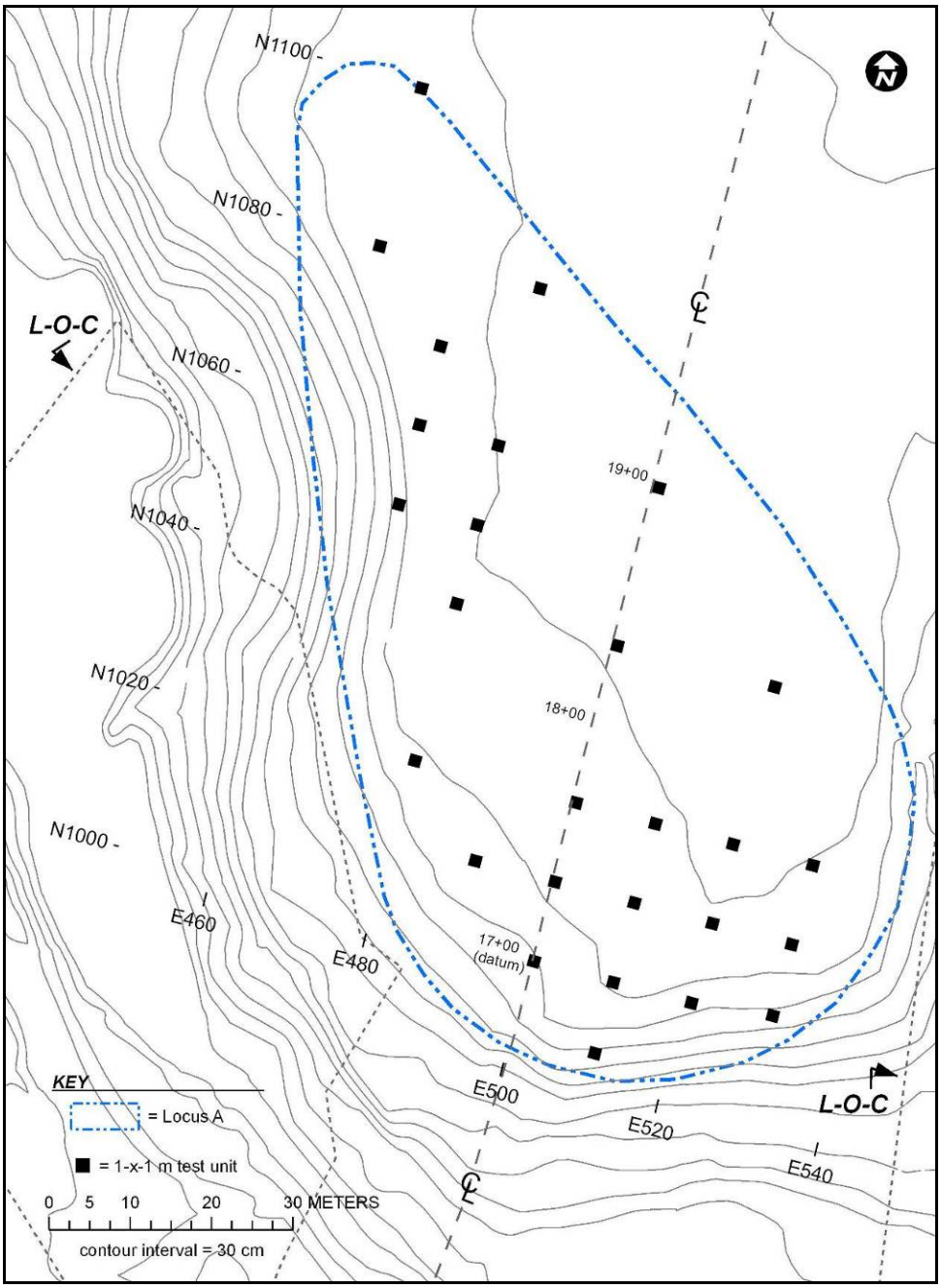


Figure 5-7. Test Unit Grid at Site 7NC-F-122.

In total, 119 artifacts were recovered as a result of Phase II excavations; 116 prehistoric, and 3 historic (Figure 5-8). All artifacts were recovered from the plowzone. The three historical artifacts were non-diagnostic and included one clear bottle fragment and 2 clinkers. Prehistoric artifacts included predominantly flakes of limonite, jasper, quartz, chert, and argillite (in decreasing order of frequency). A small number of cores, potlids, and chips were also recovered. Three small triangular jasper points recovered from the site (one each from N999/E520, N1009/E500, N1009/E520) suggest a Woodland II Period use range for the site (Custer 1984, Custer and DeSantis 1986, and Custer 1989) (Figure 5-9).

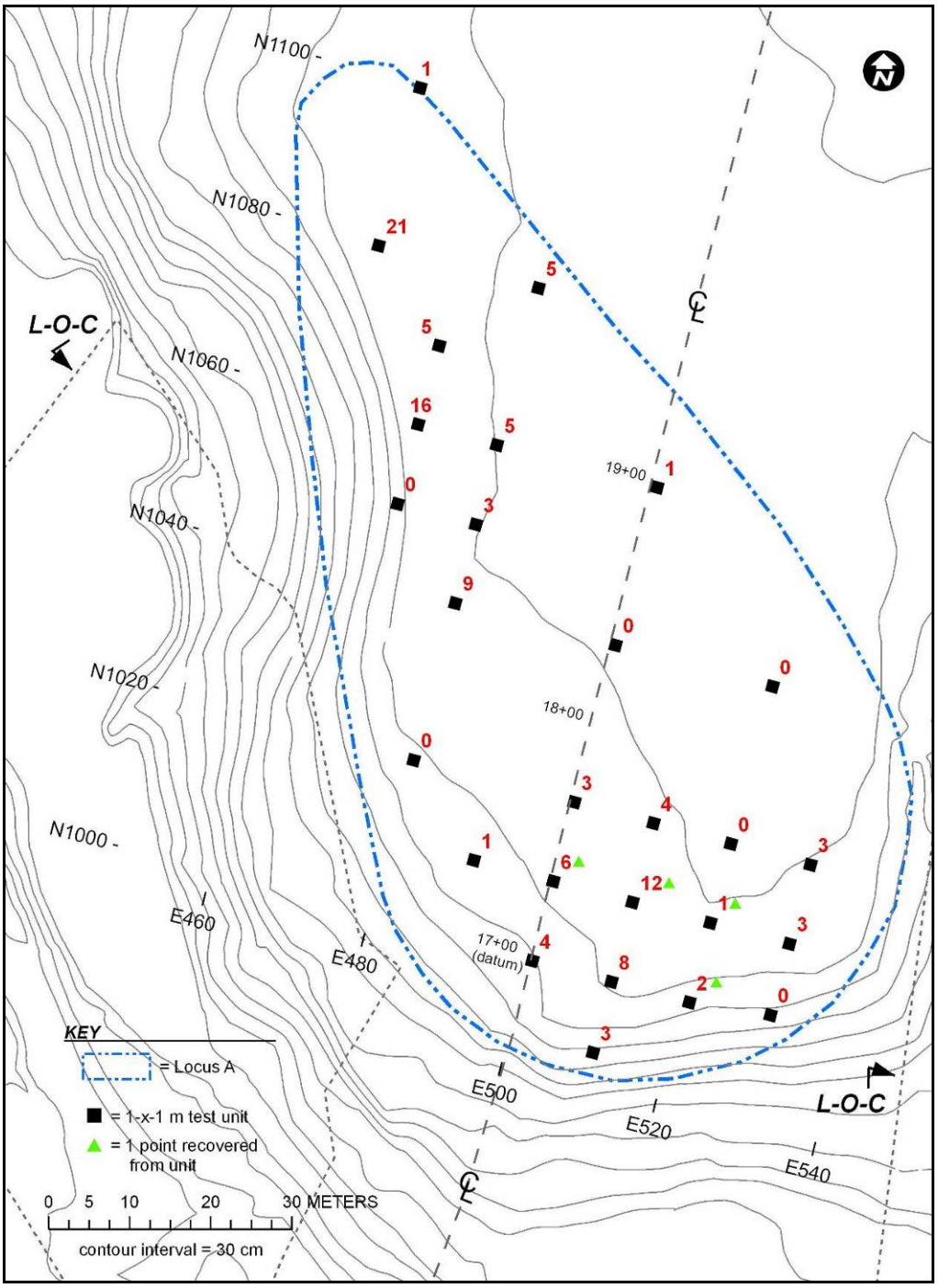


Figure 5-8. Artifact Distribution by Test Unit at Site 7NC-F-122 with Artifact Counts by Unit (noted in red).

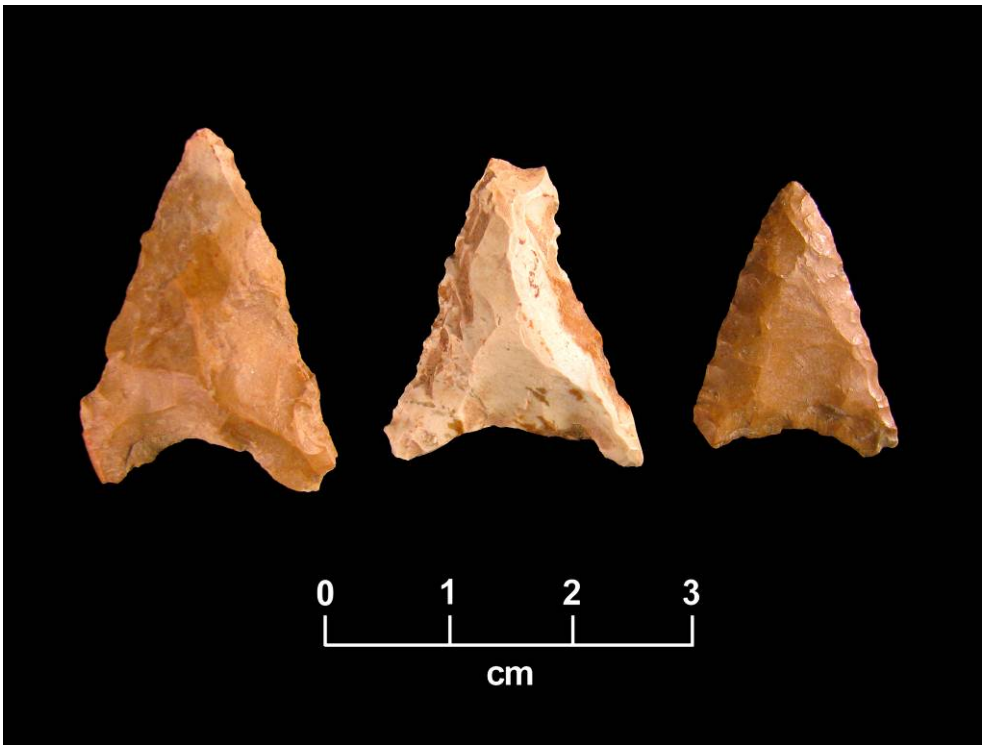


Figure 5-9. Jasper Triangular Points 7NC-F-126 (Bags 12, 15, 18).

Soils on site typically consisted of an active plowzone approximately 30 cm deep (silty loam, 10YR 5/3) overlying sterile subsoil (sandy clay loam 7.5YR 4/6). In some areas, a compacted historical plowzone stratum was clearly visible underlying the active plowzone as evidenced by the presence of plow scaring at the base of the stratum (loam, 10YR4/6). Artifacts were recovered from this stratum; however, not in the densities recovered from the active plowzone. Sand and gravels (rounded jasper and quartz) were present in varying densities across the area (see Figure 5-10 for typical unit profile using N1059/E500).

Two test units on site were excavated to a depth of one meter below surface to provide geomorphologial data (N999/E520 and N1069/E470). These excavations revealed additional strata of subsoil with increasing percentages of gravels and sand including a stratum of bedded limonite at approximately 80 cm below surface (see Figures 5-11 and 5-12 for unit profiles).

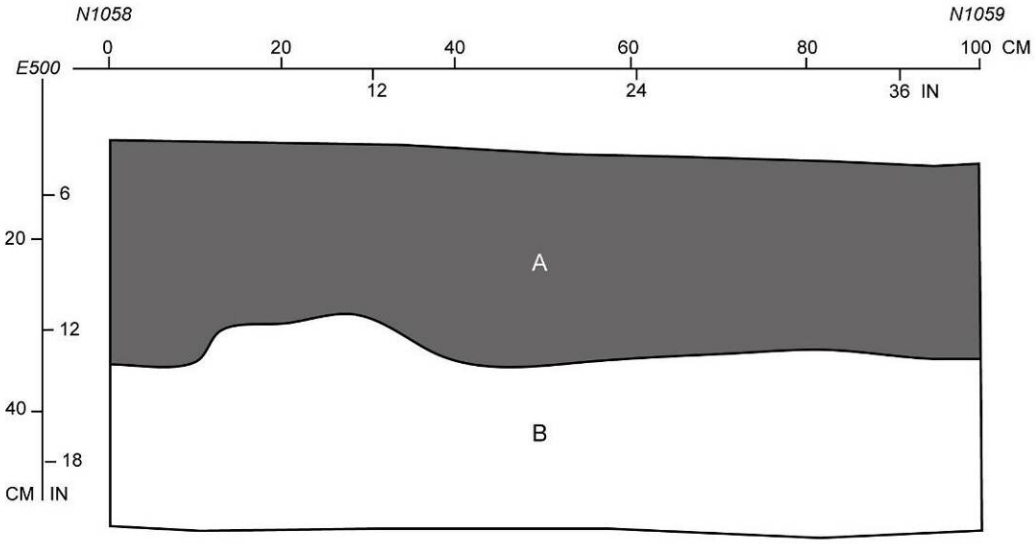
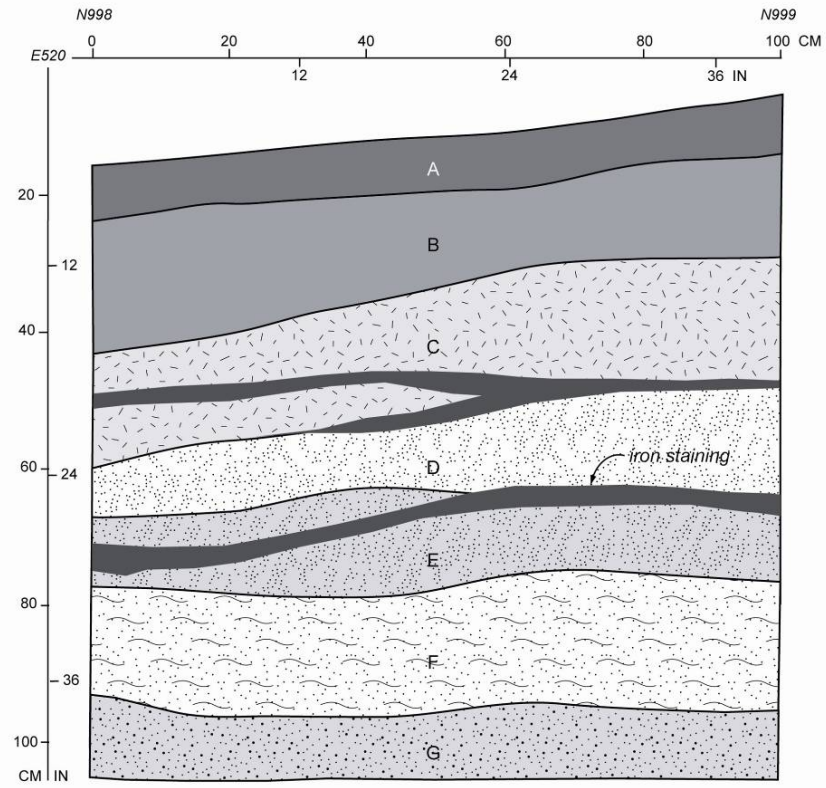
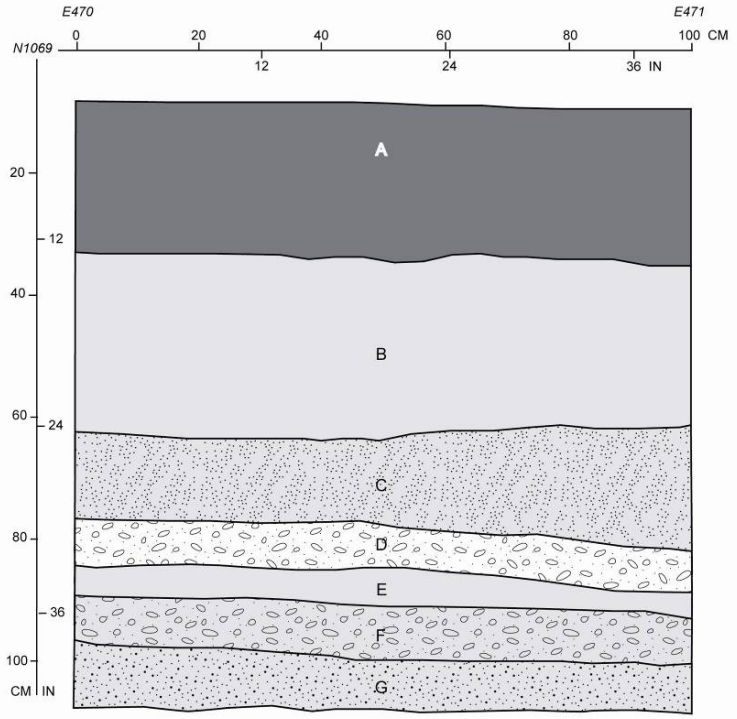


Figure 5-10. 7NC-F-122, Test Unit N1059/E500, West Profile Section.



Stratum A - brown (10YR 4/3) silty loam
Stratum B - dark yellowish brown (10YR 4/6) sandy silty loam
Stratum C - strong brown (7.5YR 5/8) sand mottled w. reddish brown (5YR 4/3) sand
Stratum D - yellow (10YR 7/6) sand
Stratum E - yellowish red (5YR 5/6) sand
Stratum F - limonite bed
Stratum G - yellowish red (5YR 4/6) sand mottled w. olive brown (2.5Y 4/4) sand

Figure 5-11. 7NC-F-122, Test Unit N999/E520, Profile Sections.
(top – west profile; bottom – north profile)



Stratum A - yellowish brown (10YR 5/4) sandy loam
Stratum B - strong brown (7.5YR 5/6) silty clay
Stratum C - strong brown (7.5YR 5/8) silty sand
Stratum D - light brown (7.5YR 6/4) sand and gravels
Stratum E - strong brown (7.5YR 5/8) sandy loam
Stratum F - strong brown (7.5YR 5/8) coarse sand and gravels
Stratum G - strong brown (7.5YR 5/8) sand

Figure 5-12. 7NC-F-122, Test Unit N1069/E470, North Profile Section.

Prehistoric artifact densities were slightly higher in the northern and southern portion of the site with subsurface artifact footprints disappearing altogether mid-site. It is possible that this lacuna is the result of sampling error as the test unit interval was the highest in the central portion of the site. However, since test unit interval was based on Phase I surface collection results, it is believed that there is a genuine lack of artifact surface and subsurface density mid-site. Looking at prehistoric distribution does not indicate any evidence of meaningful patterning (e.g., activity areas). Limonite distribution, the most abundant lithic resource utilized on site, lacks any sort of internal patterning as well (Figure 5-13).

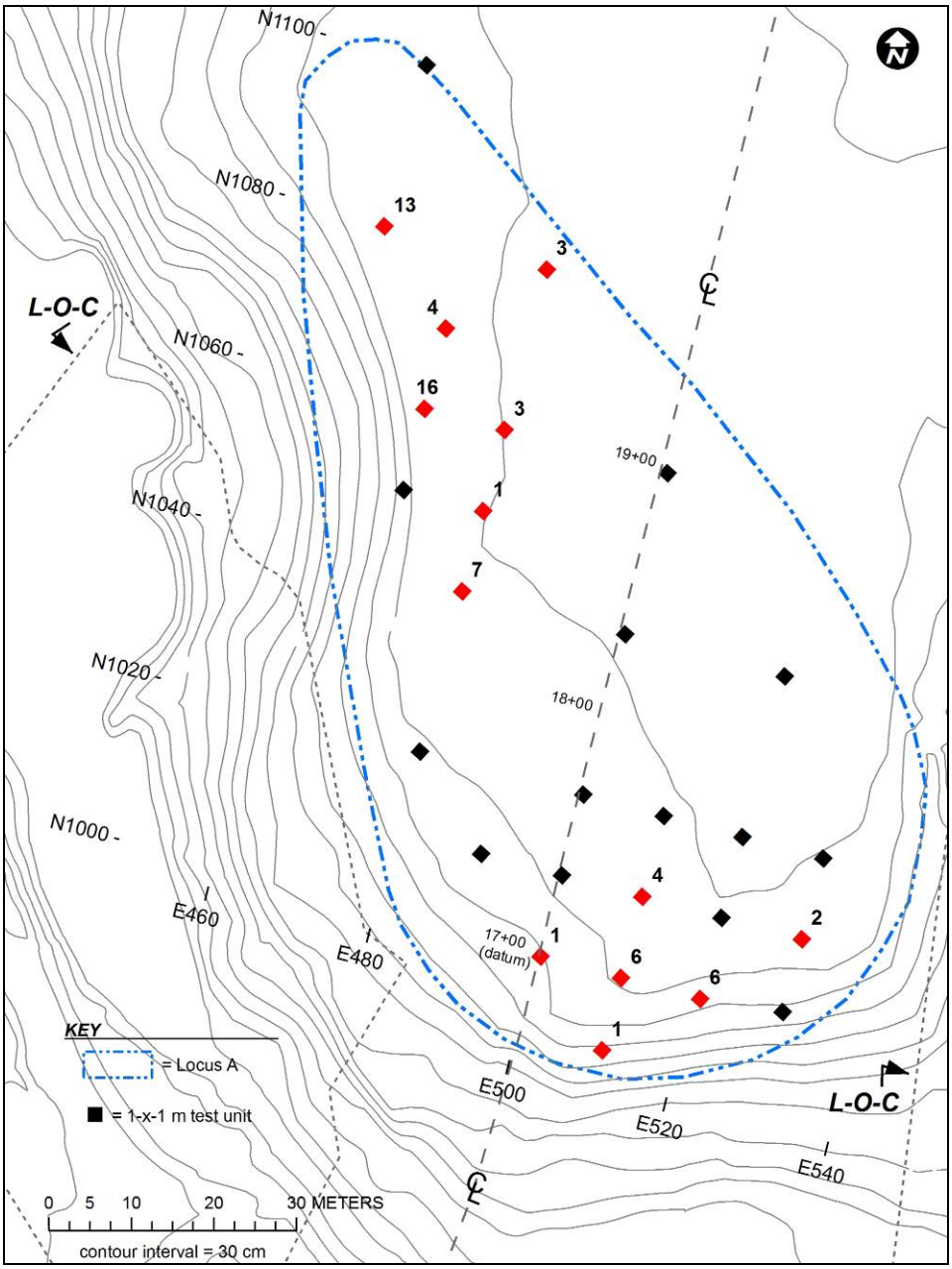


Figure 5-13. Limonite Prehistoric Artifact Distribution by Test Unit at Site 7NC-F-122 (noted in red).

No subsurface features were located as a result of Phase II excavations. Based on these findings, the unit bank and plowzone stripping options were deemed unnecessary (Versar/DelDOT consultation June 14, 2011).

5.2 7NC-F-124 – SHELL BUTTON SITE

Archival Results and Historical Land Use

Indian Range Plantation. The early history of the property named Indian Range was detailed in two previous archival studies of the Route 301 Corridor by Richard Grubb & Associates, Inc. (Grossman-Bailey and Hayden 2009) and Hunter Research, Inc. (Burrow et al. 2009). These studies were comprehensive in their coverage of the physical location of the property on historic maps, past ownership of the land, and domestic land use. They provided a framework for gathering additional information on the property's owners and an expansion of land use into possible non-domestic functions. The main points of the previous archival studies will be summarized briefly, followed by a summary of additional information gathered for the current study.

Early cartographic evidence showed that the original bounds of the Indian Range tract included the location of Site 7NC-F-124 but not the location of Site 7NC-F-126 (Burrow et al. 2009). Lord Baltimore granted 500 acres of land that became known as Indian Range to Richard Leake in 1683 (Grossman-Bailey and Hayden 2009). The project area was considered to be part of Cecil County, Maryland until the boundary was formalized in the late eighteenth century. Leake was already a resident of Cecil County at that date. There is no evidence that he settled upon the Indian Range property. Leake died intestate and without heirs and David Witherspoon petitioned to have the land resurveyed and granted to himself. Witherspoon also asked for a survey of adjoining lands that were not yet granted. The resurvey of Indian Range for Witherspoon took place in 1748, including 307 acres of the original tract and 133 acres contiguous called the "Addition to Indian Range". When "Indian Range" and "Indian Range Addition" were resurveyed for David Witherspoon in 1748, the document said, "There is on sd original Survey about 6 or 7 acres of Cultivated Land with Some indifferent fence." The presence of cultivated land and fencing on the tract implies farming by a resident or perhaps local non-resident farmer. Witherspoon rented parts of the Indian Range land in 1750 and 1753. In 1750, he signed over an eight-year lease for part of Indian Range to John McDowal. In 1753, he granted a 15-year lease to James Ward for the discontiguous portion of Indian Range lying south of "Stockton" (Grossman-Bailey and Hayden 2009).

In 1752 Witherspoon sold 197 acres of Indian Range to Barnett Vanhorn (Burrow et al. 2009). Vanhorn was listed on an inventory of those having a dwelling house on Bohemia Manor in 1770 (Burrow et al. 2009). By 1778 Barnett Vanhorn died intestate and his property was inherited by his widow and children. One heir, Jacob Vanhorn, later acquired much of his siblings' shares in the property and in 1791 bought part of the Addition to Indian Range from Jesse Higgins. The property remained in Vanhorn family hands until 1835 when part of Indian Range was purchased by Benjamin Fields (Burrow et al. 2009). Fields purchased additional portions of the property in 1836 and 1837. The 1836 purchase was a 35 acre tract bounded by the 60 acre tract, the road from

Middletown to Bohemia Manor (now Bunker Hill Road), the Choptank Road, and land of Outten Davis (Burrow et al. 2009). It is likely that Site 7NC-F-126 lies within this 35-acre parcel. The last purchase by Fields, in 1837, was of a large tract to the south of the road to Middletown (Burrow et al. 2009).

Benjamin Fields only held onto Indian Range for two years. He sold 416 acres in three parcels to George Derrickson in 1839 (NCC Deed K5/28). The deed mentioned a house on the property, which was probably the farmstead that appeared on the south side of the road to Middletown (Bunker Hill Road) on an 1849 map as "G. Derrickson" (Rea & Price 1849). This farmhouse appears on later maps, including Beers 1868 as "Chas. Derrickson (see Figure 5-1 pg.5-2, Beers 1868; also see Figure 5-2 pg. 5-3, Hopkins 1881) and stood until 2005 when it was demolished prior to development of the land for new housing.

Additional information on the owners of Indian Range and Maple Grove was gathered from tax lists, census records, local histories, and genealogy websites. The Indian Range farm was difficult to positively identify on the early tax lists for St. Georges Hundred, perhaps because of the multitude of owners during the Vanhorn era. This could also be due to the practice of listing properties under the hundred of residence of the owners, suggesting that the Vanhorns did not occupy the property after the death of Barnett Vanhorn in the 1770s. However, a Jacob Vanhorn was listed on the hundred's 1780 Tax Assessment at 40 pounds, and a Nicholas Vanhorn was on the same list at 12 pounds (NCC Tax 1780). It is also possible that the portion of Indian Range that did not pass into Vanhorn hands until 1791 appeared on the 1780 tax lists as the property of Thomas Witherspoon, valued at 200 pounds. Upon David Witherspoon's death in 1763, his property was willed to his nephew, Thomas Witherspoon. Local historical accounts state that Jesse Higgins (a party in the 1791 sale to the Vanhorns) married the widow of Thomas Witherspoon's son, also named Thomas (Scharf 1888). However, Higgins also owned Witherspoon property in Middletown including a tavern by 1800, so the properties could be combined on the tax lists.

The estate of Jacob Vanhorn was assessed for owning 350 acres in St. Georges Hundred in 1804 (NCC Tax 1804). The land was valued at 2,450 dollars and no value was listed for slaves, all other personal property, or the person himself. This does appear to match the description of Indian Range devised in Jacob Vanhorn's will of circa 1794, said to contain 353 acres (Burrow et al. 2009).

One of the Vanhorn heirs, John M. Vanhorn, was listed on the 1813 real and personal property tax rolls for the hundred as owning 162-1/2 acres from the estate of Jacob Vanhorn (NCC Tax 1813). The property was valued at 375 pounds and no value was given for buildings, livestock, slaves, or silver plate. This could represent a half-interest in the estate from the 1790s.

George Derrickson was assessed for 400 acres in St. Georges Hundred on the 1849 to 1853 tax lists. Buildings on the property were a frame house and granary and the real estate was valued at 9,000 dollars (NCC Tax 1849-1853). Derrickson owned 3 male

slaves and 1 female slave, valued at 250 dollars total. This is the first indication found that Derrickson owned slaves. Perhaps he had become prosperous enough in the past decade as the owner of Indian Range to acquire the slaves; however, he may have already owned slaves when he bought the property in the 1830s. His livestock was assessed at 161 dollars; he paid tax on owning two dogs and a poll tax.

The federal census of agriculture for St. George's Hundred in 1850 lists the farm properties by the name of their owner, agent, or manager. George Derrickson appears on the 1850 list under a farm of 100 acres, all of which is improved land (US Census of Agriculture 1850a). The cash value of the 100-acre parcel was $8,000.00, while farm implements and machinery were worth $100.00. Derrrickson's livestock, assessed at $300.00, included 3 horses, 4 milch cows, 2 working oxen, 3 other cattle, and 4 swine. In the past year, the farm had produced 800 bushels of Indian corn, 60 bushels of Irish potatoes, and 312 pounds of butter. The animals that had been slaughtered on the farm were valued at $115.00.

The Federal agricultural census for the year 1860 lists a single farm of 464 acres in St. Georges Hundred under the name of George Derrickson (US Census of Agriculture 1860). All but 20 acres of the farm were improved on the farm that was worth $37,000.00. Farming machinery and implements were valued at $500.00. Livestock - including 11 horses, 12 milch cows, 2 working oxen, 25 other cattle, 77 sheep, and 30 swine – was worth $3,000.00. The farm produced the following crops: 1,600 bushels of wheat, 2,500 bushels of Indian corn, 2,000 bushels of oats, 100 bushels of Irish potatoes, and 10 tons of hay. Other farm products were 231 pounds of wool and 200 pounds of butter. For the year ending June 1, 1860, the value of animals slaughtered was $300.00.

In the tax list of 1868 to 1872 for St. Georges Hundred, George Derrickson owned two parcels. The first tract was 268 acres, with 268 acres improved and 5 acres wooded (NCC Tax 1868-1872). This property contained a frame dwelling and old barn and the parcel was valued at 21,705 dollars. The second parcel was 196 acres, also with a frame dwelling and old barn. The second parcel was valued at 17,150 dollars. Derrickson owned livestock worth 150 dollars, 10 dollars of silver plate, and paid a poll tax (for eligible voters) of 400 dollars. His sons, George Jr. and Charles, also appeared on the 1868-1872 tax lists. George Jr. owned stock worth 1,235 dollars and paid a poll tax. Charles owned a tract of 55 acres, with 15 acres improved and 40 acres wooded. The real estate was valued at 2,886 dollars and livestock at 1,825 dollars. Charles also paid a poll tax. Perhaps Charles' property on this list was the house and farmyard at Maple Grove (see Section 5.3).

No later maps were found depicting a structure on the site itself (USGS 1931 Smyrna 15-minute quadrangle; USGS 1953 Middletown 7.5-minute quadrangle; USGS 1993 Middletown 7.5-minute quadrangle), suggesting that the land was used for growing crops or grazing livestock. Aerial photographs from the 20th century show the site within agricultural fields (Figures 5-14 and 5-15).

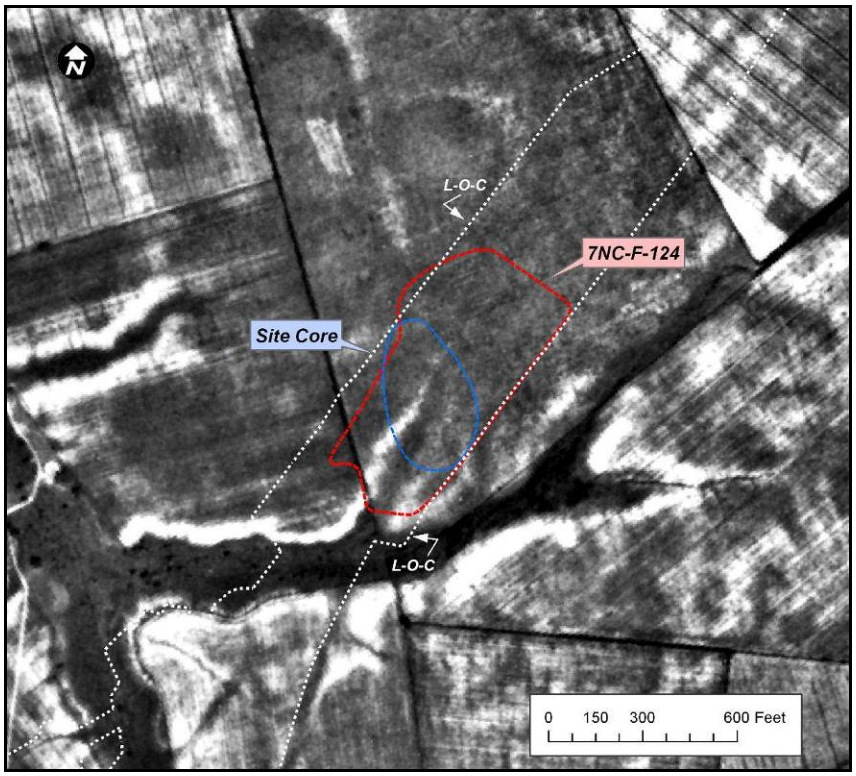


Figure 5-14. Site 7NC-F-124 Illustrated on 1937 Aerial Imagery.
(USDA Agricultural Adjustment Administration Delaware Data Mill, 1937)

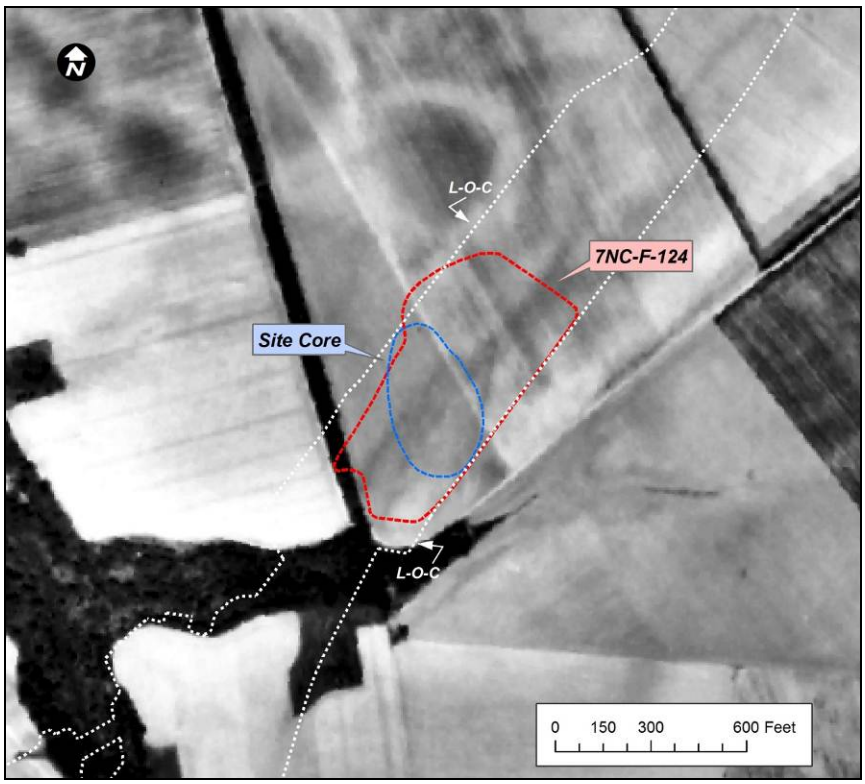


Figure 5-15. Site 7NC-F-124 Illustrated on 1968 Aerial Imagery.
(USDA 1968)

Shell Button-Making. Seashells have been used for centuries to produce buttons. Shells from the ocean are more highly prized for button-making than freshwater shells for their greater range of colors, more vivid colors, and increased brilliance. Some of the finest varieties of white shell used to create lustrous buttons nicknamed "mother-of-pearl" come from Australia, Indonesia, and the Philippine Islands. Green Snail shell and Trocas Shell are harvested from New Guinea, North Australia, Indonesia, the Philippines, and along the Malay coast (Luscomb 1967:177-178). Most of the freshwater shells that have been made into buttons originated in rivers of the United States, primarily the Mississippi and its tributaries. These tend to become more utilitarian buttons, lacking the applied or carved designs that adorn many ocean shell buttons (Luscomb 1967:177).

The author Charles Dickens wrote about shell button factories in Birmingham, England in 1852. He described high-quality ocean shells being imported from Singapore, with the finest parts of the shell used for making buttons. Dickens noted that Birmingham "supplies almost the whole world. A very few are made at Sheffield and that is all" (Dickens 1852). He stated that in "the United States, where the merchants can get almost any quantity of the shell, from their great trade with Manilla (sic) and Singapore, the buttons are not made. The Americans buy an incredible quantity from Birmingham" (Dickens 1852).

The McKinley Tariff Act of 1890 greatly increased the import tax on many goods brought into the United States (Meehan 2011). This act motivated Americans to produce more products in the United States, including buttons. The value of the shell (also known in the trade as "pearl") buttons imported into America dropped from $1.5 million in 1885 to only $100,000 in 1891 (Pippin 2005:4).

J.F. Boepple, a shell button-maker in his native Germany, settled in Muscatine, Iowa and began to make shell buttons there in 1891 (Luscomb 1967:25). Muscatine became the center of a shell button-making industry based on harvesting freshwater mollusk shells locally from the Mississippi River. By 1905, the region was producing 1.5 billion buttons, or 37 percent of the world's buttons (McCray 2010). Production began to slow in the 1930s, and the plastic button became the popular, cheaper option in the 1940s. So what became of the leftover shells in Muscatine? Tons were crushed and became street surfaces, fertilizer, stucco, and fishtank gravel (McCray 2010).

One of the earliest known firms in the eastern United States to produce shell buttons was B. Schwanda & Sons, Inc., which was manufacturing buttons from ocean shells in New York City by 1894. Foot-powered lathes were replaced by electric powered machines around 1896. Branches of the business were opened in Staffordsville, Connecticut, and Denton, Maryland (Luscomb 1967:17). A visitor to one of the Schwanda factories around 1940 described the scenes she observed. The first floor contained barrels of shells, some soaking in water to soften them. She saw men working "at machines, each with his barrel of shells beside him, cutting blanks from whole shells. A power-driven, tubular saw bit into the shell, which the man held against it. He moved the shell slightly as each blank fell, and cut another and another" (Ford 1943:151-152).

Many of the shell blanks (the raw material cut from the parent shell) were thick cylinders, sometimes an inch long. After the blanks were cut, they were sorted and brought to the factory's second floor for finishing. Imperfect blanks became seconds or were resized. The thick blanks would then be split into disks of the proper thickness for buttons by hand using a hammer and knife (Ford 1943:153). Next the shell discs would be shaped, and if the back was to have a self-shank this would be cut to form. Alternatively, if the button was to be the sew-through type, holes would be drilled through the disc, one at a time. Next came polishing of the shell buttons by hand, followed by a sorting and grading process.

A business directory of the Eastern Shore, including Delaware, did not include any button-making companies in Middletown or elsewhere in Delaware in 1909 (Polk 1909). In 1932, the only button-making manufacturers in Delaware were located in Sussex County. Both were in the Town of Milton: Broadkiln Pearl Company, Inc., and Milton Manufacturing Company (Labor Commission of Delaware 1932:15). Nine button-making industries were in operation in four towns in Delaware in 1942; all were in Sussex County. The nine button factories included the Parizek Brothers firm in Milford (Labor Commission of Delaware 1942:21) and the Adelphia Button Company and Alden Wilson Button Manufacturing in Ellendale (Labor Commission of Delaware 1942:23). Leo H. Hirsch Button Factory was located in Georgetown, the county seat (Labor Commission of Delaware 1942:23). Milton was the locale with the most button-making enterprises, with five: Broadkiln Button Manufacturers; Henry E. Edgington Button Manufacturers; Peerless Pearl Company Button Manufacturers; Richards and Tyndal Button Manufacturers; and Sussex Manufacturing Company (Labor Commission of Delaware 1942:24). Workers also were located in smaller, cottage industries, sometimes employing 10 to 20 people, or worked from home on a piecework basis (Pippin 2005). The Milton Historical Society Museum in the Town of Milton features an exhibit on the local shell button-making industry (Figures 5-16, 5-17, and 5-18)

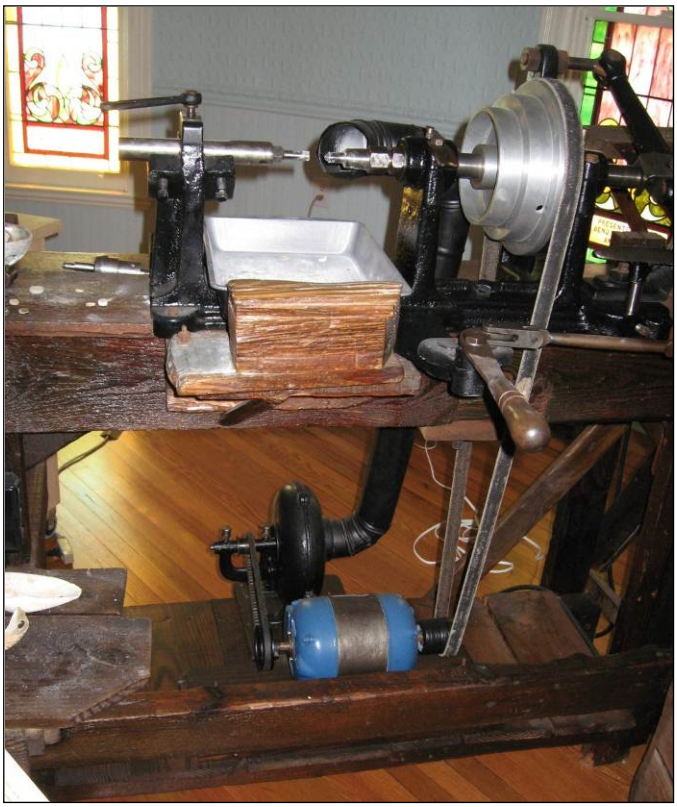


Figure 5-16. Restored Shell Button-Making Lathe Used in Early-to-Mid 20th Century.
(on Display at Milton Historical Society in 2011)

Figure 5-17. Waster Shells and Wooden Crate from Australia.
(on Display at Milton Historical Society in 2011)

Figure 5-18. Waster Shells, Button Blanks, and Shell Buttons.
(on Display at Milton Historical Society in 2011)

Archaeological Field Results

Fieldwork at site 7NC-F-124 took place from June 20 through July 1 under the direction of Laurie J. Paonessa. The historical component of 7NC-F-124 was recommended for Phase II evaluation to determine if the evidence of shell button manufacture was indicative of a workshop location including structural features or merely represented a disposal area (Liebeknecht and Burrow 2010). The site comprises approximately 7.75 acres (3.14 hectares), however, only the central 2.4 acre (1.0 hectare) portion with the highest density of shell button artifacts from the Phase I surface collection was slated for

Phase II testing (Figure 5-19). At the time of excavations, the site was in immature corn (Figure 5-20).

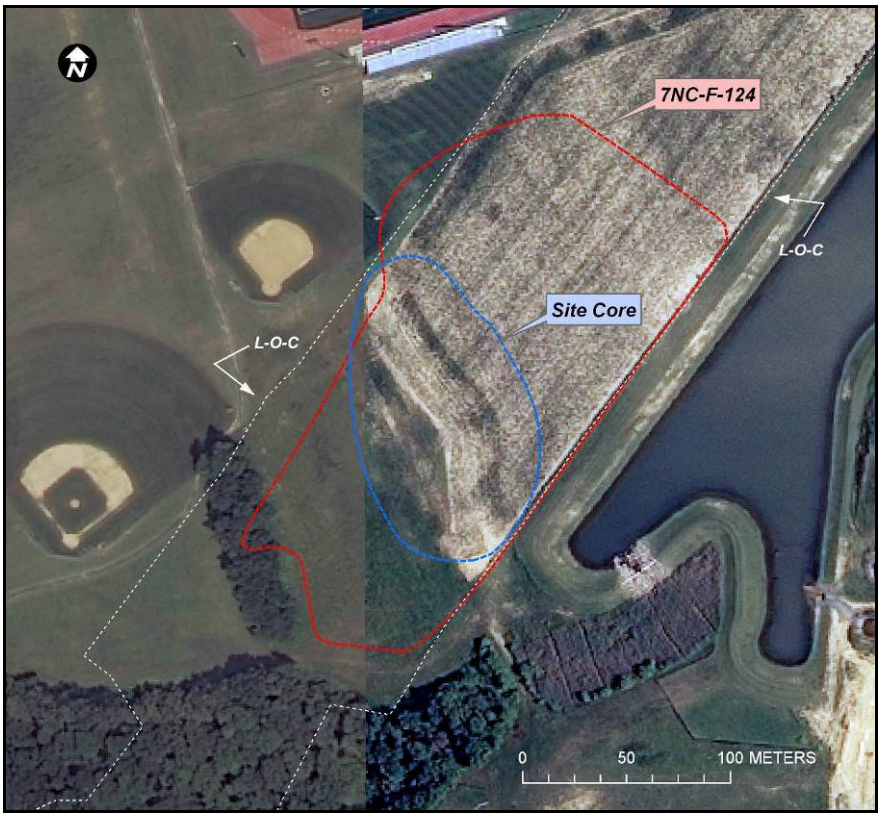


Figure 5-19. Site 7NC-F-124, Illustrating Site Boundary and Site Core.
(NAIP 2009)

Figure 5-20. Site 7NC-F-124, Illustrating Conditions and Excavation.

Thirty-five 1x1 m test units were excavated within the approximately 2.4 acre (1.0 hectare) core of site 7NC-F-124, northeast of an active sewer line. Test unit placement was determined in consultation with DelDOT and DE SHPO prior to the commencement of field work (Figure 5-21). Units were placed using a tight (10 m) grid based on surface collection densities as recorded by Hunter during Phase IB survey work (Liebeknecht and Burrow 2010). The grid datum was set at N1000/E500 at the southern edge of the site core and the baseline was laid out roughly parallel to the right-of-way centerline as staked by Century Engineering running north to south (49/229^{o}) through the site locus.

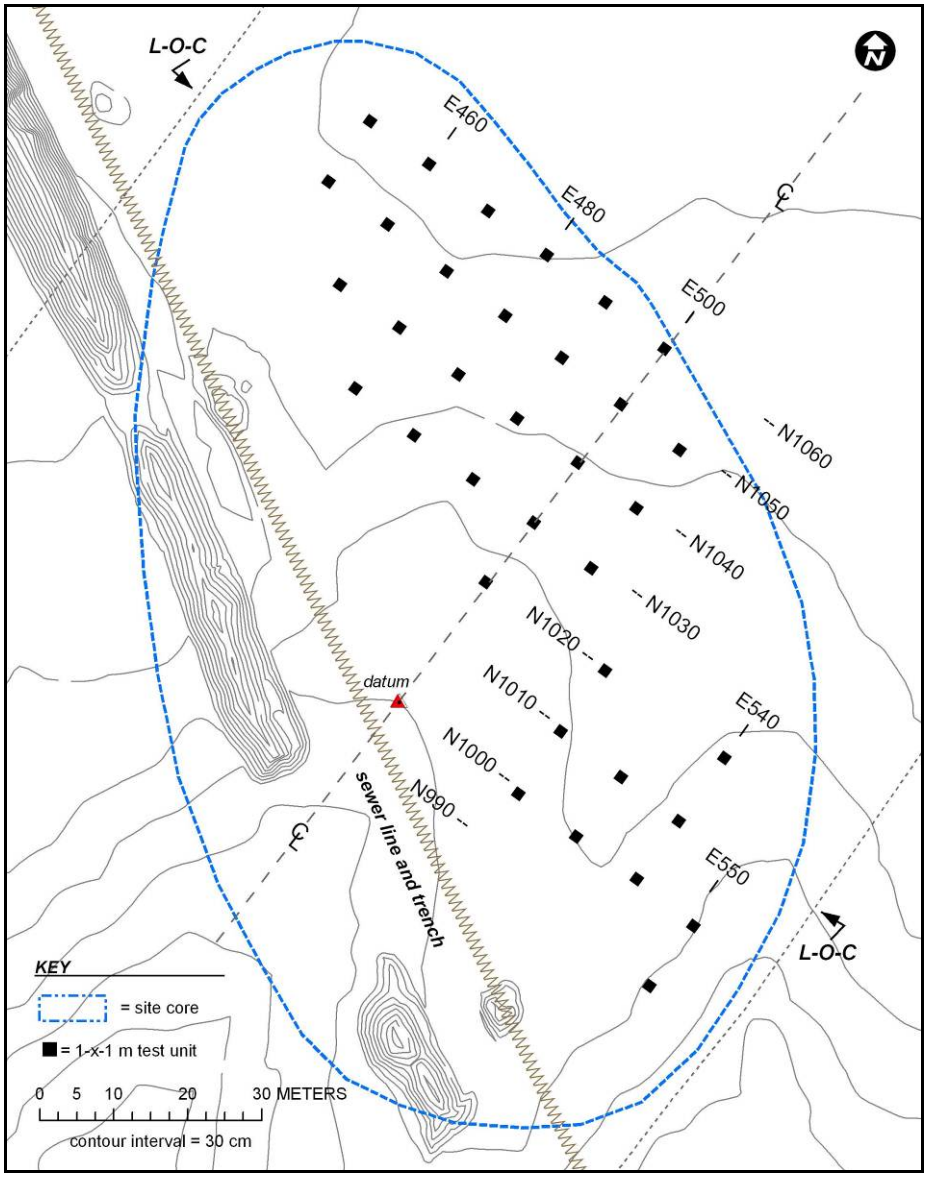


Figure 5-21. Test Unit Grid at Site 7NC-F-124.

The artifacts from Site 7NC-F-124 included 112 historical and 8 prehistoric fragments (Figure 5-22). The historical period artifacts consisted primarily of small domestic ceramic and glass sherds, as well as architectural debris including window glass and brick. Coal and clinkers were present in small quantities. Late 18th to early 19th-century

artifacts included one copper waistcoat button of the type made ca. 1770-1810 (Hinks 1988), five pearlware sherds, a Jackfield-type sherd, and lead-glazed coarse redwares. Later 19th to 20th-century artifacts included undecorated whiteware sherds and amethyst solarized vessel glass, the latter primarily manufactured in the 1880-1914 period (Kendrick 1971). Machine-made bottle glass fragments (1903+) also were present. Two shell wasters from button manufacture were found in one unit (N1040 E481), and four additional samples were collected from two surface locations. Prehistoric period artifacts consisted of lithic debitage including six jasper flakes, 1 chert flake, and 1 rhyolite flake. Due to the light distribution of all artifact types, no field sampling or discard was undertaken (see Appendix C for the complete artifact catalogue).

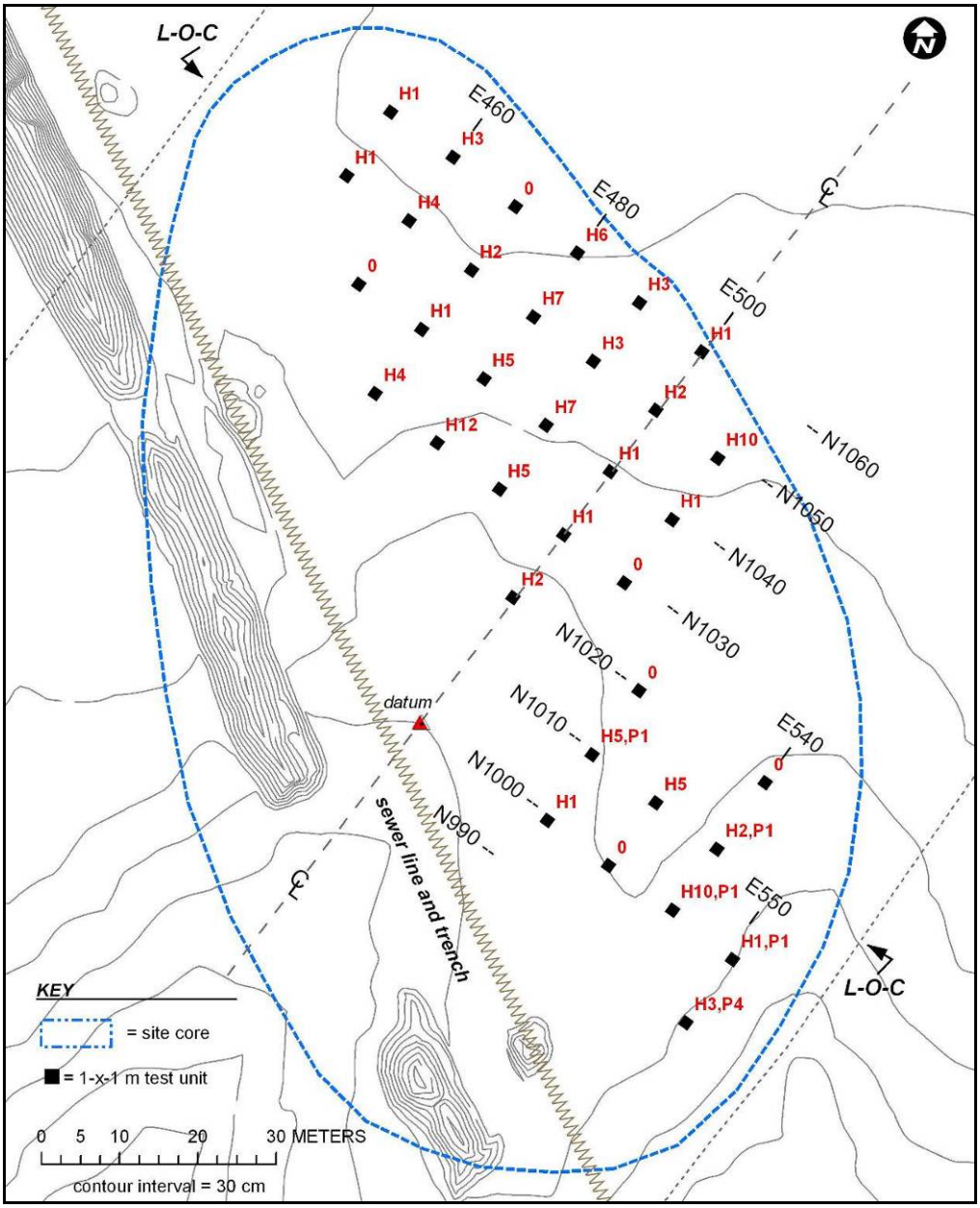


Figure 5-22. Artifact Distribution by Test Unit at Site 7NC-F-124 with Artifact Counts by Unit Noted in Red (H for historic, P for prehistoric).

Soils on site typically consisted of an active plowzone 20-30cm deep (silty loam, 10YR 4/4) overlying sterile subsoil (sandy clay loam, 10YR 5/4). The plowzone was the only artifact-bearing stratum across the site. Linear plowscars were sometimes visible at the base of the plowzone. Sand and gravels (rounded jasper and quartz) were present in varying densities across the area (see Figure 5-23 for typical unit profile using N1010/E520). Two test units on site (N1050/E491 and N1030/E481) were excavated to a depth of one meter below surface to provide geomorphologial data (see Figure 5-24 for unit profile). These excavations revealed two additional strata of subsoil (sand with gravels, 7.5YR 5/6; sand 7.5YR5/6). It was noted that the site's soils were compacted with absent or stunted growth of corn plants in the vicinity of the sewer line to within approximately 10 m northwest of the sewer line. This suggests that the site may have been used for parking of construction equipment, most likely during construction of the school facilities on the property just north of the site that took place in 2007-2008.

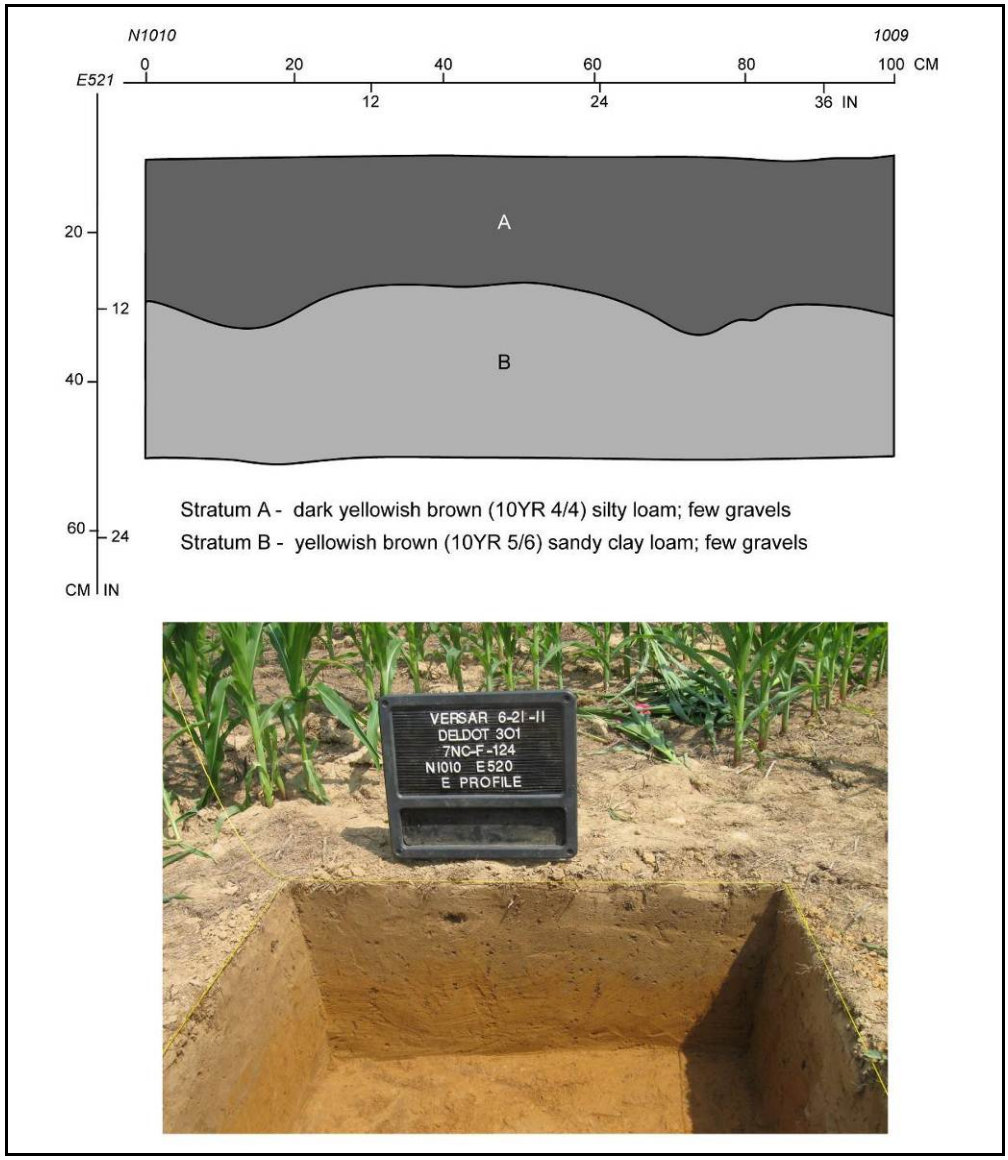


Figure 5-23. 7NC-F-124, Test Unit N1010/E520, East Profile Section.

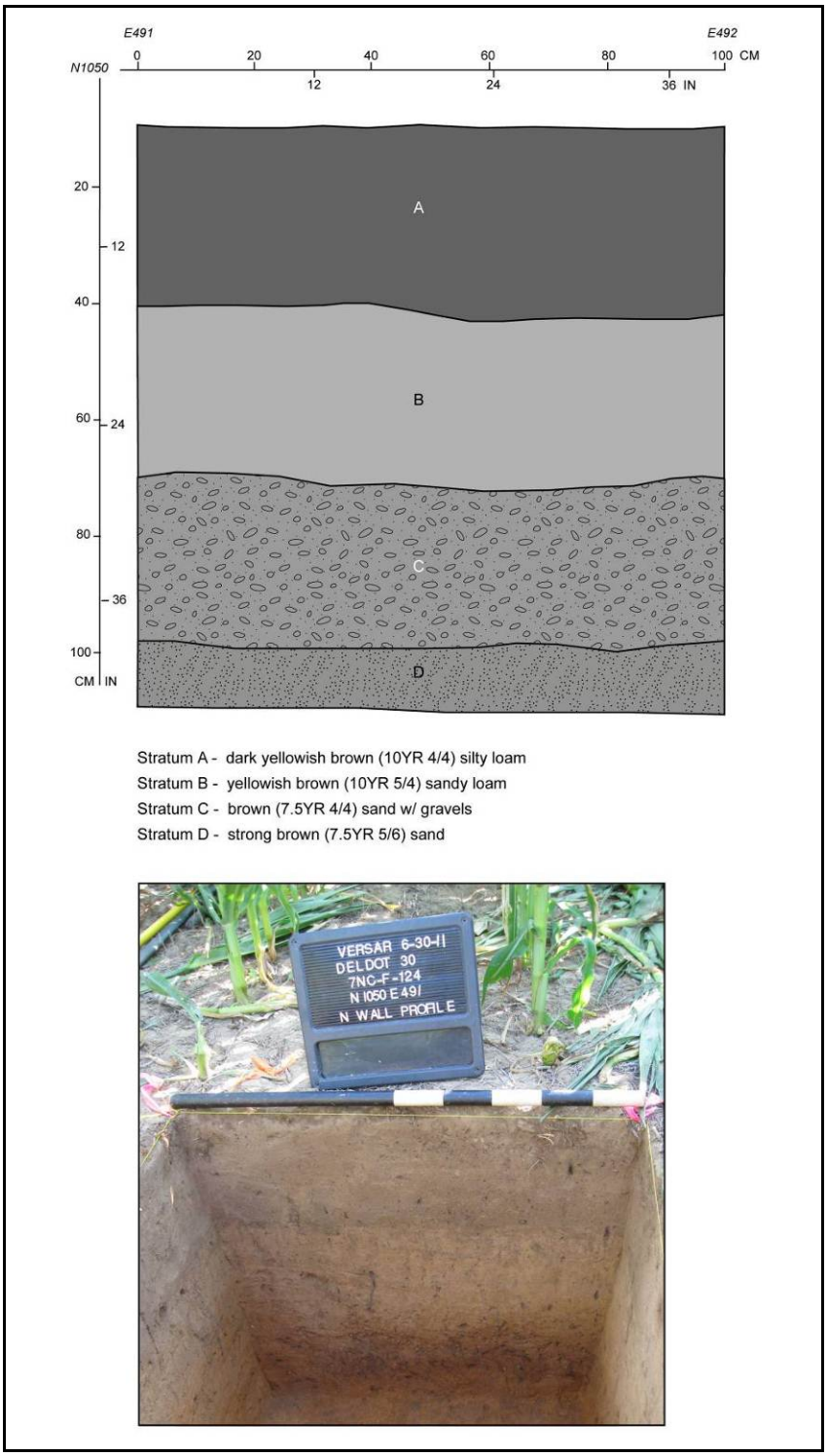


Figure 5-24. 7NC-F-124, Test Unit N1050/E491, North Profile Section.

One surprising result was the almost total lack of evidence of shell button-making waster shells at Site 7NC-F-124. There was no discernible internal patterning of artifact distribution. No subsurface cultural features were located as a result of Phase II

excavations. Based on these findings, the unit bank and plowzone stripping options were deemed unnecessary (Versar/DelDOT consultation June 28, 2011).

5.3 7NC-F-126 – BUNKER HILL NORTH

Archival Results and Historical Land Use

Maple Grove Plantation. The land on which Site 7NC-F-126 is situated was originally part of Indian Range Plantation (see Section 5.2). George Derrickson split off the portion of Indian Range north of the road to Middletown into a separate farm known as Maple Grove in the mid-nineteenth century. The Derricksons built a farmhouse on Maple Grove to the northwest of the Indian Range farmstead on the opposite (north) side of the road to Middletown. The historic house on the Maple Grove property, known as "The Maples", was built in the 1850s and was apparently named for the maple trees in its front yard. The house was listed on the National Register in 1977 (Norton 1977) and is east of the project corridor. The nominated area includes circa 2 acres immediately surrounding the house, with 200 ft. of frontage along Bunker Hill Road to 350 ft. north of the road. The house is significant for its nineteenth-century architecture. The building is L-shaped in plan and was originally sheathed in clapboard. The Maples is an example of Delaware vernacular architecture, a style that embodies many houses built in Delaware from the mid-eighteenth to the late nineteenth century. It exhibits architectural features associated with Federal, Greek Revival, and Italianate periods. In the 1880s the house received embellishments of the Second Empire style: its gable roof was sheathed with patterned shingles and a variation of a Graham Gable roof was added. The modern farm buildings beyond the house were not included in the nomination.

George Derrickson's oldest son, Charles, reportedly ran Indian Range farm until after his father's death (Norton 1977). The property, of George Derrickson, Jr., is labeled "The Maples" in 1868 (see Figure 5-1 pg. 5-2, Beers 1868). The house became the residence of Charles Derrickson, a son of George, upon his marriage (see Figure 5-2 pg. 5-3 Hopkins 1881). It has been a tenant house since Charles' death in 1926 and is the farmstead associated with the agricultural field in which Site 7NC-F-126 is located. The Derrickson family retained ownership of Indian Range and Maple Grove until the 1970s (Burrow et al. 2009:4-42).

No later maps were found depicting a structure on the site itself (USGS 1931 Smyrna 15-minute quadrangle; USGS 1953 Middletown 7.5-minute quadrangle; USGS 1993 Middletown 7.5-minute quadrangle), suggesting that the land was used for growing crops or grazing livestock. Aerial photographs from the 20th century show the site within agricultural fields (Figures 5-25 and 5-26).

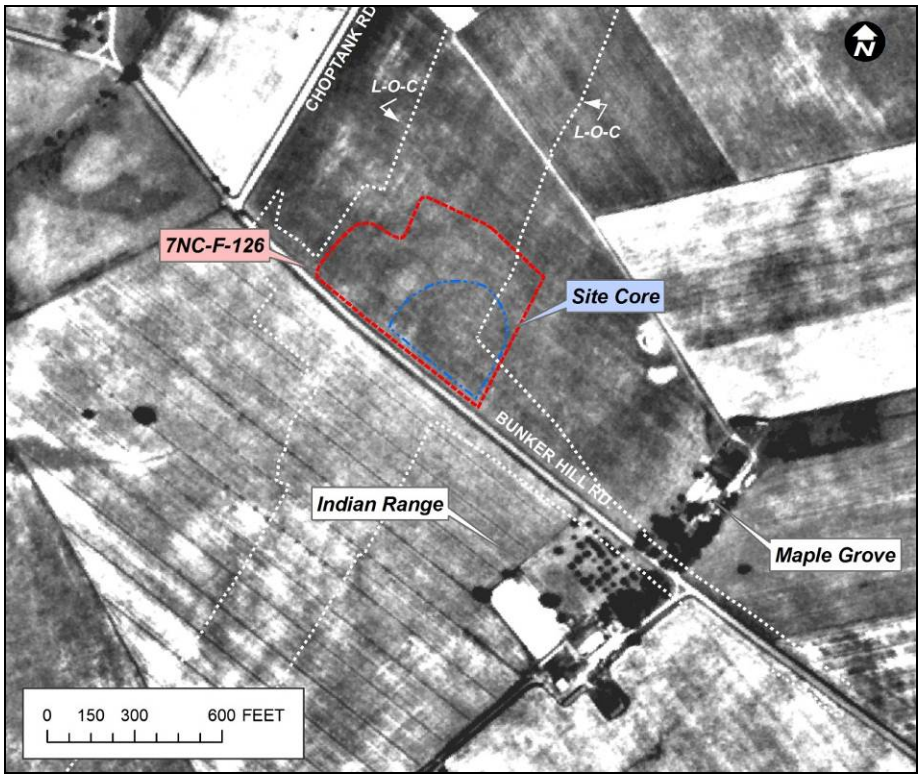


Figure 5-25. Site 7NC-F-126 Illustrated on 1937 Aerial Imagery.
(USDA 1937) [Maple Grove farmhouse to northeast of Bunker Hill Road; Indian Range farmstead to southwest of same road]

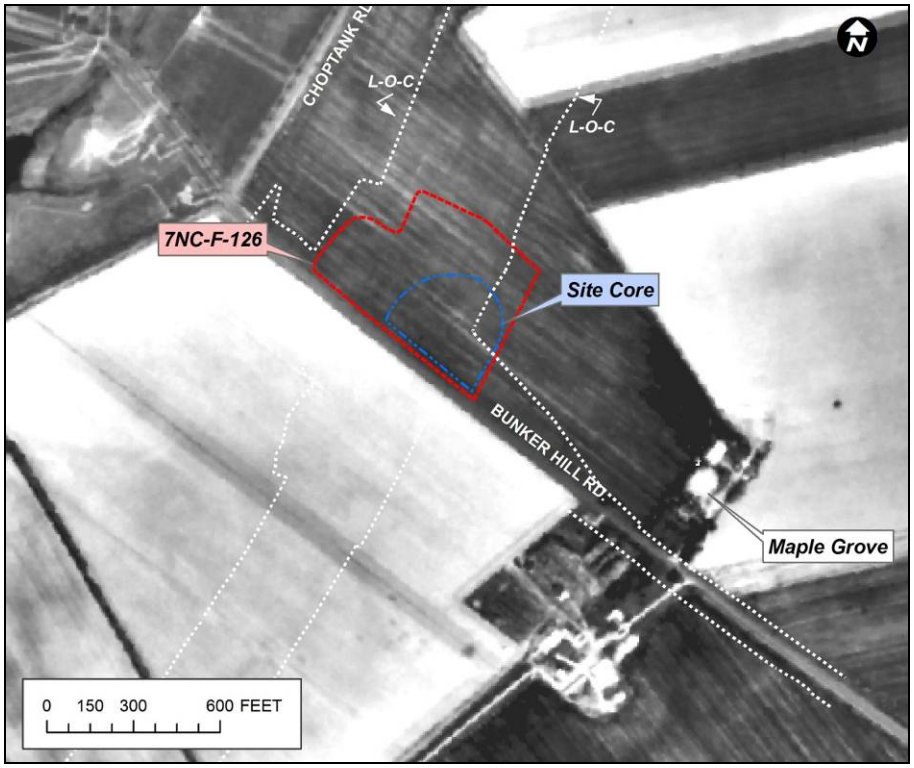


Figure 5-26. Site 7NC-F-126 Illustrated on 1968 Aerial Imagery.
(USDA 1968) [Maple Grove farmhouse to northeast of Bunker Hill Road]

Non-Domestic Use of Property. Previous archival research shows the approximate location of the colonial cart paths near the current site, with Bunker Hill Road and Choptank Road appearing to be in the same approximate locations in the 1700s as in modern times (Burrow et al. 2009). The cart paths likely followed footpaths that had been established by the local Native American populations over many centuries. Taverns or inns were typically located along high-traffic routes frequented by travelers, or in towns. Differentiating the archaeological evidence of a former tenant house from a former tavern or inn can be problematic. Both can leave behind domestic artifacts, although taverns may produce a higher concentration of items related to entertainment, such as pipestems, dice, or stoneware tankard sherds. In some cases, taverns or inns were incorporated into existing residences, especially for those enterprises operating on a small scale and perhaps lodging visitors in spare bedrooms. It was the custom in colonial and early National periods for travelers to share a room or even a bed with other travelers, even if they were strangers to one another.

While a domestic residence at Site 7NC-F-126 cannot be ruled out, archival evidence did not provide evidence that a house was ever located on the site. Cartographic images of the area beginning in 1849 with the Rea & Price map do not show a house at this location. It is possible that one of the landowners constructed a house or tenant house on the site in the hundred years leading up to the 1840s, but this is not mentioned in the deeds for the property, according to the Phase IA report (Burrow et al. 2009). It is known that the main farmstead for the Indian Range farm was situated on the opposite (south) side of Bunker Hill Road, closer to the Town of Middletown. When the land on the north side of Bunker Hill Road was split off from Indian Range and became Maple Grove farm in the 1850s, the Derrickson family built a house on Maple Grove ("The Maples") diagonally across the road from the Indian Range farmstead. The Derricksons added four tenant houses to Indian Range in the latter half of the 19th century, but these houses were situated at the far east end of Bunker Hill Road, very close to Middletown.

It was hypothesized that 7NC-F-126 could have once been the location of a tavern. The Heald 1820 map of roads in New Castle County included the location of taverns, “meeting houses” (churches), manufactories (factories, mills, tanyards, etc.), school houses, and workshops. However, none of these types of structures were shown along Bohemia Road (now Bunker Hill Road) between the Delaware/Maryland line and its junction with Warwick Road (now Route 299/301) in 1820 (Heald 1820). Curiously, Choptank Road is not depicted on the 1820 Heald map; indicating that perhaps it was a minor path and not wide enough to be considered a road by Heald.

The locations of taverns within New Castle County are well-documented after 1799 since tavern keepers needed to apply to the county for a tavern license in order to serve liquor to their customers. It was discovered that the owner of part of the Indian Range property, Jesse Higgins, did indeed own a tavern by 1800. However, the tavern was located within the village of Middletown. Higgins was described in his petition to the court, written in March 1800, as “Landlord of the Ancient Tavern in Middle Town” (New Castle County General Court [NCCGC] 1800a). Higgins goes on to state that his tavern was “built near Forty years ago, For a Tavern. As such has been purchased & Leased by the present

proprietors – is without Farm or Appendage to support its Tenant." The tenant of the tavern, Abraham See, also signed the petition. The letter was written in protest to another applicant, James Cochran, who was applying to open a new tavern within the village of Middletown (NCCGC 1800b). Cochran intended "to keep a House of public Entertainment for Travellors and others" and had "lately rented That large and Commodious Brick House in said Village belonging to Mary Wynkoop." Higgins complained in his petition that the "business or Custom, from Travellers and people of business, is a very bare support for one Tavern at that place, and to diminish it by a division between two, would be to disable both from keeping Good Houses…" (NCCGC 1800a). The court did not agree with Higgins and granted Cochran a license to open a second tavern in Middletown in May 1800 (NCCGC1800b).

Given the fact that an owner of Indian Range farm, David Witherspoon, built a tavern of brick in the village of Middletown in 1761, it would be unlikely that he had another tavern or inn on the farm, only two miles away from town. It can be implied from local history and early maps that Witherspoon moved into the Peterson mansion in the village of Middletown upon his marriage to a widow of a Peterson. Witherspoon acquired the addition to Indian Range farm in 1749 when he was already married to the former Hester Peterson. Witherspoon's descendants owned and operated the "ancient tavern" in the center of the Village of Middletown in 1800 that they claim was built "nearly forty years ago". This corroborates the local history that David Witherspoon built the tavern in the village in 1761. The owners and tenant in 1800 complained to the county courts that they were the only tavern in town and they objected to a second tavern being established. So a tavern at site 7NC-F-126, which Witherspoon owned from 1749 until his death in 1763, and his descendants owned thereafter, is unlikely. This is corroborated by the cartographic evidence.

Geophysical Survey Results

A total of 2.3 acres (0.9 hectares) were investigated using a combination of ground penetrating radar and magnetometer geophysical survey techniques. Thirty-three subsurface anomalies were identified as having the potential to be cultural (for a complete reporting of geophysical methods and results see Appendix A). A summary of these anomalies, including potential cultural uses is presented as follows:

Number	***Type***	***Cultural Potential***
Anomaly 1	Magnetometer	Pit-type feature
Anomaly 2	Magnetometer	Pit-type feature
Anomaly 3	GPR	Pit-type feature
Anomaly 4	Magnetometer	Linear anomaly, likely ditch
Anomaly 5	Magnetometer	Pit-type feature
Anomaly 6	GPR	Linear anomaly
Anomaly 7	GPR	Faint linear anomaly
Anomaly 8	GPR	Faint linear anomaly
Anomaly 9	GPR	Pit-type feature
Anomaly 10	GPR	Pit-type feature

Number	*Type*	*Cultural Potential*
Anomaly 11	GPR	Area of disturbed soils, possibly burning
Anomaly 12	GPR	Area of disturbed soils, possibly burning
Anomaly 13	Magnetometer	Pit-type feature
Anomaly 14	GPR	Pit-type feature
Anomaly 15	GPR	Pit-type feature
Anomaly 16	Magnetometer	Pit-type feature or iron object
Anomaly 17	GPR	Pit-type feature or magnetic soils
Anomaly 18	GPR	Pit-type feature
Anomaly 19	Magnetometer	Historic-era cellar
Anomaly 20	Magnetometer	Shaft-type feature
Anomaly 21	GPR	Distinctive flat anomaly, possible gravel/sand layer
Anomaly 22	GPR	Distinctive flat anomaly, possible gravel/sand layer
Anomaly 23	GPR	Distinctive flat anomaly, possible gravel/sand layer
Anomaly 24	Magnetometer	Shaft-type feature
Anomaly 25	GPR	Distinctive flat anomaly, possible gravel/sand layer
Anomaly 26	GPR	Unidentified, possibly related to Anomaly 19
Anomaly 27	GPR	Linear anomaly
Anomaly 28	GPR	Faint linear anomaly, parallels alignment of Anomaly 19
Anomaly 29	Magnetometer	Unidentified, possibly related to Anomaly 28
Anomaly 30	GPR	Distinctive flat anomaly, possible gravel/sand layer
Anomaly 31	GPR	Distinctive flat anomaly, detected after rain
Anomaly 32	GPR	Faint linear anomaly, parallels alignment of Anomaly 19
Anomaly 33	GPR	Rectilinear anomaly, could be natural given readings in area

The magnetic susceptibility survey detected areas of higher magnetic susceptibility readings along Bunker Hill road and to the west. This area corresponds with the locations of the anomalies above as well as the Phase I surface collection results. However, they continued on to the north and down into a lower area that did not produce many artifacts in the Phase 1 survey (i.e., it is outside of the archaeological site boundary). This is somewhat unexpected for midden-related higher susceptibility values and suggests that the susceptibility data could be tracking natural soil variability rather than midden location. The latter is bolstered by the low overall susceptibility values found at the site. Even the strongest susceptibility readings were relatively weak as compared to prehistoric and historic-era sites in other areas of the eastern United States. As such, the susceptibility results were not directly referenced when deciding upon test unit locations.

Archaeological Field Results

Fieldwork at site 7NC-F-126 took place from July 11 through July 30 under the direction of Mackenzie Caldwell Rohm and Laurie J. Paonessa. The site was recommended for Phase II evaluation based on the co-location of 18th-century and prehistoric material located on a low knoll and along Bunker Hill Road (figure 5-27). It was hypothesized that this concentration may be associated with the local route across the peninsula from the Delaware to Chesapeake Bays (Liebeknecht and Burrow 2010). While the entire site comprises approximately 7 acres (2.8 hectares), the core area of highest artifact density (as defined from Phase I surface collection) is only 2.3 acres (0.9 hectares). During the time of excavation, the winter wheat had just been harvested and the soybean crop was starting to sprout (Figure 5-28).

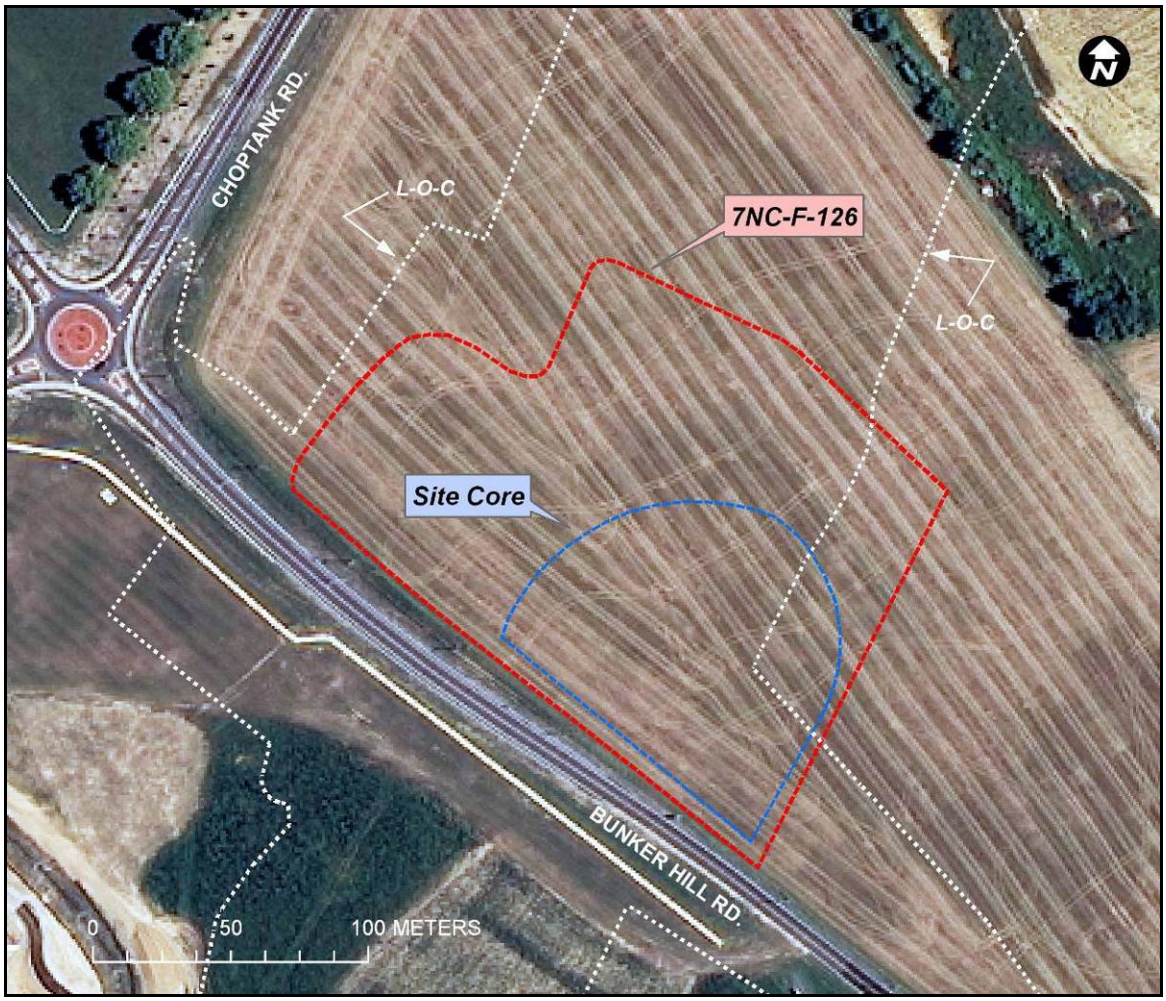


Figure 5-27. Site 7NC-F-126 Illustrating Site Boundary and Site Core (Focus of Phase II Excavations).
(NAIP 2009)

Figure 5-28. Site 7NC-F-126 Illustrating Conditions and Excavation, Facing Northeast.

Twenty-eight shovel tests were excavated as part of investigations at 7NC-F-126 (Figure 5-29). Shovel testing was completed to address a shift in the LOC from an earlier version of the project engineering plans. A total of 35 artifacts were recovered as a result of these efforts: one prehistoric quartz flake and 34 historic artifacts (including eight pieces of coal/cinder that were counted, weighed, and discarded). As a result of shovel testing, it is recommended that the site limits of 7NC-F-126 be expanded to include the current LOC.

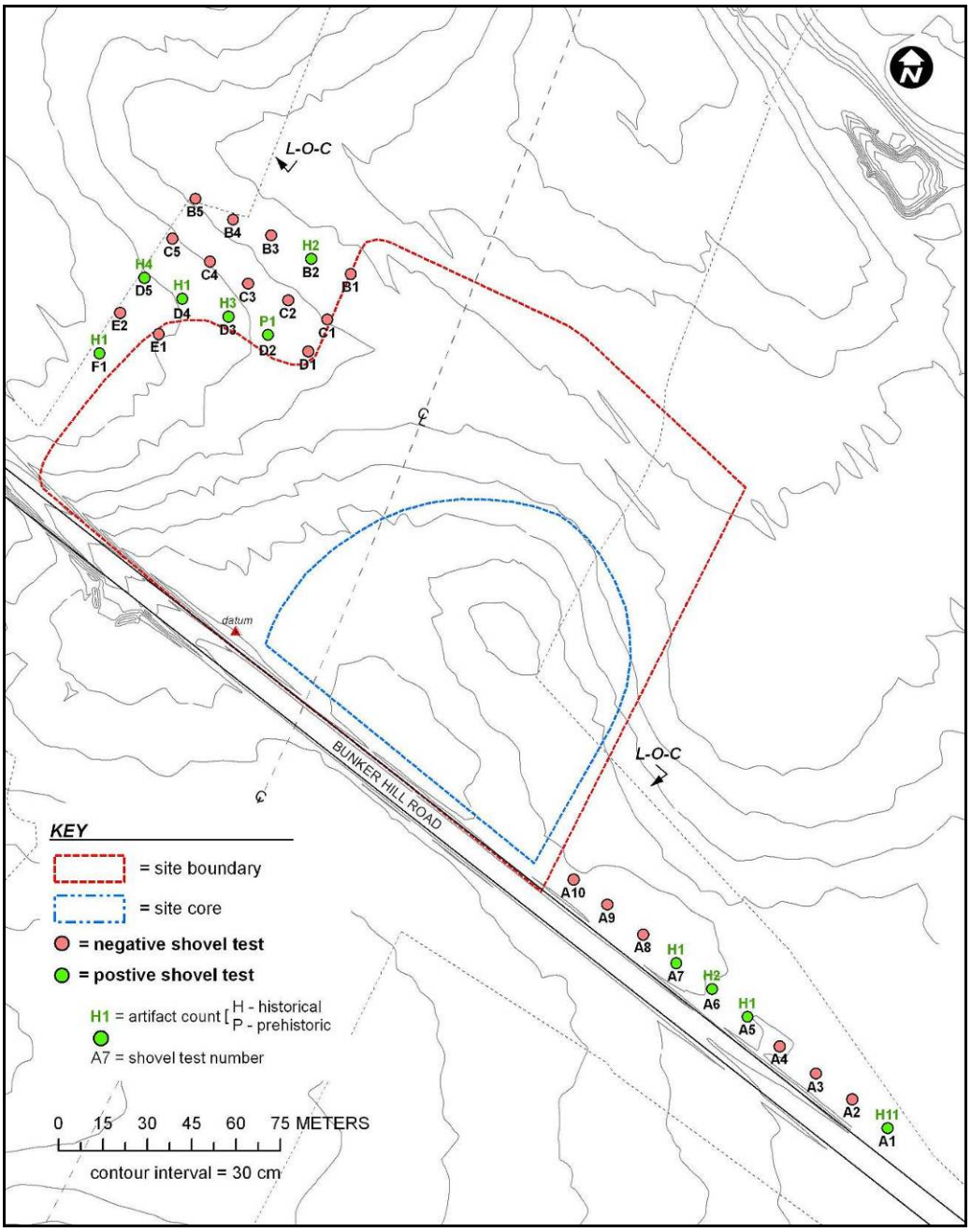


Figure 5-29. Supplementary Phase I Shovel Test Placement at Site 7NC-F-126.

Initially, 35 1x1 m test units (or area-equivalent) were excavated within the approximate 2.3 acre (0.9 hectare) core of site 7NC-F-126 (Figure 5-30). Test unit placement was determined in consultation with DelDOT and DE SHPO prior to the commencement of field work and revised as necessary during the course of the work. Units were placed using the results of the geophysical survey and based on early historical surface collection densities as recorded by Hunter during Phase IB survey work (Liebeknecht and Burrow 2010). The grid datum was set at N1000/E500 near the southwestern edge of the site and the baseline was laid out east/west (140/320^{o}) roughly parallel to Bunker Hill Road to accommodate geophysical testing.

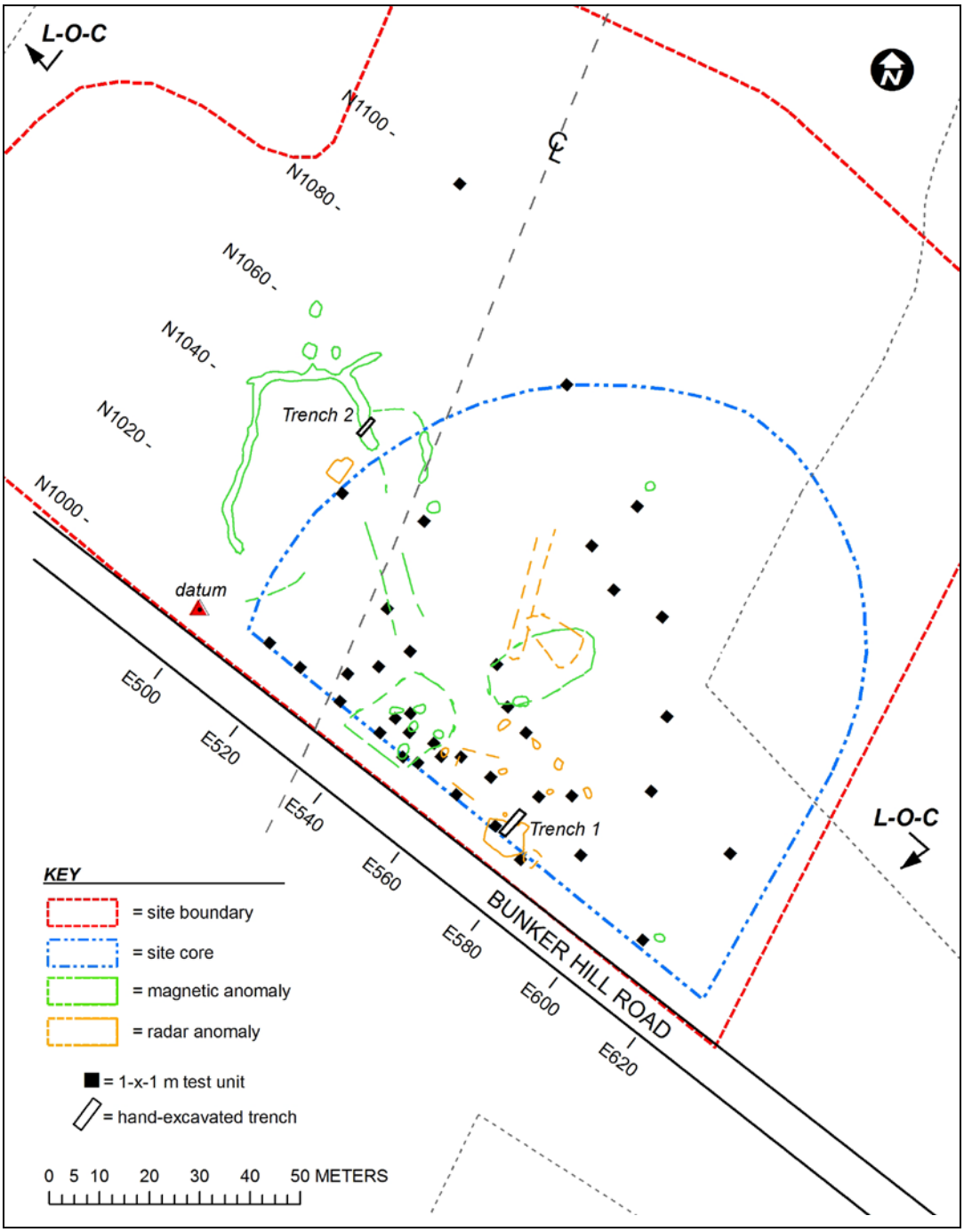


Figure 5-30. Test Unit Placement at Site 7NC-F-126 Illustrating Geophysical Results (GPR and Magnetometer only).

Geophysical survey, including magnetometer survey and ground penetrating radar, was conducted prior to the initiation of field work. As a result of this work, a total of 33 geophysical anomalies were recorded (mag n=18; GPR n=15). Of these, 10 anomalies were identified as having the highest potential for representing cultural features. In total, 19 of the geophysical anomalies were tested archaeologically including eight of the anomalies identified as having the highest potential for representing cultural features. An

effort was made to place test units in an attempt to hit the anomalies either in the center or to catch an edge depending on the alignment and grid layout. Magnetometer anomalies were excavated a minimum of 20 cm into sterile subsoil. To ensure that no cultural feature was overlooked, a circular probe was excavated to a depth of up to 1 meter below surface with a post-hole digger to examine soil consistency with greater depth. GPR anomalies were tested to a minimum depth consistent with the depth of the anomaly as determined by geophysical survey. No cultural features were located as a result of these efforts. In some cases, natural soil differences and gravel concentrations were distinct and potentially significant enough to have caused the readings. In many cases, no evidence of the geophysical anomaly (cultural or natural) was uncovered. Results of the tested geophysical anomalies are represented as follows:

Number	***Potential***	***Field Result***
Anomaly 4 (Mag)	Linear anomaly, likely ditch	Excavation of a trench consisting of a two 0.5x2m units. Plowzone was the only artifact bearing stratum. Distinct difference in the subsoil-grid north and south, the subsoil had heavy gravels, in the center, few gravels and larger percentage clay content. Difference looked trench-like in profile. Not believed to be cultural, could account for anomaly.
Anomaly 5 (Mag)	Pit-type feature	Plowzone was the only artifact bearing stratum. The western edge of the test unit, subsoil had a higher percentage of gravels, was sandier, and had lower clay content than the rest of the unit -may account for the anomaly. Nothing was evident in profile.
Anomaly 9 (GPR)	Pit-type feature	Plowzone was the only artifact bearing stratum. No distinction in soils was noted to account for anomaly.
Anomaly 10 (GPR)	Pit-type feature	Plowzone was the only artifact bearing stratum. No distinction in soils was noted to account for anomaly.
Anomaly 13 (Mag)	Pit-type feature	Plowzone and underlying transition contained artifacts. Bioturbation (rodent burrow) was documented in the north wall of the unit. No distinction in soils was noted to account for anomaly.
Anomaly 14 (GPR)	Pit-type feature	Plowzone and underlying transition contained artifacts. Bioturbation (rodent burrow) was documented in the north wall of the unit. No distinction in soils was noted to account for anomaly.
Anomaly 15 (GPR)	Pit-type feature	Plowzone was the only artifact bearing stratum. No distinction in soils was noted to account for anomaly.
Anomaly 16 (Mag)	Pit-type feature or iron object	Plowzone was the only artifact bearing stratum. No distinction in soils was noted to account for

Number	*Potential*	*Field Result*
		anomaly.
Anomaly 17 (GPR)	Pit-type feature or magnetic soils	Plowzone and underlying transition contained artifacts. No distinction in soils was noted to account for anomaly.
Anomaly 18 (GPR)	Pit-type feature	Plowzone was the only artifact bearing stratum. Three soils distinctions noted and recorded as features. Upon bisection and excavation, they were found to contain some charcoal flecking but no cultural material and were shallow and amorphous in shape. Interpreted as plow scarring, and potentially tree burn-may account for anomaly.
Anomaly 19 (Mag)	Historic-era cellar	Fieldwork included a trench of three 1x1 meter units placed to initiate at the outside of the anomaly, bisect the "wall," and continue in into the interior. Portions of trench were excavated to a depth of 1 meter. Plowzone was the only artifact-bearing stratum. Recorded differences in compactness and gravel content in subsoil is believed to account for the anomaly.
Anomaly 20 (Mag)	Shaft-type feature	Plowzone and underlying transition contained artifacts. Two features were recorded in unit. As a result of bisection and excavation, they were amorphous, contained no artifacts, and were determined to represent disturbance related to tree roots. Feature 2 in particular, roughly basin shaped may account for anomaly
Anomaly 23 (GPR)	Distinctive flat anomaly, possible gravel/sand layer	Plowzone was the only artifact bearing stratum. A thick lens of silty sand was excavated between the plowzone and consistent subsoil in the northern half of the unit. This difference in subsoil may account for the anomaly.
Anomaly 24 (Mag)	Shaft-type feature	Plowzone was the only artifact bearing stratum containing a single piece of window glass. Feature 4 recorded in this unit. Upon exaction, it appears to be a natural distinction in the subsoil, being sandier than surrounding soil believed to account for anomaly.
Anomaly 25 (GPR)	Distinctive flat anomaly, possible gravel/sand layer	Plowzone and underlying transition contained artifacts. No distinction in soils was noted to account for anomaly.
Anomaly 28 (GPR)	Faint linear anomaly, parallels alignment of A 19	Plowzone was the only artifact bearing stratum. The suboil was compact and a good deal of rodent activity was recorded. No distinction in soils was noted to account for the anomaly.
Anomaly 29 (Mag)	Unidentified, possibly related to A 28	Plowzone was the only artifact bearing stratum. Feature 8, determined upon bisection and excavation to be natural bioturbation was

Number	*Potential*	*Field Result*
		recorded in northeast corner of the unit. No distinction in soils was noted to account for anomaly.
Anomaly 32 (GPR)	Faint linear anomaly, parallels alignment of A 19	Plowzone was the only artifact bearing stratum. There was a shallow lens of silty loam between the plowzone and the suboil in the north half of this unit. Upon probing and excavation, it was determined to be amorphous and natural– likely related to root disturbance. This may account for the anomaly.
Anomaly 33 (GPR)	Rectilinear anomaly, could be natural	Plowzone was the only artifact bearing stratum. No distinction in soils was noted to account for anomaly.

Given the number of geophysical anomalies identified near Bunker Hill Road, and the fact that this area also included the highest density of early historical artifacts from Hunter's Phase IB (Liebeknecht and Burrow 2010), it was decided the bank of eight units be used to further test the site (David Clarke, DelDOT Project 301 Archaeologist, July 29, 2011). Six of these units were placed along a systematic transect at a 10 m interval running parallel to Bunker Hill Road. This placement was selected to systematically approach testing of the area with the highest potential for cultural resources based on geophysical results, Phase IB surface collection, and knowledge of early historical settlement patterns gleaned from work completed for the 301 project. The remaining two units were placed to improve coverage of Phase IB early surface collection finds.

The material collected from Phase II testing at Site 7NC-F-126 consisted of 3,018 historical period artifacts and 11 prehistoric artifacts (Figure5-31). Over half (n=1,939) of the historical material consisted of coal and clinker, which was weighed and sampled in the field (see Appendix C for the complete artifact inventory). The remaining historical period material was highly fragmented and was dominated by domestic ironstone ceramic vessel sherds and late 19th to early 20th-century bottle glass and lamp chimney glass. Architectural material was present in smaller numbers, including window glass, brick, and cut nails. Faunal remains included animal bones and clam/oyster shell fragments.

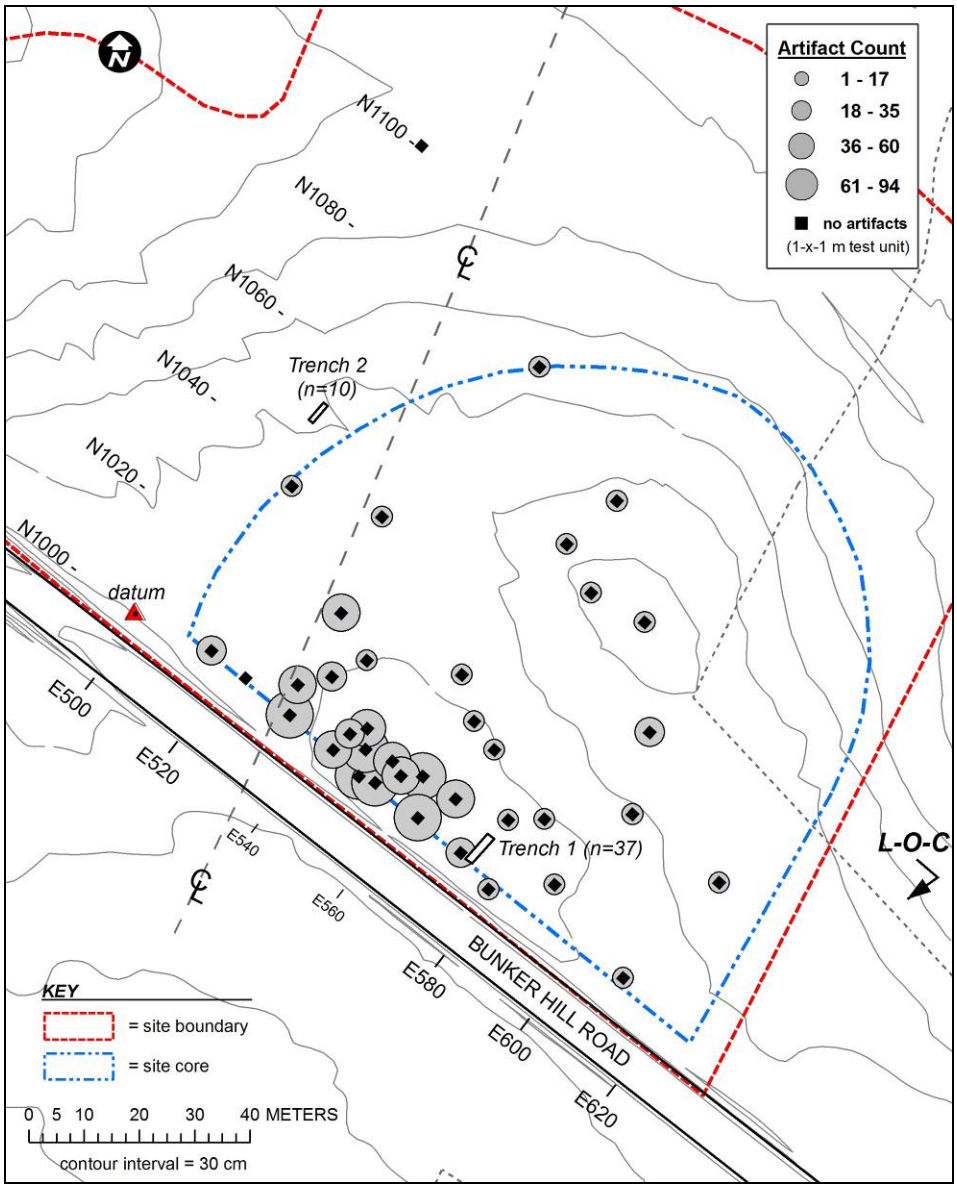


Figure 5-31. Artifact Distribution by Test Unit at Site 7NC-F-126 Presented as Gradient.

Over eighty percent of the refined earthenware ceramic sherds were undecorated ironstone, or white granite, which was manufactured predominantly from 1840 to 1930 (Miller 1991a:10). Ceramic sherds with maker's marks (Figure 5-32) included a stoneware bottle sherd manufactured by Denby Pottery, England, which post-dates 1850 (Godden 1991:90); an undecorated ironstone sherd from Etruria Pottery, Trenton, New Jersey, which post-dates 1863 (Lehner 1988:140); and an undecorated ironstone sherd from Powell and Bishop, Staffordshire, 1876-1878 (Godden 1991:509). Marks on other artifact types included one from the Owl Drug Company, 1892-1920, and one from the Three-In-One oil company (1910+). Other notable diagnostic artifacts included amethyst solarized glass, ca. 1880-1914 (Kendrick 1971:55); a fruit jar lid liner, 1869+ (Toulouse 1969:350); a Prosser-type button, 1840+ (Sprague 2002:111); and lamp chimney glass with a hand-crimped rim, ca. 1870+ (Davis 1949:155). A small number of artifacts,

including two pearlware spalls, one Jackfield-type sherd, and coarse redwares including one white slip-decorated sherd, may have been manufactured in the late 18th or earlier 19th century. No other indication of an earlier historical period occupation was found.

Figure 5-32. Ceramic Marks 7NC-F-126 (Bags 76, 87, 125).

For the purposes of general analysis, diagnostic artifacts were broken into three broad temporal categories: 18th to mid-19th century; mid-19th early 20th century; and modern, or 20th century material.

	Count	*Percent*	*Range*	*Representative Type*
	58	25	18th to mid-19th cen.	Redware sherds
	146	63	mid-19th-early 20th cen.	Undecorated ironstone sherds, solarized glass
	29	12	20th cen.	Machine-made bottle glass fragments
Total	**233**	**100**		

These artifact categories were used to look for any patterning in the distribution of artifacts including: chronological stratification, discrete areas of intense deposits, functional or activity area, and potential locations of feature outlines. It was determined that beyond the bulk of modern material being located along Bunker Hill Road (an expected result) there was little internal site patterning at 7NC-F-126.

Of the 233 artifacts recovered from Phase II testing at 7NC-F-126 that were assigned a date range, 58 (25 percent) were categorized as dating from the 18th to mid-19th centuries. These artifacts consisted of 55 coarse redware sherds (47 of which were spalls), one Jackfield-type sherd, and two pearlware sherds.

Graphic representation of redware and 18th to mid-19th century artifact distribution for the site is very similar (Figures 5-33 and 5-34). There was no discernible patterning to the distribution of redware/early historical artifacts on site that would suggest activity areas or potential feature locations. Densities were highest along Bunker Hill Road, known to be a historically important transportation corridor. In addition, a few pieces were recovered from the knoll top in the center of the site's core area.

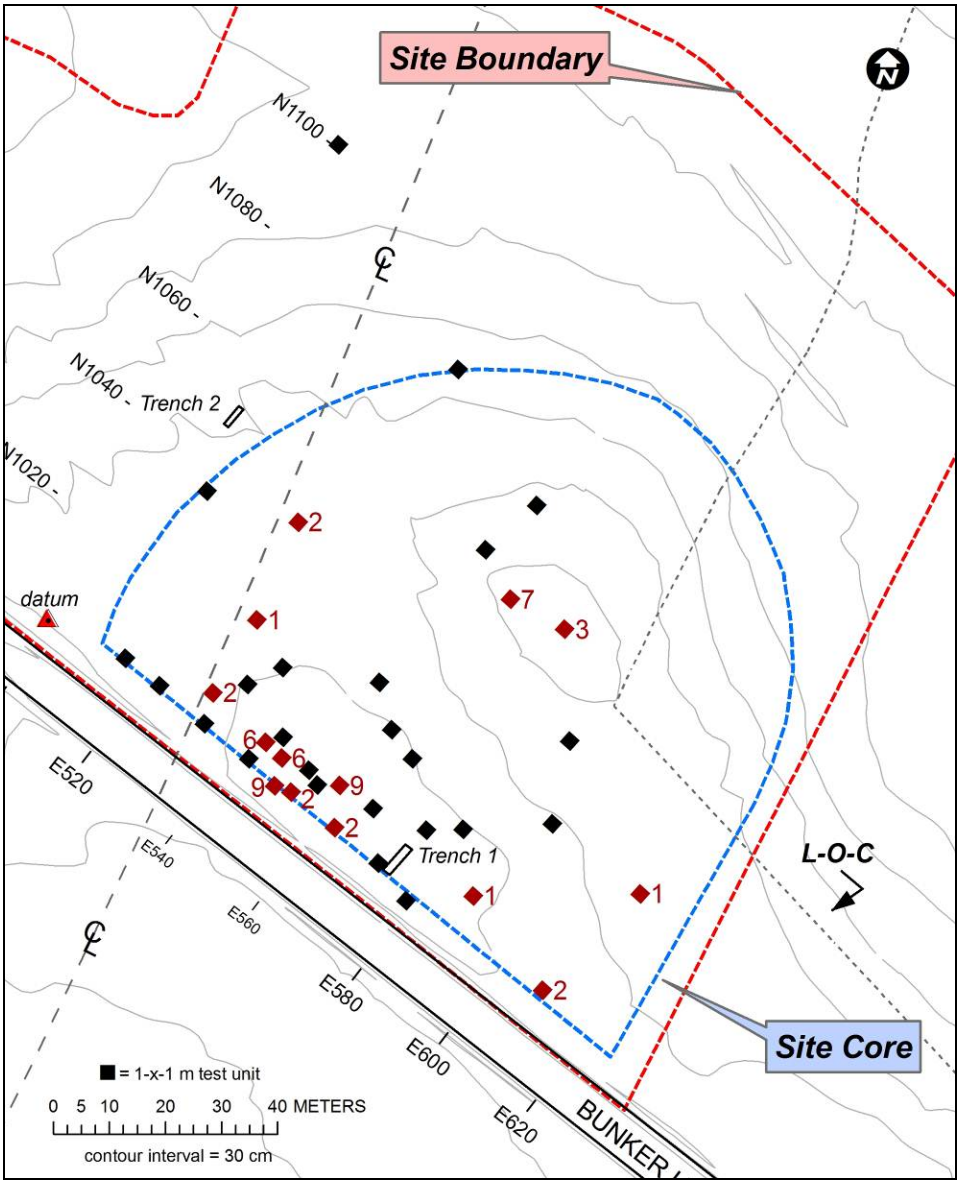


Figure 5-33. Distribution of Redware at Site 7NC-F-126 with Counts by Unit (noted in red).

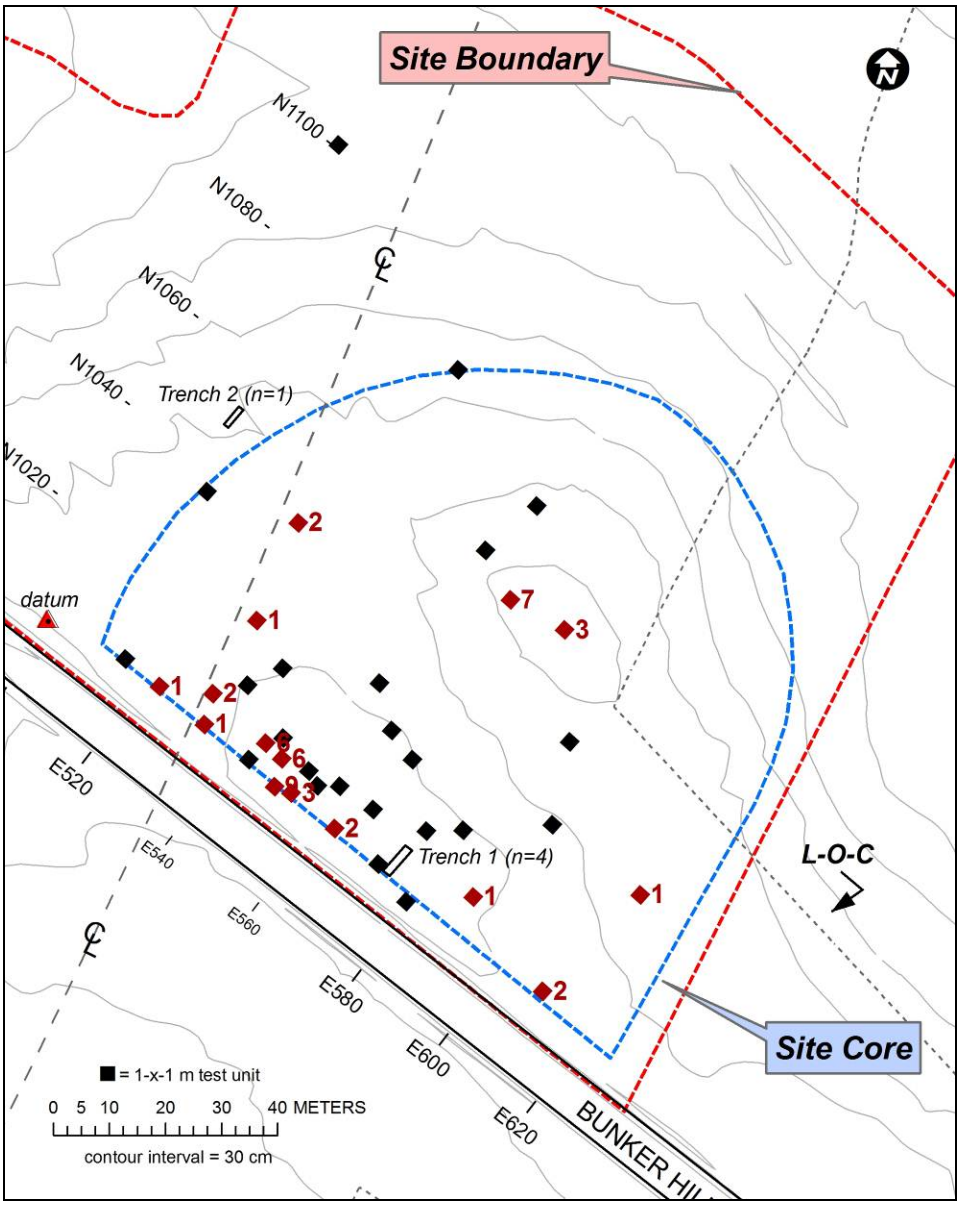


Figure 5-34. Distribution of 18th to Mid-19th Century Artifacts at Site 7NC-F-126 with Counts by Unit (noted in red).

Of the 233 artifacts recovered from Phase II testing at 7NC-F-126 that were assigned a date range, 146 (63 percent) were attributable to the mid-19th to early-20th centuries (Figure 5-35). These artifacts were primarily undecorated ironstone (n=102, 77 of which were spalls), and solarized glass (n=40), but also included a Rockingham/Bennington spall, a yellowware spall, a hand-crimped rim glass lamp chimney rim (ca. 1870+), and a glass bottle fragment from the Owl Drug Company (1892-1920).

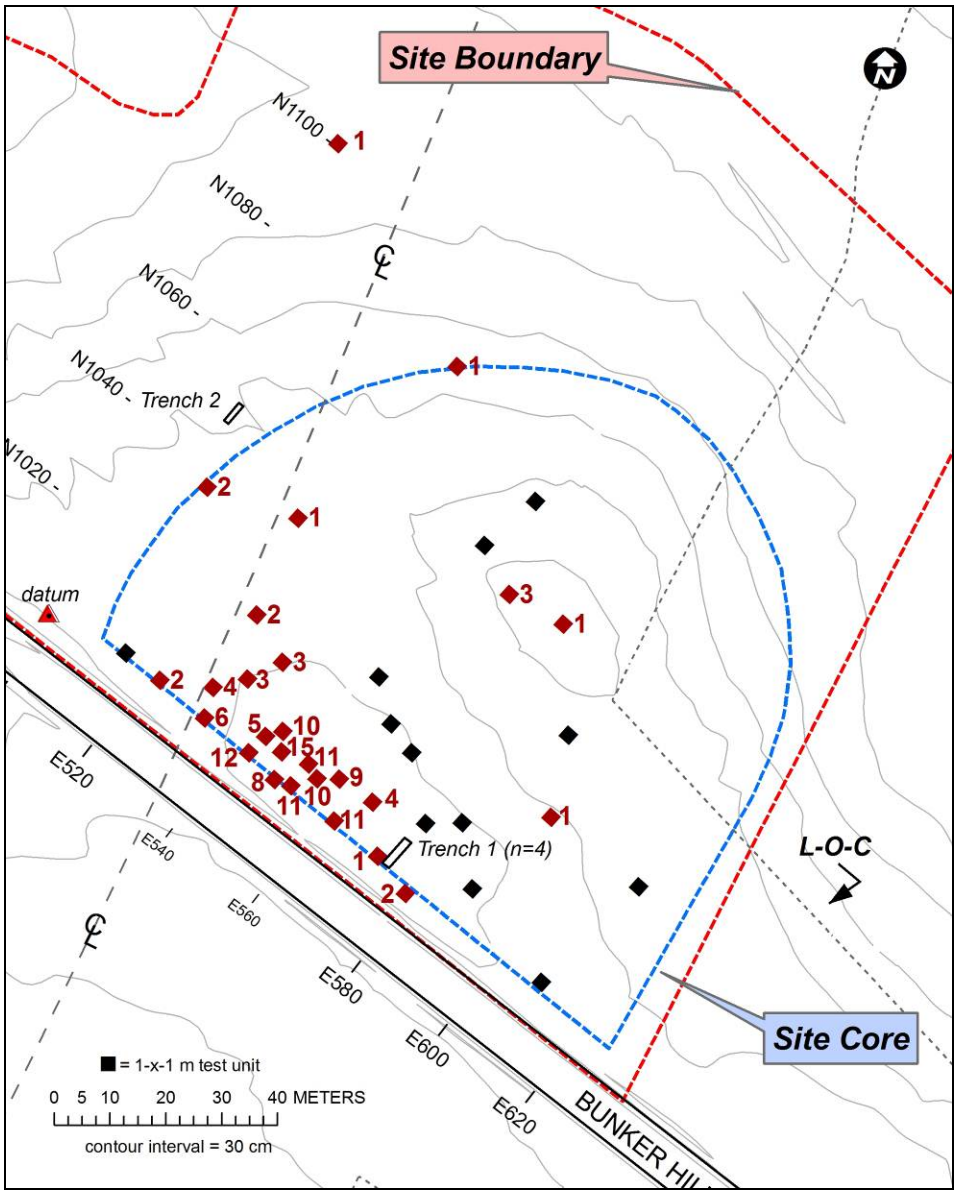


Figure 5-35. Distribution of Mid-19th to Early-20th Century Artifacts at Site 7NC-F-126 with Counts by Unit (noted in red).

Of the 233 artifacts recovered from 7NC-F-126, Bunker Hill North, that were assigned a date range, a total of 29 (12 percent) were manufactured exclusively in the 20th century period (Figure 5-36). These artifacts consisted of predominantly machine-made bottle glass fragments and also included some plastic and aluminum, and a white metal bike oil applicator. The majority of these artifacts were located along Bunker Hill Road and did not appear farther to the northeast, on the knoll top, where some earlier artifacts were documented. This could be a result of more modern debris being discarded along the well-establish transportation corridor (additional truly modern trash such as aluminum cans and chip wrappers were littered in the area as well), however, the size grade and poor condition of the artifacts was consistent with the rest of the collection.

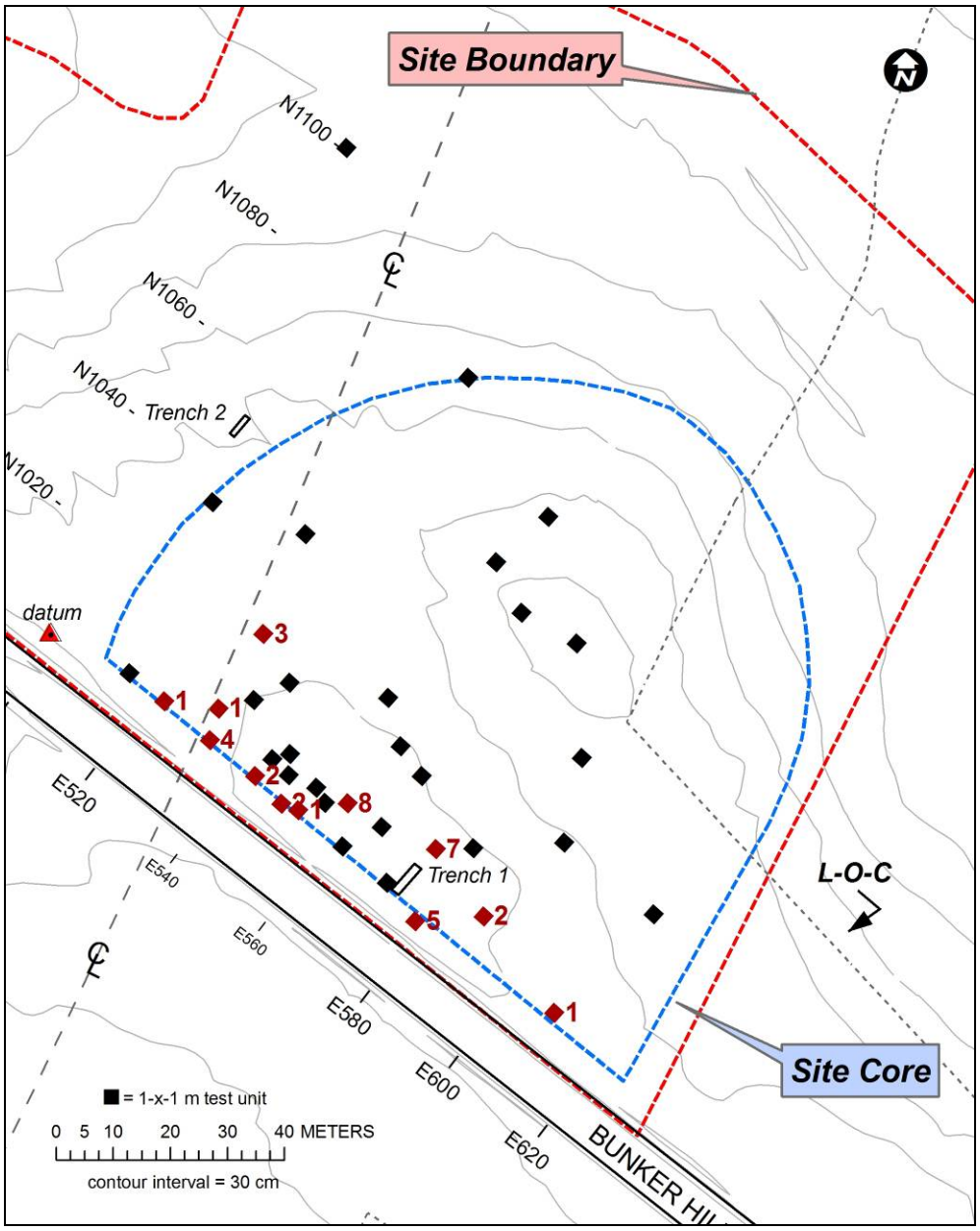


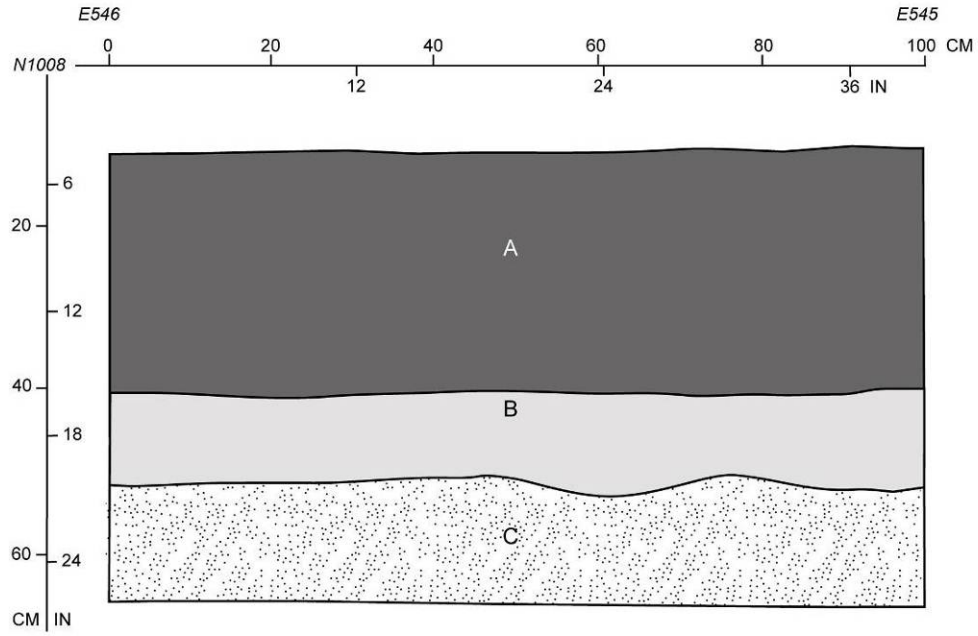
Figure 5-36. Distribution of Exclusively 20th Century Artifacts at Site 7NC-F-126 with Counts by Unit (noted in red).

Prehistoric artifacts (n=11) consisted of one surface-collected Archaic Bare Island quartz point (Figure 5-37), as well as debitage that included 1 jasper, 1 chert, 1 chalcedony, 2 quartzite, and 5 quartz flakes.

Figure 5-37. Quartz Bare Island Point 7NC-F-126.
(Recovered from Surface-Bag 127)

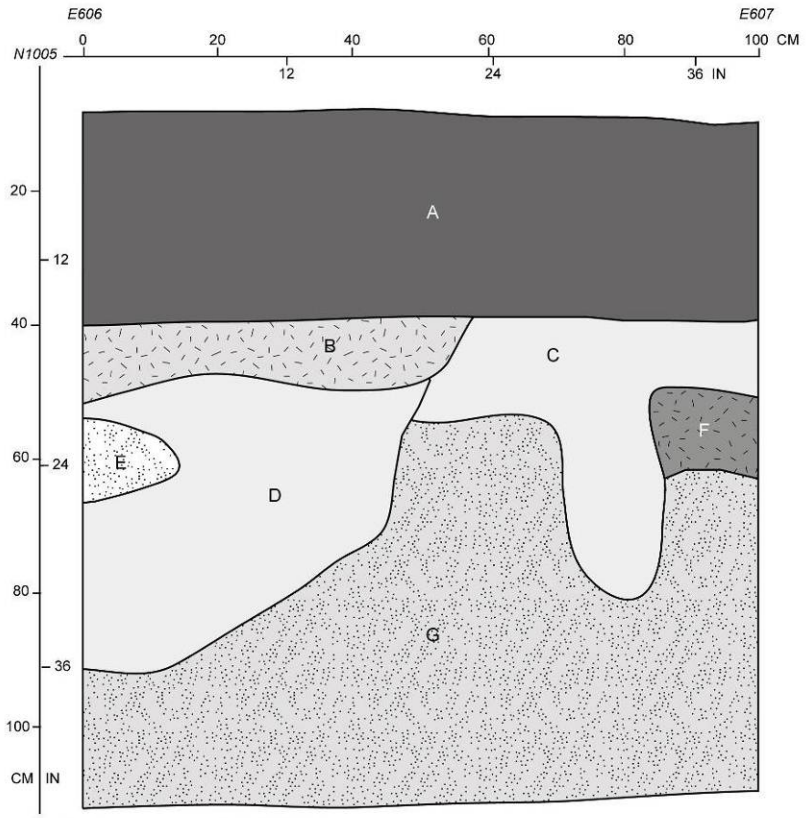
Soils on site typically consisted of an active plowzone roughly 30 cm deep (silty loam, 10YR 5/4) overlying sterile subsoil (silty clay, 7.5 YR 5/6). Linear plowscars were sometimes visible at the base of the plowzone (see Figure 5-38 for typical unit profile using N1009/E545). In places throughout the field, a transitional stratum was visible as a more compact, less organic soil level (sandy loam 10YR 6/4). Artifacts were recovered from this stratum; however, not in the densities that they were recovered from the plowzone. Two test units on site (N1006/E607 and N1005/E573 [Trench 1]) were excavated to a depth of one meter below surface to provide geomorphologial data (see Figures 5-39 and 5-40 for unit profiles). These excavations revealed additional strata of subsoil with varying amounts of sand and gravels. Bioturbation in the form of root rot and rodent burrowing were common on the site often resulting in a subtle soil staining that initially appeared cultural. Nine features were identified in unit plan view (almost exclusively at the transition between plowzone and subsoil). Of these, all nine were determined to be natural or modern disturbances (i.e. plow scarring).

No cultural subsurface features were located as a result of Phase II excavations (n=43 units total; 35 planned and 8 banked). Based on these findings, the plowzone stripping option was deemed unnecessary (Versar/DelDOT consultation July 26, 2011).



Stratum A - yellowish brown (10YR 5/4) silty loam
Stratum B - light yellowish brown (10YR 6/4) sandy loam
Stratum C - reddish yellow (7.5YR 6/6) sandy loam

Figure 5-38. 7NC-F-126, Test Unit N1009/E545, South Profile Section.



Stratum A - brown (10YR 5/3) silty loam
Stratum B - light brownish gray (10YR 6/2) mixed w/ yellowish brown (10YR 5/8) silty loam
Stratum C - very pale brown (10YR 7/4) silty loam
Stratum D - very pale brown (10YR 7/3) loamy silt
Stratum E - light yellowish brown (10YR 6/4) sandy loam
Stratum F - brownish yellow (10YR 6/6) mixed w/ very pale brown (10YR 7/3) silty loam
Stratum G - yellowish brown (10YR 5/8) sandy clay

Figure 5-39. 7NC-F-126, Test Unit N1006/E607, South Profile Section Illustrating Bioturbation and Irregular Non-Cultural Deposits possibly associated with Adjacent Bunker Hill Road Grading.

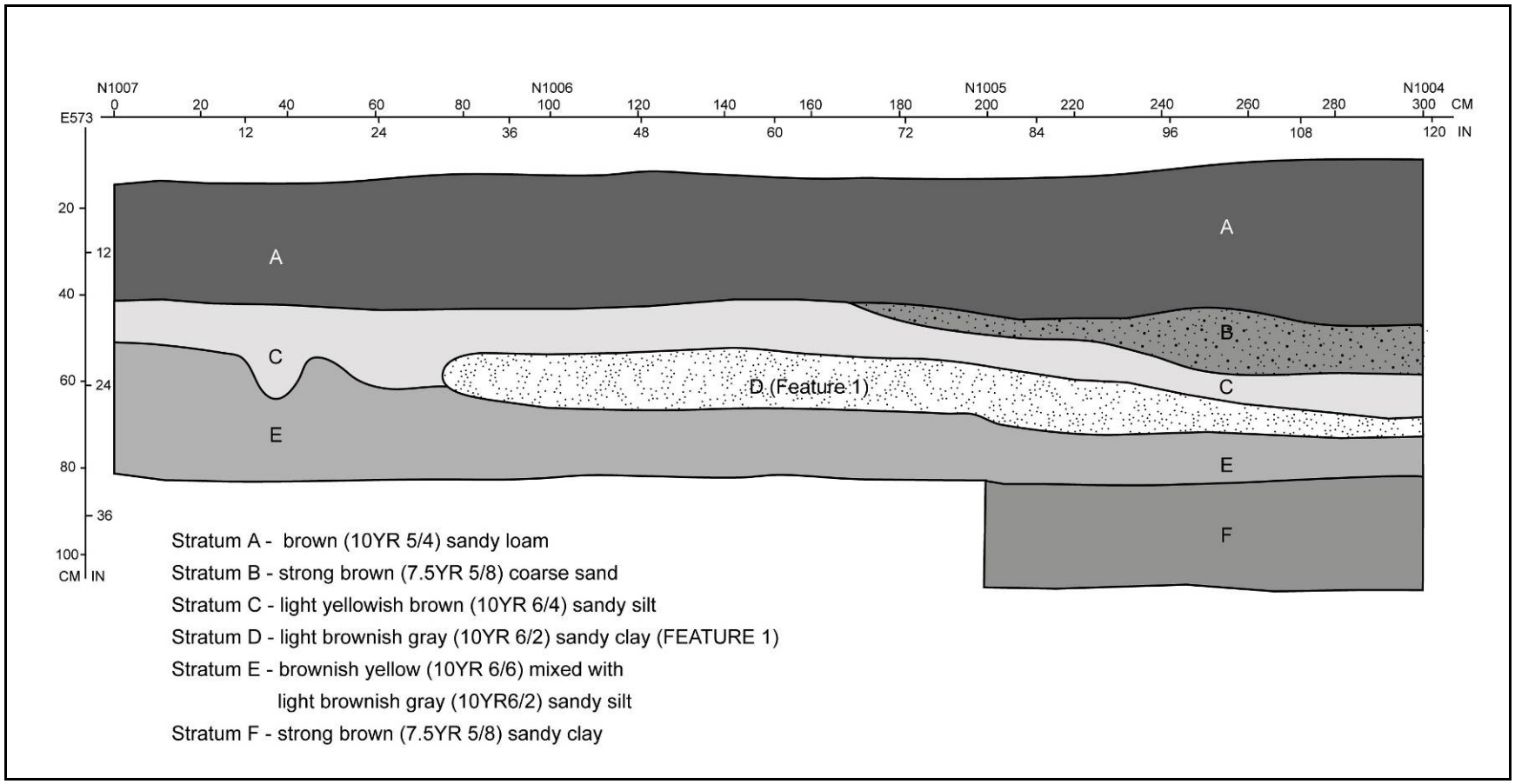


Figure 5-40. 7NC-F-126, Trench 1, South Profile Section Illustrating Irregular, Non-Cultural Deposits possibly associated with Adjacent Bunker Hill Road Grading and Meter Deep Unit N1005/E573.