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**PHASE I ARCHAEOLOGICAL SURVEY OF
THE U.S. ROUTE 301 ST. GEORGES
BORROW PIT AND THE U.S. ROUTE 13 AND
PORT PENN ROAD INTERSECTION
REALIGNMENT (CONTRACT 1D),
NEW CASTLE COUNTY, DELAWARE**

Parent Agreement 1650, Task 1

DRAFT

by

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Danae Peckler,
Emily Calhoun, and Kerri S. Barile**

Prepared for

Delaware Department of Transportation

Prepared by

DOVETAIL
CULTURAL RESOURCE GROUP

November 2013

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ABSTRACT

Dovetail Cultural Resource Group (Dovetail) conducted a Phase I archaeological survey of the U.S. Route 301 St. Georges Borrow Pit and the U.S. Route 13 and Port Penn Road Intersection Realignment (Contract 1D) in New Castle County, Delaware in March and April 2011. Archival research, including a review of relevant historical documents (e.g., period maps, property and tax records, census data, genealogical information, etc.), was conducted in support of the archaeological investigations. The purpose of this effort was to identify any archaeological sites on or eligible for the National Register of Historic Places (NRHP) within the project's area of potential effect (APE).

The Phase I examination included systematic subsurface testing and resulted in the identification of four isolated finds and one archaeological site. The isolated finds lacked evidence of concentrated cultural activity, and, as such, were not assigned Cultural Resource Survey (CRS) or site numbers. No additional work is recommended in these areas. The archaeological site, identified as the Stroud Site (7NC-G-180), was further investigated via the excavation of six test units at the Phase I level. Shovel testing coupled with test unit results at the site indicated a date range of late-eighteenth through mid-nineteenth century. Although no structural remains or architectural features were identified, archival research and artifact analysis suggest that the site was an area of domestic occupation likely associated with the Stroud family in the early-nineteenth century.

Based on the archival and Phase I archaeological work conducted as part of this project, the archaeological site, located in the northern storm water management pond associated with the U.S. Route 13 and Port Penn intersection realignment, was recommended as potentially eligible for listing on the NRHP under Criterion D. Additionally, Delaware Department of Transportation (DelDOT), and the Delaware State Historic Preservation Office (DE SHPO) concurred that further work, both archival and archaeological, should be conducted in order to more adequately evaluate this site for listing on the NRHP. The complete Phase I results from the Stroud Site (7NC-G-180) will be presented along with the results of the Phase II work (in a forthcoming report) and as such the site is not discussed in detail within this report.

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INTRODUCTION

Dovetail Cultural Resource Group (Dovetail) conducted a Phase I archaeological survey at the U.S. Route 301 St. Georges Borrow Pit and the U.S. Route 13 and Port Penn Road Intersection Realignment (Contract 1D), for the Delaware Department of Transportation (DelDOT). Both projects were completed in support of DelDOT's larger U.S. Route 301 development plan. The archaeological work for these two projects was grouped under one task due to their close geographic proximity and similarity in scope.

Based on the topographic position, environmental setting (proximity to Scott Run and the Chesapeake and Delaware Canal), and the results of previous archaeological investigations adjacent to the Area of Potential Effect (APE), the project areas were judged to have moderate to high potential for prehistoric and historic resources. As such, the current project included Phase I archaeological investigations augmented by archival background research.

Previous work in the area has included a Phase I survey along U.S. Route 13 for the proposed State Route (SR) 1 Corridor (Bedell et al. 1997) and a Historic Context and Reconnaissance Survey for the U.S. 301 Project Development (Frederick et al. 2006). The Phase I survey conducted in 1994 and 1995 included work along the U.S. Route 13 corridor from Scott Run south to Augustine Creek and identified three light scatters not determined to be archaeological sites and an eighteenth-century site (7NC-G-144) located north of Augustine Creek, but outside of the current project APE (Bedell et al. 1997).

The current project, completed between March and April 2011, included archaeological investigations in DelDOT-owned and private property in New Castle County, Delaware. The field investigations consisted of a pedestrian survey and systematic subsurface testing utilizing shovel test pits and an auger. Kerri Barile served as the Principle Investigator for this project. Field crews were under the direction of Emily Calhoun. Dr. Barile and Ms. Calhoun both meet or exceed the standards established for archaeologist by the Secretary of the Interior. Archival research was conducted by Danae Peckler. Both Dr. Barile and Ms. Peckler meet or exceed the standards established for historian by the Secretary of the Interior.

The work resulted in the identification of one archaeological site and five isolated find spots. Further, a recommendation on eligibility for listing on the National Register of Historic Places (NRHP) and additional work was given for the site identified during the survey. The project results were initially outlined and presented to DelDOT and the DE SHPO through a Management Summary in 2011. This report provides a full description of the project results.

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PROJECT AREA DESCRIPTION

The APE for the U.S. Route 301 St. Georges Borrow Pit and the U.S. Route 13 and Port Penn Road Intersection Realignment was defined by the Limit of Construction (LOC), as outlined within the preliminary construction plans furnished by DeIDOT, dated November 18, 2010. These project areas are generally located at the intersection of the proposed U.S. Route 301 and State Route (SR) 1, directly south of the Chesapeake and Delaware Canal and the Town of St. Georges, and at the intersection of U.S. Route 13 and Port Penn Road (Figure 1–Figure 3, pp. 3–5). The entire project area encompasses approximately 13.25 acres (5.4 ha) of block survey and 3,500 feet (1,067 m) of linear survey.

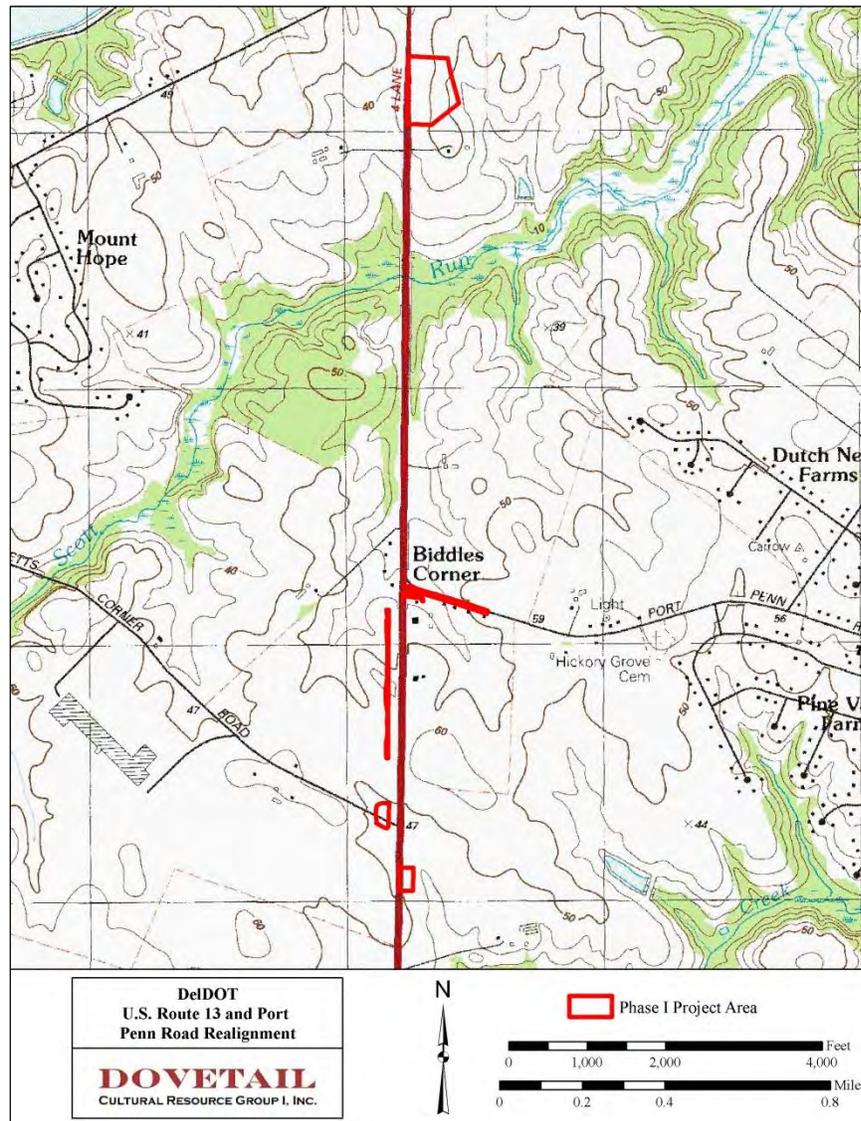


Figure 1: Location of the Saint Georges Borrow Pit and U.S. Route 13 and Port Penn Road Intersection Realignment Project Areas on the 7.5-Minute St. Georges, Delaware Topographic Quadrangle (United States Geological Survey [USGS] 1993).

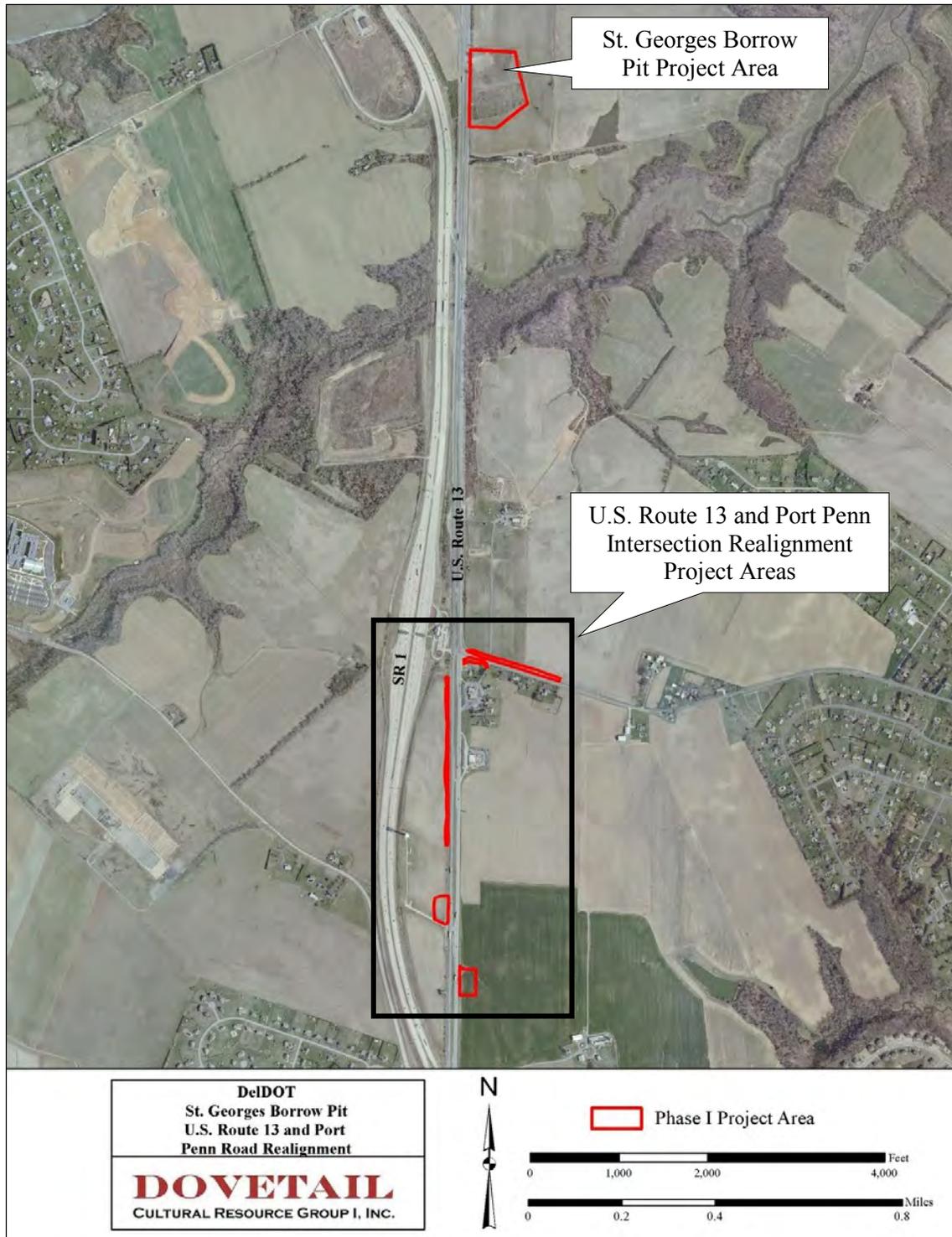


Figure 2: Aerial View of the St. Georges Borrow Pit and U.S. Route 13 and Port Penn Road Intersection Realignment Project Areas.



Figure 3: Aerial View of the Proposed U.S. Route 301 at the Intersection of SR 1, Facing South. The Port Penn Project Area is shown in red.

The U.S. Route 301 St. Georges Borrow Pit is located directly east of U.S. Route 13 and 0.5 miles (0.8 km) south of the Chesapeake and Delaware Canal and the Town of St. Georges. The APE encompasses approximately 11 acres (4.5 ha). The northwest portion of the project area had been disturbed by the addition of gravel and the prolonged driving and parking of heavy equipment since its use during the construction of SR 1 in the 1990s (Figure 4). The remaining portion of this APE appeared to be minimally disturbed and was a grassy field at the time of the survey.



Figure 4: Overview of the St. Georges Borrow Pit APE, Facing West.

The U.S. Route 13 and Port Penn Road Intersection Realignment consisted of five distinct project areas and encompassed a total of 2.25 acres (0.9 ha) of block survey and 3,500 feet (1,067 m) of linear survey. These areas include two storm water management ponds (denoted north and south) and three narrow linear extensions of the road right-of-way. These areas were a mixture of fallow, cut and disked, and newly planted fields (Figure 5–Figure 6, p. 7). One exception was the project area south of Port Penn Road which was a recently paved parking lot associated with an adjacent commercial property.



Figure 5: Linear Corridor North of Port Penn Road, Facing West.



Figure 6: Southern Storm Water Management Pond Location, Facing South.

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ENVIRONMENTAL SETTING

The U.S. Route 301 St. Georges Borrow Pit and the U.S. Route 13 and Port Penn Road Intersection Realignment APEs are located in the east-central portion of New Castle County, Delaware. This part of New Castle County has historically been rural with large tracts of farmland and continues to be rural to an extent. The improvements to U.S. Route 13 and SR 1, a four- to six-lane highway built to interstate standards directly west of U.S. Route 13, has made access from the urban areas of northern Delaware to south-central New Castle County and the beaches in southern Delaware much easier. As a result, large housing subdivisions and commercial businesses along the highway have begun to spring up on farmland around historic rural communities such as St. Georges and Port Penn. The current project area has not been impacted by this recent suburban development and only to a limited extent by construction.

Geology

The project area is in the Upper Coastal Plain physiographic zone in the Mid-Drainage management zone subdivision. The Upper Coastal Plain physiographic zone covers the area between the Smyrna River to the south and the Piedmont Fall Line to the north. In general, the soils found on the upper terraces and headlands between the major drainages are well-drained. There are a few wetlands and poorly drained floodplains along the major drainages (Custer 1984; Custer and Bachman 1986; Hodny et al. 1989). The Potomac and Columbia formations characterize the sediments of the northern Delaware Coastal Plain. Potomac formation sediments are fluvial silts and clays deposited during the Early Cretaceous Period. They are overlain by the sediments of the Columbia formation, deposited by watercourses from the north during the Quaternary Period.

The Columbia formation is characterized by sands, made up mostly of quartz, feldspar, and coarse gravels of sandstone, quartz, and chert (Custer 1984; Jordan 1964). The gravels resisted erosion which created a gently rolling topography with up to 50-foot (15.2-m) differences in elevation between floodplain marshes and headlands, thereby creating differences in plant communities. These topographic conditions combined with the presence of tidally influenced brackish watercourses and freshwater further inland allow for a wide range of available natural resources.

Hydrology

Scott Run and Augustine Creek are the main watercourses draining the area. Scott Run, located approximately 0.5 miles (0.7 km) south of the St. Georges Borrow Pit APE, drains into the Chesapeake and Delaware Canal which connects the Chesapeake Bay and the Delaware River. Augustine Creek is located approximately 0.7 miles (1.1 km) southeast of the southern storm water management pond APE in the U.S. Route 13 and Port Penn Intersection Realignment project area. Augustine Creek drains into the Delaware River. The Delaware River then empties into the Delaware Bay, which joins the Atlantic Ocean between Cape Henlopen and Cape May.

Soils

Fertile, well-drained soils attracted both humans and game over millennia. Moreover, the wild grasses, fruits, and seeds consumed by people both before and after the adoption of agriculture flourished in such settings. As a consequence, numerous archaeologists have cited the correlation between the distribution of level to gently sloping, well-drained, fertile soils and archaeological sites (e.g., Lukezic 1990; Potter 1993; Turner 1976; Ward 1965). Soil scientists classify soils according to natural and artificial fertility and the threat posed by erosion and flooding, among other attributes. Soil Classes 1 through 3 represent the most fertile soils, those best suited for not only agriculture but for a wide range of uses.

Within the St. Georges Borrow Pit APE, the Matapeake silt loam represents the majority of the soil types. A small portion of this APE is Reybold silt loam. Both of these soil types are prime farmland if drained or protected from flooding. The linear sections of the U.S. Route 13 and Port Penn Road Intersection Realignment and the northern and southern storm water management ponds consist of Reybold silt loam and are prime farmland if drained. The fertility and moderate to excellent drainage of these soils make them ideal for historic period occupations and the agricultural activities associated with them (Table 1) (Soil Survey Staff 2012).

Table 1: Soils in the Project Area (Soil Survey Staff 2012).

Soil Name	Class	Slope	Project Area	Percentage	Characteristics
Matapeake silt loam	2	2–5%	St. Georges Borrow Pit	57%	Well drained, tendency to erode
Reybold silt loam	3	5–10%	St. Georges Borrow Pit	7%	Well drained, tendency to erode
Reybold silt loam	2	2–5%	U.S. Route 13 and Port Penn Road Realignment	23%	Moderately well drained, tendency to erode
Reybold silt loam	1	0–2%	Storm Water Management Ponds	13%	Well drained

PROJECT METHODOLOGY

The purpose of this investigation was to identify any archaeological sites on or eligible for the NRHP within the project's APE. A previous Phase I survey conducted by Louis Berger & Associates in 1994 and 1995 did not identify any archaeological sites between Scott Run and Augustine Creek that fall within the current project's APE (Bedell et al. 1997).

The survey methodology employed to meet this goal was chosen with regard to the project's scope, the potential of the APE to contain significant archaeological resources, and the local field conditions. The archaeological survey consisted of both a visual inspection and subsurface testing. Systematic subsurface testing resulted in the identification of five isolated find spots and one archaeological site (Stroud Site 7NC-G-180). To supplement the archaeology fieldwork, archival and background research was undertaken to better understand the potential for cultural resources.

Archival and Background Research

Archival research conducted in association with this project gathered primary and secondary sources to learn more about the history of the project area, and cultural resources within it, to inform and support Phase I archaeological investigations. In early March of 2011, Dovetail staff visited the Delaware Public Archives, New Castle County Circuit Court, the Historical Society of Delaware, the Morris Library and Center for Historic Architecture and Design (CHAD) at the University of Delaware, and consulted online resources such as Ancestry.com and familysearch.org. Primary sources associated with the St. Georges Borrow Pit and Port Penn project area recovered in this effort include Federal Population Census records, Orphans Court records, probate records, warrants and surveys, historic maps, deeds and mortgages, family records, and various tax assessments dating as far back as 1732. Secondary sources consist of genealogical records and historical publications, as well as previous architectural and archaeological surveys of cultural resources in the project vicinity.

Field Methods

As previously noted, the archaeological APE was defined by the LOC, however, an in-depth examination of engineering/construction plans and consultation with DelDOT eliminated segments of the LOC that were previously disturbed by road and facility construction. Large portions of the project area, including the borrow pit and storm water management ponds, were subject to archaeological survey. Additionally, linear survey areas included portions that extend more than 25 feet (7.6 m) from either U.S. Route 13 or Port Penn Road. Portions of the project area within 25 feet (7.6 m) of the road corridors encompassed soils previously disturbed during highway/road and utility construction, including excavated ditches, concrete drainage channels, and buried and overhead utility corridors. As such, these areas were not subjected to archaeological survey. Project areas adjacent to the recently constructed SR 1 toll plaza were also not surveyed due to obvious subsurface disturbance associated with the construction of this facility.

The boundaries of the St. Georges Borrow Pit and storm water management ponds, associated with the Port Penn Road intersection realignment survey areas, were marked by Century Engineering prior to archaeological assessment to assure accuracy during archaeological fieldwork. The narrow segments of the APE adjacent to U.S. Route 13 and Port Penn Road were located by Dovetail staff using construction plans and hand-held Global Positioning System (GPS) units. Following the identification of the APE, the project area was then visually inspected. This inspection consisted of a pedestrian investigation to locate surface features or artifact scatters and also to identify areas that appeared to have the potential for intact subsurface deposits. The results of this inspection guided subsequent research.

Following visual inspection of all project areas, a subsurface field survey was conducted and comprised shovel testing in areas that were identified in the surface survey to have the potential for intact archaeological deposits. Areas that were determined to lack intact subsurface deposits during the pedestrian survey were subjected to intensive auger testing to verify the depth of the plowzone and/or the presence of subsurface disturbances. A Toro Dingo TX525 mechanized auger with a 12-inch (30.5-cm) diameter blade was used to complete the auger testing. Auger tests and shovel tests in the APE were excavated at a maximum of 50-foot (15.2-m) intervals. When cultural materials were recovered, radial shovel tests were excavated in every cardinal direction to determine if the artifact was an isolated find or if the area constituted an archaeological site. The survey was of sufficient intensity to determine the nature, extent, and, if possible, potential significance of any cultural resources located within the project area.

Shovel tests measured approximately 15 inches (38.1 cm) in diameter and were excavated to penetrate at least 4 inches (10.1 cm) into sterile subsoil where possible. All shovel tests were excavated in 4-inch (10-cm) arbitrary levels to 3 feet (0.9 m) in depth or culturally sterile deposits, whichever came first. The matrix was screened through 0.25-inch (0.6-cm) mesh. All cultural material recovered during the investigation was collected and bagged according to provenience. Soil conditions, weather information, and notations on disturbances were recorded within field notes. The location of each shovel test was plotted using a GPS receiver.

Based on the results of the pedestrian survey, auger testing, and shovel testing, six test units were excavated within the project corridor. These units were concentrated in the northern storm water management pond associated with the U.S. Route 13 and Port Penn Road intersection realignment construction. The test units were used to augment the results of the shovel testing to ascertain the potential for intact stratigraphy and cultural features. Units measured 3 x 3 feet (0.9 x 0.9 m) and were excavated in natural levels. Where natural levels exceed 4 inches (10 cm), arbitrary 4-inch (10-cm) levels were excavated to provide vertical control of the recovered artifact assemblage. All soils were screened through 0.25-inch (0.6-cm) mesh. All recovered cultural materials were collected and bagged according to provenience. Profile photographs were taken and scaled drawing made of at least one wall from each unit. When discovered, features were photographed and scale drawings made in plan view. Depending on size, features were bisected and excavated in arbitrary 4-inch (10-cm) levels or natural levels if they were less than 4 inches (10 cm) in depth. If materials appropriate for chronometric testing were encountered, such as charcoal, samples were

removed using appropriate methods to maintain the integrity of the samples. Like the shovel tests, the locations of all test units were documented through a hand-held GPS unit.

Following the completion of test unit excavation a shovel test was excavated at the base of the unit. This shovel test aimed to verify the continuation of subsoil and eliminate the possibility of buried horizons.

Laboratory Methods

All recovered artifacts were washed with water and rubbed with a soft brush. Once cleaned, artifacts were cataloged according to type and bagged with the field tag in 4 millimeter archival quality resealable bags. For this portion of the work, the artifact catalog recorded general provenience information and quantity for each artifact type. Artifacts were broken into two general categories: historic and natural. Artifact type was assigned according to a variety of generally accepted systems.

Historic artifacts were divided into material and functional categories [*Architectural* (ARC), *Arms and Ammunition* (ARM), *Ceramic* (CER), *Glass* (GLS), *Metal* (MET), *Organic* (ORG), *Other* (OTH), and *Personal* (PER)] for basic analysis. The artifacts were then identified as to specific wares or manufacturing techniques. *Architectural* artifacts generally included any item that was used in the construction of a building such as nails, window glass, brick, cut stone, mortar, plaster, roofing slate, etc. Specifically, nails were recorded as hand-wrought, machine cut with wrought heads, machine cut with machine cut heads, and wire (galvanized and ungalvanized) (Adams 2002; Nelson 1968). Window glass was cataloged based on color and brick was defined as either hand-made or machine-made. The *Arms and Ammunition* category included flints, bullets, bayonets, sabers, mortar shells, etc.

Ceramics were subdivided into refined and coarse earthenware, refined and coarse stoneware, porcelain, and semi-porcelain. Decoration, such as applied paint, transfer print, and molding, were also noted, and each fragment was examined to determine specific vessel aspect (i.e., body, base, handle, rim). Specific ware types and manufacture dates were identified using Noel-Hume (1991), South (1977), Bartoviks (1980), Pittman et al. (1987), Greer (1970), and Digital Archaeological Archive of Comparative Slavery (DAACS) (2006). *Glass* included all domestic glass and was catalogued by manufacturing techniques, as well as color, use, attribute, and decoration (Jones and Sullivan 1985; Madden and Hardison 2002). This category was broken down by vessel and bottle glass distinctions to help identify their possible use without seeing the actual artifact; for example, a piece of glass representing a candy dish versus a wine bottle.

Metal is a category and generally includes flat pressed metal or unidentifiable metal fragments. An attempt was made to place other metal items in a functional category to aid in analysis. *Organic* included shell, bone, and any other culturally but naturally occurring object. The *Other* category included items that were not placed into a more specific category, such as ceramic insulators and porcelain toilet fragments. Although these items are technically ceramic, they are placed within the *Other* category because they are not of a specific domestic use like a plate or bowl. *Personal* items consist of buttons, pipe fragments, military accoutrements, jewelry, etc.

Within the scope of Parent Agreement 1534, Task 2, only limited laboratory analysis was completed. Artifacts were washed and cataloged, but not prepared for final curation. Complete processing and final curation was completed under Task 5 and all artifacts were delivered to the DE SHPO on October 23, 2012. That also included culling of the artifact assemblage as per the DE SHPO standards.

CULTURAL CONTEXT

Prehistoric Context

There are five general, chronological periods of Native American cultures of the Delmarva Peninsula defined by Custer (1984, 1986): Paleoindian (15,000–8500 B.P.), Archaic (8500–5000 B.P.), Woodland I (5000–1000 B.P.), Woodland II (1000–350 B.P.), and the Contact Period (350–250 B.P.).

Paleoindian Period (15,000–8500 B.P.)

The Paleoindian Period marks the retreating of glacial conditions and the beginning of a Holocene environment that is characterized by cold temperatures and alternating periods of wet and dry climate. Human adaptation to these environmental conditions developed into small groups of nomadic Native American hunters and gatherers. Although direct archaeological evidence of non-mammalian food resources by Paleoindian peoples is lacking in Delaware, paleoenvironmental data suggests that the period comprised deciduous, boreal, and grassland biomes. These environs would have provided grazing, browsing, and shelter for animals and provided foraging opportunities. Primarily, Paleoindian Period toolkits were designed for game procurement and processing. They include projectile points, hafted and unhafted knives, scrapers, and less formalized flake tools. The fluted point is the early diagnostic hallmark of this period (Clovis, Mid-Paleo, and Dalton). Later point forms of the period were notched and often serrated (Palmer, Amos, Kirk). Toolkits often displayed high degrees of maintenance and reworking, which is consistent with nomadic lifestyles and migration between lithic raw material sources. Custer (1989) has identified Paleoindian sites along the Mid-Peninsular Drainage Divide of the Delmarva Peninsula, with the Hughes Complex in Kent County exemplifying their distributional pattern (Custer 1984).

Archaic Period (8500–5000 B.P.)

The Archaic Period is characterized by the emergence of full Holocene environmental conditions and a landscape that was dominated by mesic oak and hemlock forests. These forests attracted smaller game, such as deer and turkey, which replaced the cold-adapted grazing animal species, like bison and caribou, which became extinct (Custer 1984). A rise in sea level caused lowland flooding and the formation of river systems and swamp areas within the Mid-Peninsular Drainage Divide. The Native American peoples shifted from a more hunting-based pattern (Paleoindian Period) to one where plants became a more important food source (Custer 1989:128). A fission-fusion model of social organization helps site identifications of macro, micro, and procurement camps, with group sizes changing in response to the availability of resources each season (Custer 1989:129–130). Archaic toolkits include a number of tools indicative of plant food processing, grinding stones, netsinkers, and stone mortars. Archaic sites in Delaware include several sites within the Churchman's Marsh.

Woodland I (5000–1000 B.P.)

The Woodland I Period is marked by a pronounced warm and dry period, and dramatic changes in local environments and climate. Sea level rise slowed, allowing stabilization of riverine and estuarine areas, which in turn led to an increase in aquatic resources. This led to higher degree of sedentism by the Woodland I peoples who began showing large macro-band base camps with evidence of use year-round (Custer 1989). Storage pits and evidence of house structures are found at these sites for the first time. Increased social complexity is also evident during this period in the form of grave goods indicating complex mortuary ceremonies beginning around 2500 B.P. The Woodland I Period is also marked by stemmed, broad-bladed, and fishtail points, as well as an increased use of rhyolite and argillite. Ceramics replaced steatite bowls around 3000 B.P. (Custer 1984). The Delmarva Adena Complex was a thriving community in central Delaware while the Black Rock Complex (formerly the Wolfe Neck) was present in New Castle County. Components from the Black Rock Complex are found at Clyde Farm Complex sites. These two complexes seem to have ended by 2000 B.P., and the Carey Complex appears followed by the Delaware Park Complex by 1500 B.P. (Custer 1989:253).

Woodland II (1000–350 B.P.)

The Woodland II Period is generally marked by more intensive use of plant foods in the Middle Atlantic region and a shift to a more sedentary lifestyle and the development of an agricultural system. However, this shift to more of an agricultural system is absent in the Delmarva Peninsula (Custer 1989). There are two Woodland II complexes identified in Delaware: the Slaughter Creek Complex and Minguannan Complex. Artifacts include thin-walled Minguannan ceramics and triangular projectile points. The sites of the complexes are in the same environmental contexts as those of the Woodland I Period, oriented in marshes and wetland areas. This indicates that there were no major changes in the lifestyles of the peoples in Delaware during this time period (Custer 1989:314).

Contact Period (350-250 B.P.)

The Contact Period is marked by the initial contact between the Native American peoples of Delaware and European colonists. This was followed by the collapse of traditional native lifeways, as European goods and practices were adopted, and disease and conflict over the fur trade caused a severe loss of life among native groups. Evidence indicates that resident native populations in Delaware had minimal interaction with European settlers and were rather prevented from interacting with them by the Susquehannocks of southern Lancaster County, Pennsylvania, who dominated the fur trade. The Susquehannocks were exterminated by the Europeans by 1763, and the groups of refugees formed what Custer calls “Refugee Complexes” which are virtually non-existent in Delaware (Custer 1986:315; Kent 1989). By the mid-1700s, native settlement in the Delmarva Peninsula had come to an end.

Historic Context

In general, the history of Delaware is divided into five time periods beginning with the exploration of the area by numerous European nations and concluding with modern urbanization of the state itself. These periods are: Exploration and Frontier Settlement (1630–1730), Intensified and Durable Occupation (1730–1770), Transformation from Colony to State (1770–1830), Industrialization and Capitalization (1830–1880), and Urbanization and Suburbanization (1880–1940). Considering that the property was not patented, and likely not settled by Europeans, until 1734 and that no significant archaeological remains were recovered dating prior to 1730, this historical background will not address the period of Exploration and Frontier Settlement (see Baublitz et al. 2006 for a full treatment of the historical context of the area). The specific history of the project area is integrated into these pre-defined historic periods below.

Intensified and Durable Occupation (1730–1770)

In the eighteenth century, Delaware saw an increase in population as well as commercial expansion. The main settlements were in Wilmington, New Castle, and Lewes. Milling operations prospered in response to the abundance of wheat produced in New Castle County. This led to the establishment of other industries in Wilmington, including shipbuilding, coopering, and import-export trading. Several overland transportation corridors aided the growth of agricultural properties further inland.

The St. Georges Borrow Pit and Port Penn project areas are situated along one of the oldest roads in the state, the King's Highway (the predecessor of U.S. Route 13/DuPont Parkway). Officially laid out in 1762, the King's Highway was placed over top of an earlier pathway, evident in warrants and surveys within the project area in the early 1730s (Scharf 1888:991). The road leading east from U.S. Route 13 to Port Penn is also historic, being extended past the Quaker meeting house at "Hickory Grove" by a petition dated 1785, and clearly labeled on surveys in the project area vicinity from 1818 (Scharf 1888:991). Another historic roadway leads west from U.S. Route 13, previously known as Hyetts Corner Road, but is now a road with no outlet. This truncated roadway was historically connected to Hyetts Corner Road, still visible on the west side of SR 1/Korean War Veterans Memorial Highway, but became a dead end when the highway was constructed. These historic roadways contributed to the settlement and development of the project area in particular, beginning in earnest around the mid- to late-eighteenth century and continuing to the present day.

Most of the state's residents were farmers with 80 to 90 percent reported to be engaged in agriculture (Engal 1975:201). Lands once reserved as forests or marshes were cleared and incorporated into the crop cycle as the need for more land for crops increased. Many large estates and land grant parcels were divided, creating new farm properties centered on supplying the market-driven agricultural economy (Frederick et al. 2006:56). Beginning in the latter-half of the eighteenth century, land in St. Georges Hundred was increasingly developed by tenant farmers who built farmsteads while paying rent to a growing number of absentee landlords (Gundy and Kuncio 2009:40). Wheat was the primary crop, followed by rye, corn, barley, oats, and a variety of vegetables (Main 1973). Livestock supplemented

farmers' income from surplus crops as an increased need for labor was filled by indentured servants and slaves (Frederick et al. 2006:56).

With the exception of the borrow pit, much of the project area has been owned by members of the Vandergrift family at some point between the early-eighteenth and early-twentieth century. The Vandergrifts (also spelled Vandegrift at times) were granted land in the area as early as 1708 when Jacob Vandergrift was awarded 200 acres (80.9 ha) of land in St. Georges Hundred by the Proprietors of Pennsylvania (Warrants & Surveys, V1 #3; Historical Society of Delaware, Vandergrift Family manuscript collection). In the early 1730s, Leonard and Jacob Vandergrift, descendants of Jacob, inherited the land in St. Georges Hundred and requested a survey of the property. The 1738 survey detailed 216 acres (87.4 ha) of land, 13 acres (5.3 ha) of which were deducted for roads, and noted the presence of a single dwelling (Figure 7). Brothers Leonard and Jacob both died in the 1750s, with much of the land in the project area going to Leonard's eldest son, Christopher. According to genealogical files at the Historical Society of Delaware, Christopher was born in 1732, and later married Ruth King (also referred to as Rebecca in some records), the daughter of wealthy farmer Francis King.

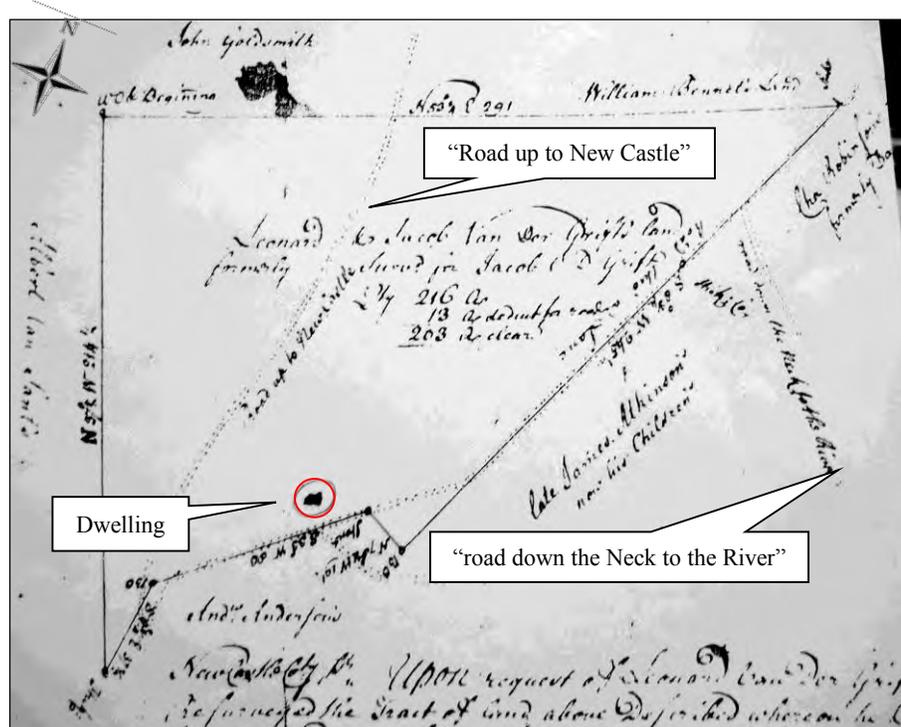


Figure 7: “Leonard and Jacob Vandergrift Land formerly surveyed for Jacob Vandergrift” (N.C. Co. Warrants & Surveys, V2 #46a. Delaware Public Archives).

Early Industrialization (1770–1830)

The American Revolution brought disarray to the region, and social and political unrest in Delaware further heightened an already tense atmosphere. Strong family and political ties to Pennsylvania resulted in support for the Revolutionaries. Only one Revolutionary War battle was fought in Delaware, at Cooch’s Bridge near Scottsborough in 1777, during the campaign that led to the Battle of Brandywine. After the Battle of Brandywine, British troops occupied

Wilmington and threatened the state capital at New Castle. The capital was moved to Dover, and this became Delaware's permanent capital in 1781.

The War of 1812 similarly avoided the state, but its economic impacts were felt in a series of embargoes which negatively affected trade. Depleting soil quality and competition from new lands in the West impacted industry. From 1800 to 1830, agricultural productivity in Delaware decreased markedly and many farmers were forced to sell their land and move to the state's industrial centers to find employment (Frederick et al. 2006:59). To fight decreased soil fertility and improve agriculture, the farmers of New Castle County established the state's first agricultural society in 1804 (Frederick et al. 2006:59). Meanwhile, manufacturing and commerce prospered as the state's population increased. Textiles, paper, snuff, rope, gunpowder, and iron were all produced in New Castle County (Coxe 1814).

The economic depression of 1819, brought on by low prices of wheat and other grains, further decreased the value of agricultural land and crops across the state. During this period, the most successful agrarians became part of central Delaware's rural elite farming class and diversified their interests by purchasing urban properties, investing in banks and manufacturing facilities, and supporting the growth of transportation networks (Siders et al. 1991). Members of this elite class promoted scientific farming and agricultural reform, advocating the enclosure of farmland and use of new machinery, constructing new farm buildings, increasing livestock production, and controlling patterns of land tenancy (Siders et al. 1993:10).

The Chesapeake and Delaware Canal (C&D Canal) was opened to traffic in 1829, connecting the Chesapeake Bay with the Delaware River and providing improved market access for area farmers and industrialists (Frederick et al. 2006:62). Overland transportation routes were constructed and improved at this time to accommodate increased numbers of travelers and facilitate trade.

Much of the project area was owned by the Vandergrift family during the eighteenth and nineteenth centuries. When Christopher Vandergrift died in June of 1816, his will identified four sons: Leonard, Jacob, William, and Christopher, and at least one granddaughter, without mention of a widow (New Castle Co. Probate Records). Prior to his passing, Christopher's land was divided into two plantations: one of which he purchased from John Stockton and rented to his son Jacob, and the other farm where Christopher himself resided, which he inherited from his father, Leonard. In his will, Christopher gave Jacob the plantation he purchased from Stockton, the core of which is now known as "Retirement Farm," and he gave his other son, Christopher, his homestead, which is later referred to as "Biddle's Corner Farm" or "Black Thorn Farm."

The 1816–1817 tax assessment lists Christopher Vandergrift, Jr. with 210 acres (84.9 ha) of land (with one "good" wood dwelling, barn and stables), and Jacob with 243 acres (98.3 ha) of land (50 acres [20.2 ha] in branch and cripple, and containing one "good" wood dwelling, barn and stables). By the time of this assessment, Jacob was about 53 years old and married to Jane McWhorter, daughter of a neighbor and another family within Delaware's "Rural Elite." His brother, Christopher, was married to Jane Ford, and had one son and three

daughters, who were orphaned a short time later when their father died intestate in March of 1818.

The parcel of land located west of U.S. Route 13 and north of Hyetts Corner Road went through a series of owners prior the Vandergrift's acquisition in 1849. James M. Vandegrift purchased the property from another member of Delaware's "Rural Elite," Daniel Corbit. Prior to Corbit's ownership, the dwelling and surrounding land belonged to Samuel Hyatt (also spelled Hyett). The Hyatts may have been long-term area residents, but they did not own this parcel of land for very long as it is noted as belonging to James Stroud in a survey dating from 1814 (New Castle Co. Orphans Court Records). In a division of property for the orphans of Jacob Egberston, the survey details Jane Stroud's two-story house, located immediately across the road from Egbertson's widow (Figure 8, p. 21). The 1810 Census did not list the Strouds as residents of St. Georges Hundred, but it is possible that this two-story structure pre-dated the Stroud's occupation of this land. This portion of the APE contained an identified archaeological site (Stroud Site, 7NC-G-180) and additional archival research was conducted during the Phase II evaluations of this site (report forthcoming).

Industrialization and Capitalization (1830–1880)

In northern Delaware, the Industrial Revolution led to significant advances in transportation, urbanization, and industrialization. In the 1840s, the Pennsylvania, Washington and Baltimore Railroad connected Newport to Wilmington, and a branch line connected New Castle to Delaware Junction. The railroad and the newly constructed C&D Canal allowed farmers and merchants increased opportunities to ship their products to markets in the eastern urban areas and abroad. As eastern urban centers grew and farming techniques improved, agriculture in Delaware expanded to include the production of perishable dairy goods, fruits, and vegetables for these markets. Manufacturing in the state grew as well, with roughly 380 factories reported in Delaware at the start of the Civil War, many specializing in brick-making, milling, and canning (Frederick et al. 2006:65).

As a border state, Delaware was politically divided and not physically impacted by military conflict during the Civil War, but played an important role in the Underground Railroad, with several "stations" located across the state. Following the Emancipation Proclamation in 1863, many African-Americans came to Delaware from the South in search of economic opportunity (Frederick et al. 2006:74). This emigration of labor worked with the expansion of agriculture and industry to create an economic boom following the war. Delaware farmers were at the center of this growth and demonstrated their financial success through substantial improvements to their farm properties. Numerous families in St. Georges Hundred erected new farmsteads with sizable dwellings, barns, and outbuildings (Herman et al. 1985). When Christopher Vandergrift, Jr. died intestate in March of 1818, he left behind a wife and four children. The Vandergrift family farm was divided by the Orphans Court in 1831, but the land remained within the family, primarily in the hands of his eldest daughter, Ann Eliza, and her husband, Eli Biddle, until the late nineteenth-century (New Castle Co. Orphans Court Records; New Castle Co. Deeds) (Figure 9, p. 22).

Previous research suggests that the extant, two-and-a-half-story, frame dwelling at Retirement Farm (N-5201) dates to the late-nineteenth century, and is potentially the third house erected on that site (see NRHP nomination). The “English” barn at Retirement Farm, sometimes referred to as the Christopher Vandergrift barn, has been documented by students at CHAD and is estimated to date between 1790 and 1810 (University of Delaware, CHAD).

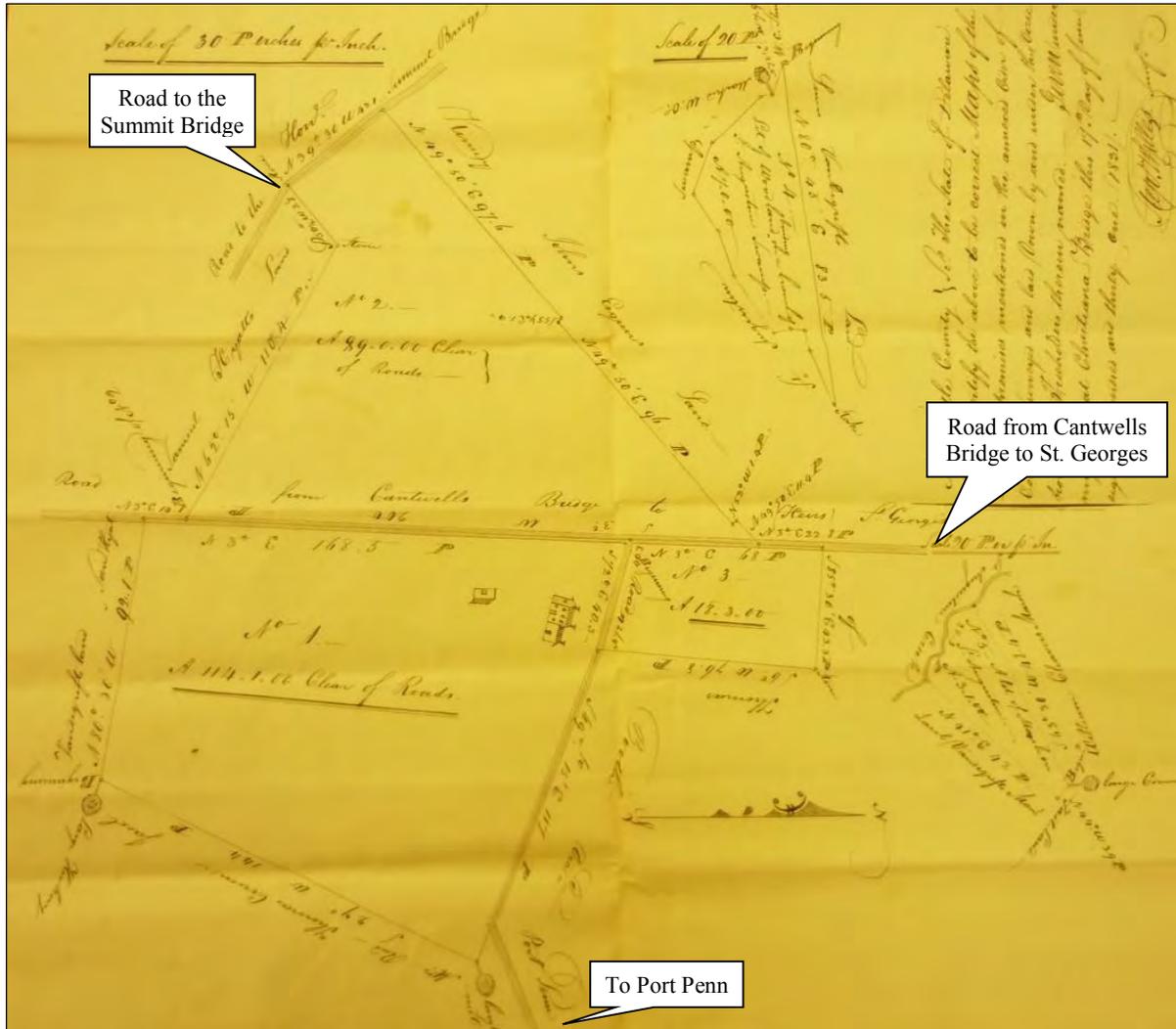


Figure 9: Division of Christopher Vandergrift [Jr.] estate, 1831 (Orphans Court Records, New Castle County).



Figure 10: 1849 Price & Rea Map of Vicinity. Vandergrift “mansion farm” or Retirement Farm in red.

In 1849, James M. Vandegrift purchased additional property within the current project area from another member of Delaware’s “Rural Elite,” Daniel Corbit. Corbit’s farm was situated at the northwest corner of the historic intersection of Hyetts Corner Road and U.S. Route 13 (Figure 11). Maps from the second half of the nineteenth century indicate that this 127-acre (51.4-ha) property contained a dwelling, which is no longer extant according to a map from 1915 (Figure 10–Figure 13, pp. 23–24).

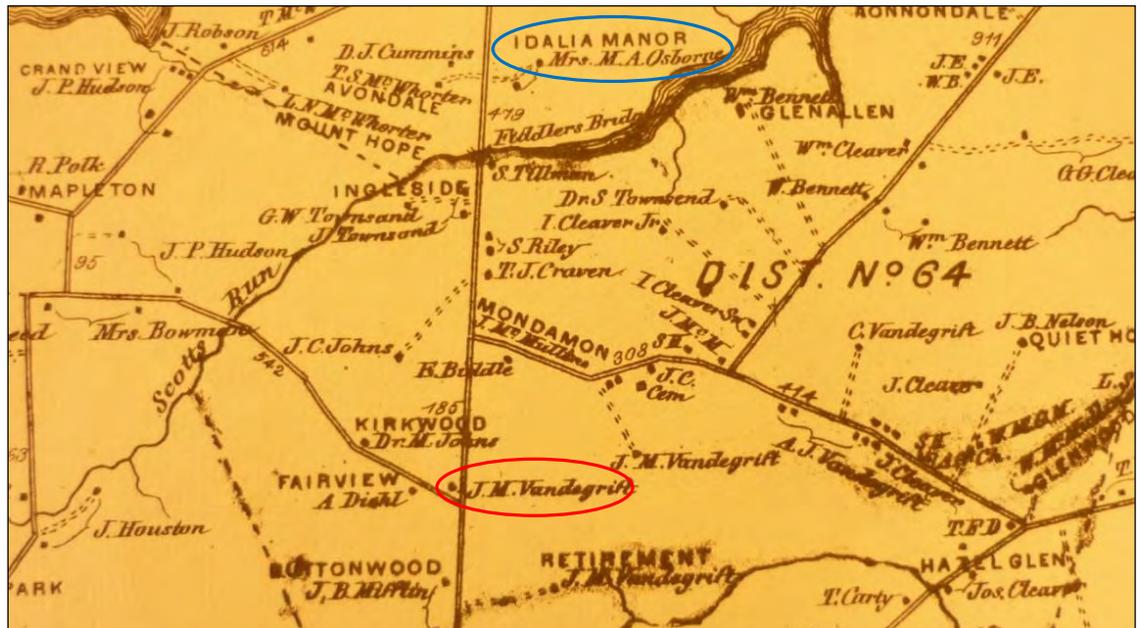


Figure 11: 1868 Pomeroy & Beers Map, St. Georges Hundred Showing New Vandergrift property (red) and Idalia Manor (blue) (Delaware Public Archives).

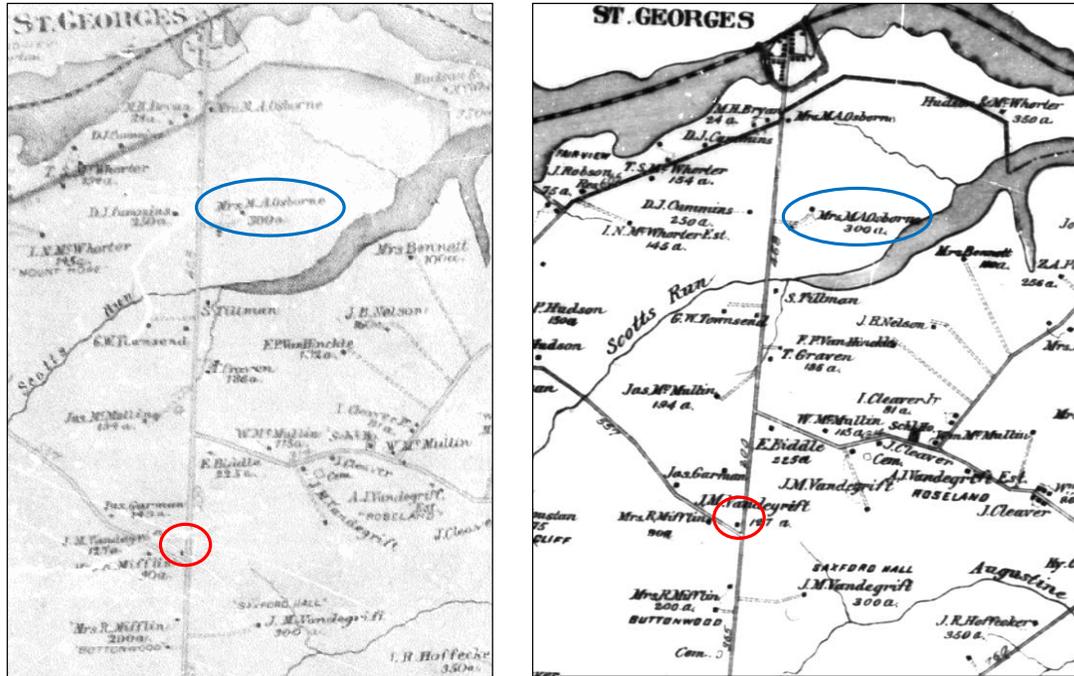


Figure 12: *Left* 1881 Hopkins Map. *Right* 1893 Baist Map (Delaware Public Archives). Vandergrift dwelling in red and Idalia Manor in blue.



Figure 13: 1915 Soil Map of New Castle County (Bureau of Soils 1915). Site of Vandergrift dwelling is in red.

At the north end of the APE, the area set aside as the St. Georges Borrow Pit was purchased by the state and previously used as a staging area during construction of SR 1. This land was historically part of a farm property known as “Idalia Manor,” operated by Mrs. John W. Osborne (Margaret Ann) from the mid-nineteenth century until the early-twentieth century (Figure 11–Figure 12, pp. 23–24) (New Castle Co. Deeds).

Urbanization and Suburbanization (1880–1940)

An increase in Delaware’s population in the late-nineteenth and early-twentieth century led to an urban expansion as immigrants from Eastern and Central Europe settled in Delaware cities and towns. Nearly 70 percent of New Castle County’s population in the early 1900s lived in Wilmington (Kellogg 1990:32). Reflecting a larger trend in population across the country, more people resided in the cities than ever, aided by increased transportation opportunities and the automobile age. Construction of T. Colman DuPont’s concrete highway, known as U.S. Route 13, allowed farmers, merchants, and residents to traverse the state more easily. Constructed in 1923 and open to traffic by 1924, this roadway stretched from Wilmington, at the north end of the state, south to the Delaware-Maryland state line (Frederick et al. 2006:79).

Transportation improvements and the growth of manufacturing during this period encouraged farmers to industrialize as increased mechanization began to fill a growing labor shortage. Agriculture in the state continued to be diverse, though rising urban populations fostered growth in the number of dairy, poultry, and truck farming operations (Frederick et al. 2006:77). Large farms became corporations producing goods specifically for markets in Philadelphia, New York, Baltimore, and other urban areas.

Population expansion in the state’s urban areas continued throughout the period, bringing new concerns to towns regarding sewer service, water supply, and other infrastructure. Urban growth spread out from Wilmington, encroaching on surrounding farmland. By the end of this period, the pattern and density of settlement in Delaware had developed into suburban clusters at the edges of urban communities and in close proximity to highways (Frederick et al. 2006:80). Scattered commercial development grew in response to residents’ increased reliance on the automobile, particularly along well-traveled highways, resulting in the construction of gas stations, motels, diners, and roadside stands across the state.

The decades of urbanization and expansion in Delaware did little to affect the rural nature of the project area since the land remained in large parcels of farmland. However, this period did see changes in the ownership of the property as it was sold, parceled, and sold again. In 1889, James M. Vandegrift sold nearly 22 acres (8.9 ha) of land containing the Stroud’s house to Thomas J. Craven, a distant cousin and the nephew of Eli Biddle, who had recently inherited the neighboring 222-acre (89.8-ha) Biddle’s Corner/ Blackthorn Farm (New Castle Co. Deeds; New Castle Co. Wills). Thomas J. Craven was an industrialist who was born in Pennsylvania, a son of Eli Biddle’s sister-in-law, Rebecca Jane Vandergrift Craven, but spent much of his life on his parents’ “house farm” in St. Georges Hundred (situated at the northeast corner of the Port Penn Road and U.S. Route 13 intersection). After inheriting his uncle Eli’s land, Thomas Craven reorganized his family’s holdings to create three sizable farm properties: the roughly 170-acre (68.8-ha) “House Farm,” the 185-acre (74.9-ha)

“Blackthorn Farm,” and the 136-acre (55-ha) “Diekl Farm.” To create the Diekl Farm, Craven removed 21.5 acres (8.7 ha) from the southern end of Blackthorn Farm, combined it with the 22 acres (8.9 ha) he purchased from James Vandegrift, and attached a 95-acre (38.4-ha) tract purchased from Rachel Mifflin on the opposite side (just south) of Hyetts Corner Road (Figure 14). Since the 95-acre (38.4-ha) tract Craven bought from Mifflin contained a substantial dwelling (N-5244: “Fairlawn” or Adam Diekl house), the two-story tenant house at the northwest corner of U.S. Route 13 and Hyetts Corner Road was likely demolished in the late-nineteenth or early-twentieth century and converted to farmland.

David Stewart Craven, Thomas’s son and a resident of Salem, New Jersey, sold both farms (in separate transactions) to William Lawrence Sartin of Pecander Hundred, months after his father’s passing, in September and November of 1922 (New Castle Co. Deeds).

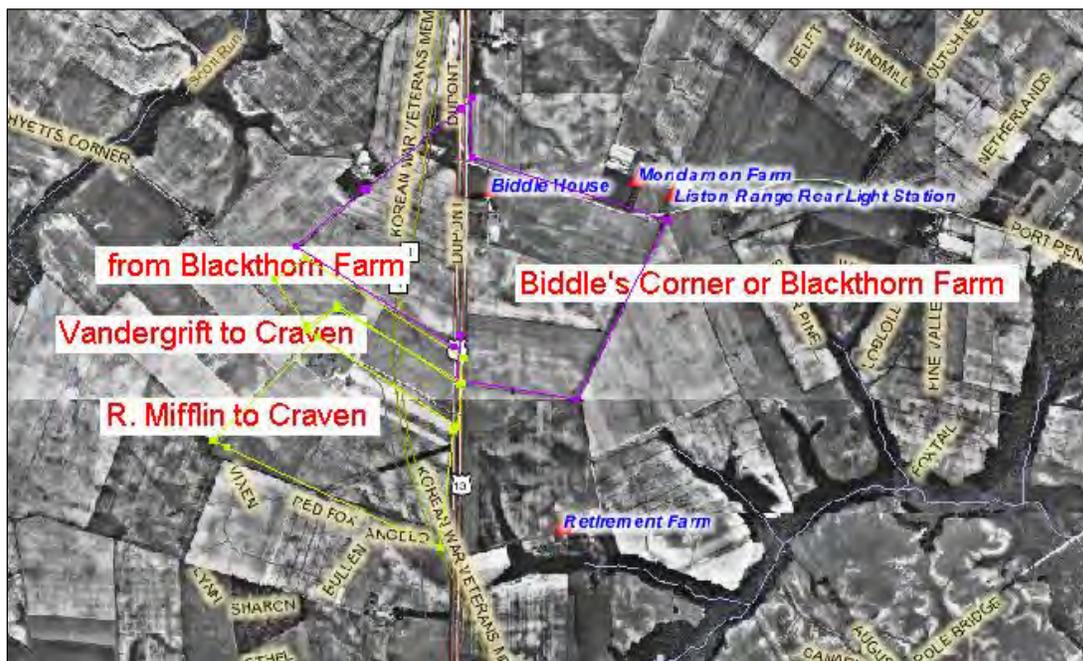


Figure 14: 1937 Aerial Image (CHRIS) with Parcels Comprising Thomas Craven’s Diekl Farm Plotted in Green and Biddle’s Corner or Blackthorn Farm Plotted in Purple (Dovetail 2011).

Recent History (1940–present)

After World War II, suburban and commercial development spread across New Castle County, altering the land use patterns and landscape of the region. This type of growth began in Wilmington and radiated outwards, affecting the towns of Newark and New Castle, and eventually spilling into the county’s countryside. Although production levels increased, the number of people and amount of land involved in the state’s agricultural industry declined. Suburban growth and increasing operational costs encouraged many farmers to sell their land to development companies (Frederick et al. 2006:85).

Planned suburban communities spread as improved roadways and an increase in employment brought more traffic into the state's rural areas. Significant transportation developments include the improvement of existing transportation corridors as well as the construction of Interstate 95 (I-95) and SR 1 providing faster travel routes across the state. During this period the railroads declined, but large manufacturing companies, such as DuPont and Chrysler, built substantial operations in Delaware to service people worldwide.

The past 70 years of history at the project area have been defined by numerous owners and land division and currently, the various parcels are owned by different entities (See Appendix A). William Lawrence Sartin purchased both the Diekl and Biddle's Corner or Blackthorn Farms from David Stewart Craven in 1922. Sartin died intestate in 1941 and both farms passed onto his widow, Sadie Sartin. Ms. Sartin sold much of the land to other farmers in the early 1950s, including the Biddle House (N-3935), the Adam Diekl house (N-5244), and the Stroud house site. The Vandergrift-Biddle House (N-3935) was conveyed to Claude N. Lester in 1955, and is currently owned by one of his sons, Earle Lester (Figure 15). The house is still standing today, but the farm setting has been compromised by mid-twentieth century development (Figure 16, p. 28). As proposed, the Port Penn project will not directly impact the residence, but it will take a minimal strip of land from the property.

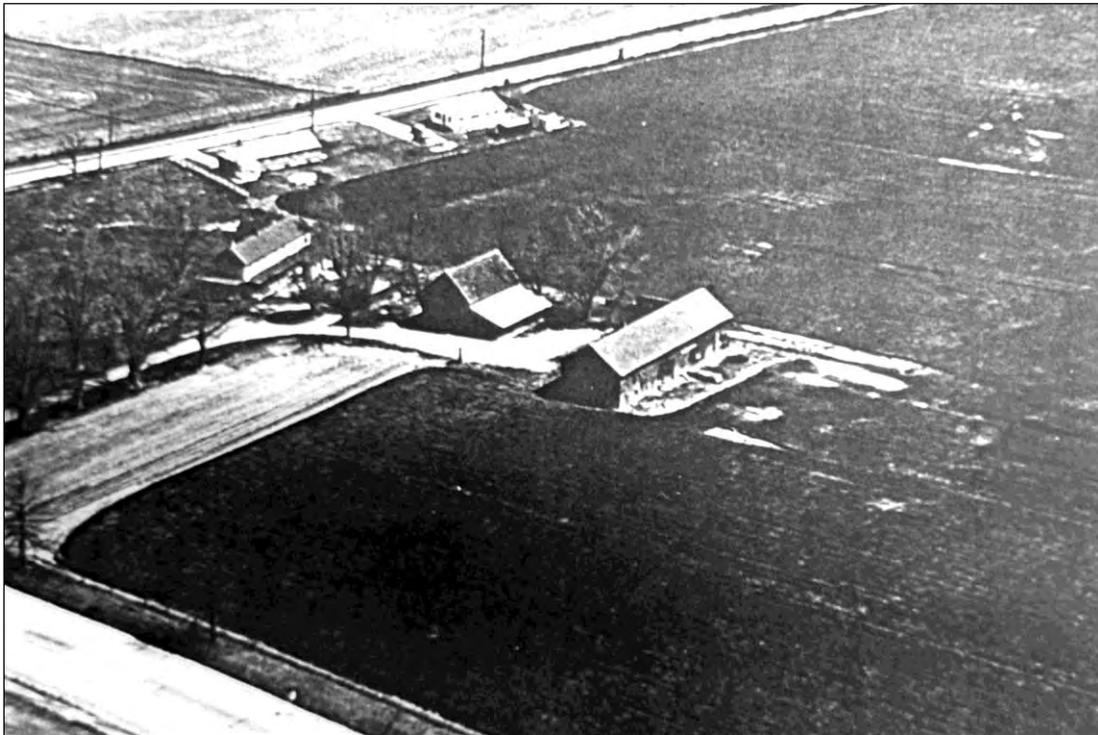


Figure 15: Circa 1956 Photograph of Biddle's Corner/Blackthorn Farm
(Courtesy of Gladys Lester).

Sadie Sartin sold Diekl Farm to Harry Deputy in 1945, who sold the 136-acre (55-ha) property to Frederick Haas in 1949. The Haas family retained possession of the farm until the early 1980s, when they sold much of the land to Van Wingerden Associates, who divided the

property and created a 7,820-foot (2,383.5-m) by 585-foot (178.3-m) parcel, visible at the northwest corner of old Hyetts Corner Road and U.S. Route 13, presently owned by the Artesian Water Company, Inc. (New Castle Co. Deeds).



Figure 16: Image of Biddle House (N-3935) Showing the “ChesDel Restaurant” on the Right, March 2011.

In the early 1960s, Idalia Manor was one of several area farms purchased by the Union Carbide Company and consolidated into a single enterprise. Today, Idalia Manor (N-3947) is an 11.4-acre (4.6-ha), NRHP-listed farmstead consisting of an early-eighteenth century, two-and-a-half-story, stuccoed brick house, that is associated with a braced-frame granary and frame crib barn. The Idalia Manor farmstead is part of a larger 1,102-acre (446-ha) tract owned by Parkway Gravel, Inc., and will not be impacted by the St. Georges Borrow Pit.

Previous Surveys

The area surrounding the intersections of Port Penn Road and Hyetts Corner Road with U.S. Route 13 (also known as Dupont Parkway), and the St. Georges Borrow Pit, contains numerous historic architectural and archaeological resources. Many have been identified through previous investigations during construction of SR 1 (Korean War Veterans Highway) and other improvements to U.S. Route 13. Adjacent to the borrow pit and Port Penn project are three previously recorded historic architectural properties: Idalia Manor (N-3947), Biddle House (N-3935), and Retirement Farm (N-5201). The two farm properties, Idalia Manor and Retirement Farm, are both contributing resources to the NRHP multiple-property listing, “Rebuilding St. Georges Hundred.” The Biddle House was not included in the 1989 nomination, but the resource meets many of the registration requirements and significant criteria outlined in the “Dwellings of the Rural Elite in Central Delaware: 1770–1830s” multiple-property documentation form.

PROJECT RESULTS

The main goal of the Phase I study conducted within the scope of this project, was to identify any archaeological sites that would be eligible for the NRHP within the APE. A brief history of the general project area was developed during the Phase I project to support this goal. The archival research identified a number of historic agricultural properties, some dating as far back as the Vandergrift ownership in the mid-eighteenth century.

The Phase I archaeological survey covered a total of 17.3 acres (7 ha) and covered six different APE segments as part of the larger St. Georges Borrow Pit and U.S. Route 13 and Port Penn Road Intersection Realignment project. With the exception of the St. Georges Borrow Pit, which comprised a grassy field and gravel disturbance and a linear section south of Port Penn Road, the project area was characterized by agricultural fields. Almost the entire project area was subjected to subsurface testing. However, the APE south of Port Penn Road was not tested because it was a paved parking lot. General survey results are presented below based on the location of the APE.

St. Georges Borrow Pit

A Phase I-level survey was conducted across the entire U.S. Route 301 St. Georges Borrow Pit project area. This area was a staging and stockpiling area used during the construction of SR 1 in the late 1990s. It measures approximately 650 feet (198.1 m) by 860 feet (262.1 m), encompassing 11 acres (4.5 ha). It is located directly east of U.S. Route 13 and 0.5 miles (0.8 km) south of the Chesapeake and Delaware Canal and the Town of St. Georges.

Based on pedestrian inspection of the borrow pit area, archaeologists determined that the northwestern portion of the project area, measuring approximately 250 feet (76.2 m) by 325 feet (99 m), had been significantly disturbed. The addition of gravel, and the prolonged parking and maneuvering of heavy equipment, disturbed this portion of the APE (Figure 4, p. 6). The remaining portion of the borrow pit area was found to be minimally disturbed (Figure 17, p. 30). Given the disturbance, a mechanized auger with a 12-inch (30.48-cm) diameter blade was used to systematically test the northwestern portion of the project area (Figure 18, p. 30). A total of 26 auger tests was excavated, and all were negative for cultural materials. In addition to auger tests, a total of 204 shovel tests (including radials) was excavated in the St. Georges Borrow Pit project area (Figure 19, p. 31).



Figure 17: Overview of the St. Georges Borrow Pit APE, Facing Southeast.



Figure 18: View of the Auger Used to Complete Subsurface Testing in the Northwestern Portion of the St. Georges Borrow Pit, Facing West.



Figure 19: Detail of Phase I Archaeological Testing of the St. Georges Borrow Pit.

Auger and shovel tests in this area extended to an average depth of 15 inches (38.1 cm) and a maximum depth of 29 inches (73.7 cm). The average A-horizon depth was 8.7 inches (22.1 cm) with a maximum A-horizon depth of 17 inches (43.2 cm). A typical shovel test profile

for this area consisted of a dark brown (10YR 3/3) silt loam overlying yellowish brown (10YR 5/8) silty clay which sealed strong brown (7.5YR 5/8) sandy clay subsoil (Figure 20).

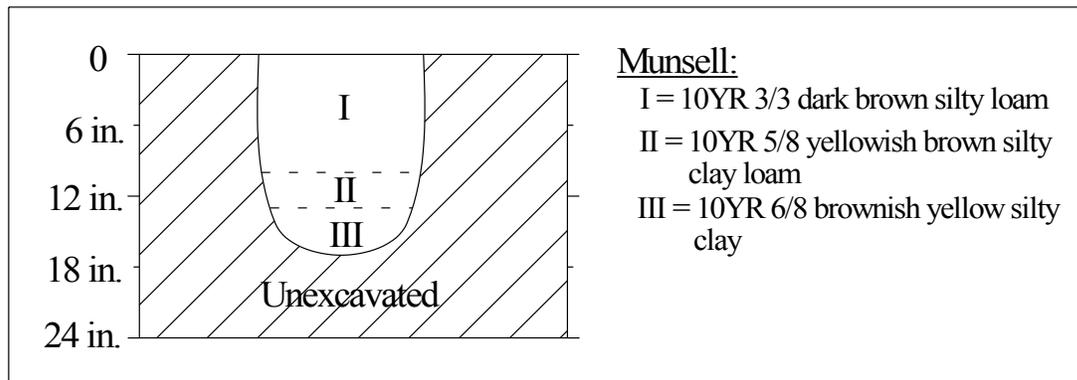


Figure 20: Profile of Shovel Test P15, Typical for the St. Georges Borrow Pit Area.

Phase I testing at the St. Georges Borrow Pit resulted in the recovery of five artifacts from three shovel tests (Figure 19, p. 31). Shovel test L8 yielded three fragments of brown lead-glazed redware (1700–1900), and all radial shovel tests were negative for cultural materials. A single metal spike was recovered from shovel test P17, and all radial shovel tests were negative. Shovel test S14 resulted in the recovery of a single hand-made brick fragment. All radial shovel tests were negative for cultural materials. Based on field consultations with DelDOT and subsequently the DE SHPO, it was determined that these artifacts constituted isolated finds and are not representative of concentrated cultural activity. As such, these finds were not assigned CRS or site numbers. Idalia Manor (N-3947), an 11.4-acre (4.6-ha) and NRHP-listed farmstead, is located south of the current St. Georges Borrow Pit project area. These isolated finds are likely associated with the historic use of this property, which was occupied from the mid-nineteenth century until the early-twentieth century. However, the recovered artifacts are not representative of meaningful or concentrated cultural activity and offer little data potential to further the historical knowledge of this property.

U.S. Route 13 and Port Penn Road Intersection Realignment

The U.S. Route 13 and Port Penn Road intersection realignment (Contract 1D) Phase I project consisted of five distinct project areas. These areas included three linear corridors comprising 3,500 feet (1,067 m) and two storm water management ponds encompassing 2.25 acres (0.9 ha) (Figure 2, p. 4).

The northernmost project areas associated with this intersection realignment are located north and south of Port Penn Road, adjacent to the intersection of U.S. Route 13 (Figure 21, p. 33). The project area south of Port Penn Road measures 300 feet (76.2 m) and is adjacent to the intersection of Port Penn Road and U.S. Route 13. This area was found to be located entirely within a recently paved parking lot associated with an adjacent commercial property (Figure 22, p. 34). As such, no subsurface investigations were conducted in this portion of the APE.



Figure 21: Detail of Phase I Archaeological Testing Along Port Penn Road.



Figure 22: Overview of Linear APE South of Port Penn Road, Facing Northeast.

The linear corridor north of Port Penn Road originates at the above-mentioned intersection and then parallels Port Penn Road for 1,100 feet (335 m) and is less than 50 feet (15.2 m) wide. This segment of the project area consisted of planted and fallow agricultural fields (Figure 23). A total of 25 shovel tests (including associated radials) along one transect was excavated in this portion of the APE. Shovel tests extended to an average depth of 16.2 inches (41.1 cm) and a maximum depth of 20 inches (50.8 cm). The average A-horizon depth was 8.2 inches (20.8 cm) with a maximum A-horizon depth of 14 inches (35.6 cm). A typical shovel test profile for this area consisted of a dark yellowish brown (10YR 4/4) silty loam overlying light grayish brown (10YR 5/4) silty clay which sealed light yellowish brown (10YR 5/6) silty clay subsoil (Figure 24, p. 35).



Figure 23: Overview of the Linear APE North of Port Penn Road, Facing East.

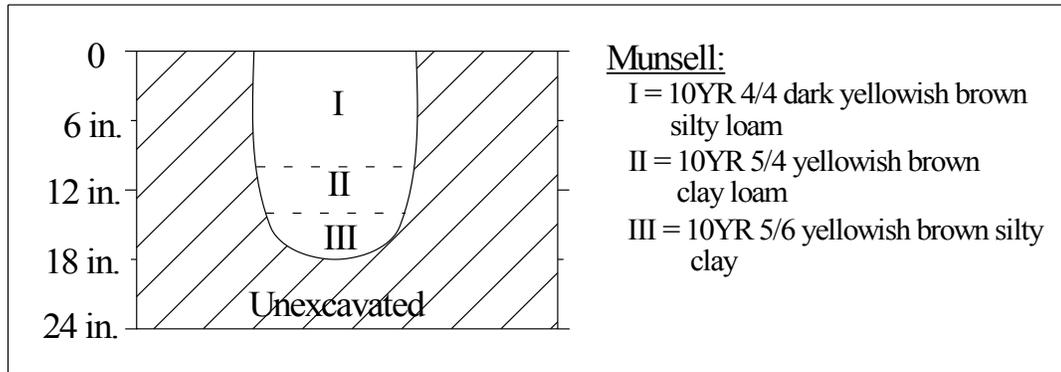


Figure 24: Profile of Shovel Test I16, Typical of APE North of Port Penn Road.

Phase I testing north of Port Penn Road resulted in the recovery of one fragment of aqua bottle glass from shovel test I15 (Figure 21, p. 33). All subsequent radial shovel tests were negative for cultural materials. Based on field consultations with DelDOT and subsequently the DE SHPO, it was determined that this artifact constitutes an isolated find and is not representative of concentrated cultural activity, and, as such, was not assigned a CRS or site number.

The final linear portion of the Port Penn Road APE is located west of, and parallel to, U.S. Route 13 (Figure 26, p. 36). This segment measures 2,100 feet (640 m) long, is less than 50 feet (15.2 m) wide, and is situated in an agricultural field (Figure 27, p. 37). A total of 46 shovel tests (including associated radials) along one transect was excavated in this portion of the APE. Shovel tests in this area extended to an average depth of 16.1 inches (40.9 cm) and a maximum depth of 24 inches (60.9 cm). The average A-horizon depth was 12 inches (30.5 cm) with a maximum A-horizon depth of 20 inches (50.8 cm). A typical shovel test profile for this area consisted of a dark yellowish brown (10YR 4/4) silty loam overlying yellowish brown (10YR 5/6) silty clay subsoil (Figure 25).

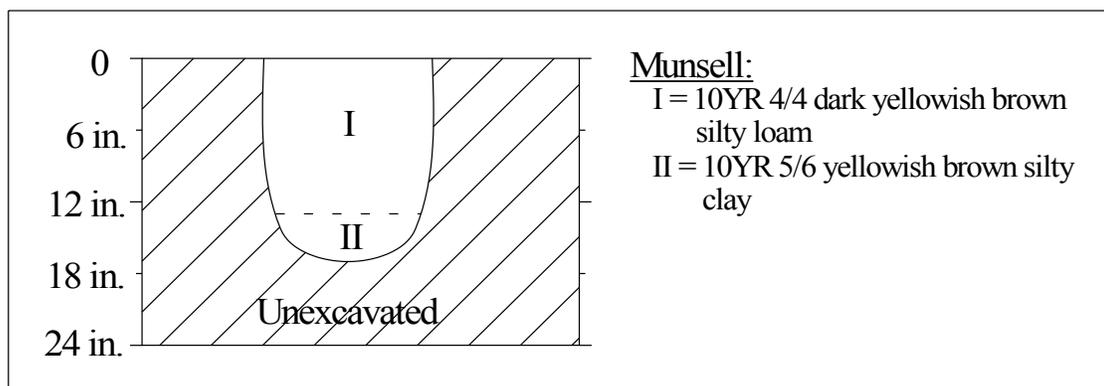


Figure 25: Profile of Shovel Test D24, Typical of APE West of U.S. Route 13.

Subsurface testing west of U.S. Route 13 resulted in the collection of one piece of ironstone (1840–2000) from shovel test D26 (Figure 26, p. 36). All subsequent radial shovel tests were negative for cultural materials. Based on field consultations with DelDOT and subsequently

the DE SHPO, it was determined that this artifact constitutes an isolated find and is not representative of concentrated cultural activity. Thus, it was not assigned a CRS or site number.



Figure 26: Detail of Phase I Archaeological Testing West of U.S. Route 13.



Figure 27: Overview of the Linear APE West of U.S. Route 13, Facing South.

The remaining two segments associated with the Port Penn Road Intersection Realignment project include two storm water management facilities, referred to in this discussion as the northern and southern ponds. The northern pond encompassed 1 acre (0.4 ha) and is located northwest of the intersection of U.S. Route 13 and Hyetts Corner Road (Figure 28, p. 38). This segment of the project area is located within an agricultural field (Figure 29, p. 39). A total of 28 shovel tests (including associated radials) was excavated in this portion of the APE and yielded 24 positive shovel tests and 102 historic artifacts. Dovetail identified this area as an archaeological site, the Stroud Site (7NC-G-180), and completed the necessary site forms to assign a CRS (N-6693) and archaeological site number. Field consultation with DelDOT determined that test units should be concentrated in this area to further explore the nature and extent of the cultural deposits.

Overall, testing at the site resulted in the recovery of 1,195 artifacts from 24 shovel tests and six test units representing a domestic occupation dating to the late-eighteenth through mid-nineteenth century (Figure 30, p. 39). The archival research indicated the presence of a two-story tenant house at the northwest corner of U.S. Route 13 and Hyetts Corner Road, as early as 1814, associated with the Stroud family (see Figure 8, p. 21). Based on these results, it was decided that further work would be required at this site. The full results of the Phase I survey at this site will be presented in a report with the Phase II results (report forthcoming) and as such are not presented within this report. Additionally, the artifacts from this portion of the APE, from the Stroud Site, were not curated with the other isolated finds identified during the course of the current investigation. Instead these Phase I artifacts were curated with the larger Phase II Stroud assemblage.

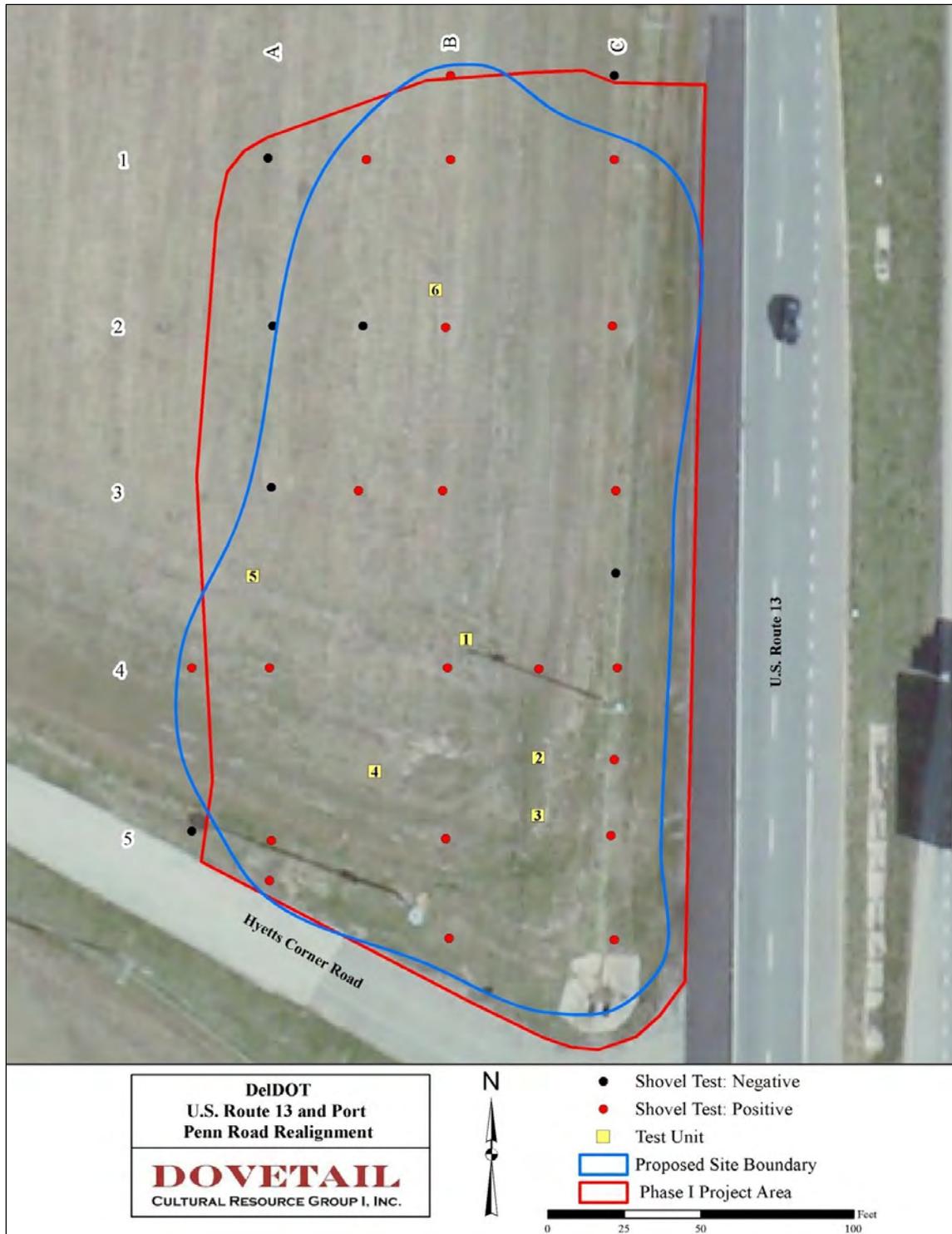


Figure 28: Detail of Phase I Archaeological Testing in the Northern Storm Water Management Pond.



Figure 29: Overview of the Northern Storm Water Management Pond West of U.S. Route 13, Facing North.



Figure 30: Sample of Artifacts Recovered from the Stroud Site. From top left: lead-glazed redware rim, knapped glass, copper-plated sugar spoon handle, painted tin-glazed earthenware, wine bottle glass, pipe stem, cats-eye whiteware, annular ironstone, hand-painted polychrome creamware, and handmade burned brick.

The final portion of the U.S. Route 13 and Port Penn Road intersection realignment APE is the southern storm water management pond, located east of U.S. Route 13. The southern pond encompasses 1.25 acres (0.5 ha), and is located entirely within an agricultural field (Figure 31). A total of 24 shovel tests was excavated in this portion of the APE (Figure 32, p. 41). Shovel tests were excavated along four transects, extending to an average depth of 16.6 inches (42.2 cm) and a maximum depth of 21 inches (53.6 cm). The average A-horizon depth was 12 inches (30.5 cm) with a maximum A-horizon depth of 18 inches (45.7 cm). A typical shovel test profile for this area consisted of a dark yellowish brown (10YR 3/6) silty loam overlying yellowish brown (10YR 5/6) clay subsoil (Figure 33, p. 42). No cultural material was recovered during archaeological investigations in this portion of the APE.



Figure 31: Overview of Southern Storm Water Management Pond East of U.S. Route 13, Facing North.

Discussion and Eligibility Evaluation

Systematic shovel tests were used to identify any archaeological sites within the project's APE. With the exception of the northern storm water management pond, the St. Georges Borrow Pit and Port Penn Road Realignment areas recovered a total of seven artifacts from five shovel tests. The radials for these five shovel tests were all negative and they were designated as isolated find spots associated with dwellings located outside of the project area. No archaeological sites were identified in these areas.

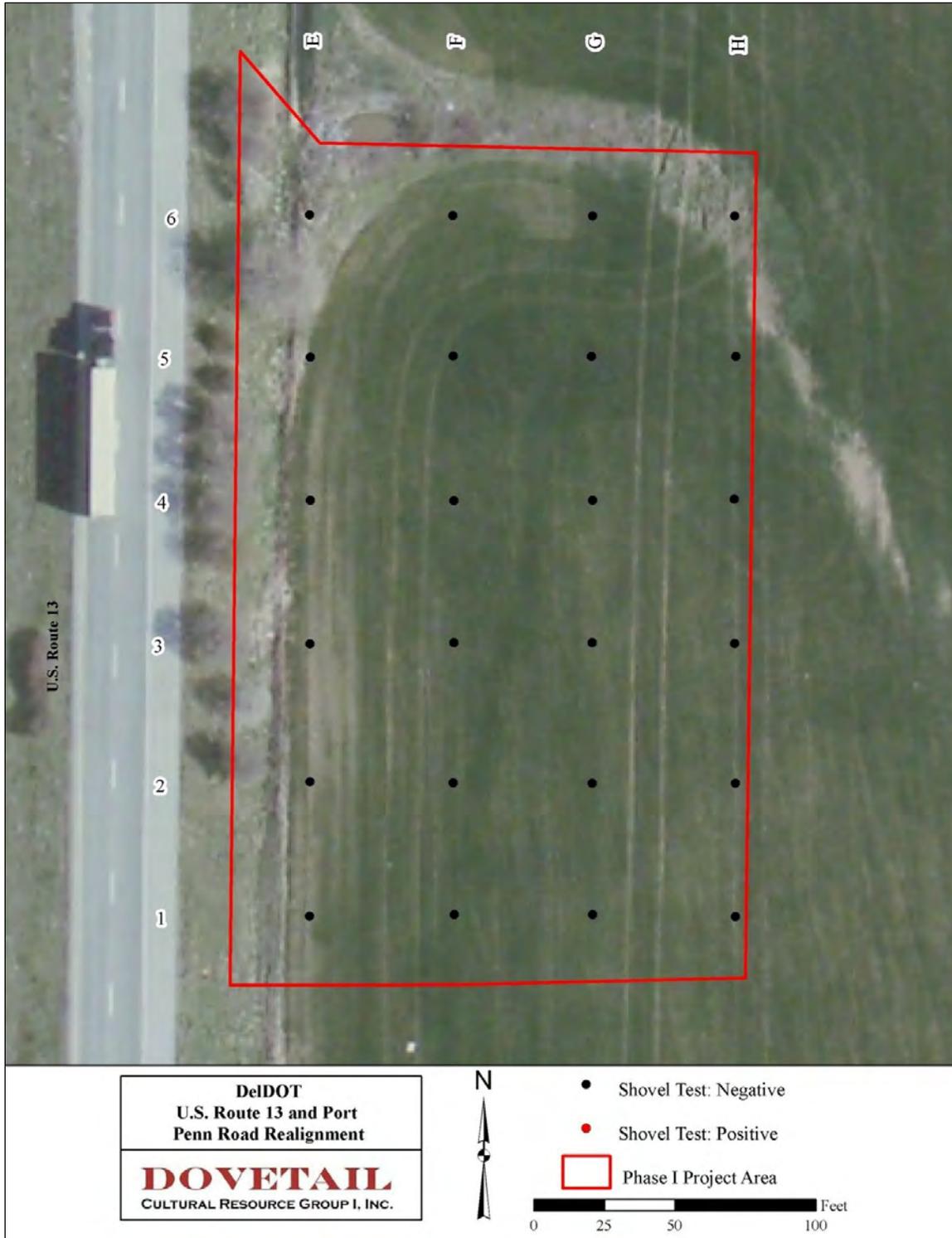


Figure 32: Detail of Phase I Archaeological Testing in the Southern Storm Water Management Pond.

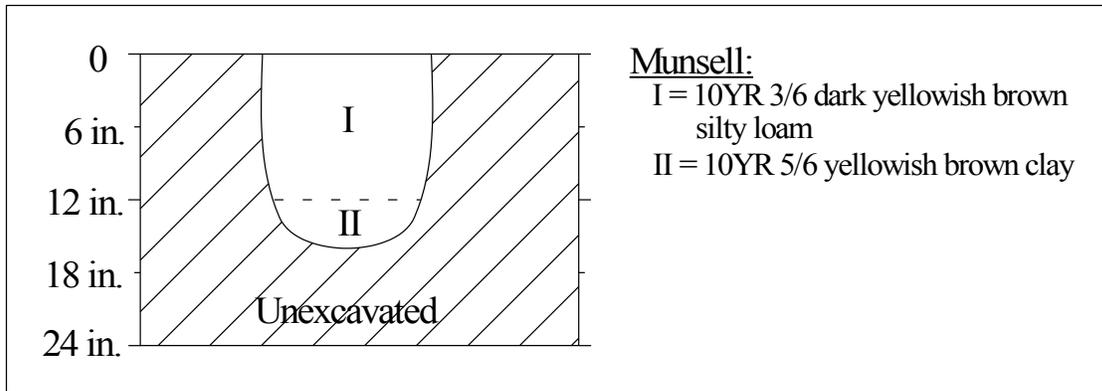


Figure 33: Profile of Shovel Test F4, Typical of Southern Storm Water Management Pond APE.

The only archaeological site that was identified during the Phase I testing was located within the northern storm water management pond APE west of U.S. Route 13. This area produced a total of 102 artifacts in 24 shovel tests and consequently, six test units were excavated in this area to further define the site boundary and integrity. The initial archival research conducted during this project revealed that a two-story structure stood at this location during the nineteenth century and was associated with the Stroud family.

Given the amount of recovered materials, the unique qualities of the assemblage, and the presence of intact cultural deposits below the modern plowzone, the site was determined to exhibit the potential to yield significant information on the domestic life, social context, subsistence/agriculture, and/or settlement patterns in New Castle County during the Transformation from Colony to State (1770–1830) Period (Criterion D). Thus, Dovetail, DelDOT, and the DE SHPO determined that further work would be required in the form of a Phase II survey. The initial results of the Phase I and Phase II work were presented to DelDOT and the DE SHPO in a management summary and the final Phase I results will be presented as part of the Phase II report. Please refer to these documents for a full discussion of the NRHP eligibility of the Stroud Site.

SUMMARY AND RECOMMENDATIONS

Dovetail conducted a Phase I archaeological survey of the U.S. Route 301 St. Georges Borrow Pit and the U.S. Route 13 and Port Penn Road Intersection Realignment (Contract 1D) in New Castle County, Delaware. Archival research, including a review of relevant historical documents (e.g., period maps, property and tax records, census data, genealogical information, etc.), was conducted in support of the archaeological investigations. The purpose of this effort was to identify any archaeological sites on or eligible for the NRHP within the project's APE.

Archival research identified a number of historic agricultural properties, some of which date as far back as the mid-eighteenth century. The project area's location along some of the oldest roads in the state, and amongst some of its richest soils, enabled an early occupation by many members of Central Delaware's "Rural Elite." Wealth continued to influence farm properties in the nineteenth century during the "Rebuilding St. Georges Hundred," and several significant examples of rural residential architecture still stand to visibly reflect this history in the project vicinity today. Although development from the second half of the twentieth century has resulted in loss of surrounding farmland, most notably construction associated with the SR 1, the area continues to retain a predominantly rural character.

The Phase I examination included systematic subsurface testing and resulted in the identification of five isolated find spots and one archaeological site. The isolated finds lacked evidence of concentrated cultural activity, and, as such, were not assigned CRS or site numbers. The one archaeological site, the Stroud Site (7NC-G-180), was investigated via the excavation shovel tests and six test units at the Phase I level. Archival and archaeological evidence defined the site as a domestic occupation during the late-eighteenth through mid-nineteenth century. This site was recommended as potentially eligible for listing on the NRHP under Criterion D and further Phase II work was conducted at the site to more adequately assess the site's eligibility. The complete Phase I results of the site (Stroud Site, 7NC-G-180) will be presented in the Phase II report, forthcoming.

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REFERENCES

Baist, G. William

- 1893 *Atlas of the State of Delaware*. Philadelphia. Copy on file at Delaware Public Archives, Dover, Delaware.

Bartoviks, Albert F.

- 1980 *The Archaeology of Daniels Village: an Experiment in Settlement Archaeology*. Ph.D. Dissertation, Department of Anthropology. Brown University, Providence, Rhode Island.

Baublitz, Richard, John Branigan, John Lawrence, Paul Schopp, Daniel N. Bailey, and David L. Weinberg

- 2006 *Archaeological Predictive Model: U.S. 301 Project Development, St. Georges, Pencader, and Appoquinimink Hundreds, New Castle County, Delaware*. Report submitted to the Delaware Department of Transportation. A.D. Marble & Company, Camp Hill, Pennsylvania.

Bedell, John, Charles H. LeeDecker, John T. Eddins, Ingrid Wuebber, Robert Jacoby, and Earl Proper

- 1997 *Phase I and Phase II Archaeological Studies in the Proposed SR 1 Corridor: Scott Run to Pine Tree Corners New Castle County, Delaware, Volume I*. Louis Berger & Associates, Inc., East Orange, New Jersey.

Bureau of Soils, United States Department of Agriculture

- 1915 New Castle County Soils map. Copy on file at Delaware Public Archives, Dover.

CHRIS, Division of Historical & Cultural Affairs

- 2011 New Castle County aerial photographs (1937, 1954, 1961, 1992, and 1997). Electronic database, <http://chris.delaware.gov/CHRIS/faces/main.html>, accessed February 2011.

Coxe, T.

- 1814 *A Statement of the Arts and Manufactures of the United States for the Year 1810*. A Cornman, Philadelphia, Pennsylvania.

Custer, Jay F.

- 1984 *Delaware Prehistoric Archaeology: An Ecological Approach*. University of Delaware Press, Newark, Delaware.
- 1986 A Management Plan for Delaware's Prehistoric Cultural Resources. *University of Delaware Center for Archaeological Research, Monograph No. 2*. Newark, Delaware.
- 1989 *Prehistoric Cultures of the Delmarva Peninsula: An Archaeological Study*. University of Delaware Press, Newark, Delaware.

Custer, J. F., and David C. Bachman

- 1986 *An Archaeological Planning Survey of Selected Portions of the Proposed Route 13 Corridor, New Castle County, Delaware*. Delaware Department of Transportation Archaeology Series No. 44, Dover, Delaware.

Digital Archaeological Archive of Comparative Slavery [DAACS]

- 2006 DAACS Mean Ceramic Date-Type File. Electronic Document: <http://www.daacs.org/cgi-upload/MCDTypes.pdf>, accessed March 2011.

Dovetail Cultural Resource Group

- 2011 Image of parcels comprising Thomas Craven's "Blackthorn" and "Diekl" Farms, plotted over 1937 Aerial of project area. Electronic document, created March 2011.

Engal, M.

- 1975 The Economic Development of the Thirteen Continental Colonies, 1720–1775. *William and Mary Quarterly* 32(2):191–222

Frederick, B., C. Dluzak, E. Young, L. Archibald, E. Amisson, P. Schopp, D. Bailey, and C. Tate

- 2006 *US 301 Project Development Historic Context and Reconnaissance Survey Report, St. Georges, Pencader, and Appoquinimink Hundreds, New Castle County, Delaware*. July. A.D. Marble & Company, Conshohocken, Pennsylvania.

Greer, Georgianna H.

- 1970 Preliminary Information on the Use of Alkaline Glaze in the South, 1800–1970. *The Conference on Historic Sites Archaeology Papers 1970*, Volume 5, edited by S. South. South Carolina Institute of Archaeology and Anthropology, Columbia.

Gundy, Barbara J., and Gerald M. Kuncio

- 2009 *U.S. 301 Project (Selected Alternative, Green North + Spur Road), Orange Section 4, New Castle County, Delaware*. Report submitted to the Delaware Department of Transportation. Skelly and Loy, Inc., Pittsburgh, Pennsylvania.

Heite, Edward F., and Cara L. Blume

- 2008 *Mitsawokett to Bloomsbury, Archaeology and History of a Native-American Descendant Community in Central Delaware*. Delaware Department of Transportation Archeological Series Number 154, Dover.

Herman, Bernard L, Lauern Archibald, Helen Ross, Trish Bensinger, Bert Jicha, William Macintire, Wade Catts, Paul Cherry, Karie Diethorn, Richard Lush, Richard Dodds, Jane Shimp, Henry Ward, and Anne Witty

- 1985 National Register of Historic Places Inventory Nomination Form: Rebuilding St. Georges Hundred, New Castle County, 1850–1880. Copy on file, Delaware Division of Historical & Cultural Affairs, Dover, Delaware.

Historical Society of Delaware, Family History Folder Collection

2011 Vandegrift Family Manuscript Collection. Historical Society of Delaware Research Library, Wilmington.

Hodny, Jay, David C. Bachman, and Jay F. Custer

1989 *Phase I Archaeological Survey of the Chesapeake and Delaware Canal Section, Odessa Segment, of the US Route 13 Corridor, New Castle County, Delaware*. Delaware Department of Transportation Archaeology Series No. 73, Dover, Delaware.

Hopkins, G. M. and Company

1881 Map of New Castle County, Delaware. Philadelphia. Copy on file at Delaware Public Archives, Dover, Delaware.

Jones, Olive, and Catherine Sullivan

1985 *The Parks Canada Glass Glossary for the Description of Containers, Tableware, Flat Glass, and Closures*. Studies in Archaeology, Architecture and History. National Historic Parks and Sites, Canadian Parks Service, Environment Canada, Ottawa.

Jordan, Robert. R.

1964 *Columbia (Pleistocene) Sediments of Delaware*. Delaware Geological Survey Bulletin No. 12.

Kellogg, Douglas C.

1990 *Guide to Archaeological Site Prediction Using Landsat Satellite Data and Logistic Regression*. Manuscript on file, University of Delaware Center for Archaeological Research, Newark, Delaware.

Kellogg, Douglas C., Robert Varisco, David J. Grettler, and Jay F. Custer

1994 *Phase II Archaeological Discoveries in the Chesapeake and Delaware Canal Section of the State Route 1 Corridor, New Castle County, Delaware*. Delaware Department of Transportation Archeological Series Number 102, Dover.

Kent, Barry C.

1989 *Susquehanna's Indians*. Anthropological Series No. 6, Pennsylvania historical and Museum Commission, Harrisburg, Pennsylvania.

Lester, Gladys

2011 Family Research and Personal Papers of Gladys Lester, local property owner, St Georges Hundred, New Castle County.

Lukezic, Craig

1990 Soils and Settlement Location in 18th Century Colonial Tidewater Virginia. *Historical Archaeology* 24(1):1-17.

Madden, Michael, and Joel Hardison

2002 *An Easy Identification Guide and Typology for Eighteenth, Nineteenth, and Twentieth Century Bottles*. Archaeological Society of Virginia, Special Publication No. 42. Richmond, Virginia.

Main, Jackson T.

1973 *The Social Structure of Revolutionary America*. Princeton University Press, Princeton, New Jersey.

New Castle County Deeds

1790– New Castle County Deed Books. New Castle County Recorder of Deeds Office, present Wilmington, Delaware and Microfilm edition, Delaware Public Archives, Dover.

New Castle County Department of Planning, Historic Preservation Section

1996 *Research Guide: How to Research the History of Your Home in New Castle County, Delaware*. Manuscript on file, University of Delaware Morris Library, Newark.

New Castle County Orphans Court Case Files

1808–1881 New Castle County Orphans Court case files. Delaware Public Archives, Dover, Delaware.

New Castle County Probate Records

1750–1907 New Castle County Probate Records. Microfilm edition, Delaware Public Archives, Dover, Delaware.

New Castle County Tax Assessments

1816–1865 New Castle County Tax Assessments. Microfilm edition, Delaware Public Archives, Dover, Delaware.

New Castle County Warrants and Surveys

1738–1752 New Castle County Warrants and Surveys. Microfilm edition, Delaware Public Archives, Dover, Delaware.

New Castle County Wills

1750–1907 New Castle County Will Books. New Castle County Register of Wills, Wilmington, Delaware and Microfilm edition, Delaware Public Archives, Dover.

Noel-Hume, Ivor

1991 *A Guide to Artifacts of Colonial America*. Reprinted from 1969. Vintage Books, New York.

Pittman, William, Leslie McFaden, and George Miller

1987 *Laboratory Manual of the Office of Archaeological Excavation*. Department of Archaeology, Colonial Williamsburg Foundation, Williamsburg, Virginia.

Pomeroy and Beers

1868 *Atlas of the State of Delaware*. Philadelphia. Copy on file at Delaware Public Archives, Dover.

Price, Jacob, and Samuel Rea

1849 A Map of New Castle County, Delaware from Original Surveys. Smith and Wister, Philadelphia. Copy on file at Delaware Public Archives, Dover.

Potter, Stephen R.

1993 *Commoners, Tribute, and Chiefs: The Development of Algonquian Culture in the Potomac Valley*. University of Virginia Press, Charlottesville, Virginia.

Scharf, John Thomas

1888 *History of Delaware, 1609-1888*. L. J. Richards & Company, Philadelphia.

Siders, R. J., B.L. Herman, D. L. Ames, A. L. Marth, G. H. Lanier, M. H. Watson, E. M. Bellingrath, N. I. Van Olsen, L. D. Bashman, and S. M. Chase

1991 *Agricultural Tenancy in Central Delaware 1770–1990: A Historic Context*. Center for Historic Architecture and Engineering, College of Urban Affairs and Public Policy. University of Delaware, Newark, Delaware.

Siders, Rebecca J., Dean Doerrfeld, Leslie Bashman, Susan M. Chase, and Bernard L. Herman

1993 *A Cultural Resource Survey of the Proposed Route 301 Corridor, New Castle County, Delaware*. University of Delaware Center for Historic Architecture and Engineering, Newark, Delaware.

Soil Survey Staff

2012 Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Electronic document, <http://websoilsurvey.nrcs.usda.gov/>, accessed December 2012.

South, Stanley

1977 *Methods and Theory in Historical Archaeology*. Academic Press, New York.

Turner, E. Randolph

1976 *An Archaeological and Ethnohistorical Study on the Evolution of Rank Societies in the Virginia Coastal Plain*. Ph.D. dissertation, Pennsylvania State University, State College, Pennsylvania.

United States Geological Survey (USGS)

2011 ST. Georges, DE 7.5 Minute Topographic Quadrangle Map. Electronic document, http://store.usgs.gov/b2c_usgs/usgs/maplocator, accessed May 2011.

University of Delaware, Center for Historic Architecture and Design (CHAD)

2011 Documentation and Research on Biddle-Vandergrift House, Retirement Farm, Idalia Manor, and Mondamon Farm. On file at CHAD, Newark.

Ward, H. Trawick

1965 Correlation of Mississippian Sites and Soil Types. *Southeastern Archaeological Conference Bulletin* 3:42–48.

APPENDIX A: CHAIN OF TITLE

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St. George's Borrow Pit

Deed Type	Book	Page	Date	Grantor	Grantee	Acres	Notes
	485 48		12/1/1986	Union Carbide	Parkway Gravel Inc.	1102.35	
DBS	V71	656	9/25/1963	Franklin B. Biggs	Union Carbide Company	303.715	
DBS	U71	550	9/16/1963	Enoch R. & Ethel Needles	Franklin B. Biggs	303.715	Being the same land conveyed by Grace Woodward Baker, widow, and others sold to Needles on May 22, 1952 (K51:128).
DBS	K51	128		Grace Woodward Baker, widow (& Samuel H./Dorothy P. Baker and Richard W./Dorothy G. Baker)	Enoch R. & Ethel Needles	350 +/-	Being same land conveyed to Margaret Thomas Baker by Margaret A. Osborne, a widow, on March 10, 1890 (?) maybe 1870?), who departed this life in 1907 (WB F3 p. 447).
Will				Margaret A. Osborne	Margaret Thomas Baker		

Frightland Parcel

Deed Type	Book	Page	Date	Grantor	Grantee	Acres	Notes
Deed	485	48	12/31/1986	Union Carbide	Parkway Gravel, Inc.	1102.35	In consideration of \$2.1 million...
Deed	Q 73	617	9/10/1964	Joseph Raynor Carrow & Katharine D.	Union Carbide	172.594	Land located on the East side of Rte 13 and South side of Scott's Run, thence with Scott's run to land of McMullen, then with McMullen to Port Penn Road, thence 3 courses to Rte 13, containing 172.594 acres. Subject to easement of Diamond State Telephone Co. Being the same land conveyed to Carrow by Letitia Craven Dillworth and husband John Dale Dilworth on July 10, 1922.
Will			12/15/1923	Estate of Dr. Joseph Carrow	Widow, Louise P. and only son, Joseph Raynor Carrow		Dr. Carrow leaves this land to his widow and their only son. Louise P. Carrow, his widow, dies on January 24, 1954, leaving property to her son, Joseph Raynor Carrow
Deed	M 31	35	7/10/1922	John Dale & Letitia Craven Dillworth of Salem, NJ	Dr. Joseph Carrow	170+/-	In consideration of \$14,000, Dillworth sells the following 3 tracts: first, 78 +/- acres on Port Penn road corner to Eli Biddle and Kings Highway, Second, from a point in Kings Hwy (Rte 13) north to Fiddler's Bridge, and thence along Scotts Run to lands of Cleaver, McMullen, and back to Rte 13 containing 73 +/- acres, and third, parcel at corner of Rte 13 and Port Penn - 18 3/4 acres. Tract No. 3 is original lot No. 3 from Division of Christopher V. estate in 1834.
Will			3/18/1922	Thomas J. Craven	Letitia Craven Dillworth	169 3/4	Item 6. To daughter Letitia, all the tract of land in St Georges hundred known as "the House Farm, comprising three adjoining lots," containing in sum 169 3/4 acres, which Thomas purchased from his brother John V. Craven.

Deed Type	Book	Page	Date	Grantor	Grantee	Acres	Notes
Deed	G 22	492	6/23/1909	John V. & Anna Craven (brother of Thomas J. who lived in West Chester, PA)	Thomas J. Craven	169 3/4	
Will			1887-1888	Eli Biddle estate	Thomas J. Craven	18.75	
Deed	S 4	331	12/4/1834	Divison of Estate of Christopher Vandergrift (II)	Eli & Ann Eliza (nee Vandergrift) Biddle	18.75	Parcel No. 1 (114 acres), 2 (89 acres), and 3 (18 acres) being the farm on which Christopher Vandergrift Sr. resided, which was left to his son Christopher J. Vandergrift and further divided through Orphan's Court proceedings for Christopher J. Vandergrift (II)

Restaurant and Biddle House Parcel

Deed Type	Book	Page	Date	Grantor	Grantee	Acres	Notes
Deed	P111	28	7/31/1980	Earle Lester	Gentleman Farmer's Restaurant (GFR)	3.6/ 13.53	Parcel No. 6 in Minor Subdivision Plan
Deed	H 97	267	6/10/1977	Claude E. Lester et al.	Earle & Mary K. Lester	approx. 160	Parcel No. 1 (5.0067 A), 85.5762 A at SE corner of Port Penn Road and Rte 13, around Sartin land, lot on W side of Rte 13 known as Tract No. 4 and containing 64.4256 acres. Being part of land conveyed to Lester family by Deed of Claude N. and Edith C. Lester Dec. 18, 1964 and same, July 20, 1965.
Deed	F 74	315	12/18/1964	Claude N. & Edith C. Lester	Claude E. Lester et al.	182	
Deed			5/6/1955	Sadie Sartin, widow	Claude N. Lester, widower	182	Property known as "Blackthorn Farm", excepting several parcels...
Deed	C 43	38	11/21/1941	Sadie Sartin, Adminx of Wm. L. Sartin estate	Sadie Sartin, Widow	5 tracts	In consideration of \$1500... The 182 acre farm known as "Black Thorn," and three tracts of property known as "Diekl farm" that were conveyed to William L. Sartin by David Craven and others in September and November of 1922
Deed	A 31	484	9/20/1922	David Stewart Craven	William L. Sartin	185	"Black Thorn" Farm
Deed	K 31	366	9/27/1922	Exec of Thomas J. Craven estate, widow of T. Craven	David Stewart Craven	321 A (4 tracts)	Blackthorn & Diekl Farms
Will			1887-1888	Eli Biddle estate	Thomas J. Craven		The tract of land known as "Biddle's Corner Farm" on which John Vail now resides. Reprinted in

Deed Type	Book	Page	Date	Grantor	Grantee	Acres	Notes
Deed	S 4	331	12/4/1834	Divison of Estate of Christopher Vandergrift (II)	Eli & Ann Eliza (nee Vandergrift) Biddle	222	Parcel No. 1 (114 acres) and 4 (7 acres), but Eli and Ann acquire lots 2 (89 acres) and 3 (18 acres) by 1841. All being the farm on which Christopher Vandergrift Sr. resided, which was left to his son Christopher J. Vandergrift. Divided through Orphan's Court proceedings for Christopher J. Vandergrift (II).
Will			1816	Estate of Christopher Vandergrift (I)	Christopher Vandergrift (II)		Will of Christopher Vandergrift (I) leaves son Jacob with the plantation on which he was residing that Christopher purchased from John Stockton Esq, Sheriff of New Castle County and also, lot of Marsh Meadow on North side of Augustine Cannall with the Stacking ground thereon; To son Christopher, the plantation on which his father had resided.
Will			11/1750	Leonard Vandergrift	Christopher Vandergrift (I)	225	
Resurvey			1738/39	Jacob Vandergrift	Jacob & Leonard Vandergrift	200	
Grant			1708	Proprietors of Pennsylvania	Jacob Vandergrift	200	

Gas Station Parcel

Deed Type	Book	Page	Date	Grantor	Grantee	Acres	Notes
Deed			10/6/2004	Hufcal, Inc.	Ralph Estep (Irrevocable Family Trust)	0.53	\$40,000 for all that lot/parcel of land with gasoline station thereon situated at the southeast corner formed by the intersection of Port Penn Road and DupPont Parkway... restrictions on plantings/fencing southern boundary line. Being Parcel #5 of lands conveyed to Hufcal by Tex-o-cal Inc. (Formerly Calotex DE, Inc.)
Deed	1448	19	10/8/1992	Tex-O-Cal Inc. (formerly Calotex DE)	Hufcal, Inc.	various	Parcel No. 5 contains lot of interest, but other land (gas station sites) conveyed in these deed as well.
Deed	L 80	543	7/1/1967	Adele Leslie Calloway	Calotex DE	various	Ms. Calloway conveys the same lots included in the previous deed, but in this document, the lot of interest is known as parcel #12, it being the same land conveyed to the Calloways by members of the Sartin family in 1958.
Deed	H 62	161	7/22/1958	Ellis P. & Freda Sartin	Clifford & Adele Calloway		all that lot situated at the southeast corner of Port Penn Rd and Route 13, being conveyed to Sartins by the widow Sadie Sartin in two indentures dated 1950 and 1955.
Deed	L 56	166	5/16/1955	Sadie Sartin, Widow	Ellis P. & Freda Sartin		Lot at Southeast corner of Port Penn Road and DuPont highway
Deed	D 50	369	6/5/1950	Sadie Sartin, Widow	Ellis P. & Freda Sartin		Lot at Southeastern corner of Port Penn Road and Dual State Highway...Being part of farm formerly known as "Blackthorn"

Deed Type	Book	Page	Date	Grantor	Grantee	Acres	Notes
Deed	C 43	38	11/21/1941	Sadie Sartin, Adminx of Wm. L. Sartin estate	Sadie Sartin, Widow	5 tracts	In consideration of \$1500... The 182 acre farm known as "Black Thorn," and three tracts of property known as "Diekl farm" that were conveyed to William L. Sartin by David Craven and others in September and November of 1922
Deed	A 31	484	9/20/1922	David Stewart Craven	William L. Sartin	185	"Black Thorn" Farm
Deed	K 31	517	11/29/1922	David Stewart Craven	William L. Sartin	136 +/-	"Diekl" Farm comprised of three tracts (95, 21, and 21 A each)
Deed	K 31	366	9/27/1922	Exec of Thomas J. Craven estate, widow of T. Craven	David Stewart Craven	321 A (4 tracts)	Blackthorn & Diekl Farms
Will	K 31		1887-1888	Eli Biddle estate	Thomas J. Craven		The tract of land known as "Biddle's Corner Farm" on which John Vail now resides. Reprinted in
Deed	S 4	331	12/4/1834	Division of Estate of Christopher Vandergrift (II)	Eli & Ann Eliza (nee Vandergrift) Biddle	222	Parcel No. 1 (114 acres), 2 (89 acres), and 3 (18 acres) being the farm on which Christopher Vandergrift Sr. resided, which was left to his son Christopher J. Vandergrift and further divided through Orphan's Court proceedings for Christopher J. Vandergrift (II)
Will			1816	Estate of Christopher Vandergrift (I)	Christopher Vandergrift (II)		Will of Christopher Vandergrift (I) leaves son Jacob with the plantation on which he was residing that Christopher purchased from John Stockton Esg, Sheriff of New Castle County and also, lot of Marsh Meadow on North side of Augustine Cannall with the Stacking ground thereon; To son Christopher, the plantation on which his father had resided.
Unknown			pre-1754	Jacob Vandergrift	Christopher Vandergrift (I)	112.5	

Deed Type	Book	Page	Date	Grantor	Grantee	Acres	Notes
Will			1750	Leonard Vandergrift	Christopher Vandergrift (I)		
Resurvey			1738/9	Jacob Vandergrift	Jacob & Leonard Vandergrift	200	
Grant			1708/9	Proprietors of Pennsylvania	Jacob Vandergrift	200	

Hyetts Corner Road/North Pond

Deed Type	Book	Page	Date	Grantor	Grantee	Acres	Notes
Deed			4/24/1998	Masters College Seminary	Artesian Water Company, Inc.	10.29	The lot is approximately 7820 x 585 feet in and addressed at 310 Hyetts Corner Rd, Middletown, DE.
			4/22/1998	Van Wingerden Associates	Masters College Seminary	10.29	
Deed	I 121	10	2/1/1983	Haas, Mary Louise, Frederick W, and Frederick Haas & Son, Inc.	Van Wingerden Associates	278	Has obtained property in pieces from Red Lions Farms, Inc. (102 a, 40 a; 1952) and Harry Deputy (3 tracts – 95, 21, and 21 a; 1949) excepting a 12.72 acre tract sold to F. W. & Mary L. Haas and a small parcel sold to William Sartin Jr.
Deed	H 87	164	12/27/1972	Haas, Mary Louise and Frederick W.	Frederick Haas & Son, Inc.	278	Haas convey the aforementioned 5 tracts of land to the company, excepting the same aforementioned. Parcel No. 5 contains the area of interest (21 acres 92.4 rods)
Deed	B 49	114	5/3/1949	Harry G. & Julia S. Deputy	Haas, Mary Louise and Frederick W.	136	3 tracts
Deed	X 44	261	2/21/1945	Sadie Sartin, widow	Harry Deputy	136	3 Tracts of land: first, 94 acres 84 37/100 rods on rod from St Georges to Odessa; second, 21 acres 159 9/10 rods on Road from Hyatts Corner to Mt. Pleasant; third, 21 acres 92 4/10 rods on Road from Hyatts Corner to Mt Pleasant. Tract No. 3 is the area of interest.

Deed Type	Book	Page	Date	Grantor	Grantee	Acres	Notes
Deed	S 44	123	9/9/1944	Paul F. Sartin, Frances Jordan, Earl Sartin, Clara Sarting, Mary Butler, and Ellis P. Sartin	Sadie E. Sartin, widow		All the land on "Blackthorn Farm" (182 +/- acres), and the farm at the intersection of Route 13 and Hyatts Corner Rd (containing 3 parcels: 95, 21, 21), but excepting three parcels sold by Sartin: first, about 7 acres sold to the State of Delaware (P29:357); second, 5.2 acres sold to Blanche Phillips (L33:53); and third, about 1 acre to State of Delaware (K32:378)
Deed	K 31	517	11/29/1922	David Stewart Craven of Salem, NJ	William T. Sartin of Pecander Hundred, New Castle County, DE	136	3 Tracts (95, 21, and 21 acres) comprising Diekl Farm
Deed	K 31	366	9/27/1922	Exec of Thomas J. Craven estate, widow of T. Craven	David Stewart Craven		Blackthorn & Diekl Farms
Deed	U 14	253	3/30/1889	James M. & Angeline C. Vandergrift	Thomas J. Craven	21 +/-	21 acres and 159.9 rods was conveyed to Thomas Craven of Salem, NJ for \$1690... Together with singular dwelling and improvements... Being part of the land conveyed to Vandergrift by David Corbit in October of 1849
Deed	D 6	144	10/27/1849	David Corbit	James M. Vandergrift	150	
Deed	Z 5	467	2/12/1849	George H. Smith	David Corbit	150	
Deed			6/7/1847	William A. Newbold	George H. Smith	105	
Deed	S 5	432	12/2/1846	Samuel Hyatt	William A. Newbold	105	
Deed	D 4	415	4/13/1826	Mary Stroud Hyatt	Samuel Hyatt	22	
Will	D 4	415		Jane Stroud	Mary Stroud Hyatt	22	

Deed Type	Book	Page	Date	Grantor	Grantee	Acres	Notes
Deed	D 4	360	12/21/1813	Samuel Hyatt, Admin of Peter Hyatt, Esq estate	Jane Stroud	22	Conveyed Lots 1 & 2 to Jane Stroud, widow. Lot 1 (est. 22 acres, 7 perches) had several buildings, and sold for \$17/acre while Lot 2 went for \$8/acre. Both lots part of 84 acres tract of Peter Hyatt , Esq (d. 1800) estate.
Agreement	U 2	542	1/5/1787	Thomas Butcher	Peter Hyatt		Conveyed Thomas Butcher's interest in all the land he inherited from John Butcher to P. Hyatt
Deed	T 1	64	1757	John See	John Butcher	112	Land granted to Jacob Vandegrift which Jacob Vandegrift Jr. sold to Leonard Humphries and Humphries onto John See (20 May 1755). Property borders Boltens (sp") Road, John McCool, Albertus vanZant, and Kings Road from St. Georges to Trap.
			5/20/1755	Leonard Humphries	John See	112	
				Jacob Vandegrift (Jr.)	Leonard Humphries	112	
				Jacob Vandegrift	Jacob Vandegrift (Jr.)	112	
Resurvey			1738	Jacob Vandergrift	Jacob & Leonard Vandergrift	200	
Grant			1708/09	Proprietors of Pennsylvania	Jacob Vandegrift	200	

Retirement Farm/South Pond

Deed Type	Book	Page	Date	Grantor	Grantee	Acre	Notes
Deed	1911	196	4/10/1995	Claude & Helen Lester	Lester Family L P	226.85	See Plat Map of June 1977
Deed	H 97	265	6/14/1977	Claude E. Lester et al.	Claude & Helen Lester	235.21	Known as Parcel No. 2, all land & bldgs on the east side of Rte 13 and North of St. Augustine Creek (see plat Mar. 25, 1977). Being part of land conveyed to Lester family by deed of Claude N. and Edith C. Lester 1964, and Claude & Edith 1965.
Deed	K 75	605	1/20/1965	Claude N. & Edith C. Lester	Claude & Helen Lester, Richard and Gladys Lester, and Earle and Mary Lester, all of Red Lion Hnd, as tenants in common	Retirement Farm	
Deed	F 74	315	12/18/1964	Claude N. & Edith C. Lester	Claude & Helen Lester, Richard and Gladys Lester, and Earle and Mary Lester, all of Red Lion Hnd	182	
Deed	C 56	464	3/19/1955	Elizabeth D. Sheppard and Lina D. Cherry (both widows of Little Rock, Arkansas)	Claude N. Lester	Retirement Farm	All that farm known as Retirement...the contents being what they may. Being the same land conveyed to sisters Lina, Cherry, and Hetty by Trustee, Kate C. Woods, in 1931. The said Hetty having died on May 16, 1951 unmarried and with no issue, leaving only her sisters to survive her.
Deed	U 37	323	11/13/1931	Kate C. Woods, Trustee	Elizabeth D. Sheppard, Lina D. Cherry, and Hetty M. Denison, tenants in common		
				Olivia C. Denison			

Deed Type	Book	Page	Date	Grantor	Grantee	Acre	Notes
Will			3/30/1889	James M. Vandergrift	Olivia C. Denison, Margaret P. Mifflin, and Benjamin S. Johnson, in trust for James V. Johnson	Retirement, Elm Grange, & Sackford Hall	
				James B. Henry	James M. Vandergrift		
Deed				Alvan Allen, Esq. (part of Mifflin property)	James M. Vandergrift	52	
Deed	D 6	144	10/27/1849	David Corbit	James M. Vandergrift	21 +/-	
Will			1854	Jacob Vandergrift	James M. Vandergrift		Mansion Farm
Will			1816	Estate of Christopher Vandergrift (I)	Jacob Vandergrift		Will of Christopher Vandergrift (I) leaves son Jacob with the plantation on which he was residing that Christopher purchased from John Stockton Esq, Sheriff of New Castle County and also, lot of Marsh Meadow on North side of Augustine Cannall with the Stacking ground thereon; To son Christopher, the plantation on which his father had resided.
Deed			1790	George Pierce	Jacob Egberston	37 & 133 perches	
Deed			pre-1790	Andrew Anderson (dec'd); John Stockton, Sheriff	Christopher Vandergrift (I)		
Unknown			pre-1754	Jacob Vandergrift	Christopher Vandergrift (I)	112.5	
Will			1750 Nov	Leonard Vandergrift	Christopher Vandergrift (I)	225	
Resurvey			1738/39	Jacob Vandergrift	Jacob & Leonard Vandergrift	200	
Grant			1708	Proprietors of Pennsylvania	Jacob Vandergrift	200	

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APPENDIX B: AUGER AND SHOVEL TEST REGISTER

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STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
A1		I	0	13	10YR 3/6 Dark Yellowish Brown Silty Loam	Level I- Plow zone
A1		II	13	17	10YR 5/6 Yellowish Brown Clay	
A2		I	0	13	10YR 3/6 Dark Yellowish Brown Silty Loam	
A2		II	13	17	10YR 5/6 Yellowish Brown Clay	
A3		I	0	14	10YR 3/6 Dark Yellowish Brown Silty Loam	
A3		II	14	18	10YR 5/6 Yellowish Brown Clay	
A4	West	I	0	15	10YR 3/6 Dark Yellowish Brown Silty Loam	
A4	West	II	15	19	10YR 5/6 Yellowish Brown Clay	
A4		I	0	12	10YR 3/6 Dark Yellowish Brown Silty Loam	
A4		II	12	16	10YR 5/6 Yellowish Brown Clay	
A5	South	I	0	11	10YR 3/6 Dark Yellowish Brown Silty Loam	
A5	South	II	11	14	10YR 5/6 Yellowish Brown Clay	
A5	West	I	0	15	10YR 3/6 Dark Yellowish Brown Silty Loam	
A5	West	II	15	18	10YR 5/6 Yellowish Brown Clay	
A5		I	0	13	10YR 3/6 Dark Yellowish Brown Silty Loam	End of transect
A5		II	13	17	10YR 5/6 Yellowish Brown Clay	
B1	North	I	0	11	10YR 3/6 Dark Yellowish Brown Silty Loam	Level I- Plow zone
B1	North	II	11	15	10YR 5/6 Yellowish Brown Clay	
B1	West	I	0	12	10YR 3/6 Dark Yellowish Brown Silty Loam	
B1	West	II	12	14	10YR 5/6 Yellowish Brown Clay	
B1		I	0	12	10YR 3/6 Dark Yellowish Brown Silty Loam	
B1		II	12	16	10YR 5/6 Yellowish Brown Clay	
B2	West	I	0	15	10YR 3/6 Dark Yellowish Brown Silty Loam	
B2	West	II	15	19	10YR 5/6 Yellowish Brown Clay	
B2		I	0	13	10YR 3/6 Dark Yellowish Brown Silty Loam	
B2		II	13	17	10YR 5/6 Yellowish Brown Clay	
B3	West	I	0	15	10YR 3/6 Dark Yellowish Brown Silty Loam	
B3	West	II	15	19	10YR 5/6 Yellowish Brown Clay	
B3		I	0	13	10YR 3/6 Dark Yellowish Brown Silty Loam	
B3		II	13	18	10YR 5/6 Yellowish Brown Clay	
B4	East	III	18	22	10YR 5/6 Yellowish Brown Silty Clay	
B4	North	I	0	12	10YR 3/4 Dark Yellowish Brown Clay Loam	
B4	North	II	12	17	10YR 5/6 Yellowish Brown Clay	
B4		I	0	16	10YR 3/6 Dark Yellowish Brown Silty Loam	
B4		II	16	20	10YR 5/6 Yellowish Brown Clay	
B4	East	I	0	12	10YR 3/6 Dark Yellowish Brown Silty Loam	
B4	East	II	12	18	10YR 3/4 Dark Yellowish Brown Clay Loam	
B5	South	I	0	10	10YR 3/6 Dark Yellowish Brown Silty Loam	
B5	South	II	10	13	10YR 5/6 Yellowish Brown Clay	
B5		I	0	20	10YR 3/6 Dark Yellowish Brown Silty Loam	Disturbed/ pipeline/ utility fill
B5		II	20	24	10YR 5/6 Yellowish Brown Clay	
B6					!!NO DIG!!	Utility trench, end of transect

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
C1	East				!!NO DIG!!	in road
C1	North	I	0	9	10YR 3/6 Dark Yellowish Brown Silty Loam	
C1	North	II	9	12	10YR 5/6 Yellowish Brown Clay	
C1		I	0	11	10YR 3/4 Dark Yellowish Brown Silty Loam	
C1		II	11	15	7.5YR 4/6 Strong Brown Sandy Clay	
C2		I	0	11	10YR 3/4 Dark Yellowish Brown Silty Loam	
C2		II	11	15	7.5YR 4/6 Strong Brown Sandy Clay	
C3		I	0	13	10YR 3/4 Dark Yellowish Brown Silty Loam	
C3		II	13	17	7.5YR 4/6 Strong Brown Sandy Clay	
C4	East				!!NO DIG!!	in road
C4	North	I	0	13	10YR 3/6 Dark Yellowish Brown Silty Loam	
C4	North	II	13	16	10YR 5/6 Yellowish Brown Clay	
C4	South	I	0	6	10YR 3/4 Dark Yellowish Brown Silty Loam	
C4	South	II	6	20	10YR 5/1 Gray Silty Loam	
C4	South	III	20	24	7.5YR 4/6 Strong Brown Sandy Clay	
C4		I	0	14	10YR 3/4 Dark Yellowish Brown Silty Loam	
C4		II	14	18	7.5YR 4/6 Strong Brown Sandy Clay	
C5	South	I	0	12	10YR 3/4 Dark Yellowish Brown Silty Loam	
C5	South	II	12	19	10YR 5/6 Yellowish Brown Silty Clay	
C5	South	III	19	32	10YR 5/6 Yellowish Brown Silty Clay with Pea Grave	
C5	South	IV	32	36	7.5YR 4/6 Strong Brown Sandy Clay	
C5		I	0	7	10YR 3/4 Dark Yellowish Brown Silty Loam	
C5		II	7	15	10YR 5/6 Yellowish Brown Silty Clay	
C5		III	15	26	10YR 5/6 Yellowish Brown Silty Clay with Pea Gravel	
C5		IV	26	30	7.5YR 4/6 Strong Brown Sandy Clay	
D1		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	
D1		II	10	15	10YR 5/6 Yellowish Brown Silty Sandy Loam	
D1		III	15	19	10YR 5/6 Yellowish Brown Silty Clay Loam	
D10		I	0	11	10YR 4/4 Yellowish Brown Silty Loam	
D10		II	11	15	7.5YR 5/6 Strong Brown Silty Clay	
D11		I	0	10	10YR 4/4 Yellowish Brown Silty Loam	
D11		II	10	14	7.5YR 5/6 Strong Brown Silty Clay	
D12		I	0	12	10YR 4/4 Yellowish Brown Silty Loam	
D12		II	12	16	7.5YR 5/6 Strong Brown Silty Clay	
D13		I	0	13	10YR 4/4 Dark Yellowish Brown Silty Loam	
D13		II	13	17	7.4YR 5/6 Strong Brown Silty Clay	
D14		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
D14		II	12	16	7.5YR 5/6 Strong Brown Silty Clay	
D15		I	0	8	10YR 4/4 Dark Yellowish Brown Silty Loam	
D15		II	8	12	7.5YR 5/6 Strong Brown Silty Clay	
D16		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Loam	
D16		II	9	13	7.5YR 5/6 Strong Brown Silty Clay	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
D17		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	
D17		II	10	14	7.5YR 5/6 Strong Brown Silty Clay	
D18		I	0	16	10YR 4/4 Dark Yellowish Brown Silty Loam	
D18		II	16	20	10YR 5/6 Yellowish Brown Silty Clay	
D19		I	0	15	10YR 4/4 Dark Yellowish Brown Silty Loam	
D19		II	15	19	10YR 5/6 Yellowish Brown Silty Clay	
D2		I	0	6	10YR 4/4 Dark Yellowish Brown with 7.5 6/8 Reddish Yellow Silty Loam	
D2		II	6	12	10YR 3/3 Dark Brown with lots of mix	
D20		I	0	14	10YR 4/4 Dark Yellowish Brown Silty Loam	
D20		II	14	19	10YR 5/6 Yellowish Brown Silty Clay	
D21		I	0	13	10YR 4/4 Dark Yellowish Brown Silty Loam	
D21		II	13	17	10YR 5/6 Yellowish Brown Silty Clay	
D22		I	0	13	10YR 4/4 Dark Yellowish Brown Silty Loam	
D22		II	13	17	10YR 5/6 Yellowish Brown Silty Clay	
D23		I	0	13	10YR 4/4 Dark Yellowish Brown Silty Loam	
D23		II	13	17	10YR 5/6 Yellowish Brown Silty Clay	
D24		I	0	13	10YR 4/4 Dark Yellowish Brown Silty Loam	
D24		II	13	17	10YR 5/6 Yellowish Brown Silty Clay	
D25		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	
D25		II	11	15	10YR 5/6 Yellowish Brown Silty Clay	
D26	North	I	0	13	10YR 4/4 Dark Yellowish Brown Silty Loam	
D26	North	II	13	17	10YR 5/6 Yellowish Brown Silty Clay	
D26	South	I	0	11	10YR 3/6 Dark Yellowish Brown Silty Loam	
D26	South	II	11	14	10YR 5/6 Yellowish Brown Silty Clay	
D26	West	I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	
D26	West	II	11	15	10YR 5/6 Yellowish Brown Silty Clay	
D26		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
D26		II	12	16	10YR 5/6 Yellowish Brown Silty Clay	
D27		I	0	10	10YR 3/6 Dark Yellowish Brown Silty Loam	
D27		II	10	13	10YR 5/6 Yellowish Brown Silty Clay	
D28		I	0	9	10YR 3/6 Dark Yellowish Brown Silty Loam	
D28		II	9	12	10YR 5/6 Yellowish Brown Silty Clay	
D29		I	0	10	10YR 3/6 Dark Yellowish Brown Silty Loam	
D29		II	10	13	10YR 5/6 Yellowish Brown Silty Clay	
D3		III	12	16	710YR 5/6 Yellowish Brown Silty Clay	
D30		I	0	20	10YR 4/4 Dark Yellowish Brown Silty Loam	
D30		II	20	24	10YR 5/6 Yellowish Brown Silty Clay	
D31		I	0	14	10YR 3/6 Dark Yellowish Brown Silty Loam	
D31		II	14	17	10YR 5/6 Yellowish Brown Silty Clay	
D32		I	0	18	10YR 4/4 Dark Yellowish Brown Silty Loam	
D32		II	18	22	10YR 5/6 Yellowish Brown Silty Clay	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
D34		I	0	15	10YR 3/6 Dark Yellowish Brown Silty Loam	
D34		II	15	18	10YR 5/6 Yellowish Brown Silty Clay	
D35		I	0	15	10YR 4/4 Dark Yellowish Brown Silty Loam	
D35		II	15	19	10YR 5/6 Yellowish Brown Silty Clay	
D36		I	0	9	10YR 3/6 Dark Yellowish Brown Silty Loam	
D36		II	9	13	10YR 5/6 Yellowish Brown Silty Clay	
D37		I	0	10	10YR 3/6 Dark Yellowish Brown Silty Loam	
D37		II	10	13	10YR 5/6 Yellowish Brown Silty Clay	
D38		I	0	15	10YR 4/4 Dark Yellowish Brown Silty Loam	
D38		II	15	19	10YR 5/6 Yellowish Brown Silty Clay	
D39		I	0	9	10YR 3/6 Dark Yellowish Brown Silty Loam	
D39		II	9	12	10YR 5/6 Yellowish Brown Silty Clay	
D4		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	
D4		II	11	15	10YR 5/6 Yellowish Brown Silty Clay	
D40		I	0	13	10YR 4/4 Dark Yellowish Brown Silty Loam	
D40		II	13	17	10YR 5/6 Yellowish Brown Silty Clay	
D41		I	0	13	10YR 3/6 Dark Yellowish Brown Silty Loam	
D41		II	13	16	10YR 5/6 Yellowish Brown Silty Clay	
D42		I	0	15	10YR 4/4 Dark Yellowish Brown Silty Loam	
D42		II	15	19	10YR 5/6 Yellowish Brown Silty Clay	
D5		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
D5		II	12	16	10YR 5/6 Yellowish Brown Silty Clay	
D6		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
D6		II	12	16	10YR 5/6 Yellowish Brown Silty Clay	
D7		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	
D7		II	10	14	10YR 5/6 Yellowish Brown Silty Clay	
D8		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	
D8		II	10	15	7.5YR 5/6 Strong Brown Silty Clay	
D9		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	
D9		II	11	15	7.5YR 5/6 Strong Brown Silty Clay	
E1		I	0	12	10YR 3/6 Dark Yellowish Brown Silty Loam	
E1		II	12	15	10YR 5/6 Yellowish Brown Silty Clay	
E2		I	0	14	10YR 3/6 Dark Yellowish Brown Silty Loam	
E2		II	14	18	10YR 5/6 Yellowish Brown Silty Clay	
E3		I	0	18	10YR 3/6 Dark Yellowish Brown Silty Loam	
E3		II	18	21	10YR 5/6 Yellowish Brown Silty Clay	
E4		I	0	17	10YR 3/6 Dark Yellowish Brown Silty Loam	
E4		II	17	21	10YR 5/6 Yellowish Brown Silty Clay	
E5		I	0	18	10YR 3/6 Dark Yellowish Brown Silty Loam	
E5		II	18	21	10YR 5/6 Yellowish Brown Silty Clay	
E6		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Loam mottled with 10YR 5/6 Yellowish Brown Silty Clay	Level I, II, III- overburden from road ditch (adjacent)

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
E6		II	9	18	7.5YR 5/6 Strong Brown Sandy Clay mottled with 10YR 4/4 Dark Yellowish Brown Silty Clay	
E6		III	18	24	10YR 5/8 Yellowish Brown Sandy Clay	
E6		IV	24	32	10YR 3/6 Dark Yellowish Brown Silty Loam	
E6		V	32	35	10YR 5/6 Yellowish Brown Silty Clay	
F1		I	0	10	10YR 3/6 Dark Yellowish Brown Silty Loam	
F1		II	10	14	10YR 5/6 Yellowish Brown Silty Clay	
F2		I	0	11	10YR 3/6 Dark Yellowish Brown Silty Loam	
F2		II	11	14	10YR 5/6 Yellowish Brown Silty Clay	
F3		I	0	11	10YR 3/6 Dark Yellowish Brown Silty Loam	
F3		II	11	15	10YR 5/6 Yellowish Brown Silty Clay	
F4		I	0	12	10YR 3/6 Dark Yellowish Brown Silty Loam	
F4		II	12	16	10YR 5/6 Yellowish Brown Silty Clay	
F5		I	0	12	10YR 3/6 Dark Yellowish Brown Silty Loam	
F5		II	12	16	10YR 5/6 Yellowish Brown Silty Clay	
F6		I	0	12	10YR 3/6 Dark Yellowish Brown Silty Loam	
F6		II	12	17	10YR 6/6 Brownish Yellow Clay Loam	
F6		III	17	20	10YR 5/6 Yellowish Brown Silty Clay	
G1		I	0	9	10YR 3/6 Dark Yellowish Brown Silty Loam	
G1		II	9	12	10YR 5/6 Yellowish Brown Silty Clay	
G2		I	0	9	10YR 3/6 Dark Yellowish Brown Silty Loam	
G2		II	9	12	10YR 5/6 Yellowish Brown Silty Clay	
G3		I	0	10	10YR 3/6 Dark Yellowish Brown Silty Loam	
G3		II	10	13	10YR 5/6 Yellowish Brown Silty Clay	
G4		I	0	10	10YR 3/6 Dark Yellowish Brown Silty Loam	
G4		II	10	14	10YR 5/6 Yellowish Brown Silty Clay	
G5		I	0	12	10YR 3/6 Dark Yellowish Brown Silty Loam	
G5		II	12	15	10YR 5/4 Yellowish Brown Silty Clay	
G6		I	0	15	10YR 3/6 Dark Yellowish Brown Silty Loam	
G6		II	15	19	10YR 5/4 Yellowish Brown Silty Clay	
H1		I	0	11	10YR 3/6 Dark Yellowish Brown Silty Loam	
H1		II	11	14	10YR 5/6 Yellowish Brown Silty Clay	
H2		I	0	10	10YR 3/6 Dark Yellowish Brown Silty Loam	
H2		II	10	14	10YR 5/6 Yellowish Brown Silty Clay	
H3		I	0	10	10YR 3/6 Dark Yellowish Brown Silty Loam	
H3		II	10	13	10YR 5/6 Yellowish Brown Silty Clay	
H4		I	0	11	10YR 3/6 Dark Yellowish Brown Silty Loam	
H4		II	11	15	10YR 5/4 Yellowish Brown Silty Loam	
H4		III	15	18	10YR 4/4 Dark Yellowish Brown Silty Clay	
H5		I	0	18	10YR 3/6 Dark Yellowish Brown Silty Loam	
H5		II	18	21	10YR 5/4 Yellowish Brown Silty Clay	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
H6		I	0	7	10YR 3/6 Dark Yellowish Brown Silty Loam	Rock Impasse- Edge of gravel filled drainage ditch
I10		I	0	9	10YR 5/4 Yellowish Brown Silty Loam	
I10		II	9	14	10YR 6/8 Brownish Yellow Silty Loam	
I10		III	14	19	10YR 6/2 Light Grayish Brown Silty Clay	
I11		I	0	3	10YR 3/4 Dark Yellowish Brown Silty Loam	
I11		II	3	14	10YR Dark Yellowish Brown Silt	
I11		III	14	18	10YR 5/6 Yellowish Brown Silty Clay	
I12					!!NO DIG!!	Northeast in gravel driveway
I13		I	0	9	10YR 5/4 Yellowish Brown Silty Loam mottled with 10YR 7/3 Very Pale Brown Clay	
I13		II	9	14	10YR 6/2 Light Grayish Brown Silty Clay	
I14		I	0	9	10YR 4/6 Dark Yellowish Brown Silty Loam	
I14		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
I15	East	I	0	10	10YR 5/4 Yellowish Brown Silty Loam	
I15	East	II	10	14	10YR 6/2 Light Grayish Brown Silty Clay	
I15	North	I	0	8	10YR 5/4 Yellowish Brown Silty Loam	
I15	North	II	8	12	10YR 6/2 Light Grayish Brown Silty Clay	
I15	South				!!NO DIG!!	In Port Penn Road
I15	West	I	0	5	10YR 5/4 Yellowish Brown Silty Loam mottled with 10YR 7/3 Very Pale Brown Clay and 10YR 6/2 Light Brownish Gray Silty Clay	Level I- overburden
I15	West	II	5	12	10YR 5/4 Yellowish Brown Silty Loam	
I15	West	III	12	16	10YR 6/2 Light Grayish Brown Silty Clay	
I15		I	0	5	10YR 5/4 Yellowish Brown Silty Loam mottled with 10YR 7/3 Very Pale Brown Clay and 10YR 6/2 Light Brownish Gray Silty Clay	Level I- overburden from road/ drainage ditch
I15		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	
I15		II	5	13	10YR 5/4 Yellowish Brown Silty Loam	
I15		II	10	16	10YR 5/4 Yellowish Brown Clay Loam	
I15		III	13	17	10YR 6/2 Light Grayish Brown Silty Clay	
I15		III	16	20	10YR 5/6 Yellowish Brown Sandy Loam	
I16		I	0	4	10YR 5/8 Yellowish Brown mottle with 10YR 4/6 Dark Yellowish Brown Silty Clay Loam	
I16		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	End of Transect, BOT
I16		II	4	12	10YR 4/6 Dark Yellowish Brown Silt	
I16		II	10	15	10YR 5/4 Yellowish Brown Clay Loam	
I16		III	12	16	10YR 5/8 Yellowish Brown Silty Clay	
I16		III	15	18	10YR 5/6 Yellowish Brown Silty Clay	
I17		I	0	10	10YR 4/6 Dark Yellowish Brown Silty Loam	
I17		II	10	14	10YR 5/8 Yellowish Brown Silty Clay	
I18		I	0	5	10YR 5/8 Yellowish Brown mottled with 10YR 4/6 Dark Yellowish Brown Silty Clay Loam	First Shovel Test Pit in winter wheat
I18		II	5	11	10YR 4/6 Dark Yellowish Brown Silty Loam	
I18		III	11	16	10YR 5/8 Yellowish Brown Silty Clay	
I19		I	0	12	10YR 4/6 Dark Yellowish Brown Silty Loam	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
I19		II	12	17	10YR 5/8 Yellowish Brown Silty Clay	
I2		I	0	12	10YR 5/4 Yellowish Brown Silty Loam	
I2		II	12	16	10YR 6/2 Light Grayish Brown Silty Clay	
I20		I	0	5	10YR 5/8 Yellowish Brown mottled with 10YR 4/6 Dark Yellowish Brown Silty Clay Loam	
I20		II	5	14	10YR 4/6 Dark Yellowish Brown Silty Loam	
I20		III	14	18	10YR 5/8 Yellowish Brown Silty Clay	
I21		I	0	11	10YR 5/4 Yellowish Brown Silty Loam	
I21		II	11	15	10YR 6/2 Light Grayish Brown Silty Clay	
I22		I	0	14	10YR 4/6 Dark Yellowish Brown Silty Loam	End of transect
I22		II	14	18	10YR 5/8 Yellowish Brown Silty Clay	
I3		I	0	7	10YR 3/4 Dark Yellowish Brown Silty Loam	
I3		II	7	9	7.5YR 4/6 Strong Brown Silty Sand	
I3		III	9	16	10YR 4/6 Dark Yellowish Brown Silt	
I3		IV	16	20	10YR 6/4 Light Yellowish Brown Silty Clay	
I4					!!NO DIG!!	Northeast in Road
I5					!!NO DIG!!	Northeast in Road
I6		I	0	9	10YR 5/4 Yellowish Brown Silty Loam	
I6		II	9	14	10YR 6/8 Brownish Yellow Sandy Loam with gravel	
I6		III	14	18	10YR 6/2 Light Grayish Brown Silty Clay	
I7		I	0	6	10YR 3/4 Dark Yellowish Brown Silty Loam	
I7		II	6	10	7.5YR 4/6 Strong Brown Silty Sand	
I7		III	10	13	10YR 4/6 Dark Yellowish Brown Silt	
I7		IV	13	17	10YR 6/4 Light Yellowish Brown Silty Clay	
I8		I	0	8	10YR 5/4 Yellowish Brown Silty Loam	
I8		II	8	12	10YR 6/2 Light Grayish Brown Silty Clay	
I9		I	0	7	10YR 3/4 Dark Yellowish Brown Silty Loam mottled with debris	
I9		II	7	14	10YR 5/6 Yellowish Brown Silty Clay	
J1		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	End of Transect
J1		II	12	16	10YR 5/6 Yellowish Brown Silty Clay	
J10		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
J10		II	12	15	10YR 5/6 Yellowish Brown Silty Clay	
J11		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
J11		II	12	16	10YR 5/6 Yellowish Brown Silty Clay	
J12		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	
J12		II	11	15	10YR 5/6 Yellowish Brown Silty Clay	
J13		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	
J13		II	11	15	10YR 5/6 Yellowish Brown Silty Clay	
J14		I	0	14	10YR 4/4 Dark Yellowish Brown Silty Loam	End of Transect
J14		II	14	16	10YR 5/6 Yellowish Brown Silty Clay	
J14					!!NO DIG!!	In driveway
J15		I	0	17	10YR 4/4 Dark Yellowish Brown Silty Loam	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
J15		II	17	20	10YR 5/4 Yellowish Brown Silty Clay	
J16		I	0	17	10YR 4/4 Dark Yellowish Brown Silty Loam	
J16		II	17	20	10YR 5/4 Yellowish Brown Silty Clay	
J17		I	0	15	10YR 4/4 Dark Yellowish Brown Silty Loam	
J17		II	15	18	10YR 5/4 Yellowish Brown Silty Clay	
J18		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	modern trash discarded
J18		II	11	14	10YR 5/6 Yellowish Brown Silty Clay	
J2		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	
J2		II	11	14	10YR 5/6 Yellowish Brown Silty Clay	
J3					!!NO DIG!!	In gravel driveway
J3 Auger		I	0	3	Large Gravel Surface Layer	
J3 Auger		II	3	6	10YR 4/3 Brown Silt with Gravel	
J3 Auger		III	6	13	10YR 4/4 Dark Yellowish Brown Very Compact Silt Cap	
J3 Auger		IV	13	18	10YR 5/6 Yellowish Brown Silty Clay	
J4					!!NO DIG!!	In gravel driveway
J4 Auger		I	0	3	Large Gravel Surface Layer	
J4 Auger		II	3	10	10YR 4/2 Dark Grayish Crushed Gravel and Sand	
J4 Auger		III	10	16	10YR 4/4 Dark Yellowish Brown Very Compact Silt Cap	
J4 Auger		IV	16	18	10YR 5/6 Yellowish Brown Silty Clay Subsoil	
J5		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	Approximately 40 feet South of gravel drive entrance
J5		II	11	14	10YR 5/6 Yellowish Brown Silty Clay	
J6		I	0	13	10YR 4/4 Dark Yellowish Brown Silty Loam	
J6		II	13	16	10YR 5/6 Yellowish Brown Silty Clay	
J7		I	0	13	10YR 4/4 Dark Yellowish Brown Silty Loam	
J7		II	13	16	10YR 5/6 Yellowish Brown Silty Clay	
J8		I	0	13	10YR 4/4 Dark Yellowish Brown Silty Loam	
J8		II	13	16	10YR 5/6 Yellowish Brown Silty Clay	
J9		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	
J9		II	11	14	10YR 5/6 Yellowish Brown Silty Clay	
K1		I			Gravel	
K1 Auger		I	0	2	Gravel Surface Layer	Ends on impenetrable asphalt
K1 Auger		II	2	6	10YR 4/3 Brown Silt Topsoil with Gravel	
K1 Auger		III	6	11	10YR 4/4 Dark Yellowish Brown Compact Silt Cap	
K10		I	0	4	10YR 4/4 Dark Yellowish Brown Silty Loam	
K10		II	4	11	10YR 5/4 Yellowish Brown Silty Loam	
K10		III	11	14	10YR 5/6 Yellowish Brown Silty Clay	
K11		I	0	3	10YR 4/4 Dark Yellowish Brown Silty Loam	
K11		II	3	7	2.5Y 5/2 Grayish Brown Silty Sand with Gravel (Grave Road)	
K11		III	7	15	10YR 5/6 Yellowish Brown Silty Clay	
K12		I	0	10	10YR 4/4 Dark Brown Silty Loam	
K12		II	10	13	10YR 6/4 Light Yellowish Brown Compact Silt	
K12		III	13	16	10YR 5/4 Yellowish Brown Silty Clay- Compact	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
K13		I	0	10	10YR 4/4 Dark Brown Silty Loam	
K13		II	10	14	10YR 5/6 Yellowish Brown Silty Clay	
K14		I	0	9	2.5Y 5/3 Light Olive Brown Sand with Gravel (Gravel Fill)	Geotextile fabric layer at base of gravel fill
K14		II	9	12	10YR 5/6 Yellowish Brown Silty Clay	
K15		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
K15		II	12	16	10YR 5/6 Yellowish Brown Silty Clay	
K16		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
K16		II	12	16	10YR 5/6 Yellowish Brown Silty Clay	
K17		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	
K17		II	11	14	10YR 5/6 Yellowish Brown Silty Clay	
K18		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	End of Transect
K18		II	11	13	10YR 5/6 Yellowish Brown Silty Clay	
K2		I	0	8	N/A	At 8 inches encountered a buried compact gravel layer that we could not penetrate. Will try further excavation with auger.
K2 Auger		I	0	3	10YR 4/4 Dark Yellowish Brown Silty Loam	After Level II- asphalt, impenetrable
K2 Auger		II	3	9	10YR 5/4 Yellowish Brown mottled with 10YR 5/8 Yellowish Brown Silty Clay	
K3					!!NO DIG!!	In gravel area
K3 Auger		I	0	6	Gravel Layer	Compact, impenetrable by auger
K3 Auger		II	6	8	10YR 5/6 Yellowish Brown mottled with 10YR 4/4 Dark Brown Silty Clay	
K3 Auger		III	8	10	10YR 5/4 Yellowish Brown mottled with 10YR 5/8 Yellowish Brown Silty Clay	
K4					!!NO DIG!!	In gravel area
K4 Auger		I	0	8	Gravel Layer	
K4 Auger		II	8	12	10YR 4/4 Dark Yellowish Brown mottled with 10YR 5/6 Yellowish Brown Silty Clay Fill	
K4 Auger		III	12	14	10YR 4/2 Dark Grayish Brown Silt Overburden	
K4 Auger		V	21	24	10YR 5/6 Yellowish Brown Silty Clay Subsoil	
K4 Auger		VI	14	21	10YR 5/4 Yellowish Brown Compact Silt	
K5					!!NO DIG!!	In gravel area
K5 Auger		I	0	5	Large Gravel Layer	
K5 Auger		II	5	6	10YR 6/4 Light Yellowish Brown Silty Clay Fill	
K5 Auger		III	6	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
K5 Auger		VI	12	15	10YR 6/4 Light Yellowish Brown Silty Clay Subsoil	
K6		I	0	7	10YR 4/4 Dark Yellowish Brown Silty Loam	At edge of gravel
K6		II	7	13	10YR 5/4 Yellowish Brown Silty Clay	
K6		III	13	19	10YR 5/6 Yellowish Brown Silty Clay	
K7		I	0	8	10YR 4/4 Dark Yellowish Brown Silty Loam	
K7		II	8	11	10YR 5/6 Yellowish Brown Silty Clay	
K8		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Loam	
K8		II	9	12	10YR 5/4 Yellowish Brown Silty Clay	
K8		III	12	16	10YR 5/6 Yellowish Brown Silty Clay	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
K9		I	0	4	10YR 4/4 Dark Yellowish Brown Silty Loam	
K9		II	4	10	10YR 5/4 Yellowish Brown Silty Loam	
K9		III	10	14	10YR 5/6 Yellowish Brown Silty Clay	
L1		I	0	8	10YR 4/4 Dark Yellowish Brown Silty Loam with Gravel	Could not penetrate- will return with auger
L1		II	8	10	2.5YR 2/2 Very Dusky Red Gravel	
L10		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Loam	
L10		I	0	5	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
L10		II	9	15	10YR 5/4 Yellowish Brown Silty Loam	
L10		II	5	11	10YR 5/4 Yellowish Brown Silty Clay	
L10		III	15	18	10YR 6/4 Light Yellowish Brown Silty Clay	
L10		III	11	15	10YR 6/8 Brownish Yellow Silty Clay	
L11		I	0	4	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
L11		II	4	11	10YR 5/4 Yellowish Brown Silty Clay	
L11		III	11	15	10YR 6/8 Brownish Yellow Silty Clay	
L12		I	0	5	10YR 5/6 Yellowish Brown Silty Clay Loam	
L12		II	5	10	10YR 7/2 Light Gray with Heavy Small Gravel	
L12		III	10	14	10YR 6/8 Brownish Yellow Silty Clay	
L13		I	0	4	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	at unused gravel entrance from highway
L13		II	4	6	10YR 7/2 Light Gray with Heavy Small Gravel	
L13		III	6	10	10YR 6/8 Brownish Yellow Silty Clay	
L14		I	0	4	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
L14		II	4	10	10YR 4/4 Dark Yellowish Brown mottled with 10YR 6/8 Brownish Yellow Silty Clay	
L14		III	10	14	10YR 6/8 Brownish Yellow Silty Clay	
L15		I	0	13	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
L15		II	13	17	10YR 6/8 Brownish Yellow Silty Clay	
L16		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	
L16		II	11	15	10YR 6/8 Brownish Yellow Silty Clay	
L17		I	0	12	10YR 4/4 Dark Yellowish Brown Silty loam	
L17		II	12	16	10YR 6/8 Brownish Yellow Silty Clay	
L18	East	I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	
L18	East	II	10	14	10YR 6/8 Brownish Yellow Silty Clay	
L18	North	I	0	9	10YR 4/4 Dark Yellowish Brown Silty Loam	
L18	North	II	9	14	10YR 6/8 Brownish Yellow Silty Clay	
L18	South	I	0	11	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
L18	South	II	11	14	10YR 6/8 Brownish Yellow Silty Clay	
L18	West	I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	
L18	West	II	10	14	10YR 6/8 Brownish Yellow Silty Clay	
L18		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
L18		II	9	14	10YR 6/8 Brownish Yellow Silty Clay	
L2 Auger		I	0	5	10YR 4/4 Dark Yellowish Brown Silty Clay Loam with Pea Gravel	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
L2 Auger		II	5	10	10YR 5/4 Yellowish Brown mottled with 10YR 5/8 Yellowish Brown Silty Clay	
L2 Auger		III	10	12	10YR 7/2 Light Gray with Heavy Small Gravel	
L2 Auger		IV	12	21	10YR 5/8 Yellowish Brown Silty Clay	
L3 Auger		I	0	3	10YR 5/4 Yellowish Brown Silty Loam with Heavy Gravel	After Level II- impenetrable by auger
L3 Auger		II	3	5	10YR 5/6 Yellowish Brown Silty Clay	
L4 Auger		I	0	20	10YR 5/4 Yellowish Brown mottled with 10YR 7/4 Very Pale Brown Silty Clay Loam	
L4 Auger		II	20	23	10YR 5/6 Yellowish Brown Silty Clay with some asphalt	
L4 Auger		III	23	29	10YR 6/4 Light Yellowish Brown Silty Clay	
L5 Auger		I	0	6	10YR 5/4 Yellowish Brown Silty Loam with Heavy Gravel	
L5 Auger		II	6	8	10YR 5/6 Yellowish Brown Silty Clay	
L5 Auger		III	8	11	Grey Gravel Fill	
L5 Auger		VI	11	14	10YR 6/4 Light Yellowish Brown Silty Clay	
L6		I	0	7	10YR 4/4 Dark Yellowish Brown Silty Loam	
L6		II	7	11	10YR 5/6 Yellowish Brown Silty Clay	
L7		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	
L7		II	10	12	10YR 5/6 Yellowish Brown Silty Clay	
L8		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Loam	
L8		II	9	12	10YR 5/6 Yellowish Brown Silty Clay	
L9		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
L9		II	12	15	10YR 5/6 Yellowish Brown Silty Clay	
M1		I	0	5	10YR 3/4 Dark Yellowish Brown Silty Clay Loam	
M1		II	5	9	10YR 3/4 Dark Yellowish Brown mottled with 10YR 5/6 Yellowish Brown Silty Clay Loam	
M1		III	9	12	10YR 7/2 Light Gray with Heavy Small Gravel	
M1		IV	12	16	10YR 5/6 Yellowish Brown Silty Clay	
M10		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
M10		II	12	16	10YR 6/8 Brownish Yellow Silty Clay	
M11		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
M11		II	12	16	10YR 6/8 Brownish Yellow Silty Clay	
M12		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
M12		II	12	16	10YR 6/8 Brownish Yellow Silty Clay	
M13		I	0	7	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
M13		II	7	13	10YR 6/8 Brownish Yellow Silty Clay	
M14		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
M14		II	9	14	10YR 6/4 Light Yellowish Brown mottled with 10YR 5/8 Yellowish Brown Silty Clay	
M15		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
M15		II	11	15	10YR 6/8 Brownish Yellow Silty Clay	
M16		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
M16		II	9	14	10YR 6/8 Brownish Yellow Silty Clay	
M17		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
M17		II	11	16	10YR 6/8 Brownish Yellow Silty Clay	
M18		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
M18		II	12	16	10YR 6/8 Brownish Yellow Silty Clay	
M2		I	0	13	10YR 6/4 Light Yellowish Brown mottled with 10YR 5/8 Yellowish Brown Silty Clay Loam	
M2		II	13	17	10YR 5/6 Yellowish Brown Silty Clay	
M3 Auger		I	0	4	Gravel	
M3 Auger		II	4	6	10YR 5/4 Yellowish Brown Silty Clay Loam	
M3 Auger		III	6	9	10YR 4/3 Brown Silty Loam	
M3 Auger		IV	9	14	10YR 4/4 Dark Brown mottled with 10YR 5/8 Yellowish Brown Silty Clay	
M3 Auger		V	14	17	10YR 5/8 Yellowish Brown Silty Clay	
M4 Auger		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Clay Loam with Gravel	
M4 Auger		II	10	16	10YR 4/4 Dark Yellowish Brown mottled with 10YR 5/8 Silty Clay	
M4 Auger		III	16	22	10YR 5/8 Yellowish Brown Silty Clay	
M5 Auger		I	0	5	Gravel	
M5 Auger		II	5	6	10YR 5/6 Yellowish Brown Silty Clay	
M5 Auger		III	6	10	10YR 5/4 Yellowish Brown Silty Clay (Compact), 10YR 5/6 Yellowish Brown Silty Clay (Impenetrable)	
M6		I	0	2	10YR 3/4 Dark Yellowish Brown Silty Clay Loam	
M6		II	2	6	10YR 6/4 Light Yellowish Brown mottled with 10YR 5/8 Yellowish Brown Silty Clay	
M6		III	6	12	10YR 5/6 Yellowish Brown Silty Clay	
M7		I	0	4	10YR 3/4 Dark Yellowish Brown Silty Clay Loam	
M7		II	4	8	10YR 6/4 Light Yellowish Brown mottled with 10YR 5/8 Yellowish Brown Silty Clay	
M7		III	8	12	10YR 6/3 Pale Brown Silty Clay	
M8		I	0	3	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
M8		II	3	6	10YR 5/6 Yellowish Brown Silty Clay	
M8		III	6	12	10YR 6/4 Light Yellowish Brown mottled with 10YR 6/8 Brownish Yellow Silty Clay	
M9		I	0	4	10YR 5/6 Yellowish Brown Silty Clay	
M9		II	4	8	10YR 2/2 Very Dark Brown Silt (Fill)	
M9		III	8	13	10YR 6/2 Light Grayish Brown Silty Clay	
N10		I	0	10	10YR 4/6 Dark Yellowish Brown Silty Clay Loam	
N10		II	10	15	10YR 5/8 Yellowish Brown Silty Clay	
N11		I	0	9	10YR 4/4 Dark Brown Silty Clay Loam with Asphalt	
N11		II	9	14	10YR 6/8 Brownish Yellow Silty Clay	
N12		I	0	5	10YR 4/4 Dark Yellowish Brown	
N12		II	5	11	10YR 2/2 Very Dark Brown mottled with 10YR 4/4 Dark Yellowish Brown Silty Clay Loam with Heavy Asphalt	
N12		III	11	16	10YR 6/8 Brownish Yellow Silty Clay	
N13		I	0	6	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
N13		II	6	12	10YR 4/4 Dark Yellowish Brown mottled with 10YR 6/8 Brownish Yellow Silty Clay Loam	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
N13		III	12	16	10YR 6/8 Brownish Yellow Silty Clay	
N14		I	0	4	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
N14		II	4	12	10YR 4/4 Dark Yellowish Brown mottled with 10YR 6/8 Brownish Yellow Silty Clay Loam	
N14		III	12	16	10YR 6/8 Brownish Yellow Silty Clay	
N15		I	0	4	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
N15		II	4	10	10YR 4/4 Dark Yellowish Brown mottled with 10YR 6/8 Brownish Yellow Silty Clay Loam	
N15		III	10	14	10YR 6/8 Brownish Yellow Silty Clay	
N16		I	0	3	10YR 3/3 Dark Brown Silty Loam	
N16		II	3	9	10YR 4/4 Dark Yellowish Brown mottled with 10YR 6/8 Brownish Yellow Silty Clay Loam	
N16		III	9	11	10YR 6/4 Light Yellowish Brown Silty Clay	
N16		IV	11	15	10YR 6/8 Brownish Yellow Silty Clay	
N17		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
N17		II	9	14	10YR 6/8 Brownish Yellow Silty Clay	
N18		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	End of Transect
N18		II	12	16	10YR 6/8 Brownish Yellow Silty Clay	
N2 Auger		I	0	6	10YR 4/3 Brown Loam Topsoil	
N2 Auger		II	6	10	10YR 4/4 Dark Yellowish Brown Very Compact Silt Fill	
N2 Auger		III	10	12	Gravel Layer	
N2 Auger		IV	12	17	10YR 6/6 Brownish Yellow Very Compact Silt	
N2 Auger		V	17	25	10YR 5/6 Yellowish Brown Silty Clay Subsoil	
N3 Auger		I	0	9	10YR 4/4 Dark Yellowish Brown Very Compact Silt Fill	
N3 Auger		II	9	10	Gravel Layer	
N3 Auger		III	10	14	10YR 6/6 Brownish Yellow Very Compact Silt	
N3 Auger		IV	14	24	10YR 5/6 Yellowish Brown Silty Clay Subsoil	
N4 Auger		I	0	7	10YR 4/4 Dark Yellowish Brown Compact Silt	
N4 Auger		II	7	13	7.5YR 5/6 Strong Brown mottled with 10YR 4/6 Dark Yellowish Brown Silty Sand	
N4 Auger		III	13	15	7.5YR 5/8 Strong Brown Sandy Clay Subsoil	
N5 Auger		I	0	3	Gravel Layer	Levels II and III- distributed fill
N5 Auger		II	3	7	10YR 6/6 Brownish Yellow Compact Silt	
N5 Auger		III	7	13	10YR 4/6 Dark Yellowish Brown Compact Silt	
N5 Auger		IV	13	14	10YR 5/6 Yellowish Brown Compact Silty Clay Subsoil	
N6		I	0	2	10YR 5/4 Yellowish Brown Silty Clay Loam	
N6		II	2	4	10YR 4/3 Brown Silty Loam with Heavy Gravel	
N6		III	4	12	10YR 6/4 Light Yellowish Brown Silty Clay	
N6		IV	12	16	10YR 5/8 Yellowish Brown Silty Clay	
N7		I	0	10	10YR 4/6 Dark Yellowish Brown Silty Clay Loam	
N7		II	10	15	10YR 5/8 Yellowish Brown Silty Clay	
N8		I	0	11	10YR 4/6 Dark Yellowish Brown Silty Clay Loam	
N8		II	11	15	10YR 5/8 Dark Yellowish Brown Silty Clay	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
N9		I	0	10	10YR 4/6 Dark Yellowish Brown Silty Clay Loam	
N9		II	10	14	10YR 5/8 Yellowish Brown Silty Clay	
O1		I	0	13	10YR 3/4 Dark Yellowish Brown mottled with 10YR 5/6 Yellowish Brown Silty Clay Loam	
O1		II	13	17	10YR 5/6 Yellowish Brown Silty Clay	
O10		I	0	9	10YR 3/3 Dark Brown Silty Loam	
O10		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
O11		I	0	11	10YR 3/3 Dark Brown Silty Loam	
O11		II	11	15	10YR 5/8 Yellowish Brown Silty Clay	
O12		I	0	8	10YR 3/3 Dark Brown Silty Loam	
O12		II	8	?	Asphalt	
O13		I	0	9	10YR 3/3 Dark Brown Silty Loam	
O13		II	9	11	10YR 5/8 Yellowish Brown Silty Clay Loam	
O13		III	11	15	10YR 6/6 Brownish Yellow Silty Clay	
O14		I	0	4	10YR 3/3 Dark Brown Silty Loam	
O14		II	4	9	10YR 5/8 Yellowish Brown Silty Clay Loam	
O14		III	9	13	10YR 6/6 Brownish Yellow Silty Clay	
O15		I	0	10	10YR 3/3 Dark Brown Silty Loam	
O15		II	10	14	10YR 6/6 Brownish Yellow Silty Clay	
O16		I	0	11	10YR 3/3 Dark Brown Silty Loam	
O16		II	11	15	10YR 6/6 Brownish Yellow Silty Clay	
O17		I	0	10	10YR 3/3 Dark Brown Silty Loam	
O17		II	10	14	10YR 6/6 Brownish Yellow Silty Clay	
O18		I	0	10	10YR 3/3 Dark Brown Silty Loam	
O18		II	10	14	10YR 6/6 Brownish Yellow Silty Clay	
O2 Auger		I	0	4	10YR 4/4 Dark Yellowish Brown Silt	
O2 Auger		II	4	8	10YR 5/4 Yellowish Brown Clay Loam	
O2 Auger		III	8	16	10YR 5/6 Yellowish Brown Silty Clay	
O3 Auger		I	0	2	Compact Gravel Surface Layer	
O3 Auger		II	2	10	10YR 4/4 Dark Yellowish Brown Very Compact Silt	
O3 Auger		III	10	15	10YR 4/3 Brown Silt with Large Gravel (around 50%)	
O3 Auger		IV	15	19	7.5YR 5/6 Strong Brown Sandy Clay Subsoil	
O4 Auger		I	0	5	10YR 4/4 Dark Yellowish Brown Silty Loam Topsoil	
O4 Auger		II	5	12	10YR 4/3 Brown Compact Silt mottled with 10YR 5/4 Yellowish Brown Silty Clay Fill with Gravel	
O4 Auger		III	12	19	10YR 5/6 Yellowish Brown Silty Clay Subsoil	
O5 Auger		I	0	4	10YR 4/4 Dark Yellowish Brown Silty Loam Topsoil	
O5 Auger		II	4	11	10YR 5/6 Yellowish Brown Silty Clay (Clay Cap/ Overburden)	
O5 Auger		III	11	17	10YR 4/6 Dark Yellowish Brown Sandy Clay	
O5 Auger		IV	17	22	7.5YR 5/6 Strong Brown Sandy Clay Subsoil	
O6		I	0	2	10YR 5/4 Yellowish Brown Silty Clay Loam	
O6		II	2	5	10YR 4/3 Brown Silty Loam with Heavy Gravel	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
O6		III	5	9	10YR 6/4 Light Yellowish Brown Silty Clay	
O6		IV	9	13	10YR 5/8 Yellowish Brown Silty Clay	
O7		I	0	7	10YR 3/3 Dark Brown Silty Loam	
O7		II	7	11	10YR 5/8 Yellowish Brown Silty Clay Loam	
O7		III	11	15	10YR 6/8 Brownish Yellow Silty Clay	
O8		I	0	10	10YR 3/3 Dark Brown Silty Loam	
O8		II	10	14	10YR 5/8 Yellowish Brown Silty Clay	
O9		I	0	9	10YR 3/3 Dark Brown Silty Loam	
O9		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
P1		I	0	13	10YR 3/3 Dark Brown Silty Clay Loam	
P1		II	13	18	10YR 4/6 Dark Yellowish Brown Silty Clay	
P10		I	0	4	10YR 3/3 Dark Brown Silty Loam	
P10		II	4	9	10YR 5/3 Brown Silty Clay Loam	
P10		III	9	13	10YR 6/8 Brownish Yellow Silty Clay	
P11		I	0	8	10YR 3/3 Dark Brown Silty Loam	
P11		II	8	12	10YR 5/8 Yellowish Brown Silty Clay	
P12		I	0	9	10YR 4/3 Brown Silty Loam	
P12		II	9	11	10YR 5/6 Yellowish Brown Silty Clay Loam	
P12		III	11	15	10YR 6/8 Brownish Yellow Silty Loam	
P13		I	0	9	10YR 3/3 Dark Brown Silty Loam	
P13		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
P14		I	0	11	10YR 3/3 Dark Brown Silty Loam	
P14		II	11	15	10YR 5/8 Yellowish Brown Silty Clay	
P15		I	0	10	10YR 3/3 Dark Brown Silty Loam	
P15		II	10	13	10YR 5/8 Yellowish Brown Silty Clay Loam	
P15		III	13	17	10YR 6/8 Brownish Yellow Silty Clay	
P16		I	0	9	10YR 3/3 Dark Brown Silty Loam	
P16		II	9	11	10YR 5/8 Yellowish Brown Silty Clay Loam	
P16		III	11	15	10YR 6/8 Brownish Yellow Silty Clay	
P17	East	I	0	10	10YR 3/3 Dark Brown Silty Loam	
P17	East	II	10	14	10YR 6/6 Brownish Yellow Silty Clay	
P17	North	I	0	8	10YR 3/3 Dark Brown Silty Loam	
P17	North	II	8	12	10YR 6/6 Brownish Yellow Silty Clay	
P17	South	I	0	9	10YR 3/3 Dark Brown Silty Loam	
P17	South	II	9	13	10YR 6/6 Brownish Yellow Silty Clay	
P17	West	I	0	9	10YR 3/3 Dark Brown Silty Loam	
P17	West	II	9	13	10YR 6/6 Brownish Yellow Silty Clay	
P17		I	0	11	10YR 3/3 Dark Brown Silty Loam	
P17		II	11	15	10YR 6/6 Brownish Yellow Silty Clay	
P18		I	0	8	10YR 3/3 Dark Brown Silty Loam	End of Transect
P18		II	8	13	10YR 6/6 Brownish Yellow Silty Clay	
P2 Auger		I	0	3	10YR 4/4 Dark Yellowish Brown Silt Topsoil	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
P2 Auger		II	3	11	10YR 4/3 Brown Silt mottled with 10YR 6/4 Light Yellowish Brown Silty Clay to Gravel	
P2 Auger		III	11	15	10YR 4/4 Dark Yellowish Brown Compact Silt Cap	
P2 Auger		IV	15	19	10YR 5/6 Yellowish Brown Silty Clay Subsoil	
P3 Auger		I	0	3	10YR 4/3 Brown Silt Topsoil with Gravel	
P3 Auger		II	3	15	10YR 4/6 Dark Yellowish Brown mottled with 10YR 5/4 Yellowish Brown Silt and 10YR 6/6 Brownish Yellow Silty Clay Fill	
P3 Auger		III	15	18	7.5YR 5/6 Strong Brown Sandy Clay Subsoil	
P4 Auger		I	0	5	10YR 4/3 Brown Silt Topsoil with Gravel	
P4 Auger		II	5	13	10YR 4/4 Dark Yellowish Brown Very Compact Silt Cap	
P4 Auger		III	13	18	10YR 5/6 Yellowish Brown Silty Clay Subsoil	
P5 Auger		I	0	4	10YR 4/3 Brown Silt Topsoil with Gravel	
P5 Auger		II	4	14	10YR 6/6 Brownish Yellow Compact Silt Cap	
P5 Auger		III	14	18	10YR 5/6 Yellowish Brown Silty Clay Subsoil	
P6		I	0	8	10YR 4/3 Brown Silty Loam	
P6		II	8	11	10YR 5/6 Yellowish Brown Silty Clay Loam	
P6		III	11	15	10YR 6/8 Brownish Yellow Silty Loam	
P7		I	0	9	10YR 3/3 Dark Brown Silty Loam	
P7		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
P8		I	0	10	10YR 3/3 Dark Brown Silty Loam	
P8		II	10	14	10YR 5/8 Yellowish Brown Silty Clay	
P9		I	0	10	10YR 3/3 Dark Brown Silty Loam	
P9		II	10	14	10YR 5/8 Yellowish Brown Silty Clay	
Q1		I	0	9	10YR 5/4 Yellowish Brown Silty Loam	
Q1		II	9	14	10YR 6/4 Light Yellowish Brown Silty Clay	
Q10		I	0	8	10YR 4/3 Brown Silty Loam mottled with 10YR 5/6 Yellowish Brown Silty Clay Fill	Lots of gravel in level I
Q10		II	8	14	10YR 4/4 Dark Yellowish Brown Clay Loam	
Q10		III	14	17	10YR 5/6 Yellowish Brown Silty Clay	
Q11		I	0	8	10YR 4/4 Dark Yellowish Brown Silty Loam	
Q11		II	8	12	10YR 5/6 Yellowish Brown Silty Clay	
Q12		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
Q12		II	12	15	10YR 5/6 Yellowish Brown Silty Clay	
Q13		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	Level II very compact
Q13		II	12	14	10YR 5/4 Yellowish Brown Clay Loam	
Q13		III	14	17	10YR 5/6 Yellowish Brown Silty Clay	
Q14		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
Q14		II	12	14	10YR 5/4 Yellowish Brown Clay Loam	
Q14		III	14	17	10YR 5/6 Yellowish Brown Silty Clay	
Q15		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	
Q15		II	10	13	10YR 5/4 Yellowish Brown Clay Loam	
Q15		III	13	16	10YR 5/6 Yellowish Brown Silty Clay	
Q16		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Loam	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
Q16		II	9	13	10YR 5/4 Yellowish Brown Clay Loam	
Q16		III	13	17	10YR 5/6 Yellowish Brown Silty Clay	
Q17		I	0	8	10YR 4/4 Dark Yellowish Brown Silty Loam	End of Transect
Q17		II	8	12	10YR 5/4 Yellowish Brown Clay Loam	
Q17		III	12	15	10YR 5/6 Yellowish Brown Silty Clay	
Q2		I	0	9	10YR 5/4 Yellowish Brown Silty Loam	
Q2		II	9	13	10YR 6/4 Light Yellowish Brown Silty Clay	
Q3		I	0	8	10YR 4/6 Dark Yellowish Brown Silty Clay	Compact/ overburden
Q3		II	8	12	10YR 5/4 Yellowish Brown Silty Loam	
Q3		III	12	16	10YR 6/4 Light Yellowish Brown Silty Clay	
Q4		I	0	9	10YR 5/4 Yellowish Brown Silty Loam	
Q4		II	9	14	10YR 6/4 Light Yellowish Brown Silty Clay	
Q5		I	0	4	10YR 4/4 Dark Yellowish Brown Silty Loam	
Q5		II	4	10	10YR 5/4 Yellowish Brown Silty Loam	
Q5		III	10	14	10YR 6/4 Light Yellowish Brown Silty Clay	
Q6		I	0	7	10YR 5/4 Yellowish Brown Silty Loam	
Q6		II	7	11	10YR 6/2 Light Grayish Brown Silty Clay	
Q7		I	0	8	10YR 5/4 Yellowish Brown Silty Loam	
Q7		II	8	12	10YR 6/2 Light Grayish Brown Silty Clay	
Q8		I	0	8	10YR 5/4 Yellowish Brown Silty Loam	
Q8		II	8	12	10YR 6/2 Light Grayish Brown Silty Clay	
Q9		I	0	4	10YR 4/4 Dark Yellowish Brown Silty Clay	
Q9		II	4	11	10YR 5/4 Yellowish Brown Silty Clay	
Q9		III	11	15	10YR 6/2 Light Grayish Brown Silty Clay	
R1		I	0	2	10YR 3/3 Dark Brown Silty Clay Loam	
R1		II	2	11	10YR 4/6 Dark Yellowish Brown Silty Compact	
R1		III	11	15	10YR 5/8 Yellowish Brown Silty Clay	
R10		I	0	8	10YR 3/3 Dark Brown Clay Loam	
R10		II	8	13	Gray Gravel	
R10		III	13	17	10YR 5/8 Yellowish Brown Silty Clay	
R11		I	0	8	10YR 3/3 Dark Brown Silty Loam	
R11		II	8	10	10YR 5/8 Yellowish Brown Silty Clay Loam	
R11		III	10	16	10YR 5/8 Yellowish Brown Silty Clay	
R12		I	0	10	10YR 3/3 Dark Brown Silty Loam	
R12		II	10	15	7.5YR 6/8 Reddish Yellow Silty Clay	
R13		I	0	8	10YR 3/3 Dark Brown Silty Loam	
R13		II	8	15	10YR 3/3 Dark Brown Silty Clay Loam	
R13		III	15	22	10YR 5/6 Yellowish Brown Silty Sand	
R14		I	0	7	10YR 3/3 Dark Brown Silty Loam	
R14		II	7	13	10YR 3/3 Dark Brown with 10YR 4/4 Dark Yellowish Brown Silty Clay Loam	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
R14		III	13	17	10YR 5/8 Yellowish Brown with 10YR 4/4 Dark Yellowish Brown Silty Clay	
R15		I	0	9	10YR 3/3 Dark Brown Silty Loam	
R15		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
R16		I	0	8	10YR 3/3 Dark Brown Silty Loam	End of Transect
R16		II	8	13	10YR 6/8 Brownish Yellow Silty Clay	
R2		I	0	12	10YR 3/3 Dark Brown Silty Clay Loam	
R2		II	12	17	10YR 4/6 Dark Yellowish Brown Silty Clay	
R3		I	0	3	10YR 4/4 Dark Yellowish Brown Silty Loam	
R3		II	3	12	10YR 3/3 Dark Brown Silty Clay Loam	
R3		III	12	16	10YR 5/8 Yellowish Brown Silty Clay	
R4		I	0	13	10YR 3/3 Dark Brown Silty Clay Loam	
R4		II	13	17	10YR 4/6 Dark Yellowish Brown Silty Clay	
R5		I	0	4	10YR 4/3 Brown Silty Loam	
R5		II	4	8	10YR 3/3 Dark Brown Silty Clay Loam	
R5		III	8	12	7.5YR 6/8 Reddish Yellow Silty Clay	
R6		I	0	8	10YR 4/6 Dark Yellowish Brown Silty Loam	
R6		II	8	12	7.5YR 6/8 Reddish Yellow Silty Clay	
R7		I	0	10	10YR 4/6 Dark Yellowish Brown Silty Loam	
R7		II	10	14	7.5YR 6/8 Reddish Yellow Silty Clay	
R8		I	0	4	10YR 4/3 Brown Silty Loam with	Terminated due to gravel impasse
R8		II	4	10	10YR 4/3 Brown Silty Loam with Gravel	
R9		I	0	12	10YR 4/3 Brown Silty Loam with Gravel at bottom	
R9		II	12	16	7.5YR 6/8 Reddish Yellow Silty Clay	
S1		I	0	9	10YR 3/3 Dark Brown Silty Loam	End of Transect
S1		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
S10		I	0	8	10YR 4/4 Dark Yellowish Brown Silty Loam	
S10		II	8	11	10YR 4/4 Dark Yellowish Brown with 7.5 6/8 Reddish Yellow Silty Clay Loam	
S10		III	11	15	10YR 6/8 Brownish Yellow Silty Clay	
S11		I	0	6	10YR 4/4 Dark Yellowish Brown Silty Loam	
S11		II	6	13	10YR 4/4 Dark Yellowish Brown with 7.5 6/8 Reddish Yellow Silty Clay Loam	
S11		III	13	16	10YR 6/8 Brownish Yellow Silty Clay	
S12		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Loam	
S12		II	9	13	7.5YR 6/8 Reddish Yellow Silty Sandy Clay with 20% Gravel	
S13		I	0	8	10YR 3/3 Dark Brown Silty Loam	
S13		II	8	12	10YR 5/8 Yellowish Brown Silty Clay	
S14	East	I	0	11	10YR 3/3 Dark Brown Silty Loam	
S14	East	II	11	15	10YR 5/8 Yellowish Brown Silty Clay	
S14	North	I	0	8	10YR 3/3 Dark Brown Silty Loam	
S14	North	II	8	11	10YR 4/4 Dark Yellowish Brown with 20% Gravel	
S14	North	III	11	13	10YR 5/8 Yellowish Brown Silty Clay	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
S14	South	I	0	9	10YR 3/3 Dark Brown Silty Loam	
S14	South	II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
S14	West	I	0	9	10YR 3/3 Dark Brown Silty Loam	
S14	West	II	9	13	10YR 3/4 Dark Yellowish Brown Silty Clay with 20% Gravel	
S14	West	III	13	17	10YR 5/8 Yellowish Brown Silty Clay	
S14		I	0	7	10YR 3/3 Dark Brown Silty Loam	
S14		II	7	11	10YR 4/4 Dark Yellowish Brown Silty Clay Loam	
S14		III	11	15	10YR 5/8 Yellowish Brown Silty Clay	
S15		I	0	10	10YR 3/3 Dark Brown Silty Loam	
S15		II	10	14	7.5YR 6/8 Reddish Yellow Silty Sand	
S16		I	0	9	10YR 3/3 Dark Brown Silty Loam	
S16		II	9	13	10YR 6/8 Brownish Yellow Silty Clay	
S2		I	0	9	10YR 3/3 Dark Brown Silty Loam	
S2		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
S3		I	0	13	10YR 3/3 Dark Brown Silty Loam	
S3		II	13	17	10YR 5/8 Yellowish Brown Silty Clay	
S4		I	0	9	10YR 3/3 Dark Brown Silty Loam	
S4		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
S5		I	0	8	10YR 3/3 Dark Brown Silty Loam	
S5		II	8	12	10YR 5/8 Yellowish Brown Silty Clay	
S6		I	0	9	10YR 3/3 Dark Brown Silty Loam	
S6		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
S7		I	0	9	10YR 3/3 Dark Brown Silty Loam	
S7		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
S8		I	0	8	10YR 3/3 Dark Brown Silty Loam	
S8		II	8	12	10YR 5/8 Yellowish Brown Silty Clay	
S9		I	0	9	10YR 3/3 Dark Brown Silty Loam	
S9		II	9	13	10YR 5/8 Yellowish Brown Silty Clay	
T10		I	0	9	10YR 4/4 Dark Yellowish Brown Loam	
T10		II	9	12	10YR 5/8 Yellowish Brown Sandy Clay	
T11		I	0	10	10YR 4/4 Dark Yellowish Brown Loam	
T11		II	10	13	10YR 5/6 Yellowish Brown Sandy Loam with Gravel	
T11		III	13	16	10YR 5/8 Yellowish Brown Sandy Clay	
T12		I	0	10	10YR 4/4 Dark Yellowish Brown Loam	
T12		II	10	15	10YR 5/6 Yellowish Brown Sandy Loam with Gravel	
T12		III	15	18	10YR 5/8 Yellowish Brown Sandy Clay	
T13		I	0	14	10YR 4/4 Dark Yellowish Brown Silty Loam	
T13		II	14	17	10YR 5/4 Yellowish Brown Clay Loam	
T13		III	17	20	10YR 6/4 Light Yellowish Brown Clay Loam	
T14		I	0	13	10YR 4/4 Dark Yellowish Brown Silty Loam	
T14		II	13	15	10YR 5/4 Yellowish Brown Clay Loam	
T14		III	15	18	10YR 5/6 Yellowish Brown Silty Clay	

STP	Radial	Level	Start Depth	End Depth	Soil Description	Comments
T5		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	End of Transect
T5		II	11	15	10YR 5/6 Yellowish Brown Silty Clay	
T6		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
T6		II	12	15	10YR 5/6 Yellowish Brown Silty Clay	
T7		I	0	12	10YR 4/4 Dark Yellowish Brown Silty Loam	
T7		II	12	15	10YR 5/4 Yellowish Brown Silty Clay	
T8		I	0	15	10YR 4/4 Dark Yellowish Brown Silty Loam	
T8		II	15	18	10YR 5/4 Yellowish Brown Silty Clay	
T9		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	
T9		II	10	13	10YR 5/6 Yellowish Brown Silty Clay	
U10		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	
U10		II	10	13	10YR 5/8 Yellowish Brown Sandy Clay	
U11		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Loam	
U11		II	9	12	10YR 5/6 Yellowish Brown Silty Clay	
U12		I	0	11	10YR 4/4 Dark Yellowish Brown Silty Loam	
U12		II	11	14	10YR 5/6 Yellowish Brown Silty Clay	
U13		I	0	14	10YR 4/4 Dark Yellowish Brown Silty Loam	End of Transect
U13		II	14	18	10YR 5/4 Yellowish Brown Silty Clay	
U7		I	0	14	10YR 4/4 Dark Yellowish Brown Silty Loam	
U7		II	14	18	10YR 5/4 Yellowish Brown Silty Clay	
U8		I	0	5	10YR 3/4 Dark Yellowish Brown Clay Loam	
U8		II	5	9	10YR 5/4 Yellowish Brown Silty Loam	
U8		III	0	14	10YR 4/4 Dark Yellowish Brown Clay Loam	
U8		VI	14	18	10UR 4/4 Dark Yellowish Brown Silty Clay	
U9		I	0	11	10YR 4/4 Dark Yellowish Brown Loam	
U9		II	11	14	10YR 5/6 Yellowish Brown Sandy Loam	
U9		III	14	17	10YR 5/8 Yellowish Brown Sandy Clay	
V10		I	0	10	10YR 4/4 Dark Yellowish Brown Silty Loam	End of Transect
V10		II	10	13	10YR 5/6 Yellowish Brown Silty Clay	
V11		I	0	9	10YR 4/4 Dark Yellowish Brown Silty Loam	
V11		II	9	12	10YR 5/6 Yellowish Brown Silty Clay	
V12		I	0	16	10YR 4/4 Dark Yellowish Brown Silty Loam	
V12		II	16	19	10YR 5/4 Yellowish Brown Silty Clay	

APPENDIX C: ARTIFACT CATALOGS

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St. Georges Borrow Pit Shovel Tests

STP	Radial	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
L8		I-1	CER	earthenware	redware	body		brown lead glaze with manganese flecking		3
P17		I-1	MET	spike	cut	possible wrought head			complete	1
S14		II-1	ARC	brick	handmade					1

Port Penn and U.S. Route 13 Intersection Realignment Shovel Tests

STP	Radial	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
A4		I-1	ARC	brick	handmade					2
A4		I-1	ARC	window glass	post industrial					1
A4		I-1	CER	earthenware	redware	body		plain	no glaze	1
A4	WEST	I-1	CER	earthenware	whiteware	body		plain		1
A5		I-1	ARC	window glass	post industrial					1
A5	SOUTH	I-1	ARC	nail	cut	UID head			head and shaft	1
B1		I-1	ARC	brick	handmade					4
B1	NORTH		ARC	window glass	post industrial					1
B1	WEST	I-1	ARC	brick	handmade					1
B2		I-1	ARC	brick	handmade					3
B2		I-1	CER	earthenware	redware	body		plain	no glaze	2
B2		I-1	CER	earthenware	redware	possible lid		black lead glaze		1
B2		I-1	CER	earthenware	pearlware	body		plain		1
B2		I-1	GLS	bottle	aqua	body				1
B3		I-1	CER	earthenware	creamware	body		plain		1
B3		I-1	GLS	bottle	green wine	body				1
B3	WEST	I-1	CER	earthenware	redware	body		plain	no glaze	1
B4		I-1	CER	earthenware	redware	body		brown lead glaze with manganese flecking		1
B4		I-1	CER	earthenware	redware	body		plain	no glaze	1
B4		I-1	CER	earthenware	whiteware	body		purple sponge ware		1
B4	EAST	I-1	ARC	brick	handmade					2
B4	EAST	I-1	CER	earthenware	creamware	body		plain		2
B4	EAST	I-1	CER	earthenware	pearlware	body		plain		1
B4	EAST	I-1	CER	earthenware	pearlware	body		annular/blue		1
B4	EAST	I-1	GLS	bottle	aqua	base				1
B4	EAST	I-1	GLS	bottle	aqua	body				1
B4	EAST	I-1	GLS	bottle	clear	body				3
B4	EAST	I-1	GLS	bottle	aqua	body		molded		1
B4	EAST	I-1	PER	pipe bowl	white clay					1
B4	EAST	I-1	PER	pipe stem	white clay	5/64th				1
B5		I-1	ARC	brick	handmade					3
B5		I-1	CER	earthenware	pearlware	body		plain		2
B5		I-1	CER	earthenware	creamware	body		plain		1
B5		I-1	CER	earthenware	redware	body		plain	no glaze	4

STP	Radial	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
B5		I-1	CER	earthenware	redware	base		lead glazed interior		1
B5		I-1	GLS	bottle	clear	body				2
B5		I-1	GLS	bottle	light green	body				1
B5	SOUTH	I-1	ARC	brick	handmade					2
B5	SOUTH	I-1	GLS	bottle	aqua	body				1
C1		I-1	CER	earthenware	creamware	body		plain		1
C1		I-1	GLS	bottle	clear	body				1
C3			ARC	brick	handmade					1
C3			GLS	bottle	clear					1
C4		I-1	ARC	brick	handmade					1
C4	SOUTH	II-1	ARC	brick	handmade					1
C4	SOUTH	II-1	CER	earthenware	redware	body		brown lead glazed		1
C4	SOUTH	II-1	CER	earthenware	whiteware	body		plain		1
C4	SOUTH	II-1	CER	earthenware	ironstone	body		plain		2
C5		II-3	ARC	brick	handmade					2
C5		II-3	ARC	nail	UID				shaft	5
C5		II-3	CER	earthenware	redware	body		brown lead glaze with manganese flecking interior/burnished exterior		1
C5		II-3	CER	earthenware	redware	body		lead glaze/burnished exterior		1
C5		II-3	GLS	bottle	aqua	body				2
C5		II-3	GLS	bottle	brown	body				1
C5		II-3	MET	UID			iron alloy			4
C5	SOUTH	I-1	ARC	brick	handmade					1
C5	SOUTH	I-1	ARC	window glass	post industrial					1
C5	SOUTH	II-1	ARC	nail	cut	cut head				1
C5	SOUTH	II-1	CER	porcelain	hard paste			plain		1
C5	SOUTH	II-1	GLS	vessel	milk glass					1
C5	SOUTH	II-1	MET	UID			iron alloy			2
C5	SOUTH	II-1	ORG	oyster shell						1
C5	SOUTH	III-1	ARC	brick	handmade			glazed		1
C5	SOUTH	III-1	ARC	brick	handmade					1
C5	SOUTH	III-1	CER	earthenware	pearlware	base		plain		1
C5	SOUTH	III-1	CER	earthenware	redware	body		black lead glaze	glazed interior and exterior	1
C5	SOUTH	III-1	CER	earthenware	redware	body		brown lead glaze interior/burnished exterior		1
C5	SOUTH	III-1	CER	earthenware	pearlware	base and body		blue transferprint/underglaze		1
C5	SOUTH	III-1	GLS	bottle	clear	body		embossed "c"		1
C5	SOUTH	III-1	GLS	bottle	clear	body		embossed "j"		1
C5	SOUTH	III-1	MET	UID			iron alloy			1
C5	SOUTH	III-1	ORG	oyster shell						1
D26		I-1	CER	earthenware	ironstone	body		plain		1
I15		II-1	GLS	bottle	aqua	rim			bead finish	1

Port Penn and U.S. Route 13 Intersection Realignment Test Units

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
1	II-3	ARC	brick	handmade					1
1	I-2	ARC	brick	handmade					3
1	I-2	ARC	nail	UID				shaft	1
1	I-2	ARC	window glass	post industrial					1
1	I-2	ARC	plaster	lime/white					1
1	I-3	ARC	brick	handmade					1
1	I-3	ARC	nail	UID				shaft	2
1	II-2	ARC	nail	cut	UID head			head and shaft	4
1	II-2	ARC	nail	cut				shaft	1
1	II-2	ARC	brick	handmade					1
1	II-2	ARC	window glass	post industrial					2
1	II-1	ARC	nail	cut	UID head			head and shaft	2
1	II-1	ARC	nail	cut				shaft	1
1	II-1	ARC	window glass	post industrial					3
1	II-1	ARC	window glass	post industrial			white paint remnants		2
1	I-4	ARC	nail	cut	cut head			head and shaft	1
1	I-4	ARC	brick	handmade					1
1	I-4	ARC	brick	handmade				burned	1
1	I-4	ARC	window glass	post industrial					4
1	I-4	ARC	brick	handmade					2
1	I-4	ARC	nail	UID				shaft	4
1	I-4	ARC	nail	cut	UID head			head and shaft	3
1	I-4	ARC	slate						1
1	I-4	ARC	window glass	post industrial					4
1	I-4	ARC	window glass	post industrial				white paint remnants	1
1	I-4	ARC	plaster	lime/white					1
1	I-2	CER	stoneware	blue-gray	base			wheel turned	1
1	I-2	CER	earthenware	redware	body		black lead glazed		4
1	I-2	CER	earthenware	whiteware	body		green and lavender glaze		1
1	I-2	CER	earthenware	creamware	body		plain		2
1	I-2	CER	earthenware	pearlware	body		hand painted/green, brown, red		1
1	I-2	CER	earthenware	pearlware	body		plain		1
1	I-3	CER	earthenware	redware	base		brown lead glaze interior	second application of clay on base	1
1	I-3	CER	stoneware	ginger	body				1
1	I-3	CER	earthenware	ironstone	base		plain		1
1	I-3	CER	earthenware	ironstone	body		plain		1
1	I-3	CER	earthenware	whiteware	body		plain		1
1	II-2	CER	earthenware	redware	body		black lead glazed	glazed on interior and exterior	3
1	II-2	CER	earthenware	redware	rim		brown lead glazed with manganese flecking		1
1	II-2	CER	earthenware	redware	body		brown lead glaze interior/burnished exterior		1
1	II-2	CER	earthenware	redware	body		black lead glazed interior/ burnished exterior		1
1	II-2	CER	earthenware	creamware	body		plain		3
1	II-2	CER	earthenware	whiteware	body		black transferprint/over glaze		1

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
1	II-2	CER	earthenware	whiteware	body		annular/blue and brown		1
1	II-2	CER	earthenware	ironstone	body		plain		1
1	II-2	CER	earthenware	UID	body		polychrome		1
1	II-2	CER	earthenware	pearlware	rim		plain		1
1	II-2	CER	earthenware	pearlware	base		plain		1
1	II-2	CER	earthenware	creamware	body		molded		1
1	II-1	CER	earthenware	redware	body		no glaze		2
1	II-1	CER	earthenware	redware	body		lead glaze		2
1	II-1	CER	earthenware	redware	body		brown lead glaze with manganese flecking		2
1	II-1	CER	earthenware	ironstone	rim		brown and blue		1
1	II-1	CER	earthenware	whiteware	body		multi chamber slip/cats-eye		1
1	II-1	CER	earthenware	whiteware	base		black transferprint/under glaze		1
1	II-1	CER	earthenware	whiteware	body		brown transferprint/underglaze		1
1	II-1	CER	earthenware	pearlware	body		plain		4
1	II-1	CER	earthenware	creamware	body		plain		3
1	II-1	CER	earthenware	creamware	base		plain		1
1	II-1	CER	earthenware	whiteware	body		plain		1
1	I-4	CER	stoneware	refined	body		salt glazed exterior/lead glazed interior		1
1	I-4	CER	earthenware	redware	body		black lead glazed	glazed interior and exterior/thin bodied	1
1	I-4	CER	earthenware	redware	body		no glaze		1
1	I-4	CER	earthenware	pearlware	body		plain		7
1	I-4	CER	earthenware	pearlware	base and body		plain		1
1	I-4	CER	earthenware	creamware	rim		plain		1
1	I-4	CER	earthenware	wheildon	body				1
1	I-4	CER	earthenware	creamware	body		plain		2
1	I-4	CER	stoneware	ginger	body				1
1	I-4	CER	earthenware	redware	rim		brown lead glaze	glazed interior and exterior	2
1	I-4	CER	earthenware	redware	base		brown lead glaze interior/burnished exterior		1
1	I-4	CER	earthenware	redware	base		brown lead glaze with manganese flecking interior/burnished exterior		1
1	I-4	CER	earthenware	redware	body		lead glaze with manganese flecking interior/burnished exterior		1
1	I-4	CER	earthenware	redware	body		no glaze		1
1	I-4	CER	earthenware	redware	body		black lead glaze		1
1	I-4	CER	stoneware	UID	rim		plain	burned	1
1	I-4	CER	earthenware	whiteware	body		plain		1
1	I-4	CER	earthenware	creamware	body		polychrome handpainted		1
1	I-4	CER	earthenware	creamware	body		plain		8
1	I-4	CER	earthenware	pearlware	body		plain		4
1	I-4	CER	earthenware	pearlware	rim		plain		1
1	I-4	CER	earthenware	ironstone	body		annular/brown and white		1
1	I-4	CER	earthenware	pearlware	rim		painted blue		1
1	I-4	CER	earthenware	pearlware	body		painted blue		2
1	I-4	CER	earthenware	creamware	base		blue transferprint/underglaze		1
1	I-4	CER	earthenware	pearlware	body		blue shell edged		1
1	I-2	GLS	bottle	clear	body				3

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
1	I-2	GLS	bottle	aqua	body				1
1	I-3	GLS	bottle	brown	body				2
1	I-3	GLS	vessel	clear	body		cut	knapped/pressure flaked	1
1	I-3	GLS	bottle	aqua	body			burned	1
1	I-3	GLS	UID	clear	UID			attributed of debitage/flake scars present	1
1	I-3	GLS	bottle	clear	body				4
1	I-3	GLS	bottle	aqua	body				1
1	I-3	GLS	bottle	clear	base			burned	1
1	I-3	GLS	bottle	clear	body		molded		1
1	II-2	GLS	bottle	aqua	body				10
1	II-2	GLS	bottle	clear	body				4
1	II-1	GLS	bottle	milk glass	body				1
1	II-1	GLS	bottle	aqua	lip and neck			patent finish	1
1	II-1	GLS	bottle	brown	body				1
1	II-1	GLS	bottle	clear	body		embossed "fl. 04 ref"		1
1	II-1	GLS	bottle	clear	body		molded		1
1	II-1	GLS	bottle	solarized	body				1
1	II-1	GLS	bottle	aqua	body				10
1	II-1	GLS	bottle	aqua	body		embossed		1
1	I-4	GLS	bottle	green wine	body				1
1	I-4	GLS	vessel	solarized	body		molded		1
1	I-4	GLS	bottle	aqua	rim			bead finish	1
1	I-4	GLS	bottle	clear	body		molded		2
1	I-4	GLS	bottle	aqua	body				4
1	I-4	GLS	bottle	clear	body				3
1	I-4	GLS	bottle	amber	body		molded		1
1	I-4	GLS	bottle	brown	body				1
1	I-4	GLS	bottle	olive	body				1
1	I-4	GLS	bottle	aqua	body				6
1	I-4	GLS	bottle	clear	body				1
1	I-4	GLS	bottle	clear	body		embossed "phil"		1
1	I-4	GLS	bottle	clear	body		embossed decoration		1
1	II-1	LTC	debitage	secondary	fragment	flint		possible gun flint fragment	1
1	I-2	MET	UID		circular	iron alloy			1
1	II-2	ORG	oyster shell						1
1	I-4	ORG	oyster shell						1
1	I-4	ORG	clam shell						1
1	I-4	ORG	coal						1
1	I-4	ORG	oyster shell						2
1	II-1	OTH	rubber						2
1	I-2	PER	pipe stem	white clay	5/64th				1
1	II-2	PER	utensil handle	sugar spoon		copper plated iron alloy			1
2	I-1	ARC	brick	handmade					3
2	I-1	ARC	window glass	post industrial					1
2	I-3	ARC	brick	handmade					2
2	I-3	ARC	window glass	post industrial					1
2	II-2	ARC	brick	handmade					1

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
2	II-2	ARC	window glass	modern					2
2	II-2	ARC	nail	UID					1
2	I-1	ARC	brick	handmade					1
2	I-1	ARC	window glass	post industrial					4
2	II-1	ARC	brick	handmade				painted black	1
2	II-1	ARC	brick	handmade					1
2	II-1	ARC	door hinge			iron alloy			1
2	II-1	ARC	nail	cut	UID head			head and shaft	3
2	II-1	ARC	nail	cut				shaft	5
2	II-1	ARC	plaster	lime/white					1
2	II-1	ARC	window glass	post industrial					2
2	I-1	CER	earthenware	whiteware	body		mocha		1
2	I-1	CER	earthenware	whiteware	body		plain		1
2	I-1	CER	earthenware	redware	body		plain	no glaze	1
2	I-1	CER	earthenware	redware	body		black lead glaze		1
2	I-3	CER	earthenware	redware	body		tan lead glaze		1
2	I-3	CER	earthenware	creamware	body		plain		1
2	I-3	CER	earthenware	creamware	body		hand painted/ green leaf		1
2	I-3	CER	earthenware	creamware	body		painted blue		1
2	I-3	CER	earthenware	pearlware	rim		plain		1
2	I-3	CER	earthenware	whiteware	body		plain		3
2	I-3	CER	earthenware	rockingham	body				1
2	I-3	CER	porcellaneous	hard paste	body		plain		1
2	II-2	CER	earthenware	redware	body		black lead glaze		1
2	II-2	CER	earthenware	redware	body		lead glaze	mica inclusions	1
2	II-2	CER	earthenware	redware	body		brown lead glaze with manganese flecking		1
2	II-2	CER	earthenware	redware	body		plain	no glaze	1
2	II-2	CER	earthenware	redware	rim		black lead glaze		1
2	II-2	CER	earthenware	whiteware	rim		shell edged/non impressed		1
2	II-2	CER	earthenware	creamware	body		plain		2
2	II-2	CER	earthenware	whiteware	body		mocha		1
2	II-2	CER	earthenware	pearlware	body		plain		1
2	II-2	CER	earthenware	pearlware	body		blue transfer print/underglaze	possible tea cup fragment	2
2	II-2	CER	earthenware	pearlware	body		hand painted/green, brown, red		1
2	I-1	CER	earthenware	redware	body		black lead glaze		3
2	I-1	CER	earthenware	redware	body		brown lead glaze with manganese flecking		1
2	I-1	CER	earthenware	redware	rim		brown lead glaze with mustard lead glaze interior	Philadelphia potters	1
2	I-1	CER	stoneware	blue-gray	lid		salt glazed		1
2	I-1	CER	earthenware	whiteware	rim		blue transfer print/underglaze		1
2	I-1	CER	earthenware	whiteware	body		plain		2
2	I-1	CER	earthenware	creamware	body		plain		1
2	II-1	CER	earthenware	redware	rim		lead glaze interior		1
2	II-1	CER	earthenware	redware	body		lead glaze interior		1
2	II-1	CER	earthenware	redware	body		black lead glaze	thick bodied	4
2	II-1	CER	earthenware	redware	body		black lead glaze	thin bodied	3
2	II-1	CER	earthenware	redware	body		brown lead glaze with manganese flecking		7

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
2	II-1	CER	stoneware	white salt glazed	body		incised		1
2	II-1	CER	earthenware	creamware	body		plain		6
2	II-1	CER	earthenware	whiteware	body		plain		11
2	II-1	CER	earthenware	ironstone	body		plain		1
2	II-1	CER	earthenware	whiteware	rim		plain		1
2	II-1	CER	earthenware	whiteware	body		blue transfer print/underglaze		3
2	II-1	CER	earthenware	whiteware	rim		blue transfer print/underglaze		1
2	II-1	CER	earthenware	pearlware	base		plain		2
2	II-1	CER	earthenware	pearlware	body		plain		4
2	II-1	CER	earthenware	whiteware	body		pink/sponge ware		2
2	II-1	CER	earthenware	whiteware	body		painted sprig motif	until 1870	1
2	II-1	CER	porcellaneous	hard paste	body		painted blue		1
2	I-1	GLS	bottle	clear	body				1
2	I-3	GLS	bottle	brown	body				3
2	I-3	GLS	bottle	light green	body				1
2	I-3	GLS	bottle	aqua	body				1
2	I-3	GLS	bottle	clear	body				2
2	I-3	GLS	bottle	clear	body		textured exterior		1
2	II-2	GLS	bottle	green wine	body				2
2	II-2	GLS	bottle	green case	body				2
2	II-2	GLS	bottle	clear	body				1
2	I-1	GLS	bottle	clear	body				5
2	I-1	GLS	bottle	aqua	body				4
2	I-1	GLS	bottle	light green	body			flat	1
2	I-1	GLS	bottle	light green	body		embossed "iu"		1
2	II-1	GLS	bottle	green wine	body				4
2	II-1	GLS	bottle	brown	body		molded		1
2	II-1	GLS	bottle	aqua	body		molded		2
2	II-1	GLS	bottle	clear	body				5
2	I-1	MET	UID						
2	II-2	MET	UID			iron alloy			2
2	II-1	MET	UID			iron alloy			1
2	I-1	ORG	oyster shell						1
2	I-3	ORG	oyster shell						2
2	I-1	ORG	coal						2
3	I-3	ARC	brick	handmade					1
3	I-3	ARC	nail	cut	UID head			head and shaft	2
3	II-3	ARC	nail	cut	UID head			complete	1
3	II-3	ARC	nail	cut	cut head			shaft	1
3	II-3	ARC	nail	cut	cut head			head and shaft	1
3	II-3	ARC	nail	cut				tip	1
3	II-3	ARC	brick	handmade			glazed		1
3	II-3	ARC	window glass	post industrial					3
3	III-1	ARC	brick	handmade					1
3	I-1	ARC	brick	handmade					2
3	I-1	ARC	nail	UID			shaft		1
3	I-1	ARC	window glass	post industrial					4
3	I-4	ARC	window glass	post industrial					1
3	I-4	ARC	brick	handmade					1
3	I-2	ARC	nail	cut	cut head			head and shaft	1

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
3	I-2	ARC	nail	cut				shaft	1
3	I-2	ARC	nail	cut	UID head			complete	1
3	I-2	ARC	brick	handmade					1
3	I-2	ARC	window glass	post industrial					3
3	II-2	ARC	brick	handmade				burned	1
3	II-2	ARC	brick	handmade					1
3	II-2	ARC	nail	cut	UID head			head and shaft	25
3	II-2	ARC	window glass	post industrial					11
3	II-1	ARC	brick	handmade					2
3	II-1	ARC	window glass	post industrial					16
3	II-1	ARC	brad	cut	cut head			complete/burned	1
3	II-1	ARC	nail	cut				shaft/burned	2
3	II-1	ARC	nail	cut	cut head			head and shaft/burned	1
3	II-1	ARC	nail	cut	UID head			complete/burned tip	1
3	II-1	ARC	nail	cut	UID head			complete	1
3	II-1	ARC	nail	UID	UID head			head and shaft	7
3	II-1	ARC	nail	UID				shaft	36
3	I-3	CER	earthenware	redware	body		brown lead glaze with manganese flecking		1
3	I-3	CER	earthenware	whiteware	rim		brown transferprint/overglaze		1
3	I-3	CER	earthenware	ironstone	body		purple/spongeware		1
3	I-3	CER	earthenware	pearlware	body		plain		1
3	I-3	CER	earthenware	creamware	body		plain		1
3	II-3	CER	earthenware	tin glazed			painted blue		1
3	II-3	CER	earthenware	tin glazed	rim		plain		2
3	II-3	CER	earthenware	creamware	body		plain		2
3	II-3	CER	earthenware	creamware	body		hand painted/polychrome		1
3	II-3	CER	earthenware	wheildon	body				1
3	II-3	CER	earthenware	redware	body		black lead glaze interior/burnished exterior		3
3	II-3	CER	earthenware	redware	rim		brown lead glaze interior/burnished exterior	mend	2
3	II-3	CER	earthenware	redware	base		brown lead glaze with manganese flecking		1
3	II-3	CER	earthenware	redware	body		lead glaze		4
3	II-3	CER	earthenware	redware	body		burnished		2
3	II-3	CER	earthenware	redware	body		glaze missing		2
3	II-3	CER	earthenware	redware	body		brown lead glaze with manganese flecking		4
3	II-3	CER	earthenware	redware	body		brown lead glaze with manganese flecking	thin bodied	1
3	II-3	CER	earthenware	redware	body		black lead glaze	glazed interior and exterior	8
3	II-3	CER	earthenware	redware	body		black lead glaze exterior/brown lead glaze interior		1
3	II-3	CER	earthenware	redware	rim		black lead glaze	glazed interior and exterior/thin bodied	2
3	II-3	CER	earthenware	redware	body		black lead glaze	glazed interior and exterior	5
3	II-3	CER	earthenware	jackfield	body			thick bodied	1
3	II-3	CER	earthenware	redware	body		green lead glaze		1

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
3	VI-1	CER	earthenware	whiteware	rim		purple/spongeware		1
3	III-1	CER	earthenware	redware	rim		lead glaze interior	crimped edges	1
3	III-1	CER	earthenware	redware	body		brown lead glaze with manganese flecking interior/burnished exterior		1
3	III-1	CER	earthenware	redware	body		black lead glaze	thin bodied	2
3	I-1	CER	stoneware	blue-gray	body		salt glazed exterior		1
3	I-1	CER	earthenware	redware	body		brown lead glaze with manganese flecking interior/burnished exterior		1
3	I-1	CER	earthenware	redware	body		no glaze/burnished exterior		1
3	I-1	CER	earthenware	redware	body		no glaze		1
3	I-1	CER	earthenware	whiteware	body		blue transferprint/underglaze		2
3	I-1	CER	earthenware	whiteware	body		plain		2
3	I-1	CER	earthenware	creamware	body		plain		1
3	I-4	CER	earthenware	redware	handle		plain	molded grooves	1
3	I-4	CER	earthenware	yellowware	body		plain		1
3	I-4	CER	earthenware	whiteware	body		purple transferprint/underglaze		1
3	I-4	CER	earthenware	whiteware	body		blue transferprint/underglaze		1
3	I-4	CER	earthenware	UID	body		plain	burned	1
3	I-4	CER	earthenware	pearlware	body		plain		5
3	I-4	CER	earthenware	whiteware	body		plain		6
3	I-4	CER	earthenware	creamware	body		plain		1
3	I-4	CER	earthenware	whiteware	base and body		plain		1
3	I-4	CER	earthenware	ironstone	body		plain		1
3	I-4	CER	earthenware	whiteware	rim		plain		1
3	I-4	CER	earthenware	redware	body		burnished exterior		1
3	I-4	CER	earthenware	redware	body		black lead glaze		1
3	I-4	CER	earthenware	redware	body		no glaze	white mark	1
3	I-4	CER	earthenware	redware	body		no glaze		2
3	I-4	CER	earthenware	redware	body		black lead glaze	glazed on interior and exterior	1
3	I-4	CER	earthenware	redware	rim		brown lead glaze/burnished exterior		1
3	I-4	CER	earthenware	redware	body		black lead glaze/burnished exterior		1
3	I-2	CER	earthenware	wheildon	body				1
3	I-2	CER	earthenware	redware	body		black lead glaze	glazed interior	1
3	I-2	CER	earthenware	redware	body		black lead glaze	glazed interior and exterior	1
3	I-2	CER	earthenware	redware	body		lead glaze/burnished exterior	possibly burned	1
3	I-2	CER	earthenware	whiteware	body		blue transferprint/underglaze		1
3	I-2	CER	earthenware	whiteware	body		mulberry transferprint/underglaze		1
3	I-2	CER	earthenware	whiteware	body		plain		2
3	I-2	CER	earthenware	whiteware	body		plain	burned	1
3	I-2	CER	earthenware	creamware	body		plain		1
3	II-2	CER	earthenware	creamware	rim		plain		2
3	II-2	CER	earthenware	creamware	body		plain		11
3	II-2	CER	earthenware	creamware	base and body		plain		1
3	II-2	CER	earthenware	pearlware	body		plain		12
3	II-2	CER	earthenware	pearlware	rim		plain		4
3	II-2	CER	earthenware	pearlware	rim		blue shell edged	molded	1
3	II-2	CER	earthenware	pearlware	body		blue shell edged	molded	1
3	II-2	CER	earthenware	yellowware	rim		plain		2
3	II-2	CER	earthenware	whiteware	rim		blue transfer print/underglaze		1

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
3	II-2	CER	earthenware	pearlware	body		blue transfer print/underglaze		1
3	II-2	CER	earthenware	creamware	body		hand painted blue		1
3	II-2	CER	earthenware	whiteware	body		purple spongeware		1
3	II-2	CER	earthenware	pearlware	body		mochaware		1
3	II-2	CER	stoneware	UID	body	tan body	salt glazed exterior		1
3	II-2	CER	earthenware	whiteware	body		plain	burned	1
3	II-2	CER	earthenware	astbury	body and handle				1
3	II-2	CER	earthenware	redware	base and body		black lead glaze	glazed on interior and exterior	1
3	II-2	CER	earthenware	redware	body		black lead glaze	glazed on interior	27
3	II-2	CER	earthenware	redware	rim		black lead glaze	glazed on interior and exterior	5
3	II-2	CER	earthenware	redware	body		black lead glaze	glazed on interior and exterior	7
3	II-2	CER	earthenware	redware	rim		black lead glaze	glazed on interior and exterior/thin bodied	1
3	II-2	CER	earthenware	redware	body		black lead glaze	glazed on interior and exterior/thin bodied	3
3	II-2	CER	earthenware	redware	body		brown lead glaze with manganese flecking	glazed on interior	3
3	II-2	CER	earthenware	redware	body		lead glaze	burned	1
3	II-2	CER	earthenware	redware	body		no glaze	burnished exterior	6
3	II-2	CER	earthenware	redware	body		lead glaze with manganese flecking		1
3	II-2	CER	earthenware	redware	base		brown lead glaze with manganese flecking	glazed on interior and exterior	2
3	II-2	CER	earthenware	redware	body		brown lead glaze with manganese flecking	glazed on interior and exterior	1
3	II-2	CER	earthenware	redware	body		lead glaze with mustard glaze	glazed interior and burnished exterior	4
3	II-2	CER	earthenware	redware	rim		lead glaze	glazed interior	2
3	II-2	CER	earthenware	redware	body		mustard glaze	glazed interior	2
3	II-2	CER	earthenware	redware	body		mustard glaze interior brown lead glaze exterior	thin bodied	1
3	II-2	CER	earthenware	redware	body		brown lead glaze	glazed interior and burnished exterior	8
3	II-2	CER	earthenware	redware	body		brown lead glaze	glazed interior and exterior/thin bodied	1
3	II-1	CER	earthenware	redware	body		no glaze/burnished exterior		4
3	II-1	CER	earthenware	redware	body		brown lead glaze interior		1
3	II-1	CER	earthenware	redware	body		reddish lead glaze exterior/mustard glaze interior		1
3	II-1	CER	earthenware	redware	body		brown lead glaze interior and exterior	burned	1
3	II-1	CER	earthenware	redware	rim		lead glaze		1
3	II-1	CER	earthenware	redware	body		brown lead glaze with manganese flecking interior/burnished exterior		1
3	II-1	CER	earthenware	redware	base		brown lead glaze with manganese flecking		1
3	II-1	CER	earthenware	tin glazed			plain		1
3	II-1	CER	earthenware	refined	body		no glaze		3
3	II-1	CER	earthenware	whiteware	body		plain		1
3	II-1	CER	earthenware	creamware	rim and body		plain		1

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
3	II-1	CER	earthenware	pearlware	body		plain		4
3	II-1	CER	earthenware	pearlware	rim		plain		2
3	II-1	CER	earthenware	pearlware	base and body		plain		1
3	II-1	CER	earthenware	pearlware	base		plain		1
3	II-1	CER	earthenware	pearlware	base and body		brown transferprint/underglaze		1
3	II-1	CER	stoneware	ginger	body				1
3	II-1	CER	earthenware	wheildon	body				1
3	II-1	CER	earthenware	creamware	body		mocha		1
3	II-1	CER	earthenware	pearlware	body		blue transferprint/underglaze		1
3	II-1	CER	earthenware	white	body		tan glazed exterior		1
3	I-3	GLS	bottle	clear	body				2
3	I-3	GLS	bottle	aqua	body				1
3	II-3	GLS	bottle	green wine	lip and neck			double ring finish	1
3	II-3	GLS	bottle	green wine	body				1
3	II-3	GLS	bottle	cobalt	body				1
3	II-3	GLS	bottle	aqua	body				4
3	VI-1	GLS	bottle	aqua	body				1
3	I-1	GLS	bottle	brown	body				4
3	I-1	GLS	bottle	light green	rim and neck		double ring		1
3	I-1	GLS	bottle	clear	body				4
3	I-1	GLS	bottle	aqua	body		molded		1
3	I-4	GLS	bottle	clear	body			seem visible	1
3	I-4	GLS	bottle	clear	body				5
3	I-4	GLS	bottle	aqua	body				2
3	I-2	GLS	bottle	brown	body				2
3	I-2	GLS	bottle	clear	body				4
3	I-2	GLS	milk glass						1
3	II-2	GLS	bottle	brown	body				1
3	II-2	GLS	vessel	cobalt	body				1
3	II-2	GLS	bottle	green	body			wavy	3
3	II-2	GLS	vessel	light green	body			thick bodied	2
3	II-2	GLS	vessel	clear	body			thin bodied	6
3	II-2	GLS	bottle	aqua	body				1
3	II-2	GLS	bottle	aqua	base				1
3	II-2	GLS	bottle	clear	base and body			panneled	1
3	II-2	GLS	bottle	clear	base				2
3	II-2	GLS	bottle	light green	body				2
3	II-2	GLS	bottle	clear	body			molded	1
3	II-2	GLS	bottle	aqua	body			molded	1
3	II-2	GLS	bottle	green wine	body				1
3	II-1	GLS	milk glass	vessel	rim				2
3	II-1	GLS	milk glass	vessel	body				1
3	II-1	GLS	bottle	solarized	body				6
3	II-1	GLS	bottle	clear	body				4
3	II-1	GLS	bottle	aqua	body				11
3	II-1	GLS	bottle	green wine	body				1
3	II-1	GLS	bottle	amber	body				1
3	II-1	GLS	bottle	clear	body				1
3	II-3	LTC	debitage	secondary	fragment	flint			1
3	I-4	MET	UID			iron alloy			2

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
3	I-2	MET	UID			iron alloy			2
3	I-2	MET	cast iron fragment			iron alloy			1
3	II-2	MET	UID			iron alloy		unidentifiable metal pieces	11
3	II-1	MET	UID			iron alloy			7
3	I-3	ORG	oyster shell						1
3	II-3	ORG	bone	mammal					6
3	II-3	ORG	bone	mammal	teeth				9
3	II-3	ORG	oyster shell						1
3	III-1	ORG	bone	mammal	tooth				1
3	I-4	ORG	oyster shell						1
3	I-2	ORG	oyster shell						1
3	II-2	ORG	bone	mammal					19
3	II-2	ORG	bone	mammal	tooth				10
3	II-2	ORG	oyster shell						2
3	II-2	ORG	bone	UID				burned	1
3	I-1	PER	pipe bowl	white clay	rim				1
4	IV-1	ARC	brick	handmade					1
4	I-2	CER	stoneware	grey bodied	body		salt glaze exterior/albany slip interior		1
4	I-2	ARC	nail	cut	UID head			head and shaft	1
4	I-2	ARC	window glass	post industrial					1
4	I-2	ARC	brick	handmade					1
4	II-1	ARC	nail	cut				shaft	1
4	II-2	ARC	nail	UID				shaft	7
4	II-2	ARC	nail	cut	UID head			complete	1
4	II-2	ARC	nail	cut	UID head			head and shaft	3
4	II-2	ARC	plaster	lime/white					1
4	I-3	ARC	brick	handmade					1
4	I-1	CER	earthenware	redware	body		no glaze		1
4	I-1	CER	earthenware	redware	body		black lead glaze	thin bodied	1
4	I-1	CER	earthenware	creamware	body		plain		1
4	I-1	CER	earthenware	ironstone	body		plain		1
4	I-2	CER	earthenware	yellowware	body		molded		1
4	I-2	CER	earthenware	creamware	body		plain		1
4	I-2	CER	earthenware	pearlware	body		plain		2
4	I-2	CER	earthenware	pearlware	base		plain		1
4	II-1	CER	earthenware	redware	body		no glaze	interior of thick bodied fragment	1
4	II-1	CER	earthenware	redware	body		black lead glaze	glazed interior and exterior	2
4	II-1	CER	earthenware	redware	body		black lead glaze interior		1
4	II-1	CER	earthenware	redware	body		brown lead glaze		3
4	II-1	CER	earthenware	pearlware	body		plain		2
4	II-1	CER	earthenware	whiteware	body		plain		3
4	II-1	CER	earthenware	whiteware	rim		painted blue		1
4	II-1	CER	earthenware	whiteware	body		blue transferprint/underglaze		1
4	II-1	CER	earthenware	creamware	body		plain		3
4	II-2	CER	earthenware	tin glazed	base		plain		1
4	II-2	CER	earthenware	whiteware	rim		annular		1
4	II-2	CER	earthenware	pearlware	base		plain		1

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
4	II-2	CER	stoneware	refined			gray salt glazed		1
4	II-2	CER	earthenware	whiteware	body		albany slip exterior		1
4	II-2	CER	earthenware	refined	body		no glaze		1
4	II-2	CER	earthenware	creamware	body		plain		2
4	II-2	CER	earthenware	pearlware	body		plain		1
4	II-2	CER	earthenware	whiteware	body		blue transferprint/underglaze		1
4	II-2	CER	earthenware	redware	body		black lead glaze	glazed interior and exterior	1
4	II-2	CER	earthenware	redware	body		brown lead glaze with manganese flecking interior/burnished exterior		1
4	II-2	CER	earthenware	redware	body		no glaze/burnished exterior		2
4	II-2	CER	earthenware	redware	body		no glaze/burnished exterior		5
4	I-3	CER	earthenware	redware	handle and body		brown lead glaze	glazed interior and exterior	1
4	I-3	CER	earthenware	redware	body		burnished		1
4	I-3	CER	earthenware	redware	body		no glaze		1
4	I-3	CER	earthenware	redware	body		brown lead glaze interior/burnished exterior		1
4	I-1	GLS	bottle	light green	body				1
4	IV-1	GLS	bottle	clear	body		molded ".c."		1
4	I-2	GLS	bottle	aqua	body				1
4	I-2	GLS	bottle	clear	body				1
4	I-2	GLS	bottle	light green	body				1
4	II-1	GLS	bottle	solarized	body				3
4	II-1	GLS	bottle	green	body				1
4	II-1	GLS	bottle	clear	body				1
4	II-1	GLS	hurricane	clear	body				1
4	II-2	GLS	bottle	aqua	body				10
4	II-2	GLS	bottle	aqua	body			molded	2
4	II-2	GLS	bottle	aqua	body			melted	1
4	II-2	GLS	bottle	clear	body				8
4	IV-2	GLS	bottle	clear	body				1
4	I-3	GLS	bottle	light green	body				6
4	I-3	GLS	milk glass		body				1
4	I-3	GLS	bottle	brown	body				1
4	I-3	GLS	mirror fragment		body				1
4	I-3	GLS	bottle	clear	body				3
4	II-1	MET	UID			iron alloy			1
4	I-1	ORG	clam shell						1
4	I-2	ORG	oyster shell						2
4	I-3	ORG	clam shell						2
5	I-2	ARC	brick	handmade					1
5	I-3	ARC	window glass	post industrial					1
5	I-3	ARC	brick	handmade					3
5	I-2	CER	earthenware	redware	body		black lead glazed		1
5	I-2	CER	earthenware	pearlware	body		plain		1
5	I-3	CER	earthenware	redware	body		no glaze		4
5	I-3	CER	earthenware	redware	body		lead glazed exterior/brown lead glazed interior		1
5	I-1	CER	earthenware	creamware	body		plain		1

Test Unit	Level	Category	Type	Subtype	Form	Material	Decoration	Size / Other Comments	Count
5	I-1	CER	earthenware	redware	body		brown lead glaze with manganese flecking		1
5	I-1	CER	earthenware	redware	body		no glaze		1
5	I-2	GLS	bottle	clear	body		embossed "me"		1
5	I-2	GLS	bottle	clear	body				2
5	I-2	GLS	bottle	cobalt	body				1
5	I-3	GLS	bottle	brown	body				1
5	I-3	GLS	bottle	aqua	body				1
5	I-1	GLS	bottle	aqua	body and base				1
5	I-1	ORG	oyster shell						1
5	I-1	OTH	mica					sample	1
6	I-3	ARC	brick	handmade			glazed		1
6	I-1	ARC	brick	handmade					1
6	I-2	ARC	brick	handmade					1
6	I-4	ARC	brick	handmade					1
6	I-3	CER	earthenware	pearlware	body		plain		1
6	I-3	CER	earthenware	creamware	body		plain		1
6	I-3	CER	earthenware	refined	body		no glaze		1
6	I-1	CER	earthenware	redware	body		no glaze	burnished exterior	1
6	I-3	GLS	bottle	aqua	body				2
6	I-1	GLS	bottle	clear	body				1
6	I-2	GLS	bottle	clear	body				2
6	I-2	GLS	bottle	light green	body				1
6	I-2	GLS	bottle	aqua	body		molded		1
6	I-4	GLS	bottle	clear					1