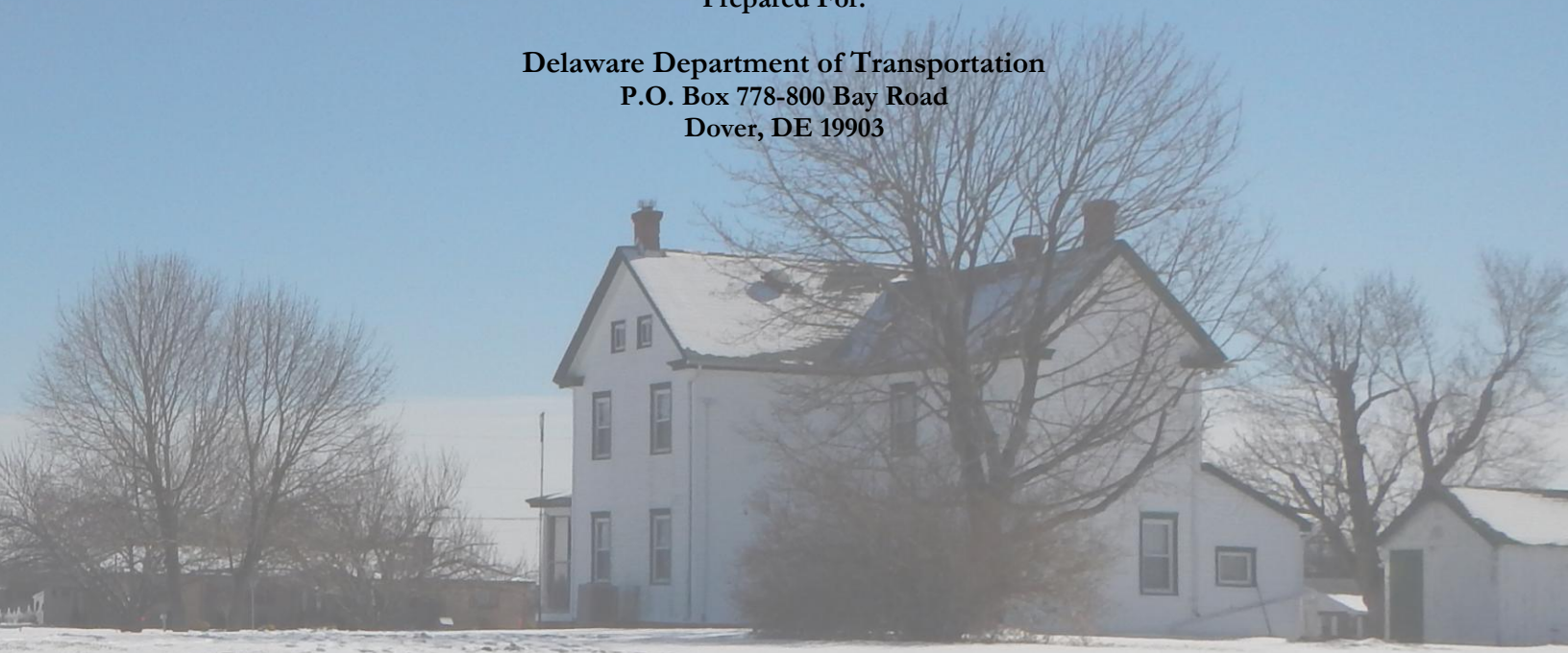
PHASE I ARCHAEOLOGICAL SURVEY, SR 72, MCCOY ROAD TO SR 71 NEW CASTLE COUNTY, DELAWARE



Prepared For:

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Executive Summary

The Delaware Department of Transportation (DelDOT) intends to conduct roadway improvements along a portion of SR 72 (Wrangle Hill Road) extending from SR 71 (Red Lion Road) and McCoy Road south of the town of Bear, New Castle County, Delaware. The project area includes five (5) areas within the project corridor where ground disturbance will occur outside of the roadside Right of Way (ROW). These consisted of five (5) Stormwater Management (SWM) ponds to act as sediment basins during construction and as stormwater runoff catch basins thereafter. One of the areas also includes a section of new roadway connecting Wilson Boulevard to McCoy Road. Work was completed in accordance with Title 7, Chapter 53 of the Delaware Code and Section 106 of the National Historic Preservation Act. The Ottery Group was tasked with completing the Phase I archeological survey as Task 1 under Agreement 1652.

Archeological survey of the SR 72, McCoy Road to SR 71 project area consisted of shovel test pit (STP) excavation within the limits of disturbance for two of the five proposed SWM Ponds, designated Area 1 and Area 2. The remaining three SWM ponds (Areas 3-5) are existing catch basins where planned alterations are limited to areas that were disturbed by the original construction. Disturbances within these areas were noted as part of this survey. A total of 82 STPs were excavated within the project area. Four of the STPs contained domestic artifacts dating to the late 19th-20th century.

One archeological site was recorded by the archeological identification survey. The Wilson Farm archeological site (7NC-G-185) is a light scatter of domestic artifacts that is likely associated with the adjacent to the Wilson Farm architectural site (N-05036). The Wilson Farm house was originally constructed prior to 1849 and burned in the 1930s, when the current structure was built on the earlier foundation. A total of six (6) historic period domestic artifacts were recovered. The artifacts recovered date from the late 19th-20th century. No prehistoric artifacts were recovered during the survey.

No additional archeological investigation of site 7NC-G-185 or for the remainder of the project area are recommended for the proposed SR 72, McCoy Road to SR 71 roadway improvement project.

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1.0 Introduction

The Ottery Group conducted a Phase I (identification-level) archeological survey for proposed roadway improvements to State Route 72 and McCoy Road. The project area consists of five (5) discontinuous areas encompassing approximately 8.7 acres (Figure 1.1). The project area is situated south of the town of Bear, New Castle County, Delaware.

The archeological survey included background research, field investigations, artifact processing, and reporting conforming with *Archeological Survey in Delaware* (HPO 2012). All work was conducted in accordance with the standards of the Secretary of the Interior, as specified in the *Standards and Guidelines for Archaeology and Historic Preservation* (Federal Register, Vol. 48, No. 190, 1983).

Fieldwork was conducted between January 27 and January 29, 2014. Thomas Bodor, RPA, served as Principal Investigator for the project. Karl Franz and Lily Kleppertknoop conducted the fieldwork. Matthew Palus conducted background research. Karl Franz prepared the report with the assistance of Matthew Palus and Lily Kleppertknoop.

The following chapters discuss the environmental and cultural conditions and backgrounds of New Castle County. The report also details the field and laboratory methods as well as the results of the Phase I archaeological survey. The last chapter summarizes the survey work performed and provides a conclusion on the identified cultural resources and future research potential within the SR 72, McCoy Road to SR 71 project area.

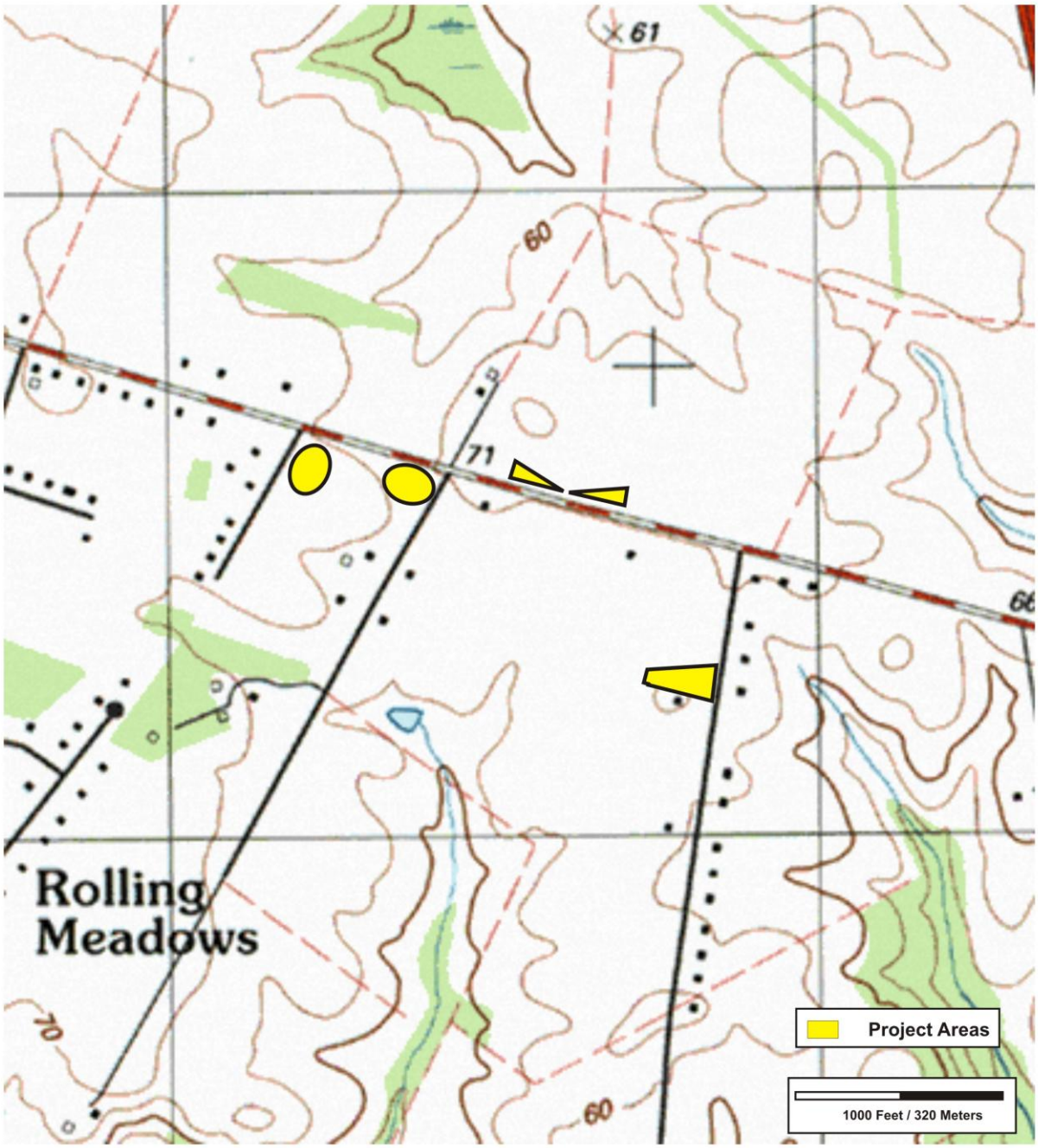

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Figure 1.1:

Location of the Project Area on the 1993 USGS St. Georges DE Quadrangle

2.0 Project Location and Description

2.1 Project Area Description

The DelDOT road improvement project for SR72 extends from SR 71 (western terminus) to McCoy Road (eastern terminus). The archeological survey area falls within the eastern half of the DelDOT project area, extending from Copples Land to McCoy Road. The proposed improvements to SR 72 (Wrangle Hill Road) include widening and drainage improvements as well as the construction of a segment of new road that will connect Wilson Boulevard to McCoy Road.

In general the project area is a mix of 21st century suburban development, with the exception of a few early 20th century farmhouses. Several residential developments are present in the immediate vicinity of the project area, all of which were constructed between 2002 and 2006. Kathleen H. Wilbur Elementary School, which is present at the northeast corner of the project area, was constructed between 2007 and 2008. One early 20th century farmhouse abuts the project area along the proposed new road segment connecting Wilson Boulevard and McCoy Road.

The project area falls within the Mid-Drainage Zone of the High Coastal Plain (Custer 1989). The High Coastal Plain contains erosion resistant coarse gravel deposits creating a generally rolling topography and a mix of well-drained and poorly-drained soils. Topography within the vicinity of the project area consists of generally level terrain, with a southward slope. The nearest water sources are the headwaters of unnamed first order tributaries of Dragon Creek, the closest of which is situated 550 feet to the southeast of the easternmost part of the project area. Dragon Creek runs into an estuary that joins Delaware Bay 5.5 miles east of the project area.

Elevations within the project area range from 61 to 71 feet above mean sea level (AMSL). The NRCS maps three soils present within the project area: Ingleside-Hammonton-Fallsington complex, 0-5% slopes (ImB), Matapeake silt loam 0-2% slopes (MkA), and Matapeake silt loam 2-5% slopes (MkB). Ingleside-Hammonton-Fallsington complex soils vary from well drained to poorly drained soils formed from loamy fluvomarine sediments and are found on flouvomarine terraces, flats, and depressions. Matapeake soils are characterized as well drained soils composed of silty eolian deposits over fluvomarine sediments.

2.2 Project Description

The archeological survey was conducted to determine whether previously unidentified cultural resources were present within areas that would be disturbed by the construction of five (5) SWM ponds and one new road segment (Figures 2.1-2.5). An assessment of the project area was conducted prior to the initiation of fieldwork to determine the likelihood of encountering archeological resources. The archeological assessment examined the documentary record for the project area including historic town maps and historic property inventories to identify locations of historic activity and was used as a basis for developing the testing methodology for each test area individually.

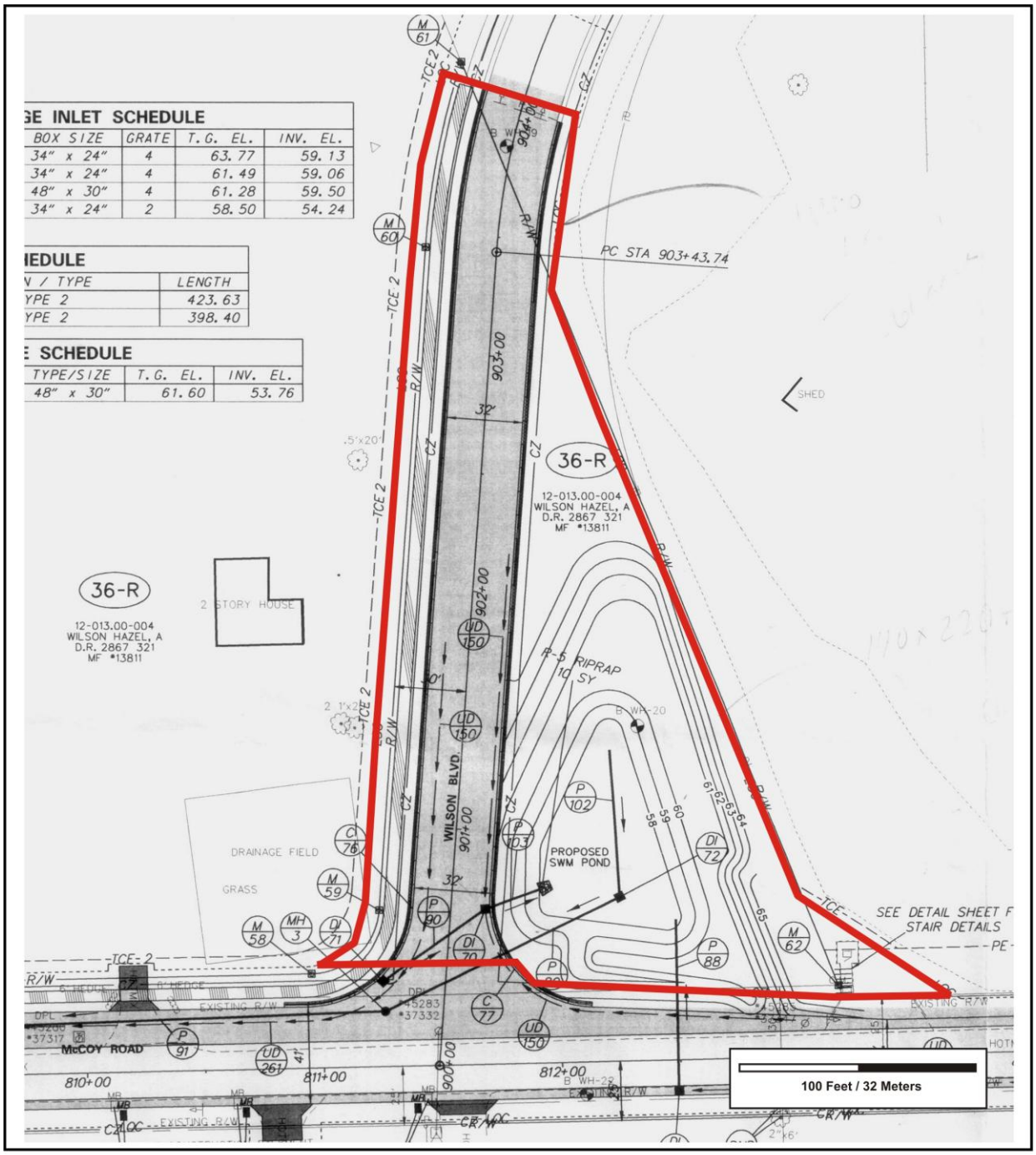

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Figure 2.1:

Test Area 1

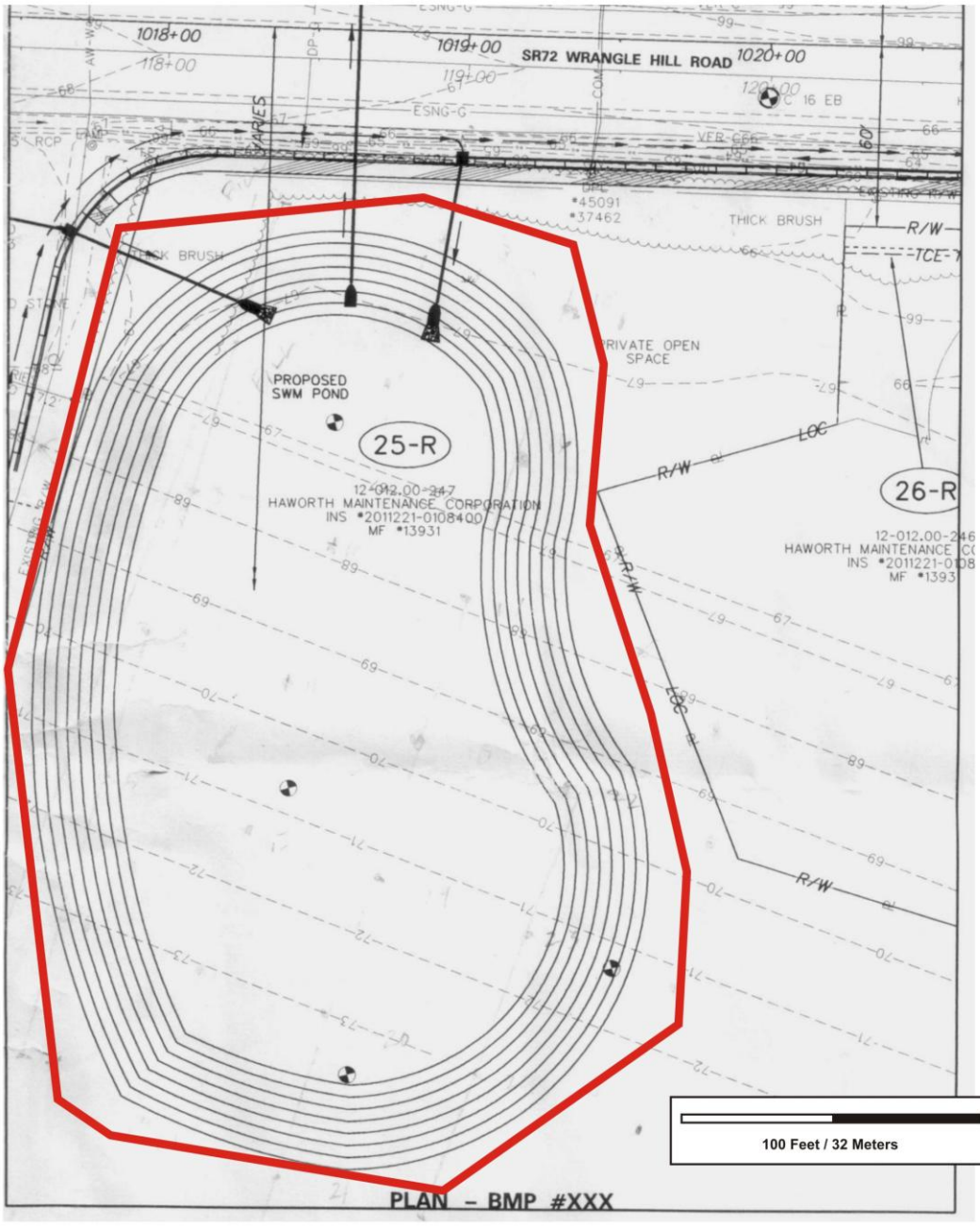

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Figure 2.2:

Test Area 2

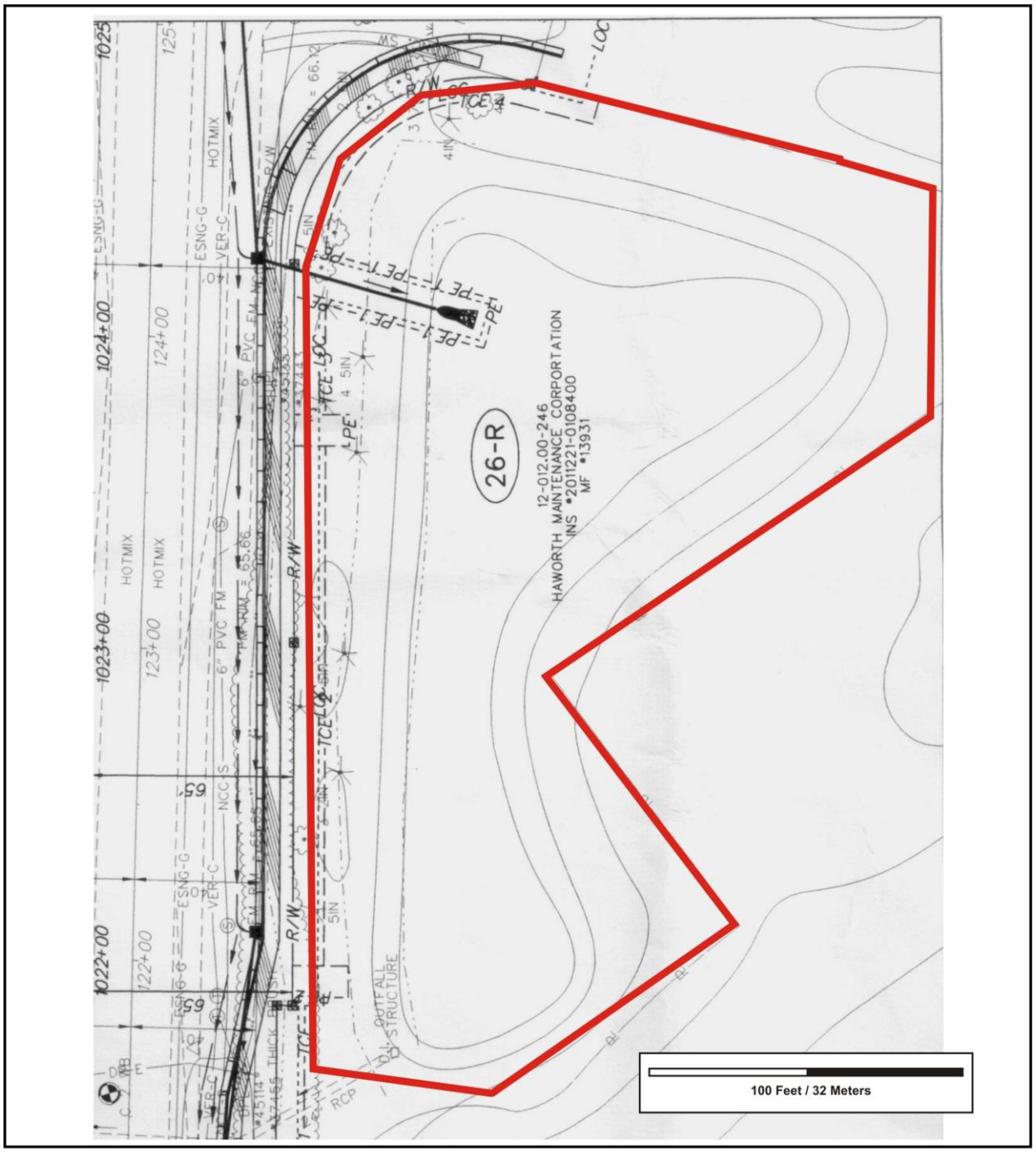

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Figure 2.3:

Test Area 3

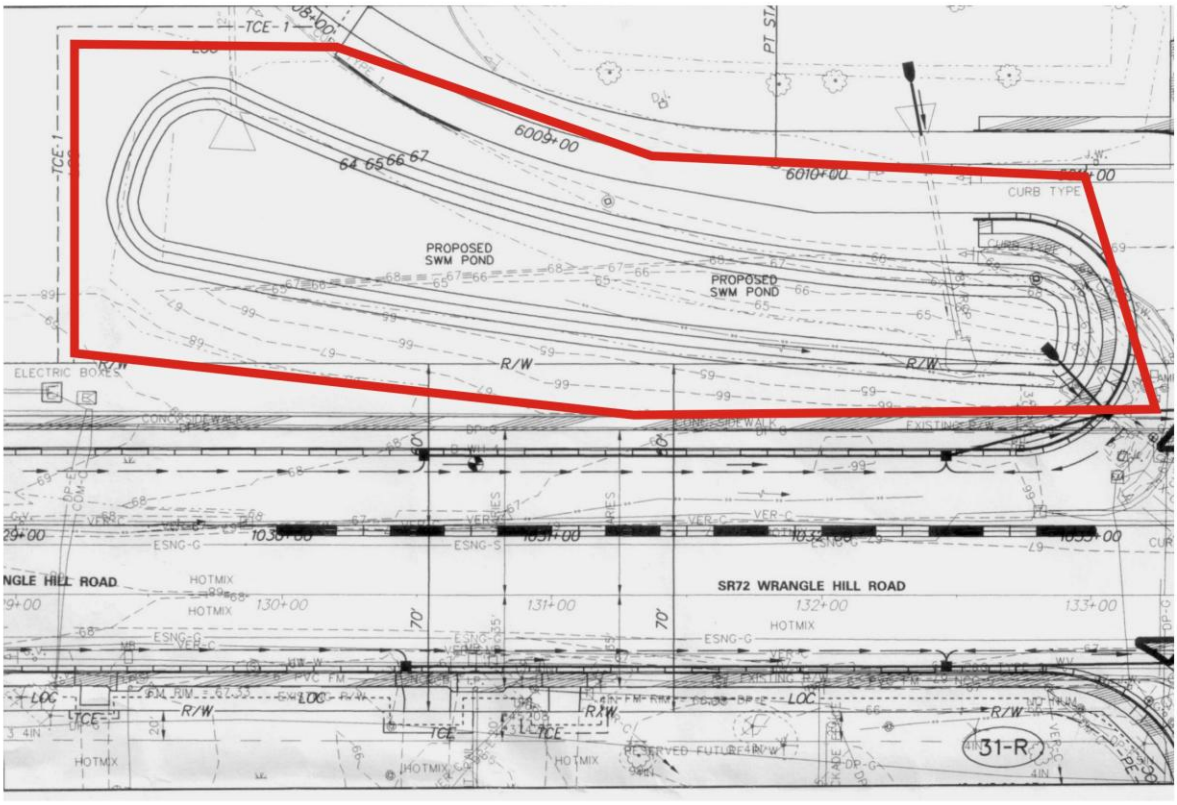

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Figure 2.4:

Test Area 4

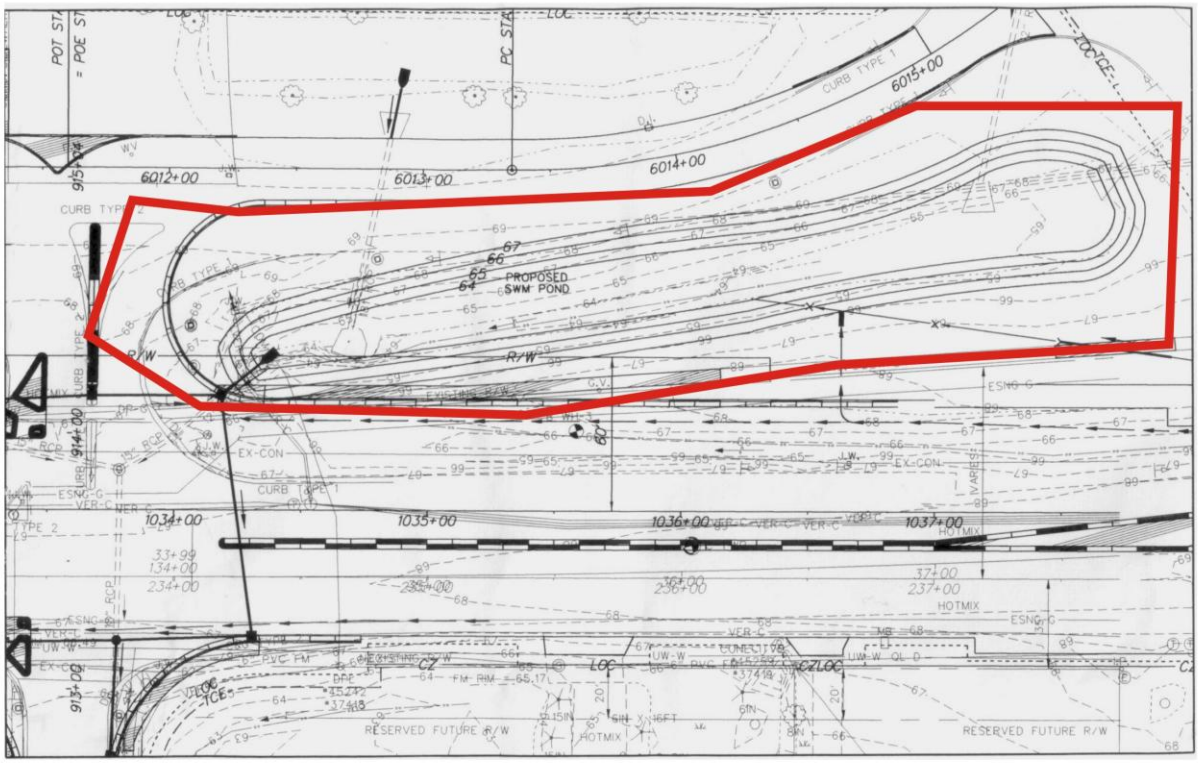

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Figure 2.5:

Test Area 5

3.0 Environmental and Historical Background

3.1 Environmental Context

The natural environment has been an important determinant of settlement and subsistence patterns during prehistoric and historic occupations of the region. Specific environmental characteristics, such as soils and proximity to water, influenced the quantity and variety of resources available to prehistoric peoples (i.e., wild plants, animals, and raw lithic materials for the manufacture of stone tools). In a broader sense, climate effects the distribution of fauna, flora, and the nature and distribution of soils. Climate also influences where people travel or settle and how they exploit natural resources in their surroundings. Throughout the Middle Atlantic region, the locations and types of prehistoric sites are closely correlated with the modern biophysical environment (ca. 3,000 BP-Present) and with paleoenvironments (ca. 12,000-3,000 BP).

3.1.1 Paleo-Climate

The climate of the Middle Atlantic region underwent a series of changes following the retreat of the glaciers at the end of the Pleistocene. An understanding of climatic change is important in understanding the environmental conditions facing prehistoric peoples and how adaptation to these conditions shaped human settlement patterns and subsistence. Climatic episodes defined by Carbone (1976) for the Shenandoah Valley are broadly applicable to the project area. The vegetation history of the project area may be inferred from general vegetation histories of the Middle Atlantic region that have been developed from data provided by fossilized pollen. Plant communities also influence the faunal resources that were available in the past.

The last glacial episode reached its peak at approximately 18,000 B.P. The glaciation occurring at the terminal Pleistocene had profound effects upon the climate of the Middle Atlantic region. The climate during this time was cool and wet; average temperatures were several degrees lower than present (Carbone 1976). Surface runoff from the retreating glaciers and heavy precipitation resulted in numerous upland bogs and poorly drained lowlands (Custer and Wallace 1982). A relatively open forest dominated by spruce and pine was the predominant vegetative cover.

Moist climatic conditions during this episode promoted the development of uplands and increased wetland areas associated with stream drainages. These vegetation communities would have provided unique sets of resources and unique resource distributions for Paleoindian and Archaic populations.

Between 10,000 and 8,500 B.P., the effects of the ice sheet began to diminish. The primary change during this time was the rise in sea levels resulting in the slow inundation of many river valleys. The most pronounced embayment in the Middle Atlantic region occurred with the drowning of the Susquehanna River, which eventually resulted in the formation of what we now call the Chesapeake Bay. This rise in sea level would have affected all tributaries to the Bay, including locations far away from its shores. Possible results of this rise include a cessation of stream incision, a decrease in stream competency that results in an increase in deposition throughout the drainage basin, and an increase in headwater erosion. During this time, seasonality increased and deciduous forests spread. Many Pleistocene fauna became extinct or migrated out of the region altogether.

Between 8,500 and 5,000 B.P., the climate was warmer and more humid (Custer 1984), becoming increasingly warmer and drier, with the warmest and driest period from 5,000 to 4,000 B.P. (Carbone 1976). With increasing deciduous constituents, the resources available to Middle Archaic occupations changed. An increase in nut-bearing trees also might have resulted in an increase in small foraging animals. Anadromous fish increased in number by the end of this climatic episode.

The warmer and drier climatic conditions resulted in the draining of bogs and pocosins, which decreased the number of water sources available across the landscape.

By 5,000 B.P., colder and wetter climatic conditions resulted in the replacement of the oak-hemlock forest community by an oak-pine-hickory community (Custer and Wallace 1982). The period between 5,000 and 3,000 B.P. has been interpreted as a xerothermic climate regime (Carbone 1976), which resulted in fewer lower order streams and a concentration of resources in lowlands (Custer and Wallace 1982). By the end of this climatic episode, climax forests dominated by mixed oak-hickory-pine were established composing a community similar to modern forest communities. The Late Holocene (3,000 B.P. to the present) represents essentially modern climatic conditions, although several climatic perturbations are suggested after the beginning of this period.

3.1.2 Modern Climate, Flora, and Fauna

Today, New Castle County represents a transition zone between humid subtropical climate conditions to the south and humid continental conditions to the north. The average January low temperature is 28 degrees; the average July high temperature is 90 degrees. Average precipitation is 45 inches, approximately 45% of which falls between May and September, although quantities of precipitation vary widely from year to year (ODSC 2014).

3.2 Prehistoric Cultural Sequence

New Castle County, Delaware is located within the Middle Atlantic culture area, which is traditionally defined as extending from the Dismal Swamp of the North Carolina/Virginia border to the Hudson estuary in New York, and from the Appalachian mountains to the Atlantic Ocean.

There are three general prehistoric cultural traditions recognized in the Middle Atlantic region: Paleo-Indian, Archaic, and Woodland. Originally developed as cultural historical units primarily intended to treat temporal and spatial questions, these traditions are defined by diagnostic artifact forms and assemblages. In more recent years, this scheme has been modified to emphasize cultural adaptations to changing ecological conditions. While the various terms continue to be used, their use is now as much behavioral as classificatory.

3.2.1 Paleo-Indian Period (12,000-8,500 BP)

The Paleo-Indian period (ca. 12,000-8,500 BP) represents human occupation and utilization of the lands representing a tundra like environment following the retreat of the Wisconsin glaciers circa 11,000 B.C. (Dent 1995). Classical models of Paleoindian traditions propose a hunting and foraging subsistence pattern focused around extinct megafauna, pursued by highly mobile, opportunistic populations organized as bands composed of multiple family groups.

These models, largely derived from Paleoindian sites identified west of the Appalachian chain, have proved to be not directly applicable to eastern North America, where direct association between Paleoindian artifacts and extinct megafauna has not been identified. There is also material evidence to support the hypothesis that Eastern Paleo-Indian populations exploited of a wider range of resources, perhaps most notably the findings at the Shawnee-Minisink site along the Delaware River in the Upper Delaware Valley (McNett 1985). Thus, Paleo-Indian populations were mobile, frequently changing location throughout the year within a territory in order to utilize available resources. Gardner's research at the Flint Run Complex in Virginia (Gardner 1974, 1977, 1979) has identified several types of sites organized around the base camp, which was the main focus of habitation by aggregate bands. Base camps tend to have heterogeneous artifact assemblages, in contrast to smaller special purpose sites that were occupied by smaller groups for shorter periods of

time to make use of seasonally available resources. Base camps were tied to quarry sites where high-quality cryptocrystalline lithic materials were extracted for stone tool manufacture (Gardner 1977, Goodyear 1979). Gardner (1974) and others (Witthoft 1953) have also proposed that upland settings were utilized as they offered a vantage point from which to observe migrating animals. Smaller camps and special use sites radiate from the base camps in varying distances.

Gardner (1974) notes that Paleo-Indians placed an emphasis on hunting, although it is most likely that exploitation of available floral resources were also a critical component of Paleo-Indian subsistence strategies. In many areas, Paleo-Indian sites are associated with large Pleistocene megafauna such as mammoth and mastodon, however, Gardner (1980) notes that the hunting economy probably focused on deer, elk, and possibly caribou. Diagnostic projectile point forms include (from earliest to latest) Clovis, Mid-Paleo, and Dalton-Hardaway. In New Castle County, Paleo-Indian occupations are poorly documented, and are generally represented through isolated finds or in mixed assemblages.

3.2.2 Archaic Period (8,500-5,000 B.P.)

The Archaic period (6,500-3,000 B.P.) in the eastern United States generally refers to pre-ceramic sites associated with wide scale, seasonal foraging across various environmental zones that occupied the emerging Holocene deciduous forests. This was considered distinct from the Paleo-Indian period that was characterized by highly mobile hunters reliant on big game for their livelihood. Warmer and wetter climatic conditions at the onset of the Holocene resulted in the disappearance of grasslands and the expansion of mesic forests comprised of oak and hemlock. These woods led to the increase of browsing animals, such as deer and turkey, which in turn served as a hunted resource. Sea levels rose during this period as the glaciers melted; this rise caused lowland flooding and the inundation of river systems, which sped the development of complex estuary system. This increase in swampy environments created favorable conditions for the growth of new floral and faunal resources that favored the new environment. As the climate grew warmer and plant and animal resources began to inhabit larger areas, human occupation spread into new ecological settings, and as a result, Archaic period sites are found in a much broader range of topographic settings. Settlement patterns were seasonally oriented, and groups were still semi-nomadic, with a subsistence base focused on hunting and gathering. Research over the last two decades has revealed that the transition between the Paleo-Indian and Archaic was not as great as previously thought. The transition to the Archaic appears to have been more gradual and characterized by exploitation of an increasingly broad range of local resources and decreasing mobility.

Early in the Archaic period, there appears a continuation of the earlier Paleo-Indian lifeways, with an emphasis on the use of cryptocrystalline lithic materials for tool making. Lithic technology, however, shifted to a variety of corner-notched types, including Palmer and Kirk, as well as bifurcate-base types such as Lecroy. This shift in projectile point form may indicate diversification within the system of production, as economies shifted from a concentration on hunting deer and other large game to more diverse faunal exploitative patterns focused on smaller game and increase in the use of plants as a food source. Archaic toolkits include a number of tools indicative of plant food processing, grinding stones, net sinkers, and stone mortars. There evolved less emphasis is placed upon high-quality cryptocrystalline stone, suggesting that the settlement system based on quarry-related base camps became less important.

The focus of settlement is at seasonally occupied base camps located on the floodplains of major drainages where seed plants could be exploited. Hunting and limited-use sites are located in the uplands, along lower-order streams and near lithic sources, and adjacent to interior swamps and swampy floodplains of low order drainages.

The Late Archaic sub-period (5,000-3,000 B.P.) is characterized by cultures that made efficient use of their local environments, and as a result, there is an increased degree of regional distinction that is visible in the archeological record. During this time semi-sedentary settlement systems expanded, possibly as a result of greater aridity that tethered groups to critical resources, or an increase in population that resulted in territorial circumscription. Increased use of riverine and estuarine resources is evident. The development of estuaries throughout the Coastal Plain from the continued rise in sea levels resulted in the increased distribution of crabs and oysters and extensive seasonal runs of anadromous fish. Steatite bowls are introduced into the technology inventory. The majority of projectile points representative of this time period consist of side-notched and stemmed varieties, which are typically manufactured from quartz.

The Late Archaic represents the culmination of what Caldwell (1958) termed primary forest efficiency. Caldwell stressed the variety and availability of food sources in the eastern forests, and stressed that prehistoric groups could move seasonally to maximize resource acquisition. Thus, in the eastern United States in general, Late Archaic groups are seen as mobile hunting and gathering peoples who exploited seasonal resources and scheduled their movements accordingly. In parts of the Middle Atlantic region, the Late Archaic period also is associated with large bivalve middens. Scattered campsites focused on major rivers appear to form a major element within the settlement pattern; short-term campsites in upland zones along small streams have also been documented.

Culturally diagnostic artifacts for this period include the Savannah River and Susquehanna Broadspear projectile point types, which appear to be represented in different frequencies above and below the Fall Line separating the Piedmont and Coastal Plain. The presence of steatite bowls in assemblages is also a diagnostic artifact of this period.

3.2.3 Woodland I (5,000 B.P. to 1,000 B.P.)

In North American archaeology, the Woodland period is traditionally defined (in neoevolutionary terms) as a "stage" of precontact sociocultural development marked by the appearance of; ceramic manufacturing and the use of domesticated plants (Willey and Sabloff 1980). The Woodland I period was defined originally in the 1930s by the appearance of ceramics, maize agriculture, and sedentary villages. At the time, it was believed that ceramics, food production, and sedentary village life were mutually inclusive. Research over the last few decades, however, has revealed that the transition between the Archaic and Woodland were not as great as previously thought. Witthoft (1953) has defined a Transitional Period linking the Archaic and the Woodland periods that was restricted in appellation to the cultural sequences of the northeastern and Middle Atlantic regions of the United States. Custer (1989; Custer and Wallace 1982) considers the Late Archaic through Middle Woodland as a related continuum.

The Woodland I period in the greater Mid-Atlantic is frequently characterized as a period of presumed increased sedentism and a gradual shift toward the exploration of domesticated cultigens (maize, beans, and squash) together with wild grasses. The Woodland I period data do suggest a greater use of aquatic resources and it is during this period that large macroband base camps were presumably occupied on a year round basis (Custer 1989). Storage pits and evidence of house structures are first found during this period. A microband base camp is the predominant site type identified along river floodplains and estuarine marshes. Small procurement camps are found along streams and adjacent to bay/basin features.

The increased productivity of coastal and estuarine resources resulted from the stabilization of sea levels; marshes developed and estuarine areas rapidly became places on the landscape in which fish,

waterfowl, and shellfish could be easily exploited. Floodplains are increasingly the focus of plant harvesting including amaranth and chenopodium.

Woodland I technology included two sets of diagnostics. The first is a series of projectile points, typified by fishtail and by contracting stemmed varieties. The wide distribution of non-local lithic materials suggests the development of long-distance exchange networks. It might also represent boarder local interaction among groups who had access to these sources or access to groups with direct access to these non-local sources. The second set of diagnostics is ceramics. Characteristic ceramics of the period include steatite-tempered Marcey Creek and Selden Island types, and sand-tempered Accokeek ceramics (Stewart 1982:70).

Villages grew in size and became more permanent as increase social complexity is believed to be evident (Custer 1989). Handsman and McNett (1974:26) have suggested that there was a greater reliance on horticulture resulting from an increasing population as well as the development of ranked societies during this time. Diagnostic artifacts include Popes Creek ceramics that are more frequent in the Coastal Plain as well as shell-tempered Mockley wares (Stewart 1982:76). Evidence for this change presumably comes in the form of non-local grave goods that may indicate mortuary ceremonies, which were being practiced in central Delaware beginning around 500 B.C. and ending around 0 B.C. Known as the Delmarva Adena, this culture period is hallmarked by raw materials and finished items similar to those used by Ohio Valley Adena groups (Custer 1984). The settlement and subsistence patterns 2,000 to 1,000 years ago (in the later Woodland I period) are inferred to have been similar to the earlier Woodland I times.

3.2.4 Woodland II (1,000 BC to 400 B.P.)

Woodland II adaptations include the more intensified use and storage of plant foods and this period is associated with the first appearance of the "three sisters" (i.e., maize, beans, and squash) in the Middle Atlantic region. Other changes that purportedly mark the Late Woodland period in the greater Delaware Valley include a change in lithic technology with the disappearance of a formal biface industry and use of cobbles for tool manufacture, as well as changes in ceramic production and decoration. During the Woodland II period there appears to be an increase in population in certain areas, with more sedentism in places due to reliance on locally available plants and marine resources such as shellfish. Ranking of society and inter-regional interaction of social groups is noted, but these social processes do not necessarily increase in intensity compared to Woodland I practices. Changes in stone tools come are noted by the presence of triangular points in the tool kit, which are thought to be the product of the introduction of the bow and arrow.

Large, permanent villages were located on the floodplains of major rivers. By A.D. 1,350, there is evidence of stockaded villages, suggesting extensive warfare throughout the Middle Atlantic region. Shell-tempered Townsend series ceramics are predominant in Late Woodland assemblages, while crushed-rock-tempered Potomac Creek wares are prevalent in the Inner Coastal Plain to the Fall Line zone. In the Piedmont, a different set of ceramics developed, with influence from the Ohio Valley cultures. These include crushed quartz, crushed chert, limestone, and sand/grit tempered wares such as Clemson Island, Shepard, Page, Keyser, Monongahela, and Munsee Incised (Stewart 1982: 85).

In the lower Delaware River drainage, the emergence of sedentary (or semi-sedentary) villages and food production began to appear by A.D. 1000, but cultigens appear to have supplemented rather than supplanted wild plant gathering and hunting, and "few, if any, Woodland II groups ever became fulltime farmers" along the lower Delaware River and Delaware Bay (Custer 1984:147).

3.2.5 Contact Period (400 B.P.)

The Contact period in Delaware was marked by the establishment of European settlements, initially occurring along the Delaware River and then later more generally in the hinterland of the Delmarva Peninsula. This precipitated a major disruption in the lives of the Native Americans already living on the peninsula. European demand for furs affected the indigenous economy; metal and other European goods displaced stone and other traditional materials. After contact with European settlers, the traditional lifeways were disrupted. European settlement rapidly led to the nearly complete elimination of Native American groups in the Middle Atlantic region. Settlement and subsistence of historic Native Americans at the time of contact were most likely a continuation of patterns observed in the Late Woodland period.

At the time of European arrival into Delaware, the coastal areas were inhabited by the Algonquian speaking groups, most notably the Lenape and Nanticoke. Algonquian speaking groups occupied much of the land on both sides of the Potomac River up to the Fall Line. Jennings (1978) claims that the Susquehannocks were primarily located north of New Castle County although they proved significant during the early colonial period. However, as European settlements began encroaching into former Indian lands, many of these original inhabitants left the area or were ravaged by diseases for which they had no resistance.

3.3 Regional Historical Context

Historic period development in Delaware has been broken down into five thematic subcategories that are indicative of the varying economic and settlement trends that showcase the growth and development of the state. These include: Exploration and Frontier Settlement (1630-1730), Intensified Occupation (1730-1780), Early Industrialization (1780-1830), Industrialization and Early Urbanization (1830-1880), and Urbanization and Early Suburbanization (1880-1940).

3.3.1 Exploration and Frontier Settlement (1630-1730)

Exploration of Delaware Bay and the Delaware River were undertaken as early as 1609. Early settlement attempts in Delaware were not initiated until the 1630s by the Swedish and Dutch. The first permanent settlements were Zwanendael, a Dutch colony in southern Delaware started in 1631 and Fort Christiana, a Swedish settlement started in 1638. Incursions between the Swedish and Dutch resulted in the Swedish abandonment of colonial interests in Delaware by 1655. Subsequent to the second Anglo-Dutch War (1665-1667), England gained control of colonial settlement in North America. During the period of 1669-1672, the southern half of Delaware was claimed by Calvert as part of the colony of Maryland, where it was known as Durham County, and land patents were issued. At the same time, the Duke of York claimed authority over Delaware as part of New York, and responded by issuing patents of its own. The Whorekill Raids of 1672 involved a series of skirmishes between Maryland and New York over control of the Whorekill settlement in Delaware, near present-day Lewes. The dispute continued until 1681, when Delaware was issued to William Penn (Richter 2013).

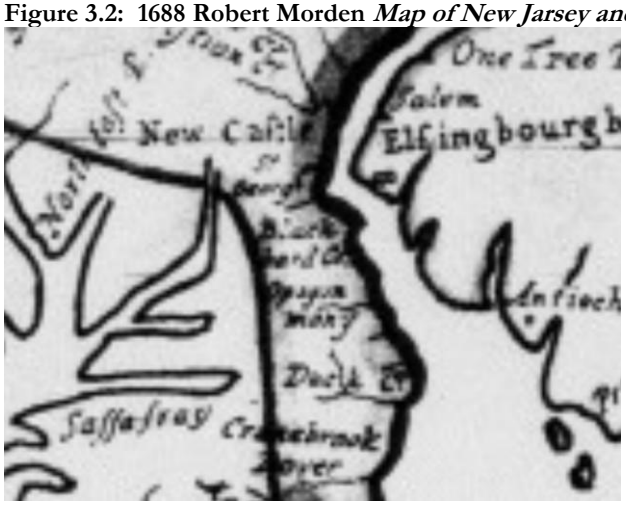
During the early colonial period, initial settlement was limited to the banks of Delaware Bay and up along the Delaware River. This is primarily a result of the lack of navigable waterways leading to the interior of the state. It was not until William Penn owned Delaware that population began to increase, primarily through large holdings patented to Maryland and Virginia plantation owners. While Penn originally attempted to legislate Pennsylvania and Delaware as a single colonial entity, the differing interests of the Piedmont Pennsylvanians and the Coastal Delawareans ultimately resulted in separate assemblies (Richter 2013).

By the beginning of the 18th century, production had begun to transition from tobacco to wheat, for export from commercial centers at New Castle and Philadelphia.

The earliest map that shows the vicinity of the project area is the 1673 Augustine Herrmann *Virginia and Maryland*, which shows the community of Red Lion (Figure 3.1). The map attributes the territory as part of the colony of Maryland. On the 1688 Robert Morden Map of New Jarsey and Pensilvania, Red Lion does not appear, but St George does (Figure 3.2).

Figure 3.1: 1673 Augustine Herrmann *Virginia and Maryland*

Figure 3.2: 1688 Robert Morden *Map of New Jarsey and Pensilvania*



3.3.2 Intensified Occupation (1730-1780)

During the mid-18th century, Delaware saw moderate population increase but little in the way of major population centers. New Castle and Lewes continued to be the most populous towns, with Wilmington becoming more prominent. The primary economy was agriculturally based. The lack of topographical relief in southern and central Delaware limited the potential for water powered industry such as milling and iron forges. These industries were introduced in the northern part of Delaware in the vicinity of the Fall Line, where fast water was to be found. During this period, the majority of traffic was conducted by water. The low and boggy terrain in the lower part of the territory made overland travel arduous and the upkeep of roadways difficult (Scharf 1888).

Roadways were introduced as early as the 1730s when an overland route between New Castle and Lewes approximating the course of modern Route 13 was initiated. This was later improved in 1762 as King's Highway.

3.3.3 Early Industrialization (1780-1830)

During the American Revolution, economic change was forced upon Delaware, as well as the rest of the colonies. The lack of access to English trade goods, as well as the loss of the primary market for exported grains, spurred the development of local production beyond the agricultural. This was combined with a decrease in crop yields due to soil deflation.

As population continued to increase, there was a disparity in the location of settlement. The majority of the population increase took place in the northern tip of Delaware. This was in part due to the growth of industry that was available along the Fall Line.

The Chesapeake and Delaware Canal was opened in 1829, representing Delaware's sole participation in the canal boom that predated the introduction of the railroad. The canal connected Delaware Bay to the upper Chesapeake Bay, creating a new town, Delaware City, at the eastern terminus. This provided a navigable waterway to north central Delaware that was previously lacking. Improved roadways and new construction opened previously underutilized central Delaware for agricultural development. The rise of scientific farming in newly opened farmland had the benefit of increased crop yields due to techniques that caused less damage to soil productivity.

3.3.4 Industrialization and Early Urbanization (1830-1880)

The transportation revolution that began with the opening of the Chesapeake and Delaware canal reached new heights with the opening of the Philadelphia, Wilmington, and Baltimore Railroad in 1839. By the 1860s the Pennsylvania and Delaware Railroad expanded through central Delaware connecting Delaware City to Wilmington. The railroads effected population increase in ways that the canals could not. Land speculation led to the creation of towns along the railroad routes. The railroads opened the farmland of Delaware to urban centers of Philadelphia, New York, and Baltimore. The expanded trade routes allowed for focused production on perishable crops that would not otherwise be feasible. During this period, Delaware became the country's largest producer of peaches. This continued until the 1870s when blight decimated the crops.

During this period, county level mapping surveys were undertaken, including current roadways and the location of structures and landowners. The vicinity of the project area consists of small towns at crossroads and farms of 100-400 acres in size outside of the towns. Figures 3.3 to 3.5 show the development of the vicinity of the project area, with the town of Bowersville to the west and Wrangle Hill Road in its present location. By 1881 McCoy Road and Sunnyside Lane appear on the maps. A property owned by *T. Bellville* appears on both the 1849, 1868, and 1881 maps, immediately adjacent to Area 1.

3.3.5 Urbanization and Early Suburbanization (1880-1940)

Following the expansion of the railroad into central and southern Delaware, the development of rural Delaware increased, primarily in the growth of small towns. The size of farms began to decrease as parcels were sold off or tenanted. A significant population increase took place in the urban areas in the north of the state. By 1900, approximately 41% of the population of Delaware lived in Wilmington. By 1950 this would increase to over 50%.

Figure 3.3: Location of the Project Area on the 1849 Rea and Price *Map of New Castle County, Delaware*

Figure 3.4: Location of the Project Area on the 1868 D.G. Beers Atlas Map of New Castle County, Delaware

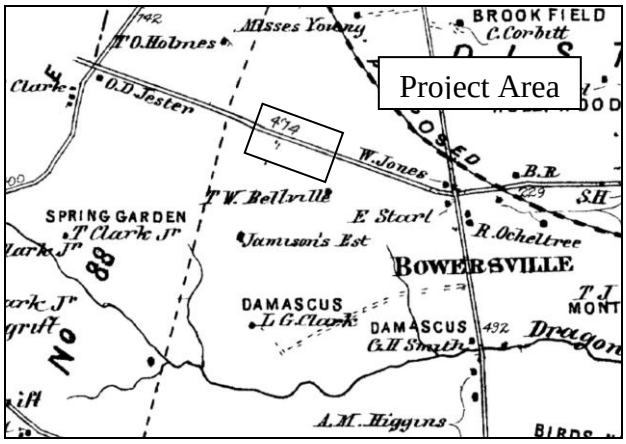
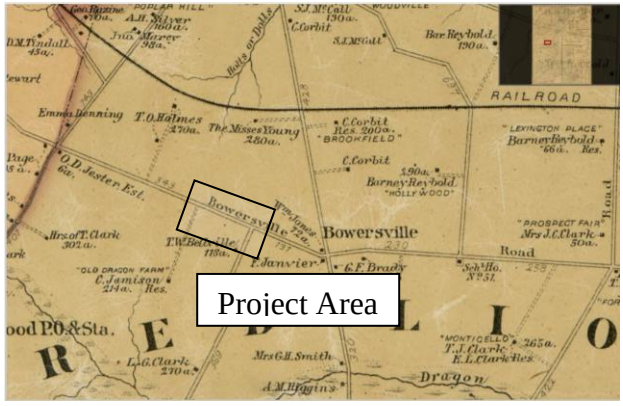


Figure 3.5: Location of the Project Area on the 1881 G.M. Hopkins *Map of New Castle County, Delaware*



In the 1880s, developments in food preservation led to the creation of an industry for the canning of vegetables, oysters, and fish. Following the collapse of the peach industry, dairy and poultry production became staples of the rural farm.

3.3.6 Post War Suburbanization (1940-present)

During the mid 20th century, the vicinity of the project area retained the same rural character that it had in the 1860s. Aerial photographs from 1937, 1954, and 1968 not only show little increase in development, but show nearly identical land use including the layout of individual fields (Figure 3.6-3.9).

Figure 3.6: Location of Test Areas 1-5 on the 1937 Aerial Photograph

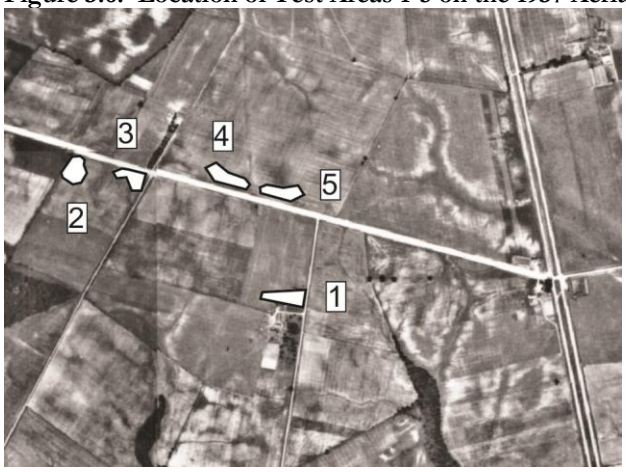


Figure 3.7: Location of Test Areas 1-5 on the 1954 Aerial Photograph

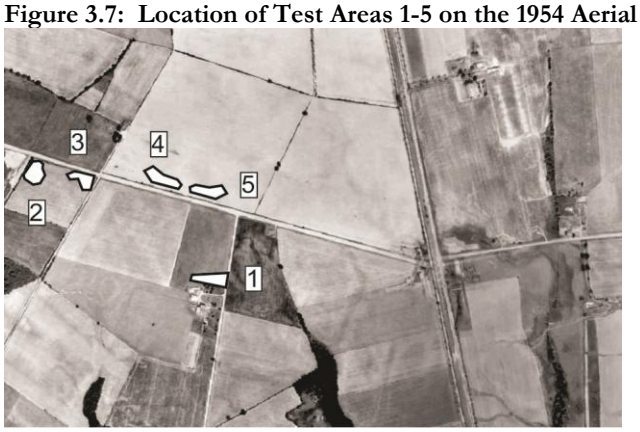
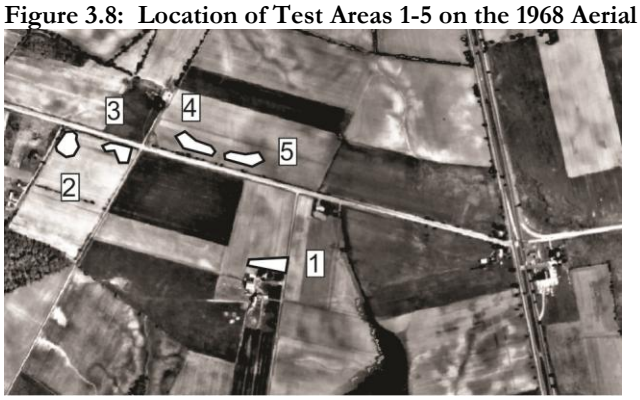


Figure 3.8: Location of Test Areas 1-5 on the 1968 Aerial Photograph



While development in the vicinity of the project area increased during the 1980s, real change did not occur until the turn of the 21st century (Figure 3.9). Beginning in 1997 with the construction of Route 1, suburban expansion proceeded rapidly (Figure 3.10). Between 2002 and 2007, several residential developments appear in the area, followed by the construction of a large elementary school (3.11-3.13).

Figure 3.9: Location of Test Areas 1-5 on the 1992 Aerial Photograph

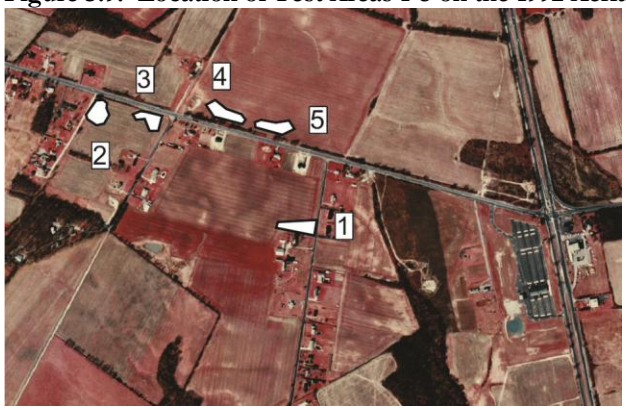


Figure 3.10: Location of Test Areas 1-5 on the 1997 Aerial Photograph

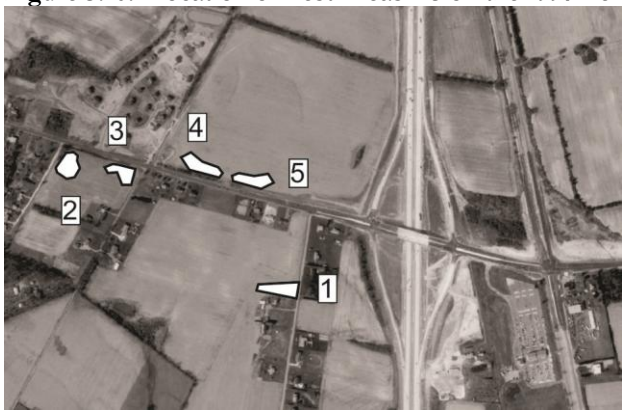


Figure 3.11: Location of Test Areas 1-5 on the 2002 Aerial Photograph

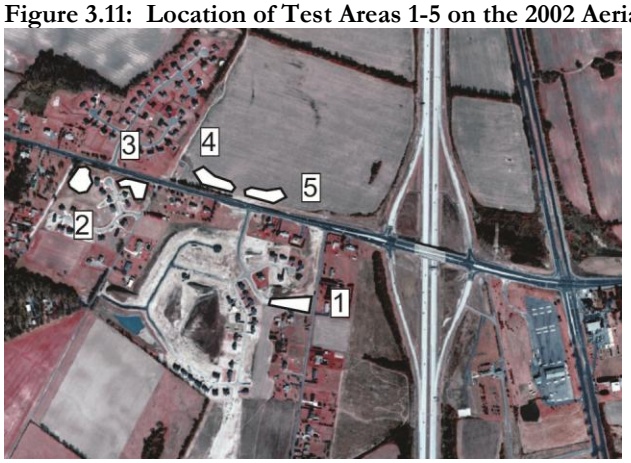


Figure 3.12: Location of Test Areas 1-5 on the 2006 Aerial Photograph

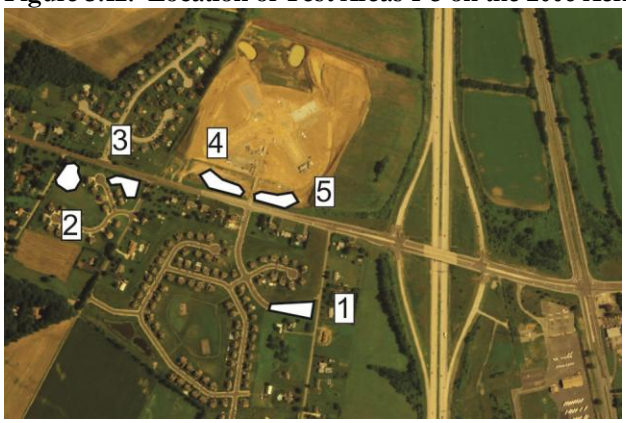
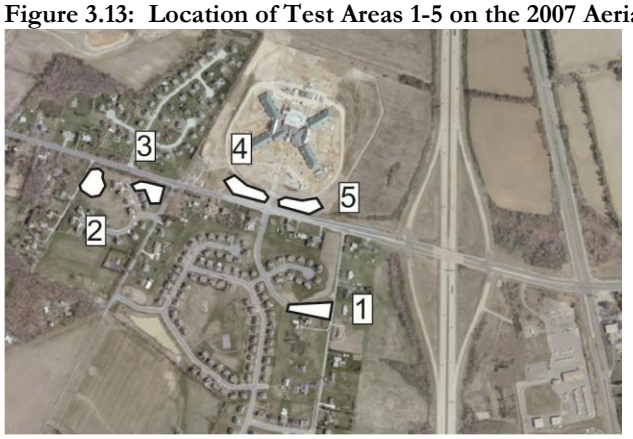


Figure 3.13: Location of Test Areas 1-5 on the 2007 Aerial Photograph



3.4 Local and Tract History

The project area consists of five areas of construction impacts that fall outside of the DelDOT right-of-way.

3.4.1 Area 1

This area crosses a five-acre property associated with a larger, approximately 120-acre historic farm dating to at least the mid-19th century. The existing structure at 1863 McCoy Road (N-05036) was evaluated during a 2013 architectural survey completed by The Louis Berger Group, Inc. (LBG 2013), associated with the widening of DE Route 1. Berger's summary of existing research indicates that the present structure is built upon a stone foundation associated with an earlier farmhouse that burned early in the 20th century. The earlier farmhouse is present on a series of historic maps extending to the mid-19th century. The Bellville family is indicated as owner on the 1849 Rea and Price map of New Castle County, the 1868 Beers map, and an 1881 G. M. Hopkins map.

Deed research could be extended as early as 1799 with the acquisition of approximately 114 acres of land from an unknown person by John Watson, who died intestate. In 1821 John Watson's heirs, who resided in Bourbon County, Kentucky, and also two individuals named James and Elizabeth Magee, who may have been appointed as trustees for John Watson's estate in New Castle County,

sold an approximately 112-acre tract of land to Thomas Belville. This tract encompassed Area 1 of the current study. An elder Thomas Belville appears in the index to New Castle County deed books during the early 19th century, and his last will and testament was filed with the county in 1819. The younger Thomas Belville had a son and heir, who was named Thomas W. Belville, and who increased this Belville landholding to 121 acres in 1860. The property passed out of the Bellville family in 1885 following Thomas W. Belville's death.

The title histories of Areas 1, 2 and 3 converge early in the 20th century, when in 1936 the former Belville property – still encompassing 120 acres – was transferred to the St. George's Trust Company and thereafter subdivided. A parcel slightly larger than five acres has been passed down through the family of William D. Wilson and his wife Pearla M. Wilson, whose descendents still own the farmhouse and property.

Table 3.1: Deed History for Area 1

Liber	Folio	Grantor	Grantee	Date	Acreage
2867	321	Wilson, Raymond P., and Hazel A.	Wilson, Hazel A.	7/24/2000	5.04
1977	183	Wilson, Raymond P., and Hazel A.	Wilson, Raymond P., and Hazel A.	9/7/1995	5.04
1246	160	Wilson, Pearla M., and Raymond P.	Wilson, Raymond P., and Hazel A.	10/18/1991	5.04
Y87	725	Wilson, Pearla M., and Raymond P.	Wilson, Pearla M., and Raymond P.	6/30/1973	5.04
Y87	725	Wilson, William D., and Pearla M.	Wilson, Pearla M., and Raymond P.	6/29/1973	5.04
Y87	725	Wilson, Pearla M., and William D.	Wilson, William D., and Pearla M.	6/28/1973	5.04
F40	111	St. George's Trust Company	Wilson, Pearla M., and William D.	11/30/1936	120
E40	72	William B. Lester	St. Georges Trust Company	11/9/1936	120
P19	556	Martha D. Dolbey	William B. Lester	10/12/1903	120
E18	437	John E. Taylor, Sherrif	Martha D. Dolbey	2/15/1900	121
M13	143	William M. Stuckert, Administrator of Thomas W. Belville	Miles Clark	11/28/1885	ca. 121
M7	129	Sarah Belville, John P. Belville and Mary B. his wife, Isaac V. Clark and Sarah R. his wife, and Curtis B. Ellis and Margaret E. his wife	Thomas W. Belville	6/23/1860	ca. 121
S6	300	Isaac V. Clark, Sarah E. Clark	Thomas W. Belville	3/8/1855	112
1819 Will of Thomas Belville		Thomas Belville (deceased)	Sarah Belville	3/12/1823	112
X3	306	Samuel Watson, Ilai (Ilia?) Nunn and Jamima Nunn (nee Jamima Watson), land inherited through father John Watson	Thomas Belville	1/23/1821	112
?	?	?	John Watson, or James and Elizabeth Magee	3/6/1799	ca. 114

3.4.2 Area 2

This construction site falls within a subdivision with homes that appear freshly completed in a 2002 aerial photograph available from the Delaware Environmental Monitoring and Analysis Center (DEMAC). Prior to this the land appears to be undeveloped farmland.

Table 3.2: Deed History for Area 2

Liber	Folio	Grantor	Grantee	Date	Acreage
Instrument 200112210108400		Haworth Land Development LLC	Haworth Maintenance Corporation	10/30/01	3.01
2711	264	Barlow, Roger L., and Sally S.	Haworth Land Development LLC	9/15/99	3.01
S114	103	Frank H. Moody, Jr. and Ruth J. Moody	Barlow, Roger L., and Sally S.	5/1/81	11.0?
M46	333	Clyde D. Austin	Frank H. Moody, Jr., and Ruth J. Moody	9/30/46	27
D40	205	Clyde A. Reburn	Clyde D. Austin and Mabel M. Austin	11/18/36	
This property was part of the Belville property during the 19th century and prior to 1936 the title history for Area 2 merges with that of Area 1.					

3.4.3 Area 3

There is a road in the approximate location of Sunnyside Lane depicted on the 1868 Beers map, and on the 1881 G.M. Hopkins map, which accessed property of C. Jamison, who owned 214 acres on a tributary of Dragon Creek, well south of the current project area. No development is depicted on either of these maps at the intersection of this road with SR 72. The present subdivision appears to be under construction in a 2002 aerial photograph.

Table 3.3: Deed History for Area 3

Liber	Folio	Grantor	Grantee	Date	Acreage
Instrument 200607190068767		Haworth Land Development LLC	Haworth Maintenance Corporation	10/30/01	1.39
2711	264	Barlow, Roger L., and Sally S.	Haworth Land Development LLC	9/15/99	1.39
S114	103	Frank M. Moody and Ruth J. Moody	Barlow, Roger L., and Sally S.	5/13/81	1.39
M46	333	Clyde Austin	Frank M. Moody and Ruth J. Moody	9/30/46	1.39
D40	205	Clyde A. Reburn	Clyde D. Austin and Mabel M. Austin	11/18/36	
This property was part of the Belville property during the 19th century and prior to 1936 the title history for Area 3 merges with that of Area 1.					

3.4.4 Areas 4 and 5

The tract history for Areas 4 and 5, where Kathleen H. Wilbur Elementary School now stands, appears to reflect the history of ownership of the Delaware City Refinery, west of the current project area and north of Delaware City. Title research for this parcel identified a series of recent

transactions in which the ca. 50-acre property where this elementary school was constructed after 2006 was included in a larger sale of land including numerous parcels located further west on Wrangle Hill Road adjacent to River Road (SR 9). These sales of large, discontinuous properties corresponds to the shifting ownership of the Delaware City Refinery.

A chain of title was extended to 1988, the year in which the Delaware City Refinery was purchased from Texaco Refining and Marketing, Inc. by STAR Enterprises, a corporation associated with Saudi Aramco, or the Saudi Arabian Oil Company, the energy giant historically connected with Standard Oil of California. Successive owners Motiva Enterprises and the Premcor Refining Group acquired the land at Wilbur Elementary via the same deed instruments granting them ownership of the refinery, and it is reasonable to project this back to the mid-20th century and the earliest interests in the oil refinery, which was built starting in 1956 under a division of the Tidewater Associated Oil Company, later controlled by the Getty Oil Company.

The title chain for the property containing Areas 4 and 5 quickly becomes muddled amidst these complicated transactions involving lengthy deeds and other documents, which really represent a series of corporate mergers or takeovers. Throughout these proceedings the parcel of land now containing Wilbur Elementary was held undeveloped, perhaps speculatively or with an eye on future expansion of the refinery's facilities. It is only anticipated that the property has descended through the ownership of Tidewater Oil and Getty starting in the mid-20th century, and the earlier history of the property is not known. Ostensibly the land saw agricultural uses as did much of the land in this portion of Red Lion Hundred.

Table 3.4: Deed History for Areas 4 and 5

Liber	Folio	Grantor	Grantee	Date	Acreage
Instrument 200405030049043		Premcor Refining Group LLC	Colonial School District	6/30/2006	49.19
20040503	49043	Motiva Enterprises, LLC	Premcor Refining Group LLC	4/30/2004	20040503
2567	286	Star Enterprise	Motiva Enterprises, LLC	10/1/1998	2567
814	314	Texaco Refining and Marketing, Inc.	STAR Enterprise	12/31/1988	814

3.5 Previously Identified Cultural Resources

A search of the records at the Delaware Historic Preservation Office in Dover determined that the project area had not been the subject of prior archeological testing and that no previously identified archeological sites had been recorded there. A total of seven (7) archeological surveys have been conducted within one mile of the project area. The majority of the surveys were conducted for the construction of State Route 1/13 (UDCAR 1989, 1994, 1995a, 1995b). The remaining surveys were conducted for a proposed water line (MAAR 1990), a natural gas pipeline (E&A 2005), and the construction of a DMV (Versar 2012). These archeological surveys resulted in the identification of seven (7) archeological sites. Five of the reports are Phase I identification surveys. Two of the MAAR reports (1994, 1995b) are Phase II investigation and a Phase III data recovery.

A total of eight (8) archeological sites have previously been identified within one mile of the project area. Both prehistoric and historic period archeological sites are present within the vicinity of the project area. All of the sites were identified by the previous surveys: three (3) sites (7NC-E-093, 7NC-G-104, and 7NC-G-105) were identified by the 1989 survey of the Route 1/13 corridor

(UDCAR); two (2) sites (7NC-E-103 and 7NC-E-104) were identified by the 1990 survey for a proposed water line (MAAR); one (2) sites (7NC-E-102 and 7NC-G-171) was identified during survey for a proposed natural gas pipeline corridor (E&A 2005); and one (1) site was identified during survey for a proposed DMV location (Versar 2013). The historic sites are all situated along historic roadways and are present on 19th century maps of the area. The prehistoric sites are clustered along an unnamed tributary of Dragon Creek. All of the prehistoric sites are situated on stream terraces overlooking the drainages; most are situated at the confluence of first order tributaries. Phase II level evaluation was conducted at two of the prehistoric sites (7NC-G-104 and 7NC-G-105). Phase IIII data collection was conducted at site 7NC-G-105. A description of the archeological sites within one mile of the project area is shown in Table 3.1.

Table 3.5: Previously Identified Archeological Resources within a One-Mile Radius of the Project Area

Site #	Description
7NC-E-093	Prehistoric: Woodland Period lithic scatter
7NC-E-102	Historic: 19th-20th century house site
7NC-E-103	Historic: Late 19th-20th century house site
7NC-E-104	Historic: 18th century artifact scatter
7NC-G-104	Prehistoric: Woodland I Period chipping station
7NC-G-105	Prehistoric: Micro-band Base Camp
7NC-G-171	Historic: Late 19th-20th century house site
7NC-G-181	Prehistoric: Nondiagnostic low density lithic scatter

One previously identified historic structure is present immediately adjacent to the project area. The Wilson Family Farmhouse (N-05036) was recorded by a survey of architectural resources conducted in 2013.

3.6 Typical Cultural Resources Expected in the Project Area

Prior to the initiation of fieldwork, an assessment of potential to encounter cultural resources was performed using the location of previously identified sites within one mile of the project area, environmental data from both the project area and comparative to prehistoric archeological sites in the vicinity of the project area, and an evaluation of historic maps and aerial photographs.

For modeling prehistoric archeological potential, the primary environmental data used were: proximity to water, degree of slope, and drainage of soils. Four (4) prehistoric archeological sites are present within one mile of the project area. All of these sites are situated on stream terraces within 200 feet of a first or second order tributary of Dragon Creek. Area 1 of the project area is situated at at the headwaters of an unnamed tributary to Dragon Creek, approximately 600 feet from water. Areas 2-5 are not set on landforms within 2,000 feet of water. Degree of slope is generally consistent in relation to the five project areas and the previously identified sites. Soil drainage within the project area is a mixture of well-drained and poorly-drained soils, while soils within the previously recorded prehistoric sites are generally well-drained. Area 1 within the project area is assessed with a medium to high potential for encountering prehistoric archeological resources. Areas 2-5 possess a low probability of encountering prehistoric deposits.

Historic period archeological sites are more accurately defined through cultural rather than environmental variables. Means of transportation are keys to the presence of domestic and industrial sites. These sites are usually situated within 100 meters of an historic roadway or navigable waterway. Of the four (4) historic period archeological sites, all appear as properties on the 1849 Rea and Price *Map of New Castle County*. During the 19th century, the project area was adjacent to the historic village of Bowersville. The tract history for the project area indicates that the vicinity of the project area was made up of farms that ranged from 100-400 acres in size. Wrangle Hill Road was built prior to 1849

and McCoy Road was constructed by 1881. The historic Wilson Family Farmhouse appears on the 1849 map and is currently extant, approximately 100 feet from the southern portion of Area 1. Although Areas 2-5 are immediately adjacent to Wrangle Hill Road, there are no properties that appear on the historic maps. Accordingly, Area 1 is assessed with a high potential for encountering historic period archeological deposits associated with the Wilson Family Farmhouse. Areas 2-5 are considered to have a low to medium potential to encounter historic period deposits.

Due to the elevated archeological potential within Area 1, a tighter testing interval was implemented. While there is a low to medium probability of encountering historic period materials in Areas 2-5, historic development makes it unlikely that any deposits that may be present are intact. Areas 3-5 are comprehensively disturbed due to the previous construction of SWM ponds.

4.0 Research Design and Methods

4.1 Research Design

This investigation adhered to the standards, techniques, and methods outlined in the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (Federal Register, Vol. 48, No. 190, 1983) and the *Archeological Survey in Delaware* (HPO 2012). The project included background research, field testing, and laboratory analysis.

4.2 Archival Research

Background research was conducted prior to field investigation. This included a review of the Delaware HPO site files, soil surveys, cultural resource management reports, and National Register of Historic Places (NRHP) listings. A variety of historic maps and historic aerial photographs were consulted using online resources including the DelDOT archeology website, DEMAC, and the Library of Congress (LOC). Deed research was conducted using information available at the HPO and New Castle County Clerk's Office. Environmental data regarding the project area was compiled using resources including the State of Delaware CHRIS system, NRCS online soil survey, EPA watershed information, and climatological information from the Office of the State Climatologist.

4.3 Field Methods

The Phase I archeological survey was conducted between January 27 and January 29, 2014. The fieldwork was conducted by Karl Franz and Lily Kleppertknoop and consisted of shovel test pits (STPs) excavated at 10-meter intervals within the high potential Area 1 and at 15-meter intervals in the lower potential Area 2. Comprehensive disturbance in Areas 3-5 precluded subsurface testing. Areas of ground disturbance were documented photographically.

The project area was limited to the limits of disturbance depicted on project schematics. For the purposes of the archaeological survey, the project area was treated as five distinct test areas. In the event that artifacts were recovered, close interval radial testing would be conducted unless such testing would lead beyond the boundaries of the project area.

The locations of STPs were noted on marked survey flags established using a fiber glass reel tape and an optical sight survey compass. Each STP was marked with a pin flag and measured at least 40 centimeters (cm) in diameter and was excavated in levels that approximated the existing soil conditions. Excavation of the STPs was performed based on stratigraphic layers to a depth of ten centimeters into sterile soil or to the limits of hand excavation. The STPs were offset if necessary due to obstacles such as trees, roads, or debris and based on the discretion of the excavator. One hundred percent of excavated soil was sifted through ¼-inch wire mesh screen for cultural material. Artifacts were documented and collected in labeled bags according to their horizontal and vertical provenience for further processing. Shovel test pits were excavated to culturally sterile soils unless physical obstructions prevented excavation beyond the depth of the obstruction.

Field notes recorded the vertical location of recovered cultural material, soil stratigraphy, soil colors, and soil textures onto standardized STP forms using Munsell color charts and common soil texture nomenclature. After excavation and recording, all STPs were backfilled. Additionally, digital photography was used to document unusual or exceptional land forms, materials, or cultural features.

The locations of all tests were plotted on a proposed site plan provided by DelDOT. All maps, field notes, STP records, catalog forms, photographs, and other project related information are on file with the Ottery Group in Kensington, Maryland.

4.4 Laboratory Methods

The general methodology for the processing of archeological material recovered from Phase I survey includes the cleaning, stabilization and cataloging of the artifact assemblage and associated records. In general, stable artifacts, such as ceramic and glass, were mechanically cleaned with water and dried. More friable artifacts such as bone and shell, were mechanically cleaned with a dry brush, unless additional conservation is necessary. Heavily corroded metals were cleaned with a stiff brush to remove adhering soils and to expose diagnostic attributes. Artifact processing procedures conform to the *Curation Guidelines and Standards for Archeological Collections* (HPO 2001).

Artifacts were initially sorted into general categories based on material type and inventoried in a Microsoft Excel database based on relevant diagnostic attributes. Prehistoric artifacts, if encountered, were analyzed based on general morphology modeled after Andrefsky's (1998) typology. Debitage was categorized as either shatter, unintentional fractures resulting from lithic reduction, flakes and intentionally removed materials with morphological characteristics such as platforms and bulbs of percussion. Flakes were further sorted by their overall size, determined in 10-millimeter (mm) increments.

Historic artifacts were catalogued according to a functional analysis system modified from South's original functional groups (South 1977). In most cases, the original Group categories have been simplified and smaller groups have been merged into larger groups. Historic artifacts were classified using the following group designations: Domestic, Architectural, Clothing, Personal, Faunal, Floral, Fuel, Weaponry, Transportation, Hardware, and Utilities. Further, the artifacts were classified according to material, type, decoration, function, portion, and color. As a special case, vessel glass believed to be lamp chimney fragments have been classified in the Domestic category rather than as Furniture. The Utilities category encompasses coal and its by-products and charcoal. A marker category also was used to identify recovered material which was determined to be modern material in the laboratory. Modern material was noted but not collected unless in situ with older material.

Following analysis, artifacts were bagged in perforated, four-milliliter polypropylene bags labeled with provenience and project information and boxed in acid-free containers for long-term storage at an appropriate facility.

5.0 Results

The field survey was conducted between January 27 and January 29, 2014. The project area was broken down into five (5) test loci designated Areas 1-5. Each test area represents a separate SWM pond; Area 1 also includes an area of new road construction connecting Wilson Boulevard to McCoy Road. A total of 82 shovel test pits were excavated within Areas 1 and 2 (Figure 5.1). Areas 3-5 were comprehensively disturbed by prior construction of SWM ponds and were photographed only during this survey. One archeological site was encountered and identified as the Wilson Farm Site, a scatter of late 19th-20th century artifacts associated with the previously identified architectural resource the Wilson Family Farmhouse (N-05036). The site has been issued Delaware Resource Identification Number 7NC-G-185.

5.1 Area 1

Area 1 is a triangular shaped area that encompasses approximately 1.3 acres. Proposed construction includes a segment of new roadway approximately 450 feet long connecting two existing roads, McCoy Road and Wilson Boulevard. A triangular SWM pond is planned immediately north of the new roadway. The southern edge of the right-of-way is approximately 30 feet from the house at 688 McCoy Road. The house is a previously recorded architectural resource, the Wilson Family Farm (N-05036). Documentation for the structure indicates that it is not the original structure that appears on the 1849 Rea and Price map and was built in the 1930s on the original foundation. Area 1 was identified as having a high potential to contain historic period archeological deposits and a medium potential for prehistoric deposits (see section 3.5). Because of the archeological potential in Area 1, a testing interval of 10-meters was utilized.

A total of 53 STPs were excavated within Area 1 (Figure 5.1). Soils within the STPs exhibited a generally consistent profile indicative of a former agricultural field. The typical STP profile consisted of a 10YR 3/4 dark yellowish brown sandy loam plowzone that measured between 25 and 30 cm thick above a 10YR 5/6 yellowish brown sandy clay loam substrate. Excavation was taken to a depth of at least 50 cm in all STPs. Minimal disturbances were noted in the western portion of the area, where modern bluestone gravel were mixed into the plowzone soils. This is likely due to material stockpiling during the construction of Wilson Boulevard and the associated residential development.

Of the 53 STPs excavated in Area 1, four (4) contained historic period domestic artifacts. All of the positive STPs were located within the transect closest to the Wilson Family Farm house. A total of six (6) artifacts were recovered from the STPs. All of the artifacts were recovered from the plowzone horizon. The artifacts are shown in Table 5.1.

Table 5.1: Artifacts Recovered from STP Testing in Area 1

STP	Stratum	Depth	Description
4	A_P	0-30	Whiteware sherd, plate, blue transfer print, Willow Pattern
4	A_P	0-30	Unglazed redware/brick fragment
5	A_P	0-26	Whiteware sherd, plate, blue transfer print, Willow Pattern
5	A_P	0-26	Unglazed redware/brick fragment
8	A_P	0-25	Clear window glass fragment
11	A_P	0-32	Clear lead glazed redware sherd, vessel type unknown

The Willow Pattern is the most common of the blue transfer print decorative motifs. It was created in the 1790s and is still in production today. One of the sherds contained enough detail to identify the location on the vessel that it comes from. This is shown as a red outline on the vessel in Figure 5.2.

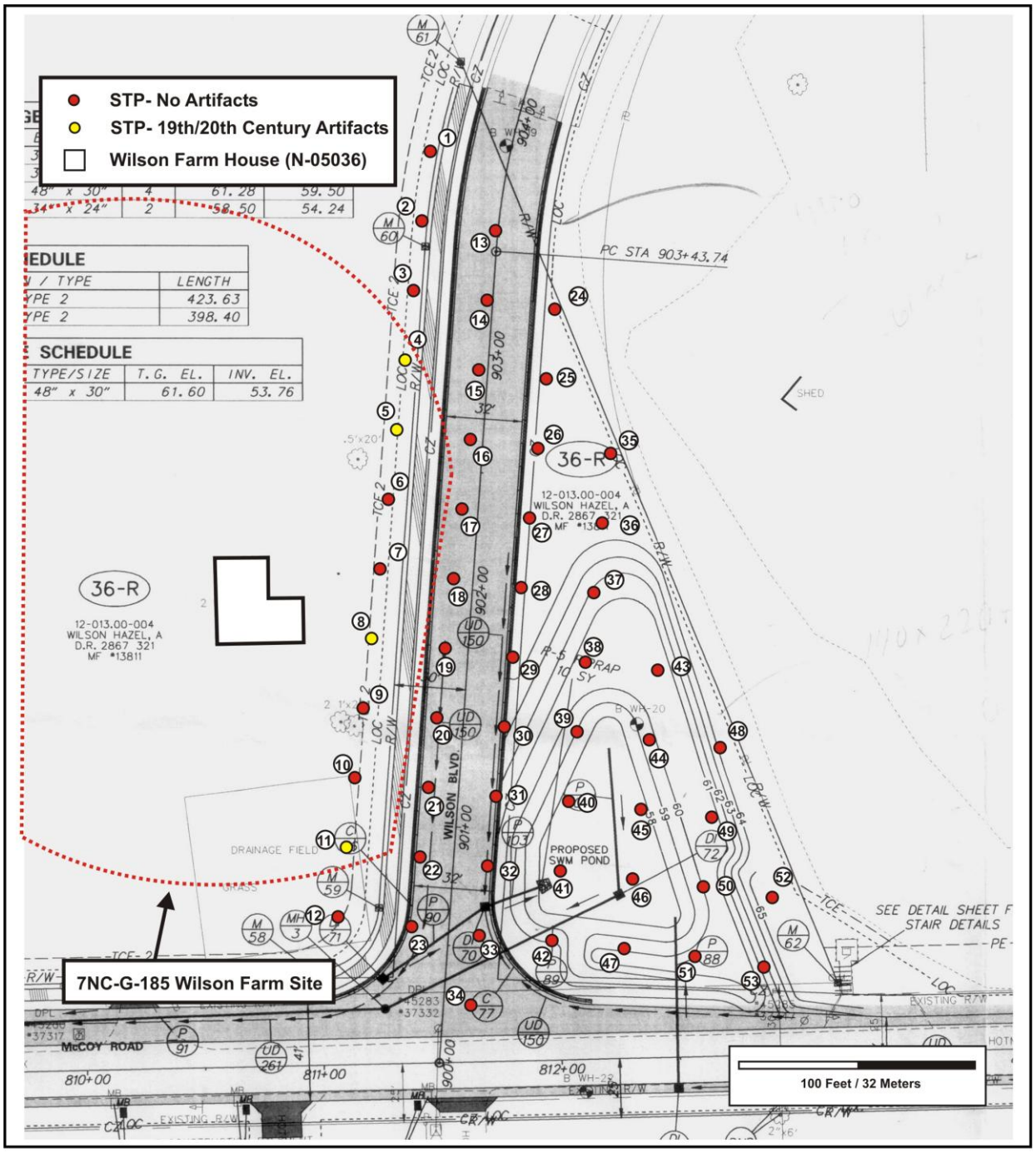


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Figure 5.1:

Location of Archeological Testing within Area 1 including Boundaries of the Wilson Farm Site (7NC-G-185)

Figure 5.2: Willow Pattern Plate. Red Mark Indicates Sherd from STP 8

The artifacts recovered from the STP testing of Area 1 represent an archeological site. Although there is a low quantity of artifacts, there is a spatial relationship between the positive STPs and the extant historic structure is clearly visible. The artifacts are limited to the transect closest to the house and consist of domestic debris. Site number 7NC-G-185 was issued for the site, which was designated the Wilson Farm Site. Although not confirmed by archeological testing, the site boundaries were drawn to include the historic farm complex (N-05036). The site form and revised documentation for the historic structure are included as Appendix B to this report.

5.2 Area 2

Area 2 is an ovoid area encompassing approximately 1.9 acres. It is situated at the junction of Wrangle Hill Road and Copples Lane. Proposed construction within Area 2 consists of a new SWM pond in area that is currently open space within a residential development. Because Area 2 was assessed to have a low potential to contain prehistoric and historic archeological deposits testing was conducted at a 15-meter interval.

A total of 29 STPs was excavated within Area 2 (Figure 5.3). Soils within the STPs exhibited the same consistent profiles as were encountered in Area 1. The typical STP profile consisted of a 10YR 3/4 dark yellowish brown sandy loam plowzone that measured between 25 and 30 cm thick above a 10YR 5/6 yellowish brown sandy clay loam substrate. The soil profile within Area 2 is indicative of former agricultural fields. Some disturbances were encountered in the southeastern corner of Area 2 where graded soils from the construction of the residential development were encountered.

No cultural materials were encountered within Area 2.

5.3 Area 3

Area 3 is an existing SWM pond that encompasses approximately 1.9 acres. It is situated at the junction of Wrangle Hill Road and Sunnyside Lane. Locations of planned ground disturbance within Area 3 are limited to the creation of a drainage conduit that would feed the existing pond. The limits of disturbance all fall within areas that have been comprehensively disturbed by the construction of the existing pond. No subsurface testing was conducted in Area 3. Figure 5.4 shows photographs of the current levels of disturbance within Area 3.

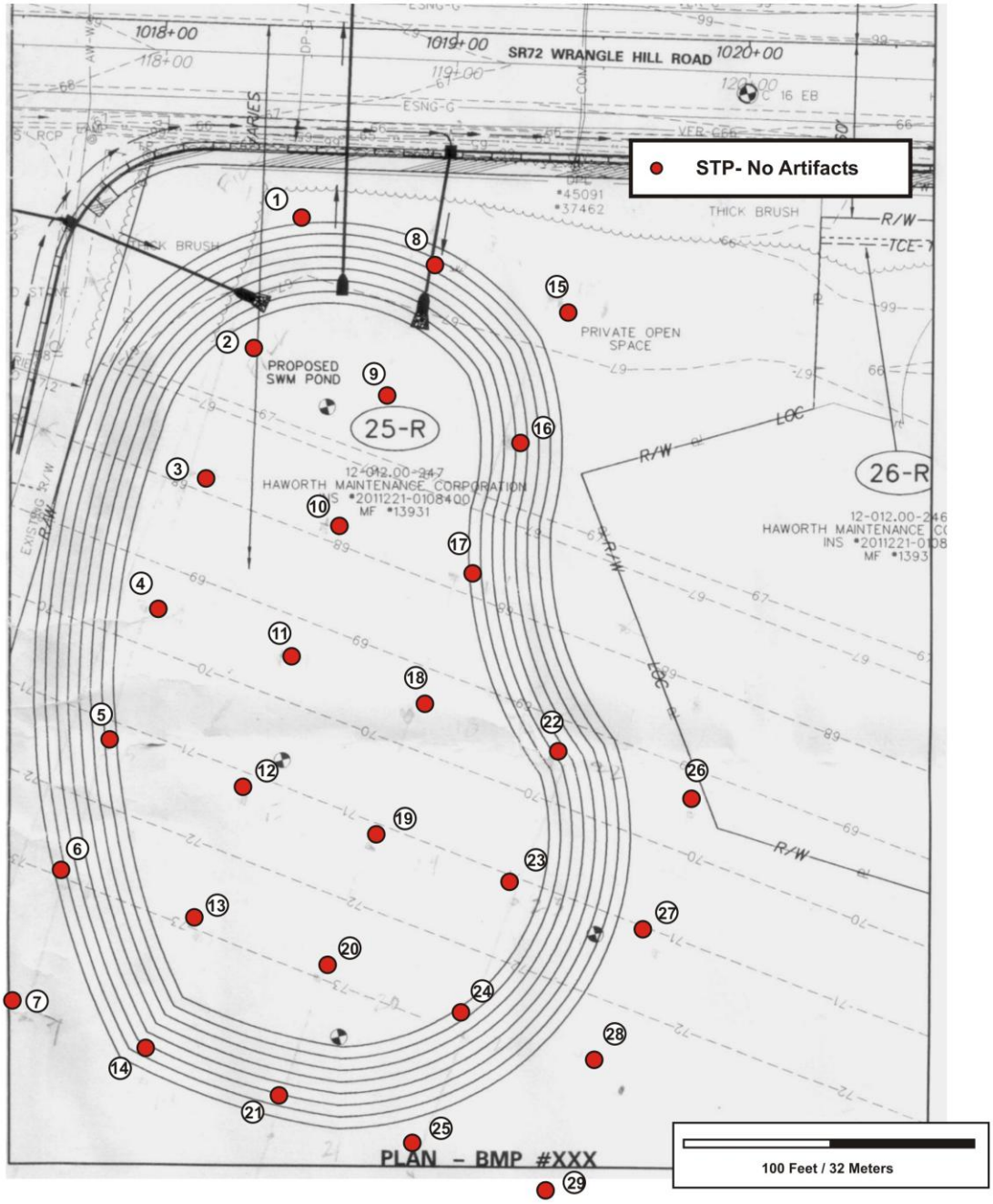

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Figure 5.3:

Location of Archeological Testing within Area 2

Existing SWM Pond, facing Southwest

Area 3 from the Intersection of Wrangle Hill Road and Sunnyside Lane, facing Northwest

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Figure 5.4:

Photographs of Area 3

5.4 Area 4

Area 4 is an existing SWM pond that encompasses approximately 1.4 acres. It is situated along the circular drive around Kathleen H. Wilbur Elementary School. Locations of planned ground disturbance within Area 4 are limited to the creation of a drainage conduit that would feed the existing pond. The limits of disturbance all fall within areas that have been comprehensively disturbed by the construction of the existing pond. No subsurface testing was conducted in Area 4. Figure 5.5 shows photographs of the current levels of disturbance within Area 4.

5.5 Area 5

Area 5 is an existing SWM pond that encompasses approximately 1.4 acres. It is situated along the circular drive around Kathleen H. Wilbur Elementary School. Locations of planned ground disturbance within Area 5 are limited to the creation of a drainage conduit that would feed the existing pond. The limits of disturbance all fall within areas that have been comprehensively disturbed by the construction of the existing pond. No subsurface testing was conducted in Area 4. Figure 5.6 shows photographs of the current levels of disturbance within Area 5.

Existing SWM Pond, facing Southeast

Existing SWM Pond, facing Northwest

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Figure 5.5:

Photographs of Area 4

Existing SWM Pond, facing West

Existing SWM Pond, facing East

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Figure 5.6:

Photographs of Area 5

6.0 Summary and Conclusions

DelDOT intends to conduct roadway improvements along the SR 72 (Wrangle Hill Road) corridor in New Castle County, Delaware. The project area includes five (5) separate areas where SWM ponds will be installed. The Ottery Group was tasked with completing the Phase I archeological survey as Task 1 under contract agreement 1652.

6.1 Summary

A total of 82 STPs were excavated at within Areas 1 and 2 of the project area. Area 1, which was assessed to have a high potential for encountering historic period archeological deposits was tested at 10-meter intervals. Area 2 which was assessed at a lower potential, was tested at 15-meter intervals. Areas 3-5 already contained SWM ponds built for earlier construction projects. These areas were comprehensively disturbed and were documented photographically only.

One archeological site was recorded during the survey of Area 1 (Figure 6.1). The Wilson Farm Site (7NC-G-185) consists of a light scatter of domestic artifacts that date from the late 19th-20th century. The spatial pattern of the positive STPs show that the positive tests are not a field scatter but are associated with the extant farmhouse adjacent to the project area. The farmhouse is a documented historic resource and is the second house that was present in that location. The earlier structure appears on the 1849 Rea and Price *Map of New Castle County*.

6.2 Conclusions

Although an archeological site was documented by the current survey, the low density of material recovered suggests that the bulk of the site falls outside of the project area. Further archeological investigation within the project area is unlikely to yield significant archeological information. Accordingly, no additional archeological testing is recommended for the SR 72, McCoy Road to SR 71 project area.

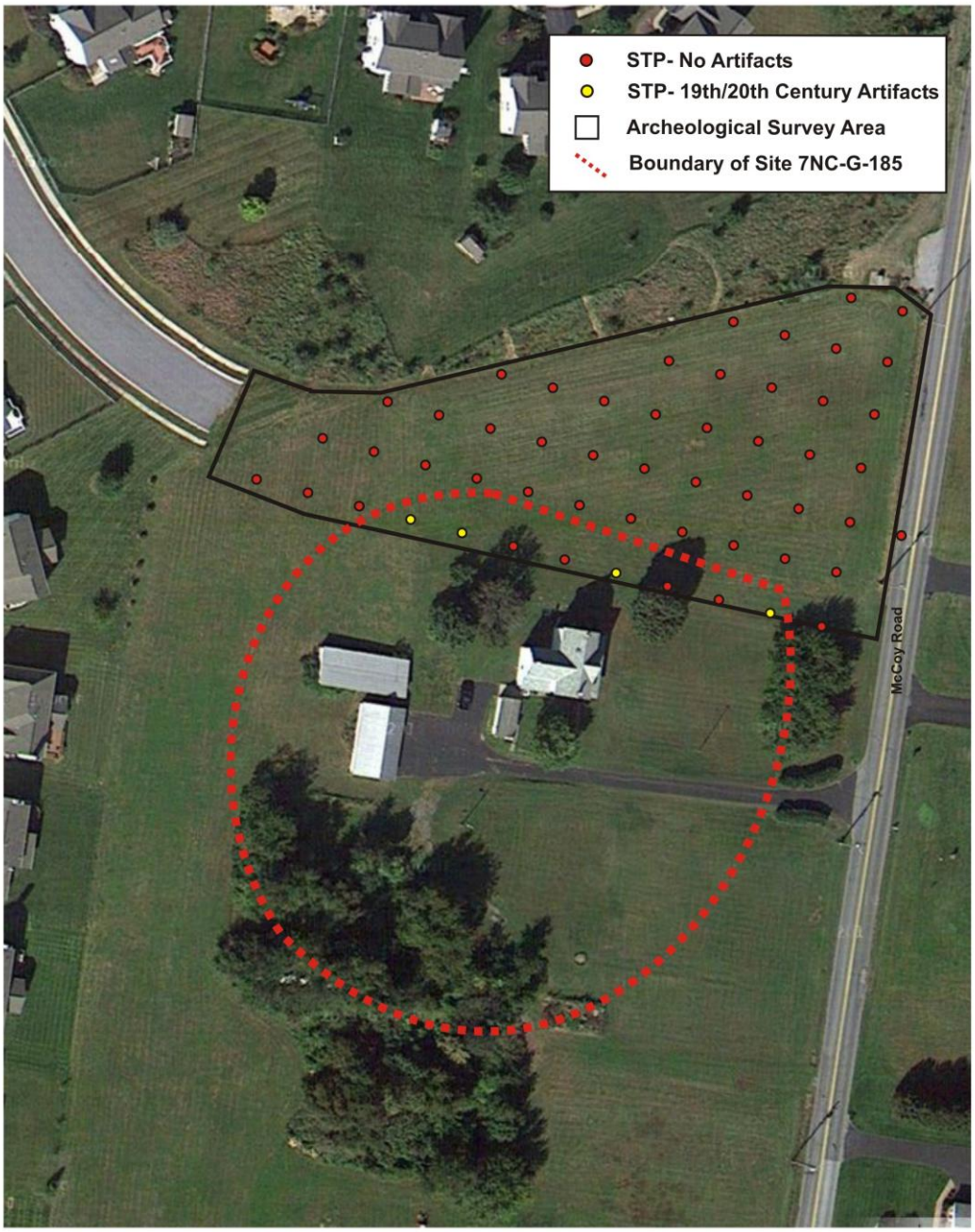

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Figure 6.1:

Boundaries of the Wilson Farm Site (7NC-G-185)

N

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APPENDIX A:
Artifact Catalog

STP	Stratum	Depth	Count	Material	Type	Description	Decoration	Size
4	A_P	0-30	1	earthenware	whiteware		blue transfer print, Willow Pattern	1.7cm
4	A_P	0-30	1	brick			Unglazed	0.9cm
5	A_P	0-26	1	earthenware	whiteware		blue transfer print, Willow Pattern	1.5cm
5	A_P	0-26	1	brick			Unglazed	1.0cm
8	A_P	0-25	1	glass	window	colorless		1.2cm
11	A_P	0-32	1	earthenware	redware		Clear lead glaze	1.9cm

APPENDIX B:
Delaware CRS Forms

APPENDIX C:
Resumes of Key Personnel

THOMAS W. BODOR, RPA
Vice President & Director of Cultural Resource Services

EDUCATION

University of Maryland, M.A.A., Applied Anthropology, 1994
University of Denver, B.A., Anthropology, 1990

REGISTRATIONS/CERTIFICATIONS/PROFESSIONAL AFFILIATIONS

Register of Professional Archeologist (RPA)
40-Hour Certified OSHA HAZWOPR (29CFR1910.120)
Council for Maryland Archeology (President-Elect 2006-2008, President 2009-2010)

EXPERIENCE

Mr. Bodor has twenty-two years of experience in archeology and cultural resource management in more than 21 states in the Mid-Atlantic, Midwest, Southwest, and Southeast regions of the United States, and in Puerto Rico. He is qualified under the Secretary of the Interior's Professional Qualifications (Archeology) (36 CFR 61) and is certified by the Register of Professional Archeologists (RPA). Mr. Bodor has broad experience in cultural resource management projects for private, state, and federal compliance projects, as well as training and teaching experience in federal preservation laws including the National Historic Preservation Act, Archeological Resources Protection Act, National Environmental Policy Act, and the Native American Grave Protection and Repatriation Act. In addition to his full-time work with The Ottery Group, Mr. Bodor serves as archeologist for the City of Annapolis, MD Historic Preservation Commission. He is also a past President of the Council for Maryland Archeology.

EMPLOYMENT SUMMARY

2002 – Present **Vice President and Director of Cultural Resource Services, The Ottery Group, Inc., Silver Spring, MD.** Responsibilities include management of all cultural resource staff and projects for public and private clients. Also, includes oversight of archeological and architectural history projects, development of budgets, proposals, client relations, staff management, and policy development. Specific duties also include serving as Program Manager and/or Principal Investigator on all cultural resource projects, SHPO/Client consultation, public outreach, and other related activities.

1997 – 2002 **Senior Archeologist/Project Manager, URS Corporation, Gaithersburg, MD.** Responsible for management of cultural resources contracts for both private and public clients. Includes oversight responsibilities, as well as supervision of field projects, artifact analysis, and report preparation. All work is closely coordinated with SHPO and clients for compliance with federal and state requirements for cultural resource management.

1996 - 1999 **Consulting Cultural Resources Specialist, Chesapeake Bay Foundation (CBF), Annapolis, MD.** Responsible for grant proposals to secure funds for establishment of cultural history program at CBF. Provide educational and management consultation regarding treatment of cultural resources on property owned by CBF. Developed educational packets and designed exhibits to be used to educate trip participants on the relationship between environment and culture over time. Work involved historical and archeological research properties owned by CBF, primarily in Maryland and Virginia.

1994 - 1997 **Principal Investigator, Greenhorne & O'Mara, Inc., Greenbelt, MD.** Responsible for designing and supervising all aspects of fieldwork, research, artifact analysis, and report preparation. Also consultation with clients and coordination with SHPO in compliance with

federal and state guidelines for cultural resources management.

1993 - 1994 **Archeologist, Maryland-National Capital Park and Planning Commission, Bladensburg, MD.** Conducted archeological investigations, research, and prepared reports on sites owned by Prince George's County. Projects involved surveys and intensive excavation of sites, including 19th century slave quarters at Northampton.

1989 - 1993 **Project Archeologist, Archeology in Annapolis, Annapolis, MD**. Conducted archeological investigations at numerous sites in the historic core of Annapolis. Supervised crews, conducted fieldwork, laboratory analysis of historic artifacts from the 18th through 20th centuries, prepared reports.

1991 **Archeological Field Technician, The American University, Washington, DC.** Crew Member responsible for assisting with excavations of late Archaic to early-Woodland phase prehistoric site near Bowie, MD.

1990 - 1991 **Archeological Field Technician, Roosevelt Archeology Project, Arizona State University, Tempe, AZ.** Field Archeologist on the Roosevelt Archeology Project. Excavated remains of the prehistoric Salado culture (A.D.800-1400) of the Tonto Basin in central Arizona.

1989 **University of Denver Archeology Laboratory, Denver, CO.** Analyzed and cataloged prehistoric bone tools from the Pettit Site in Northwestern New Mexico.

1989 **University of Denver Museum of Anthropology, Denver, CO.** Helped design a new proposal for the reopening of the University's Museum of Anthropology and Archeology. Co-organized assessment and evaluation of the University's collections for preparations for exhibits. Coordinated progress with Dean of School of Arts and Humanities and the Department of Anthropology.

SELECTED PROJECT EXPERIENCE

- 2010-2015 IDIQ contract with U.S. Army Environmental Command, Fort Sam Houston, Texas. Contract includes all variety of cultural resource compliance services for various Army installations nationwide. Responsibilities include managing contractual and technical aspects of the contract, managing subcontractors, and oversight/quality control for all task orders.
- 2010-2015 Cultural Resource Services Contract, Maryland State Highway Administration, Baltimore, MD. Contract covers all types of Section 106 compliance services for the SHA's engineering and planning division for projects statewide.
- 2010-2011 Section 106 Consulting Services, Department of Veterans Affairs Medical Center, Washington, D.C. Working with a team headed by Ellerbe Beckett/AECOM, provided Section 106 consulting services to coordinate VAMC 20-Year Master Plan for the DC campus. Coordinated VA-SHPO consultations for potential effects to archeological and historic resources in and around the urban property.
- 2010-2011 Fort Ward Historical Study and Archeological Evaluation, Fort Ward Historical Park, City of Alexandria, VA. Principal Investigator for historical and archeological project to assist Alexandria with effective management of Civil War-1950s period historic and archeological resources. Work involved project management, public outreach, archival and field research, and GIS.
- 2010-2011 Section 106 Consulting Services, Nazarene Village, North East, Cecil County, MD. Coordinated Section 106 compliance between US Army Corps of Engineers and MD SHPO for private commercial development with adverse effects to Nation Nazarene Church Camp.
- 2009-2010 Sparrow Point Shipyard, Determination of Effects, Section 106 Consultation for the Sparrows Point LNG Terminal. Project Manager and lead consultant for various compliance activities associated with the proposed LNG Terminal facility at the Sparrows Point Shipyard Historic District. Work

involved research and fieldwork to document adverse effects to the historic district, consultation with client, and preparation of various correspondences for review by FERC and MHT.

- 2009-2010 Biscoe Gray Heritage Farm Master Plan, Calvert County, MD. Contracted by Calvert County Department of Planning and Zoning to develop master plan for the Biscoe Gray Heritage Farm, a historic tobacco farm containing significant historic and archeological resources. Served as Project Manager.
- 2009 National Business Parkway North, Section 106 Consultation to Resolve Adverse Effects. Project Manager and lead consultant for proposed business park development in Anne Arundel County, MD. Consultation with MHT, COE, and local officials resulted in determination of adverse effects to historic properties in the development parcel, leading to the development of an MOA to outline final compliance steps.
- 2008 Prince George's County Department of Planning, Maryland-National Capital Park and Planning Commission, African American Historic Sites Inventory. Project Manager for contract with Planning Department to document 70 individual properties and three communities associated with African American history in the county. Project also includes oral history to help develop comprehensive historical context for the project.
- 2007 Elm Street Development, Inc., Phase III Archeological Investigations of Site 18QU968, Queen Anne's County, Maryland. Principal Investigator for data recovery at late-seventeenth through eighteenth century domestic site on Kent Island.
- 2007 Howard County Department of Public Works, Little Patuxent Parallel Sewer Interceptor Project, Phase II and III archeological investigations. Principal Investigator for federal/state compliance project on a Woodland Period habitation site on the Little Patuxent River in Howard County.
- 2007 City of Hampton Architectural Resources Survey and National Register Nominations. Project Manager for large-scale survey of historic architectural resources in Hampton as part of VDHR Cost-Share Program. Survey resulted in documentation of 1,700 individual resources and National Register Nominations for two historic districts.
- 2007 Maryland State Highway Administration, Phase I Archeological Consulting Services. Project Manager for multi-year, IDIQ-type contract for archeological services for the Maryland State Highway Administration. Responsible for overall project management, client relations, budgeting, technical quality of work, staffing and schedules, and health and safety.
- 2006-2008 Prince George's Department of Planning, Maryland-National Capital Park and Planning Commission. Antebellum Plantations Guide. Served as Project Manager for contract with Prince George's County Department of Planning for the development of a unique research guide related to plantations and agriculture during the pre-Civil War period.
- 2005-2011 Virginia Institute of Marine Science, Gloucester Point, Virginia. Co-Project Manager for yearlong archeological data recovery of Colonial, Revolutionary, and Civil War site as part of state compliance to mitigate impacts associated with the proposed Seawater Research Laboratory. Project resulted in recovery of extensive cultural material and recordation of features from the site of Gloucestertown, a 17th century tobacco port town on the York River.
- On-going Land Development Projects, Multiple County Jurisdictions in Virginia, West Virginia, and Maryland. Project Manager for various archeological and historic architectural studies for local (county) land development applications. Work involves coordinating compliance with local and state subdivision reviews, providing recommendations, conducting Phase I, II, and III archeological field investigation, public testimony, and general client consultation.
- 2004 Mallicote-Decker Stoneware Kiln Site, Abingdon, Virginia. Principal Investigator for archeological data recovery at a 1870s stoneware kiln attributed to Charles Decker. The project was sponsored by the Virginia Department of Historic Resources Threatened Sites Program, which funds excavations at significant archeological sites threatened with destruction. Results of project were highlighted in a stoneware pottery exhibit presented by the William King Regional Arts Center in Abingdon.

- 2000-2002 Federal Highway Administration, Woodrow Wilson Bridge Project. Multi-year cultural resource management prior to construction of the new Woodrow Wilson Bridge, Maryland and Virginia. Served as Principal Investigator for extensive Phase I and II investigations. Projects include:
    - Archeological Investigation, Freedmen's Cemetery, Alexandria Virginia.
    - Phase II Archeological Investigation, Jones Point Lighthouse, Alexandria, Virginia
    - Various Phase I and II Archeological Investigations, Proposed Compensatory Wetland Mitigation Sites in Virginia.
- 1994-2002 Indefinite Delivery Contract for Environmental Engineering Services, United States Coast Guard (USCG) FDCC LANT. Contract involves providing environmental and cultural resources consulting services to the USCG prior to proposed construction on bases located within the Atlantic watershed. Cultural resource projects include: Phase I, II, and III Archeological Investigations, USCG Base San Juan, Puerto Rico; Phase I and II Archeological Investigation, USCG Reserve Training Center, Yorktown, Virginia; Phase I Archeological Survey, USCG Base Sault Saint Marie, Michigan; Section 106 Compliance and NEPA Environmental Assessment for multiple USCG stations, Michigan; Phase I Archeological Survey, USCG Station Sabine, Texas.
- 1997-2002 Federal Emergency Management Administration (FEMA), Hazard Mitigation Technical Assistance Program (HMTAP) and National Infrastructure Technical Assistance Contract (NISTAC). Multi-year contract to complete environmental and cultural resource compliance documents for FEMA prior to new construction in aftermath of natural disasters, and to provide environmental consulting for mitigation alternatives. Work has included all stages of archeological investigation completed in Montana, Colorado, Hawaii, California, Virginia, Michigan, North Dakota, Florida, Georgia, North Carolina, Mississippi, Texas, Pennsylvania, and Alabama. Also, created and implemented National Historic Preservation Act training manual for use by FEMA Regional Environmental Officers in compliance procedures, including preparation of Memorandum of Agreements, and Programmatic Agreements.
- 2000 Fort Myer Military Community (FMMC), Arlington, Virginia, and Washington, D.C. Principal Investigator overseeing preparation of Section 106 and 110 compliance documents including archeological survey and Archeological Resource Management Plans for Fort's Myer and McNair.
- 2000 City of Louisville, Portland Wharf Redevelopment Project, Louisville, Kentucky. Part of team of designers, planners, and cultural resource specialists tasked with developing alternative designs for the redevelopment of the former neighborhood of Portland Wharf. Goal of project is to establish park focusing on the history and archeology of Portland Wharf. Working closely with Portland Museum to expand and develop museum exhibits for the new park. Coordinating with local interest groups and archeologists.
- 1997-1999 King William Reservoir Project, City of Newport News, Virginia. Primary cultural resource management consultants for the proposed King William Reservoir, involving compliance with U.S. Army Corps of Engineers and Virginia Department of Historic Resources. Project included coordination with state Native American tribes and issues of traditional cultural properties.
- 2001 Natchez Trace Parkway Multi-Use Trail, Natchez, Mississippi. Conducted archeological assessment for proposed multi-use trail. Developed recommendations for evaluation and treatment of significant archeological sites to be impacted by proposed trail. Project sponsored by Eastern Lands Federal Highway Administration
- 2000 Fort Dix, New Jersey, Phase I Archeological Investigation. Principal Investigator for Phase I survey of proposed contingency operations center. Sponsored by United States Army Corps of Engineers, Seattle.
- 1998 Columbia Gulf Transmission, Inc. Completed Federal Energy Regulatory Commission (FERC) compliance documents related to proposed pipeline construction in Louisiana.
- 2001 Maryland State Highways Administration Noise Barriers. Principal Investigator for archeological assessments and surveys for proposed noise barriers along various SHA roads.
- 2000, 2004 St. John's College, Annapolis, Maryland, Phase I Archeological Survey. Principal Investigator for survey completed according to local ordinance prior to planned renovation to Mellon Hall (2000) and monitoring for new dormitory building (2004).

- 1999 Cuiaba Pipeline Project, Bolivia. Principal Investigator for brief archeological surveys in Bolivia in advance of Enron Corporation natural gas pipeline.
- 1994-1997 Indefinite Delivery Contract, Pennsylvania Department of Transportation (PennDOT). Responsibilities included designing Phase I workplan, supervision of all fieldwork, interpretations, and report production. Also worked with PennDOT and Pennsylvania State Historic Preservation Office to determine impacts to identified sites and develop workplan for further treatment of sites.
- 1995 Environmental Impact Statement, Consolidation of FDA Headquarters, General Services Administration, Montgomery County, MD. Prepared workplan for treatment of archeological resources on FDA property. Workplan was written in accordance with Section 106 requirements.
- Water Resources Studies and Military Projects, U.S. Army Corps of Engineers (COE) Louisville District, KY and TN. Principal Investigator. Projects included: Phase I Archeological Survey, 1862 Richmond Battlefield. Prepared and implemented study to locate prehistoric sites in addition to locating the 1862 Richmond Battlefield to corroborate National Register of Historic Places nomination form. Phase II evaluations of three prehistoric sites at Rough River, Kentucky. Duties included supervision of all fieldwork consultation and coordination with COE archeologists, production of final report detailing findings, and recommendations.
- 1989-1993 Archeology In Annapolis Project, jointly sponsored by the University of Maryland, College Park and Historic Annapolis Foundation. Archeologist. Responsibilities included supervising and conducting fieldwork, public programming and interpretation, report preparation. Projects included:
    - 1993 U.S. Naval Academy, Annapolis, MD. Supervised first archeological survey of the U.S. Naval Academy as part of Legacy Resource Management Program. Instructed field school students on archeological methods and processes. Developed public interpretation program. Produced final report on excavations.
    - 1992 Naval Academy, Annapolis, MD. Conducted documentary research in preparation for reconnaissance survey and predictive model of cultural resources on the grounds of the Naval Academy as part of the Legacy Project.
    - 1992 Retallick-Brewer House, Annapolis, MD. Supervised excavations and authored final report. Site is typical of a tradesman or artisans home from the late 18th century.
    - 1991 Charles Carroll House, Annapolis, MD. Assistant supervisor on excavations at the Charles Carroll House. Co-authored final report on excavations.
    - 1990 State Circle, Annapolis, MD. Field Archeologist on State Circle project investigating the changes to State Circle since the 18th century.
    - 1990 Anne Arundel County Court House, Annapolis, MD. Field Archeologist on excavations at Franklin Street site, a thriving African-American community from the early-19th century to the mid-20th century.
    - 1989 Gotts Court Project. Field Archeologist on site associated with historic African-American community in Annapolis.
    - 1989 William Paca House and Gardens. Documented eighteenth and nineteenth century artifacts and features within the formal garden of William Paca.
    - 1989 Field School Training. Completed field school training with the University of Maryland, College Park and was then hired on to assist with excavations at the Charles Carroll Gardens.

TECHNICAL REPORTS, PAPERS, AND PRESENTATIONS

2002-Current Mr. Bodor has been the author or co-author of more than fifty technical reports for Phase I and II archeological investigations throughout the United States.

Additional Reports include:

2002 Bodor, Thomas W. and Bernard Slaughter. *Phase I Archeological Survey of Two Proposed Floodwater Retention Areas, Vicinity of Sattler and New Braunfels, Comal County, Texas.* Prepared for Federal Emergency Management Agency, Region VI.

2002 Bodor, Thomas W., Fred Holycross, Amy Barnes. *Integrated Cultural Resource Management Plan, National Naval Medical Center, Bethesda, Montgomery County, Maryland*. Prepared for U.S. Navy, Chesapeake Division Naval Facilities Command.

2002 Bodor, Thomas W. and Justin Patton. *Phase I Archeological Survey of Proposed Drainage Improvements, City of Schertz, Guadalupe County, Texas*. Prepared for Federal Emergency Management Agency, Region VI.

2002 Bodor, Thomas W., Cassandra Michaud, Heather Crowl. *Phase I Archeological Investigation at 28 Bridgetown Pike, Bridgetown, Bucks County, Pennsylvania.* Prepared for Federal Emergency Management Agency, Region III.

2002 Bodor, Thomas W., and Cassandra Michaud. *Phase I Archeological Investigation of the Schoonmaker House, Chester Heights Borough, Delaware County, Pennsylvania.* Prepared for Federal Emergency Management Agency, Region III.

2001 Bodor, Thomas W. *Cultural Resource Assessment, Natchez Trace Multi-Use Trail, Natchez, Adams County, Mississippi.* Prepared for the Federal Highway Administration and National Park Service.

2001 Bodor, Thomas W., (Project Manger) and Daniel Cassedy. *Phase I Archeological Survey for the Proposed White Oak Power Plant, Dry Fork, Pittsylvania County, Virginia.* Prepared for the White Oak Power Company, Tallahassee, Florida.

2001 Bodor, Thomas W., and Cassandra Michaud. *Phase I Archeological Investigation at 28 Bridgetown Pike, Middletown Township, Bucks County, Pennsylvania.* Prepared for Federal Emergency Management Agency, Region III.

2001 Bodor, Thomas W., and Cassandra Michaud. *Phase I Archeological Survey of a Proposed Wetland Mitigation Site, Mason Neck State Park, Fairfax County, Virginia.* Prepared for Federal Highways Administration.

2001 Rhodeside & Harwell, Incorporated. *Portland Wharf Park Master Plan: Inventory, Analysis, and Alternative Concepts, Louisville, Kentucky*. Prepared for the City of Louisville.

2001 Bodor, Thomas W. *Phase II/III Archeological Investigations and Archeological Monitoring, U.S. Coast Guard Base San Juan, Puerto Rico*. Prepared for the United States Coast Guard, Norfolk, Virginia.

2001 Bodor, Thomas W. and Bernard Slaughter. *Archeological Investigations at Freedmen's Cemetery, Alexandria, Virginia.* Prepared for Federal Highways Administration.

2001 Bodor, Thomas W. and Cassandra Michaud. *Phase I Archeological Investigations at the Silver Property, Stafford County, Virginia*. Prepared for Federal Highways Administration.

2000 Bodor, Thomas W., and Cassandra Michaud. *Archeological Resources Management Plan, United States Army Fort Myer, Arlington County, Virginia*. Prepared for the Fort Myer Military Community, Fort Myer, Virginia.

2000 Bodor, Thomas W., and Cassandra Michaud. *Archeological Resources Management Plan, United States Army Fort McNair, Washington, D.C.* Prepared for Fort Myer Military Community, Fort Myer, Virginia.

2000 Bodor, Thomas W. *Phase I Archeological Survey, Mellon Hall Parking Lot Expansion, St. John's College, Annapolis, Anne Arundel County, Maryland.* Prepared for St. John's College, Annapolis, Maryland.

2000 Bodor, Thomas W., Anne Brockett, Cassandra Michaud. *Cultural Resource Assessment for Proposed Tier 1 Compensatory Wetland Mitigation Sites in Virginia.* Prepared for Federal Highways Administration for the Woodrow Wilson Bridge Project.

2000 Bodor, Thomas W. and Cassandra Michaud. *A Cultural Resource Survey for the Proposed Air Mobility Warfare Center Contingency Operations Compound Site, Fort Dix, New Hanover Township, Burlington County, New Jersey*. Prepared for the United States Army Corps of Engineers, Seattle.

2000 Bodor, Thomas W. *Class III Cultural Resource Inventory, Meadow Lake Township, Barnes County, North Dakota (FEMA-1220-DR-ND).* Prepared for FEMA.

2000 Bodor, Thomas W. *Class III Cultural Resource Inventory, Cass County Diversion Project, Stanley Township, Cass County, North Dakota*. Prepared for FEMA.

2000 Bodor, Thomas W. *Class III Cultural Resource Inventory, Reroute of Twelve DC Line Towers, Quimby Township, Kidder County, North Dakota.* Prepared for FEMA.

1999 Bodor, Thomas W. *Phase I Archeological Survey of Proposed Firing Range, USCG Reserve Training Center, Yorktown, Virginia*. Prepared for USCG FDCC-LANT, Norfolk, VA.

1999 Bodor, Thomas W. *Phase I Archeological Investigation, Broad Top Wastewater Management Program, Broad Top Township, Bedford County, Pennsylvania*. Prepared for Broad Top Township, PA.

1998 Bodor, Thomas W. *Phase I Archeological Investigation of United States Coast Guard Base San Juan, Puerto Rico*. Prepared for USCG FDCC-LANT, Norfolk, Va.

1998 Bodor, Thomas W., and Gerard Kashatus. *Archeological Reconnaissance of Proposed Flood Mitigation Activities in the Village of Ralston, Lycoming County, Pennsylvania*. Prepared for FEMA, Washington, D.C.

1998 Bodor, Thomas W., and George Logan. *Phase I/II Archeological Investigation, Site 44YO775, Yorktown, York County, Virginia.* Prepared for the USCG Reserve Training Center, Yorktown, VA. and USCG FDCC-LANT

1998 Bodor, Thomas W. and Bernard K. Means. *Upgrade Alternative, Phase I and II Archeological Investigations for the U.S. 219 Meyersdale Bypass Project, S.R. 6219, Section B08, Somerset County, Pennsylvania: Volume II: Phase I Archeological Investigation along the Eastern and Upgrade Alternatives and in the Northern and Southern Termini.* Report prepared for Pennsylvania Department of Transportation, District 9-0.

1998 Bodor, Thomas W. and Bernard K. Means. *Southern Terminus, Phase I and II Archeological Investigations for the U.S. 219 Meyersdale Bypass Project, S.R. 6219, Section B08, Somerset County, Pennsylvania: Volume II: Phase I Archeological Investigation along the Eastern and Upgrade Alternatives and in the Northern and Southern Termini.* Report prepared for Pennsylvania Department of Transportation, District 9-0.

1997 Bodor, Thomas W, and Danica Ziegler. *Phase I Archeological Investigations and Landscape Reconstruction at Cameron Station Military Reservation, Alexandria, Virginia.* Prepared for Greenvest, L.C.

1997 Bodor, Thomas W., Danica Ziegler, and James Long. *Phase I Archeological Investigation, Bryan Property, Alexandria, Virginia.* Prepared for Greenvest, L.C.

1997 Bodor, Thomas W. *Phase I Archeological Investigations, Food and Drug Administration Consolidation, White Oak, Maryland.* Prepared for General Services Administration, Washington, D.C.

1997 Bodor, Thomas W. P*hase I/II Archeological Investigations, S.R. 0032, Section 87S, Bucks County, Pennsylvania.* Prepared for PennDOT, District 6-0.

1997 Bodor, Thomas W. and Jennifer Sparenberg. *Phase II Archeological Investigations, S.R. 2036, Section 89S, Bucks County, Pennsylvania.* Prepared for PennDOT District 6-0.

1997 Bodor, Thomas W. 1997. *Phase II Archeological Investigations, S.R. 4003, Section 78S, Bucks County, Pennsylvania.* Prepared for PennDOT, District 6-0.

1996 Bodor, Thomas W. 1996. *Phase II Archeological Investigations, Sites 15BC186, 15BC189, 15GY94, Breckinridge and Grayson Counties, Kentucky.* Prepared for U.S. Army Corps of Engineers, Louisville District.

1996 Bodor, Thomas W. and Roderick Brown. *A Phase I Cultural Resources Reconnaissance of Circa 470 Acres of the Richmond Battlefield at the Bluegrass Army Depot, Madison County, Kentucky.* Prepared for the U.S. Army Corps of Engineers, Louisville District.

1995 Bodor, Thomas W and Elizabeth Moore. *Phase I Archeological Investigation, S.R. 219, Section C08, Bradford Bypass Extension Bradford Township, McKean County, PA.* Prepared for PennDOT.

1995 Bodor, Thomas W., Simon Lewthwaite, and Varna G. Boyd. *Phase I Archeological Investigation of the Renaissance Festival Theme Park, Stafford County, VA.* Prepared for the Renaissance Entertainment Corporation.

1995 Bodor, Thomas W., and Varna G. Boyd. *Phase I Archeological Investigations, S.R. 4003, Section 835, New Britain Township, Bucks County, PA.* Prepared for PennDOT.

1995 Bodor, Thomas W., and Varna G. Boyd. *Phase I Archeological Investigation, S.R. 2036, Section 825, Wrightstown Township, Bucks County, PA.* Prepared for PennDOT.

1995 Bodor, Thomas W., and Varna G. Boyd. *Combined Cultural Resources Survey Report for the U.S. Coast Guard Station Sabine.* Prepared for the U.S. Coast Guard - FDCC Atlantic.

1995 Bodor, Thomas W., and Benjamin Fischler. *Phase I Archeological Investigations Report for the U.S. Coast Guard Group Sault Sainte Marie Family Housing Project.* Prepared for the U.S. Coast Guard - FDCC Atlantic.1994

1994 Bodor, Thomas W., and Benjamin Fischler. *Phase I Archeological Investigations of the Dixie Hill Tract,*

Fairfax County, VA. Prepared for Richmond-American Homes, Inc.

1994 Bodor, Thomas W., and Donald K. Creveling. *A Phase I Archeological Survey of the Proposed Anacostia Tributaries Trail from Lakeland to Cherry Hill Road, Prince George's County, MD.* Prepared for the Maryland-National Capital Park and Planning Commission.

1993 Bodor, Thomas W., Gilda Anroman, Jean Russo, Kevin Etherton, and Hannah Jopling. *Cultural Resource Survey at the United States Naval Academy in Annapolis, MD.* Prepared for Naval Facilities Engineering Command, USNA.

1992 Bodor, Thomas W. *Archeological Investigations at the Retallick-Brewer House Site in Annapolis, MD.* Prepared for the Griffis Foundation, Inc.

1991 Bodor, Thomas W., George C. Logan, Marian C. Creveling, and Lynn L. Jones. *Archeological Investigations at the Charles Carroll House in Annapolis, MD*. Prepared for Charles Carroll of Carrollton, Inc.

PROFESSIONAL PAPERS

2007 Bodor, Thomas W. and Karl Franz, "Archeology of Kent Island, Maryland." Presented at the Annual Meeting, Middle Atlantic Archeology Conference, Virginia Beach, Virginia.

2006 Bodor, Thomas W. and Lyle C. Torp. "Archeology and Historic Preservation as Heritage Discourse in Prince George's County, Maryland" Presented at the Annual Conference, Middle Atlantic Archeology Conference, Virginia Beach, VA.

2005 Middle Atlantic Archeology Conference, Annual Meeting, April 15-17, Rehoboth Beach, Delaware. Session Chair, "Ceramics in the Middle Atlantic."

2003 Bodor, Thomas W. and Matthew Palus. "The Spirit, or Intent, of Compliance Archeology." Paper presented at the 2003 Preservation Maryland Conference, Easton Maryland. May 3, 2003.

1995 Bodor, Thomas W. and Abdul Karim Mustapha. "Transformation of a Public: The Historical Development of the United States Naval Academy in Annapolis, Maryland." Paper presented at the Council for Northeastern Historical Archeology (CNEHA) Conference, Williamsburg, Virginia. March 1995.

1994 Bodor, Thomas W. "Cultural Resources Investigations at the United States Naval Academy in Annapolis, Maryland." Paper presented at the quarterly meeting of the Archeological Society of Maryland, Annapolis, Maryland. October 1994.

KARL FRANZ
Archeologist - Field Supervisor

EDUCATION

Saint Mary's College of Maryland, B.A., Anthropology/Sociology, 1991

REGISTRATIONS/CERTIFICATIONS/ PROFESSIONAL AFFILIATIONS

40-Hour Certified OSHA HAZWOPR (29CFR1910.120)
Middle Atlantic Archeological Conference
Archeological Society of New Jersey
Archeological Society of Maryland

EXPERIENCE

Mr. Franz has over twenty years of continuous archeological experience and has managed archeological fieldwork in 14 states east of the Mississippi, with a focus in the Mid-Atlantic, Northeast, and Southeast Regions of the United States. He has directed excavations at sites for a variety of public, private, and government clients for purposes that range from compliance-driven to pure research. In addition to project management and laboratory direction, Mr. Franz has authored over 100 technical cultural resources reports.

EMPLOYMENT HISTORY

2005 – Present **Archeological Field Supervisor, The Ottery Group, Inc., Silver Spring, Maryland.** Responsibilities include management of multiple cultural resources projects simultaneously; the duties for which include: developing research designs and excavation strategies, logistics, supervision of field and laboratory staff, interpretation of archeological data, research, graphic design, and technical writing. While with the Ottery Group, Mr., Franz has directed archeological excavations in Connecticut, Maine, Maryland, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Virginia, Washington, D.C., and West Virginia.

2003 – 2005 **Archeologist, Richard Grubb and Associates, Cranbury, New Jersey and Allentown, Pennsylvania.** Mr. Franz was responsible for managing archeological fieldwork for projects in New Jersey, New York, and Pennsylvania. While with RGA, he was trained in technical report writing and site interpretation.

1997 – 2003 **Archeological Supervisor, URS Corporation, Florence, New Jersey.** While with URS, Mr. Franz managed crews of up to 20 field technicians on several large-scale projects in Delaware, Maryland, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia. Other duties included research, and contributions to technical reports. As an employee of URS, Mr. Franz received training in historic period artifact identification with George Miller, a prominent ceramicist.

1995 – 1997 **Field Director**, **Baltimore Center for Urban Archeology, Baltimore, Maryland.** While working at the BCUA, Mr. Franz served as a field technician and crew chief before being promoted to field director. As field director, he managed archeological excavations of two nineteenth century cemeteries in Baltimore, Maryland. Responsibilities included coordination with contractors and city offices, scheduling, site survey, preliminary osteological analysis, laboratory curation, and report preparation.

1994 **Crew Chief, Alexandria Archeology, Alexandria, Virginia.** While a contractor with the City of Alexandria, Mr. Franz assisted in the excavation of an eighteenth-nineteenth century Quaker

cemetery in Alexandria, Virginia and supervised volunteer excavators. While working there he was trained in preliminary osteological analysis.

1991 – 1994 **Crew Chief, Greenhorne & O'Mara, Greenbelt Maryland.** While working for Greenhorne & O'Mara, Mr. Franz served as a field technician before being promoted to crew chief. He participated in several prehistoric and historic archeological surveys in the Maryland, North Carolina, Pennsylvania, Virginia, and West Virginia. Duties included field excavation, artifact processing, keeping field records, and supervising small crews of excavators under the direction of a field director.

1989 – 1990 **Field Assistant/Laboratory Assistant, Historic Saint Mary's City, Saint Mary's City, Maryland.** While a student at St. Mary's College of Maryland, Mr. Franz developed skills in archeological method through a series of three month renewable contracts. He was trained in excavation technique, artifact identification, laboratory processing, cataloging, and collections management by Silas Hurry and Tim Riordan of Historic St. Mary's City.

SELECTED PROJECT EXPERIENCE

- **Fort Ward Historical Study and Archeological Evaluation, Fort Ward Historical Park, City of Alexandria, VA (2010-2011).** Managed fieldwork for the high-profile excavation at an African-American community and cemetery in Alexandria, Virginia, which resulted in the identification of several graves and domestic features dating to the post-Civil War period. The project included public outreach and tight coordination with City agencies.

- **Archeological Investigation of the Dowdy Creek Watershed, WV (2008).** Developed and implemented excavation strategies for a National Park Service study to identify short-duration sites on micro-landforms. The field results of the survey were analyzed using GIS to identify patterns that are applicable in other settings.

- **Archeological Investigations of the Waveland Farm Site, Annapolis, MD (2007).** Managed field excavations and conducted artifact analysis for excavations at a type site for Late Woodland Sullivan Cove ceramics. Features that were interpreted as relating to ceramic production were identified and excavated.

- **Kramer-Jacobs Cemetery, Urbana, MD (2007).** Supervised fieldwork for the delineation and relocation of a nineteenth century family cemetery. A non-intrusive method for cataloguing age and sex from field drawings and photographs was developed specifically for the project.

- **Gibson's Grant, Kent Island, MD (2006-2007).** Managed fieldwork and laboratory analysis for Phase II investigation and Phase III data recovery at a late-seventeenth through early-eighteenth century farm complex. Several papers were presented at the Middle Atlantic Archeological Conference regarding the excavations.

- **Greenbrier Pipeline, WV, VA, and NC (2001-2003).** Supervised excavations for portions of a 300-mile natural gas pipeline project crossing three states. A large quantity of sites was identified during the Phase I survey and over 40 Phase II investigations were conducted as a result on prehistoric and historic period sites.

- **Raritan Landing, NJ (2001).** Supervised fieldwork for part of a Phase III data collection of several structures comprising a Revolutionary War-era port town.

- **Freedmen's Cemetery, Alexandria, VA (1999-2000).** Oversaw fieldwork for initial investigations to delineate a Civil War-era African-American cemetery.

- **Antietam Battlefield, Sharpsburg, MD (1997).** Worked as a Field Technician on a metal-detector survey of parts of the battlefield. Identified previously unknown troop movement patterns, which were later chronicled in *Archaeological Perspectives on the American Civil War*.

- **Johns Hopkins Hospital Cemetery, Baltimore, MD (1995-1996).** Supervised excavation of a large-scale cemetery delineation and relocation project. More than 800 burials were documented and excavated. The project involved monitoring of heavy equipment and surveying. Several papers were presented at the Middle Atlantic Archeological Conference and the Council for Northeast Historical Archeology Conference regarding the excavations.

- **Route 219 Bypass, Somerset, PA (1993-1994).** Managed an excavation crew on a 15-mile road bypass project along the Casselman River in the Laurel Highlands of Pennsylvania. Project consisted of Phase I, II, and III investigations. A series of Late Woodland period Monongahela village sites were identified and excavated. Several papers were presented at the Middle Atlantic Archeological Conference, the Eastern States Archeological Federation Conference, and the American Anthropological Association Conference regarding the excavations as well as articles in peer-reviewed journals.

TECHNICAL REPORTS

2011 Franz, Karl and Thomas Bodor. *Phase I Archeological Survey of the McNamara Family Trust Property, Mountain Road, Pasadena, Anne Arundel County, Maryland (Subdivision #2010-004).* Prepared for Messick and Associates.

2011 Franz, Karl and Thomas Bodor. *Phase I Archeological Survey of the Herbert Farm Property, 7761 Leonardtown Road, Hughesville, Charles County, Maryland*. Prepared for the Southern Maryland Electric Cooperative.

2011 Franz, Karl and Lyle C. Torp. *Archeological Monitoring, Summit Point Motor Sports Park Telecommunications Facility, 201 Motorsports Park Circle, Summit Point, Jefferson County, West Virginia*. Prepared for Global Tower, LLC.

2011 Franz, Karl and Thomas Bodor. *Summary Report, Archeological Investigation, Interim Drainage Project, Fort Ward Historical Park, Alexandria Virginia*. Prepared for the Office of Historic Alexandria.

2011 Franz, Karl and Thomas Bodor. *Phase I Archeological Survey for the Stream Restoration Project, Winkler Botanical Preserve, Alexandria, Virginia*. Prepared for Duke Realty.

2011 Franz, Karl and Thomas Bodor. *Phase I Archeological Survey for the Stream Restoration and Sewer Line Rehabilitation Project (10-383), Popes Branch Park, Texas Avenue to Fairlawn Avenue SE, Washington, District of Columbia.* Prepared for Delon Hampton and Associates.

2011 Torp, Lyle C. and Karl Franz. *Phase I Archeological Identification Survey of Impact Areas at the Hillwood and Colorado Telecommunication Sites, Rock Creek Park, Washington, D.C.* Prepared for the National Park Service.

2011 Franz, Karl, Kristin Pryor, and Thomas Bodor. *Phase I Archeological Survey of the Proposed Solomons Choice Subdivison (#2010-022), 341 Dogwood Road, Millersville, Anne Arundel County, Maryland.* Prepared for Messick and Associates.

2011 Torp, Lyle C. and Karl Franz. *Phase I Archeological Identification Survey of Impact Areas at the Site 97- Park Central Road Telecommunications Site, Catoctin Mountain Park, Sabillasville, Frederick County, Maryland*. Prepared for the National Park Service.

2011 Franz, Karl and Thomas Bodor. *Summary Report, Archeological Investigations at Fort Ward Historical Park, Alexandria, Virginia*. Prepared for the Office of Historic Alexandria.

2010 Franz, Karl and Thomas Bodor. *Phase I Archeological Survey for the Proposed River Glen Subdivision (#08-017), 843 Woods Road, Pasadena, Anne Arundel County, Maryland*. Prepared for Charter House, LLC.

2010 Franz, Karl and Thomas Bodor. *Supplemental Phase II Archeological Testing at the Sappington Site (18AN1449), Odenton Gateway Property, Odenton, Anne Arundel County, Maryland.* Prepared for Elm Street Development, Inc.

2010 Franz, Karl and Thomas Bodor. *Phase I Archeological Survey for the Hickey Run Stormwater Pollution Abatement Project, United States National Arboretum, 3501 New York Avenue NE, Washington, District of Columbia.* Prepared for AECOM.

2010 Sperling, Christopher, Karl Franz, and Thomas Bodor. *Phase I Archeological Survey for the Proposed Highland Farms Subdivision (#07-069) 2166 Old Dairy Farm Road, Gambrills, Anne Arundel County, Maryland.* Prepared for Elm Street Development, Inc.

2010 Franz, Karl and Thomas Bodor. *Phase I Archeological Identification Survey of the Surmont Telecommunications Site (Site 7WAN250B), 21600 West Offutt Road, Poolesville, Montgomery County, Maryland*. Prepared for Advantage Environmental.

2010 Bodor, Thomas and Karl Franz. *Phase I Archeological Survey of the Proposed Rogers Property Residential Development, Rogers Avenue, Howard County, Maryland*. Prepared for G&R Rogers Development.

2010 Sperling, Christopher, Karl Franz, and Thomas Bodor. *Archeological Investigations at Four Locations on the Biscoe Gray Heritage Farm, Calvert County, Maryland.* Prepared for the Calvert County Department of Planning and Zoning.

2010 Franz, Karl, Christopher Sperling, and Thomas Bodor. *Archeological Assessment, Veterans Administration Hospital Center, 50 Irving Street, Washington, District of Columbia.* Prepared for Ellerbee Beckett.

2009 Franz, Karl and Lyle C. Torp. *Combined Phase IA/IB Archeological Investigation for the Proposed Collabar NY-101 Telecommunications Site, 90 Youngblood Road, Crawford, Orange County, New York*. Prepared for CMX Engineering.

2009 Franz, Karl and Lyle C. Torp. *Phase I Archeological Identification Survey of the Lisbon-River Road Telecommunications Site, 652 River Road, Lisbon, New London County, Connecticut*. Prepared for AT&T Mobility.

2009 Franz, Karl and Thomas Bodor. *Phase I Archeological Survey of the Proposed Gibson Way Subdivision, 4795 Mountain Road, Pasadena, Anne Arundel County, Maryland (Subdivision Number 2008-014).* Prepared for Messic and Associates.

2009 Franz, Karl and Thomas Bodor. *Phase I Archeological Survey of the Proposed Southern Maryland Electric Cooperative (SMECO) Huntingtown Substation, 3545 Solomon's Island Road, Huntingtown, Calvert County, Maryland*. Prepared for the Southern Maryland Electric Cooperative.

2009 Franz, Karl and Thomas Bodor. *Phase I Archeological Survey of the Proposed Riddle Mine, 4379 Sands Road, Harwood, Anne Arundel County, Maryland*. Prepared for Chaney Enterprise Limited Partnership.

2008 Franz, Karl and Lyle Torp. *Phase I Archeological Investigation of the Proposed Liberty North Telecommunications Site, O'Keefe Hill Road, Liberty, Sullivan County, New York.* Prepared for CMX Engineering.

2008 Franz, Karl and Lyle Torp. *Phase I Archeological Investigation of the Proposed Pecksville Telecommunications Site (Site NY-104), Grape Hollow Road, Holmes, Duchess County, New York.* Prepared for CMX Engineering.

2008 Torp, Lyle C., Thomas Bodor, Karl Franz, and David R. Hixson. *Archeological Investigation of the Dowdy Creek Watershed, New River Gorge National River, Fayette County, West Virginia*. Prepared for the National Park Service.

2008 Franz, Karl and Thomas Bodor. *Phase I Archeological Survey and Phase II Archeological Evaluation of Sites of Sites 46Hy495, 46Hy497, and 46Hy501, Lost City, Hardy County, West Virginia*. Prepared for the Natural Resources Conservation Service.

2007 Franz, Karl and Lyle Torp. *Phase I Archeological Survey of the Proposed Location for the Chadds Ford Telecommunications Facility (1DE6637A), Chadds Ford Township, Delaware County, Pennsylvania.* Prepared for CMX Engineering.

2007 Torp, Lyle, Thomas Bodor and Karl Franz. *Archeological Excavations at the Waveland Farm Site (18AN17), Annapolis, Anne Arundel County, Maryland (Subdivision # 2006-069).* Prepared for John Morton.

2007 Bodor, Thomas and Karl Franz. *Phase II Evaluation of Site RI-103 (Camp Varnum Site), Narragansett, New Castle County, Rhode Island, Contract # W912LD-06-T-0057*. Prepared for the Rhode Island National Guard.

2007 Torp, Lyle C., Karl Franz, and Rebecca Crew. *Cultural Resources Investigation of Proposed Improvement to Blackwood-Clementon Road, Pine Hill Borough, Camden County, New Jersey*. Prepared for Bach Associates, PC.

2007 Levinthal, Aaron, Karl Franz, and Thomas Bodor. *Phase I Archeological Survey of the Stocketts Property, Lothian, Anne Arundel County, Maryland (Subdivision #2004-121).* Prepared for Joan A. Stockett.

2007 Torp, Lyle and Karl Franz. Removal and Relocation of the Kramer-Jacobs Cemetery (18-FR-847), Flint Hill, Frederick County, Maryland. Prepared for the Frederick County Department of Planning and Zoning.

2006 Bodor, Thomas and Karl Franz. *Phase I Archeological Survey of the Stonebrook Village Residential Development Phase II, Hedgesville, Berkeley County, West Virginia*. Prepared for Circa.

2006 Franz, Karl and Lyle Torp. *Phase I Archeological Survey of the Proposed Chestnut Neck Boatyard Telecommunications Facility, Port Republic, Atlantic County, New Jersey*. Prepared for Advantage Engineering.

2006 Bodor, Thomas, Lyle Torp, Karl Franz, and Christopher Sperling. *Phase II Archeological Evaluation of Sites 18QU968, 18QU970, 18QU971/2, and 18QU973 Located Within the Proposed Gibson's Grant Subdivision, Stevensville, Queen Anne's County, Maryland.* Prepared for Elm Street Development, Inc.

2006 Franz, Karl and Lyle Torp. *Phase I Archeological Survey of the Proposed PHI-130 (Block 255, Lot 4, Greenwich Township) Telecommunications Site, Gibbstown, Gloucester County, New Jersey*. Prepared for Advantage Engineering.

2006 Bodor, Thomas and Karl Franz. *Phase I Archeological Survey of the Lynn's Cove Subdivision, Piscataway Election District, Prince George's County, Maryland (Subdivision No. 04-05119).* Prepared for Nazim Khan.

2006 Bodor, Thomas and Karl Franz. *Supplemental Phase I Archeological Survey of the Proposed Presidential Golf Course, Dulles, Loudoun County, Virginia (SPEY 2005-0051).* Prepared for The Presidential Golf Club.

2005 Bodor, Thomas and Karl Franz. *Phase I Archeological Survey of the Proposed Presidential Golf Course, Dulles, Loudoun County, Virginia.* Prepared for The Presidential Golf Club.

2005 Bodor, Thomas and Karl Franz. *Phase I Archeological Survey, The Preserve at Southeast Creek, Church Hill, Queen Anne's County, Maryland.* Prepared for Bozak, Inc.

2005 Bodor, Thomas, Karl Franz, Willie Hoffman, and Christopher Sperling. Phase II Archeological Evaluation of Sites 18QU681, 18QU682, and 18QU982 Located Within the Willow Branch Subdivision, Price, Queen Anne's County, Maryland. Prepared for McCrone, Inc.

2005 Bodor, Thomas and Karl Franz. *Phase I Archeological Survey, Howard Property, Glen Burnie, Anne Arundel County, Maryland*. Prepared for William Seay.

2005 Bodor, Thomas and Karl Franz. *Phase I Archeological Survey of the SMECO Property, Accokeek, Prince George's County, Maryland.* Prepared for the Southern Maryland Electric Cooperative.

2005 Bodor, Thomas, Karl Franz, Aaron Levinthal, and Lyle Torp. *Phase I Archeological Identification Survey of the St Martin's Retreat Subdivision, Anne Arundel County, Maryland.* Prepared for Cattail Associates.

2005 Bodor, Thomas and Karl Franz. *Phase I Archeological Survey of the Home Court Residential Development, Edgewater, Anne Arundel County, Maryland.* Prepared for SRC 214, LLC.

2005 Franz, Karl. Phase *I Archeological Survey, Bethel Sewer Interceptor, Bethel Township, Berks County, Pennsylvania*. Prepared by Richard Grubb and Associates.

2005 Andrews, Donna M., Karl Franz, and Paul J. McEachen. *Section 106 Consultation, Cellco Partnership D/B/A Verizon Wireless, TRE-East Trenton, 2-70 Parker Avenue, City of Trenton, Mercer County, New Jersey*. Prepared for Cellco Partnership D/B/A Verizon Wireless.

2005 Franz, Karl and Paul McEachen. *Section 106 Consultation, Cingular Wireless Site No. W-1120, Scotch Plains Volunteer Fire Department #2, 1910 Raritan Road, Scotch Plains Township, Union County, New Jersey*. Prepared for Cingular Wireless.

2005 Franz, Karl and Paul McEachen. *Phase I Archeological Investigations, Jersey City Middle School #6, City of Jersey City, Hudson County, New Jersey.* Prepared for Pennoni Associates, Inc.

2005 Cummings, Roxanna S. and Karl Franz. *Section 106 Consultation, Sprint Spectrum, LP, Site #NY61X301A, 3339 Route 46, Parsippany-Troy Hills Township, Morris County, New Jersey*. Prepared for Sprint Spectrum LP.

2005 Cummings, Roxanna S., Karl Franz, and Paul J. McEachen. *Section 106 Consultation, Omnipoint Communications, Inc. as Agent for Omnipoint Facilities Network 2, LLC, NJ-06-530F, Durham Avenue, 983 New Durham Road, Edison Township, Middlesex County, New Jersey*. Prepared for *Communications, Inc. as Agent for Omnipoint Facilities Network 2, LLC*.

2005 Franz, Karl. *Phase IA Archeological Survey, Replacement of Dickson's Mill Road Bridge Over Pine Brook, Morris County Bridge No. 1400-490, Harding Township, Somerset County, New Jersey*. Prepared for Medina Consultants PC.

2005 Franz, Karl. *Phase I Archeological Survey, Little Lehigh Pedestrian Bridge, Lower Macungie Township, Lehigh County, Pennsylvania.* Prepared for Keystone Consulting Engineers, Inc.

2005 Andrews, Donna and Karl Franz. *Section 106 Consultation, AT&T Wireless, Site #W-1105D, All Seasons Storage, Hopatcong, New Jersey.* Prepared for AT&T Wireless.

2004 Andrews, Donna M., Karl Franz, and Paul J. McEachen. *Section 106 Consultation, Nextel of New York, Inc., D/B/A Nextel Communications, Mountainside, Site No. NJ-1908, 1193 Route 22, Borough of Mountainside, Union County, New Jersey*. Prepared for *Nextel of New York, Inc., D/B/A Nextel Communications*.

2004 Franz, Karl. *Phase I Archeological Survey, Liberty Borough and Township Treatment and Collection System, Liberty Borough and Township, Pennsylvania*. Prepared for Basset Engineering, Inc.

2004 Franz, Karl and Paul J McEachen. *Section 106 Consultation, New York SMSA Limited Partnership D/B/A Verizon Wireless, Upper Freehold 2, 189 Route 526, Upper Freehold Township, Monmouth County, New Jersey*. Prepared for New York SMSA Limited Partnership D/B/A Verizon Wireless.

2004 Franz, Karl. *Phase I Archeological Survey, Fisk Field, Wilson Borough, Northampton County, Pennsylvania.* Prepared for the Boroough of Wilson, PA.

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July 24, 2014

Mr. Timothy Slavin, Director
Division of Historic and Cultural
Affairs The Green, Suite 21A
Dover, DE 19901

Subject: Section 106 Compliance: SR 72, McCoy Road to SR 71, New Castle County, Delaware State Contract Number T201402188; Federal Aid ESTP-356(7)

Dear Mr. Slavin:

The Delaware Department of Transportation (DelDOT) Environmental Studies Section has received your comments on the Phase I Archaeology Report from The Ottery Group for the above project. The project is funded by the Federal Highway Administration, the lead federal agency. DelDOT has addressed DHCA's comments in the attached Addendum to the Phase I report. We are submitting this Addendum for your records. If there are any questions, please contact David Clarke at (302) 760-2271. Thank you for your continued cooperation.

Sincerely,

Therese M. Fulmer, Manager
Environmental Studies

TMF/dc
Enclosure
cc: Gwen Davis, DE SHPO
Jesse Zanavich, DE SHPO
Craig Lukezic, DE SHPO
Heidi Krofft, DelDOT
File

Addendum to the Phase I Archaeological Survey Report
SR 72, McCoy Road to SR 71, New Castle County, Delaware

July 24, 2014

David S. Clarke RPA
DelDOT Archaeologist

Substantive Comments:

The author identified one Archaeological site, the Wilson Farm Site (7NC-G-185) that will be impacted by the project and recommends that no further work is necessary at this site. The report does not contain an eligibility determination of the portion of the site that will be impacted by the project; therefore DHCA is unable to concur with the recommendation that no further work is necessary at this site.

For an eligibility determination of the above ground resource the Wilson Family Farmhouse (N-05036) please see the below report which recommends the structures as not eligible for listing in the National Register of Historic Places.

Kuhn, Patti and Sarah Groesbeck (Louis Berger Group)
2013 Architectural Survey Report, SR 1 Widening, New Castle County, Delaware

For the portion of the Wilson Farm Site (7NC-G-185) that will be impacted by the project, below is an eligibility determination.

NATIONAL REGISTER EVALUATION

Archaeological sites may be found eligible for listing in the National Register of Historic Places (NRHP) under any of the four criteria that apply to all historical sites:

(A) They are associated with events that made a significant contribution to the broad patterns of our history; or
(B) They are associated with the lives of persons significant in our past; or
(C) They embody distinctive characteristics of a type, period, method of construction, represent the work of a master, possess high artistic values, represent a significant and distinguishable entity whose components may lack individual distinction; or
(D) They have, or may be likely to yield, information important in prehistory or history.

The portion of the Wilson Farm Site (7NC-G-185) that will be impacted by the project consists of 4 positive shovel tests containing 19th and 20th century artifacts and 4 negative shovel tests spaced 10 meters apart along one transect running east / west (see figure 6.1 in the report). The artifacts appear to be associated with the occupation of the Wilson Family Farmhouse (N-05036).

The portion of the Wilson Farm Site (7NC-G-185) that will be impacted by the project has no known associations with important events in American history (Criterion A). Background research revealed no information about the site that indicates association with significant persons (Criterion B). Because there is no evidence of intact subsurface architecture, it also does not have a unique architectural style or association with an important architect (Criterion C). The nature, small size of the portion of the site that will be impacted by the project and evidence for disturbance due to agricultural use of the land in the 19th and 20th century make it unlikely that additional archaeological investigations would provide significant historical data (Criterion D).

Therefore, the portion of the site that will be impacted by the project is recommended as not eligible for the NRHP under Criteria A, B, C, or D. However, this does not preclude portions not impacted by this project from being potentially eligibly for the NRHP. Based on the above and below ground cultural resources at this site, if future projects have the potential to impact portions of this site not tested under this federal undertaking, then the author recommends that a phase II archaeological evaluation / eligibility determination survey be completed for the portions of the site that will be impacted.