

3.0 CULTURAL HISTORY AND ARCHAEOLOGICAL SITE CONTEXT

3.1 Regional Precontact Era Context

There are currently five (generally) accepted periods regarding the chronological sequencing of Native American cultures of the Delmarva Peninsula: Paleoindian (13,000 to 6500 B.C.), Archaic (6500 to 3000 B.C.), Woodland I (3000 B.C. to A.D. 1000), Woodland II (A.D. 1000 to 1600), and the Contact Period (A.D. 1600 to 1750). Note that precontact-era sites in the vicinity of the APE date to the Woodland I and Woodland II periods.

3.1.1 *Paleoindian Period (13,000 to 6500 B.C.)*

It is purported that Pleistocene megafauna played an important role—albeit a role that is not well understood—in the lives of the earliest inhabitants. Groups likely employed a broad-spectrumed diet that included plants and smaller animals, which allowed them to adapt to changing ecologies they faced within the early pioneer landscape of the Delmarva. Site data suggest that settlement during this time period occurred largely in the mid-peninsular drainage divide. Resource procurement camps and small base camps likely also existed near swampy areas and bay/basin features that dotted Kent County forests. Such locales attracted game and were a source of plant resources, but these places mostly remained unoccupied.

Researchers identified a cluster of Paleoindian fluted point finds designated as the Hughes Early Man Complex of sites in central Kent County, Delaware (7K-E-10, -24, and -33). The complex includes six Paleoindian artifact concentrations/surface finds located on well-drained knolls adjacent to a large freshwater swamp and several poorly drained areas (Custer 1989:105). These ecological settings are present east of the APE. The majority of the remaining Paleoindian sites in central Delaware and the Mid-Drainage Zone have taken the form of isolated point and tool finds on the surface (Custer 1984, 1989). The Blueberry Hill Site (7K-C-107) located northeast of the APE and closer to the St. Jones River contained a late Paleoindian period component (Heite and Blume 1995).

A detailed discussion of Paleoindian mobility and subsistence strategies is not appropriate for this report. It is sufficient to remark that competing and sometimes complementary theories

about Paleoindian mobility and subsistence economies are available in many late-twentieth-century works (see Custer 1996; Custer and Stewart 1990; Gardner 1989; Kelly and Todd 1988; McNett 1986; Meltzer 1993; Moeller 1989).

3.1.2 Archaic Period (6500 to 3000 B.C.)

The Archaic period is marked by the gradual emergence of a Holocene environment within the Atlantic episode. Warmer and wetter climatic conditions prevailed with the disappearance of grasslands and the expansion of mesic forests of oak and hemlock. Mast foods were provided by the mesic forest, which also attracted small game animals, especially deer and turkey. A marked rise in sea level during the early Holocene had a profound effect on the Delmarva Peninsula. This rise caused lowland flooding and the inundation of river systems, which sped the development of complex estuary systems. Numerous interior swamps also emerged. These changes caused a net increase in floral and faunal resources associated with these new wetland areas. 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.

Overall, Archaic period sites within the mid-drainage zone are few in number. Archaic sites are often associated with bay/basin features and represent short-lived hunting and processing occupations (Custer 1989:135). The Blueberry Hill Site (7K-C-107) located near a bay/basin feature and northeast of the APE contained an Archaic period component (Heite and Blume 1995). 7K-C-51, the Puncheon Run Site, also contained an Archaic component (Leedecker et al. 2005). Bay/basin features are present near the APE. Increased diversity and frequency of stone tools paralleled the increased diversity in the local ecology and resource seasonality. Tools used for processing plant resources became more common. Based on this information, it was anticipated that Archaic period sites might be identified on the edges of bay/basin features and in relative upland settings overlooking extant, ephemeral, or relict water sources.

3.1.3 Woodland I (3000 B.C. to A.D. 1000)

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: 1) ceramic manufacturing and 2) use of domesticated plants (Willey and Sabloff 1980). These two technological innovations have been deemed significant in that they presuppose greater sedentism with population growth and increased “socioeconomic complexity.” Complexity is perhaps best understood in this context as intensification. Climatic conditions in Woodland I times were defined by the Sub-boreal episode, which was generally drier and exhibited greater climatic variation than the previous Atlantic episode. The Woodland period in the greater Mid-Atlantic region is frequently characterized as a period of presumed increased sedentism and a gradual shift toward the exploitation of domesticated cultigens (maize, beans, and squash) together with wild grasses such as amaranth and chenopodium. However, evidence for domesticated plants is sparse on the Delmarva Peninsula, and that evidence for increased sedentism is at best tenuous. The Woodland I period data do suggest a greater use of aquatic resources. It is during the Woodland I period that large macroband base camps were presumably occupied on 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.

Groups inhabiting the Middle Atlantic region during the Woodland I period appear to have expanded their use of lithic raw materials to include quartz, quartzite, argillite, and rhyolite (Custer 1992; Kinsey 1977; Stewart 1984). Custer (1992:42) suggested that the use of more varied materials reflects a decrease in size of band territories. The wide distribution of non-local lithic materials, such as South Mountain rhyolite from south-central Pennsylvania, also suggests the development of long-distance exchange networks. It might also represent broader local interaction among the groups residing on the Delmarva Peninsula who had access to these sources or access to groups with direct access to these non-local sources.

Increased social “complexity” is argued to be evident during the Woodland I period. Some researchers believe that the development of a sedentary lifestyle and the control of surplus food resources may have led to the development of ranked societies at this time (Custer 1989). 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.

Altogether, Woodland I artifact assemblages are purported to reflect the intensification of food production concomitant with the development of a more sedentary settlement strategy focused on riverine and estuarine resources (Custer 1984). Mortuary practices incorporating various grave goods, such as carved platform pipes; bone and antler tools; and a variety of projectile points, celts, and pestles, are in place during Woodland I as well (Custer 1989:293). Microband base camps of the Woodland I period have been identified in or near the APE. These include 7K-C-73 (located in the APE near Puncheon Run) and 7K-C-328 and 7K-C-330, which are located southwest of the APE along Isaac Branch.

7K-C-51, the Puncheon Run Site; and 7K-C-411, the Hickory Bluff Site, which are located approximately 1.5 miles to the east at the confluence of Puncheon Run and the St. Jones River, also contained Woodland I components (respectively, see Leedecker et al. 2005; Petraglia et al. 2002). Relevant and detailed publications about precontact-era occupation in the broader project area may be found in the *Archaeology of the Puncheon Run Site* report (Leedecker et al. 2005) or the Hickory Bluff report (Petraglia et al. 2002).

3.1.4 Woodland II (A.D. 1000 to 1600)

The Woodland II period is associated with the first appearance of the “three sisters” (i.e., maize, beans, and squash) in the Mid-Atlantic region. *Zea mays* (maize) is first dated on the central Delaware River ca. A.D. 900 to 1000 (Stewart 1998:9). 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;
- Changes in ceramic production and decoration;

- Changes in settlement pattern; and
- Changes in environmental exploitation.

The horizon markers for the Woodland II period are not found uniformly throughout the Delaware Valley. Although the presence of cultigens is documented in the Delaware River drainage by the end of the first millennium A.D., the impact of these food sources is unclear. Evidence suggests that food production and village life was not universally adopted in all sections of the river, and in some areas it may not have even been adopted prior to European arrival (Becker 1986). Although there is no consensus among archaeologists, it appears that there was a gradient from south to north for an increased importance in food production among Late Woodland/“village farming” Native American societies in the Delaware River drainage. It is hypothesized herein that like hunter-gather societal intensification elsewhere in North America (i.e., the Pacific Northwest), the clinal change to increased plant husbandry may have been related to decreasing resource diversity and abundance. In other words, the southern end of the drainage may have exhibited greater resource richness and abundance than the upper reaches of the drainage, where farming was clearly invoked as an economic strategy. Like the Pacific Northwest societies, social-political-economic ways of life may have become increasingly rigid as kinds and numbers of resources diminished due to space (the narrowing valley) and time (seasonally availability) restrictions on wild resources.

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). Some of the largest sites (macroband base camps such as Indian Field and Indian Landing) produced extensive evidence of wild plant gathering rather than domesticates (Custer 1984:163-166). Custer (1984:169-170) believes that food production most likely occurred along tributary rivers to the Delaware Bay south of the Mispillion River. He hypothesized that food production began here because of environmental constraints on maintaining a hunter-gatherer economy in the face of a rising population. Microband base camps are found more frequently with site locations corresponding to Woodland I period microband base camps. 7K-D-45 and

7K-D-48, which are both sites that were identified on St. Jones Neck in Kent County, as well as the Island Field Site (7K-F-17) contain archaeological deposits associated with temporary hunting sites (Custer 1989:323). Procurement sites are poorly understood, but they appear to commonly occur on small ridges adjacent to poorly drained woodland and floodplain areas of major drainages. This type of setting is present in the APE. 7K-C-329 likely represents a Woodland II procurement site that is located on Isaac Branch and southwest of the APE.

3.1.5 Contact Period (A.D. 1600 to 1750)

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. The introduction of European diseases and the conflict over control of the fur trade caused catastrophic social and political disruptions. By the end of the period, traditional lifeways were all but abandoned, and few Native American groups remained on the peninsula. Native American descendants (Lenape and Nanticoke) continue to reside in Delaware. There is potential to encounter Contact period sites in the project area (Fithian 2006); however, it is likely that sites of the period would not be easily distinguishable from Woodland II sites. The APE and the vicinity contain no known Contact-era sites.

3.2 Regional Historic-Era Context

The history of Delaware has been subdivided into six thematic periods that chronicle the major trends and developments of the state. These include 1630-1730+/- Exploration and Frontier Settlement; 1730-1770+/- Intensified and Durable Occupation; 1770-1830+/- Early Industrialization; 1830-1880+/- Industrialization and Early Urbanization; 1880-1940+/- Urbanization and Early Suburbanization; and 1940-Present Commercialization and Suburbanization.

3.2.1 Exploration and Frontier Settlement (1630 to 1730+/-)

The European settlement of Delaware was initiated by the competing colonial powers of Sweden and Holland in the 1620s and 1630s. The two countries established several small, fortified settlements along the Delaware River and Delaware Bay. Following a series of military conflicts, the Dutch took control of Delaware in 1656 and established the town of New Amstel (New Castle) near Fort Casimir (Weslager 1961:12). In 1664, the English gained control of the entire Mid-Atlantic region.

Because central Delaware's interior was removed from major navigable waterways and areas of initial settlement in northern and southern Delaware, there was virtually no European presence in this back country area during the Swedish, Dutch, and early English periods of colonization. Initial European settlement centered along the St. Jones and Mispillion creeks. According to Hancock (1976:5), by the 1670s scattered farms were established along the lower sections of these two creeks. Early settlers were English, although several were also Dutch and French Huguenot (Hancock 1976:4-6). By 1682, the population of Kent County included only 99 adult males (Scharf 1888:1030).

Significant settlement into central Delaware did not occur until after the 1680s when William Penn granted large tracts to primarily Maryland and Virginia landowners. The landowners wanted to expand their holdings and establish a tobacco plantation agricultural system that had been successful in the Chesapeake tidewater region. African-American slaves were used on some of these farms. By 1721, an estimated 500 African-American slaves lived in Delaware (Newton 1997). Farmers of smaller parcels operated subsistence operations based on the mixed agricultural system commonly practiced throughout the Mid-Atlantic region during this period.

In 1683, William Penn re-chartered Kent County, which was originally founded as St. Jones County in 1680. Penn also ordered the establishment of a county seat, which he named Dover (Scharf 1888:982). The courthouse was built by 1697, and a small village began to grow around it. However, the town of Dover was not laid out officially until 1717, at which time it encompassed 125 acres. During the first decades of the eighteenth century, settlement in and around Dover increased and the local population began to grow.

Dwellings and farm-related outbuildings were impermanent structures during this early settlement period in central Delaware. The area's European inhabitants built earth-fast dwellings supported by posts set directly into the ground. Such structures were quite common in the region and were, in fact, promoted by Penn himself. Although they did not always succeed in doing so, the builders of such dwellings "expected to replace them with more durable houses within the span of a generation" (Herman 1987:84). Not surprisingly, no dwellings from this period are still standing in the study area.

3.2.2 Intensified and Durable Occupation (1730 to 1770+/-)

The mid-eighteenth century in central Delaware witnessed population growth, the maturing of the rural economy, the establishment of local agricultural service center towns, improvements to the transportation network, and the expansion of market-oriented farm production. As in the wider Mid-Atlantic region during this period, farming dominated Delaware's colonial economy; 80 to 90 percent of the population was engaged in agriculture (Egnal 1975:201). Mixed farming centered on grain production was the primary form of agriculture during this period. Tobacco continued to be produced as well, mainly by relocating Marylanders (Herman et al. 1989:20, 24). This intensified, market-oriented farming required more labor input. Hence, farmers increasingly employed a growing labor force in their fields. As a result, the number of slaves in Delaware also increased significantly during this time. By 1770, Delaware's population included an estimated 1,836 African-Americans, a sizable portion of which were enslaved (U.S. Bureau of the Census 1961:756).

The town of Dover grew during this time. In 1750, the town had only 20 families (Louis Berger & Associates, Inc. [LBA] 2000:4). By 1762, the town was described as having about 200 to 300 residents, two churches, a general store, a tavern, and shops of several tradesmen (Hancock 1976:9). Caesar Rodney, one of Delaware's most prominent Revolutionary War-era statesmen, was born in Dover in 1730. For a period, the orphaned Rodney came to live at the estate of Nicholas Ridgely, a well-to-do landowner who lived just west of Dover. Born of wealthy parents in Maryland, Ridgely moved to Kent County in 1738, acquired a plantation just west of Dover in 1748, and built his home, Eden Hill (CRS K-125), in 1749 (Bushman 1993:11-17). This historic property is located adjacent to the east of the north end of the APE. The Ridgelys continued to be

a successful and prominent family in the Dover area throughout the eighteenth and nineteenth centuries.

The built environment also expanded and became a much more permanent element of central Delaware's rural landscape during this period. Brick increasingly became a preferred building material for those who could afford it. Nonetheless, log and wood frame construction were most common. While single-cell hall plans persisted among dwellings throughout this period and into the nineteenth century, chambered-hall and multi-room hall-and-parlor plans became increasingly common. Also, formal architectural styles, typified by the closed-plan Georgian style, were increasingly adopted in the construction of the homes of the rural elite (Lanier and Herman 1997:16-24). Ridgely's Eden Hill house serves as an example of rural Georgian architecture from this period.

3.2.3 Early Industrialization (1770 to 1830+/-)

This period witnessed profound economic, political, social, and scientific changes, all of which affected the agricultural landscape of central Delaware, both positively and negatively. The Dover area was spared from the direct effects of military action during the American Revolution and the War of 1812. However, economic disruption caused by the wars and by a series of trade embargoes, along with the depletion of soils and the opening of new lands in the West, impacted farm families in the Dover area. The population of Kent County decreased between 1820 and 1830 and then remained at a constant during the 1830s at just under 20,000 (University of Virginia Library: Historical Census Browser, accessed October 2005). During this period, African-Americans made up approximately one quarter of the county's population. The number of African-American slaves in the county decreased during this period, from 2,300 in 1790 to 588 in 1830. Conversely, Kent County's free black population increased during this time.

By 1775, Dover had expanded to include a residential section bounded by North, South, East, and High streets (Edwards et al. 2003). In 1777, during the Revolution, the capital of Delaware was transferred from New Castle to Dover. This protected the capital from the threat of invading British troops, who entered northern Delaware in 1777. After the war, Dover became the capital of the State of Delaware.

During this period, transportation and rural industry were closely related to the dominant farming economy. Farm products were transported along the area's meager road system and via shallow draft boats on the many creeks in the area. Landings were established on the larger creeks, including one on St. Jones Creek at Dover. Towns like Dover that had a creek landing and were connected to the road network became local commercial hubs. These "commercial towns" served as focal points for the local society and economy (Heite and Heite 1986). Local creeks and runs also powered an increasing number of gristmills and sawmills. By 1772, John Pennell had built a "tumbling dam," mill pond, and sawmill in the vicinity of the APE on Isaac Webb's Branch or Isaac's Creek (i.e., Isaac Branch; see Scharf 1888).

According to a historic context concerning agricultural tenancy in central Delaware (Siders et al. 1991:18), this period was characterized by intensive building activity that resulted in increased numbers of durable houses. Also, the rural elite, who were engaged in a market-based extensive agricultural economy, contributed significantly to the rural architectural landscape (Herman et al. 1992). A variation on the double-pile center-passage plan, the double-pile side-passage plan, which originated in urban areas near the end of the colonial period, spread to the countryside in the early to mid-nineteenth century. Houses continued to be constructed of timber frame and brick. Another dwelling type that appeared more frequently was the tenant house. These open plan structures, built with log or timber frame dwellings, contained one to three rooms and ranged from one to two stories in height (Sheppard et al. 2001:11). In response to increased needs for tenant housing brought by demographic pressures, changing farm practices, and the influence of agricultural reform, the "house and garden" plan developed. As part of a formal contract, a farm owner leased his laborer a small house and small plot for raising garden crops and livestock. These tenancies were often clustered together along roadways or tree lines, but were always within sight of the main farmstead. Built on piers and thus being portable, house and garden tenant houses were easily moved, and farm owners would frequently move these dwellings within the farm (Sheppard et al. 2001). Unfortunately, due to their ephemeral occupational natures, their archaeological signatures remain somewhat ambiguous, as a house and garden is expected to leave behind little trace of formal features and artifact assemblages that might manifest themselves simply as moderately dense historic field scatters.

3.2.4 Industrialization and Early Urbanization (1830 to 1880+/-)

Beginning around 1840 and continuing throughout the mid-nineteenth century, central Delaware generally experienced an economic upsurge. As farm values and incomes dramatically rose during this time, the agricultural landscape experienced a period of revitalization. This boom was the result of the convergence of a number of factors, including improved farming techniques, the adoption of new agricultural products, the increasing use of farm machinery, the building of the Delaware Railroad, the full exploitation of the Chesapeake & Delaware (C&D) canal, the use of steamboat transportation, and the burgeoning of major markets in the industrial cities of the Mid-Atlantic and Northeast. Mixed farming centered on grain (corn and wheat) and livestock production was the primary focus of farming. The extension of the Delaware Railroad southward into Kent and Sussex counties in 1856 facilitated a boom in orchard crops, namely peaches, in the mid-1800s (Reed 1947:382). The southern terminus of the railroad was located at Seaford, and the northern terminus linked with major rail networks in the city of Wilmington (Hoffecker 1977:46). In 1859, the Delaware Railroad reached the Maryland border at a location the railroad company dubbed Delmar (Hayman 1979:19-31). The railroad sped the shipment of perishable orchard and garden crops to urban markets. By 1870, Kent County was regarded as the center of the peach-growing area (Reed 1947:385). However, a blight known as the yellows reached Kent County in the 1880s and largely wiped out the orchards. Nevertheless, farmers generally had economic success during this period because the values of agricultural products and farmlands increased.

During this period, manufacturing expanded in Delaware with 380 factories in existence at the beginning of the Civil War. In Kent County, canneries were built as orchard and truck garden farm production expanded during the second half of the nineteenth century (De Cunzo and Garcia 1992). Dover boasted two canning factories by the 1870s (Hancock 1976:51). Mills continued to flourish along the county's creeks during this period. As a result of this economic upsurge, the town of Dover cemented itself as an important regional economic center. The extension of the Delaware Railroad to the town also played a major role in establishing Dover's local prominence. Along with the mills and factories, the town included numerous stores and shops that served the rural and urban population.

By the eve of the Civil War in 1860, the slave population in Kent County had declined to 203 (University of Virginia Library: Historical Census Browser, accessed October 2005). The number of free African-Americans in the county had risen to over 7,200 at that time (or 26 percent of the county population). Although a border state, Delaware remained unscathed during the Civil War. The Underground Railroad, the emancipation of slaves in 1863, the subsequent Union victory, and economic opportunity brought thousands of free African-Americans to Delaware during this time (Skelcher 1995a). By 1880, the African-American population in Kent County had risen to over 8,100. The overall population in 1880 was just under 33,000 (University of Virginia Library: Historical Census Browser, accessed October 2005).

The increased wealth of farmers and the rural gentry in Delaware's Upper Peninsula precipitated a widespread rebuilding of the built environment. The initial phase of rebuilding focused on remodeling existing houses by adding service wings and replacing dilapidated farm buildings. New house construction also occurred. This involved a mixture of Victorian styles, including Italianate, Second Empire, Gothic, late Federal, and Greek Revival. The dwellings of the non-elite citizens (e.g., tenant farmers and farm laborers) remained unchanged from the previous period. The numbers of simple, vernacular dwellings, however, increased markedly during this period as farm tenancy rose. As a result, this period saw a dramatic increase in house and garden tenancies (Sheppard et al. 2001).

3.2.5 Urbanization and Early Suburbanization (1880 to 1940+/-)

During this period, industry and manufacturing greatly expanded in Delaware. The northern part of the state experienced the bulk of this growth. The 1880 census reported 204 manufacturing establishments in Kent County, which was roughly half the number reported in New Castle County (University of Virginia Library: Historical Census Browser, accessed October 2005). The expansion of industry in general, along with other factors, resulted in a reciprocal decrease in the number of people employed in agricultural-based businesses. With this change, a greater percentage of the population resided in cities rather than in rural areas. During this time period, the Delaware Railroad remained a major mode of transportation. At the turn of the twentieth century, before the highway era, the railroad provided the most important means of transportation in Delaware (Hoffecker 1988:157). Important improvements in transportation

occurred, such as the invention of the automobile and the modernization of the state's roadways. The construction of the DuPont Parkway (present-day U.S. Route 13), an innovative concrete highway, resulted in linking Dover to Wilmington and Philadelphia. The highway also helped in the development of recreational economy, as shore towns to the south were now more readily accessible by car.

Nonetheless, Kent County remained largely a rural zone with an agriculturally based economy. Farming at this time is best described as intensive and commercialized. Mixed farming, focusing on grain production, was abandoned as farmers began to change their products to reflect the changing market demands. This resulted in a move toward large-scale dairy, poultry, and garden vegetable/orchard farming. Farmers began to increasingly rely on mechanized farm equipment and industrially produced fertilizers to increase production (Reed 1947:391-419; De Cunzo and Garcia 1992:96-187). In many cases, farmers also began to direct-market their products via farmers markets and roadside stands.

Toward the end of the period, suburban communities began developing outside of urban centers. Dover remained a small community during the late nineteenth and early twentieth centuries. According to census figures, the town had a population of 3,329 in 1900, 3,720 in 1910, and 4,042 in 1920 (LBA 2000:6). In spite of being a small town, Dover began a series of infrastructural modernization initiatives in the late nineteenth and early twentieth centuries. In 1881, the town water works were built. Between 1900 and 1902, the town built a steam-generated electric plant. The municipal sewer system was completed by 1936 (Edwards et al. 2003:2-3). In 1907, the city authorized the expenditure for the pavement of many city streets (Sammak and Winslow 1967:47; LBA 2000:6). Between 1925 and 1936, Dover's limits were extended and its infrastructure improved. The industrial firm International Latex Corporation came to Dover in 1937. This enterprise became the city's first major non-agricultural industry (City of Dover website, accessed October 27, 2005). Other industrial firms, including General Foods (located adjacent to the north end of the APE), soon followed (Edwards et al. 2003:2-3).

The population of Kent County declined slightly during the first half of this period, decreasing from 32,664 in 1890 to 31,023 in 1920. By 1940, the population had rebounded to 34,441. Over

this same period, the African-American population declined as well, decreasing from 8,036 in 1890, to 6,752 in 1920, to 6,531 in 1940. These declines may be attributed to lower demands for agricultural labor and higher demands for industrial workers that caused an out-migration from rural areas to urban centers. African-Americans were leaving the rural South increasingly during this time to escape Jim Crow discrimination and the lack of economic opportunity and were establishing communities in the industrial cities of the North. This phenomenon may have also influenced a portion of African-Americans from Kent County to migrate north. African-American populations in rural Delaware especially declined during the 1920s and early 1930s (Skelcher 1995a:114). However, the education of African-Americans in Delaware improved with the establishment of dozens of schools for African-American children, which was a trend that began in the decades after the Civil War (Skelcher 1995b:213).

Opportunities for higher education were also afforded African Americans with the founding of the state college in Dover in 1892. Now known as the Delaware State University, the college had an enrollment of 28 students by 1896 and 138 by 1923. By the end of the 1940s, nearly 400 students attended the school. African-American neighborhoods began to develop in and around Dover, although these areas were segregated from white sections. African-Americans settled mainly in the western part of Dover along Queen and Kirkwood streets. A community of African-American tenant farmer and farm laborer families also developed east of the Eden Hill farm. Known as Pigeon Hill, this area was situated between North and Water streets and Governors Avenue, just outside the APE to the north (LBA 2000:5).

In terms of architectural developments, this period witnessed a broadening of architectural styles. A wide variety of late Victorian and early modern styles were built in the Dover area, although some styles were more commonly employed than others. Dwelling styles and forms from this period include Second Empire, Stick, Shingle, Queen Anne, Foursquare, Front Gable Cottage, Bungalow, Colonial Revival, Side Gable Cottage, and Cape Cod Cottage. A holdover from earlier periods, the simple vernacular open plan form, was still used during this time for tenant housing. Dwellings during this period were increasingly constructed from milled wood frames. Brick was also used, especially as less costly machine-made bricks became available. Another important aspect of house construction during this period was the expansion of exterior covering

and roofing materials. These included wood clapboards, tar paper, asphalt siding, asphalt shingles, and tin roofing.

3.2.6 Commercialization and Suburbanization (1940 to Present)

As transportation networks expanded and automobiles became commonplace after World War II, suburbanization spread throughout Delaware. Dense suburbanization and commercialization began around Wilmington and then expanded to other areas. To the south, Dover also experienced major expansion through suburbanization and commercialization. As the available lands around Dover were swallowed up by residential and commercial development, nearby rural areas became attractive locations for further development. This pressure, along with the construction of the new State Route 1 highway in the 1990s, helped facilitate the increasing level of suburbanization and commercialization now present throughout central Kent County. With this dramatic change in land use, farming in the area was severely affected, greatly decreasing its prominence as the primary livelihood in central Delaware (Darsie 1997).

The City of Dover experienced great growth during this period. In 1941, the U.S. Army built an airfield at Dover, although it closed in 1946 after the war. The facility was reopened by the U.S. Air Force in 1951, but again was largely deactivated after the end of the Korean War. In 1954, the Military Air Transport Service reactivated the base. Since then, the base has become one of the world's largest military freight terminals and is currently home to the 512th Airlift Wing. As a result of residential and commercial development, the city expanded over 1,000 acres by 1960. In particular, Dover saw a major population increase in the 1950s. Numerous subdivisions sprang up around Dover. By 1956, the developments of Kent Acres and Rodney Village, both just south of Dover, had been established. One of Dover's first shopping centers, The Mall at Rodney Village, was built in 1960 in association with the Rodney Village residential development. Other subdivisions and commercial centers were built during this time (Frucht 1994:4; Edwards et al. 2003:2-12). Post-World War II residential architecture and planned developments (like Rodney Village and Kent Acres) in which dwellings were concentrated expressed the tendencies of industrial mass production. The Levittown phenomenon of the late 1940s and 1950s, which featured acre after acre of identical tract housing, embodied these principles. These residential developments provided very cheap housing, although the expression

of individualism through architecture was heavily diminished. Typical mid- to late-twentieth-century dwelling types include Minimal Traditional, Cape Cod, Ranch, split level, house trailers, prefabricated houses, and custom built homes.

In particular, the Route 13 corridor became the focus of strip mall/shopping center construction during the late 1940s and continued through the 1970s. The strip mall contained many roadside commercial buildings that included retail shopping, dining, and automotive-related establishments. By the 1990s, large-scale box retail stores began to appear on the fringes of Dover. Residential development continued, as rural agricultural areas adjacent to the city were increasingly developed for housing. The pressure for more housing and the concomitant increase in real estate values persuaded many land-owning farmers to sell their farms to developers. The pattern of decreasing farmland and increasing residential development was manifested across much of Delaware and continues to the present.

During this time, passenger ridership on the Delaware Railroad began to wane; therefore, passenger train operations between Wilmington and Delmar ended in December 1965. Freight service on the railroad continued, however, and was increased within the project APE when General Foods Corporation constructed a food production facility in the West Dover area in 1963. To facilitate the movement of both raw materials and finished products, General Foods decided on a location with easy access to the railroad. General Foods constructed a number of sidings along the Delaware Railroad to assist in this process (Kraft Operations website, accessed December 8, 2005).

3.3 Historic Maps and Aerials

Historic atlas and topographic mapping and historic aerials shed light on the potential presence of historic archaeological resources in the archaeological-resource sensitive areas investigated during the Phase I survey. The Byles (1859) and Beers (1868) atlas maps depict properties owned by H. Jenkins in the southern portion of the APE near Test Areas 2, 6, and 7 (Figures 4 and 5). The Jenkins property near Test Area 2 is currently known as the Kesselring Farm Site (CRS K-1030). One Jenkins property east of New Burton Road and oriented toward Webbs Lane is the Hunn Jenkins Farm (CRS K-3205), which is located adjacent to the northeast of Test Area

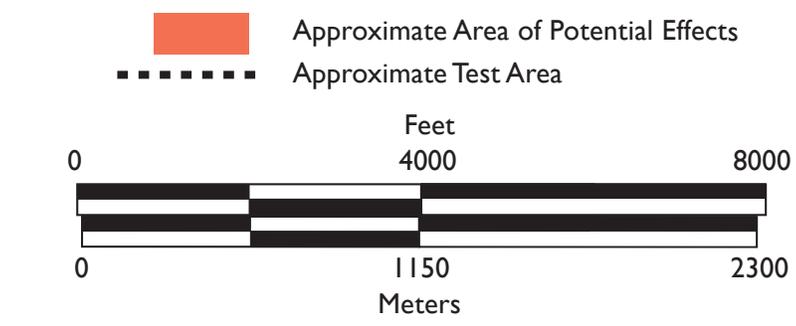
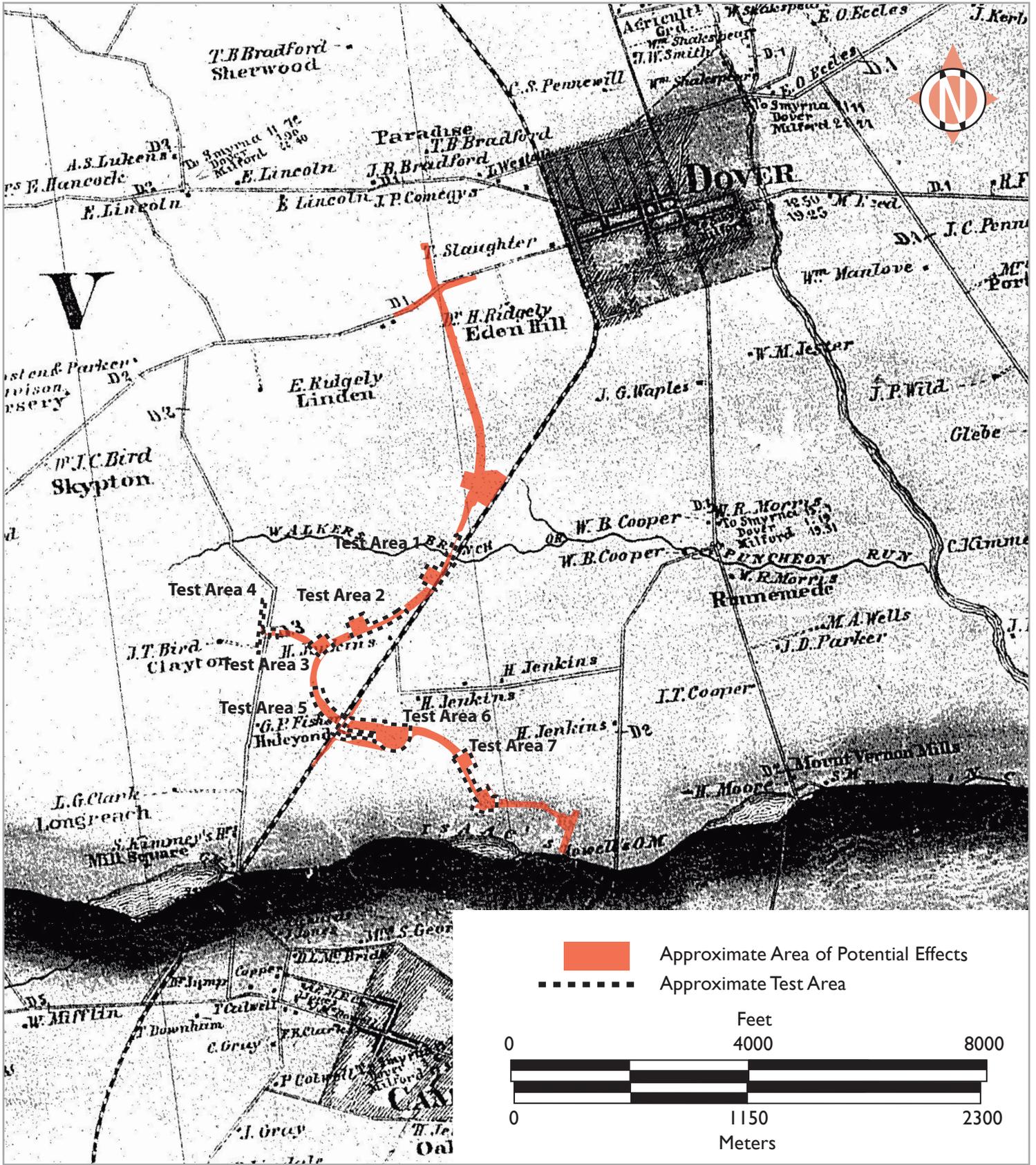


Figure 4
Detail of 1859 Byles Map
 Phase I Archaeological Survey, West Dover Connector,
 Kent County, Delaware



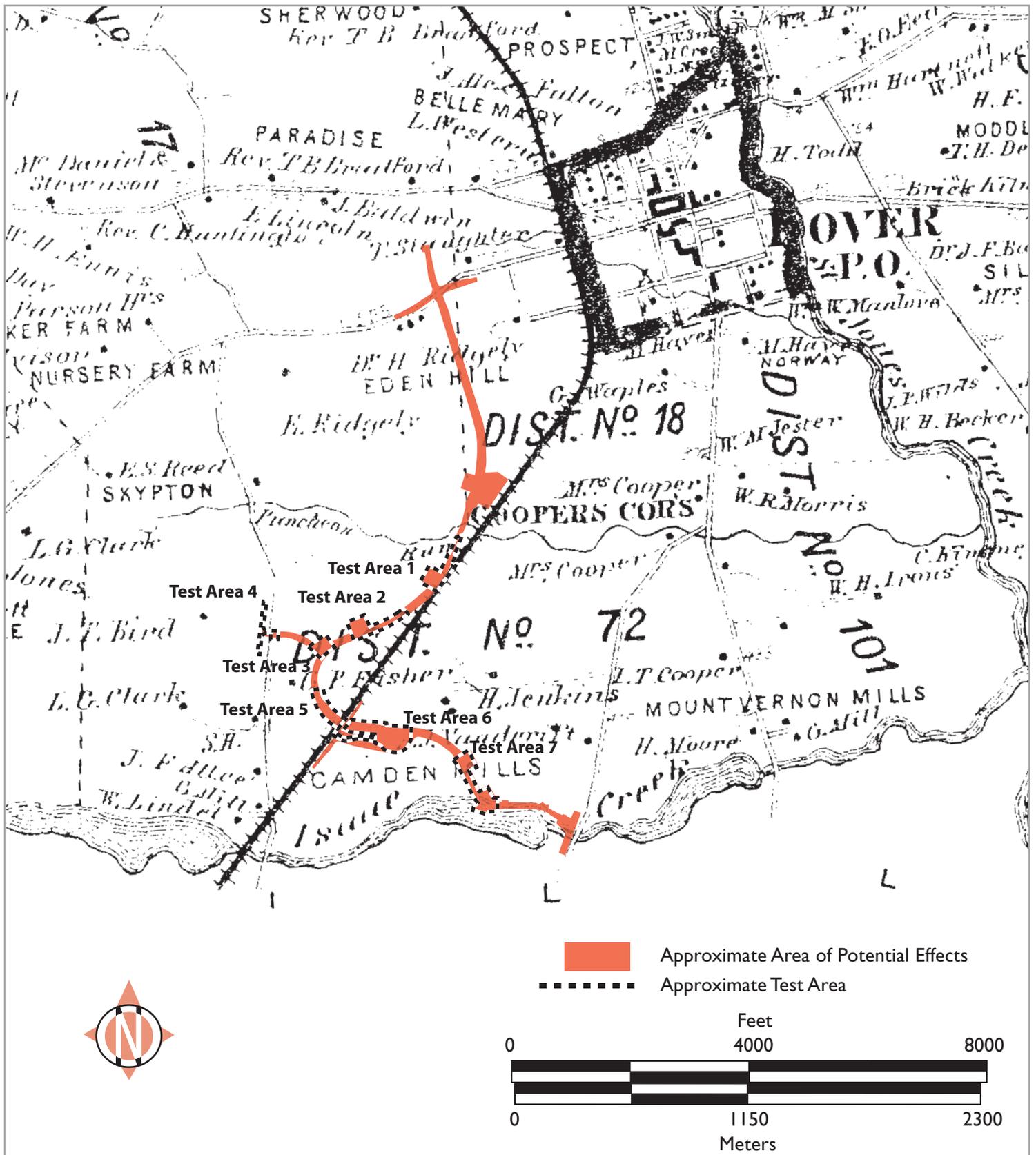


Figure 5
Detail of 1868 Beers Map

Phase I Archaeological Survey, West Dover Connector,
 Kent County, Delaware

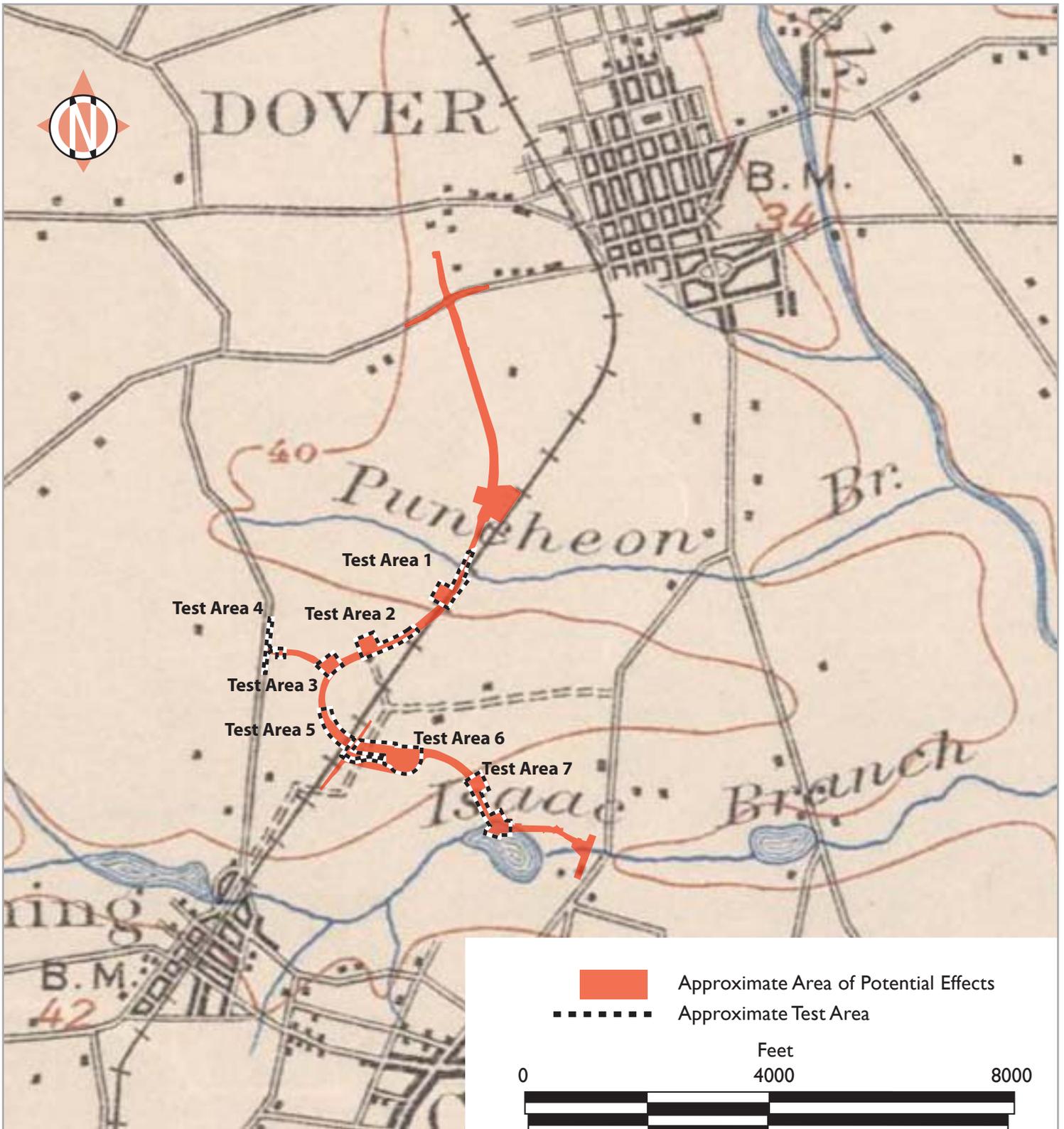


Map Document X: Graphics\Projects\P-738A\Detail of 1868 Beers.ai

6 and northwest of Test Area 7. This property is the former Jenkins homestead. Additional Jenkins properties are depicted on the atlas mapping, and these are presumably tenant farmsteads that were also located east of New Burton Road. One of these is the known ruins of a farm (CRS K-7638, 7K-C-443), which is located adjacent to the south of Test Area 6. The Byles and Beers maps document additional H. Jenkins properties were located in the vicinity of Test Area 6; one of them, K-1072, is still standing today. Together, the atlas maps document that H. Jenkins owned multiple structures and farmland in and adjacent to the APE in the nineteenth century. None of the Jenkins structures depicted on either the Byles or Beers maps is inside the APE.

The Byles and Beers maps also depict a number of mills on Isaac Branch. Three mill ponds are discernible on the stretch of Isaac Branch south of the APE. From west to east, the first is a gristmill labeled “S. Kimmey’s Hs. & G.M.” near the intersection of the Delaware Railroad and Isaac Branch on the Byles map. This area is defined as “Mill Square” on the Byles map and “Camden Mills” on the Beers map. The Byles map shows another gristmill—“Howell’s G.M.”—adjacent to the southeast of the APE and on the west side of the intersection of SR 13 and Isaac Branch. This mill is not depicted on the Beers map. Another grist mill is shown on the Beers map to have been located further to the southeast of the APE and closer to the confluence of the Isaac Branch and St. Jones River. It is a grist mill located in an area labeled “Mount Vernon Mills” on the Beers map. None of these mills or their mill ponds or races is located within the APE. They likely played key roles in milling agricultural products raised nearby, likely on farmland inside the APE. A 1906 USGS (reprinted 1915) topographic map of the Dover Quadrangle shows two properties proximal to the APE (Figure 6). These are the Kesselring Farm (CRS K-1030) and the Hunn Jenkins Property (CRS K-3205). The map shows that, like today, much of the area surrounding and including the APE served as agricultural lands.

Historical aerial photographs dating from 1937, 1954, 1961, and 1968 also shed light on historic-era occupations that took place adjacent to the APE (DataMil, accessed May 2012). Seven known historic properties influence the historic archaeological sensitivity of the APE, and in concert with precontact-era sensitivity guided decision-making about where to conduct archaeological testing within the APE (Figure 7). The Kesselring Farm (CRS K-1030) and the Hunn Jenkins Farm (CRS K-3205) are depicted on all of the aerials and continue to stand at



Map Document X: Graphics\Projects\P-738A\Detail of 1906 USGS.ai



Figure 6
Detail of 1906 (Revised 1915) USGS Map
 Phase I Archaeological Survey, West Dover Connector,
 Kent County, Delaware

these same locations today. A late-nineteenth- and early-twentieth-century farm (now demolished/ruins, CRS K-7638, 7K-C-443) appears on the 1937, 1954, 1961, and 1968 aerials. It was likely owned by H. Jenkins and apparently fell into disuse after 1968 because it appears to be in ruins in the 1992 aerial. It is located adjacent to the south of Test Area 6. Another farmstead that may have been owned by H. Jenkins is also depicted on the same aerials and still stands today. Its CRS form (CRS K-1072) notes that it dates to the late nineteenth/early twentieth centuries and is located at 1605 Burton Road. It is located adjacent to the north of Test Area 6.

All of these properties (CRS K-1072, K-1030, K-3205, and K-7638) hold important clues for the origins of the cultural materials identified in their vicinities. It was anticipated that artifacts found adjacent to these properties would be associated with the occupations of these farmsteads. The historic atlas maps, topographic maps, and aerial photographs depict no additional historic-era properties immediately adjacent to or within the tested portions of the APE. The APE is proximal to one historic property listed in the National Register of Historic Properties (NR; see Figures 4 and 5). The Eden Hill property (CRS K-0125), an eighteenth- through twentieth-century farm complex, is located east of the north end of the APE. Properties adjacent to the APE that have been recommended NR-eligible are the Kesselring Farm (CRS K-1030) and the Hunn Jenkins Farm (CRS K-3205).

3.4 Local Archaeological Site Context

An examination of the Delaware Cultural Resource Survey archaeological site forms and the Cultural and Historical Resource Information System (CHRIS) website (accessed May 2012) demonstrates historic and pre-European contact occupations in the vicinity of the APE. One known archaeological site, 7K-C-73 (CRS K-0470), dates to the Woodland I period and is situated inside the portion of the APE located adjacent to the intersection of New Burton Road and Puncheon Run. Additional precontact-era sites near the APE are primarily associated with either Puncheon Run or Isaac Branch. Most of the sites were identified on the margins of these two waterways, one of their tributaries, or in upland settings in cultivated fields.

Twenty-two recorded archaeological sites are located within an approximately 1-mile radius of Test Areas 1 through 7 (Table 1). Twenty-one of the sites contain evidence for pre-European

contact occupations. Three of these contain evidence for Woodland I occupations, one contains evidence for a Woodland II occupation, and 15 contain evidence for undated precontact-era components. One site contains evidence for precontact and historic occupations. One site contains only evidence for a late-nineteenth- to mid-twentieth-century historic occupation. Based on these sites, it is inferred that the portions of the APE closest to Puncheon Run and Isaac Branch (i.e., Test Areas 1 and 7) contain high sensitivity for precontact archaeological resources. It is also inferred that portions of the APE near historic farmstead properties (i.e., Test Areas 2, 6, and 7) contain high sensitivity for historic archaeological resources.

Table 1. Recorded Archaeological Sites within 1-Mile Radius of Test Areas 1 through 7.

CRS #	Site #	Site Name	Period	Site Type	Site Setting
K-0467	7K-C-83	-	Precontact	Unknown	Near the north bank of Puncheon Run, west of the APE
K-0468	7K-C-82	-	Precontact	Unknown	Near the north bank of Puncheon Run, west of the APE
K-0469	7K-C-48	-	Precontact	Unknown	Formerly cultivated field, north of Puncheon Run, west of the APE
K-0470	7K-C-73	-	Woodland I	Unknown	In the APE (Test Area 1), south bank of Puncheon Run
K-0471	7K-C-49	-	Precontact	Unknown	Near north bank of Isaac Branch, south of APE (Test Area 6)
K-0515	7K-C-60	Fifer Site	Precontact	Unknown	South bank of Isaac Branch, southwest of APE
K-0516	7K-C-50	-	Precontact and Historic	Unknown	South bank of Isaac Branch, southwest of APE
K-5471	7K-C-108	UDRF Survey Dover.IV.9105	Precontact	Procurement Site	North bank of Puncheon Run, west of the APE
K-5472	7K-C-109	UDRF Survey Dover.IV.96	Precontact	Procurement Site	Near the north bank of Puncheon Run, west of the APE
K-5473	7K-C-110	UDRF Survey Dover.IV.100	Precontact	Procurement Site	Formerly cultivated field, north of Puncheon Run, west of the APE
K-6206	7K-C-326	Wyoming Lake East A	Precontact	Unknown	North bank of Isaac Branch, southwest of APE
K-6207	7K-C-327	Wyoming Lake East B	Precontact	Unknown	North bank of Isaac Branch, southwest of APE
K-6208	7K-C-328	Wyoming Lake East C	Woodland I	Unknown	Near north bank of Isaac Branch, southwest of APE

CRS #	Site #	Site Name	Period	Site Type	Site Setting
K-6209	7K-C-329	Wyoming Lake East D	Woodland II	Unknown	Near north bank of Isaac Branch, southwest of APE
K-6210	7K-C-330	Wyoming Lake East E	Woodland I	Unknown	Near north bank of Isaac Branch, southwest of APE
K-6211	7K-C-331	Wyoming Lake West A	Precontact	Unknown	North bank of Isaac Branch, southwest of APE
K-6212	7K-C-332	Wyoming Lake West B	Precontact	Unknown	North bank of Isaac Branch, southwest of APE
K-6213	7K-C-333	Wyoming Lake West C	Precontact	Unknown	Near north bank of Isaac Branch, southwest of APE
K-6214	7K-C-334	Wyoming Lake West D	Precontact	Unknown	Near north bank of Isaac Branch, southwest of APE
K-6215	7K-C-335	Wyoming Lake West 1	Precontact	Unknown	North bank of Isaac Branch, southwest of APE
K-6216	7K-C-336	Wyoming Lake South 1	Precontact	Unknown	South bank of Isaac Branch, southwest of APE
K-7638	7K-C-443	-	Historic, Late 19th c. to Mid 20th c.	Farmstead	Cultivated field south of APE (Test Area 6)

Source: Delaware CRS forms; CHRIS website, accessed May 2012

The three sites containing Woodland I components and the one site containing a Woodland II component were assigned those occupation eras based on diagnostic lithic artifacts recovered at each site. 7K-C-73 contains single Jacks Reef, corner-notched, and stemmed points. 7K-C-328 contains a quartz stemmed point that is noted as Bare Island-like. 7K-C-330 contains a small quartz corner-notched point. The single site assigned to the Woodland II period contains a jasper triangle. The remainder of the precontact sites contains non-diagnostic precontact lithics that included utilized flakes, hammerstones, or debitage. The single historic site, 7K-C-443, was designated a site based on the demolished ruins of a farmstead. Although no subsurface survey has been conducted at that site, it is very likely that the site contains archaeological deposits. The single site exhibiting both precontact and historic components (7K-C-50) is noted as containing a stemmed point and “some colonial material.” It is tempting to assign the precontact component to the Woodland I period, based on the stemmed point, and the historic component to the eighteenth century, based on the colonial material. But the lack of additional detail precludes such assignment. Nevertheless, it is clear that the project area contains potential to yield evidence for Woodland I and Woodland II occupations and nineteenth- and twentieth-century farmstead

occupations. Most of the known sites in and near the APE are located near Puncheon Run or Isaac Branch. Prior to this investigation, only one archaeological site, the Woodland I-era 7K-C-73, was identified in the APE.

Based on the local archaeological site context, as well as on the historic maps and aerial photographs, it was anticipated that the APE was most likely to contain evidence of the last 3,000 years of human occupation in central Delaware. More specifically, it was anticipated that artifacts associated with Woodland period sites might be encountered, and it was expected that nineteenth- through mid-twentieth-century agricultural farmstead sites might also be encountered during the survey.