CULTURAL HISTORICAL BACKGROUND

Environmental Setting

The study area, located in New Castle County, falls within the Piedmont Uplands physiographic province, extending from just northwest of the Fall Line marking the transition from the Piedmont to the Coastal Plain and continuing west through the Piedmont. The following summary of the environmental setting of the Piedmont has been abstracted from Custer (1984).

The Piedmont Uplands of Delaware represent the northern portion of the Delmarva Peninsula and are characterized by a generally high relief topography dissected by the narrow and sometimes steep stream valleys of relatively small drainage systems; isolated knolls rise above the general level of the landscape. Elevations in the study area range from 90 feet to 370 feet above mean sea level. Thornbury (1965) notes that, within the Piedmont Uplands, there are no large tributaries of the older incised river systems of the Susquehanna and the Delaware Rivers, and that the drainage systems tend to be of lower order. Although broad floodplains may be found along the higher order streams of White Clay Creek and the Brandywine, Elk and Northeast Rivers, the floodplains along the larger tributaries flowing through this portion of the region – the low order tributaries of these rivers - tend to be rather limited in size. The underlying geologic formations consist of folded Paleozoic and Pre-Cambrian metamorphic and igneous rocks. Soils are generally well-drained, but some poorly-drained areas occur in the floodplains and upland flats.

The study area is crossed by seven drainages: Hyde Run and its tributary, Coffee Run, flow near the western end of the project area and are low order tributaries of Red Clay Creek; Red Clay Creek and two of its small unnamed tributaries run through the central portion; and Little Mill Creek and one of its tributaries, Little Falls Creek, flow near the eastern end of the project area (Figure 3 shows the locations of these streams). Hyde Run is a small stream that crosses Lancaster Pike close to its junction with Newport Gap Road. Its tributary, Coffee Run, crosses Lancaster Pike approximately .8 mile east of the Newport Gap intersection. Red Clay Creek crosses the Pike approximately 1.9 miles east of the Newport Gap Road intersection, with a tributary crossing the Pike a short distance on either side of the Creek itself. Little Falls Creek crosses under Lancaster Pike and drains south into Little Mill Creek; and lastly, there is Little Mill Creek itself, approximately a half mile west of the intersection of Lancaster Pike with State Route 141. It is these stream drainage areas, with their floodplains and contiguous slopes, that offered the greatest potential for finding evidence for prehistoric occupation within the project area limits.

Delaware Regional Culture History: The Prehistoric Past Through The Contact Period

Custer (1984, 1986a, 1986b, and 1989) has divided the regional prehistory into four major time periods: the Paleo Indian Period, circa 12,000 B.C. to 6500 B.C.; the Archaic Period, from 6500 B.C. to 3000 B.C.; the Woodland I Period, from 3000 B.C. to A.D. 1000; and the Woodland II Period, from A.D. 1000 to 1650. In the following discussion, paleoecological data is correlated with the cultural episodes; these time periods reflect changing environmental conditions in the past and their accompanying cultural responses, responses that are evident in the archeological record as settlement patterns and varying types and styles of artifacts. Information derived from the archeological record includes changes in projectile point morphology, additions or deletions to the general tool inventory, and/or indications of changes in resource exploitation procedures. Following these prehistoric time periods is the Contact Period, from 1600 to 1750, which terminates with the aboriginal populations' shift to an acculturated way of life. The Historic Period overlaps the contact period somewhat, with early settlement in the project area beginning in the 1730s.

Paleo Indian Period - 12,000 - 6500 B.C.

This time period dates to the terminal Late Pleistocene and early Holocene eras, a time that marks the final retreat of the glaciers and the beginning of the gradual development of modern climatic conditions. The earlier part of this period fell within the Late Glacial Episode (up to 8000 B.C.), a time when the Middle Atlantic region would have been affected by the northern ice sheets. A mosaic of different vegetation communities - grassland settings within a broader coniferous matrix dominated by spruce, with deciduous elements in the riverine zones - apparently supported an admixture of mammals, some now extinct (mastodon, mammoth, woodland musk ox, giant moose) and some modern (white-tailed deer, caribou, and elk); some of these mammals were browsers, while others were grazers. The latter part of the Period, falling within the Pre-Boreal/Boreal Episode (8000 B.C. to 6500 B.C.), marked the transition between the end of the Pleistocene and the beginning of the Holocene and was characterized by a reduction in grassland areas and the spread of mixed woodland settings dominated by boreal species, particularly pine. A hydrophytic sere (floodplain climax forest) would have been present along the stream courses, with the forest here - with its river birch, willow, cottonwood, and sycamore - being more closed. Boggy areas around lowlying areas of the floodplains were also attractive habitats to be exploited (Carbone 1976:185 - 186). The effect of this environmental change on faunal distribution was that of the extinction of many of the Pleistocene megafauna dependent on open grassland habitats and a redistribution in habitat areas for those animals affected by the reduction in forest edge settings.

Within these settings, the Paleo Indian lifestyle is assumed to have been one of both hunting and gathering, but with a marked emphasis on hunting. The tools in general appear to be for the acquisition of game animals and for the processing of these animals and their by-products. These tools include projectile points for killing, bifacial knives for butchering, and various flake tools for scraping, cutting, and piercing meat, bone or hide.

Large bifaces were carried away from the quarry to be used as hand axes that would be knapped down into flake tools in the travels away from the quarries (Gardner 1974). Diagnostic artifacts include such spear point styles as the Clovis, Mid-Paleo, and Dalton-Hardaway points and, towards the latter part of the period (referred to as the Early Archaic in most traditional schemes), corner and side notched styles such as Palmer, Amos and Kirk points.

A preference for a high quality cryptocrystalline lithic material is one of the diagnostic features of the Paleo Indian tool kit (Gardner 1977 and 1983), and the careful resharpening and maintenance of tools was common. This reliance on such high quality lithics had important implications for Paleo Indian settlement patterns. Gardner (1974, 1977, 1983 and 1989) observed that base camps were frequently located in the vicinity of quarries, with hunting camps and special resource procurement sites radiating out from the base camp/quarry locale. Cavallo (1981:11) also identified this pattern at the Turkey Swamp site in New Jersey. This model was reflected in the model postulated by Custer, Cavallo, and Stewart (1983) in which they stated that Paleoindian and Early Archaic groups restricted their movements to "a catchment area of variable size with a radius up to 200 km centered around one or more cryptocrystalline lithic sources", relying upon the biface tool technology in the large bifaces which served as a core source for flakes to be worked into specialized tools (in Haynes 2002). A fairly mobile lifestyle in which groups focused on the quarries and on game-attractive environments is hypothesized, with a society organized by the interaction of single and multiple family bands.

A number of Paleo Indian sites are known for northern Delaware, but because of the absence of quarries and favorable environmental settings within the project area, it was not expected that any Paleo Indian sites would be located.

Archaic Period - 6500 - 3000 B.C.

The continually changing climatic conditions resulted in the emergence of essentially modern environmental conditions by approximately 6500 B.C. A corresponding change in the adaptive strategies of aboriginal groups living in the Middle Atlantic region is also evident in the prehistoric record. Most important to these early settlers was the extinction of the large game species caused, at least in part, by the reduction in the grassland environments and their replacement by the closed mesic forests of oak and hemlock of the Atlantic Episode (6500 B.C. to 3100 B.C.); this period is defined in many pollen profiles by the maximum expansion of nut bearing trees (Carbone 1976:183). A general warming trend and an increase in precipitation favored the expansion of the dense mesic forests; swampy and boggy areas were probably widely distributed in areas of poor drainage. Faunal components were essentially modern, with deer and turkey figuring as major game animals. Thus the aboriginal hunting patterns adapted to the habits of these more solitary species, and the gathering of plant foods became increasingly important in their subsistence systems. This change in subsistence patterns is indicated in the archeological record by the increasing presence of various types of ground stone tools such as axes, celts, gouges, and grinding stones, by plant processing tools such as mortars and pestles, and by a variety of new projectile point styles (bifurcated and stemmed) made from a wide variety of lithic materials. A simple expedient tool technology to

produce multipurpose, generalized tools is adopted, and the tools are used briefly before being discarded (Gardner 1976).

Archaic sites are located in a wider variety of environmental settings and in different locations than are the earlier Paleo Indian sites (Gardner 1987). Many of the new site settings are related to emerging environmental zones associated with the spread of the mesic forests, variations in the water table, and sea level rise. This increase in the variety of environmental settings would have been reflected in a concomitant increase in the variety of seasonally available resources. Settlement patterns were now characterized by three types of sites: macro-band or multiple family base camps in areas of maximum habitat overlap; micro-band base camps, apparently occupied by fewer family units; and special resource procurement sites, exhibiting a more limited range of activities oriented towards the extraction of locally available resources. A fusion/fission social organization, based on seasonal activity, is apparently represented by these different site types in which micro-band and special resource procurement sites radiate out from the base camp. In the Piedmont a more complex system of functional site types is represented, perhaps an adaptation to the more varied resource settings resulting from the greater topographic relief than one finds in the Coastal Plain of Delaware (Custer 1986b).

Areas of high probability for Archaic sites in the Piedmont would be low rises located around marshy or swampy areas away from major drainages, and locations at sheltered locales along smaller streams which allowed the utilization of available resources such as plant or animal foods or lithic resources.

Woodland I Period - 3000 B.C. - A.D. 1000

This period is correlated with the Sub-Boreal Episode (3110 B.C. to 810 B.C.) and the Sub-Atlantic Episode (810 B.C. to A.D. 1000). The Sub-Boreal Episode begins with a pronounced warm and dry period characterized by an increase in the xeric oak/hickory forest cover and a waning of the mesic forests, at least in the northern portion of Delaware, an increase in grassland areas, and a decrease in the rate of sea level rise sufficient to allow the formation of estuarine resources. During the Sub-Atlantic Episode, a cooling trend accompanied by increasing precipitation led to the development of forest communities that approximate modern distributions. The northern Piedmont and the Fall Line Zones would have fallen within the oak/chestnut biome.

By 3000 B.C., then, the rising sea level and climatic/environmental changes - the beginning of a climatic period Carbone describes as “a period of major environmental stress which limited opportunity in some areas and opened up new avenues in others” (Carbone 1982:45) - led to a reorganization of the prehistoric way of life. This rise in the ocean’s water level resulted in the development of brackish water estuaries along the continent’s coastal areas, creating a rich environmental zone that could support the occupants of large base camps on a seasonal schedule; these base camps most likely represent a population that was semi-sedentary for a large part of the year. An increase in the overall population for the region may be noted for this time period. Earlier groups seem to have had relatively mobile lifestyles associated with flexible social organizations and an easily transported tool technology. Now one may recognize, in addition to the

more sedentary lifestyle and the large population aggregates, a less portable storage technology, elaborate exchange systems, and complex burial patterns (Custer 1986b).

The 3000 B.C. to A.D. 1000 time range is based on similarities as delineated by Custer (1986:87; 1989:143, 144):

1. The development of estuarine and riverine adaptations that are stable and intensive enough to produce large macro-band base camps in the zone of freshwater/saltwater interface and along the major drainages;
2. Population growth (or more intensive site utilization) at single site locations much larger than Archaic macro-band base camps;
3. The appearance of foraging and collecting adaptations in areas less productive than the estuarine and riverine settings;
4. The participation in exchange networks that result in the movement of raw materials and finished artifacts, across large areas;
5. The occasional participation in complex mortuary ceremonies that create cemeteries with rich grave offerings.

The Woodland I tool kit is characterized by broad-bladed, bifacially chipped broadspears, as well as by the appearance of a solid container technology. This technology is first apparent in the appearance of soapstone, or steatite, bowls, which were later replaced by ceramic vessels at circa 1,000 B.C. Ground stone tools continue to be a part of the tool kit, and there was an increase in the number and variety of such tools as adzes, gouges, celts and axes. Participation in regional trade networks also seems evident for this era, as indicated by the extensive use of nonlocal materials such as argillite, rhyolite and steatite, used both for tools as well as for non-utilitarian items. This is most evident at Delmarva Adena sites.

The settlement pattern exhibits an increase in the number and variety of procurement sites and an increase in the size of macro-band base camps that appear to represent sedentism, with semi-subterranean pit houses and storage and/or trash features.

Woodland II Period - A.D. 1000 - 1650

The environmental setting of the Woodland II Period is essentially modern in character. It is at this time period that a stable agricultural adaptation appears to have been achieved throughout much of the Middle Atlantic region, accompanied by the development of sedentary lifestyles (Custer 1989:298). While a movement to the more arable lands in the floodplains of major drainages, accompanied by the appearance of more permanent structures and large villages, is typical for the Middle Atlantic at this time, the Delaware Piedmont continues to exhibit many of the characteristics of Woodland I settlements. Indeed, many Woodland I settlements were also occupied during the Woodland II Period, with few changes in overall lifestyle and artifact assemblages. A shift to large village sites has not been found in the Piedmont Uplands (Stewart et al. 1986; Custer and Cunningham 1986:24). Settlement patterns continue to focus on areas of reliable water sources, with smaller camps being found that probably represent short-term exploitative sites. There is a breakdown in the trade and exchange systems that existed during the Woodland I Period, possibly caused by the disruption of social networks as a result of

fissioning communities, resulting in fewer and less distinctive non-local materials. The lack of non-local lithics may also be related to the changing settlement system at the source areas (Custer 1984).

It is the various new ceramic types, with their complex decorations including incised lines and cord-wrapped stick impressions, that characterized the Woodland II Period in Delaware. These wares evolved out of the earlier Woodland I ceramics. Crushed shell Townsend Ware with fabric impressed exterior surfaces and Minguannon ceramics tempered with sand, grit and crushed quartz with smooth or cord marked surfaces area the primary types. Townsend ware is associated with the Slaughter Creek Complex in southern Delaware, while the Minguannon complex is found in New Castle County and surrounding areas. Small triangular projectile points that appeared in late in the Woodland I period become ubiquitous, and indicate the use of the bow and arrow. These are generally made from high quality cryptocrystalline stone (Custer 1984).

High probability areas in the Piedmont Uplands would be well-drained terraces near high order streams and stream confluences, sinkhole/spring complexes, upland slopes near ephemeral streams, low order stream floodplains, particularly swampy areas, and locations near lithic sources.

Early European Contact Period - A.D. 1600 - 1675

It was during the period from 1600 to circa 1675 that the Delaware Indians developed an active interaction with the newly arrived European traders and settlers. There are no clear-cut examples of archeological sites belonging to this period, but documented evidence refers to Indian contact: Henry Hudson entered the Delaware Bay in 1609 and encountered Native Americans; Cornelius Hendrickson traded with native American groups along the Delaware Bay in 1616 (Weslager, personal communication 1981, in Custer 1984); and in 1632 there is the destruction of the Dutch whaling station at Swanendael which had been established in 1629. Because the fur trade moved swiftly to the west, a result of the depletion of fur-bearing animals along the eastern seaboard, and Native Americans in Delaware were blocked to the west by the Susquehannocks, the Delaware groups were prevented from actively participating in the emerging fur trade by the middle of the seventeenth century.

By 1675 the Susquehannocks left Lancaster County and ceased to affect the native American groups in Delaware. But ethnohistorical accounts chronicle a rapid disruption of the Indian way of life, brought about by deculturation resulting from a combination of factors: the expulsion of the Indians from their land; introduced European diseases, to which the indigenous populations had no immunity and which frequently struck down the people even before direct contact was made; a new dependence on European manufactured goods; and an increase in inter-group warfare due to competition for access to fur trading (Custer 1984). Large quantities of trade goods are not found in Delaware sites, making contact period sites difficult to recognize. The artifact assemblages are thought to otherwise resemble Woodland II sites, based on two contact period sites excavated in New Castle County (Custer and Silber 1995:16).

At this time in their history, the Indians in the northern part of Delaware were a part of the rather loosely defined Delaware Nation. All of the groups belonged to the larger

linguistic grouping known as the Coastal Algonquin, of which Delaware is a subdivision. The Delaware Nation consisted of widely scattered, rather fluidly organized and relatively independent local groups that seemed to be organized at a band or tribal level, lacking large scale organization and large communities. During the later part of this period, Native American groups began to leave areas of relatively dense European settlement, further disrupting traditions and cultural institutions (Custer 1984). It was much later in time that the shattered remnants of these groups were able to form a cohesive Pan-Delaware polity.

Delaware Regional Culture History: The Historic Period - A.D. 1730 - Present

Much of the regional history that follows has been abstracted from a number of sources, including a number of earlier DelDOT reports which include Coleman et al. 1985, Coleman et al. 1990, De Cunzo and Garcia 1992, Grettler et al. 1996, Taylor et al. 1989, and Walker et al. 1997.

The earliest colonial settlement in Delaware was by the Dutch in 1629, when a whaling station was established near Lewes; here, under the sponsorship of the Dutch West India Company, a small venture was established for whaling and for raising grain and tobacco. This, unfortunately, ended with the all-male population being massacred by the local Indians in 1632. In 1638, a group of Swedes employed by the New Sweden Company settled further north, building Fort Christiana in what is now part of the city of Wilmington. The Fort became the nucleus of a scattered settlement of Swedish and Finnish farmers known as New Sweden; they settled primarily along the western shore of the Delaware River in a string of small settlements reaching up the river from New Castle as far north as present day Philadelphia. Small communities grew up at Fort Christiana and at Upland, now Chester, Pennsylvania.

The Dutch claimed the same area of land by right of prior discovery, and in 1651, the Dutch West India Company's Fort Casimir was established, ostensibly for the purpose of trade with the Native Americans, at what is now New Castle, in an effort to try to block Swedish efforts to control commerce in the Delaware River. Although the Swedes were able to capture this fort in 1654, renaming it Fort Trinity, the rivalry between the two groups continued, with the Dutch recapturing Fort Trinity and seizing Fort Christiana as well. New Sweden was now out of existence as a political entity. In 1656, the Dutch West India Company sold its interest to the City of Amsterdam, and the town of New Amstel grew up around the former Fort Casimir (Munroe 1984:21-28). Settlers now fell under the supervision of local officials appointed by the burgomasters of Amsterdam.

In 1664, the English attacked the Dutch settlement at New Amstel, gaining control of the colony; for nearly two decades the area was governed as a part of New York. Former Dutch magistrates continued in office under the new English authority, and the residents of the area—the Swedes, Finns and Dutch—peacefully accepted the rule of the Duke of York through his appointed governors. Conflicting claims to the western shore of the Delaware River were made by the Duke of York and Lord Baltimore. The three counties of Delaware were part of the area for which proprietary rights were granted by the Duke of York to William Penn in 1682. During this time, the area north of New Castle still retained a large population of Swedes and Finns who had settled there previously, while the Dutch population was more prevalent further south (Munroe 1984:29-33).

Now Delaware was under control of Philadelphia, both economically and politically. Philadelphia, established by Penn in 1682, had gained a population of 6,000 within a decade, and as planned, became a center for commerce, shipping, and government. It so dominated the region that other urban centers were slow to develop - Wilmington and Lancaster did not receive borough status until 1740 and 1742 respectively. Philadelphia became the chief port for exporting the grain and flour produced in the region, including the New Castle County area (Lemon 1967). Small commercial centers grew up as the population density increased, and shipping points - small towns such as Newport and

Christiana, through which goods were channeled to Philadelphia - began to appear. Grain and flour were also shipped from various landings along the Delaware River.

The settlement pattern at this time was one of scattered family farmsteads located along the major drainages such as the Delaware River itself, White Clay Creek, Red Clay Creek, and Christiana Creek (Weslager 1961). Subsistence farming continued to be important, with farming oriented to the production of goods for household use; agricultural production for home consumption can be described as general mixed farming, with most farms producing several types of small grains, corn, flax and hemp, and vegetables. Most farms also had substantial orchards. Cattle and pigs were generally kept, as were a few sheep, and horses were used more often than other animals for farming operations and hauling. At the turn of the nineteenth century, yields on the area farms were low and cattle were small in size (Lemon 1972:150-166). Many farmers were also craftspeople, making products for use by the local population (Lemon 1972:6).

This pattern gradually changed to one that also involved the production of goods for consumption for the growing urban and international market, always a significant economic factor (Bidwell and Falconer 1941:261; Lemon 1972:2). Wheat and flour were the primary agricultural exports by 1700, and wheat continued as the primary market crop through the eighteenth century.

Settlement in the New Castle County area continued to expand during the eighteenth century; colonists began to move inland, away from the navigable rivers and streams, as the overland road transportation network improved. Although the good productive land – the rich floodplains - was settled first, marginal property was settled as the population grew. The size of farms at this time ranged between one hundred and two hundred acres, a decrease in size from the original land grants that averaged about five hundred acres; this decrease was the result of the grants and tracts being divided by inheritance among many siblings or by the sale of portions of the family properties.

Throughout the eighteenth century the increasing population stimulated the development of new towns as well as more effective communication networks. Hamlets grew up at crossroads and around taverns, ferries, churches, and mills. Roads were improved over the course of the century as the population grew and trade increased. Farming, the dominant occupation for the region's population, continued to be a combination of the cultivation of grains (wheat, rye, corn, barley and oats) and the raising of livestock. The iron industry – which had begun about 1725 at Iron Hill in Pencader Hundred (Coleman et al. 1990:9) – continued to grow, as did lumber production and grain mill enterprises, until, by the end of the eighteenth century, Delaware had become one of the leading manufacturing states, with Wilmington and its environs representing one of America's leading industrial areas.

Mills along the Brandywine and other streams must have been established early on in the settlement of the area, but began to develop as an industry during the 1730s (Hoffecker 1974:8). Milling and other manufacturing operations during the 1700s tended to be run by a single proprietor, and the business locations were dispersed throughout the countryside. Later in the century cotton milling developed (Lemon 1972:30).

It was in the nineteenth century that methods of transportation changed considerable in New Castle County, a time when the quality of the flour milled on the Brandywine had

become legendary. The emphasis on improved market access for raw materials and products stimulated the construction of canals, railroads and turnpikes such as the Lancaster Turnpike, the Kennett Turnpike, and the Concord Turnpike (Dauer 1978), although in general the road system within Delaware lagged considerably behind the railroads as a means of transportation.

The Turnpikes: A Brief History

The success of Pennsylvania's Lancaster and Philadelphia Turnpike (sometimes referred to as the Lancaster Turnpike) in the 1790s spurred the development of other turnpike roads. Toll roads such as the Gap and Newport Turnpike, authorized in 1807 in Pennsylvania and 1808 in Delaware (Scharff 1888:417), the Wilmington and Lancaster Turnpike (hereafter referred to as the Lancaster Turnpike), authorized in 1808 and connecting Wilmington to the Gap and Newport Turnpike (Scharff 1888:417), the Kennett Turnpike and the Wilmington and Great Valley (Concord) Turnpike, both authorized in 1811 (Scharff 1888:885) were developed in order to accommodate the burgeoning commercial trade among these towns. These were generally built on existing public roads that were improved for the purpose, although sometimes sections may have been built on new alignments. Toll gate intervals and rates were set for each company, and were not standard from one road to another.

The Lancaster Turnpike appears to have followed the public road already in existence that ran from Wilmington toward Lancaster up to the current Old Wilmington Road intersection, after which it took a more southerly route. A petition to the justices of the Court of Quarter Sessions in May 1775 gives the beginning point of the proposed public road as the intersection of the King's Road to Christiana Bridge and Front Street. The road passed through property of many of the historic landowners along the road such as Samuel Barker and Andrew Stilley, whose names are still connected with properties in the study area. Meets and bounds are given for the part of the road from Wilmington to a post in the Ocasson [Hokessin] Road, which the route then follows to the Pennsylvania border.

The following information about the construction and operation of the Lancaster Turnpike has been gleaned from minutes of the company meetings. These are found in the Turnpike records housed at the Historical Society of Delaware's library in Wilmington (W & GV Turnpike Records, Vol. I).

Although the Lancaster Pike was authorized by the legislature in 1808, the first organizational meeting did not occur until June, 1809. The turnpike road was to run from Wilmington either to the state line or to meet the Gap and Newport Turnpike. A route was surveyed the next year, but a choice had to be made between a northern and a southern route. After conferring with landowners concerning damages, the southern route was chosen. This route affected property belonging to James Armor, William Jordan, Patrick Kinney, Thomas Springer and Albanus C. Logan.

Actual turnpike construction began in 1811, after permission was received from the Borough of Wilmington to begin construction at the intersection of Front and Market Streets. In return for this permission, the company agreed not to construct a toll booth

within the Borough limits. The first section of road passed inspection in 1812, and a committee was appointed to see to the construction of a toll gate at the intersection of Lancaster Pike and Kennett Road (an old kings road). By 1813, the road had been completed as far as the Priest's Place (probably the Coffee Run Mission) on the west side of Red Clay Creek, a distance of five and three quarters miles. Completion of the final one and a quarter mile of road was put off because the Gap and Newport Turnpike had not yet reached the planned point of intersection. A search for a toll gatherer began, and in 1813, Matthew Crips was hired at $50 per quarter. He was authorized to collect tolls for the five and three quarters miles of completed road. Plans were begun for a second toll house.

In 1814, the second toll house was completed and Jacob Peterson was hired to gather tolls. During construction, an unspecified problem arose in which, according to turnpike minutes, a 'hostile disposition' was manifested by Jarvis Scullion and his wife toward the workmen who were working on the toll house and gate near Springer's Tavern [Oak Hill Inn]. The problem was solved by moving the toll house, but this must have been a relatively small shift in location, since the toll gate remained in that general location. The 1860 Lake and Beers "Map of the Vicinity of Philadelphia and Reading" shows the toll gate (and presumably the house to which it was attached by a line) across the Pike from the J. Armor residence. At this time, a meeting was held to "commute with such persons as might wish to commute for travelling the said road." A fixed amount was charged to these commuters, so that they might travel the road for a set period without having to pay a toll each time.

By 1818, the stone part of the road was competed as far as the Gap and Newport Turnpike. There are no specific records for the details of construction, but perhaps Lancaster Pike was constructed in a similar manner to the Wilmington and Great Valley (Concord) Turnpike. The records for this turnpike specified an artificial road at least 20 feet wide was to be built, and that it was to be bedded with wood, stone, gravel, clay or other materials to create a solid foundation with a facing of a hard material to create a firm surface. The hard road was to be flanked by unpaved or summer roads, with a maximum width of 100 feet (W & GV Turnpike Records, Vol. 1). Lancaster Pike had two sections, a three mile section starting from Market Street in Wilmington, and a three mile and 138 perch section from that point to the Newport Gap Pike.

The turnpike construction involved taking stone from the lands of people living along the road, both to build the road bed and to construct arches or bridges over the streams. Even as the road was in the process of being constructed, repairs needed to be made, and payments to contractors and inspectors for these repairs are found throughout the meeting minutes. Bridges were built at Red Clay Creek and at Coffee Run. In 1831, appropriations for snow removal by 71 laborers were noted, and various bridges needed repair. Only one other mention of snow removal occurred, and that was in 1854.

Improvements to the first toll house were made by toll gatherer Matthew Crips (who was replaced in 1815 by John Gregary), and the minutes from an 1816 meeting show that the company was unable to come to terms with him for the purchase of the kitchen he erected, so Crips removed it to his own property. After this, the company itself began to make improvements to the toll houses. In 1816, a privy was completed at the first toll house, and in 1817, a committee was appointed to make adjustments to the toll house to

better accommodate Gregary's family. In 1818, an appropriation was made for a lamp for the second gate. In 1853, unspecified repairs were made to the upper, or second, toll house.

A report was made on an agreement with the Bank of Delaware and the Wilmington and Brandywine Bank concerning the company's debt at an 1831 meeting in which semi-annual payments and interest payments were arranged. After this point, the company may have been profitable, since dividends were noted as being paid fairly regularly.

The property along Lancaster Pike is known to have remained primarily agricultural, and few businesses are mentioned. Some meetings of the turnpike company were held at taverns, but other than Springer's tavern on the Pike, these seem to have been located in Wilmington. An abatement was granted to Alexander Porter, who began operation of a stage to Lancaster in 1828. Mention is made several time of the poorhouse, which probably also had an abatement or commuter agreement with the company. William Lowell operated a brickyard just above the first milestone, and the company made arrangements for him to pay toll for only one mile of roadway.

The Gap and Newport Turnpike became a free road in 1838. The following year, a committee was appointed by the Wilmington City Council to confer with the board of the turnpike company about making the lower end of the Lancaster Pike within the Borough of Wilmington a free road; the company concluded that they had no authority to vacate the road. Presumably, this would require an act of the legislature. The addition of new roads intersecting the turnpike eventually caused them to put the first toll house up for sale and to construct a new house and gate. The new toll gate was erected in 1856, at the intersection of an unspecified new road, but minutes of an 1858 meeting indicate that the company was still losing money because of the location of the first gate. By 1859 the law on toll gates was altered, and the company was charging tolls for the exact distance of travel, and only one gate was operated. The turnpike records continue up to 1861; the turnpike was made a free road in 1877 (Scharff 1888:417).

Settlement Features During the Nineteenth and Twentieth Centuries

That area of New Castle County in which the project area lies remained primarily agricultural from late colonial times to the end of the nineteenth century, although the nearby Brandywine industries (the powder mills, the producers of powder kegs, the grain milling, and the cotton and woolen manufacturers) offered numerous opportunities for part-time employment – an attractive proposition for agriculturally based workers who sought supplemental sources of cash income on an occasional basis (Taylor et al. 1989:25). Statistics indicate that workers in the powder yard (such as E. I. DuPont's, on the Brandywine) often left the company and the hazards of the job at an early age, taking their savings and purchasing farms nearby (Uminowicz 1979:19). This helped to off-set a trend that centered on the migration of workers to urban areas.

In general, nineteenth and early twentieth century settlement was characterized by larger landholdings and tenant farms, as well as by hamlets and small commercial towns. Numerous taverns and shops are noted on the early maps of New Castle County, offering services and products used by both the local population and the traveling teamsters and merchants. While they offered a place for meals and overnight accommodations, they functioned also as places for community gatherings, festivities, and often, political

elections, rallies, and public auctions. The lack of a postal system also led to the development of these establishments as communication exchange centers (Thompson 1987; Wholey et al. 2003). Tavern records show that taverns were operated at distances of one mile, two miles, four miles and eight miles from Wilmington along the Pike. The Oak Hill Inn was first established as a tavern on the Pike, and was recorded in 1787 as such. The exact location of several other taverns on the Pike are not known, although Heald's 1820 "Roads of New Castle County" (Appendix II: Map 1) shows a few taverns on roads intersecting the turnpike. Only Loveville became a named hamlet on the turnpike, and had a post office and a shoe shop. The area around Springer's Tavern (Oak Hill Inn today) developed somewhat, having a blacksmith and wheelwright shop, and the Oak Hill schoolhouse was located nearby. Farming occupied the vast majority of those parts of the landscape suitable for agriculture until quite recently.

Industrialization along Red Clay Creek may not have been on the scale of the Brandywine mills, but iron, textile, snuff, spice and paper mills appeared on the Creek during the nineteenth century. Gilpin's mill (later the Delaware Iron works) was located at Wooddale, a short distance north of Lancaster Pike, where Gilpin operated a slitting mill from 1814 until 1826. James Wood and his son Alan leased the mill until 1832, operating a rolling mill; Alan Wood purchased the mill in 1844, and the Delaware Iron Works operated until 1890. After this it was converted to a paper mill that operated until at least 1910 (Pursell 1958).

The Wilmington and Western Railroad, which crosses the turnpike within the project area, was built in 1871-1872. It was nearly 20 miles in length and ran from Wilmington to Landenberg, Pennsylvania. Because of its later acquisition by the Baltimore and Ohio Railroad in 1883, it is sometimes referred to as the Landenberg Branch of the B & O Railroad (1978 Wilmington & Western Railroad National Register Nomination Form).

Farming occupied the vast majority of those parts of the landscape suitable for agriculture until quite recently, and was practiced by the remaining descendants of the early settlers – those Swedes, Dutch and English who first broke ground here. Although at the beginning of the 1800s, agriculture had become significantly less productive under the old practices, new techniques such as the use of improved drainage systems, fertilizers, and farm machinery boosted production greatly. While the traditional crops – oats, corn and wheat – were still in demand, decreasing crop yields encouraged crop rotation with marketable fodder grasses, a commodity required by urban transportation (Bidwell and Falconer 1941:235; Passmore et al. 1978:29). Urban markets also required meat, fattened in the pastures before being sold; the cow manure was an important by-product, valued as fertilizer. Ultimately, dairying became an important alternative to crop production in Delaware (Passmore et al. 1978:36). Tenant farming, common in the eighteenth century, became even more prevalent in the nineteenth century. By the beginning of the twentieth century, over 50% of all the farmers in Delaware were tenants or sharecroppers (De Cunzo and Garcia 1992:28).

In the early twentieth century, some of the farmhouses in the project area were altered to conform to the style of the Country House movement. By the last decades of the nineteenth century, the idea of the country house had changed from one of a place in which to retreat to that of being a showplace. While the architecture stemmed from the earlier English Country House styles, the American houses that imitated them were on

smaller estates, and tended to incorporate modern technological improvements in plumbing, heating, electricity and so on. The houses were sometimes associated with model farms and English style gardens. By 1915-1920, a vernacular style had developed out of this movement, with building styles based on Colonial and Federal style homes. This style, developed in Pennsylvania, blossomed in Delaware during the late 1920s and 1930s.

New Castle County's proximity to Wilmington as well as its excellent transportation network are two of the factors which stimulated the County to grow and diversify as it entered the twentieth century, although the decline in the use of water power in favor of cheap fossil fuels and electricity directly contributed to the demise of the factories on the Brandywine (Taylor et al. 1989:27). Today, considerable residential and commercial development has been carried out, and the area has taken on the character of a mixed land-use suburban environment, with numerous housing subdivisions, strip malls, large malls, and various small businesses and commercial complexes. Increasing suburbanization of the area has meant that many older functional buildings (barns, coops, dairies, etc.) are gone or have been replaced by more modern ones, while the older residences themselves are in various stages of restoration, remodeling or decay.