

## BACKGROUND RESEARCH

### PREVIOUS INVESTIGATIONS

Several archaeological investigations have been completed in the project vicinity, most of them associated with the building of SR 1 (Table 1). Figures 3-7 show the locations of these studies and the known archaeological sites in the APE.

**Table 1: Previous Archaeological Studies in the APE**

DESCRIPTION	REFERENCE
Phase I Archaeological Survey, Routes 4, 7, 273	Thomas 1980
Archaeological Planning Survey of the SR 1 Corridor	Custer and Bachman 1986
Phase I and II Archaeological Studies, Route 7 South Corridor	Catts et al. 1988
Archaeological Testing and Historical Investigations of “The Place at Christeen”	Catts et a. 1989
Phase I Archaeological Survey of the SR 1 Canal Section, Red Lion Creek to Scott Run	Hodny et al. 1989
Phase II Archaeological Testing of the Lewden Green Site, 7NC-E-9	Custer et al. 1990
Phase I Survey of Waterline Near Route 13/72 Intersection	Mellin and Baumgardt 1990
Management plan for Delaware’s historic archaeological resources	De Cunzo and Catts 1990
Cultural Resource Planning Study for the proposed Route 301 Corridor, New Castle County	Kellogg 1992
Phase II Archaeological Investigations, SR 1 Canal Section	Kellogg et al. 1994
Paleoenvironmental Studies of the SR 1 Corridor	Kellogg and Custer 1994
Phase III Archaeological Excavations of the Wrangle Hill Site (7NC-G-105)	Custer et al. 1995
Phase III Archaeological Excavations of the Snapp Site (7NC-G-101)	Custer and Silber 1995
Phase I and II Testing at Scott Run and the Route 13/72 Interchange, and Phase III Mitigation of the Woodville Grave Site	Doms et al. 1995
Phase I and II Archaeological Investigations in the SR 1 Corridor, Scott Run to Pine Tree Corners	Bedell et al. 1996
Archaeological Excavation of the Partridge Memorial Cemetery	Traver 2000

*Note: studies are listed in chronological order, the oldest first.*

### *Planning Studies*

Archaeological planning studies carried out for both SR 1 and U.S. Route 301 encompassed the study area (Custer and Bachman 1986; Kellogg 1992). These studies were directed toward assessing the current state of archaeological knowledge and predicting where new archaeological sites were likely to be found. Both studies included attempts to develop predictive models for site locations. The general conclusion from this work is that although certain general factors can be identified, no model has been found that accounts for site locations with both accuracy and precision. Kellogg (1992) found that the most important factor for prehistoric site locations was the presence of a stream or a boundary between dry and wet soils, and historic sites were found most often close to either streams or historic roads. However, some sites were found in low probability locations. One of Kellogg’s modeling exercises showed that 62 percent of prehistoric

sites were found in high-probability locations, but since high-probability areas made up 49 percent of the study area, sites were only 1.3 times more likely to be found in high-probability areas than outside them.

Custer and Bachman (1986) describe archaeological survey undertaken with the goal of refining their site location model. Survey was carried out of plowed fields along the south side of Dragon Run, east of the current study area. Seven small prehistoric sites were found, and a large private collection of points from this area was viewed. A large cache of rhyolite and jasper blades was found at Site 7NC-G-20 in this area in the 1970s.

What these studies actually show is that the locations of archaeological sites can only be predicted using a very fine-grained analysis that examines the landscape in detail. The Wrangle Hill Site (see below), eligible for the National Register of Historic Places, was located at the confluence of two streams, one of which was too small even to appear on a USGS quadrangle map. The USGS quadrangle shows no stream in the vicinity of the Conrail North A and B Sites, but an ephemeral drainage is present. Historic sites have been found in all sorts of locations, even places that seem too poorly drained for habitation. Except for steep slopes and wetlands, very little of the area can be said to have no potential for archaeological sites.

### *Route 273*

Initial archaeological survey of the SR 1/SR 273 interchange was done when the SR 273 bypass was built around Christiana (Thomas 1980). This survey was carried out by surface inspection of a fallow field. No artifacts were found. This study seems to have covered the intersection as it currently exists but not any area beyond that.

### *Studies Related to the Route 7 South Project*

Archaeology for SR 1 in the northern part of the APE was actually done under the heading of Route 7 South (Catts et al. 1988). This study covered an alignment extending from I-95 to U.S. Route 13 that substantially overlaps the eventual SR 1 alignment. The first part of the survey was done in 1982 by DeIDOT archaeologists. After changes to the alignment, additional fieldwork was carried out by the University of Delaware Center for Archaeological Research (UDCAR) in 1986. The survey was carried out by a combination of surface inspection and test unit excavation. The survey included two alternatives for the segment that bypasses historic Christiana, on the west and the east. The eastern alternative was chosen, so work on the western route was discontinued after the Phase I work was complete. The work reported in the initial report includes both Phase I survey and the limited Phase II testing that was carried out at smaller sites. The more extensive Phase II testing carried out on larger sites was reported separately.

Twelve archaeological sites were discovered and evaluated during the Phase I survey (Table 2). Six of the sites are primarily prehistoric, six are primarily historic, and one, the Nowakowski Site (7NC-E-52), had potentially significant historic and prehistoric components. No testing was carried out at the African Union Methodist Church and Cemetery, which was just outside the APE, but the presence of a potentially significant archaeological site was assumed. The seven

prehistoric sites identified and investigated during the survey ranged in age from the Archaic period (6500 BC to 3000 BC) to the Woodland II period (AD 1000 to 1650). Five of these sites were characterized as small and temporary-use resource gathering and processing sites. The small sites were all located on rises near small wetlands or intermittent streams.

**Table 2: Archaeological Sites Identified during the Route 7 South Project**

SITE No.	NAME	TYPE	NRHP STATUS
7NC-E-9	Lewden-Green	Prehistoric camp	Not Eligible
7NC-E-16	Marta Site	Prehistoric lithic scatter	Not Eligible
7NC-E-32		Prehistoric lithic scatter	Not Eligible
7NC-E-50	Larson	Prehistoric lithic workshop	Not Eligible
7NC-E-51	St. Francis Hospital Farmstead	20 <sup>th</sup> -c. farm	Not Eligible
7NC-E-52	Nowakoski Site	18 <sup>th</sup> -century domestic site and prehistoric camp	Outside final ROW, not evaluated
7NC-E-53	Patterson Lane	18 <sup>th</sup> -c. to 20 <sup>th</sup> -c. farm and landing	Eligible – Criteria A and D
7NC-E-54	Upland Victorian Site	Woodland I and II base camp	Outside final ROW, not evaluated
7NC-E-81	Texaco East	Prehistoric lithic scatter	Not Eligible
7NC-E-82	Dickson	Store, ca. 1780-1845; tenant house, 1845-1920	Eligible; excavated; destroyed
7NC-E-83	Heisler Tenancy	Tenant house, ca. 1840-1920	Not Eligible
-	African Union Methodist Church and Cemetery	Church and Cemetery	Outside ROW but considered eligible

*Catts et al. (1988)*

Phase II testing was carried out at the Larson Site (7NC-E-50), which fronted on School Bell Road. The finds there consisted of 3,100 pieces of quartz debitage, 10 early-stage quartz bifaces, a quartz corner-notched point, and a chert stemmed point. All this material was recovered from the plowzone, so the site was considered not eligible for listing in the National Register.

Two prehistoric sites, the Lewden-Greene Park Site and the Upland Victorian Site, were larger sites classified as base camps. The Lewden-Greene Park Site underwent Phase II testing; the Upland Victorian Site was on the western alternative, so no further work was done. The six historic-period sites spanned the mid-1700s to the 1900s. These included the site of the Union African Methodist Church and Cemetery, three historic sites in the Patterson Lane Site complex, and, on the unused western alternative, the Nowakowski Site. All these historic sites are located on the outskirts of Christiana, which was historically a locally important transshipment center for farm produce and commodities.

Additional, more extensive Phase II archaeological work was carried out on four sites, the prehistoric Lewden-Green Park Site and the three sites that make up the historic Patterson Lane Site Complex. Note that because the crossing over the Christina River was moved west of its originally planned site, the area along the east side of SR 1, about 200 feet wide, was covered by these earlier surveys from Route 273 north to Patterson Lane

### *The Lewden-Greene Park Site (7NC-E-9)*

The Lewden-Greene Park Site was a prehistoric base camp located on a floodplain adjacent to the south bank of the Christiana River (Custer et al. 1990). A large number of prehistoric artifacts were recovered during Phase I and II testing. These included ceramics from the Delaware Park and Wolfe Neck Complexes of the Woodland I period (ca. 500 BC to AD 100), and stone tools made from jasper, chert, quartz, and ironstone (Figure 8). The site was investigated again after changes to the alignment, and during the second round of Phase II testing most of the artifacts found were associated with the Minguannan Complex of the Woodland II period, ca. AD 1300 to 1600. Between the two studies, 98 1x1-meter test units and 66 75x75-centimeter test units were dug on the site, constituting a very intensive Phase II study (Figure 9). Both studies found that all of the prehistoric artifacts were in the plowzone, so the site was found not eligible for the National Register.

### *The Patterson Lane Site Complex*

The Patterson Lane Site Complex was a historic landscape located east of the town of Christiana, bounded on the south by the Christina River, on the east by Eagle Run, and on the north by Patterson Lane (Catts et al. 1989). Patterson Lane is an old road that once connected the Patterson Mill to Christiana via a small bridge over Eagle Run. The complex included three separate historic archaeological sites: the Patterson Lane Site (7NC-E-53), the William Dickson Site (7NC-E-82), and the Heisler Tenancy Site (7NC-E-83). Although these sites were close together, they turned out to be located on separate tracts of land with different ownership histories (Figure 10).

The Patterson Lane Site (7NC-E-53) was the home of John Read, the father of George Read, who signed the Declaration of Independence. It was established before 1737, when John purchased it with “houses, wharves, and other improvements.” The Reads called it “The Place at Christeen,” and it was inhabited throughout the nineteenth century. The property included a dwelling house that stood until after 1906 as well as a wharf and store. Phase II testing produced numerous domestic artifacts dating to the whole span of the site’s occupation. The mid-eighteenth century was represented by Delftware, Staffordshire slipware, and white salt-glazed stoneware, later periods by creamware, pearlware, whiteware, ironstone, and aqua bottle glass. This site was determined eligible for listing in the National Register, but because of changes in the alignment it was avoided. The house foundation survives, intact, 200 feet from the shoulder of SR 1.

The William Dickson Site (7NC-E-82) was the location of a store and landing, close to the Patterson Lane Site but part of a separate historical property. It was established around 1780 as a store and served that function until around 1845, when it was removed. Based on the presence of a single seal bearing the name “W. Dickson,” the store has been associated with Christiana merchant William Dickson. Dickson arrived in town around 1780, rented a town house, and carried on his business. Mostly he bought wheat and flax seed, which he sold or traded for household goods that he sold from his store. Written records do not give the location of his store, so it might well have been the William Dickson Site. He died in 1795. Dickson’s probate inventory survives, and it offers a window into the business of a small-town merchant at that

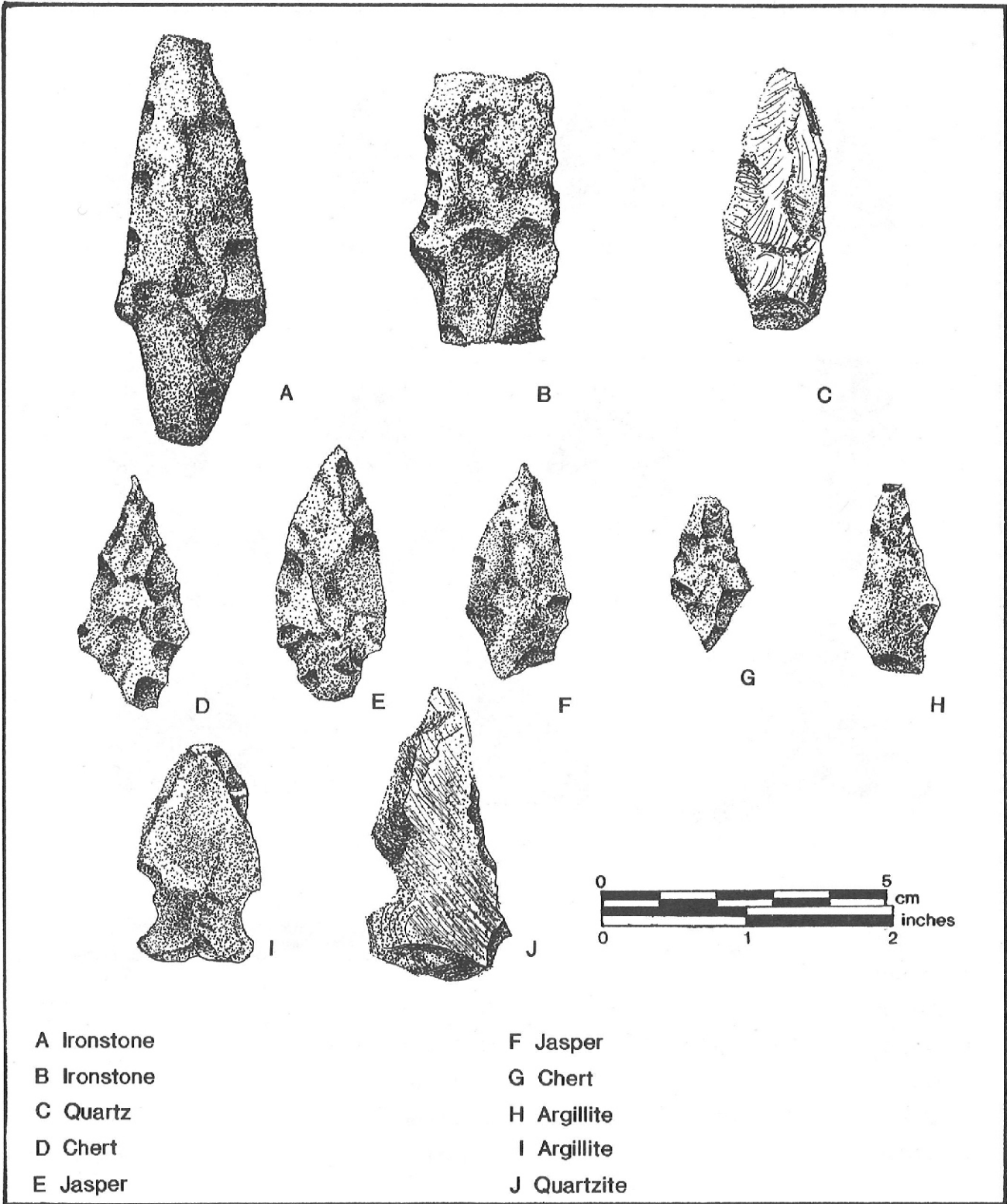


FIGURE 9: Projectile Points from the Lewden Green Site (7NC-E-9)

SOURCE: Custer et al. 1990:41

time. The research done for this project also included the review of New Castle County store records from that period to provide a context for Dickson's business.

After the store was removed, another house was built in the same place and occupied by tenants until 1919. At least some of the tenants were African American. This site was considered eligible for listing in the National Register under Criterion D. Extensive Phase III excavations were carried out, and then the site was destroyed by the construction of SR 1.

The Heisler Tenancy Site (7NC-E-83) was the location of a tenant house built in the nineteenth century and occupied until 1968. It was established under the ownership of William Egberg Heisler, a wealthy investor who controlled hundreds of acres of land in New Castle County. The site was adjacent to Patterson Lane. Because most of the material encountered during the Phase II testing dated to recent times, the site was not considered significant (Catts et al. 1989:324). However, the Phase II testing was quite extensive; 21,800 artifacts were recovered from a single feature, a trash-filled ravine, and this material received a Phase III level of analysis. Minimum vessel analysis, for example, identified 285 ceramic vessels in the collection from the ravine.

Although very few prehistoric artifacts were found in Phase I testing adjacent to the marshes along the Christina River, a few hundred were found during the investigations of the Patterson Lane and Dickson historic sites. It seems that any prehistoric Indians who camped along this stretch of the river stayed well back from the bluff edge.

#### *Studies Related to the Canal Segment of SR 1*

The C&D Canal Segment of SR 1 extended from Red Lion Creek to Scott Run, a distance of 6.4 miles. Phase I archaeological survey of this segment was conducted by UDCAR in 1988 (Hodny et al. 1989; Kellogg et al. 1994). The survey was carried out by a combination of surface inspection, shovel testing, and test unit excavation. Locations for testing were determined in the field, based on topography and visible artifacts, and in most areas the testing was not systematic. Rather than run a regular grid across the entire corridor, the investigators generally placed their tests in what seemed to them the best locations. Figure 11 shows how this strategy was implemented in the area south of Red Lion Creek.

It is not always possible to determine exactly what areas were covered by this survey. The maps given in the Phase I report seem precise, but they sometimes disagree with later documentation of the same sites. For example, Figure 12 shows the Phase I map of the area north of Dragon Run, and Figure 13 shows a map from the report on the Phase II testing of these same sites. The Phase II mapping shows the sites some distance away from the locations given on the Phase I map, and actually outside the SR-1 right-of-way (ROW) (Kellogg et al. 1994:34). In general, Phase II mapping should be more accurate, since more time is spent at each site and the survey for the ROW is usually more advanced by the time of Phase II studies. It therefore seems likely that the Phase I survey in this segment was actually carried out somewhat east of the eventual alignment and that the area along the east side of existing SR 1 was covered by that survey.

Twelve archaeological sites were discovered, all but one of them prehistoric. Phase II testing was carried out at nine sites (Kellogg et al. 1994). This testing was generally quite thorough, using

numerous test units. Three sites were found to be eligible for listing in the National Register: the Wrangle Hill Site (7NC-G-105), the Snapp Site (7NC-G-101), and the historic Woodville Farm Site (7NC-E-98).

Except for the Snapp Site, which was on the former bank of St. Georges Creek, all of the prehistoric sites along this segment were associated with very small streams. The location of the Wrangle Hill Site, for example, was described as “the confluence of two minor ephemeral streams.” The locations of these sites show that in this area, prehistoric people made broad use of the landscape, camping in spots well away from major wetlands.

One interesting finding of the Phase II studies was a great variability in the types of stone used on the smaller sites. The debitage from the Dragon Run North B Site (7NC-G-104) was 89 percent ironstone, and at the nearby Wrangle Hill Site (7NC-G-105) it was 55 percent ironstone. The only other site in the region to produce so much ironstone was the ironstone quarry at Herring Island in Maryland. Ironstone is not found in the cobbles of the Columbia Formation but comes from rock layers exposed along steeply incised streams of the upper Coastal Plain. Presumably there was an as-yet-undiscovered ironstone outcrop somewhere in the Dragon Run drainage, or perhaps along St. Georges Creek. Ironstone points from the region are mainly stemmed types, with either square or contracting stems. These probably date to the Woodland I period, perhaps between 3000 and 1000 BC. The other prehistoric sites in the study produced a mix of material, most of it available from cobbles (quartz, chert, jasper, quartzite), with small percentages of imported rhyolite and argillite.

The study determined that an area nearly 2,000 feet wide on the north bank of the canal had been disturbed by the deposition of canal spoils. No testing was carried out in that area.

#### *The Snapp Site (7NC-G-101)*

The Snapp Site is a large prehistoric site on the south bank of the C&D Canal (Custer and Silber 1995) (Figure 14). Before the canal was built, this location would have been adjacent to St. Georges Creek, between two small tributary streams. The excavated area of the site measured 260 feet east-west, parallel to the canal, and 360 feet north-south (80x110 meters). Within this area 235 sub-plowzone features were excavated. Many of these were substantial pits containing numerous prehistoric artifacts.

Some evidence was found of occasional use of the site in early times, including what appears to be a fragment of a Clovis point around 13,000 years old. However, most of the material on the site dated to the Woodland I period, from around 1300 BC to AD 600. This included a large amount of Marcey Creek and Dames Quarter pottery dating to between 1300 and 800 BC. Projectile points associated with these wares were mostly rather crude stemmed types made on several different materials (rhyolite, chert, argillite, and quartz). The most spectacular find at the site was a large jasper biface resembling those found in burials at Island Field, radiocarbon dated to between AD 600 and 700.

The Snapp Site has a key place in ongoing debates about the interpretation of prehistoric sites in Delaware. Jay Custer used the data from this site to formulate his “Delaware pit house”

# Distribution of Dated Features by Culture Complex

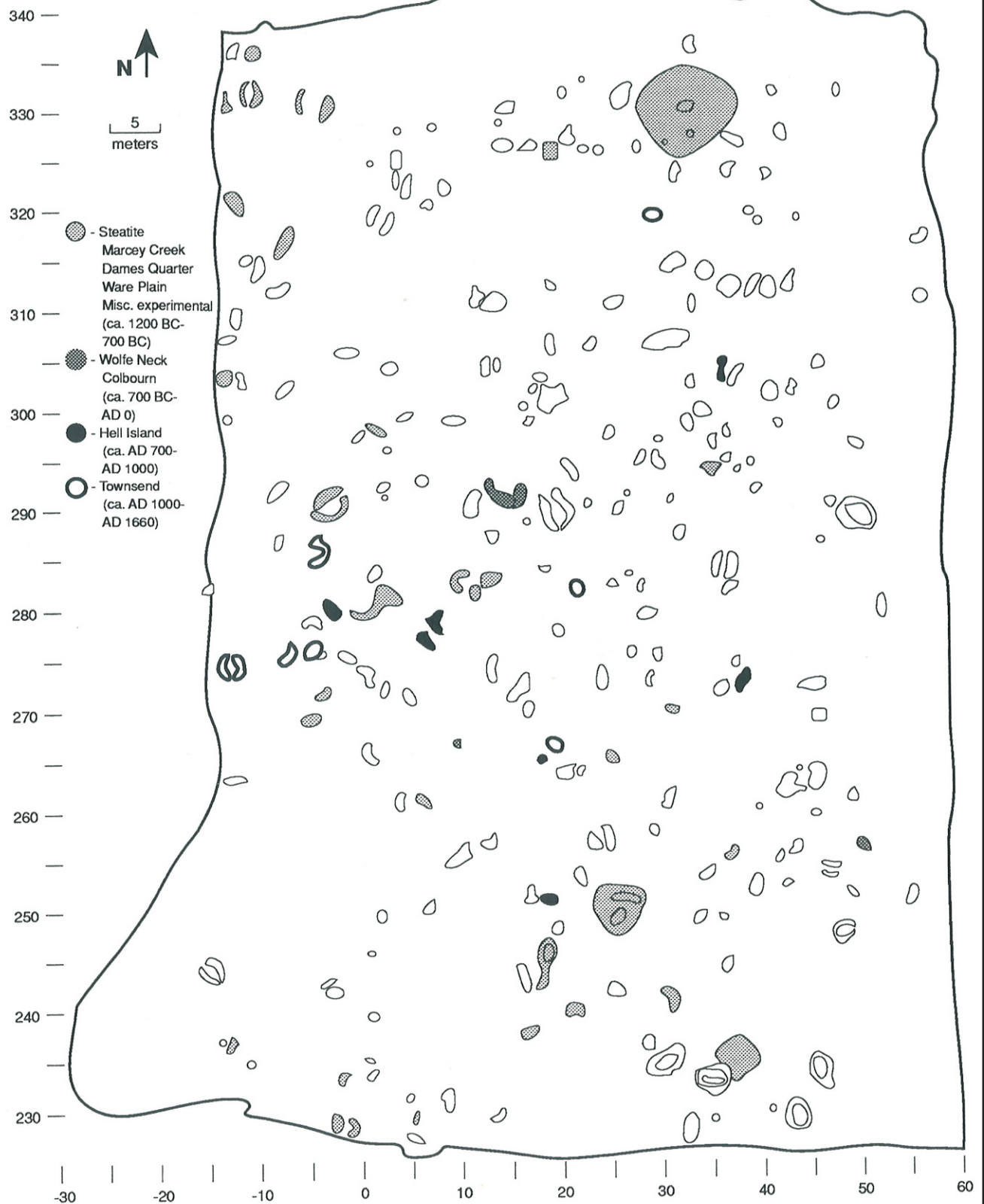


FIGURE 14: Distribution of Sub-Plowzone Features at the Snapp Site (7NC-G-101) SOURCE: Custer and Silber 1995



hypothesis, which holds that the D-shaped pits found on many prehistoric sites are the remains of shallow semi-subterranean houses. At the Snapp Site the D-shaped pits that many interpret as tree-throws were interspersed with cylindrical and basin-shaped pits that most archaeologists would accept as cultural, and the various types of pits contained similar densities of artifacts.

*The Wrangle Hill Site (7NC-G-105)*

The Wrangle Hill Site was a small prehistoric site on a low hill near the confluence of two very small, intermittent streams. The location is not one where most models would predict a major prehistoric site. Excavations of the site revealed evidence of repeated occupations, mainly in the Woodland I (Late Archaic to Middle Woodland) period. Several large, cylindrical pit features were found. The excavated area of the site measured only about 100x100 feet (30x30 meters), but more than 2,400 artifacts were recovered, including 17 finished points, 37 other bifaces, and 36 unifacial tools (Figure 15). A majority of the stone artifacts were ironstone. Not much pottery was found, but one pit did contain a substantial section of a Nassawango vessel.

*The Woodville Farm Site (7NC-E-98)*

The Woodville Farm Site was a farm occupied in the nineteenth and twentieth centuries. It was fully excavated by UDCAR in 1994, but no report was ever prepared on the results.

During the construction of SR 1, a small, unmarked cemetery was discovered just south of the farm. This was designated Site 7NC-E-98, the Woodville Grave Site. The cemetery was not mentioned in any of the documentation found in tracing the title of the farm, nor is one shown on any map. Since the cemetery was discovered at such a late date, after final plans for SR 1 had been completed, avoidance was not possible. All 13 burials were excavated. A report has been issued on this work (Doms et al. 1995).

*The U.S. Route 13/SR 72 Intersection*

In 1989, UDCAR carried out archaeological studies for intersection improvements at the intersection of U.S. Route 13 and SR 72, at Wrangle Hill (Doms et al. 1995). Two archaeological sites were investigated, both of which had already been discovered during studies for a water line in the vicinity carried out by MAI, Inc. In addition, there was a standing house on the southeast corner of the intersection, the Stahl House, that has since been demolished.

*The Jones House Site (7NC-G-103)*

The Jones House Site was located on the northwest corner of the U.S. Route 13/SR 72 intersection. A dwelling stood there by 1816, and it is shown on the 1849 Rea & Price map. This structure seems to have been torn down around 1900, replaced by a frame house that was in turn demolished in the 1950s for a parking lot. The site received a very intensive Phase II investigation that included the excavation of 17 test units and stripping the plowzone from an area measuring more than 2,000 square feet. In the stripped area the excavators found the concrete block foundations of an early twentieth-century house and also what appeared to be the remains of a nineteenth-century blacksmith shop, including a post building, anvil bases, and

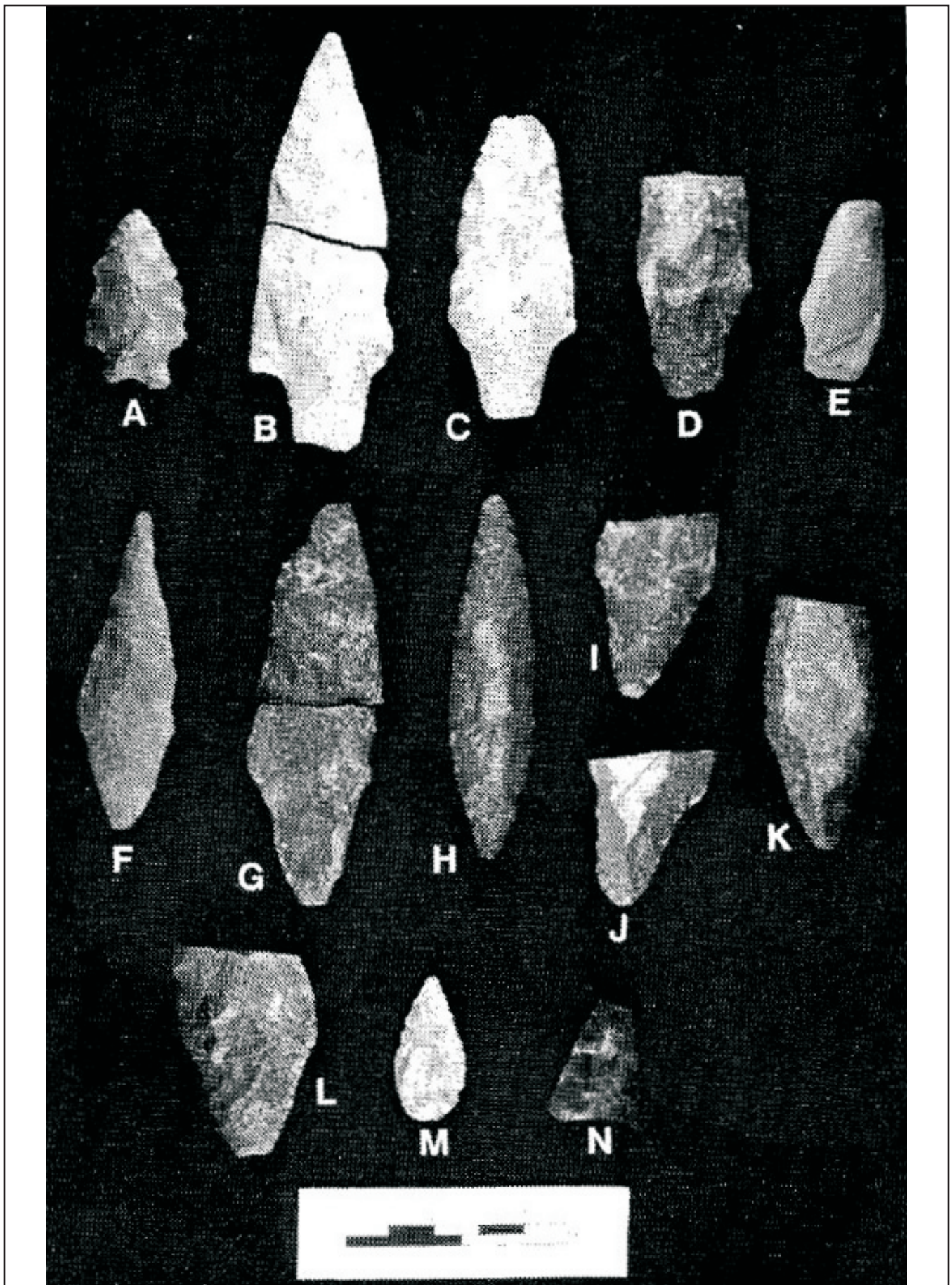


FIGURE 15: Projectile Points from the Wrangle Hill Site (7NC-G-105)

SOURCE: Custer et al. 1995:26

many metal objects. Because the integrity of the blacksmith shop had been degraded by twentieth-century construction, the site was considered not eligible for listing in the NRHP.

*The Thomas Williams Site (7NC-E-104)*

The Thomas Williams Site was originally identified by MAI, Inc., during survey for a pipeline, and it was studied again by UDCAR as part of a turn lane project for the U.S. Route 13/SR 72 intersection at Wrangle Hill. The site was originally defined as a scatter of eighteenth-century artifacts along the west side of U.S. Route 13, 700 feet north of SR 72. Documentary research suggested that the site was established as the residence of Thomas Williams, who owned the property from 1721 to 1734. After Williams sold the property, it was maintained as a tenancy by a series of owners, and it was described in 1772 as an old log dwelling that needed a new roof.

Phase I and II testing showed that numerous eighteenth-century artifacts were present on the site, representing occupation between about 1720 and 1820; however, this testing showed that the artifacts in the ROW for the turn lane project came from disturbed contexts. Most of the site was outside the ROW, extending more than 100 feet from U.S. Route 13.

*The Partridge Memorial Cemetery (Site 7NC-E-149) and the John T. Simmons Property*

The John T. Simmons Property is a farm located about 1,000 feet west of SR 1, north of its intersection with U.S. Route 40. There are still buildings standing on the farm, although they have lost much of their integrity. The standing buildings date mainly to the mid-nineteenth century. One part of the frame farmhouse has a log core and appears to be earlier, although how much earlier is not known. The property also includes the Partridge Memorial Cemetery, which is about 400 feet away from the house.

Work done at the cemetery shows that the property has a long history. In 1999 MAAR, Inc. carried out excavations at the Partridge Cemetery (Traver 2000). This work was carried out for the planned construction of a large bank facility that was never built. The topsoil was removed from the site by hand. This exposed the graves of 10 adults and three infants, which were exhumed (Table 3). The cemetery had been bounded by a fence measuring 35x40 feet, for which the postholes were found.

The cemetery was used between 1776 and 1813, when the property belonged to the Partridge family. The centerpiece of the plot was the brick vault grave of James Partridge, a merchant of Christiana Bridge and an officer in the Revolutionary War. The grave was topped by an inscribed obelisk (Figure 16). Partridge seems to have been buried in a brick vault under the monument. Excavation of the burials provided an interesting if small sample of heights and ages at death.

A small cellar hole dating to the early 1700s was also found in the cemetery. The artifacts associated with it included North Devon earthenware, Staffordshire dot and comb slipware, Delftware, and scratch blue stoneware, but no creamware. The cellar measured about 5x7 feet. It was not excavated because the project focused on moving the burials.

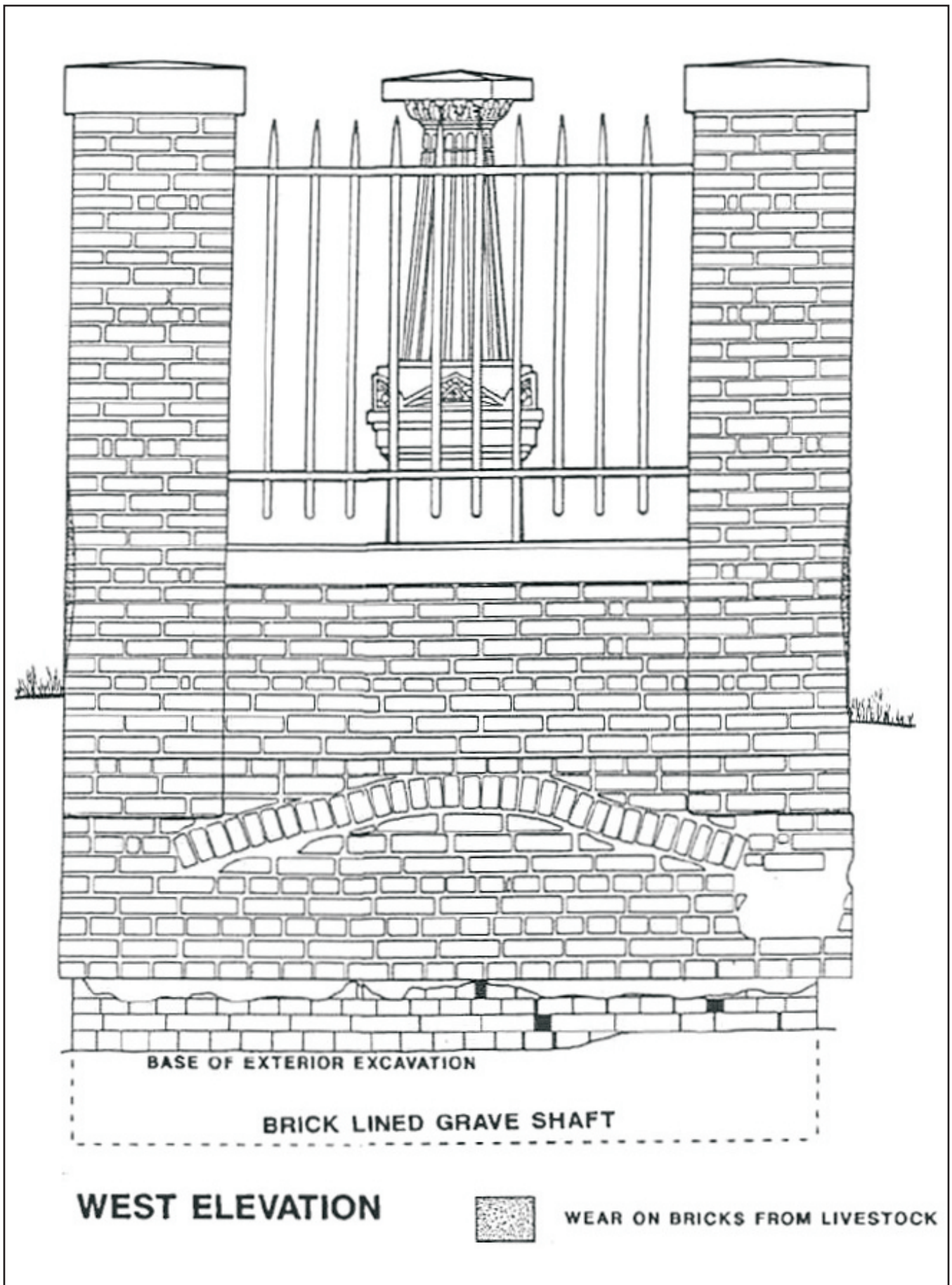


FIGURE 16: James Partridge Monument

SOURCE: Traver 2000

**Table 3: Burials at the Partridge Cemetery**

FIELD NO.	SEX	AGE	RACE	HEIGHT (ft)	NOTE
1	F	17-22	Caucasian	5.2	
2/17	M	30-34		5.5	
19		Infant			
4/5					Previously exhumed
6	M	35-45			
7	F	20-25		4.8	
8	F	40-50	Caucasian	4.8	Fancy coffin; likely Mary Partridge, died in 1787 at 45 years
9	M	45-49	Caucasian	5.7	
15	F	15-17		5.5	
16	M	30-40		5.7	Musket ball in neck
18		Infant			
21		Infant			
24	M	50-60			In brick vault; probably James Partridge, died in 1793 at 60 years

*Source: Traver (2000)*

The estate inventory of James Partridge, dated 1793, shows that the property included an old house and a new house, both with second stories, as well as a barn, a smoke house, and a crib where wheat was stored. Eight slaves lived on the property. The location of this farm is not known, nor is it known if the log portion of the John T. Simmons farmhouse was one of the buildings listed in the inventory.

#### KNOWN ARCHAEOLOGICAL SITES

There are 29 previously recorded archaeological sites in or adjacent to the APE (Table 4).

**Table 4: Known Archaeological Sites in the APE**

SITE No.	SITE NAME	TYPE	NRHP STATUS	SOURCE
7NC-G-100	Parkway Gravel	Prehistoric camp	Not Eligible	Kellogg et al. 1994
7NC-G-101	Snapp	Prehistoric base camp	Eligible; excavated; destroyed	Custer and Silber 1995
7NC-G-102	Weaver	Prehistoric lithic scatter	Not Eligible	Kellogg et al. 1994
7NC-G-103	Dragon Run North A	Prehistoric lithic scatter	Not Eligible	Kellogg et al. 1994
7NC-G-104	Dragon Run North B	Prehistoric camp	Not Eligible	Kellogg et al. 1994
7NC-G-105	Wrangle Hill	Prehistoric camp	Eligible; excavated; destroyed	Custer et al. 1995
7NC-E-102	Start House	House, 1790s-present	Not Eligible	
7NC-E-103	Jones House	19 <sup>th</sup> - to 20 <sup>th</sup> - c. house	Not Eligible	Doms et al. 1995
7NC-E-104	Thomas Williams	18 <sup>th</sup> -c. artifact scatter	Tested area Not Eligible, but main part of site was not evaluated	Doms et al. 1995
7NC-E-93	Conrail South A	Prehistoric lithic scatter	Not Eligible	Kellogg et al. 1994
7NC-E-92	Conrail South B	Prehistoric lithic scatter	Not Eligible	Kellogg et al. 1994
7NC-E-94	Conrail North A	Prehistoric lithic scatter	Not Eligible	Hodny et al. 1989
7NC-E-95	Conrail North B	Prehistoric lithic scatter	Not Eligible	Hodny et al. 1989
7NC-E-96	Fairweather	Prehistoric lithic scatter	Not eligible	Hodny et al. 1989
7NC-E-97	Stanley	Prehistoric lithic scatter	Outside ROW; Phase II recommended	Hodny et al. 1989
7NC-E-98	Woodville Farm	19 <sup>th</sup> -c. farm	Eligible; excavated; destroyed	Kellogg et al. 1994
7NC-E-12		Prehistoric (3 points plus 2 point fragments)	Not Evaluated	Omwake 1978 (site form)
7NC-E-149	Partridge Cemetery	Graveyard, 1776-1813	Not Evaluated	Traver 2000
7NC-E-81	Texaco East	Prehistoric lithic scatter	Not Eligible	Catts et al. 1988
	Lester Farm	19 <sup>th</sup> -c. Farm	Not Eligible	Catts et al. 1988
7NC-E-50	Larson	Prehistoric lithic workshop	Not Eligible	Catts et al. 1988
7NC-E-32		Prehistoric lithic scatter	Not Eligible	Catts et al. 1988
	African Union Methodist Church and Cemetery	Church and Cemetery	Outside ROW but considered eligible	Catts et al. 1988
7NC-E-51	St. Francis Hospital Farmstead	20 <sup>th</sup> -c. farm	Not Eligible	Catts et al. 1988
7NC-E-9	Lewden-Green	Prehistoric camp	Not Eligible	Custer et al. 1990
7NC-E-53	Patterson Lane	18 <sup>th</sup> -c. to 20 <sup>th</sup> -c. farm and landing	Eligible – Criteria A and D	Catts et al. 1989
7NC-E-82	Dickson	Store, ca. 1780-1845; tenant house, 1845-1920	Eligible; excavated; destroyed	Catts et al. 1989
7NC-E-83	Heisler Tenancy	Tenant house, ca. 1840-1920	Not Eligible	Catts et al. 1989
7NC-E-16	Marta	Prehistoric	Not Eligible	Catts et al. 1988

## REGIONAL PREHISTORY

Delaware's prehistory is divided into four chronological periods: Paleoindian (circa 18,000 to 6500 BC), Archaic (6500 to 3000 BC), Woodland I (3000 to 1000 BC), and Woodland II (1000 BC to AD 1650). The periods mark cultural development from largely nomadic hunter-gatherers during the Paleoindian period to fairly sedentary villagers in the Woodland II period. A fifth time period, the Contact period (1524 to 1750), can also be considered as the history of native peoples during the time of initial European colonization. This division of periods, developed by Jay Custer, is different from the one used in other parts of the Middle Atlantic (Table 5). It has the advantage of being tailored to the findings from the Delmarva Peninsula, but the disadvantage of not being comparable to the chronology used in the surrounding region.

**Table 5: Periods of Delaware Prehistory**

DELAWARE PERIOD	COMMON PERIOD	DATE	NOTES
Paleoindian	Paleoindian		
	<i>Pre-Clovis</i>	18,000 BC	
	<i>Clovis</i>	11,000 BC	First undisputed human occupation of the Americas; large, lanceolate, fluted points.
	Early Archaic	9000 BC 8000 BC	Shift from large lanceolate points to smaller corner-notched forms, climate warms, population grows.
Archaic	Middle Archaic	6500 BC 5000 BC	Increasing diversity of toolkit, growing population.
	Late Archaic	3500 BC	Large number of sites in almost all environments indicates growing population and mastery of the forest environment.
Woodland I <i>Clyde Farm Complex</i>		3000 BC	
	<i>Transitional</i>	2200 BC	Shift to large base camps along rivers; steatite bowls, broadspear points, signs of social stratification.
	Early Woodland	1350 BC	Introduction of pottery.
<i>Black Rock Complex</i>	Middle Woodland	500 BC	Intensifying use of coastal environments, horticulture using native plants.
		0	
<i>Carey and Webb Complexes</i>		AD 500	Expanded trade, more social stratification, possible arrival of Algonquian speakers from the north.
Woodland II	Late Woodland	AD 1000	Villages, maize agriculture, and large-scale warfare.
Contact	Contact	AD 1575	Fur trade, followed by arrival of European settlers.

Delaware prehistory has been detailed by Jay Custer (1984, 1989), and the summary below is largely summarized from his work.

### *Paleoindian Period (circa 18,000 to 6500 BC)*

The earliest occupation of the eastern woodlands was by Paleoindian groups who may have entered the region around 18,000 BC. The date of the earliest occupation is much disputed. Some archaeologists accept occupation by “Pre-Clovis” people as early as 18,000 BC, while others think that the well documented Clovis culture of around 11,500 BC represents the first human inhabitants of the Americas. Pre-Clovis occupations have been reported at Meadowcroft Rockshelter in Pennsylvania (Adovasio et al. 1980), in Maryland at the Miles Point Site (Lowery 2007; Lowery et al. 2010), and in Virginia at the Cactus Hill Site (McAvoy et al. 1997; Wagner and McAvoy 2004). No Pre-Clovis sites have yet been identified in Delaware. The body of evidence on Pre-Clovis sites suggests that the culture featured small group encampments and a diverse diet, with a toolkit featuring stone blades and nearly triangular lanceolate projectile points.

Later occupants of the region, known as the Clovis culture, date to circa 11,500 BC and are represented by numerous finds in Delaware. The Clovis culture arrived at a time of abrupt climate change toward the end of the last ice age. Clovis sites appear to have been focused on well-drained landforms near major streams and inland swamps. Other highly productive habitats were also exploited by Clovis groups; group movement may have centered on sources of high-quality stone for tool making. When the Clovis culture appeared, sea levels were more than 200 feet lower than today. Occasional finds of stone tools from ocean waters suggest that the Clovis people made some use of coastal environments, but most evidence has disappeared under the sea. The Clovis diet included Pleistocene megafauna, such as mastodon and mammoth, but the hunting emphasis was likely on deer, elk, and perhaps caribou. Fish, berries, and other fruits were also parts of the Paleoindian diet. The diagnostic artifact of Clovis culture is the basally fluted lanceolate Clovis point; typically associated tools include scrapers and graters for working hides and bones.

With the onset of the Holocene, spruce-dominated boreal vegetation was replaced by the northward expansion of deciduous forests, and large mammals migrated to new ranges or were driven to extinction. An abrupt cold period, known as the Younger Dryas, occurred between 10,800 and 9500 BC (Wah 2003), triggering a number of environmental changes. The Clovis disappeared around that time, evolving into a range of regional cultures, while the northeastern U.S. may have been nearly depopulated.

After 9500 BC, as the climate warmed, evidence of human presence again becomes common. Populations were still probably low, however. Comparison with modern hunter-gatherers of northern Quebec, whose environment is much like what prevailed in Delaware at the end of the Ice Age, suggest that a single band of 100 to 200 people would have occupied an area the size of Pennsylvania. The huge beasts of the Ice Age had gone extinct and the reindeer had migrated northward, so people had to change their hunting strategies. Their success is shown by evidence of rapidly growing populations. Sites from 9500 to 6500 BC are more numerous than earlier sites and are more dispersed. Clovis points disappear from site assemblages and are replaced by a diverse set of corner-notched and side-notched point types. In Delaware sites of this late Paleolithic period are especially common around inland swamps, such as those along the Christina River above the Fall Zone.



### *Archaic Period (6500 to 3000 BC)*

The beginning of the Archaic period roughly corresponds to the Hypsithermal, a climatic episode marked by rising temperatures, decreasing precipitation, and the development of more seasonally variable climate. An oak-hemlock-hickory forest dominated the region, and deer became the dominant large mammal.

The growing population changed its subsistence-settlement patterns. Sites are larger and more numerous, and a more diverse toolkit implies a broader range of subsistence activities than in the Paleoindian period. During the Archaic period sites began to appear in locations that had been previously ignored, such as interior ridgetops; however, base camps were still located primarily in the floodplains of major drainages and around large wetlands. The appearance of new tool types specifically designed for woodworking, seed grinding, and nut cracking (e.g., axes and adzes, mauls, grinding slabs, and nutting stones) and the location of sites in previously unused areas indicate an increasing reliance on gathered plants for food and other necessities. By the end of this period, people had achieved a mastery of the forest environment, and the large number of sites scattered across the landscape shows that they had learned to use all the resources available to them.

### *Woodland I Period (3000 BC to AD 1000)*

During the Woodland I period, after 3000 BC, the style of life began to shift. Instead of living in a dispersed and nomadic way, traveling through the entire landscape, people began to spend more of the year at large base camp sites. These sites were always associated with major wetlands, including tidal creeks, rivers, and inland swamps. Fish and shellfish became very important to subsistence during this period. Other wetland resources, such as marsh plants (“Tuckahoe”) were probably also exploited, although there is little evidence of this. Numerous large pits were dug for the storage of food. The number of sites and settings for sites continued to expand, and on the floodplains of major waterways villages and hamlets evolved to sites of nearly year-round occupation. At some sites in Delaware, there are signs of the emergence of stratified societies and engagement in extensive exchange networks. Major sites from this period have been found along Churchman’s Marsh, just northeast of the APE, and at the Snapp Site along the C&D Canal (see discussion above).

Woodland I sites are marked by a suite of narrow-bladed projectile points that accompanied adaptations for exploiting hardwood trees and sylvan resources. Assemblages include a high frequency of grooved axes, adzes, celts, gouges, and grinding stones. Broad-bladed projectile points appeared during the period and are found most commonly on floodplain sites. Although broadspear points are sometimes found in ritual mortuary contexts, they were apparently utilitarian objects, as shown by occasional breakage and edge attrition (Custer 1991). Some archaeologists think these broadspears represent the arrival in the region of invaders from the south, while others think they spread as people adopted a new technology.

A noteworthy development during the period is the use of carved soapstone (steatite) bowls. Soapstone was quarried during this period in the Piedmont of Virginia, Maryland, and Pennsylvania. Vessels were apparently carved at the quarries and transported in finished form,

probably by canoe (Dent 1995:182-184). Soapstone pots were clearly used for cooking, but it is not yet known what foods they were used to process (fish, meat, seeds, tubers, or nuts). Soapstone vessels are found on sites dating to circa 1700 to 800 BC (Sassaman 1999, 2006).

Production of ceramics began in the region beginning circa 1350 BC. The earliest vessels imitated the form of flat-bottomed soapstone pots and were tempered with bits of soapstone and other rock (Stewart 1998). These earliest ceramic ware types are known as Marcey Creek and Vinette I, and found throughout the Middle Atlantic region and into New York State. The invention of pottery is used in the conventional scheme to divide the Archaic from the Woodland period, but in the Middle Atlantic there does not seem to have been much change in the overall culture at that time. The same types of projectile points and other stone tools continued in use, and sites were on the same landforms. In fact, many sites continued in use through this transition, including the Snapp Site.

Exchange networks developed during this period, linking local tribes to groups to the north, south, and west. Tools made from non-local stone are found in many Woodland I assemblages. Elaborate burials have been found in Delaware dating to around 500 BC to AD 1, with mortuary objects showing links to the Adena and Hopewell cultures of the Ohio Valley. Lithic materials shifted to higher-quality stone and stone from non-local sources circa 500 BC (Stewart 1989, 1992). This shift in pattern of stone use is seen as additional evidence of the development of regional trade networks.

Custer has defined prehistoric complexes based on the co-occurrences of certain artifacts and features on sites in similar locations. The Clyde Farm, Black Rock (also known as Wolfe Neck), Carey, and Delaware Park complexes have been defined for the Woodland I period in the Fall Zone. The complexes are temporally sequential to one another. The Clyde Farm Complex encompassing the period from 3000 BC to approximately 1000 BC and is marked by broadspear projectile points, steatite vessels, and Hell Island ceramic wares. The Black Rock Complex encompasses the period from 1000 to circa 500 BC and is marked by Wolfe Neck or Vinette I ware types and Rossville projectile point types. The Carey Complex extends from 500 BC to AD 1. The Carey Complex is marked by increased oyster use, Fox Creek projectile points, and shell-tempered ceramics. The Delaware Park Complex extends from AD 1 to 1000 and is marked by base camps with large storage features. Hell Island ceramics and Jack's Reef projectile points are also markers of the Delaware Park Complex.

#### *Woodland II Period (AD 1000 to 1650)*

The Woodland II period began around AD 1000 as Indian groups began living in hamlets and villages and practiced agriculture. At around AD 1000 maize horticulture was adopted by many people, but reliance on maize was variable from group to group. It has been speculated that wild rice, *chenopodium*, and other wild plants played a bigger role than maize in local diets. Diets continued to include fish, shellfish, deer, and turkey. Sites are typically located in floodplains of higher-order streams and adjacent to high-yield agricultural soils.

In some parts of Delaware, a dramatic increase in the number of sites coincides with the Woodland II period. Larger sites are commonly on tidal creeks that feed into the Delaware River,

with smaller resource extraction sites in a wide variety of environmental settings. The Fall Zone and eastern Piedmont may have been used seasonally as part of the settlement round of groups based on the Coastal Plain (Stewart 1992).

During the Woodland II period regional exchange networks largely ended. Indigenous societies may have fragmented. Prior to AD 1200/1300, settlements were not stockaded (fortified), suggesting that there were minimal inter- and intra-group hostilities (Stewart 1993). At around AD 1200 to 1300, throughout the Middle Atlantic region, population density increased, nucleated settlements and stockaded villages were established, and there is evidence of population movement and displacement (Stewart 1993).

After AD 1200/1300, ranked societies emerged, which developed into the complex tribes and chiefdoms encountered by the Europeans in the late sixteenth and early seventeenth centuries.

One cultural complex has been defined for the Woodland II in the Fall Zone: the Minguannan Complex. This complex is marked by sand-, grit-, or crushed quartz-tempered ceramics that may have incised or cord-impressed surface treatments. No large village sites have been identified in northern Delaware. Indeed there is an ongoing dispute over whether the Indians of this region ever began to live in agricultural villages or continued to live as mobile hunter gatherers (Becker 1976).

#### *Contact Period (AD 1524 to 1750)*

Indigenous communities were disrupted and frequently in flux throughout the Delaware River basin after European colonization began. Diseases brought by the Europeans ravaged Indian settlements. Warfare and eviction from lands destroyed many other Indian communities. The Indian-Colonist relationship ebbed and flowed, with periods of intermittent conflict and warfare.

The initial European exploration of the Delaware Bay may have taken place in 1524 by Giovanni da Verrazano, although the account of his explorations is not universally accepted. More concerted exploration and settlement began in 1609 with Henry Hudson's exploration of the Delaware Bay and River. Hudson sailed for the Dutch, who built an outpost near Lewes ("Zwaanendael") in 1631. Samuel Argall, an Englishman, explored the Delaware in 1610, but most British settlement came in the middle of the seventeenth century.

Swedish settlements were established in early seventeenth-century Delaware. In 1638 Fort Christina was built by the Swedes at the confluence of the Christina and Brandywine rivers, in what would later become Wilmington. Swedish settlement grew along both sides of the Delaware River in the middle of the seventeenth century.

The lower Delaware River and the Delaware Bay were home to several related Indian groups, known collectively to Europeans as "the Delaware Indians"; they called themselves the "Leni-Lenape" or the "Lenape." The Lenape had three principal tribes: the Munsee, who lived in the middle and upper reaches of the Delaware River; the Unalachtigo, who may have lived in the Lehigh Valley of Pennsylvania; and the Unami, who lived on the lower section of the Delaware

River and the Bay, including the Wilmington area (Kraft 2001). The Lenape traded with Swedish and Dutch colonists and were on generally peaceful terms with both colonial powers.

As recorded by Europeans, Lenape settlement types included stockaded villages, open longhouse villages, and also smaller houses at hunting and fishing camps (Goddard 1978). Bands would congregate during the agricultural season and split into small family units during the winter. Indians along the lower section of the Brandywine River are known to have been Unami-speaking Lenape; they were often referred to as “Brandywine Indians” (Weslager 1972). The Brandywine Indians may have never practiced much agriculture beyond cash cropping during the middle of the seventeenth century, and they may not have had substantial villages during any period of their history (Becker 1989). Population estimates for the Lenape during the Contact period have been quite varied.

The Lenape’s rivals were the Susquehannocks, who were located principally in south-central Pennsylvania along the Susquehanna River. The Susquehannocks also controlled the upper parts of the Brandywine drainage. The Susquehannocks waged war against the Lenape between 1630 and 1635, eventually defeating the Lenape and making them their subjects. The Brandywine Indians came to be on generally friendly terms with the Susquehannocks later in the seventeenth century, when they saw a mutual enemy in the British.

The Dutch and Swedes competed for control of the Delaware River basin during the first two quarters of the seventeenth century. The Dutch tried to assert control of the area by erecting Fort Nassau on the eastern side of the Delaware River in 1623. The Swedish governor subsequently built a fort on the western bank of the river in the Philadelphia area, and Fort Christina in the Wilmington area. In 1651 the Dutch governor built Fort Casmir, located in what is today Newcastle. Violence erupted between the Dutch and Swedes in 1655, and the Dutch emerged in control of “New Netherlands.” Dutch hegemony was short-lived, however, as the British took control of the colony in 1664. The lands eventually came under the control of William Penn and the Pennsylvania colonial government.

Many Indians chose to leave the Delaware Valley starting in the 1660s, moving north to New York and eventually Ontario, and west to Oklahoma. The Indian-colonial fur trade was on the wane in this period, and there was increasing tension between the Indians and colonists for land. In addition, the Lenape, who had been struck by a devastating outbreak of smallpox circa 1635, were struck by another smallpox outbreak in 1661, weakening their communities. There are accounts of Lenape emigrating from Delaware between approximately 1660 and 1750; some chose to remain in Delaware and become part of colonial society. The Lenape of the Wilmington area, the Brandywine Indians, remained on their lands until circa 1729, moving north at that time to join the refugee communities of the Seneca-Susquehannock (Weslager 1972).

## HISTORICAL OVERVIEW

### *Exploration and Settlement (circa 1630 to 1730)*

The Swedish settlement in northern Delaware was most commonly known as Christenham. It originally consisted of 25 Swedish and Finnish colonists who lived in a small cluster of houses

surrounding Fort Christina (Dixon 1992:11). Over time, the Christenham colony became the nucleus of a small settlement, one of a string of settlements along the Delaware known collectively as New Sweden. The project's backers kept careful censuses of the residents, and these figures show that the population grew to 183 inhabitants after a decade and to 368 by 1654. In 1655 the Dutch regained control of the area and built Fort Casimir near present-day New Castle while letting Fort Christina fall into ruin. In 1664 the Dutch colonies in Delaware, along with Fort Christina, fell to British control; however, the British encouraged the continued settlement of the area by the Swedish, Finnish, and Dutch colonists (Munroe 1984:24-26). Despite attempts by the Dutch to reclaim its colonies in Delaware in 1673 and 1674, the area remained under the control of the British. In 1682 proprietary rights to Pennsylvania and the land including all of modern Delaware were granted to William Penn, who established the Colony of Delaware. In 1704 Delaware was granted permission from Penn to organize an assembly separate from Pennsylvania (Munroe 1984:43).

In the decades before and after the turn of the eighteenth century, the land in New Castle County outside the small towns was primarily occupied by subsistence farmers who chose where to settle based on the drainage characteristics of soils and the proximity of navigable waters or reasonable passable roads (Bowers 1988:11). By the end of the seventeenth century, New Castle County farmers were shifting from subsistence farming to a more market-oriented farming. Mixed farming was the common form of agriculture in which the cultivation of grains, particularly wheat, was combined with livestock raising. Mills were built along the waterways to assist in the production of grain and became one of the earliest types of manufacturing complexes in the area. The discovery of iron ore in the area attracted a group of Welsh miners and settlers, and in 1684 a grant for the "Welsh Tract" was issued by Penn. Overall, settlement of the region remained sparse and was mostly concentrated along the major waterways.

Delaware was divided into administrative units called "hundreds" in 1687. New Castle County initially contained five hundreds, but was ultimately divided into eleven hundreds<sup>1</sup>. Few roads existed during this period, and those that did were often in poor condition. By 1660 the route known as "Herman's Cart Road" was in use, connecting Appoquinimink (present-day Odessa) with Bohemian Manor in Maryland. Another road ran from New Castle to Appoquinimink and Christiana, and a third connected Ogetown to New Castle (Scharf 1888:413).

The Finnish and Swedish settlers along the Delaware had relatively good relations with nearby Indians, especially the Susquehannocks, and they used these relationships to establish a profitable Indian trade. As the trade shifted westward, Finnish traders moved with the frontier, first to the "Swedestown" area at the head of the Chesapeake Bay, and then west up the Potomac and Susquehanna rivers. Despite their small numbers, these Finnish settlers may have made a large contribution to the culture of the American frontier. They brought across the Atlantic a tradition of living as slash-and-burn farmers in forest areas, and they seem to have passed this expertise on to other settlers. Building with logs — unknown to the Dutch and English — may have been introduced into North America by Finns (Jordan and Kaups 1989).

The farms of the early Delaware settlers contained groups of small buildings rather than large houses or barns. Whether log or wood frame, most houses had a single room. They were

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<sup>1</sup> The project area falls into the Red Lion, New Castle, White Clay Creek, and Saint Georges hundreds.

expanded, when time and money permitted, by constructing an array of outbuildings that made up the agricultural complex, including kitchens, meat houses, chicken houses, stables, bake houses, and grain and tobacco sheds (Herman et al. 1989:63-65). The domestic outbuildings were sited closer to the main dwelling, and the agricultural outbuildings were typically sited closer to the fields. Early commercial buildings, including mills, tanneries, and blacksmith shops, were also typically simple wooden structures.

### *Intensified and Durable Settlement (circa 1730 to 1770)*

A second influx of immigration occurred during the Intensified and Durable Settlement period, resulting an increase in the settlement of inland areas. Between 1725 and 1755, English and Scots-Irish immigrants arrived in New Castle County and worked as indentured servants on local farms. New Castle County, with its fertile soils and access to markets, had evolved into a commercial farming community during this period. In the mid-1770s the average size of a farm in the county was about 200 acres and typically included grain cultivation and livestock raising (Lemon 1972:179).

The increase in population and commercial activities in New Castle County led to the establishment of towns as well as new modes of transportation and new industries. The permanent settlement of Wilmington began in 1731 and had grown to approximately 30 houses by 1736 (Dixon 1992). Initially known as Willingtown, the new settlement was ideally located with a protected harbor in the wide, slow-running Christina River, and a natural energy source from the narrow, swift-running Brandywine River. Willingtown's location was also advantageous for its transportation potential, in particular the navigation of the Christina River to the Delaware River and beyond, as well as already established land routes (DeCunzo 2004:94-95). Wilmington's initial growth was inhibited by its proximity to Philadelphia, which dominated not only the mercantile economy of the Delaware River valley but also the social, religious, and political life of the Pennsylvania colony. However, Wilmington was able to thrive because of its geographic location, which provided a strong economic base for milling and shipping (Dixon 1992:14).

The village of Christiana Bridge, eventually known as Christiana and located immediately west of the northern end of the APE, formed at the foot of a bridge spanning Christina River and was one of the few hamlets in the Upper Peninsula by 1700 (Figure 17). A bridge had been at that location as early as 1686, and the small village evolved on the north bank of the river in White Clay Creek Hundred (Federal Writers' Project 1938:483). The tract of land was originally called Eagle's Point and was surveyed around 1683 for John Ogle, a large landowner in the hundred. The tract passed to Dr. Rees Jones, Christiana's first known doctor, in 1731. Following his death, the tract passed to his nephew, John Emes, in 1759 before the majority of the tract was sold to nine tenants who were a collection of successful yeomen, merchants, innkeepers, and cordwainers (Dunn 1974). The village's strategic location along the Kings Road (SR 7) from Philadelphia to Baltimore gave rise to its early economic prosperity and lent itself as a resting spot for George Washington as he traveled between the two cities. During that period, in addition to the establishment of Wilmington and Christiana, a number of other towns formed or began to prosper in the Upper Peninsula, including Newport, Cuckoldstoan (Stanton), Newark, and Cantwell's Bridge (Odessa).

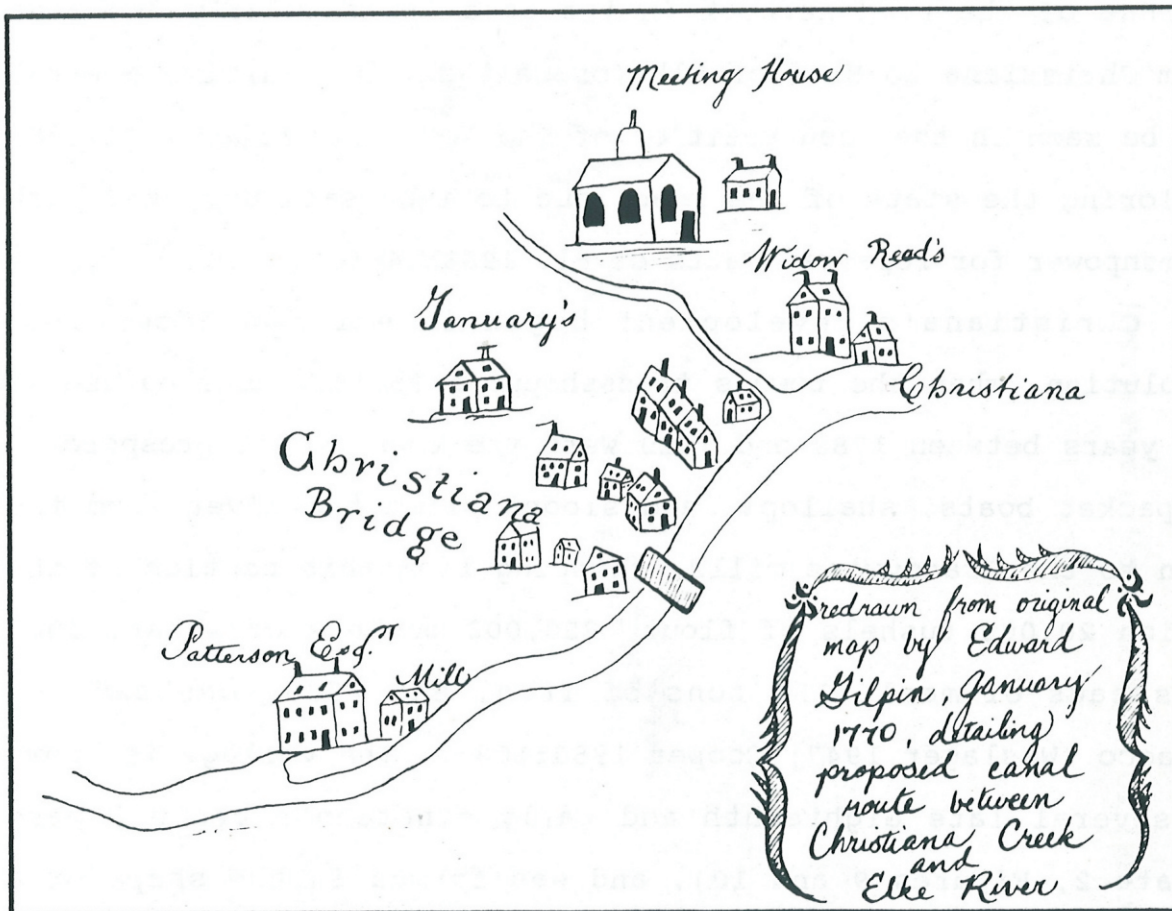


FIGURE 17: Christiana Bridge in 1770

Transportation during this period was tied mostly to the waterways, like the Christina River and Red Lion Creek that cross through the study area; however, commercial goods were shipped overland to processing and distribution centers over short distances. Travel between commercial centers and towns was eased by the development of the Philadelphia-Lewes post road, modern day U.S. Route 13. Many of the early eighteenth-century towns formed along this route, including Red Lion and St. Georges, both located near the study area.

St. Georges was established sometime before 1730 at a milldam on the south side of St. Georges Creek. A tavern was at the location as early as 1735 and was still in operation as late as 1762, when the King's Highway was officially surveyed through the area (Federal Writers' Project 1938:335). St. George was part of a north-south running stage coach route until the arrival of the railroad in the second half of the nineteenth century.

With the intensification of agriculture activities, many farmers turned to slave labor in the eighteenth century. The slaves came to Delaware through Dutch slave traders and through the emigration of Maryland tobacco planters into the colony during the seventeenth and eighteenth centuries. By 1775 Delaware had 2,000 slaves. Attempts were made to abolish the slave trade in the colony; however, Governor John Penn vetoed the measure put forth by the General Assembly. The state constitution established after the Declaration of Independence prohibited the import and export of slaves (Hyland and Kuncio 2006:9).

Perceived agricultural opportunities, rural population growth, and practices that fostered degradation of once fertile soils led farmers to bring more marginal lands into cultivation as the eighteenth century progressed. During that period large landholdings were increasingly divided into small plots and were either owner-occupied or tenant farms. Agriculture in New Castle County through much of the eighteenth century was based on extensive rather than intensive use of land, in which crop rotation and use of lime or manure for soil restoration was largely unknown. By the 1750s, however, crop rotation became relatively widespread, with corresponding improvements in yields (Catts et al. 1988:25). Many farms produced a surplus of crops, primarily wheat and Indian corn, for market sale in such places as Dover, Wilmington, Philadelphia, and Baltimore (Siders et al. 1993:13).

#### *Transformation from Colony to State (circa 1770 to 1830)*

At the start of the Transformation from Colony to State period, the Revolutionary War heavily influenced social, economic, and political developments in New Castle County. Industry developed along the rivers in the commercial centers because of improved milling technologies, and Wilmington, in particular, saw great prosperity after the war with the dropping of trade barriers and the rise in the price of flour. Merchants began trading flour directly with the West Indies, setting off the town's first major economic and population growth since the early years of its establishment. Along with the expansion of the Brandywine mills, Wilmington took advantage of an increased demand for shipping, and several new small-scale manufacturing and craft enterprises were established (Goodwin 1986:13). Wilmington's economic growth was also reflected in its population, which rose from 1,200 in 1785 to more than 5,000 inhabitants in 1820 (Dixon 1992).



At the time of the Revolutionary War, Christina Bridge had become a prominent commercial center with a number of wharves and storehouses built along the river's banks. Nearly 20 shopkeepers and merchants are known to have been conducting business in the village between 1735 and 1800. Its location along a principal road put the village in important location during the Revolutionary War. In 1777 Gen. George Washington ordered battalions to march to Christiana prior to fighting back the British invasion at Cooch's Bridge (near Newark), the only Revolutionary War battle to occur in Delaware. Additional troops again passed through Christiana Bridge, which was chosen by an Act of Assembly as Delaware's supply depository, in 1781.

Following the war, Christiana emerged as a prominent transshipment point in the Philadelphia-Baltimore trade network, and also functioned as a social and economic center for the surrounding agrarian community. The Christiana Tavern and Shannon Hotel served as points of social interaction for residents and travelers passing through. A post office was opened in Christiana in 1793. The school in the community, which was initially established in 1752, was incorporated into the state education system in 1804 (Dunn 1974). In 1827 the Methodists joined the town's religious community, which had had a Presbyterian church since 1738 (Bowers 1988:6).

During the first decades of the nineteenth century, rural New Castle County experienced widespread depression, with significant out-migration to cities or to new lands in western states. Those agriculturalists who remained, however, bought up the farms of their less fortunate neighbors, thereby reassembling larger and potentially more productive holdings (Herman 1987:5). The owners of these large farms employed hired laborers and tenants to work their lands. Delaware had a total population, including both slaves and free blacks, of 64,273 inhabitants by 1800, with nearly 40 percent of the total living in New Castle County.

The hard times faced by these farmers came to an end during the second quarter of the nineteenth century with the introduction of new agricultural methods and improved modes of transportation. Thanks to the significant educational and promotional efforts of the New Castle County Agricultural Society, organized in 1818, agricultural practices significantly improved by the mid-nineteenth century to include fertilization, use of new machinery, and better drainage techniques. Production also expanded to include more dairying in response to demands from the region's expanding urban centers (Catts et al. 1988:28; Herman 1987:5). The first detailed map of the county was prepared by Rea and Price in 1849 (Figure 18).

At the end of the period, construction began on the C&D Canal, which would be an impetus for future industrialization and capitalization in New Castle County, which was further propelled by the arrival of the railroads in 1831. Philadelphia merchants, seeking to take advantage of the agricultural wealth of western Pennsylvania, revived the construction of a canal that would connect the Delaware River with the Chesapeake Bay, bisecting New Castle County. Wilmington residents initially invested in the C&D Canal as they thought it would terminate at the Christina River; however, a southerly route was chosen, cutting the city off from the main trade route across the peninsula and ending its monopoly of the portage trade (Goodwin 1986).

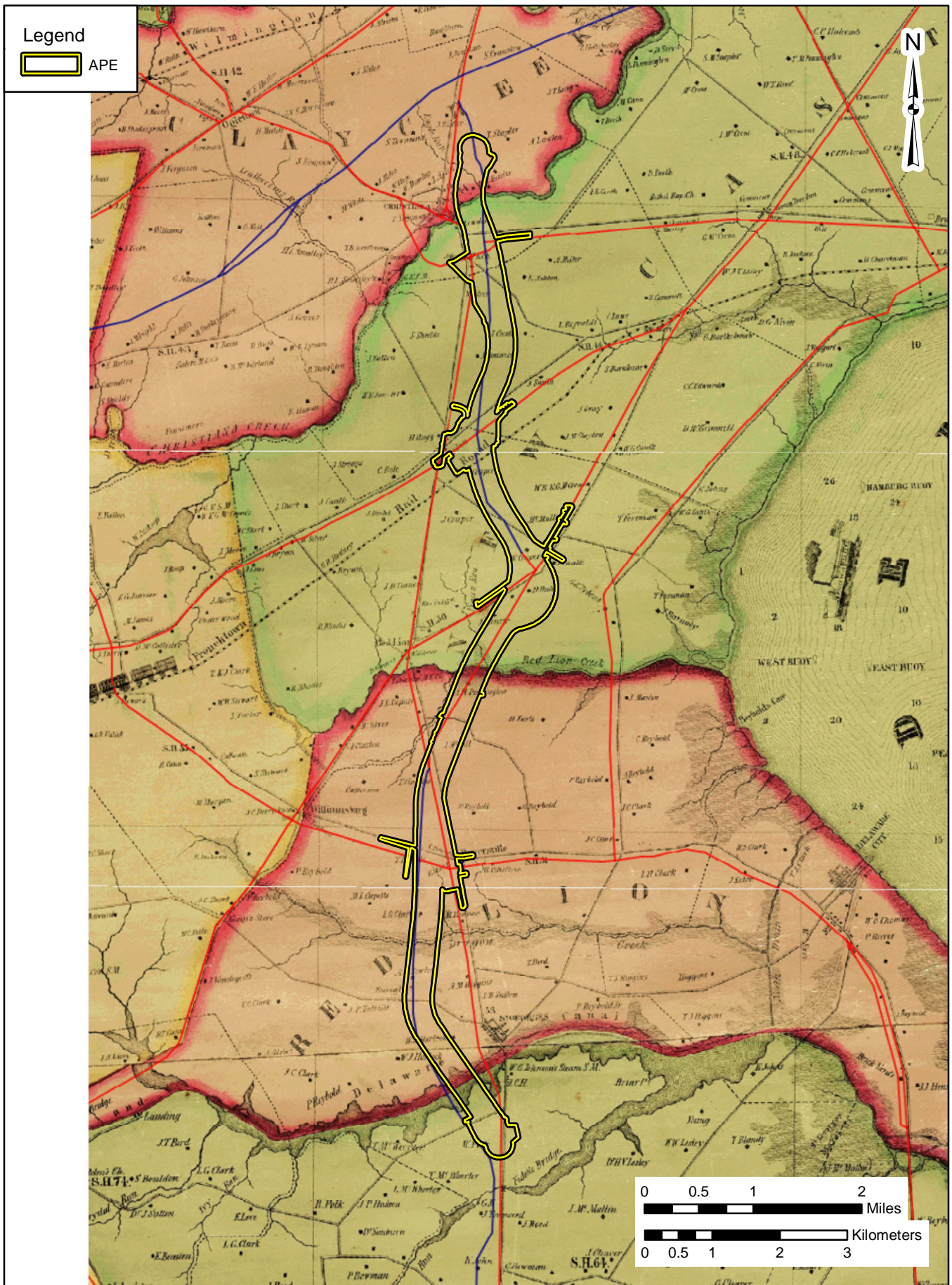


FIGURE 18: Study Area and Vicinity, 1849

SOURCE: Rae and Price 1849

### *Industrialization and Capitalization (circa 1830 to 1880)*

Improvements in transportation continued during the Industrial and Capitalization period with the arrival of the railroad in New Castle County. The New Castle and Frenchtown Railroad began the first regular steam railroad passenger service in the county and was the impetus for the establishment of an all rail freight and passenger route to Philadelphia (Jett and Fitting 1979). In 1835 the Philadelphia, Wilmington, and Baltimore Railroad was completed, propelling development of industry in New Castle County. The line traveled south from Philadelphia through Wilmington to Baltimore, parallel to the Delaware River from Philadelphia until a point north of Wilmington, where it traveled south and west along the Christiana River toward Maryland. Other railroads built in the state during the period include the downstate Delaware Railroad (1850s) and the Pennsylvania and Delaware Railroad (1870s) (Figures 19 and 20).

During this period Delaware, as part of its agricultural revival, was the center for peach production in the eastern United States. Red Lion Hundred, in particular, where peaches were introduced in 1831, had the most productive and profitable farms and orchards in the state by 1850. The agricultural productivity can be mostly attributed to the introduction of scientific-farming methods, particularly the use of marl (decayed seashells containing 18 to 15 percent carbonate of lime), which were uncovered during the construction of the C&D Canal and applied to the fields of a Red Lion Hundred farmer. The success of that farmer's crops led to the widespread use of marl until the advent of commercial lime. The peach boom lasted until about 1870, when the orchards were destroyed by a blight called "the yellows" (De Cunzo and Garcia 1992).

The revival of agriculture brought about by improved farm practices in New Castle County, as in other areas of north-central Delaware, was accompanied by a major rebuilding of the agricultural landscape. The rebuilding included the transformation of existing structures as well as erection of completely new structures, both domestic and agricultural. Concurrently, the crib/granary and the bank barn were introduced in the area with the increasing use of center-passage dwelling plans, the application of fashionable details, and the incorporation of specific functions, such as cooking, within houses, often by locating them in rear ells (Herman 1987:146, 148, 206). The reconstruction also extended to houses of tenant farm managers and laborers, as earlier log and frame "tenements" were replaced with new dwellings that, particularly for managers, could resemble those of a middling farm owner in size and finish (Herman 1987:162).

The town of Christiana did not share in the economic revival enjoyed by the surrounding agricultural community in the mid-nineteenth century. The fact that neither of the major railroads built during the period connected through Christiana and that the C&D Canal was constructed south of the town instead of connecting to the Elk and Christina rivers as originally planned did not bode well for the town's growth. Christiana remained a local service center through much of the nineteenth century, but only the churches, hotels, and dwellings of its more prosperous citizens remain extant (Catts et al. 1988:29-34).

Bear, a crossroads community near the study area, became more established during the period. Located at the intersection of the Christina to Red Lion Road (present-day SR 7) and the New Castle and Frenchtown Turnpike (present-day U.S. Route 40), the hamlet featured a tavern during the early nineteenth century, which was demolished in 1845. Other buildings in the town

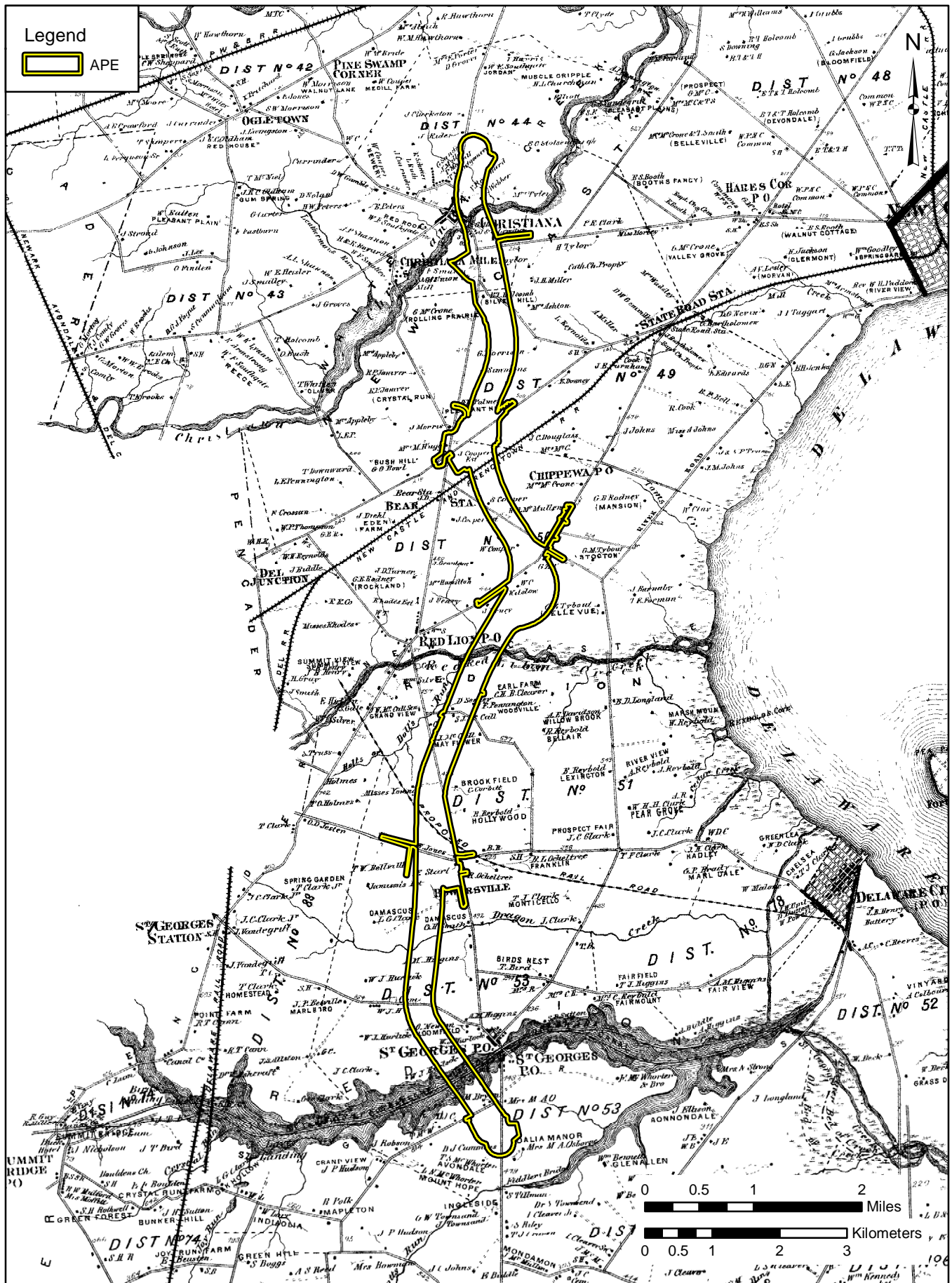


FIGURE 19: Study Area and Vicinity, 1868

SOURCE: Beers 1868

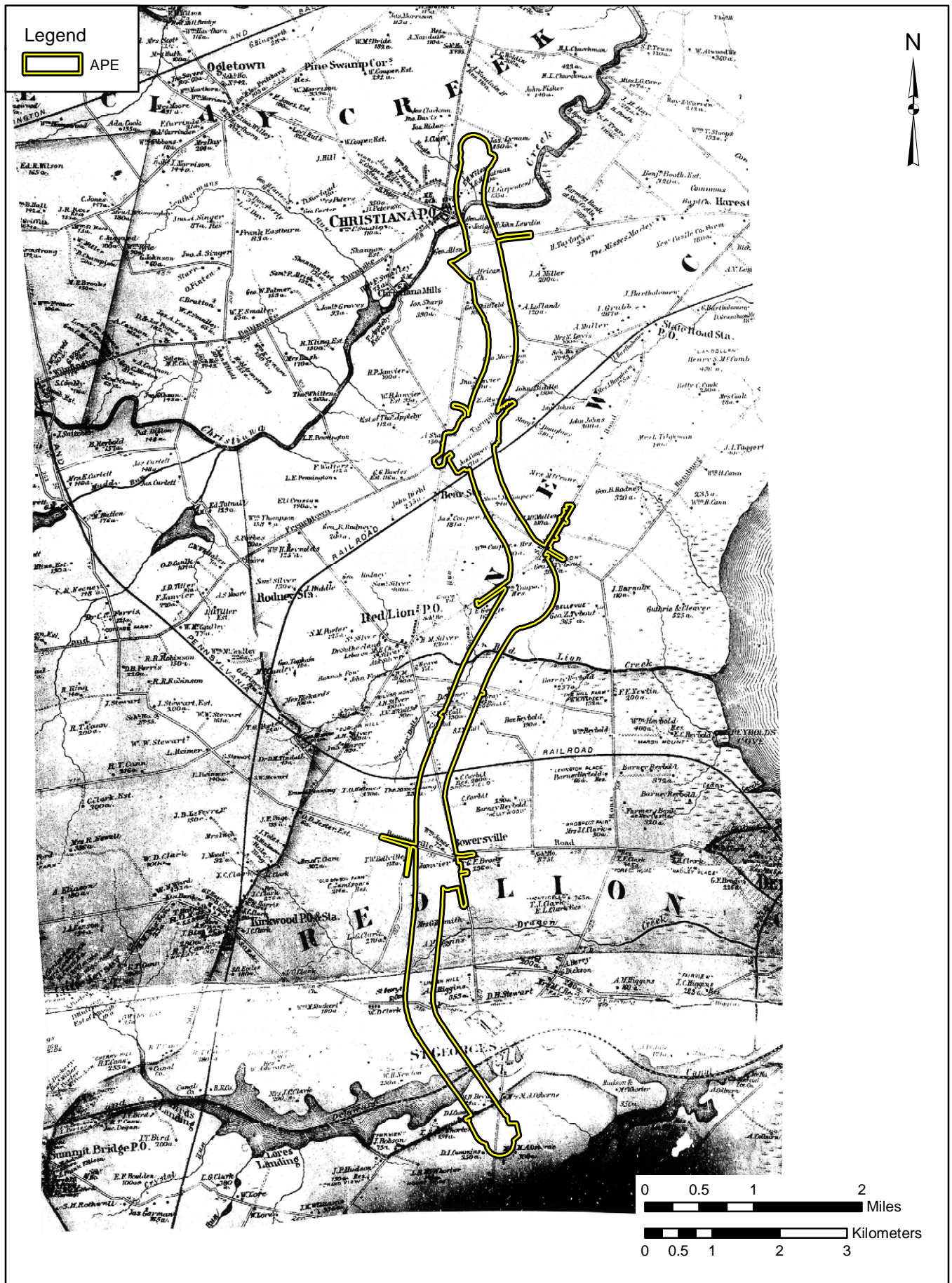


FIGURE 20: Study Area and Vicinity, 1881

SOURCE: Hopkins 1881

during the nineteenth century were two general stores, a blacksmith shop, an Odd Fellows hall, and a post office. The hamlet also served as a stop for the New Castle & Frenchtown Railroad and would include a station and water tank by the mid-nineteenth century (Hyland and Kuncio 2006:16).

The impact of the Civil War on Delaware, which had a population of 112,216 before the war, was more social than economic. Several military encampments for home guard units were temporarily established throughout the state. Pea Patch Island housed 12,500 Confederate imprisoned soldiers during the war at Fort Delaware (New Castle County City Council 1968). New Castle County, which was home to 49 percent of the state's population, reportedly had several major links along the Underground Railroad and was sympathetic with the Union. Abolitionists, who were most typically Quakers, had been active in New Castle County decades prior to the Civil War and often found themselves working against slave catchers who were attempting to collect rewards for the capture of runaway slaves.

A depression, as well as the collapse of the peach industry, followed the war. Since there were no longer slaves, laborers began demanding higher wages, while prices of farm products fell. The labor force, particular former slaves, began migrating to the northern cities. Many tenant farm houses fell into ruins, and the larger mansions were used to house tenants (Jett and Fitting 1979).

#### *Urbanization and Suburbanization (circa 1880 to 1940)*

Toward the end of the nineteenth century, competition from agricultural areas of the Midwest and Great Plains hurt the agricultural economy of many areas of the Northeast and Middle Atlantic regions. North-central Delaware farmers responded by diversifying, with increasing emphasis on fruits and vegetables. In addition, the introduction of pasteurization and improved methods of refrigeration enabled a significant expansion of the dairy industry throughout northern Delaware (Passmore et al. 1978:41-2). Both dairying and fruit and vegetable farming in New Castle County benefited by the many surrounding urban centers, such as Baltimore, Wilmington, and Philadelphia, and the many methods of transportation available for the transport of goods. In the Piedmont uplands the growth of dairy farming was expressed, architecturally, by expansion of existing bank barns with large hay sheds, and farther south it was represented by the use of a "new" material (concrete) and erection of new barns, with concrete block ground stories and concrete floors.

During the period farm size and the total acreage of farmland in the state began to decrease as farms were abandoned and suburbs began to grow. In 1912, 84 percent of the land area in the county remained agricultural. The 1910 census listed over 2,000 farms in the county with over half farmed by their owners. After 1910 farm sizes began to decrease, with farms of 100 acres or less in the majority from a previous average of 130 acres in 1880, and tenant farming became even more prevalent (De Cunzo and Garcia 1992:28).

World War I brought increased industry to many of the county's urban centers. Wilmington's shipyards, foundries, tanneries, and munitions plants increased production as part of the war effort. The shipyards produced freighters used for shipping cargo overseas, and the tanneries produced leather used in ships, passenger rail cars, uniforms, and shoes. DuPont, which had

begun manufacturing gunpowder near Wilmington in 1802, had a government contract as the sole manufacturer of military gunpowder and supplied more the 40 percent of the gunpowder used by Allied forces. This economic upturn was short-lived, however, and after the war ended in 1918, Wilmington's industry entered a decline that continued through the Great Depression until the onset of World War II. Several of the city's major plants closed in the 1920s and 1930s, including Bethlehem Steel, Jackson & Sharp, and the Lobedell Car Wheel Company (Dixon 1992:36; Zug-Gilbert and Diamanti 2011).

The use of roads for travel became popular with the growing affordability of automobiles for both commercial and private use. In 1903, following the National Good Roads Convention, the General Assembly of Delaware passed an act that provided matching funds for the construction of permanent roads. When the act was repealed two years later, New Castle County began its own road improvement program. Between 1905 and 1908, the county constructed nearly 73 miles of improved roads, and by 1916 New Castle County had 220 miles of improved roads (Rosin and Bowers 1992:4-5).

Between 1913 and 1917, the number of registered automobiles in Delaware soared from 3,050 to 10,702, a trend echoed on a national level. The increase in car ownership led to a national interest in road improvement, and in 1916 Congress passed the Federal Aid Highway Act, which provided federal matching funds for road construction but only to states having highway departments staffed with qualified engineers (Rosin and Bowers 1992:6). As a result the Delaware State Highway Department was established in 1917 to construct and improve Delaware's primary road system, and within six years over 89 miles of modern roads had been built in Delaware. The DuPont Highway (present-day U.S. Route 13) was completed in 1924 and followed the old eighteenth-century King's Highway in several locations. Improvements were made to U.S. Route 40, and by 1927 that highway extended through Delaware into New Jersey with the use of a ferry service. Ultimately, the Delaware Memorial Bridge was constructed in 1950 to carry vehicles across the Delaware River at this crossing (Hyland and Kuncio 2006:17).

The new and improved road system brought new forms of growth and development to New Castle County. Commercial enterprises, including those offering services for automobile travel, were built along the new thoroughfares. Commercial services were built in strips, and restaurants and diners, service stations, and campgrounds and tourist cabins, the forerunners of roadside motels, were built to accommodate automobile travelers (Rosin and Bowers 1992:8-9). A change in design aesthetic for commercial architecture resulted from the new forms of commercial development and was based on the need to ease automobile access to the services. Areas for parking and maneuvering cars close to the businesses were incorporated into the new designs. Beginning in the mid-1930s, architecture began to also replicate the aerodynamic, streamlined designs of cars, as see in the Streamline Modern style (Rosin and Bowers 1992:18).

Some residential buildings were also built along the new transportation routes, which provided a means for a quick commute to urban centers. The residences were typically vernacular in style with some architectural details influenced by popular styles of the time, including Colonial Revival, Craftsman, and Cape Cod (Hyland and Kuncio 2006:17). Although land adjacent to the highways became developed, the land beyond mostly retained its agricultural character, with farmers taking advantage of the roads for efficient transport of crops to market.

Residential development surrounding Wilmington during this period took on the form of subdivisions. From 1880 to 1950, a total of 182 Wilmington area subdivisions were built in Brandywine, Christiana, Mill Creek, and New Castle hundreds (Chase et al. 1992:25). Twenty-three of these subdivisions were built in New Castle Hundred, north of the study area. The earlier subdivisions were typically laid out in a grid pattern; however, in the 1920s, as parkways grew in popularity, subdivisions were designed with curvilinear roads, which were thought to make for a more scenic subdivision and to slow motor traffic. These earlier subdivisions often took several years to build, which would typically result in more variety of architectural styles as the houses would reflect the changing trends in residential design (Chase et al. 1992:30).

*Suburbanization and Early Ex-Urbanization (1940 to present)*

Land use in New Castle County, particularly the northern section of the county, continued to become more urbanized, a trend that started during the 1930s and accelerated during the post-World War II era. Increased automotive transportation as well as improved roads continued to lead to new patterns of settlement. While urban population growth continued, there was also an expansion of a non-agricultural but residential population into rural areas. Both residential and commercial development grew along primary and secondary roadways in the county. After Christiana, New Castle Hundred had the second highest hundred population in northern New Castle County, with 8,261 residents in 1930, and by 1960 the hundred had more than tripled in size with 40,293 residents (Crosswhite and Vaughn 1962:5).

Today, the area is still developing rapidly, a trend reinforced by the construction of SR 1. Only a few large farms remain north of the canal, and they may soon be covered with tract housing or commercial development.