

3.0 ARCHAEOLOGICAL RESOURCES PREDICTED FOR THE Archaeological APE

3.1 Pre-contact

The following is a summary of previously identified pre-contact period archaeological sites in the general vicinity of the S.R. 24 Improvements archaeological APE, and a discussion of the potential for the archaeological APE to contain pre-contact period archaeological sites. Table 1 summarizes this information for the proposed test areas.

The Paleoindian period started with the arrival of the earliest inhabitants of Delaware, *ca.* 15,000 years ago, and ended with the emergence of essentially modern environmental conditions at approximately 6,500 years ago. Paleoindian archaeological remains in Delaware include fluted projectile points attributable to the Clovis, Mid-Paleo, and Dalton-Hardaway phases, as well as early side and corner notched projectile points such as Palmer, Amos, and Kirk types (Broyles 1971; Coe 1964; Custer 1986:32). Types of Paleoindian sites include quarries, quarry reduction stations, base camps, base camp maintenance stations, outlying hunting sites, and isolated projectile point finds, with these isolated projectile points the most common (Custer 1984:52-53). The majority of the Paleoindian site types, as defined by Gardner (1979), are directly related to lithic resource procurement and lithic tool manufacturing. "Three major concentrations of Paleoindian sites are noted for the northern portion of the Delmarva Peninsula" (Custer 1984:56). The S.R. 24 Improvements archaeological APE is not located within any of these three Paleoindian site concentrations. Sources of high-quality lithic raw materials are not present within the S.R. 24 Improvements archaeological APE; therefore, the likelihood of substantial Paleoindian period remains being present in the archaeological APE is low, and no Paleoindian archaeological remains have been previously identified within or adjacent to the S.R. 24 Improvements archaeological APE.

"The beginning of the Archaic period coincides with the emergence of Holocene environments in Delaware and is characterized by a shift in human adaptation strategies" (Custer 1984:61). This adaptation strategy shift occurs at approximately 6,500 years ago with the emergence of bifurcate projectile points such as St. Albans, LeCroy, and Kanawha types (Broyles 1971; Chapman 1975). Based on preliminary information gleaned from excavated archaeological sites in locations surrounding Delaware, a variety of stemmed projectile point types characterize the Archaic period from approximately 6,000 B.C. to 4,000 B.C. (Custer 1984:62). Indicators of the new adaptations include the addition of new tools, such as groundstone, to the tool kit; the addition

**Table 1.
Proposed Phase I Archaeology Survey of the S.R. 24 Improvements Archaeological APE**

Project APE Segment/ Figure Reference	Proposed Testing Methodology	Expected Resources	Justification for Survey
S.R. 1 to Love Creek			
Test Areas A & D Figure 2 Sheets 1 & 2	surface collection if good ground visibility, and excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single to multiple use sites	pre-contact - <i>in situ</i> soils of appropriate age; well-drained, nutrient retaining soils (SfA); Custer's low and moderate probability areas; only minor disturbance from plowing
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; agricultural field historically, with little or no probability for archaeological remains; along historic roadway frontage of properties (1938-1960) with little to no potential for deep features (e.g., well, privies)
Test Area B Figure 2 Sheet 2	surface collection if good ground visibility, and excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single to multiple use sites	pre-contact - <i>in situ</i> soils of appropriate age; well-drained, nutrient retaining soils (SfA, SfB); Custer's low and moderate probability areas; only minor disturbance from plowing
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; agricultural field historically, with little or no probability for archaeological remains; along historic roadway frontage of properties with little to no potential for deep features (e.g., well, privies)
Test Areas C & F Figure 2 Sheet 3	surface collection if good ground visibility, and excavation of STPs	pre-contact - small to large; temporary to more permanent occupation; single to multiple use sites	pre-contact - <i>in situ</i> soils of appropriate age; well-drained, nutrient retaining soils (SaA, SaB); Custer's high probability area; only minor disturbance from plowing; proximity to Love Creek
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; agricultural field historically, with little or no probability for archaeological remains; not close enough to Love Creek for potential stream-related resources (e.g., mill); along historic roadway frontage of properties over 50 years of age with little to no potential for deep features (e.g., well, privies)

Table 1.
Proposed Phase I Archaeology Survey of the S.R. 24 Improvements Archaeological APE
(Continued)

Project APE Segment/ Figure Reference	Proposed Testing Methodology	Expected Resources	Justification for Survey
Test Area E Figure 2 Sheets 2 & 3	surface collection if good ground visibility, and excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single to multiple use sites	pre-contact - <i>in situ</i> soils of appropriate age; well-drained and moderately well-drained, nutrient retaining soils (SaA, Wo); Custer's moderate probability area; only minor disturbance from plowing
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; agricultural field historically, with little or no probability for archaeological remains
Holly Lake Road to Oak Orchard Road			
Test Area G Figure 2 Sheet 4	excavation of STPs (wooded)	pre-contact - small to large; temporary to more permanent occupation; single to multiple use sites	pre-contact - <i>in situ</i> soils of appropriate age; excessively drained soils (EvA, EvB); Custer's low and moderate probability area; proximity to Hopkins Prong
		historic - none	historic - no historic structures associated with this area; Hopkins Prong not useful for potential stream-related resources (e.g., mill); along historic roadway frontage of properties with little to no potential for deep features (e.g., well, privies)
Test Area H Figure 2 Sheets 4 & 5	surface collection if good ground visibility, and excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single use sites	pre-contact - <i>in situ</i> soils of appropriate age; well-drained, nutrient retaining soils (SfA); Custer's low, moderate, and high probability areas; only minor disturbance from plowing
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; agricultural field historically, with little or no probability for archaeological remains; along historic roadway frontage of properties with little to no potential for deep features (e.g., well, privies)

Table 1.
Proposed Phase I Archaeology Survey of the S.R. 24 Improvements Archaeological APE
(Continued)

Project APE Segment/ Figure Reference	Proposed Testing Methodology	Expected Resources	Justification for Survey
Test Areas I & Q and Tunnel Test Area Figure 2 Sheet 5	surface collection if good ground visibility, and excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single use sites	pre-contact - <i>in situ</i> soils of appropriate age; poorly and excessively drained soils (Fa, EvA, EvB); Custer's low and moderate probability areas; only minor disturbance from plowing; adjacent to swampy land
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; agricultural field historically, with little or no probability for archaeological remains; along historic roadway frontage of properties with little to no potential for deep features (e.g., well, privies); proximity to swampy land
Test Areas J & R Figure 2 Sheets 5 & 6	surface collection if good ground visibility, and excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single use sites	pre-contact - <i>in situ</i> soils of appropriate age; mucky to droughty and nutrient poor soils (Jo, EvA); Custer's low and moderate probability areas; only minor disturbance from plowing; adjacent to swampy land
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; agricultural field historically, with little or no probability for archaeological remains; along historic roadway frontage of properties over 50 years of age with little to no potential for deep features (e.g., well, privies)
Test Area K Figure 2 Sheet 7	surface collection if good ground visibility, and excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single use sites	pre-contact - <i>in situ</i> soils of appropriate age; excessively drained soils (EvA); Custer's low probability area; only minor disturbance from plowing
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; agricultural field historically, with little or no probability for archaeological remains; along historic roadway frontage of properties with little to no potential for deep features (e.g., well, privies)

Table 1.
Proposed Phase I Archaeology Survey of the S.R. 24 Improvements Archaeological APE
(Continued)

Project APE Segment/ Figure Reference	Proposed Testing Methodology	Expected Resources	Justification for Survey
Test Areas L, S, & T Figure 2 Sheet 7	excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single use sites	pre-contact - <i>in situ</i> soils of appropriate age; excessively and well drained soils (EvA, RuA, Ws); Custer's low and moderate probability areas; only minor disturbance from plowing
		historic - none to roadside litter	historic - along historic roadway frontage of properties over 50 years of age with little to no potential for deep features (e.g., well, privies)
Hall/Norwood Test Area Figure 2 Sheet 7	surface collection if good ground surface visibility, and excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single use sites	pre-contact - <i>in situ</i> soils of appropriate age; excessively and well drained soils (EvA, RuA); Custer's low and moderate probability areas; minor disturbance from plowing and roadway shoulder
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; agricultural field historically, with little or no probability for archaeological remains; along historic roadway frontage of properties with little to no potential for deep features (e.g., well, privies)
Test Area M and Coursey Test Area Figure 2 Sheets 7 & 8	surface collection if good ground surface visibility, and excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single use sites	pre-contact - <i>in situ</i> soils of appropriate age; well drained nutrient retaining soils (RuA, Ws); Custer's low and moderate probability areas; minor disturbance from plowing and roadway shoulder
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; agricultural field historically, with little or no probability for archaeological remains; along historic roadway frontage of properties with little to no potential for deep features (e.g., well, privies)

Table 1.
Proposed Phase I Archaeology Survey of the S.R. 24 Improvements Archaeological APE
(Continued)

Project APE Segment/ Figure Reference	Proposed Testing Methodology	Expected Resources	Justification for Survey
Test Areas N, O, & U Figure 2 Sheets 8 & 9	surface collection if good ground surface visibility, and excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single use sites	pre-contact - <i>in situ</i> soils of appropriate age; excessively drained soils (Eva); Custer's low and moderate probability areas; only minor disturbance from plowing
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; agricultural field historically, with little or no probability for archaeological remains; along historic roadway frontage of properties over 50 years of age with little to no potential for deep features (e.g., well, privies)
Test Area P Figure 2 Sheet 4	surface collection if good ground surface visibility, and excavation of STPs	pre-contact - small to large; temporary to more permanent occupation; single to multiple use sites	pre-contact - <i>in situ</i> soils of appropriate age; excessively drained soils (EvA, EvB); Custer's low and moderate probability areas; proximity to Hopkins Prong; only minor disturbance from plowing
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - no historic structures associated with this area; Hopkins Prong not useful for potential stream-related resources (e.g., mill); along historic roadway frontage of properties over 50 years of age with little to no potential for deep features (e.g., well, privies)

Table 1.
Proposed Phase I Archaeology Survey of the S.R. 24 Improvements Archaeological APE
(Continued)

Project APE Segment/ Figure Reference	Proposed Testing Methodology	Expected Resources	Justification for Survey
Test Areas V & W Figure 2 Sheet 9	surface collection if good ground surface visibility, and excavation of STPs	pre-contact - isolates; small artifact scatters; temporary, single to multiple use sites	pre-contact - <i>in situ</i> soils of appropriate age; excessively drained soils (EvA); Custer's low probability area; only minor disturbance from plowing
		historic - none to rural field scatters resulting from fertilization and/or litter	historic - proximal to NRHP-listed Harmon School but outside of historic boundaries; agricultural fields historically, with little or no probability for archaeological remains; along historic roadway frontage of properties over 50 years of age with little to no potential for deep features (e.g., well, privies)

of alternative lithic raw material sources (e.g., secondary cobble sources) for tool making; replacement of direct procurement systems by embedded systems; reduction in the range of activities carried out at special purpose sites; less reliance on cryptocrystalline lithic raw materials; increased floral resource use; reduced emphasis on hunting; and site location preference to a wider variety of environmental settings different from Paleoindian preferences. "In the overall picture the variety of site types and activities seems to represent a diffuse adaptation (Cleland 1976) to an increasing variety of environmental settings as well as the increasing variety of resources available due to increased seasonality" (Custer 1986:65). This seasonality is reflected in the macro/micro-band/procurement site settlement types postulated for the Archaic period in Delaware. A variety of environmental settings, including swamps/marshes and their associated terraces, and floodplains of major streams would have been preferred locations for macro-band camps. The S.R. 24 Improvements archaeological APE does not contain these types of environmental settings. Sheltered locales along smaller streams, and major stream headlands appear to be the preferred micro-band camp environmental settings. There is a paucity of data for both Archaic period macro- and micro-band site locations in Sussex County (Custer 1986:73). By 3,000 B.C. in Delaware, significant changes occurred in lifeways, climate, and environment, and signaled the end of the Archaic period. Few Archaic period archaeological sites are known in Delaware and of those investigated, none are stratified (Custer 1984:61, 65). The potential for the S.R. 24 Improvements archaeological APE to contain Archaic period archaeological remains is low to moderate based on the limited environmental settings included in and the small size of the archaeological APE. If Archaic period remains are identified, they will most likely not be stratified or intact due to the heavy historic use of the areas, peripheral to the existing roadway, which comprise the archaeological APE.

The beginning of the Woodland I period is placed at approximately 3,000 B.C. when the rate of sea level rise slowed and riverine and estuary environments began to stabilize (Emery and Edwards 1966:733). An increase in population is posited for the period, along with the development of sedentism. Many large base camp sites, with associated large numbers of people, are evident in many parts of the Delmarva peninsula during the Woodland I period (Custer and Catts 1991:19). The overall trend was towards more sedentism with increases in local populations. Woodland I period lifeways varied from the Archaic period and included increases in plant processing tools; the introduction of stone and then ceramic containers; the development of incipient ranked societies; the addition of fishing gear such as netsinkers; increases in broad-bladed knives; and the development of trade and exchange networks/systems. Settlement during this period commonly

consisted of repeated use campsites and semi-sedentary to sedentary village sites along major drainages (Morin *et al.* 2001:3.3). Woodland I complexes identified in southern Delaware include Clyde, Wolfe Neck/Delmarva Adena, and Carey. The close of the Woodland I period is dated to approximately A.D. 1000. Due to the lack of major drainages within the S.R. 24 Improvements archaeological APE, there is a low to moderate probability of identifying large, permanent Woodland I period site types.

The Woodland II period is dated from A.D. 1000 to the contact period, ca. A.D. 1600. The period is marked by the alteration of Woodland I lifeways (Custer 1984:146). "The basic changes noted in Delaware include the breakdown of trade and exchange networks, alterations of settlement patterns, the development of sedentary lifestyles, and the appearance of agricultural food production to varying degrees in different areas" (Custer 1984:146). Horticulture became very important across the Middle Atlantic region during the Woodland II period, although little archaeological evidence for it has been identified in Delaware (Morin *et al.* 2001: 3.3). In general, the change in lifeways from the Woodland I period to the Woodland II period is not as marked in southern Delaware (Custer and Catts 1991:24). "In general, the Woodland II subsistence patterns in southern Delaware are similar to those of the Woodland I period with the likely addition of minor amounts of cultivated plant food resources" (Custer and Catts 1991:24). Small triangular projectile points, and various styles of ceramics are temporally diagnostic Woodland II period artifacts. Two basic varieties of ceramics, Townsend and Minguannan wares, are distinguished in Delaware (Custer 1984:148). Townsend ceramics are described as shell tempered, fabric impressed exterior surface wares (Griffith 1982), while Minguannan wares exhibit sand, grit, or quartz temper with smoothed, corded, or smoothed-over corded surfaces (Custer 1981). Woodland II ceramics of southern Delaware are classified within the Townsend series (Griffith 1982). For a complete and detailed pre-contact period context of the project area, the reader is referred to *A Management Plan for Delaware's Prehistoric Cultural Resources* (Custer 1986); *A Management Plan for the Prehistoric Archaeological Resources of Delaware's Atlantic Coastal Region* (Custer 1987); *Delaware Prehistoric Archaeology, An Ecological Approach* (Custer 1984); and *Chesapeake Prehistory* (Dent 1995).

The event that defines the Contact period in Delaware is the arrival of Euro-Americans. The exact date of first Euro-American contact can be debated; however, Custer (1986:162) uses A.D. 1600. At European contact, most of the Delmarva peninsula was inhabited by a number of Algonquian-speaking tribes (Feest 1978:240). The Delaware and Nanticoke lived and used adjacent parts of Delaware in and around the S.R. 24 project area. These groups shared a

common egalitarian band-level or simple tribal-level organization that lacked any large-scale supralocal organizations (Custer 1984:175). This is in contrast to the large communities and corporate lineages of the Susquehannocks. "Thus in considering the archaeological record of the European Contact period in Delaware, we can assume that throughout Delaware all groups were marginal participants in the fur trade and victims of Susquehannock hegemony" (Custer 1984:176).

Contacts with Europeans lead to changes in Native American lifeways, including the replacement of traditional goods with European goods such as fabric in place of skins, copper and iron vessels in place of earthen pots, bark vessels, and baskets; and guns, hatchets, and iron traps in place of the bow and arrow, lithic tools, deadfall, and snares. Social, political, material culture, and settlement pattern changes in Native American lifeways came about as a result of their direct involvement with the Europeans. Despite the magnitude of cultural changes to the Native American lifeways, after initial European contact, the most traumatic of the Native American/European interactions was the introduction of the diseases, such as measles, small pox, typhus, and others to the Native American populations who lacked immunities to the diseases (Brasser 1978:83). These epidemic diseases caused unnatural and immediate declines in Native American populations (Brasser 1978:83).

In addition to diseases, conflicts between competing European nations also involved the Indians, with profound effects on their culture (Ritchie and Funk 1973:368). Traditional alliances were broken, false promises were made, boundaries of traditional territories became muddled, and Native American groups began to be displaced. Based on these ideas, evidence for small groups living outside of the major transportation routes would be the archaeological signature for Native American groups in Delaware during the Contact period. Custer (1986:166) indicates that the archaeological record alone may be insufficient to understand the Contact period, and that careful study of the ethnohistorical record may be necessary as well.

According to the predictive modeling accomplished by Custer (n.d.) for pre-contact period archaeological resources in Delaware, the majority of the archaeological APE is contained within moderate and low probability areas; however, there are two locations along the archaeological APE that are assigned a high probability. The first of these high probability locations is situated approximately 0.8 km (0.5 mi) north of Love Creek just south of where the headwaters of Dorman Branch contact the S.R. 1 to Love Creek segment of the archaeological APE. The second high probability area is located approximately 0.9 km (0.6 mi) south of the north end of the Holly Lake Road to Oak Orchard Road segment of the archaeological APE.

More specifically, Table 2 (after Custer 1987:62) indicates that the probability for finding significant sites within the interior areas of the Atlantic Coastal region (of which the S.R. 24 Improvements archaeological APE is a part) is low to medium for most of the pre-contact period site types, while the existing data quality is poor. This makes the interior areas of the Atlantic Coastal region low research sensitivity areas (Custer 1987:58). Custer (1987:62) does list two site types, Woodland I and Woodland II procurement, as high probability sites with fair data quality; however, the majority of site types for the remainder of the pre-contact period are listed as low or medium probability. The State Management Plan (Custer 1986:206) denotes the S.R. 24 Improvements archaeological APE as having high/medium significant site potential with development pressure, and as one of the most important areas for future research.

Table 2.
Site Probabilities and Data Quality for the Interior Areas of the Atlantic Coastal Region
(after Custer 1987)

SITE TYPE	PROBABILITY FOR SITES	EXISTING DATA QUALITY
Paleoindian Period		
Base Camp	low	poor
Base Camp Maintenance Station	low	poor
Procurement	medium	poor
Archaic Period		
Macro-band Base Camp	low	poor
Micro-band Base Camp	low	poor
Procurement	medium	poor
Woodland I Period		
Macro-band Base Camp	low	poor
Micro-band Base Camp	medium	poor
Procurement	high	fair
Woodland II Period		
Macro-band Base Camp	low	poor
Micro-band Base Camp	medium	poor
Procurement	high	fair
Contact Period		
General	low	poor

In 1986, Custer (1986:196) identified 74 previously recorded archaeological sites within County Block G, where the archaeological APE is located, and a total of 327 sites in Sussex County. Review of the Delaware archaeological site files did not yield any previously recorded pre-contact period archaeological sites within or adjacent to the archaeological APE. Reviews of several previously completed cultural resource management project reports pertinent to the area

also indicate that no pre-contact period archaeological sites have been identified within the vicinity of the S.R. 24 Improvements archaeological APE. Ongoing archaeological studies by McCormick Taylor for the Oak Orchard Sanitary Sewer District near Warwick Cove (approximately 1.9 km [1.2 mi] to the south of the southern terminus of the archaeological APE) have identified a series of small overlapping Woodland I and Woodland II period occupations (Barbara Silber, personal communication 2004). These sites have yielded lithic debitage and ceramic sherds indicative of campsite activity. Pre-contact period isolates have also been identified during McCormick Taylor's research (Barbara Silber, personal communication 2004).

General information about the history of portions (especially the southern portion of the Holly Lake Road to Oak Orchard Road segment) of the archaeological APE was provided by members of the Nanticoke Indian Tribe. Most of this information came in the form of remembrances about what buildings had been moved to or from the area and when, what types of roadside businesses were present and when, landowner information, and roadside/building positioning within the past 50 to 80 years. Much of this information is important to the interpretation of both Nanticoke Indian and Euro-American historic structures/properties located in the project area. Comments regarding the locations of traditional ethnic or cultural practices were restricted to floral collecting areas and the Powwow Grounds, both located outside of the S.R. 24 Improvements archaeological APE, and the present Nanticoke Indian Museum property.

Despite the direct and lengthy association of the Nanticoke Indians with the archaeological APE, based on the absence of previously identified pre-contact period archaeological sites in the general vicinity of the archaeological APE, the nature of the archaeological APE along an existing transportation and utilities corridor, and the constricted areal size of the test areas, the S.R. 24 Improvements archaeological APE is considered to have a low to moderate probability to contain pre-contact period archaeological sites. The presence of both well drained soils of appropriate age to contain archaeological resources, as well as the presence of less attractive poorly drained soils within the archaeological APE also supports a determination of moderate probability to contain pre-contact period archaeological remains.

3.2 Historic

The following is a summary of previously identified historic period archaeological sites in the general vicinity of the S.R 24 Improvements archaeological APE, remembrances of Nanticoke tribal members and non-tribal residents, and a discussion of the potential for the archaeological APE to

contain historic period archaeological sites. For an extensive description of Delaware's Euro-American history, especially agriculture, the reader is referred to the *Management Plan for Delaware's Historical Archaeological Resources* (DeCunzo and Catts 1990) and "*Neither a Desert Nor a Paradise*": *A Historic Context for the Archaeology of Agriculture and Rural Life, Sussex County, Delaware, 1770-1940* (DeCunzo and Garcia 1993). DeCunzo and Catts (1990:109-110, 112) list 79 previously identified historic period archaeological sites within Sussex County, including 19 in County Block G where the archaeological APE is located. Three years later, DeCunzo and Garcia (1993:344) indicate that 150 archaeological agricultural sites have been identified in Sussex County, the result of 18 Phase I cultural resources surveys. None of the 18 surveys included any portions of the current S.R. 24 Improvements archaeological APE. The types of properties which were identified in these nearby surveys include agricultural complexes, individual residences, maritime resources, industrial/commercial resources, public/religious resources, and others. A more recent survey, Morin *et al.* (2001), was conducted along S.R. 24 at its intersection with S.R. 5. This survey did not identify any archaeological resources, and did not recommend any of the four properties identified as over 50 years of age (Dunmore House, Norwood Property, Adkins Produce, and Burton Realty) as eligible for listing in the NRHP. The eligibility of at least one of the buildings discussed by Morin *et al.* (2001) is being examined during the current McCormick Taylor survey. Based on the results of the past archaeological research in the vicinity of the S.R. 24 Improvements archaeological APE, it appears that the archaeological APE has the potential to contain the gamut of historic period archaeological resources; however, agricultural related resources will most likely make up the bulk of those identified. Ongoing research by McCormick Taylor near Warwick Cove has identified late eighteenth-early nineteenth and mid-nineteenth century historic period sites (Barbara Silber, personal communication 2004). This research has not yet been reported in the literature.

As previously discussed, the Nanticoke people have a special and long-term relationship with the S.R. 24 Improvements project area. This relationship, despite Euro-American attempts to exterminate or remove the Nanticoke people, continued throughout the post-contact period to the present. Today over 550 Nanticoke people who live in Sussex County maintain their special relationship with a changing S.R. 24 project area by retaining their heritage through preservation of their traditions. In recognition of the Nanticoke's history and influence in Delaware, the Nanticoke Indian Community Multiple Property Nomination was established (Delaware State Historic Preservation Office 1979). The historic property includes nine individual properties within an area bounded by the north shore of Indian River, S.R. 297, and County Roads 309 and 309A, although

the Nanticoke people live over a much greater area. Although only the Harmon School property is located within the S.R. 24 Improvements archaeological APE, all of the nine individual properties included in the nomination - inventory form are described in Table 3.

**Table 3.
Descriptions of Individual Properties Making Up the
Nanticoke Indian Community National Historic Property**

Property Name CRS Number	Description	Location*
Indian Mission Church S-759	early 20 th century religious structure; retains original use; wood frame, clapboard covered, gothic style building; typical of rural churches in southern Delaware	ca. 5.5 km (3.4 mi) northwest of archaeological APE
Harmony Church S-753	late 19 th century religious structure; retains original use; wood frame, asbestos siding, rock-faced concrete foundation, gothic style building	ca. 1.8 km (1.1 mi) southwest of south end of archaeological APE
Robert Davis Farmhouse and Environs S-754	built ca. 1900; wood frame, asbestos siding, two-story building; log corn cribs	ca. 1.0 km (0.6 mi) southwest of south end of archaeological APE
Warren T. Wright Farm S-758	destroyed by fire; appeared to resemble the Robert Davis farmhouse; owned by Warren T. Wright, a leader in the Nativist Movement	ca. 0.8 km (0.5 mi) southwest of south end of archaeological APE
Ames Hitchens Chicken Farm S-755	chicken farm; wood frame, clapboard sided, two-story house with two long one-story, flat roofed chicken houses; chicken houses are located on the west side of the house	ca. 1.0 km (0.6 mi) southwest of south end of archaeological APE
Indian Mission School S-757	stucco covered masonry, one-story educational facility; maintained as the Nanticoke Indian Center; current building replaced one-room frame building destroyed by fire in 1948	ca. 1.3 km (0.8 mi) southwest of south end of archaeological APE
Johnson School S-756	built early 1920s; wood shingle frame structure, colonial revival style; typical of schools constructed for minority communities under the school reforms of the early 20 th century	ca. 2.6 km (1.6 mi) southwest of south end of archaeological APE
Harmon School S-165	current school built in early 1920s to replace the earlier one-room frame school built in the 1880s by the separatist Nanticoke faction; wood shingle covered frame structure with a concrete foundation, colonial revival style; typical of schools constructed for minority communities under the school reforms of the early 20 th century	at south end of archaeological APE
Isaac Harmon Farmhouse S-751	single-pile residence; built in 1840s; small wood frame shed outbuilding; one of first properties in the Indian River Community to be owned by an Indian family	ca. 1.8 km (1.1 mi) south of south end of archaeological APE

* location in relation to the S.R. 24 Improvements archaeological APE.

De Cunzo and Catts (1990:28, 172-176) include the S.R. 24 Improvements project area as part of the southernmost area of seventeenth century settlement in Delaware, and as a part of the route from coastal houses to interior Dagsboro during the periods of Intensified and Durable Occupation (1730-1770±), and Transformation from Colony to State (1770-1830±). There is less emphasis on the S.R. 24 Improvements project area later in the historic period (e.g., Industrialization and Capitalization and Urbanization and Suburbanization) (De Cunzo and Catts 1990:175-176). However, with recent pressures on the landscape from development and tourism, the potential archaeological resources in the S.R. Improvements 24 project area are vulnerable.

Based on information contained within the historic archaeological resources context (De Cunzo and Catts 1990:28), it appears that the area surrounding the S.R. 24 Improvements project has the potential to contain archaeological resources dating from the seventeenth century to the recent past.

Review of the Delaware archaeological site files revealed that the only previously recorded historic property located in the S.R. 24 Improvements archaeological APE is the Nanticoke Indian Community. Only one of the nine individual properties listed within the Nanticoke Indian Community NRHP inventory-nomination form, the Harmon School, is located within the archaeological APE boundaries; however, based on preliminary historic structures research by DeDOT and McCormick Taylor, additional Nanticoke properties may be present in the archaeological APE. The significance of these Nanticoke properties reflects the importance of this Indian group in the general vicinity and provides a non-Euro-American historic context into which newly identified historic period archaeological resources may need to be placed. Direct input from the tribal members is essential for the formation of this context.

The earliest historic map (Beers 1868) of the archaeological APE lists several private homeowners/landowners; however, no commercial, industrial, or public establishments are listed (e.g., mills, stores, schools) for the archaeological APE vicinity. It is difficult to ascertain the exact locations of these 1868 structures with regard to S.R. 24 since S.R. 24 was not yet established as a roadway over much of its current route. Landowner surnames associated with structures which may be within or immediately adjacent to the northern S.R. 1 to Love Creek segment of the project include Paynter, Conwell, Fisher, and Burton. As demonstrated by the Beers map (1868), the northern segment of the project, which was closer to Lewes and the coast, was more densely settled than the southern Holly Lake Road to Oak Orchard Road segment. Landowner surnames associated with structures along the southern segment include Robinson, Clenga, and Satherfield. Later historic maps (Delaware State Highway Department 1941; War Department Corps of

Engineers, U.S. Army 1928, 1938, 1948a, 1948b) indicate schools and churches in the vicinity of the archaeological APE. Historic maps also indicate that the route of S.R. 24, once it was established ca. 1928, has not changed appreciably throughout the historic period, but that development immediately adjacent to the roadway has increased (Beers 1868; Delaware State Highway Department 1941; War Department, Corps of Engineers, U.S. Army 1928, 1938, 1948a, 1948b). In addition, current landowners and residents confirmed that small shifts in the road's positioning had taken place through the years. These roadway shifts, as well as the common Sussex County practice of moving structures to new locations, makes correlation of historically mapped structures with current structures complicated. Due to resort-associated development since World War II, many sites and structures associated with the history of the community have been destroyed (Delaware State Historic Preservation Office 1978). Rapid development of the S.R. 24 corridor continues to the present and is reflected in the need for the proposed roadway widening.

Based on the presence of the Nanticoke Indian Community historic property within the archaeological APE, the presence of several potentially significant historic structures adjacent to the archaeological APE, the status of the area as the traditional and historic cultural-use area of the Nanticoke Indian Tribe, the indications that this area has been inhabited by Euro-Americans since A.D. 1630, and the indication from historic maps and oral interviews that different and/or additional historic structures may have been present adjacent to the archaeological APE, the S.R. 24 Improvements archaeological APE has a moderate to high probability to contain historic period archaeological resources. However, this probability must be tempered by the constricted size of the archaeological APE and its location along the fronts of historic structures where deep historic features, such as in-filled wells or privies, are not normally located. Due to the long-term rural nature of the archaeological APE, and based on the numbers of different types of previously identified historic archaeological sites located within Sussex County, if historic period archaeological sites are identified in the archaeological APE, they will likely be related to Nanticoke Tribal or Euro-American rural agricultural and/or domestic activities. However, given the constricted size and positioning of the archaeological APE, if historic archaeological resources are identified, they will most likely be generalized historic artifact scatters or isolates, types of resources which do not typically contribute significant information about the land-use history of an area.