4.0 CULTURAL BACKGROUND AND CULTURAL RESOURCES PREDICTED

The following is a summary of previously identified pre-contact and historic period archaeological sites, as well as historic properties located in the general vicinity of the U.S. 301 Orange Section 4 archaeological APE, and a discussion of the potential for the project area to contain pre-contact and historic period archaeological resources and historic properties. The information is intended to be as specific to the Orange Section 4 archaeological APE as possible. Therefore, if additional information regarding the general pre-contact period of Delaware is desired, the reader is referred to: *Delaware Prehistoric Archaeology: An Ecological Approach* (Custer 1984); *A Management Plan for Delaware's Prehistoric Cultural Resources* (Custer 1986); *Stability, Storage and Culture Change in Prehistoric Delaware: The Woodland I Period (3000 B.C.-A.D. 1000)* (Custer 1994); *Management Plan for the Prehistoric Archaeological Resources of Northern Delaware* (Custer and DeSantis (1986); *A Management Plan for the Prehistoric Archaeological Resources of Delaware's Atlantic Coastal Region* (Custer 1987); *Management Plan for Delaware's Historical Archaeological Resources* (De Cunzo and Catts 1990); C*hesapeake Prehistory, Old Traditions, New Directions* (Dent 1995); and H*andbook of North American Indians, Volume 15: Northeast* (Trigger 1978). For a detailed ethnography for the region the reader is referred to *Hickory Bluff: Changing Perceptions of Delmarva Archaeology* (Petraglia *et al*. 2002). The same goal of specificity is true for the historic period information in this document as well. For more information regarding general discussions of the historic period in Delaware, especially agriculture, the reader is referred to: *Historic Context and Master Reference and Summary* (Herman *et al.* 1989); *History of Delaware, 1609-1888 (*Scharf 1888); *Historic Context: The Archaeology of Agriculture and Rural Life, New Castle and Kent Counties, Delaware, 1830-1940* (De Cunzo and Garcia 1992); and *Agricultural Tenancy in Central Delaware, 1770-1990±: A Historic Context* (Siders *et al.* 1991).

4.1 Pre-contact Period

4.1.1 Paleoindian Period (*ca.* 12,000 B.C. to 6,500 B.C.)

The Paleoindian period (*ca.* 12,000 B.C. to 6,500 B.C.) 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 being 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 by peoples of this period. Sources of high quality lithic raw materials are not present within the Orange Section 4 archaeological APE. In addition, site patterning seems to indicate that the Paleoindian peoples favored riverine environments on high terraces or knolls overlooking rivers or streams (Custer 1986:49). Based on the lack of high quality lithic raw material resources and riverine environments in the Orange Section 4 archaeological APE, the likelihood of substantial Paleoindian period remains such as quarry sites or base camps being present is low. However, the location of the archaeological APE between two recognized concentrations of Paleoindian sites located in northern New Castle County, Delaware and Cecil County, Maryland, and along the Mid-peninsular Drainage Divide means that the area would have been visited by these groups of people during hunting, resource collection, or visiting activities (Custer 1984:59, 1986:49-51). There is the potential, therefore, for isolated fluted projectile points made and used by these people to be present.

No Paleoindian period archaeological remains have been previously identified within or adjacent to the archaeological APE; however, the concentration of Paleoindian sites defined along the Mid-peninsular Drainage Divide appear to correlate with poorly drained locations and the areas immediately surrounding these poorly drained areas (Custer 1984:57, 1986:49; Riley *et al*. 1994:6). Portions of the project area, especially in the northern sections, exhibit hydric soils indicating that they are poorly drained; therefore, they may have the potential to contain Paleoindian period archaeological sites on landforms adjacent to these wet areas. Baublitz *et al*. (2006:8) report that the closest evidence of Paleoindian people's activities to the U.S. 301 Project are those identified northwest of Glasgow and north of the New Castle and Frenchtown Railroad right-of-way on the Route 896 project. Both of these purported Paleoindian period sites are located well outside of the Orange Section 4 archaeological APE.

4.1.2 Archaic Period (6,500 B.C. to 3,000 B.C.)

"The beginning of the Archaic period (6,500 B.C. to 3,000 B.C.) coincides with the emergence of Holocene environments in Delaware and is characterized by a shift in human adaptation strategies" (Custer 1984:61). Warmer, moister climates prevailed which, in turn, increased the numbers and range of the mixed hemlock-oak forests providing food for animals (e.g., deer, turkey) and people alike. There was also a marked increase in sea level which through coastal flooding and river inundation, indirectly was responsible for the development of extensive estuary systems and interior swamps (Baublitz *et al.* 2006:8). "These changes caused a net increase in the variety and density of floral and faunal resources available to indigenous groups" (Baublitz *et al*. 2006:8).

This shift to a broader subsistence strategy occurs at approximately 8,500 years ago and is seen in the archaeological record with the emergence of bifurcate projectile points such as St. Albans, LeCroy, and Kanawha types (Broyles 1971; Chapman 1975). In addition to the bifurcate projectile points, stemmed and notched forms also occur. Based on preliminary information gleaned from excavated archaeological sites in locations surrounding Delaware, a variety of stemmed projectile point use characterizes the Archaic period from approximately 6,000 B.C. to 4,000 B.C. (Custer 1984:62). Indicators of the new subsistence adaptations include the addition of new tools, such as ground stone, to the tool kit by Archaic period people; the addition 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/microband/procurement site settlement types postulated for the Archaic period in Delaware. The number of ecological settings that Archaic period peoples used increased on the Delmarva Peninsula and with it an attendant increase in available subsistence resources (Baublitz *et al.* 2006:12). A variety of environmental settings, including swamps/marshes and their associated terraces, as well as

floodplains of major streams, would have been the preferred locations of these peoples' macroband camps. While poorly drained soils are present in the Orange Section 4 archaeological APE, it does not appear to contain true swamps/marshes or associated terraces and no major streams are present; therefore, macroband camps associated with Archaic peoples would not be expected.

Sheltered locales along smaller streams and major stream headlands appear to be the Archaic period peoples' preferred microband camp environmental settings in northern Delaware; however, other settings are likely to include microband camps (Custer 1986:72). In general, it appears that microband camp locations would have been in areas with lower carrying capacity than those chosen for macroband camps (Baublitz *et al.* 2006:12). One specific microband camp setting which mirrors areas within the archaeological APE is small rises near poorly drained areas away from the major drainages of the High Coastal Plain (Custer 1986:72). Therefore, there is some potential for Archaic period microband camps to be present in the archaeological APE.

Unlike macro- and microband sites, procurement sites used by Archaic period peoples for the gathering/hunting of specific, locally available natural resources appear to be located in varied topographic and environmental settings in order to take advantage of resource procurement and seasonality of resources (Baublitz *et al.* 2006:12; Custer 1984:67, 1986:74). These sites would represent more ephemeral and short term activities/occupations which would affect the archaeological representation of them. Many previously identified isolates and lithic scatters may represent procurement sites, and there is potential for these types of uses to be reflected in the archaeological record preserved in the archaeological APE.

By 3,000 B.C. in Delaware, significant changes occurred in lifeways, climate, and environment, and signaled the end of the Archaic period. Baublitz *et al.* (2006:12-13) mention five previously recorded Archaic component archaeological sites in the overall U.S. 301 project area; however, none of these is located within the Orange Section 4 archaeological APE. The five Archaic period sites are represented by lithic scatters and include a possible microband camp. The closest site, Lums Pond (7NC-F-18 [N-03778]), is located north of the C&D Canal, and contained limited artifactual evidence of Archaic period activities mainly in the plowzone (Petraglia *et al.* 1998:146). Limited Phase I survey used to test portions of the U.S. 301 predictive model study area "failed to record any definitive" pre-contact period archaeological sites; however, a small number of isolated projectile points and debitage was identified (Baublitz *et al.* 2006:96). The potential for the Orange Section 4

archaeological APE to contain Archaic period archaeological remains is low to moderate based on the limited environmental settings included in the project area that were preferred by Archaic peoples. If Archaic period remains are identified, they will most likely represent isolated finds, lithic scatters, microband camps, or procurement sites on small areas of relatively higher elevation adjacent to poorly drained areas along small drainages (Custer 1986:74). However, any interpretations of pre-contact period behavior, including settlement patterns, as viewed from archaeological remains needs to be couched in terms of the scale and resolution of the observations and research questions (Lovis 2008:27; Robinson 2008:23). Recent examples of archaeologists' attempts to interpret Archaic cultural patterns that seem arbitrary at one scale, but may become more systematic and meaningful at another scale, are included in a recent SAA Archaeological Record (Society for American Archaeology 2008). These articles demonstrate new research which challenges the "antiquated spatiotemporal constructs" (Duff 2008:2) of the Archaic, including the traditional definition of the Archaic/Woodland boundary.

4.1.3 Woodland I Period (*ca.* 3,000 B.C. to *ca.* A.D. 1000)

The Woodland I period begins at approximately 3,000 B.C., when the rate of sea level rise slowed and riverine and estuarine environments began to stabilize, and continues until *ca.* A.D. 1000 (Morin *et al.* 2001:3.2; Riley *et al.* 1994:6). 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 appeared to be towards more sedentism, with increases in local populations; however, research in New Jersey on the acquisition of argillite during the Woodland I period (Watson and Custer 1990) suggests that Woodland I peoples may have had larger wandering ranges than once thought, inferring less sedentism than was originally postulated for the period. Based on these differences in lithic transport, questions regarding pre-contact period peoples' movements, settlement mobility, and patterns of lithic technology organization may be considered (Watson and Riley 1994:67). In addition, studies of sites dating to this period indicate that "what Custer (1984, 1989) had previously called macroband base camps may instead represent the overlap of deposits associated with repeated use of a location by single families or small groups composed of a few families (Custer 1994; Petraglia *et al*. 2002)" (Baublitz *et al*. 2006:14). Therefore, these larger Woodland I period sites may

actually represent reuse through time rather than increased population or quantities of residences.

Woodland I period lifeways varied from the Archaic period and included increased use of plant processing tools; the beginning and use 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. "Soapstone and ceramic vessels are viewed as items that facilitated more efficient food preparation and the remains of prehistoric dwellings have been documented at the Delaware Park and Clyde Farm sites in northern Delaware" (LeeDecker *et al*. 1992:15). Areas that appear important to Woodland I peoples' settlements include the major river floodplains and estuarine swamp/marsh areas, none of which occur in the Orange Section 4 archaeological APE.

There are many more Woodland I period archaeological sites known in Delaware compared to archaeological sites associated with other time periods; therefore, it is possible to recognize some temporal and spatial variation within Delaware (Custer 1986:98). Within the Woodland I period, Custer (1986:89) recognizes six cultural complexes, including Late Carey, Webb/Delaware Park, Carey, Wolfe Neck, Delmarva Adena, and Clyde Farm/Barker's Landing, based on associations with diagnostic projectile points and ceramic types. However, the settlement types associated with all of the Woodland I complexes include macroband/larger/reuse camps, microband/smaller camps, and procurement sites in various quantities and proportions. Preferred locations for Woodland I period peoples' macroband/larger/reuse camps include floodplains of major drainages, developing estuarine marshes, and well-watered limestone lowlands in the Piedmont (Custer 1986:99, 106). These areas appear to be favored by Woodland I period peoples for their quantity and variety of natural resources which made them particularly good areas for hunting and gathering (Baublitz *et al.* 2006:15). Microband/smaller camps are located in interior swamp, major floodplain/confluence, and salt marsh settings, as well as specialized resource locations (Custer 1986:100-101, 106). Like Archaic period procurement sites, Woodland I procurement sites are located in varied topographic and environmental settings in order to take advantage of resource procurement and seasonality of resources (Custer 1986:107). The overlap in site type locations may reflect more of a quantitative difference in recovered archaeological materials rather than actual site type/usage differences in behavior or preference for specific locations.

There are three previously recorded archaeological sites near the Orange Section 4 archaeological APE exhibiting potential Woodland I period components. Site 7NC-F-14 (N-03796) is a single component Woodland I site located west of the archaeological APE along Choptank Road. The second nearby possible Woodland I period site is 7NC-F-92 (N-14203), which is located west of the Orange Section 4 archaeological APE along Choptank Road. The designation of the site as belonging to the Woodland I period is suspect since the site form description notes that the site is a low density lithic scatter with no diagnostic artifacts. The lack of diagnostic artifacts associated with the site is confirmed by Morrell and Glumac who do not date the site to a specific period (2008:72-73). At the time of the Phase II report submittal, a carbon sample which had been recovered from a feature had not been submitted for radiometric analysis (Morrell and Glumac 2008:72). This carbon sample has the potential to more specifically date the site. The third nearby previously recorded archaeological site with a Woodland I period association is Lums Pond (7NC-F-18 [N-03778]) located just north of the C&D Canal. The dominant Woodland I complex at Lums Pond is the Clyde Farm complex (Petraglia *et al*. 1998:146). Baublitz *et al*. (2006:16) refer to the site as a "small base camp," the equivalent of Custer's microband camp. Limited Phase I survey of portions of the U.S. 301 predictive model study area did not yield any evidence of Woodland I period occupation/use of the area (Baublitz *et al*. 2006:94).

Based on the settings associated with the different types of Woodland I period archaeological sites, there is low probability for macroband/large base camps to be present in the Orange Section 4 archaeological APE; however, based on projected increased population and movements of that population (e.g., for lithic raw material procurement) during the Woodland I period, there is moderate potential for microband/smaller base camps, procurement sites, and isolated finds to be present in the archaeological APE.

4.1.4 Woodland II Period (A.D. 1000 to *ca.* A.D. 1600)

The Woodland II period is dated from A.D. 1000 to the contact period, *ca.* A.D. 1600 and 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 to peoples 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). Woodland I settlements, especially the large base camps, continued in many instances to be occupied during the Woodland II period, with very few changes in basic lifestyles and overall artifact assemblages indicated (Stewart *et al.* 1986). Intensive plant utilization and hunting remained the basic subsistence activities of Woodland II period peoples up to European contact.

Similarly, no major changes are seen in social organization for this period in northern Delaware (Kellogg1992:11). Small triangular projectile points and various styles of ceramics are temporally diagnostic Woodland II period artifacts and make the period distinguishable from Woodland I. Woodland II period ceramics of Northern Delaware are classified as Minguannan (Custer 1984:149; Kellogg 1992:16). Minguannan wares exhibit sand, grit, or quartz temper with smoothed, corded, or smoothed-over corded surfaces and are distributed throughout northern Delaware, southeastern Pennsylvania, and the Piedmont and Coastal Plain regions of northern Maryland at the head of the Chesapeake Bay (Maryland Archaeological Conservation Lab 2002). At one time, it was thought that this ware type did not occur south of the C&D Canal (Custer 1981:154, 1984:154); however, newer research has yielded Minguanna wares in archaeological contexts at several sites located in Kent County (e.g., 7K-C-13 [K-00477], 7K-C-411 [K-6765], 7K-C-194A [K-6024], 7K-C-312 [K-6193], 7K-D-13 [K-0606], 7K-D-26 [K-0597]) (Bupp 2000:3; Custer *et al.* 1996a; Custer *et al*. 1996b:243; Petraglia *et al.* 2002:14-86).

Custer (1984:156) views the presence of “numerous muticomponent macroband base camp sites that include Woodland I materials and Minguannan complex artifacts” as an indication that the cultural adaptations of the two periods are similar. General Woodland I settlement patterns can therefore be applied to the Woodland II Minguannan complex (Custer 1984:156). If this is true, then preferred locations for macroband camps throughout the Woodland II period would include floodplains of major drainages, developing estuarine marshes, and well-watered limestone lowlands in the Piedmont. There was not a major shift in site locations during the Woodland II period related to occupying extensive arable land for agricultural purposes (Custer 1986:144). Woodland period peoples’ microband camps would be located in interior swamp, major floodplain/confluence, and salt marsh settings, as well as specialized resource locations. Woodland II procurement sites would be located in varied topographic and environmental settings in order to take advantage of resource procurement, but with the advent of more sedentary lifeways and agriculture, their overall numbers should be less across the landscape.

No Woodland II period archaeological sites have been previously identified within or adjacent to the Orange Section 4 archaeological APE; however, one isolated Madison-type projectile point traditionally assigned to the Woodland II period was identified during Phase I survey of portions of the predictive model study area (Baublitz *et al.* 2006:92). No other artifacts were found in association with the projectile point, and it is considered an isolated find. Custer (1984:154) states that there appears to be an absence of Woodland II period archaeological sites in southern New Castle and northern Kent counties which may reflect an area of relatively low population density located between two main population concentrations of the Minguannan and Slaughter Creek complexes. Based on the settings associated with the different types of Woodland II period archaeological sites, there is low probability for Woodland II macroband camps to be present in the Orange Section 4 archaeological APE; however, since these sites are larger and typically have quantities of associated storage features, if they exist in the archaeological APE, they should be easily identified. Based on projected increased population and movements of that population (e.g., for lithic raw material procurement) during the Woodland II period, there is moderate potential for microband camps, procurement sites, and isolated finds to be present in the archaeological APE.

4.1.5 Contact Period (1600-1750)

Unlike the Paleoindian, Archaic, and Woodland period divisions within the pre-contact period, the beginning of the Contact period in Delaware is signaled by the arrival of Europeans, a cultural event, rather than an environmental event (Custer 1986:162). The beginning of the Contact period is defined by the arrival of the first substantial numbers of Europeans to Northern Delaware; however, assigning an exact starting date to the period is difficult. Weslager (1961, 1981) suggests that the earliest documented contact is in 1609 when Henry Hudson entered the Delaware Bay; however, Thurman (1974) and Goddard (1978) suggest that contact could have occurred earlier but there is no historical documentary evidence to support these claims. Moravian missionary ethnographic accounts relate that at the time of the Europeans' arrival in the Mid-Atlantic region, the Munsee occupied the Upper Delaware Valley, the North Unami occupied the Middle Delaware Valley and Central New Jersey, and the South Unami or Unalachtigo occupied the Lower Delaware Valley and southern New Jersey (Kent 2001:91; Morrell and Glumac

2008:12). These Native Americans referred to themselves as the Lenape; however, the Europeans called them Delaware due to their association with the river.

The Lenape are generally considered to have descended from an Algonquian-speaking Late Woodland culture which flourished in the Middle Atlantic coastal plain from Manhattan to southern New Jersey (Kent 2001:92). Lenape subsistence was based on agriculture, hunting, fishing, and the gathering of wild plant foods (Grumet 1989). The Lenape occupied semi-permanent agricultural villages located on fertile land along major streams. They raised corn, beans, squash, and tobacco (Grumet 1989). The Lenape are a good example of a group that was forced to migrate by population pressure from Euro-American settlers in New York, New Jersey, and eastern Pennsylvania. The Lenape migrated westward to the Susquehanna River Valley in central Pennsylvania, the Allegheny and Ohio valleys in western Pennsylvania, and finally to eastern Ohio (Stevens 1976). The Lenape sided with the French during the French and Indian War, joined Pontiac's Rebellion in 1763, and allied themselves with the British during the American Revolution (Stevens 1976). Following the Revolutionary War, many of the Lenape fled to Canada or migrated further west, eventually settling in "Indian Territory," in present-day Oklahoma.

Other Native American peoples living in the region when Europeans began settling the area included the Wicomiss and Tokwogh along the Chester and Sassafras rivers in the Upper Peninsula, and the Nanticoke and Choptank along the streams that bear their names in eastern Maryland and western Delaware (Dent 1995:264; Feest 1978:240). These groups were small, with the Nanticoke peoples being the most populous (Feest 1978:242). The Wicomiss' territory extended from the Chester River headwaters south along the mid-Peninsular drainage divide to the Wicomico River (Marye 1938:151; Smith 1986a:150). The Wicomiss were displaced southward by the Susquehannocks but found refuge among the Nanticoke (Marye 1939). In the last quarter of the seventeenth century, Maryland pursued a war against the Wicomiss because of their alliance with the Delaware Indians (Petraglia *et al.* 2002:5-6). Many captives were sold into slavery in Barbados in 1669 (Browne 1883:196, 1887:136); however, their continued existence, with a distinct identity, is attested to by a reference to Wicomiss people living at the town of Checonnesseck in 1677 (Browne 1896:146).

The Tockwogh people lived north of the Wicomiss. In 1608, John Smith described them as having a palisaded village, but not much other information about them exists (Smith 1986b:231). The Tockwogh and Choptank peoples are described as participating in a 1659

treaty with the Maryland government that allowed colonial settlement of the upper portion of the western Peninsula area (Browne 1885:362-364).

The Nanticoke remained a strong presence on the Delmarva Peninsula throughout the Contact period, maintaining possession of significant portions of their core territory (Busby 2000; Porter 1979). “According to Nanticoke traditions recorded by Heckenwelder (1819:74), the Nanticokes at an early date detached themselves from the Delawares and settled on the Eastern Shore of Maryland where they increased and subsequently split up into several separate groups” (Feest 1978:240). Custer (1984:175) states that the Unami Delaware, Choptank, Nanticokes, and other Native American peoples living in the Delmarva Peninsula seemed to have shared a common egalitarian band-level or simple tribal-level organization that lacked any large scale supralocal organizations. A strong group of Nanticoke people survived removal from the area and placement on reservations, and located to the Indian River area of Sussex County, Delaware where many continue to live today.

The Choptank people resided in the Choptank River drainage. “Although Smith did not specifically mention these people in his description, the Maryland colonial government initiated interaction with them in the first half of the seventeenth century (Browne 1885:362-364; Marye 1936:15)” (Petraglia *et al.* 2002:5-3). The Choptank people maintained possession of their core territory throughout the Contact period primarily by cooperating with the colonial Maryland government (Busby 2000; Porter 1979).

When the Dutch established their settlement at Lewes, Delaware in 1631, they found the Lenape scattered in small communities along the Delaware River (Kent 2001:95). Based on historic accounts, it appears that the Native Americans who occupied the northern portions of Delaware did not maintain intensive interactions with Europeans, remaining instead under the virtual domination of the Susquehannock Indians of southern Lancaster County, Pennsylvania (Kellogg 1992:16; Kent 2001; Morrell and Glumac 2008:12). After the removal of the Susquehannocks as a dominant power in the central Mid-Atlantic region in 1675, the process of population disruption accelerated throughout the Delmarva Peninsula (Custer 1984:179). It is likely that the lifeways of the Native Americans in northern Delaware continued into the late seventeenth and early eighteenth centuries in the area, but gradual erosion of their traditions and social environment, migration of large numbers of people, and decimation of the populations by European diseases led to the virtual extinction of their lifeways in the region. “By the middle part of the eighteenth century, the

archaeological record no longer can produce any information on native American groups in Delaware" (Custer 1984:179). The Contact period ended with the virtual extinction of Native American lifeways in the Middle Atlantic area with only a few remnant groups surviving (Kellogg 1992:16).

The period continues to be poorly understood because few sites have yielded cultural material evidence of this time period. Contact period sites in Delaware are rare. Kellogg (1992:16) states that only one "unequivocal" site representing this period of time, 7NC-E-42 (N-07841) (Custer and Watson 1985), has been identified. "However, a reexamination of artifact collections from Delaware (Fithian 1992) found more evidence of Contact period interaction between Native Americans and Europeans than previously thought" (Kellogg 1992:16). No archaeological sites assignable to the Contact period have been identified in the U.S. 301 Orange Section 4 archaeological APE.

4.1.6 Previously Identified Pre-contact Period Archaeological Resources

Eight previously recorded archaeological sites located within 920.0 m (3,018.4 ft) of the Orange Section 4 archaeological APE exhibit pre-contact period components. No previously recorded pre-contact period archaeological sites are located within the currently mapped boundaries of the archaeological APE. Limited Phase I survey of the U.S. 301 study area to test the predictive model yielded only isolated projectile points and debitage and did not define any pre-contact period archaeological sites (Baublitz *et al*. 2006:94). This previous testing incorporated only sampling on DelDOT owned lands, and therefore was not an exhaustive survey of the area. The methods used during this previous survey are very similar to those proposed for the Orange Section 4 Phase IB survey; therefore, the areas that were surveyed by Baublitz *et al.* (2006) will not be re-surveyed. However, at the time of the survey, no formal consensus on the adequacy of the survey was reached by DelDOT and DESHPO, and consideration of whether the identified artifacts should be defined as sites was not undertaken. Hopefully, the results of the full Phase IB Orange Section 4 survey will help in the reconsideration of the Baublitz *et al*. (2006) materials.

Table 1 summarizes the previously recorded archaeological site information included in the DESHPO files for the eight pre-contact, five historic, and two unknown period archaeological sites and Figure 5 shows where they are located in relation to the APE. The majority of the previously recorded pre-contact period archaeological sites are not

Table 1. Previously Recorded Archaeological Sites In or Near the Orange Section 4 APE

CRS No.	Site No.	Site Name	Current Setting	Distance and Direction to Water from Site	Distance and Direction to Site from Closest Portion of APE	Cultural/Temporal Periods	Diagnostic Artifacts/ Comments
N-5151	Not assigned during original survey	Noxon's Adventure	agricultural field and archaeological remains	N/A	Located in APE Segment H	Intensified and Durable Occupation, 1730-1770±; farmstead; in 1734 a 300 ac tract of land was granted to Thomas Noxon; log house, barn, and other outbuildings located on property by 1779; sold to the Burchard/Burnham families *ca.* 1779; these families held property (*ca.* 187 ac) until 1900; land remained in agricultural production until late 20th century; remains were cleared of vegetation, photodocumented, and mapped as part of archaeological investigations associated with the testing of U.S. 301 archaeological predictive model (Baublitz *et al.* 2006); house foundation, wooden shed, the foundation of a second outbuilding, and a windmill were recorded	
N-14208	7NC-F-97	(none)	landscaped yard	approximately 406.9 m (1,335.0 ft) east	approximately 519.6 m (1,704.7 ft) west	undated pre-contact; 18th-19th century domestic	low density lithic scatter with no diagnostic artifacts; collected from plow zone; one quartz biface and fifteen thermally altered flakes made of quartz, quartzite, and sandstone; no evidence of undisturbed prehistoric artifact deposits or features; well-defined distribution of historical cultural material at southern end of site; historic artifact concentration is opposite the approximate location of an outbuilding associated with the Governor B.T. Biggs property as defined on historical map (Beers 1868); moderately dense nineteenth century architectural and domestic debris with no evidence of structural elements associated with a possible historical building
N-14209	7NC-F-98	(none)	landscaped yard	approximately 356.3 m (1,169.0 ft) east	approximately 473.6 m (1,553.8 ft) west	undated pre-contact; 19th century domestic and industrial	low density lithic scatter with no diagnostic artifacts; one quartz reduction flake; historic artifacts located immediately adjacent to the landowner-identified former location of a historical blacksmith shop (Beers 1868); pearlware, bottle and table glass shards, and brick fragments; 19th century domestic and architectural historical artifacts
N-03796	7NC-F-14	(none)	agricultural field	approximately 450.8 m (1,479.0 ft) east	approximately 572.8 m (1,879.3 ft) west	Woodland I	single component
N-14211	7NC-F-100	(none)	agricultural field/driveway/ landscaped yard	approximately 217.0 m (711.9 ft) southwest	approximately 725.8 m (2,381.2 ft) northwest	undated pre-contact; 1770-1830 Early Industrialization; 1830-1880 Industrialization and Early Urbanization	171 prehistoric artifacts; uniface, bifaces, cores, and debitage; fire-cracked rock; broken chert projectile point (Fishtail-like); projectile point is likely associated with early to middle portions of the Woodland I period; unifacial tool is a jasper spokeshave; lithic raw materials include jasper, chert, and quartz and lesser quantities of chalcedony and quartzite; historic period artifact scatter (domestic and architectural debris); cut nails, pearlware, creamware, redware, a fragment of delft, window glass, hand wrought nails, engraved pewter button, decorated lead buckle fragment, and lead caming and brick fragments; historic period rectanglular post mold feature, two large semi-circular pit features, and a shallow rectangular stain of unknown function; historic period component recommended eligible with pre-contact period component not contributing to eligibility
N-14210	7NC-F-99	(none)	landscaped yard/wooded	approximately 94.3 m (309.4 ft) northeast	approximately 670.8 m (2,200.8 ft) northwest	undated pre-contact; 1770-1830 Early Industrialization; 1830-1880 Industrialization and Early Urbanization	pre-contact period scatter with three possible loci on gradual slope to Back Creek; quartz, jasper, and chert debitage, quartz endscraper, utilized and retouched flakes, cores; hammerstone; one pre-contact period cord or net impressed exterior ceramic sherd with a coarse quartz grit temper; pre-contact ceramic is similar to Wolfe Neck variety; jasper Levanna-type triangle projectile point similar to Levanna type normally associated with the Woodland II period; nineteenth century artifacts attributable to historical manuring practices; historic period redware, yellowware, cut/wrought nails, and window glass; recommended not eligible.
N-14032	7NC-F-76	Back Creek (addendum form information only)	wooded/golf course	approximately 39.0 m (128.0 ft) south	approximately 647.2 m (2,123.4 ft) northwest	undated pre-contact	revision of existing site boundary (original site form not available); tightly-clustered distribution of lithic material; debitage and fire-cracked rock; recommended not eligible

Table 1. Previously Recorded Archaeological Sites In or Near the Orange Section 4 APE

CRS No.	Site No.	Site Name	Current Setting	Distance and Direction to Water from Site	Distance and Direction to Site from Closest Portion of APE	Cultural/Temporal Periods	Diagnostic Artifacts/ Comments
N-14034	7NC-F-78	Back Creek	wooded/golf course	approximately 51.0 m (167.3 ft) north	approximately 1,256.9 m (4,123.7 ft) west/northwest	no site form on file at DESHPO	no site form on file at DESHPO
N14033	7NC-F-77	Back Creek	wooded/golf course	approximately 76.0 m (249.3 ft) northeast	approximately 1,038.1 m (3,405.5 ft) west	no site form on file at DESHPO	no site form on file at DESHPO
N-14203	7NC-F-92	(none)	agricultural field	approximately 281.6 m (923.9 ft) west	approximately 844.8 m (2,771.7 ft) west	undated pre-contact (table); Woodland I (text)	low density lithic scatter with no diagnostic artifacts; a few historic period artifacts; recommended not eligible
N-14204	7NC-F-93	(none) (J. Clayton property)	agricultural field	approximately 278.1 m (912.4 ft) west/southwest	approximately 814.2 m (2,671.3 ft) west/southwest	1830-1880 Industrialization and Early Urbanization	historic period artifact scatter in agricultural field adjacent to extant roadway; artifact assemblage contains a moderate quantity of architectural artifacts
N-14306	7NC-F-110	Armbruster	agricultural field	approximately 898.9 m (2,949.1 ft) east	approximately 1,259.7 m (4,132.9 ft) east	1830-1880 Industrialization and Early Urbanization; 1880-1940 Urbanization and Early Suburbanization; 1940-1960 Suburbanization and Early Ex-urbanization	large historic period artifact scatter in agricultural field. Examples of artifacts include: container glass, bottle, nails, redware, ironstone, whiteware, brick, porcelain button, porcelain figurine fragment, shell, and glass insulator. Complete inventory included in site form.
N-14205	7NC-F-94	(none) (M.D. Wilson property/Wilson Tenancy Farm)	agricultural field/wooded	approximately 58.5 m (191.9 ft) south	approximately 515.6 m (1,691.6 ft) southwest	1830-1880 Industrialization and Early Urbanization	historic period midden/possible structural elements associated with tenant houses as indicated on historical maps; eligible for listing in the NRHP.
N-14206	7NC-F-95	(none)	landscaped yard	approximately 89.4 m (293.3 ft) southeast	approximately 516.8 m (1,695.5 ft) southwest	undated pre-contact; 19th century domestic	low density lithic scatter with no diagnostic artifacts; light plow zone scatter of historical debris predominantly ceramics; whiteware, redware, porcelain, creamware, and glass; may be associated with former location of J. Callahan structure (Hopkins 1881, Baist 1893)
N-14207	7NC-F-96	(none)	agricultural field	approximately 249.6 m (818.9 ft) south	approximately 689.0 m (2,260.5 ft) southwest	undated pre-contact; undated historic period	low density lithic scatter with no diagnostic artifacts; jasper and quartz debitage; historic period artifacts including whiteware, redware, glass, nails, screw, faunal, plow, and an aluminum snap

attributable to a specific cultural or chronological affiliation, and are listed as “undated pre-contact”. Two of the previously recorded pre-contact period archaeological sites have tentative Woodland I period associations and are noted in the Woodland I discussion above. The majority of the previously recorded sites are described as “small” or “low density” lithic scatters. This type of site is in keeping with the idea that the Orange Section 4 archaeological APE traverses land which was never geographically included in any major identified pre-contact period settlement pattern or complex. The Orange Section 4 archaeological APE appears to always have been a location which was used secondarily or peripherally by pre-contact period peoples who occupied more attractive landforms elsewhere but used the vicinity of the archaeological APE for hunting and resource gathering, and/or traveling through.

In addition to the previously recorded archaeological sites listed in the DESHPO files, the Choptank Road/State Route 15 Improvement draft report (Morrell and Glumac 2008) identifies 10 archaeological sites with pre-contact period components. Based on survey and some Phase II testing, the pre-contact period archaeological record in the Choptank Road project area is characterized as having smaller artifact scatters and low densities of associated artifacts representative of short-term, procurement-related encampments. Certain environmental conditions also appear to influence archaeological site location based on the Choptank Road project data. Site locations appear to be related to convenient access to a perennial source of potable water, a moderate elevation above the water, a less than five percent slope to the occupied landform, and the presence of well-drained Matapeake soils. Some locations within the Orange Section 4 archaeological APE approximate these conditions.

Several archaeological site location predictive models have been completed either within the Orange Section 4 archaeological APE or in areas adjacent to it (Baublitz *et al*. 2006; Custer 1984; Kellogg 1992; Lothrop *et al*. 1987). A general discussion of the formation and usefulness of predictive models as well as a summary of each is included in Baublitz *et al.* (2006:36-45) and is not repeated here. However, the results of all of the predictive models seem to support the idea that the Orange Section 4 archaeological APE has only low to moderate potential to contain significant pre-contact period archaeological resources, and that this low probability is not due to preservation or survey issues but rather to settlement pattern/location preferences/choices practiced by people during the pre-contact period. Testing the validity of this statement is part of the Phase IB fieldwork goals.

4.1.7 Summary of Pre-contact Period Archaeological Resources Predicted

The types and locations of expected pre-contact period archaeological sites were derived from multiple sources of information including details of previously identified pre-contact period sites in the general vicinity of the archaeological APE, the results of several archaeological site location predictive models, and areal topographic and vegetation conditions as determined through a limited windshield fieldview and aerial photographs. The results of the Phase IA archaeological investigations indicate that there is potential for pre-contact period archaeological remains to be present within the Orange Section 4 archaeological APE, albeit low. If pre-contact period archaeological resources are identified, they will most likely be small or low density artifact scatters representative of the short-term and ephemeral use of the area. Larger macroband and even microband sized archaeological sites with associated Woodland materials are not expected.

Currently, no previously identified pre-contact period archaeological sites are present in the Orange Section 4 archaeological APE; however, this may at least in part be due to the limited quantity of archaeological survey that has taken place in the archaeological APE. Without survey of an area, the low potential of the area cannot be confirmed or denied. Although there is a dearth of previously identified pre-contact period archaeological sites within the archaeological APE, there are a number of previously identified pre-contact period archaeological resources located nearby, which would indicate that the area was being used by aboriginal peoples. The archaeological APE traverses through agricultural properties which are not extensively disturbed and most likely exhibit some intact soils of appropriate age to contain pre-contact period archaeological resources. Remembering that low probability does not mean total absence of sites, when the area is surveyed, some archaeological remains should be present.

4.2 Historic Period

The historic overview of the project area is extensively addressed in two reports produced in 2006 for the U.S. 301 Project: *U.S. 301 Project Development, Historic Context and Reconnaissance Survey Report, St. Georges, Pencader, and Appoquinimnk Hundreds, New Castle County, Delaware* (Frederick *et al*. 2006a) and *U.S. 301 Project Development, Determination of Eligibility Report, St. Georges, Pencader, and Appoquinimink Hundreds, New Castle County, Delaware* (Frederick *et al.* 2006b). The reports synthesize much of the research previously

conducted on the project area, the hundreds, and Delaware and New Castle County agriculture. They are incorporated by reference as part of this report. The history of the Orange Section 4 archaeological APE is a microcosm of the overall history of the larger U.S. 301 project area. Salient parts of that history are summarized below. Unless otherwise noted, the historic background information contained in this document has been extrapolated from the two 2006 reports referenced previously.

In addition, deed research was completed in order to create a chain of ownership for each of the 65 current tax parcels that would potentially be impacted by construction of the Orange Section 4 selected alternative. Information resulting from the deed research that is germane to the proposed Phase I survey strategy has been included in Appendix A of this document.

4.2.1 Exploration and Frontier Settlement (1630-1730±)

Significant Euro-American settlement in Delaware's Upper Peninsula Zone did not occur until the 1680s, when William Penn granted large land tracts to Maryland and Virginia landholders seeking to expand their holdings. The holdings were often granted in the form of large manors of hundreds or even thousands of acres. Manors that apparently included land contained in the Orange Section 4 archaeological APE were Bohemia Manor and St. Augustine Manor. Bohemia Manor included portions of Cecil County, Maryland and western St. Georges and Pencader hundreds, and was said to contain 20,000 acres. St. Augustine Manor bordered Bohemia Manor on the east (Scharf 1888:985). Proprietors of manors then subdivided the plots into smaller farms, which could also measure hundreds or thousands of acres.

Despite the presence of these manors, settlement in the area was still sparse at the end of the seventeenth century. In 1683, all of St. Georges Hundred had only 50 taxable individuals and their families, most likely representing perhaps 250 total inhabitants. Settlers were attracted to the area's soils, which histories and other historic contexts refer to as some of Delaware's most fertile, well drained, and highly productive; however, soils mapped within Orange Section 4 archaeological APE are a mix of both hydric and better drained soils, necessitating some drainage ditching. Early farmers followed a mixed farming strategy, raising a cash crop such as wheat as well as subsistence crops and livestock. Houses tended to be small, single room and hall-and-parlor dwellings built of logs. Agricultural outbuildings were small, impermanent, and also constructed from logs. At the turn of the eighteenth century, a shift was made to a more market-based agricultural

economy, with wheat producing the highest income. Larger farms, called plantations, tended to be established on waterways, then the most reliable means of transportation. Waterways also provided power for gristmills, sawmills, and tanneries.

Archaeological remains associated with this earliest period of Euro-American settlement in the archaeological APE will most likely be representative of agricultural, rural domestic, and/or frontier/military activities. In addition, sites may represent interactions between Europeans and Native Americans. Remains representative of this early historic period may take the form of remnant cultural features and/or small, dispersed artifact scatters. Recognition of artifacts indicative of the period (e.g., artifacts that can be related to a specific ethnic European group, artifacts that are frontier or colonial in nature, artifacts known to relate to Native American/European interactions) will be important to identifying archaeological sites associated with this earliest historic time period.

Kellogg (1992:71) states that areas of historical importance during this period have been traditionally linked to transportation routes, either streams or early roadways. The only streams contained in the archaeological APE are associated with the Back Creek drainage. The lack of navigable waterways and poorly drained soils present in the Orange Section 4 archaeological APE would most likely result in limited settlement of the archaeological APE during this earliest time period. Augustine Herrman's Cartway is the most referenced of these late seventeenth century transportation routes. It generally ran from Bohemia Manor, Maryland to New Castle, Delaware, but it passed to the south of the Orange Section 4 archaeological APE (Burrow *et al.* 2009:Figure 4.3). A second roadway, Reedy Island Road, is referenced on a *ca*. 1740 map found by Burrow *et al.* (2009) in the Rumsey Family Papers at the Library of Congress (Figure 6) and undoubtedly was present during this period in Delaware's history. The road appears on a number of later deeds and plots for N-5151, Noxon's Adventure. It is sketched in a 1771 resurvey map of the property (Figure 7), a 1799 survey plan (Figure 8), and an 1844 survey (Figure 9) (Baublitz *et al*. 2006). Old Reedy Island Road is also shown as a dashed line on a 2000 *Record Re-Subdivision Plan for the Lands of Midfarms*, a proposed housing development (New Castle County Recorder of Deeds 2000) (Figure 10). The road extended east from Choptank Road and then turned north-northeasterly.

In addition, the construction of houses and other farm buildings from logs using post-in-ground methods described in the historic documents would be unlikely to yield a permanent and well-preserved archaeological record, especially if the building locations were later plowed and used as agricultural fields. Some stains representing the posts from

these buildings may be preserved below the plowzone at the interface with the subsoil; however, an archaeological method utilizing plowing/disking-rainwashing-pedestrian reconnaissance and/or excavation of shovel test pits (STPs) will not be sufficient to identify these types of small, ephemeral subsurface features. If there is a serious desire to identify agricultural building locations from this period, stripping of the plowzone over larger contiguous areas would be the most useful method for identifying these ephemeral subsurface features. The stripping locations would need to be carefully determined based on a thorough review of all historic documents and maps that may indicate the locations of these early farms.

Based on Kellogg (1992:77), the Orange Section 4 archaeological APE falls into low and medium probability areas for the presence of pre-1730 period archaeological resources. These probabilities were in part derived from distances to navigable drainages and period roadways. Likewise, Baublitz *et al.* (2006:52) contend that the potential for archaeological resources from this period would be difficult to model and the probability low. The one exception to this may be the locations of unmarked cemeteries of the period. Based on Heite and Blume (1992:33-37), some general guidelines regarding their placement were helpful in identifying potential locations of unmarked cemeteries within the Orange Section 4 archaeological APE.

4.2.2 Intensified and Durable Occupation (1730-1770±)

Population in the general study area and, by extension, the Orange Section 4 archaeological APE, increased markedly during this period. Large grant parcels were broken up into smaller farms, which were increasingly operated by new owners or tenants. Known land owners in the Orange Section 4 archaeological APE during this period included Thomas Wirt (Appendix A: Tables 3, 4, and 11), the Cazier family (Appendix A: Tables 5, 6, 8, 9, 10, 11, 29, and 30), Thomas Noxon and Samuel Burchard (Baublitz *et al*. 2006), and the Clayton family, the proprietors of Bohemia Manor. The population increase and accompanying division of large estates into smaller, owner or tenant operated farms meant that more land could be cleared and placed in cultivation. Consequently, there was a major increase in the acreage of tilled cropland throughout the region. Archaeological investigations associated with preparation of the predictive model (Baublitz *et al.* 2006:Appendix B) identified one historic farmstead dating from this period within the Orange Section 4 archaeological APE, N-5151, Noxon's Adventure (see Figure 5). Court records

indicate that the farm had a log house plus a barn and other outbuildings on it by 1779 and probably earlier. The land was warranted to Thomas Noxon in 1734; in 1768, he sold it to Samuel Burchard (Baublitz *et al*. 2006).

Mixed crop and livestock farming continued to be the norm in the area, with wheat remaining the primary crop. As the amount of tilled cropland expanded and more crops began to be grown for market, the need for labor increased. In concert with the increase in agricultural market production came an increased emphasis on improved roadways. An associated growth in the construction of mills was also seen during this period (Baublitz *et al*. 2006:32). Despite the increase in mills during this time period, historic maps do not show any mill locations or mill ponds within or adjacent to the Orange Section 4 archaeological APE. The streams which flow through the archaeological APE would not have had sufficient fall to be used for water power without damming. Since mills were essential to local communities, and their locations are better known and documented than other types of establishments, the potential for an unmarked mill location within the archaeological APE is low.

The need for additional farm labor during the period from 1730 to 1770 was met through tenancy arrangements and the importation of indentured servants and African slaves. Surplus production greatly improved the standard of living of a small number of farmers who were able to increase their holdings, construct new, more durable dwellings, and build specialized farm structures, such as granaries, corncribs, and barns, and domestic outbuildings such as detached kitchens and smokehouses. Generally, these outbuildings numbered three to five and were built in close proximity to the farmhouse, a cluster known as the inner yard or toft (Bedell 2002:13-14). Beyond their placement in proximity to the dwelling, archaeological investigations of Upper Peninsula farmsteads from this time period have not identified a common pattern behind the placement of outbuildings (Bedell 2002:25, 60). Maps from the period are few and, other than on plat maps, rarely detail the locations of farmhouses, much less outbuildings.

Logs continued to be the most common building material. The most common permanent house type was the two-room, hall-and-parlor plan; stair passage plans and Georgian architectural style house forms did not become common until the late eighteenth and early nineteenth centuries and were rare even then, confined only to the elite of society (Herman 1987:26, 109-110). Architectural and documentary evidence indicates that most farm buildings, including dwellings, were built on wood, stone, or brick piers with shallow foundations, or on wood sills placed directly on the ground. Archaeological evidence of

these buildings in the form of stains are often lost if the land on which they were located was later plowed (Bedell 2002:55-56), making locating their remains difficult.

Settlement patterns in the Upper Peninsula Zone during this period shifted from a water-oriented focus to a more inland focus (Wise 1980). With this shift in focus came the construction/establishment of more roadways than previously existed. The addition of roadways provided for new housing/farm locations. Farmsteads built in this period were oriented toward roads, rather than waterways, but were not necessarily built next to them. Dwellings could be located as much as 152.4 m (500.0 ft) away from the road. Little is known as to how Delaware farmers in this period chose the sites of their farmsteads, making it difficult to predict where remains could be found (Bedell 2002:52). Although Delaware farmers owned slaves, the area did not support large plantations and slaves were generally limited to one or two on an agricultural complex. Slaves apparently lived within the farmhouse or in detached kitchens, rather than in slave quarters (Bedell 2002:7). Many farms employed or were run by tenants. If a farm had both an owner's and a tenant house, the tenant house generally was located in a stand of trees on the edge of a farm field, within site of the farmhouse but as far away from it as possible (Bedell 2002:53), a pattern that would continue in future periods.

Farmsteads were not the only resources oriented in proximity to roads. "Taverns were located along heavily traveled post and cart roads, most frequently at crossroads or junctions with landings and streams" (Custer and Cunningham 1986:45). One major road located within the Orange Section 4 archaeological APE, Choptank Road, appears on colonial era maps. No crossroads are present, however, so the potential for archaeological remains of taverns is low. With the addition of secondary roads, some rural churches were established outside of towns to serve the rural populations (Custer and Cunningham 1986:46). No historic churches are mapped within or adjacent to the Orange Section 4 archaeological APE and no archaeological remains of churches are expected. Based on Kellogg (1992:80), the Orange Section 4 archaeological APE falls into low and medium probability zones for the presence of pre-1770 period archaeological resources. These probabilities were in part derived from distances to navigable drainages and period roadways.

4.2.3 Early Industrialization (1770-1830±)

The American Revolution dominated the social and political scenes in the country during the early part of this period. Only one battle occurred within Delaware, the Battle of Cooch's Bridge near Glasgow. All action associated with the battle, including approaches and withdrawals, occurred well north of the Orange Section 4 archaeological APE (Nelson 2003). Therefore, archaeological military resources related to the Revolutionary War are not expected.

During the first half of this period, the project area's population continued to grow and, as it did, the large manor and farms of the earlier period were subdivided into smaller holdings. Deed research indicated that numerous farms had been established in the area of the Orange Section 4 archaeological APE by this period. These included farms owned by well-known Delaware individuals and families, including Joseph Tatnall (Appendix A: Tables 5, 6, 8, 9, 10, 11, 29, and 30) and William Cann (Appendix A: Tables 45 through 64). These were undoubtedly tenant farms. John T. Biggs, father of a future governor of Delaware and patriarch of a family that would dominate land ownership in the area for decades, began assembling his land holdings in the 1820s (Appendix A: Tables 3, 4, and 14). His lands were located in the northern part of the Orange Section 4 archaeological APE. South of Biggs's holdings were farms owned by the Clayton and Naudain families (Appendix A: Tables 31, 32, 35-40).

Deeds provide the names of some of the families who owned land in the area of the Orange Section 4 archaeological APE during the Early Industrialization period. The deeds, however, pertain to land, not to buildings, and buildings are mentioned only sporadically in them. The locations of farmsteads or agricultural outbuildings could not be ascertained from the deeds.

A marked decrease in population in Pencader and St. Georges hundreds occurred after 1800, as war-related trade embargoes, soil depletion, and the opening of new lands in the west all served to siphon off a portion of the farming population. Successful farmers who stayed, like John T. Biggs and Joshua Clayton, were able to increase their land holdings and grow more crops for market, including grains such as wheat and corn, and livestock such as beef cattle. They began to adopt scientific agricultural principles, chiefly four-to-nine-field crop rotation patterns and the use of fertilizers. As a result, social and economic stratification became more pronounced and rural farming elite began to develop.

In addition to their land holdings, this new upper class diversified their wealth through investments in urban property, banking, transportation, and manufacturing.

However, the rural elite's largest contribution to the project area was a re-ordering of the built environment. During this period, the elite began acquiring large land holdings which were developed into both owner-occupied estates that included stair-passage and Georgian farm houses, more durable and numerous farm buildings including larger barns and specialized buildings such as stables and horse barns, and also tenant occupied farms. The Orange Section 4 archaeological APE falls squarely within the area where this rebuilding was occurring. The deed record indicates that much of the land within the archaeological APE was owned by a small number of upper class families, including the Biggs, Clayton, Cazier, Bayard, Naudain, Burnham, Tatnall, and Cann families. The rebuilding movement would not reach full bloom, however, until the mid-nineteenth century. The few references to buildings found during deed research conducted for the properties within the Orange Section 4 archaeological APE indicated that most during this time period were relatively simple structures built of log.

Identifying where archaeological remains associated with these estates might be found within the Orange Section 4 archaeological APE remains difficult. As is the case with the previous historical period, there is limited information on how farmers chose where to build their farmsteads, although the orientation toward roads probably became more pronounced. Farm buildings continued to be built in clusters of no discernable pattern in proximity to the house, and outbuildings continued to be built on wood sills, piers, or other impermanent foundation materials.

It is also important to note that, despite their impact on the built environment, the rural elite accounted for only about one-third of the area's population; the other two-thirds owned no land. As a consequence, more farms became tenant operated, such as those owned by Tatnall and Cann, who lived elsewhere. As the need for farm labor increased, elite farmers began to provide housing on their properties, resulting in what became known as the "house and garden plan." A farm owner would lease laborers a small house and plot for raising garden crops and livestock as part of a formal contract. These dependencies were often clustered together along roadways or tree lines, but were always within sight of the main farm complex. The houses were built on piers and could be easily moved. The houses of the elite tended to be more permanent and built predominantly of log or wood; brick houses were less common but tend to have a higher survival rate.

The increase in tenancy was related to a number of factors, including the widespread manumission of slavery in New Castle County between 1780 and 1830. Manumission resulted, in large part, from the Quaker heritage of many of the farmers and the realization that labor arrangements such as tenancy, sharecropping, and wage laborers were much more practical and profitable than housing and feeding slaves. As a result, new Castle County's free African American population more than doubled between 1800 and 1830. African Americans worked as farm or day laborers and in the trades or they became tenant farmers. Land ownership by African Americans, however, remained low. In rural areas, they tended to live in or near swampy ground, land of limited value to white agriculturalists (Bedell 2002:53).

With increased populations, towns such as Middletown, Summit Bridge, and Mount Pleasant were formed during this period. The locations of these towns are away from the lands which now comprise the Orange Section 4 archaeological APE. The archaeological APE has remained agricultural and rural.

4.2.4 Industrialization and Early Urbanization (1830-1880±)

During the mid-nineteenth century, the inhabitants in the vicinity of the archaeological APE, like the inhabitants of the larger project area, generally experienced an economic upsurge, which resulted in a revitalization and rebuilding of the agricultural landscape. Over a 40 year period from 1830 to 1870, nearly every house and farm building was subjected to "repairs and renewals" that transformed architectural design and local agricultural practice (Herman *et al.* 1985:8-1). The rebuilding was centered in the hundreds that comprise the larger U.S. 301 project area -- St. Georges, Pencader, and Appoquinimink. Many of the large scale farm complexes and remnants of the agricultural landscape in proximity to the archaeological APE date from this period. By contrast, although this period is called Industrialization and Early Urbanization, industrial and urban activities were primarily limited to the Wilmington area. The only real impact industrialization had on the project area was that, near the end of the period, it attracted and drew away potential farm workers to jobs in the city.

A number of factors were responsible for the revitalization of the area. The exploitation of the C&D Canal, completed in 1829, and the extension of the Delaware Railroad into the area in the 1850s greatly improved transportation and made access to wider, and particularly urban, markets available. Improved farming techniques, including

mechanization, increased crop yield. The transportation and farming improvements led to the adoption of new, successful agricultural products. As a result, wealth in the area increased, which was reflected in the revitalized built environment. The transportation improvements immensely benefited the area but did not directly affect the Orange Section 4 archaeological APE. The C&D Canal is located just north of but outside of the archaeological APE and the railroad passed it to the east. It is not anticipated that archaeological remains associated with the canal or railroad will be found within the Orange Section 4 archaeological APE.

The project area became one of the most lucrative farming belts in the state. In 1850, for example, farms in St. Georges Hundred averaged 210 ac, with 88 percent of the land improved. The hundred ranked as the third wealthiest in the state. During this period, farms became more specialized, diversified, and commercially oriented, particularly after the Civil War. (Delaware, generally, and the Orange Section 4 archaeological APE, specifically, saw no battles during the Civil War, meaning the land was virtually untouched by this conflict; therefore, archaeological remains associated with the Civil War are not expected.) Increasingly, farmers switched to dairy products such as butter and milk and perishables such as peaches, products that the new transportation systems could move quickly and efficiently to urban markets in Wilmington, Philadelphia, Baltimore, and Washington, D.C. Near the end of the period, peach production became a prosperous business. Leading the way were farmers such as Delaware Governor Benjamin T. Biggs, who raised thousands of peach trees on multiple farms he owned southwest of Summit Bridge (including N-6320 -- J. Biggs House; N-6190 -- Governor Benjamin T. Biggs Farm/S.C. Biggs Farm; and N-5123 -- Governor Benjamin T. Biggs Farm). Another member of the farming elite, Henry Clayton, became the largest shipper of peaches in St. Georges Hundred in 1875, boasting 19,000 trees on his farm, Woodside (N-427) (see Figure 5).

The increased wealth produced a rebuilding of the project area, particularly by the elite farmers. Existing houses were expanded and remodeled, with functions that had formerly taken place in outbuildings, such as the housing of servants and the cooking of food, brought into the main house. Other houses were razed and new ones built in their place. The rebuilding, however, was not limited to the dwellings of the elite. Houses were also built for farm managers and tenants, often in designs similar but less extravagant than that of the land owners' homes. Agrarian outbuildings often reflected the diversification and commercial nature of the farms. Outbuildings included grain, hay, and threshing barns, corncribs/granaries, carriage houses, wagon sheds, and stables.

Maps and atlas published during this period show the approximate locations of the farmsteads associated with the area's farms. Combined with deed research, they provide a picture of land ownership during the period 1830-1880. An atlas of New Castle County published in 1849 (Rea and Price 1849; Figure 11) showed relatively few landowners in or near the Orange Section 4 archaeological APE, indicating that farms were fairly large during this period. The landowners shown on the atlas include families mentioned in earlier periods -- Biggs, Naudain, Burnham -- and also individuals who had established farms near the beginning of this period, including Caulk, Beaston (Appendix A: Tables 1, and 2), Kane (Appendix A: Tables 19-20), Ellison, Houston (Appendix A: Tables 5 through 12, 29-30), and Callahan. Two farmsteads appear to be in or near the Orange Section archaeological APE, the S. Burnham Farm/Knox's Adventure (N-5151) and the J.W. Callahan Farmstead (N-5147). In all other cases, the archaeological APE appears to cross through land that would have been farm fields. As agricultural buildings tended to be built in proximity to farmhouses, the chances of uncovering the remains of agricultural buildings is low, except in the case of the Burnham Farm (N-5151), through which the Orange Section 4 archaeological APE will pass. However, the possibility of finding other types of archaeological features is slightly higher, especially family cemeteries.

A second atlas, published almost twenty years after the first (Beers 1868), shows that the area through which the Orange Section 4 archaeological APE passes was more densely settled then it had been in 1849 (Figure 12). Much of the density was the result of elite families subdividing their lands among the next generation of children. And yet, at the time the atlas was published, nearly all the land in the Orange Section 4 archaeological APE was owned by two families, the Biggs and the Claytons, through blood or marriage. The exceptions occur north of Bethel Church Road, where some of the land within the archaeological APE was owned by William Carter (Appendix A: Tables 1 and 13), Charles Beaston (Appendix A: Table 2), and J.W. Kane (Appendix A: Tables 19 and 20); at the ramp at the north end of the alternative connecting Orange Section 4 to existing U.S. 301, which clips a portion of the land historically owned by the Ellison family (Appendix A: Tables 5 through 12); north of Churchtown Road, where John Houston maintained a farm (Appendix A: Tables 29-30); and north of Old Schoolhouse Road, where land was controlled by the Burnham (Appendix A: Tables 41-44) and Walker families (Appendix A: Tables 62-63).

More farmsteads or buildings on the 1868 atlas appear to be potentially within the path of the Orange Section 4 archaeological APE. From north to south, these include: two

buildings on the north side of Bethel Church Road, one associated with J.W. Lloyd and a intersection of Bethel Church and Bethel roads; a building associated with the S.C. Biggs House (N-6190) on the east side of Bethel Church Road near Bethel Road (see Figure 5); a building, possibly a tenant house, owned by Henry Clayton on the south side of Churchtown Road; a probable tenant house on the south side of Old Schoolhouse Road associated with the J. Clayton property; the S. Burnham Farm/Knox's Adventure (N-5151) north of Armstrong Corners Road; and the M.E. Walker House on the south side of Armstrong Corners Road. The proposed route of the Orange Section 4 selected alternative could also cross foundations and post holes associated with agricultural outbuildings; family cemeteries; and tenant house and garden dwellings which are not depicted on the maps. Another potential resource is remains associated with Schoolhouse No. 96, which was established on the north side of Armstrong Corners Road in 1873 (New Castle County Clerk of Peace 1873). The parcel on which it was built is located near proposed intersection improvements.

The period also saw the development and expansion of communities and towns. Summit Bridge, established in 1825 to the northeast of the Orange Section 4 archaeological APE, expanded following completion of the canal. It probably subsumed within its boundaries the small hamlet of Jesterville, which appears on an 1849 map of New Castle Hundred (see Figure 11; Rea and Price 1849) but not on other nineteenth century maps and atlases. Near the south end of the archaeological APE, the community of Armstrong Corners developed at the crossroads of U.S. 301 and Armstrong Corners Road. Armstrong Corners had strong African American associations. Overall, in 1860, St. Georges and Pencader hundreds had the highest proportion of African Americans in New Castle County. Thirty-six percent of the inhabitants of the hundreds were of African descent. Deed research indicated a record of African American land ownership within or in the vicinity of the Orange Section 4 APE, particularly at the south end of the APE.

4.2.5 Urbanization and Early Suburbanization (1880-1940±)

The agricultural boom that had characterized the vicinity of the Orange Section 4 archaeological APE between 1830 and 1870 waned after that and had largely ended by 1900. Although the archaeological APE remained agricultural during the Urbanization and Early Suburbanization period, the value of farmland and the prices of farm commodities both began to fall by as early as 1880. The changes disrupted well-established land holding

patterns, forcing some farmers to divide and diversify their property and operations. Dairy production in the area rose steadily between 1880 and 1940. Accompanying this change was the erection of modern dairy barns with concrete floors, improved ventilation, and separate milk houses. Increasingly, poultry became an important crop for both eggs and meat, leading to the construction of long, low chicken houses. Peaches, a boom crop of the mid-nineteenth century, was decimated by blight and overproduction and was largely a negligible part of the agricultural mix by 1900. Other produce, such as apples, pears, and vegetables, replaced peaches as market crops. These crops were grown by individual truck farmers and on farms owned by large canning companies.

Increased industrialization in Newark and Wilmington created competition for labor, leading to a shortage of both reliable tenants and farm laborers. In response, farmers increasingly began to employ labor-saving technology, including first steam and then gasoline powered tractors and harvesting equipment. This created a need for new buildings to house the machines. The residential building stock also diversified. As farms were subdivided and reduced in size, more modest houses were constructed on the new tracts. Also, strips of farmland along roadways were often sold for residential development. The ready availability of mass-produced building materials resulted in the construction of a spate of vernacular houses with limited stylistic pretensions. These included houses with minimal Colonial Revival elements, as well as Bungalows, Cape Cods, and front and side gable cottages. These houses were generally built with full foundations of stone, poured concrete, or concrete block, and often with either full or partial basements. Where farm managers and tenants were still employed, these kinds of houses were built for them, too.

Towns like Summit Bridge and Middletown grew during the period of 1880 to 1940, expanding outward from their historic boundaries but never encompassing any land within the Orange Section 4 archaeological APE. A different type of residential change, however, occurred at the north end of the U.S. 301 Project archaeological APE after 1919, when the federal government acquired the C&D Canal as part of its plan to create an Intracoastal Waterway. Reconstruction and expansion of the canal during the 1920s and 1930s forced African Americans living along the canal at Summit Bridge to relocate.

Despite these overall trends, historic maps and aerial photographs showed little change in the landscape of the Orange Section 4 archaeological APE during the period from 1880 to 1940. Deed research also confirmed that a small number of families continued to dominate land ownership -- Beaston, Biggs, Clayton, Houston, and Burnham. The most noteworthy change in land ownership occurred at the southern end of the archaeological

APE, where land owned by Martin Walker in the 1830-1880 period was acquired by Benjamin Armstrong and his family (Appendix A: Tables 61-62).

Two maps from the beginning of the period are reproduced as Figures 13 and 14. Once again, the location of the Orange Section archaeological APE has been approximated on the maps. The first map, published in 1881 (G.M. Hopkins & Company 1881), shows a landscape little different from 1868. The archaeological APE crosses over what is shown as largely open agricultural fields. Buildings/farmsteads that are shown in or adjacent to the archaeological APE and that may have archaeological remains associated with them include: a building associated with Mrs. J.E. Brisbane (N-6320) on the north side of Bethel Church Road (see Figure 5); a building, possibly a tenant house, located on the south side of Bethel Church Road, which appears to be associated with the 300 ac J.L. Ellison property "Hedgeland;" the S.C. Biggs Farms (N-6190) and a cluster of four buildings on the west side of the intersection of Bethel Church and Bethel roads (see Figure 5); two buildings owned by H. Clayton located on the south side of Churchtown Road; the S. Burnham Farm/Knox's Adventure (N-5151) located north of Armstrong Corners Road; a building associated with the Martin E. Walker property (N-5145) located on the south side of the Armstrong Corners Road (see Figure 5); and Schoolhouse No. 96, located across the road from the Walker House. The same buildings are shown on the 1893 atlas of New Castle County (Baist 1893; see Figure 14), and it has been speculated that the 1893 atlas is just a republishing of the 1881 map with a few superficial changes made.

If the maps give an image of the archaeological APE during the beginning of the 1880-1940± period, United States Geological Survey (USGS) quadrangle maps from 1906 and 1931 (Figure 15), a map of rural postal routes from 1915 (United States Postal Department 1915; Figure 16), and aerial photographs from 1937 (Figure 17) provide a view of the landscape during the middle and end of the period. The project area remained rural and agricultural throughout the period. The house associated on nineteenth century maps with the Ellison property and the cluster of four houses on the west side of the intersection of Bethel Church and Bethel roads are no longer extant. The Orange Section 4 archaeological APE does not appear to encroach on the locations of past above-ground resources until the areas south of Old Schoolhouse Road, when it passes to the east of historic resource N-5149 and through historic resource N-5151. Both of these resources are farmsteads with a farmhouse and numerous outbuildings. Further south, on the south side of Armstrong Corners Road, the farmstead identified on a nineteenth century map as

the Martin E. Walker property is still present, but the schoolhouse noted as being across the road on the early maps does not appear to be there any longer.

4.2.6 Commercialization and Suburbanization (1940-Present)

The Orange Section 4 archaeological APE remained agricultural in nature for much of the period, as aerial photographs clearly demonstrate. Until the last decade of the twentieth century, the vicinity of the archaeological APE was largely devoid of the large housing developments that have been built throughout much of New Castle County and the larger U.S. 301 project area. This has changed, however, and the rural agrarian landscape is increasingly becoming a residential one with newer housing developments present near the northern limits of the Orange Section 4 archaeological APE, just northeast of the proposed U.S. 301 and Churchtown Road intersection, and west of the western project limits along Churchtown Road.

Until the change to a more residential landscape, area farmers continued to run successful dairy, grain, soybean, and truck farming operations. Yields were maximized through the use of modern farm machinery, hybrid crop species, man-made fertilizers, and other agrichemicals. Still, as the century progressed, agriculture as a percentage of New Castle County employers had fallen dramatically. As the residential population increased into formerly sparsely settled areas, infrastructure needs increased and with it property taxes. Many older farmers ceased agricultural operations and sold their land to large development companies, hastening the transformation to a residential landscape. For example, the entire area of the Orange Section 4 archaeological APE between Old Schoolhouse and Armstrong Corner roads, as well as an area south of Armstrong Corners Road, and the properties on either side of the APE have been owned since the 1970s by a development company called Midfarms.

Two other dramatic changes to the landscape of the Orange Section 4 archaeological APE occurred near mid-century. Between 1957 and 1959, existing U.S. 301 was constructed. The highway is absent on aerial photographs from 1954, but is present on those from 1961 (Figures 18 and 19). The highway is part of a transportation corridor connecting Wilmington and Richmond, Virginia. The U.S. 301 Project included the building of a new Summit Bridge over the Chesapeake and Delaware Canal in 1960. The new bridge was needed to route the road around Baker Airfield (now Summit Airpark). Both

existing U.S. 301 and the airfield are located east of the Orange Section 4 archaeological APE.

The second change to the landscape has been the increased residential development facilitated by the opening of existing U.S. 301. Aerial mapping from 1954, 1961, 1968, and 1992 show that the landscape through which the Orange Section 4 archaeological APE passes was in large measure unchanged from its historic appearance. Farm fields still dominated (see Figures 18 and 19; Figures 20 and 21). The only small exception was the beginning of residential development near the archaeological APE along Churchtown Road. As late as 1997, residential development had barely begun to encroach upon the archaeological APE. The situation had changed dramatically by the time the next aerial map was produced in 2002 (Figure 22). At that time, housing developments like Summit Bridge, Dickerson Farms, and Post and Rail Farm had been constructed; a sand and gravel operation was located on the south side of Back Creek; and individual houses were scattered on divided farm properties in proximity to the archaeological APE. Currently, (i.e., 2007) the landscape within the Orange Section 4 archaeological APE is mainly farm fields with a few structures, paved roads, and utilities present (Figure 23). The general nature of the area surrounding the archaeological APE remains about 50 percent agricultural and 50 percent residential.

The Orange Section 4 alignment has been placed on aerial photographs dating from 1954 and 1961. No historic buildings appear to be within the path of the alignment. With the exception of approximately five structures, the Orange Section 4 alignment has been intentionally routed to avoid individual residences and newer housing developments. The archaeological APE does encroach on the edge of the sand and gravel operation; however, no archaeological resources associated with this commercial venture would be expected. In fact, the presence of the operation may have disturbed or destroyed sediments with the potential to contain older *in situ* archaeological resources.

4.2.7 Previously Identified Historic Period Cultural Resources

Historic period resource surveys of the project area have been conducted since the early 1970s. An intensive level survey of St. Georges Hundred was completed in the mid-1980s in order to complete the NRHP nomination *Rebuilding St. Georges Hundred, New Castle County, 1850-1880* (Herman *et al.* 1985). More recently, Phase I and II archaeological investigations have taken place to the west of the Orange Section 4

archaeological APE for the Choptank Road/State Road Improvement Project (Morrell and Glumac 2008). This study identified several archaeological sites with historic period components dating from the late seventeenth through the mid-twentieth centuries. None of these sites is within the Orange Section 4 archaeological APE. An intensive level survey of the entire proposed U.S. 301 corridor was conducted in 1992-1993 and reported in *A Cultural Resource Survey of the Proposed Route 301 Corridor New Castle County, Delaware* (Siders *et al.* 1993). A Phase I reconnaissance survey and Phase II intensive level survey of the current project area were completed in 2005-2006 (Frederick *et al.* 2006a and Frederick *et al.* 2006b). The surveys focused in large part on the most prevalent resource types in the project area, the historic farms and farmsteads. The limited Phase I survey conducted by Baublitz *et al.* (2006) to test the predictive model yielded multiple historic period artifact field scatters/concentrations of which two are associated with known former building locations.

The following previously recorded historic period resources fall within or near the proposed U.S. 301 Orange Section 4 archaeological APE. They are presented in order of their location from north to south. Their locations are shown on Figure 5.

4.2.7.1 N-6320 -- J. Biggs House, 939 Bethel Church Road

The 9.9 ac property, located on the north side of Bethel Church Road, contains a *ca*. 1800 log dwelling concealed within a *ca*. 1850 frame addition and encased in *ca*. 1990 vinyl siding. The only other buildings on the property are a *ca*. 1940 outbuilding and a *ca*. 1990 shed. At the time the 1849 atlas of New Castle County (Rea and Price 1849) was published, the house was owned by John Biggs, father of Delaware Governor Benjamin T. Biggs, and was one of the farms within the family enclave of properties located along Bethel Church/Choptank roads. The history of the farm has been traced back to acquisitions by Thomas Wirt in 1780. Biggs family ownership first occurred in 1823 and continued through 1976. The house location is not within the Orange Section 4 archaeological APE and, based on historic mapping, the land associated with the property would have been located behind or north of the house on the north side of Bethel Church Road and, therefore, also would not be located within the archaeological APE. The resource was recommended as not eligible for listing in the NRHP in 2006 due to an absence of the original farm plan and prominent agricultural outbuildings. The resource has not been formally evaluated for NRHP eligibility, as a full investigation for eligibility under

Criterion D would require removal of parts of the house. No archaeological remains associated with historic period resource N-6320 are expected to be present in the Orange Section 4 archaeological APE.

4.2.7.2 N-6190 -- Governor Benjamin T. Biggs Farm/S.C. Biggs Farm, 1084 Bethel Church Road

The Governor Benjamin T. Biggs Farm/S.C. Biggs Farm was determined not eligible for NRHP listing in 1995 as the result of a planned right-of-way acquisition for U.S. 301. It was also surveyed in 2005 as part of the Choptank Road study (Morrell and Glumac 2008) and between May 2005 and July 2006 for the current U.S. 301 architectural resource survey. The 2006 intensive level survey (Frederick *et al.* 2006b) confirmed the not eligible evaluation, stating that the resource lacked integrity. The resource consists of a *ca*. 1850 brick dwelling and twentieth century frame and concrete block outbuildings, including a secondary dwelling, a garage/apartment, and an equipment shed. The historic farm was part of a series of farms located in the area and owned by the Biggs family. This farm was primarily the property of Sewell C. Biggs, the brother of Governor Benjamin T. Biggs, who lived on a neighboring farm located to the south. It was part of an enclave of properties owned by the Biggs family along Bethel Church/Choptank roads. Nineteenth century maps show historic period resource N-6190 as having 186.0 ac of land, and its historic boundaries undoubtedly extended into the Orange Section 4 archaeological APE. However, it appears that the portions of the property within the archaeological APE have served as farm fields historically; therefore, there is less archaeological potential.

4.2.7.3 N-14397 -- Nicholas L. and Mildred Swyka House, 1147 Bethel Church Road

Although located near the location where four houses are shown on maps from 1868, 1881, and 1893, the dwelling at 1147 Bethel Church Road is not related to them. Instead, the house is a *ca.* 1952 Bungalow and garage. The 7.5 ac property was once part of the Biggs Corner Farm, one of the cluster of farms owned in the area by the Biggs family. Although the construction of this house may have disturbed remnants of the earlier homes in this area, archaeological artifacts or cultural features may still be present.

4.2.7.4 N-5123 -- Governor Benjamin T. Biggs Farm, 1196 Choptank Road

This resource was listed in the NRHP in 1985 as part of the *Rebuilding St. Georges Hundred* nomination. Within the historic period resource boundary are an 1846 brick, vernacular dwelling with Greek Revival elements, a smokehouse, three implement sheds, a small barn, a shop, a dairy, and approximately 4.0 ac of land, which equates to the present day tax parcel. According to nineteenth century maps, historically, the farm had 181.0 ac of associated land, which would have extended into the Orange Section 4 archaeological APE; however, these lands would have been agricultural fields. The Governor Benjamin T. Biggs Farm was part of a complex of farms in the vicinity owned by the Biggs family.

According to the NRHP nomination, Benjamin T. Biggs served as Delaware's governor between 1887 and 1892. Additionally, he was a director of the Citizens National Bank of Middletown and the Queen Anne and Kent Railroad, of which he was also president. Biggs was also a successful farmer who owned agricultural complexes in New Castle and Kent counties, Delaware and Queen Anne's County, Maryland. He and his sons owned 67,000 peach trees in 1887 (Herman *et al.* 1985). The extensive land holdings meant Biggs' farms were run by managers and tenants, although historic period resource N-5123 was apparently his home farm.

4.2.7.5 N-427 -- Woodside, 1358 Choptank Road

This historic period resource was listed in the NRHP in 1985 as part of the *Rebuilding St. Georges Hundred* nomination. Within the mapped boundary are a *ca*. 1860 brick Italianate style dwelling, a stable, a granary, a cattle/dairy barn, an equipment shed, a water tower, and 3.5 ac of land, which is equal to the present day tax parcel. Historically, the farm contained 212.0 ac at the time the house was built, and its associated agricultural fields would have extended into the archaeological APE.

According to the NRHP nomination, Henry Clayton's great-grandfather, Joshua Clayton, was one of the first settlers in this portion of St. Georges Hundred. He, along with Richard Bassett, owned an estate called Bohemia Manor, out of which many of the area's farms were devolved. Bohemia Manor was located in Cecil County, Maryland, and Pencader, St. Georges, and Appoquinimink hundreds in Delaware. Henry Clayton had the house on the property built *ca*. 1860, when he was 21 years old, although he did not acquire ownership of the farm until 1873, when his father, Joshua Clayton of Thomas,

deeded the farm to him. Joshua Clayton at one time owned more than 3,500.0 ac of land in the area. The Clayton family owned a number of farms along Choptank Road north of Armstrong Corners. Henry Clayton was an early proponent of peach farming and by 1875 was the largest shipper of peaches in St. Georges Hundred. He also raised wheat, cattle, strawberries, and other produce. In 1882, he, his father, and the Biggs family opened a cannery in Middletown (Herman *et al.* 1985).

4.2.7.6 N-109 -- East Choptank/Thomas Clayton Farm/Rhoades House, 1542 Choptank Road

N-109 was listed in the NRHP in 1985 as part of the *Rebuilding St. Georges Hundred* nomination and identified as the farm known as Choptank. Historic maps and deed research indicate, however, that it is actually the East Choptank Farm, a property originally owned in the early and mid-nineteenth century by Joshua Clayton. In 1849, Clayton conveyed use of the farm but not ownership of it to Nathaniel Young (New Castle County Recorder of Deeds 1849:36). In 1870, Young's heirs formally returned the property to Clayton (New Castle County Recorder of Deeds 1870:204). It may have already been occupied at that time by Joshua Clayton's oldest son, Thomas Clayton, who apparently expanded the house on the East Choptank property after he assumed control of the 222.0 acre farm.

At the time of the NRHP listing, the resource consisted of a three-story frame house with Greek Revival style elements, a large barn, a corncrib, and a small shed. The corncrib was lost in 2004. The original house was dated to *ca*. 1835. It was incorporated into the rear ell when a new front block was constructed *ca*. 1850. The current NRHP boundary contains 14.7 ac of land. Historically, the farm contained 222.0 acres and its associated agricultural fields would have extended into the archaeological APE. It was one of a number of farms the Clayton family owned along Choptank Road. The Clayton family at one time owned 3,500.0 ac in the area.

4.2.7.7 N-5149 -- Moody-Clayton House, South Side of Old School House Road, 0.3 mile East of Choptank Road

The 2006 Determination of Eligibility Report for the project identified historic period resource N-5149 as the Moody-Clayton House. The 1849 map of Delaware (Rea and Price 1849) shows a house owned by M. Moody near this location. M. Moody is Maria

Moody, who received 187.0 acres of land in trust during an 1825 division of the lands of her late father, Arnold Naudin (New Castle County Recorder of Deeds 1825:22). The land did not have a dwelling on it at the time. By 1837, however, Moody had erected a log dwelling on the west side of the property, near Choptank Road (Andrzejewski 1995). This house is shown on the 1849 map (see Figure 11). Her son, John Moody, built the first part of N-5149, a second, frame house *ca*. 1860, shortly after his mother's death. Moody's house was a two-story high, one-room deep balloon frame house with a one-story, shed-roofed room on the gable end (Andrzejewski 1995).

Joshua Clayton purchased Moody's land and a neighboring 52.0 ac parcel in the early 1860s, creating a 231.0 ac farm (New Castle County Register of Wills 1888:36), one of the many owned in the vicinity by Colonel Joshua Clayton. During Clayton's ownership, the orientation of the house was changed by building a new two-story, three-bay section facing north toward Old Schoolhouse Road. The original section became the rear T (Andrzejewski 1995).

The log and the frame houses and their attendant outbuildings are no longer extant. When surveyed in 1979, N-5149 included the two-story frame house and, located around a circular driveway, a concrete block shed; two frame, two-story barns; a concrete block and frame dairy barn; and a stable. All of these buildings were demolished some time after 1995 (Andrzejewski 1995).

The farmstead was located in a stand of trees located a short distance east of the archaeological APE. There is the potential that historic period artifacts related to this property could be found, although it appears that the archaeological APE will cross only agricultural fields associated with the resource.

4.2.7.8 N-5150 -- J. Armbruster House, South Side of Old School House Road, 0.6 mile West of Summit Bridge Road

As with historic period resource N-5149, the Moody-Clayton House, there appears to have been two houses located on the J. Armbruster property during the nineteenth century, one located on the road between Armstrong Corners and Mt. Pleasant and a second house located closer to Old Schoolhouse Road. Historic resource N-5150, which is no longer extant, was the latter. Photographs of the resource could not be located in the DESHPO's files, but a sketch prepared when the house was surveyed in 1979 shows it had an ell-shaped plan, with a possible front gable and wing dwelling like historic period resource N-5149. No outbuildings were noted. The house was demolished some time after

1988.

In 1849 (Rea and Price 1849), 1868 (Beers 1868), and 1881 (G.M. Hopkins & Company 1881), the property is identified as belonging to J. Armbruster. The farm contained 230.0 ac and the land could have extended into the archaeological APE. Farmstead remains, if any, however, would most likely be located within a stand of trees located outside of and to the east of the Orange Section 4 archaeological APE. By 1893, this farmhouse is no longer shown on the historic mapping (Baist 1893).

4.2.7.9 N-5151 -- S. Burnham Farm/Knox's Adventure, North Side of Armstrong Corner Road, 1,100 feet East of Choptank Road

Historic period resource N-5151 is no longer extant, but the location of the former farmhouse appears to be within the bounds of the Orange Section 4 archaeological APE (see Figure 2, Sheet 7). The resource was surveyed in both 1979 and 1988. Photographs taken in 1988 show a two-story, five-bay center hall plan frame house with a rear ell. A one-story addition was located within the legs of the ell. No outbuildings were noted.

A detailed history of the ownership of the farm is included in the archaeological predictive model prepared for the U.S. 301 Project (Baublitz *et al.* 2006). The correct name of the property is actually Noxon's Adventure, rather than Knox's Adventure, as it is denoted on nineteenth century maps. The property dates to 1734, when a 300.0 ac tract of land was granted to Thomas Noxon. Court records indicate that the farm had a log house plus a barn and other outbuildings located on it by 1779 and perhaps earlier. It was sold to the Burchard/Burnham families at about that time. They would hold the property, containing approximately 187.0 ac, until 1900. The land would remain in agricultural production until the late twentieth century. Farmstead ruins of the Noxon's Adventure farmstead were cleared of vegetation, photodocumented, and mapped as part of archaeological investigations associated with testing the U.S. archaeological predictive model (Baublitz *et al*. 2006). Recorded were a house foundation, wooden shed, the foundation of a second outbuilding, and a windmill.

4.2.7.10 N-5147 -- J.W. Callahan Farm, East Side of Choptank Road, 0.25 mile South of Armstrong Corner Road

The 1849 Rea and Price map and the Beers 1868 atlas of New Castle County identified a J.W. Callahan Farm near the southern end of the Orange Section 4

archaeological APE. The house location on the 1849 map was a considerable distance east of Choptank Road, within or near the archaeological APE. By the time the 1868 map was published, the J.W. Callahan house was shown as located on Choptank Road, which could indicate that a new house had been built on the property as part of the rebuilding of St. George's Hundred. The Callahan House does not appear on the 1881 (G.M. Hopkins & Company 1881) or 1893 (Baist 1893) maps of New Castle County.

Despite its absence on the latter two nineteenth century maps, a resource was surveyed in 1979 and identified as the J.W. Callahan House. The impressive frame, three story dwelling dated stylistically to the mid or late nineteenth century. Historically, the farm's associated agricultural fields in all likelihood extended into the archaeological APE. The house and its outbuildings were subsequently demolished. New residences are now located where the farmstead once stood.

4.2.7.11 N-5144 -- Schoolhouse, North Side of Armstrong Corners Road, West of Summit Bridge Road

In 1873, the existing school district in this portion of St. Georges and Appoquinimink hundreds was subdivided, and School District 96 was created (New Castle County Clerk of Peace 1873). Schoolhouse No. 96 would have been constructed on the north side of Armstrong Corners Road at around that time. Although Armstrong Corners historically had African American associations, the schoolhouse was not an African American school. The parcel on which it was located could be impacted by intersection improvements proposed on Armstrong Corners Road east of Orange Section 4.

The schoolhouse property was documented in 1988 but no determination of NRHP eligibility was made. The building was demolished prior to 1992 and an office complex and other buildings were built. The construction activities may have disturbed any archaeological remains.

4.2.7.12 N-5145 -- M.E. Walker House, South Side of Armstrong Corners Road, West of Summit Bridge Road

Historic resource N-5145 was surveyed in 1979. The structures were demolished sometime between 1979 and 1992. The 1961 aerial photograph showed the farmhouse and farmstead located along a driveway which came off of Armstrong Corners

Road. An outbuilding was located a short distance to the west, at the head of a farm lane. Nineteenth century maps list the house as the property of Martin E. Walker, who acquired the land in 1865 (New Castle County Recorder of Deeds 1865:341). The location of his house was near proposed roadway and intersection improvements on Armstrong Corners Road east of Orange Section 4. Agricultural and domestic archaeological resources associated with the farm may be present in the archaeological APE, particularly in a small stand of trees to the immediate west of some late twentieth century houses that were built on the property.

The owner of the property prior to Walker had been Amos Bell, an African-American (New Castle County Recorder of Deeds 1838:379), although his house location is shown as being well east of the Orange Section 4 archaeological APE on the 1849 map of the area. Before Bell, the property had been one of many parcels of land owned in Pencader and St. Georges hundreds by William Cann. A partition map of his lands created in 1835 showed a log house on the property (New Castle County Orphans Court 1835:446).

4.2.8 Summary of Historic Period Archaeological Resources Predicted

The results of the Phase IA archaeological investigations indicate that there is potential for historic period archaeological remains to be present within the Orange Section 4 archaeological APE. If historic period archaeological resources are identified, they will most likely be related to rural domestic and/or agricultural events. When the historic period land use of the project area is considered, it is clear that agriculture dominates the entire span of Euro-American occupation and was the livelihood of some of the area's most prominent citizens. The project area remains rural and sparsely occupied today, with suburban in-filling of non-agricultural related housing present only since World War II, and most of it not constructed until the late twentieth or early twenty-first centuries. The fact that agricultural practices comprise large tracts of land with proportionally few buildings or other permanent features, and most of the previously identified historic home and farm buildings are not located within the archaeological APE, indicates that the historic period archaeological record may be constrained to artifact scatters associated with no longer extant buildings, accidental disposal, or field manuring activities.

The historic record indicates that many St. Georges Hundred farmers owned slaves during the colonial and early national periods. However, slave ownership was generally limited to one or two, and the slaves apparently lived either in detached kitchens or in the

main house and not in separate slave quarters. Archaeological evidence of only two known slave quarters have ever been located in Delaware (Guerrant, personal communication 2008), so the chance of finding remains of separate buildings that housed slaves is low.

There is a stronger likelihood of finding individual burials or a family cemetery. Bachman and Catts (1990) formulated a predictive model that found that the majority of family cemeteries were sited between 100.0 and 1,300.0 ft away from a farmhouse on a well-drained knoll or ridge. Heite and Blume (1992:34) refined the model, examining all well-drained soils between 400.0 and 1,000.0 feet from a known house site, within a 180 degree arc from the road, and eliminating low-lying places, tofts, and difficult to reach areas.

Nineteenth century maps and atlases show approximate locations of house sites and roads, but they do not denote topography or soil conditions and scale can be problematic, particularly after maps have been reproduced. Nevertheless, based on the Heite-Blume model, there is the potential of identifying burials and family remains associated with N-6190 -- Governor Benjamin T. Biggs Farm/S.C. Biggs Farm; N-5149 -- Moody-Clayton House; N-5151 -- S. Burnham Farm/Knox's Adventure; and N-5145 -- M.E. Walker House.

Since the Orange Section 4 archaeological APE does not follow or cross many historic roadways and was never part of a town, there is low potential for archaeological remains of historic period resources associated with these features. Taverns, churches, blacksmith shops, stores, and other commercial ventures typically located in towns along major roadways or at cross roads and, therefore, associated archaeological remains would not be expected in the archaeological APE. This conclusion is also supported by the lack of indications of these types of establishments on historic period mapping of the archaeological APE. While mills would have been necessary to the farming community located in the archaeological APE, the lack of streams with enough head to power a mill, as well as the lack of remnant mill ponds, indicate that mill remains would not be expected in the archaeological APE.

Additionally, despite the location of the archaeological APE in proximity to areas that saw major action during the American Revolution and the Civil War, there appears to be no evidence in historic documentation or mapping to support the use of the Orange Section 4 archaeological APE during either of these conflicts. Therefore, military related archaeological artifacts and cultural features would not be expected.

In the portions of the Orange Section 4 archaeological APE that are located along existing or historic roads, the archaeological APE is narrow and relegated to either the

margins of agricultural fields or what is and would have been historically front yards of or entrances to residences and farmsteads. Typically, deep historic period archaeological features, such as wells and privies and/or sheet middens, are not located in the fronts of buildings along the main road. Historic period activities which might have taken place in the front yards were most likely short term and ephemeral, leaving little or no archaeological signature. Not only are front yards not usual places for accumulations of historic period artifacts, excepting roadside litter, they have also often been extensively disturbed by the emplacement of utilities and, in the case of rural agricultural areas, drainage ditches.

Potential expected historic period archaeological resources representative of the Exploration and Frontier Settlement (1630-1730±) and the Intensified and Durable Occupation (1730-1770±) periods should be rare due to the low population density and land use of the archaeological APE at that time. If historic period archaeological resources from this period are present, they should be related to the large landholding families of the region. No mills or other early industrial enterprises are known historically for the archaeological APE. Below-ground structural remains from this period are unlikely, as there were very few structures and most were built using wood sills, shallow foundations, and piers of brick or stone.

The Early Industrialization (1770-1830±) period is known for improvements to agricultural practices; however, these would rarely leave identifiable archaeological signatures, since these improvements tended to be more likely changes in types of crops and methods of soil replenishment than issues which would affect the physical record left behind by a farm's layout or tool inventory. The presence of some orchards in the project area is important to note, since burned tree root systems associated with the clearing of old orchards can partially mimic pre-contact period fire features in some cases.

During the Industrialization and Early Urbanization (1830-1880±) and Urbanization and Early Suburbanization (1880-1940±) periods, land use in the project area continued to be agricultural; however, transportation improvements affected the agriculture. None of these major transportation improvements, such as the canal and Delaware Railroad, had direct impacts to the Orange Section 4 archaeological APE that would have left an archaeological signature. Historic period land use information during this period also references populations such as tenant farmers, free African Americans, and slaves in the project area. Archaeological resources, especially culturally related artifacts, associated with these populations may be expected. One historic farmstead associated with this period is located within the archaeological APE.

Due to the small quantities of residential development that have actually taken place within the Orange Section 4 archaeological APE, there will most likely not be archaeological resources associated with the Commercialization and Suburbanization (1940-Present) period present. Minor disturbance by suburban residential features and a nearby sand and gravel operation may have disturbed or destroyed pre-contact and historic period archaeological remains once present in the archaeological APE. Agricultural resources related to the period may be present.

Only one previously identified historic period archaeological resource is present in the Orange Section 4 archaeological APE. Based on this lack of previously identified archaeological resources; the documented historic land use of the archaeological APE as agricultural fields; the history of sparse settlement and heavy agricultural land use; the apparent relatively undisturbed nature of the soils/sediments present; and the length of Euro-American settlement in the area, the Orange Section 4 archaeological APE has low to moderate potential to contain significant historic period archaeological resources. With the proximity of the archaeological APE to population centers in Delaware and Maryland, De Cunzo and Catts (1990:180-183) recognize that the archaeological APE is on the boundary of portions of the state in which the historic archaeological record is threatened by continued modern development. This places the Orange Section 4 archaeological APE as a moderate to high priority location for future archaeological research.