

**HISTORIC ARCHAEOLOGICAL RESOURCES OF THE PROPOSED  
ROUTE 13 CORRIDOR: AN OVERVIEW**

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The purpose of this overview is to briefly describe the types of historic archaeological resources which have been identified within, and which are expected to be within, the proposed Route 13 corridor alignments. Expected site locations are based on probability distributions which were developed during the initial planning study (Custer, Jehle, Klatka, and Eveleigh 1984) and refined in later studies (Custer and Bachman 1985; Custer, Bachman, and Grettler 1986). All known sites and projected probability zones are noted on the attached maps and listed in the Appendix to this report.

In general, this overview will review the regional historical setting of the project area and will discuss relevant sites within the project area. Potentially significant sites, and ~~classes~~ classes of sites, which are likely to be eligible for listing on the National Register of Historic Places will be noted.

**REGIONAL HISTORY AND ARCHAEOLOGICAL SITES**

This overview is abstracted from Munroe (1978), Hoffecker (1973, 1977), Weslager (1961, 1967), Lemon (1972), and Hancock (1932). The earliest colonial settlement in Delaware was the Dutch settlement of Zwaanendael which was established as a

whaling colony near present-day Lewes in 1629. The settlement was short-lived as the early colonists were massacred by local Indians in 1632. Further north, the Swedes and Finns established Fort Christina in 1638 at the confluence of the Brandywine and Christina Rivers in what is now Wilmington. The small colony grew and within a few years a fort, church and small farming community had appeared and formed the nucleus for the first permanent European settlement in Delaware. This community contested the Dutch settlements further north in the Delaware Valley.

Dutch colonial interests continued and in 1651 Fort Casimir was established near modern New Castle. Conflicts between the Dutch and the Swedes escalated to military conflict, as both groups infringed on the rights of the other. The Dutch were ascendent and they appropriated the Swedish colonies. Fort Casimir was renamed Fort Trinity, and New Amstel, a farming and trading settlement, arose nearby. The Dutch claims included all land from the Christina River to Bombay Hook by the early 1660's, including a portion of the project area.

British hegemony of the region began in 1664 when Sir Robert Carr seized the Dutch colonies and assumed possession for James, Duke of York and Albany. Anglicizing the new colony was a slow and gradual process; however, the transfer of authority from Dutch to British hands was peaceful with existing land ownership, trading privileges and political structure maintained by the new leadership. The Swedish, Finnish, and Dutch colonists remained in Delaware and new immigrants of those nationalities, as well as English and Scotch-Irish, supplemented the growing population to

form a multi-ethnic community.

In 1682, William Penn was granted proprietary rights over Pennsylvania and the Lower Three Counties which included the city of New Castle, the land within a 12-mile radius of the New Castle courthouse, and the land on the west bank of the Delaware Bay (including all of modern Delaware). Conflicts soon developed between the Quakers of Pennsylvania and the colonists of the Three Lower Counties, and these led to the establishment of separate governmental bodies and relative autonomy for the southern colonists. However, economic ties continued to link Penn's factionalized colony. The Penn family's claims to interest in the colony were finally relinquished just prior to the American Revolution.

Settlement patterns in the project area from the Colonial Settlement Period (1638-1681) are extremely difficult to define because both archaeological investigation and documentary research for the period are in developmental stages. Wise (1978, 1979) has presented a preliminary model for settlement patterning in the early colonial period applicable to Dutch settlements in the vicinity of New Castle, Appoquinimink, St. Jones Neck, and Lewes. Research on the Chesapeake tidewater of Maryland and Virginia provides the most detailed data on early colonial settlement patterning in an area which shares environmental and economic similarities with Delaware (see Earle 1975; Kelly 1979; Custer 1983; Wesler et al. 1981; Wesler 1982). The three sites in the Saint Georges Hundred identified in this report, and the studies noted above provide a limited basis for defining early

colonial settlement patterning and plotting potential site locations.

Dispersed plantations and farmsteads close to the tidewater shoreline and water transport facilities were the predominant settlement types (Wise 1979; Earle 1975; Kelly 1979; Middleton 1953). The study area sites are located at the first extensive area of well-drained land along the major drainage systems. The pattern of locating houses on well-drained soils within 300 feet of a drainage bank has also been identified by Wise (1978,1979) in the St. Jones Neck area. The long-lot system of settlement, or variations on it, is seen on these early historic sites, in tidewater Delaware, Maryland, and Virginia (Wise 1978, 1979; Earle 1975; Kelly 1979; Delaware Division of Historic and Cultural Affairs 1976:15), and would apply to sites in the project area. The long-lot system established linear land units extending from a shoreline or stream bank toward the drainage divide. Dwellings were constructed near the shore with agricultural lands behind. Distances ranging from one-quarter to one and one-half miles separated dwellings and resulted in a dispersed settlement pattern (Earle 1975). This system provided accessibility to the major water transportation routes for all landowners, demonstrating the strong water-orientation in communities where overland transportation networks were in initial stages of development (Middleton 1953). Nevertheless, where road networks were present, particularly trans-peninsular roads, there were also clusters of settlements.

Structures present at early colonial agricultural complexes would have included small, wood frame dwellings and a wide

variety of outbuildings: kitchens, meat houses, hen houses, milk houses, stables, bake houses, and grain and tobacco sheds (Earle 1975). Occupational specialists were limited in number and variety (Earle 1975), most likely because the early agricultural complexes maintained self-sufficiency by retaining part-time specialists, thereby creating a limited demand for services. Docks and warehouses, and perhaps merchant offices and dwellings, are expected at the landing operations situated along the major streams and coastal zone.

Given the characteristics of settlement in the colonial period it is predicted that sites of this period will be located north and east of the project area. The Appoquinimink River-Drawyers Creek drainage area holds the highest potential for containing early historic archaeological sites although some may also be present in the Smyrna River - Duck Creek area as well.

By the middle of the 18th century, population increases and commercial expansion stimulated the growth of towns and the development of transportation and industry. During the 1730's successful attempts were made to harness waterpower on the Brandywine and Christina Rivers resulting in the establishment of Wilmington as the foremost milling and shipping center in Delaware. The availability of wheat from the central Mid-Atlantic region, easy and economical transportation, and the proximity of the Philadelphia and New York markets facilitated the commercial rise of the Brandywine mills. During the later part of the 18th century Wilmington's economy focused on shipbuilding, coopering, milling, and import-export trade.

The rise of commerce and industry in Wilmington produced significant effects on the rural areas of New Castle and Kent counties. The technologies utilized in the Brandywine Valley spread to these areas resulting in an extensive network of mills throughout the colony. Millworks in the agrarian areas were frequently multi-functional with water-powered grist, saw and (woolen cloth) fulling operations being performed at different seasons at the same location. The mills primarily produced goods for local and non-local markets. At this time, the agrarian Delmarva Peninsula was considered an area of portage between the Chesapeake Bay markets (Annapolis and Baltimore) and the Delaware River and Bay markets (Philadelphia).

Settlement remained water-oriented during the Initial Agrarian Settlement Period (1682-1810) which includes numerous waves of settlement from Europe, Pennsylvania, and Maryland with settlements expanding up the navigable streams into headwater areas. Several examples of sites from this period are noted in the Appendix. A number of distinct settlement patterns are noted which reflect environmental and economic constraints. Ports, landings, and agricultural complexes were established where well-drained land was available on the Delaware River-Delaware Bay shore. Port Penn, on the Delaware River, became a major redistribution-shipping center for central Delaware. Kitts Hummock, St. Augustine Creek Landing, and Bowers Beach were port settlements located at the mouths of major streams during slightly later time periods.

The presence of extensive marshland at the mouths of streams and along their lower reaches resulted in the establishment of

inland landings and agricultural complexes. These settlement types were situated on the first available expanses of well-drained soils. All the inland settlements and landings established during this period in the proximity of the project area exhibit this pattern. They are: Red Lion on Red Lion Creek, Saint Georges on Saint Georges Creek; Cantwell's Bridge (now Odessa) on the Appoquinimink River; Taylor's Bridge Landing and Blackbird Landing on Blackbird Creek; Flemings Landing, Brick-store Landing, Smyrna Landing, and Smyrna on the Smyrna River; Whitehall Landing, Fast Landing, and Leipsic on the Leipsic River; Little Creek Landing on the Little River; Dover on the St. Jones River; and Frederica on the Murderkill River.

The western limits of settlement were the headwater areas of the navigable streams and their major tributaries during the early portions of this period. Very little settlement occurred in the extensive areas along drainage divides between watersheds although these lands were patented. Instead, settlement was restricted to land in close proximity to major waterways. Water routes were the keystone of the transportation system, although overland travel was increasing as a far-ranging network of roadways developed (see the Varille and Shallus Map of 1802). Indeed, a regional road network existed by the 1720's between the Dover area, the northern part of the colony, and Maryland's Eastern Shore and some settlement may be expected along these roads. However, without a doubt, the major focus of early settlement during this period remained along the major drainages.

Commercial transportation was tied to water routes because they were more economical than overland transport of bulky

agricultural products (Middleton 1953). However, the movement of goods over short distances to processing and redistribution centers was often overland; especially in the inland hinterland. Intra-regional passenger travel between commercial centers and towns was facilitated by the development of the Philadelphia-Lewes postroad (modern Route 13). While road travel was difficult and time-consuming, it often offered more direct routes than the waterways, which were oriented toward the Delaware River-Delaware Bay and better suited to transport market-oriented produce. Earle (1975) has identified a similar pattern of road development and use in tidewater Maryland.

Agrarian settlement was predominant, however. During the 1720s towns were established at the junction of major transportation routes and many of the towns grew from landings and hamlets. The site locational data collected for the project area indicate three factors important in the siting of early towns: 1) the availability of extensive areas of well-drained land; 2) proximity to a navigable stream; and 3) proximity to the Philadelphia-Lewes postroad (now Route 13/113), the Chesapeake Bay spur (now Route 301), or other road networks. These factors have also been noted by Wise (1979) and their importance demonstrated in historic site locational analyses (Custer and Bachman 1985). The towns of Red Lion, Saint Georges, Mt. Pleasant, Cantwell's Bridge (Odessa), Leipsic, Smyrna, Dover, Frederica, Canterbury, Camden, and Noxontown (which is no longer extant), all early 18th century towns, possess these locational characteristics. Locational data also indicate that the early



towns were situated at mid-drainage or further upstream settings (see Wise 1979). This pattern suggests that town sites were chosen near the heads of navigation of major streams and tributaries. The routing of the Philadelphia-Lewes postroad through the towns and the heads of navigation facilitated inland transportation and communication.

The siting of Middletown deviates from the patterns noted above because it is situated at the western edge of settlement on the drainage divide between the Appoquinimink River and Drawyers Creek watersheds. Its position on a major road to the eastern shore of Maryland, and at a terminus of numerous cartroads, encouraged its growth despite the absence of a navigable stream.

Towns were the loci of facilities for the storage and redistribution of agricultural surplus and processed goods. Population was concentrated in towns, although both population and town size were small. Documentary research on the activities in early Delaware towns has been limited, although the distribution of settlement types within the project area and more detailed data available for adjacent areas allows the delineation of town patterning.

Mercantile concerns, shops, stores, and public offices represent the major services available to town residents and hinterland populations (Lemon 1972; Reps 1972; Earle 1975; Kelly 1979; Wise 1979). Craftsmen, mill complexes and manufactories were outside towns. Early towns have been described by some researchers as "cities" or "urban" in character because they served the function of urban centers for the agricultural hinterlands (Earle 1975; Kelly 1979; Wise 1979; Henry 1981). It

is more likely that towns in the project area retained the characteristics of provincial towns well into the 19th century or later.

Farmsteads, plantations and estates were the predominant settlement type during this period and numerous archaeological examples are noted in the Appendix. They were present within the limits of settlement discussed earlier. Agricultural settlement was absent in the drainage divide areas. Because agricultural produce needed to be moved to processors or redistribution centers, agricultural settlements were 1) in close proximity to major streams and their tributaries or 2) along primary and secondary roads which linked the hinterland to landings and service centers. These trends are reflected in the probability zones noted on the attached maps. Landholdings were substantial in size and although extensive areas were settled, settlement density was low (see Varle and Shallus Map of 1802 - General Assembly of the State of Delaware 1899). Documentary research on landholdings in Maryland shows a mean plantation size of 430 acres (Kelly 1979). Kelly (1979) points out that land sales data suggest increases in settlement area and settlement density, when in fact, they reflect increases in individual landholdings as landowners' purchased adjacent tracts. Agricultural settlements contained a main house and a broad range of special function outbuildings, as well as residential quarters for tenants, agricultural laborers, servants, and slaves. In the 1750s, draining of marshland opened new areas to agricultural use in the lower reaches of Drawyers Creek, Appoquinimink River, and Leipsic

River.

Mill complexes and agricultural mill complexes were conspicuous features on the rural landscape. Their distribution was of course limited by the need for water; however, they were located consistently at mid-drainage settings or further upstream on major streams and their tributaries. It is likely these locations were chosen because they are at the heads of navigation. Mills generally were located outside town, but their stream settings offered access to transport facilities. Numerous secondary roads linked the processing centers to the agricultural hinterland. There was an absence of mills on the lower portions of the major drainages which suggests that some agricultural products may have been shipped unprocessed to markets. Interior produce apparently was processed and later transported to market, or processed goods were consumed by local markets and unprocessed surplus was shipped to outside markets.

Data on the distribution patterns of manufactories, the workshops of occupational specialists and other types of sites are very limited for the study area. Only one manufactory was identified for this period, although it fits the pattern recognized by researchers working in other areas. Like mills, manufactories and workshops were situated within the agricultural hinterland in order to be accessible to the agricultural community requiring their services (see Lemon 1972; Earle 1975; Kelly 1979; Wise 1979). Taverns were located along heavily travelled post and cart roads, most frequently at crossroads or junctions with landings and streams and are noted for the study area in the Appendix. Shifts in the usage of structures as

residences and taverns over time makes positive identification of taverns difficult. Generally taverns were spaced the distance an overland traveller could ride in one day, but often a traveller found shelter in a farmhouse along the route. Churches were located in towns and in rural settings. Rural churches were found on secondary roads accessible to the agricultural population.

A substantial number of sites of this period have been identified within the proposed project area (see Appendix and attached maps). More sites conforming to the settlement patterns and settlement types presented above are expected. The attached maps note the sensitivity zones for potential pre-1802 settlement based on the above settlement pattern analysis and also notes the few known pre-1802 sites. Saint Georges and Mt. Pleasant are the only towns established in the early 18th century in the vicinity of the proposed alignments. Many of the early 18th century ports, landing, plantations, and farmsteads lay outside the project area on the lower reaches of streams and on the Delaware River-Delaware Bay shore.

The early decades of the 19th century saw the beginning of an agricultural revolution throughout Delaware, most extensively in New Castle county. The first agricultural society in the United States was formed in New Castle county in 1804 with a strong focus on scientific agricultural practices. A number of factors worked in conjunction to establish New Castle county, and Delaware as a whole, as an important agricultural producer. The discovery of marl, a natural fertilizer, during the construction

of the Chesapeake and Delaware Canal in the 1820's enhanced the productivity of Delaware agriculture while the opening of the canal encouraged the production of market-oriented crops because produce could be quickly and cheaply transported to markets.

The opening of the Philadelphia, Wilmington and Baltimore Railroad in 1839 provided transportation of northern Delaware produce to the growing eastern markets. The extensive production of market-bound crops developed later in Kent and Sussex counties due to a lack of interior transportation facilities, although produce did move by water from seaport towns. When the Delaware Line extended rail service to Dover and later Seaford in the 1850's, a vast agricultural hinterland was opened and agricultural production for markets increased significantly.

Prior to 1832 Delaware's agricultural products were primarily grains, with fruit and vegetable crops of lesser importance. During the period 1832-1870 Delaware became the center for peach production in the eastern United States. Rich soil, favorable climate and rainfall, excellent transportation facilities, and strategic location near large markets made peach production a lucrative enterprise. Delaware City with its canal location led Delaware and New Castle county in production until the peach blight of the 1850's. The peach industry was hindered in Kent and Sussex counties until the 1850's due to transportation limitations. Early attempts there failed because producers could not move fruit to market economically. Rail service into the area and the absence of the peach blight in the southern counties made the peach industry economical in the 1850's.

By the end of the "peach boom", massive harvests were being shipped by rail and steamship lines to Philadelphia and Baltimore where much was readied for resale to the northern states. The peach industry proved profitable for a large number of peach growers, as well as a variety of support industries. Basket factories, canneries, and peach tree nurseries all aided in and reaped the financial rewards of the peach industry. The railroad and steamship lines integral to peach distribution, depended on peach shipment for a large portion of their annual revenue. The construction of "peach houses" of the Italianate architectural style took place at this time and peach houses are common in the project area as both standing structures and potential archaeological sites.

Through the 19th century, and into the 20th century, Delaware's agricultural production continued to focus on perishable products with a decrease in staples. There has been marked increase in milk and poultry production while the levels of fruit and vegetable production were maintained. Cash crops such as tobacco, have been of importance on a small scale in Kent and Sussex counties.

Throughout Delaware's agricultural history farm labor has been a valued commodity. In the colonial period blacks in slavery and white indentured servants were the primary farm laborers. By the mid-18th century white indentured servants were as numerous as black slaves. Slightly less than one-half of the blacks in the state in 1790 were free; however, by 1810, less than one-quarter of blacks were slaves according to federal

censuses. Therefore, in the 18th century, free black laborers played an increasing role in farm production. Abolitionist attitudes were strong in Delaware and legislation enacted by Quaker and Methodist leaders restricted the increase of slaveholding, especially in New Castle and Kent counties, by prohibiting the importation and exportation of slaves. Agricultural factors, as well, reduced the profitability of slaveholding and thus a combination of ethical and economic factors were responsible for the increase in the free black population in the state prior to Emancipation and the Civil War.

Major shifts in settlement patterning occurred within the project area during the full Agrarian Settlement Period (1810 - 1880) which is characterized by the development and growth of a local agricultural economy primarily in response to railroad and canal construction. Choices in settlement location were no longer constrained by water accessibility and major settlement expansion was felt in the upland zones between watersheds, especially on the high, well-drained soils along the drainage divide separating the Chesapeake Bay and Delaware River-Delaware Bay watersheds. This vast area contained agriculturally productive land, but the high cost of overland transportation had limited its value in earlier periods. In previously settled areas, unoccupied land on the drainage divides came into agricultural production. There was a continuation of the water-oriented settlement patterns established earlier because they remained economically viable. New roads linked the older transportation system and the newly established canal and railroad routes. The construction of the railroad and the canal,

however, was not the only factor in settlement expansion. Increasing population pressure in settled areas and the growing demand of the interregional markets for agricultural products made the construction of the new transportation routes economically feasible. The location of the railroad and canal had profound influence on the patterning of settlement into the 20th century. These patterns have been demonstrated by recent historic site location analyses (Custer and Bachman 1985).

Roads became more important as factors in settlement location as this period progressed. No longer were the major streams and primary roads the foci of settlement. An extensive network of roads was established in the newly settled agricultural hinterland and these roads linked farmsteads and agricultural hamlets to the redistribution centers and served to channel agricultural surplus from the hinterland to the large, domestic markets. Population growth and settlement density were highest between the Philadelphia-Lewes postroad and the railroad line which paralleled it to the west, the major axes of the proposed corridors. The major service centers within the study area were situated on one of these routes or on the canal.

The establishment of new towns and the growth of existing towns and hamlets was an important response to the new transportation corridors in that the new towns were not restricted by earlier environmental and economic constraints. Towns appear on the perimeters of watersheds and on drainage divides which were once obstacles to agricultural settlement and could never have supported town growth. Surrounding the new



towns was a large agricultural hinterland occupying similarly situated land.

Saint Georges was already important as a local center due to its position at the junction of a major north-south road and Saint Georges Creek. The canal enabled Saint Georges to increase its influence as a redistribution center and command a larger share of the growing agricultural surplus of the hinterland. Dover, Smyrna and Cantwell's Bridge (Odessa) emerged as intra-regional centers because rail, road and water transportation routes converged in these already established centers. These towns controlled extensive hinterlands and they provided a wide range of business and commercial services for the rural population. The broad range of services provided employment for the large, concentrated non-agricultural population. While these towns played increasingly important roles in the intra-regional economy, they were still subordinate to the inter-regional centers, Philadelphia, Baltimore, and Wilmington.

Local centers, such as Clayton, Townsend, Cheswold, Sassafras Station (Green Spring), Kenton, Wyoming, and Woodside, were established specifically to store and redistribute agricultural products. Middletown experienced heavy growth as a railroad town. Each of the towns exerted influence over a small rural hinterland and were also the loci of stores, banks, hotels, railroad stations, commercial offices, physician's offices, and post offices. The new towns exhibited regularized street plans and clearly defined residential and commercial districts. These patterns are not seen in older communities which developed by accretion.

The improvement of roadways encouraged additional settlement throughout the region. A primarily agrarian pattern of settlement consisting of farmsteads, workshops, manufactories, processing facilities, crossroad towns, churches, and schools were scattered along the primary and secondary roadways. The farmsteads were involved in market crop production and farm products were transported to nearby centers.

The substantial number of agricultural tenant dwellings and farms in the region indicates the presence of a large body of landless agricultural laborers. The distributional pattern of agricultural tenant-related structures in rural areas indicated the majority were situated close to the roadways (Custer and Bachman 1985). Further research is required to verify this pattern and to explain the differences in the distribution of tenant-related structures and the residences of the landed population.

Hamlets and villages were established at the intersection of secondary roads which connected the hinterland to local and intra-regional centers and major transportation routes. The crossroad town provided the hinterland population with a restricted set of services, usually a general merchandise store and less frequently workshops. They also served as the loci of small population clusters. The ubiquitous "Corners" are found throughout the study area. Crossroad towns did not appear at the junction of all roads, but only at the junction of roads leading to large centers or major transportation routes which exerted a "pull" on the hinterland products and the population requiring

the services of centers.

The majority of sites identified in the proposed project area date to this period. The settlement types discussed, excluding the intra-regional centers and most of the local centers, are present in high numbers in the project area and known locations are noted on the attached maps and listed in the Appendix.

No major changes in the settlement patterns established during the preceding period occurred during the Settlement Stabilization and Agrarian Maintenance Period (1880-1910). The hierarchical structure of settlement types described in the previous section persisted. New centers did not develop during this period because the economic and environmental constraints operative earlier resulted in the siting of centers in highly advantageous locations. Subsequent technological and transportation improvements served only to increase the agricultural productivity of the hinterland and the spheres of influence of the local and intra-regional centers.

Population increases were significant within centers, but these are all outside the proposed project area. Few sites dating from this period have been identified; however, many of the sites established earlier continue to serve the same functions within the same settlement conditions.

Motorized transportation and upgrading of roads for automobile traffic encouraged distinctive settlement shifts during the Modern Period (1911-1950). Urban population growth continued and the concentration of commerce and industry increased. A more important shift was the expansion of a non-

agricultural population into rural areas. Primary and secondary roads became the foci of residential settlement and small parcels of land along the roads were carved from large farm properties for single family dwellings. The farmsteads generally remained behind the new residential front and the character of the region remained agrarian. New settlement types for this period are the non-agricultural residences and automobile-related facilities. The pattern of settlement is essentially a composite or mosaic of earlier patterns superimposed one upon the other.

The patterning and density of settlement in Delaware, and the study area specifically, have been strongly influenced by several factors throughout its history. These are: 1) an agrarian economy; 2) the commodity demands of large markets, first Europe and the West Indies, and later domestic commercial-industrial centers, and 3) transportation facilities. The advent of automobile transportation in the 20th century brought about significant improvements in the state road system and opened large tracts of land to productive agriculture. The Dupont Highway constructed in the 1920's linked the northern and southern sections of the state and shifted the agrarian focus of the southern counties permanently toward non-local markets.

### **RESEARCH QUESTIONS**

Most of the Route 13 project area has been, and continues to be, an important agricultural area, and the study of the development of Delaware's agriculture provides a focus for historic archaeological research. For example, little is known

about the lower class of non-landed tenant farmers. Few of their dwellings survive and the historical record makes little reference to the role played by this group in the rural society. Most known agricultural tenant dwellings are of less substantial construction and appear to be situated near the roadsides of each farmstead, while the landowner's more imposing dwelling is located back from the road. How this is related to the agricultural community and the general social structure has not yet been explained.

As has been stated above numerous times, there has been a general shift through time from a subsistence to market agriculture. However, farm-specific and inter-farm preferences for marketable versus subsistence foodstuffs are poorly known. From primary documents like agricultural censuses, orphans court records, and deeds, some indication of regional agricultural preferences could be obtained and the overall pattern of agricultural land use could be better understood. The location analysis generated here could also be an important part of this research.

Related to both agriculture and settlement pattern is the question of farmstead design. How were the agricultural complexes laid out, what was the arrangement and function of outbuildings, where were the yard areas and how was each used, and, in a more general sense, where were the early farmsteads placed within each land parcel? Excavation of farmsteads can answer these questions. The relative importance of transportation, soils, markets, and other factors should be

studied further on a more site-specific basis to see how they influenced farmstead design and placement through time. It has also been shown that the "long-lot" system of land use was prevalent in the early historic period in Tidewater Maryland, and Virginia and it is postulated that it was also used in the project area. However, this remains to be demonstrated and a detailed study of early land records and plat maps would be required.

Transportation has always been an important consideration in the marketability of Delaware agricultural produce, and through time, various types of transportation have served that need. At the same time, the emphasis on each type has shifted and with it have come subtle changes in town development and size, rural settlement pattern, population density, and opportunities for light manufacturing and foodstuff processing. The general improvement of the transportation system also allowed for the appearance of some manufacturing in a number of towns in an otherwise highly agrarian economy. Pursuits like carriage-making, tanning, and peach processing were introduced. Very little of this activity is present today, most of it having presumably declined with changing market conditions. This aspect of the local economy has never been documented and future archaeological research could seek to reconstruct these activities.

The earliest forms of travel in the Route 13 corridor were probably by boat and on foot, as the few early roads were frequently unsuitable for cart travel. The heads of stream navigation became transshipment centers and thus foci of

settlement. During the 19th century, the establishment of adequate roads and then railroads altered the commercial pattern and emphasized the junctions of these later modes of travel. Hamlets grew up around road/railroad intersections and the importance of places like Blackbird Landing, Smyrna Landing, and Odessa was eclipsed by Blackbird Station, Clayton, and Middletown. Research within the proposed Rt. 13 Corridor should try to reveal the mechanisms of this change and document its ramifications for village life, commercial patterns, and population change. Not to be overlooked is the impact of the construction of the present Rt. 13 on the lifeways of the people of the Upper Delmarva Peninsula. This road, which essentially replaced an older Philadelphia to Lewes Post Road, drastically altered the traffic pattern on the Delmarva when it was opened in the early 1920s.

One of the features of the early road network was taverns or inns placed at intervals of approximately a day's ride along the major thoroughfares. If the establishment could be situated at a crossroads, so much the better. Research into the Buck Tavern, at Summit Bridge, Delaware (Wilkins and Quick, 1976) suggested that rural inns and taverns in Delaware were often ephemeral businesses which were licensed, but otherwise loosely defined, were often contained in farmhouses or dwellings only slightly modified for the purpose, and as a group are presently poorly documented. The analysis of such an establishment may present thorny problems for it is currently unknown how many inns and taverns have existed within the Rt. 13 Corridor. So far only

three such structures have been identified so far in the survey: one 18th century structure in Kenton Hundred and two 19th century examples in St. Georges Hundred.

Another aspect of the historic settlement pattern is the element of church building placement and the demographics of the supporting congregations. Churches were especially important gathering places for a variety of social events during the seventeenth and eighteenth centuries when they were often one of the first structures erected in the community. Furthermore, ministers were frequently the most literate individuals in the community and thus assumed leadership roles. Church records are valuable sources of demographic information, for they were often the only repository of personal records in newly settled areas which lacked strong local governments with record keeping facilities. These sorts of records should be examined for information on congregation size, areal extent, and the kinds of activities, both secular and ecclesiastical, conducted at the church site.

The black enclave south of Townsend, Delaware, known locally as "New Discovery", presents an opportunity to study a late 19th and 20th century rural ethnic community and its associated social structure. Areas of inquiry should include land tenure, land size and use for each landowner, land transferral practices, subsistence and cash crop growing practices, house type and preference and construction practices, and group identity and cohesion through time.

In sum, by evaluating the site-specific data available from the sites discovered during this study within broader research



questions, the significance of prehistoric and historic archaeological sites can be evaluated. Furthermore, analyses of these data can yield valuable insights on historic human behavior in the Delmarva region through time.

### **MANAGEMENT CONSIDERATIONS**

Detailed statements of cultural resource management considerations are provided in a separate overview, but a few comments can be made here. The listings of known sites in the study area provided in the Appendix, and in the other planning studies, a partial statement of all of the historic sites in the project area alignments and can be viewed as a sample of the sites. For management purposes, it is necessary to use both the projected probability zones for pre-1802 sites and the site listings which are marked on the enclosed maps. The marked probability zones are based on the initial models reported by Custer et al. (1984: Attachment VI) and have been adjusted based on field testing and further analysis (Custer and Bachman 1985; Custer, Bachman, and Grettler 1986).

Table 2 provides an estimate of the percentage of the area of the alignment within each data link that falls within each probability zone and the number of known sites. These percentages and site counts can be used to estimate the relative amount of data recovery that might be required within any given data link. The high probability zones will not only have more sites, but they are also more likely to have more large sites eligible for listing on the National Register of Historic Places.

**TABLE 2: Historic Archaeological Site Counts and Pre-1802 Probability Areas**

Data Link	Site Count	% High Prob. (pre-1802)	% Low Prob (pre-1802)
A1.1	0	10	90
A1	13	80	20
A2	2	--	100
A3	0	--	100
A4	1	30	70
A5	0	10	90
A6	1	--	100
A7	0	25	75
A8	1	10	90
A9	1	40	60
B1	7	50	50
B2	27	100	--
B3	1	100	--
B4	2	100	--
B5	6	100	--
B6	10	--	100
B7	5	100	--
B8	3	100	--
B9	9	100	--
B10	6	100	--
B11	0	50	50
B12	0	50	50
B13	0	--	100
B14	0	--	100
B15	0	20	80
B16	0	100	--
B17	0	100	--
B18	0	100	--
B19	0	100	--
C1	1	90	10
C2	0	80	20
C3	5	20	80
C4	1	60	40
C5	0	50	50
C6	0	40	60
C7	0	100	--
C8	0	60	40
C9	0	50	50
C10	2	30	70
C11	0	80	20
X1	22	10	90
X2	1	20	80
X3	0	10	90
X4	1	20	80

Therefore, the high probability zones are the areas for significant prehistoric cultural resources. All known historic sites will require at least Phase II testing to determine their eligibility for listing on the National Register of Historic Places and many will also require Phase III data recovery excavations.

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## Key to Symbols in Appendix

### Historic Site Type Symbols

AGBLG	-	Agricultural Outbuilding
AGCX	-	Agricultural Complex
AGMCX	-	Agricultural-Mill Complex
AGTEN	-	Agricultural Tenant Dwelling/Farm
BRID	-	Bridge
CHUR	-	Church
DWCX	-	Dwelling Complex
GMCX	-	Gristmill Complex
INDTEN	-	Industrial Tenant
LANOP	-	Landing Operation
MANUFY	-	Manufactory
PEACH	-	Peach House
RRR	-	Railroad-related
RRSTA	-	Railroad Station
SCH	-	School
STRUC	-	Structure
TENANT	-	Tenant House
WKSH	-	Workshop

APPENDIX

HISTORIC ARCHAEOLOGICAL SITES ASSOCIATED WITH STANDING STRUCTURES

SITE NUMBER	DATA LINK	HUNDRED	DATE	FUNCTION	ARCH. POTENT.	SIG.
N5888	A1	APPOQUINIMINK	1868-1893	AGCX	Y	H
N4309	A1	APPOQUINIMINK	1849-1868	RRR	Y	M
N105	A1	SAINT GEORGES	P1849	AGCX	Y	H
N5849	A2	APPOQUINIMINK	L19THC	HOT	Y	M
N5847	A2	APPOQUINIMINK	1880	DWCX	Y	M
K3181	A4	KENTON	P1868	TENANT	Y	H
N5087	B1	RED LION	1849-1868	AGTEN	Y	H
N5053	B1	RED LION	P1849	AGCX	Y	H
N4275	B1	NEW CASTLE	C1920'S	BRID	Y	L
N5086	B1	NEW CASTLE	1849-1868	AGTEN	Y	H
K3151	B10	LITTLE CREEK	P1868	AGCX	Y	H
K3155	B10	LITTLE CREEK	M20THC	SERVST	Y	U
K1771	B10	LITTLE CREEK		DWCX	Y	U
K3164	B10	LITTLE CREEK	P1868	EST	Y	H
K1609	B10	LITTLE CREEK	C1840	AGCX	Y	H
N5181	B2	SAINT GEORGES	P1849	AGCX	Y	H
N5154	B2	SAINT GEORGES	1849-1868	DWCX	Y	H
N5249	B2	RED LION	1849-1868	AGCX	Y	H
N1235	B2	RED LION	1790	AGCX	Y	H
N3947	B2	SAINT GEORGES	1849-1868	AGCX	Y	H
N5187	B2	SAINT GEORGES	P1849	AGCX	Y	H
N1492	B2	RED LION	1800-1825	EST	Y	H
N5042	B2	RED LION	1825-1875	AGCX	Y	H
N5156	B2	SAINT GEORGES	P1849	AGCX	Y	H
N4291	B2	RED LION	1920-1929	BRID	Y	L
N5857	B5	APPOQUINIMINK	P1849	AGCX	Y	H
N6306	B6	BLACKBIRD	C1830	DWCX	Y	H
N6299	B6	BLACKBIRD	E20THC	DWCX	Y	M
N6303	B6	BLACKBIRD	E19THC	SCOSTA	Y	H
N6304	B6	BLACKBIRD	L19THC	DWCX	Y	M
N6300	B6	BLACKBIRD	L19THC	AGCX	Y	M
N6305	B6	BLACKBIRD	1800	DWCX	Y	H
N6309	B6	BLACKBIRD		SCH	U	U
N6302	B6	BLACKBIRD	L19THC	STO	Y	H
N6301	B6	BLACKBIRD	L19THC-E20TH	DWCX	Y	M
N6307	B6	BLACKBIRD		AGCX	U	U
N5265	B7	BLACKBIRD	1868-1893	AGCX	Y	M
N6271	B7	BLACKBIRD	P1849	AGCX	Y	H
K3847	B8	DUCK CREEK	1939	DWCX	Y	L
K3846	B8	DUCK CREEK	1939	DWCX	Y	L
K3826	B9	DUCK CREEK	E20THC	DWCX	Y	M
K3850	B9	DUCK CREEK	L19THC	AGCX	Y	H
K3830	B9	DUCK CREEK	L18THC	AGCX	Y	H
K3851	B9	DUCK CREEK	L19THC	DWCX	Y	M
N5938	C3	BLACKBIRD	P1849	AGCX	Y	H



SITE NUMBER	DATA LINK	HUNDRED	DATE	FUNCTION	ARCH. POTENT.	SIG.
N6232	X1	APPOQUINIMINK	M20THC	DWCX	Y	L
N6216	X1	APPOQUINIMINK		DWCX	U	U
N5880	X1	APPOQUINIMINK	1923	CHUR	Y	L
N6235	X1	APPOQUINIMINK	M20THC	DWCX	Y	L
N6219	X1	APPOQUINIMINK		DWCX	U	U
N6215	X1	APPOQUINIMINK	M20THC	DWCX	Y	L
N6234	X1	APPOQUINIMINK	M20THC	DWCX	Y	L
N6230	X1	APPOQUINIMINK	E20THC	DWCX	Y	M
N6229	X1	APPOQUINIMINK	C1900	DWCX	Y	M
N6228	X1	APPOQUINIMINK	M20THC	DWCX	Y	L
N6227	X1	APPOQUINIMINK	E20THC	DWCX	Y	M
N6231	X1	APPOQUINIMINK	M20THC	DWCX	Y	L
N6226	X1	APPOQUINIMINK	E20THC	DWCX	Y	M
N6218	X1	APPOQUINIMINK		DWCX	U	U
N6222	X1	APPOQUINIMINK	M20THC	DWCX	Y	L
N6221	X1	APPOQUINIMINK	C1950	DWCX	Y	L
N6220	X1	APPOQUINIMINK		DWCX	U	U
N6217	X1	APPOQUINIMINK	M20THC	DWCX	Y	L
N6223	X1	APPOQUINIMINK	E20THC	DWCX	Y	M
N6224	X1	APPOQUINIMINK	1920-1935	SCH	Y	L
N6225	X1	APPOQUINIMINK	E20THC	DWCX	Y	M
K238	X4	DUCK CREEK	1774	AGMCX	Y	H

POTENTIAL ARCHAEOLOGICAL SITES NOT ASSOCIATED WITH  
STANDING STRUCTURES

SITE NUMBER	DATA LINK	HUNDRED	DATE	FUNCTION	SITE POTENT.	SIG.
155	A1	SAINT GEORGES	1849-1868	DWCX	Y	H
42	A1	RED LION	1849-1868	AGTEN	Y	H
972	A1	SAINT GEORGES	1868-1893	RRSTA	Y	M
86	A1	SAINT GEORGES	1849-1868	AGTEN	Y	H
950	A1	SAINT GEORGES	1849-1868	AGTEN	Y	H
225	A1	APPOQUINIMINK	P1849	AGCX	Y	H
942	A1	SAINT GEORGES	1868-1893	AGTEN	Y	H
156	A1	SAINT GEORGES	1849-1868	DWCX	Y	H
904	A1	APPOQUINIMINK	1868-1893	AGTEN	Y	M
41	A1	RED LION	1849-1868	AGTEN	Y	H
716	A6	EAST DOVER	P1868	STRUC	Y	H
740	A8	NORTH MURDERKIL	P1868	AGCX	Y	H
759	A9	SOUTH MURDERKIL	P1802	MMCX	Y	H
1032	B1	RED LION	1849-1868	AGTEN	Y	H
1034	B1	RED LION	1849-1868	AGTEN	Y	H
1033	B1	RED LION	1849-1868	AGTEN	Y	H
596	B10	LITTLE CREEK	P1868	DWCX	Y	H
37	B2	RED LION	1849-1868	AGTEN	Y	H
116	B2	SAINT GEORGES	1849-1868	AGCX	Y	H
103	B2	SAINT GEORGES	P1849	AGTEN	Y	H
186	B2	SAINT GEORGES	P1849	SCH	Y	M

SITE NUMBER	DATA LINK	HUNDRED	DATE	FUNCTION	SITE POTENT.	SIG.
113	B2	SAINT GEORGES	P1849	STO	Y	H
33	B2	RED LION	P1868	AGTEN	Y	H
187	B2	SAINT GEORGES	1849-1868	DWCX	Y	H
37	B2	RED LION	1849-1868	AGTEN	Y	H
189	B2	SAINT GEORGES	1849-1868	DWCX	Y	H
188	B2	SAINT GEORGES	1849-1868	STRUC	Y	H
1041	B2	RED LION	1849-1868	AGTEN	Y	H
36	B2	RED LION	P1849	AGTEN	Y	H
1042	B2	RED LION	1868-1893	AGTEN	Y	M
35	B2	RED LION	P1849	AGTEN	Y	H
38	B2	RED LION	P1849	AGCX	Y	H
102	B2	SAINT GEORGES	P1849	BRID	Y	M
122	B2	SAINT GEORGES	1849-1868	AGCX	Y	H
914	B3	SAINT GEORGES	1868-1893	AGTEN	Y	M
847	B4	APPOQUINIMINK	1849-1868	PO	Y	H
1052	B4	APPOQUINIMINK	1849-1868	WKSH	Y	H
842	B5	APPOQUINIMINK	1849-1868	AGTEN	Y	H
843	B5	APPOQUINIMINK	1868-1893	DWCX	Y	M
886	B5	APPOQUINIMINK	1849-1868	AGCX	Y	H
844	B5	APPOQUINIMINK	1868-1893	DWCX	Y	M
285	B5	APPOQUINIMINK	P1849	AGTEN	Y	H
792	B7	BLACKBIRD	1868-1893	AGCX	Y	M
340	B7	BLACKBIRD	P1849	AGTEN	Y	H
405	B7	BLACKBIRD	P1849	AGCX	Y	H
923	B8	DUCK CREEK	P1868	AGTEN	Y	H
448	B9	DUCK CREEK	P1868	AGTEN	Y	H
447	B9	DUCK CREEK	P1868	SCH	Y	M
463	B9	DUCK CREEK	P1868	AGCX	Y	H
475	B9	DUCK CREEK	P1868	AGTEN	Y	H
476	B9	LITTLE CREEK	1802-1850	GMCX	Y	H
284	C1	APPOQUINIMINK	P1849	AGCX	Y	H
648	C10	LITTLE CREEK	P1868	AGTEN	Y	H
690	C10	EAST DOVER	P1868	CHUR	Y	M
425	C3	BLACKBIRD	1849-1868	AGCX	Y	H
327	C3	BLACKBIRD	1849-1868	AGCX	Y	H
325	C3	BLACKBIRD	1849-1868	AGTEN	Y	H
326	C3	BLACKBIRD	P1849	SCH	Y	M
416	C4	BLACKBIRD	1849-1868	AGCX	Y	H
327	X1	BLACKBIRD	1849-1868	AGCX	Y	H
327	X2	BLACKBIRD	1849-1868	AGCX	Y	H