

CULTURAL RESOURCES SURVEY



Maryland Transit Administration
Dunkirk Park and Ride Project

Dunkirk, Calvert County, Maryland



July 2008

revised January 2009

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Engineers & Planners
Since 1946 **Taylor**

**CULTURAL RESOURCE SURVEY OF
DUNKIRK PARK AND RIDE
DUNKIRK, CALVERT COUNTY, MARYLAND**

PREPARED FOR

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ABSTRACT

A cultural resources survey for the Dunkirk Park and Ride project in Calvert County was conducted by McCormick Taylor, Inc. in June and July 2008. The project involves the construction of a 491-space park and ride facility on approximately 15 acres. The project is located in a woodlot situated on the east side of MD 4 just north of Town Center Boulevard. The primary goal of the survey was to locate and identify any NRHP-eligible or -listed historic architectural or archeological resources that may be affected by the proposed project. A project effects analysis was conducted for all NRHP-eligible or -listed resources identified within the project's Area of Potential Effect (APE).

The historic architectural survey involved the examination of two resources, the Howes Barn (CT-1316) and the Ewing Property (CT-1317). The Howes Barn contains a 20th century tobacco barn. The Ewing Property contains three structures, Ewing Barn, Ewing Bungalow, and Ewing Barn South. Ewing Barn and Ewing Barn South are 20th century tobacco barns. Ewing Bungalow is a 20th century dwelling. Based on the study results, the Maryland Historical Trust has determined that the Howes Barn and Ewing Property are unable to illustrate significance within any of the National Register Criteria for Evaluation due to the overall deteriorated condition of the standing structures on both properties. Pursuant to their comment letter issued on October 21, 2008, it is the MHT's opinion that the Howes Barn and Ewing Property are not eligible for listing in the National Register of Historic Places. Based on the results of a project effects analysis, it has been concluded that the project will have no effect on any NRHP-listed or eligible historic architectural resources.

Two archeological sites, the Dunkirk P&R 1 Site (18Cv491) and Dunkirk P&R 2 Site (18Cv492) were identified within the project APE. Both sites are prehistoric sites that contain intact, archaeological deposits with excellent subsurface integrity. These deposits are contained in unplowed buried A and B horizons. Both sites are situated on slight rises that abut base of a hillslope on a stream terrace. Both sites have the potential for yielding significant archaeological information from good stratigraphic contexts than can be used to explore prehistoric technologies, resource utilization, and habitation activities at low-order, interior wetland settings of Maryland's Western Shore. Both sites are recommended NRHP-eligible under Criterion D.

The Dunkirk P&R 1 Site (18Cv491) is the intact remains of a small transient base camp or procurement/processing locale of unknown temporal context. The site is of archeological interest because it presents an opportunity to study a small, short-term site with good stratigraphic contexts. The small size of the site and its limited artifact assemblage also suggest the recurrent use of the site was minimal, if not limited to a single occupation. Because of its small size, subsurface stratigraphic integrity, and low frequency of reuse, the site has the capacity to provide a complete and sound dataset that will allow accurate analysis of the activities performed, technologies employed, and resources utilized at the site.

The Dunkirk P&R 2 Site (18Cv492) is the remains of an Early Woodland-Middle Woodland Period, multi-component, base camp. The site was identified and delineated based on the recovery of thirty-nine prehistoric artifacts, the majority of which are Accokeek and Mockley ceramic sherds. Based on the vertical distribution of the ceramic sherds in an intact soil stratigraphy, the site may also be stratified. Information recovered from the site will provide new information on Early-Middle Woodland base camps at small, low-order, interior wetland settings of Maryland's Western Shore.

Per the current design scheme, both sites will be adversely affected by the proposed project. If avoidance is not feasible, treatment measures will be necessary to mitigate adverse project effects. Data recovery excavations are a recommended treatment measure for these sites.

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I. INTRODUCTION

This report presents a discussion of the methods and results of a cultural resources survey for the Dunkirk Park and Ride project (hereafter referred to as Dunkirk P&R), which is located in Dunkirk, Calvert County, Maryland (**Figure 1, Figure 2, and Figure 3**). **Figure 4 and Figure 5** present representative of photographs of the project area.

The goal of the survey was to locate and identify any significant cultural resources, historic architectural or archeological, that may be affected by the proposed project. The cultural resources survey was performed in June-July 2008 by McCormick Taylor, Inc. for the Maryland Transit Administration (MTA).

The cultural resources survey was conducted in accordance with state and federal standards and guidelines as set forth in:

- Maryland Historical Trust's (MHT) *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994); *Technical Update No. 1 Conservation Standards* (July 2005); and *General Guidelines for Compliance-Generated Determinations of Eligibility* (2002)
- MHT's Office of Research, Survey, and Registration (ORSR) guidelines
- Maryland Historical Trust Act of 1985, as amended, State Finance and Procurement Article §§ 5A-325 and 5A-326 (formerly Article 83B) of the Annotated Code of Maryland
- *Archeology and Historic Preservation: The Secretary of the Interior's Standards and Guidelines* (FR 48:44716-44742) (Sept. 1983)
- Advisory Council on Historic Preservation Implementing Regulations 36 CFR Part 800 -- Historic Properties (as amended)

The cultural resources survey included both historic architectural and archeological surveys.

A. Project Description, Need, and History

The proposed Dunkirk Park and Ride project entails the construction of a 491-space park and ride facility on an 85-acre parcel of land known as the Eisenman property (**Figure 2, Figure 3**). The Eisenman property is located at the northern edge of the Dunkirk Town Center and extends on both sides of MD 4.

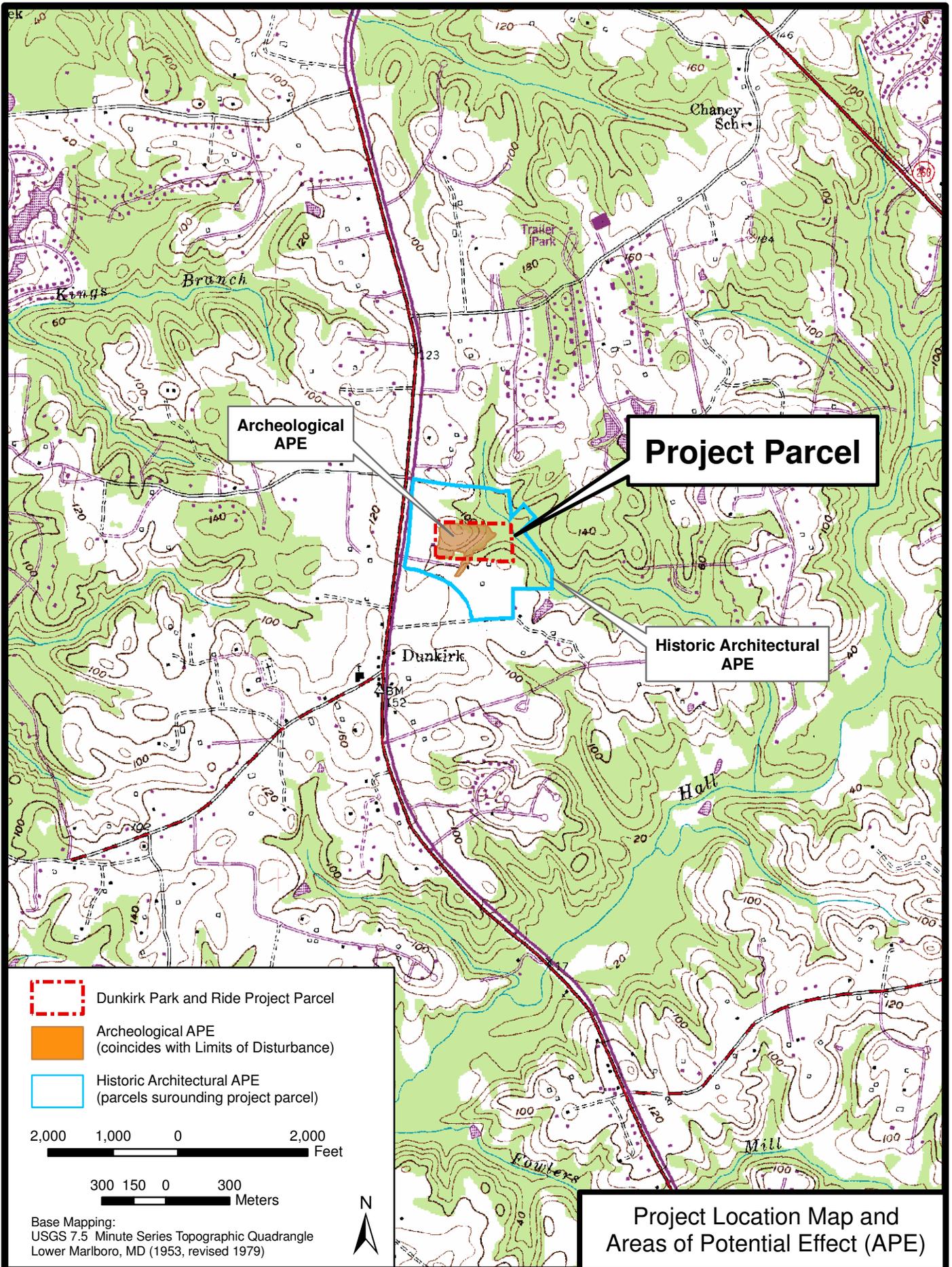
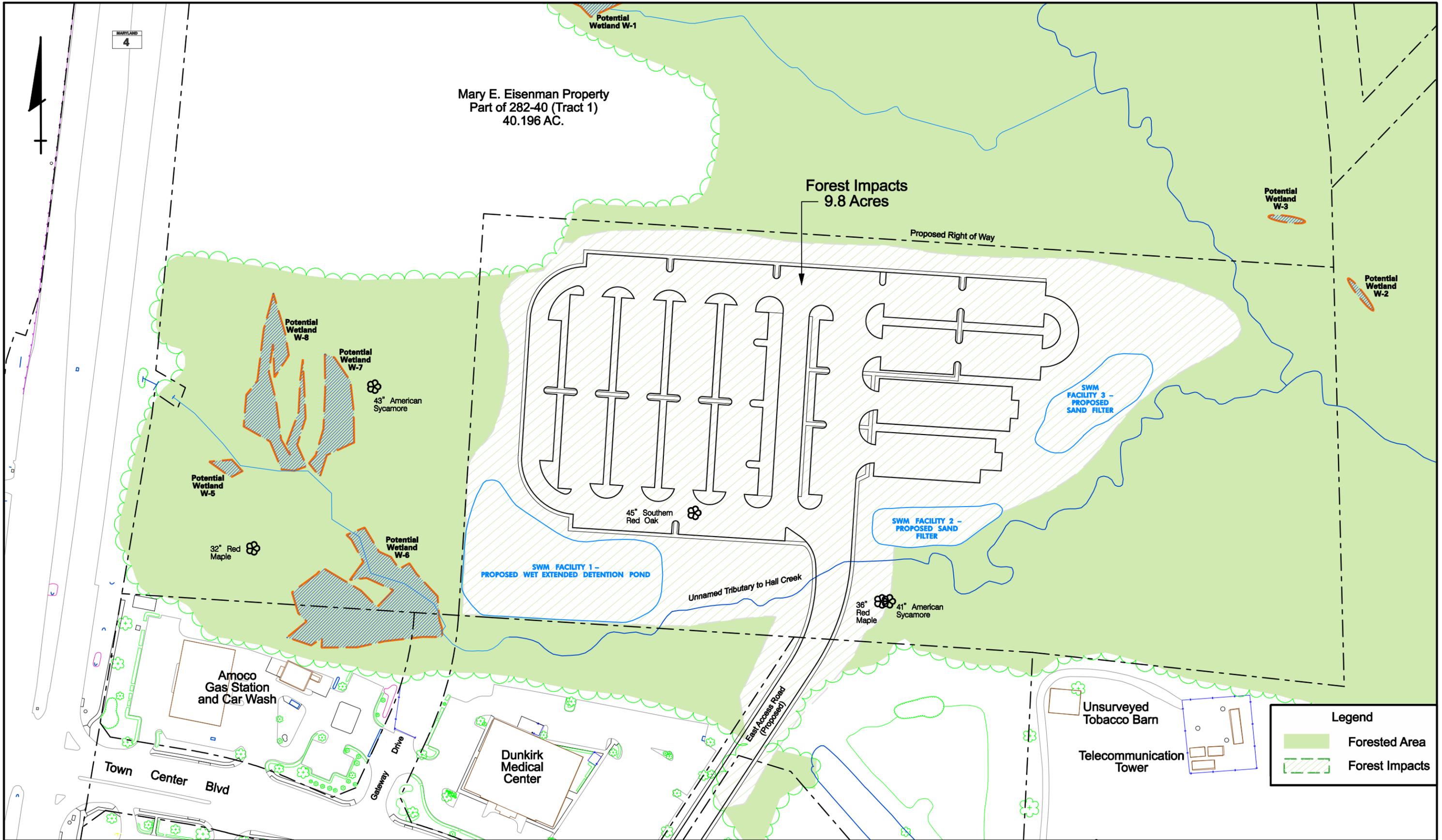


FIGURE 1



MARYLAND
4

Mary E. Eisenman Property
Part of 282-40 (Tract 1)
40.196 AC.

Forest Impacts
9.8 Acres

Proposed Right of Way

Amoco Gas Station
and Car Wash

Dunkirk Medical
Center

Unsurveyed
Tobacco Barn
Telecommunication
Tower

Legend

- Forested Area
- Forest Impacts



MARYLAND TRANSIT ADMINISTRATION

MAY, 2008
60' 0 60' 120'

PROPOSED DUNKIRK
PARK & RIDE
CALVERT COUNTY, MARYLAND

FIGURE 2

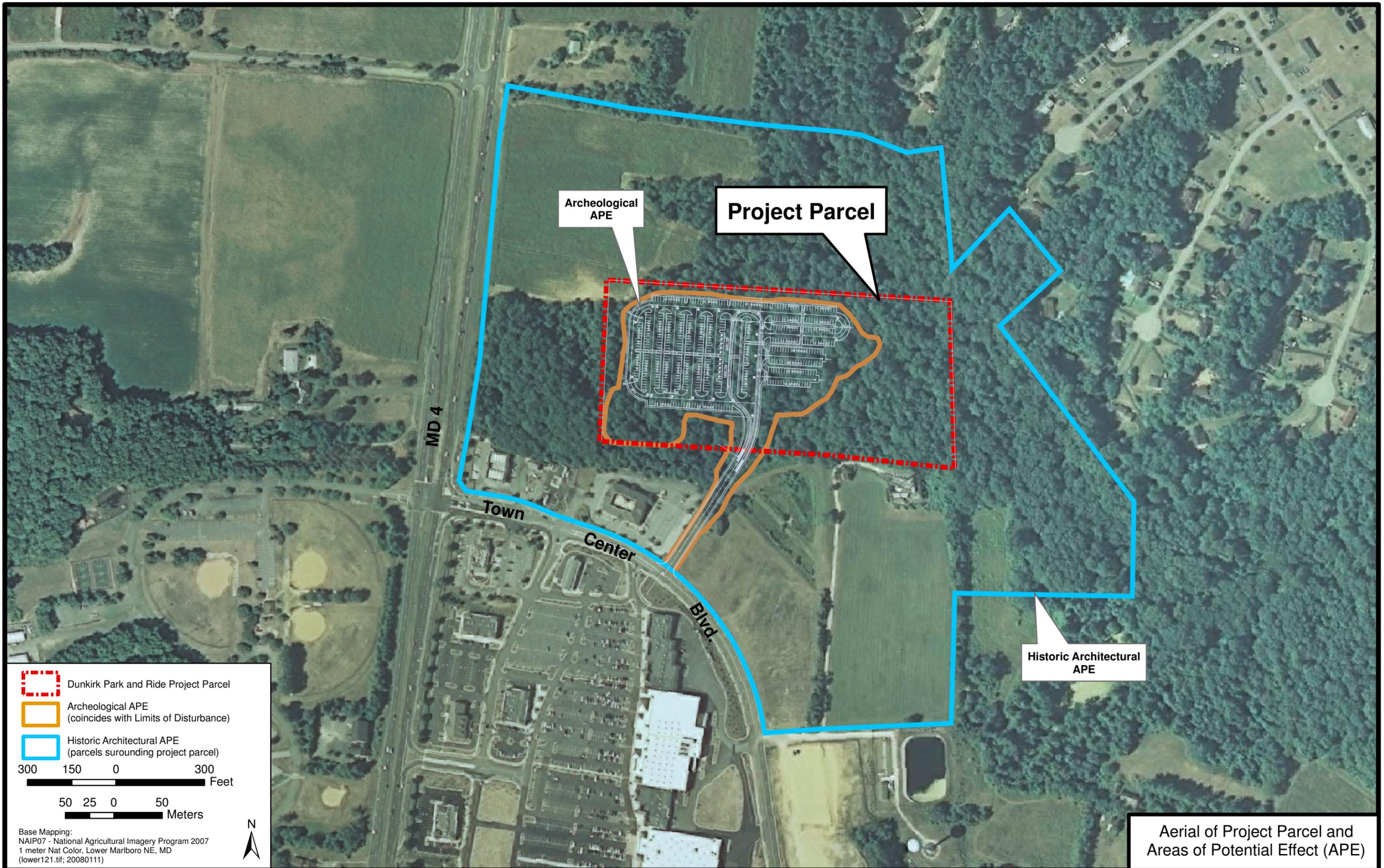


FIGURE 3



Photograph taken facing east.
June 2008

View Along Stream Terrace

FIGURE 4



Photograph taken facing north.
June 2008

View of Hill Slope
from Stream Terrace

FIGURE 5

The proposed facility would be located on approximately 15 acres in the southeast corner of the portion of the Eisenman property on the east side of MD 4.

The proposed facility would be accessible to buses, automobiles, pedestrians, and bicyclists. The location near both MD 4 and the Dunkirk Town Center would provide a highly visible location, convenient to both current park and ride patrons and the MTA's No. 902 Commuter bus line, which operates along MD 4. A preliminary concept for the design of the facility is currently being developed. The site design for the concepts would incorporate amenities including bus loading and unloading areas, passenger shelters, lighting, bicycle racks, landscaping, and pedestrian walkways. In addition to construction of the facility, the proposed project would also include the construction of stormwater management facilities to meet all of the Maryland Department of the Environment (MDE) standards and the construction of an access road between Town Center Boulevard and the proposed park and ride lot.

Since 1989, the MTA has provided express bus service for commuters living in Southern Maryland and traveling to the Washington, D.C. area. The current service level consists of a total of 210 trips on eight bus routes. Annual ridership on these bus routes has increased by more than 150 percent during the five-year period between 2000 and 2005. Because Southern Maryland is one of the fastest growing regions in the State, demand for commuter bus service continues to increase.

The MTA's No. 902 Commuter bus line starts from either St. Leonard or the Calvert County Fairgrounds and continues on to Prince Frederick, Sunderland, and Dunkirk. Parking demand at nearly all the park and ride facilities currently served by this line, including Dunkirk and lots adjacent to Dunkirk, exceeds capacity. MTA's past and present parking agreements have included arrangements under which spaces are leased, shared, or otherwise temporary, thus having the potential for being unreliable, uneconomical, or disrupting service. To avoid such uncertain circumstances at the Dunkirk Park and Ride location, the MTA is proposing to provide an adequate park and ride facility to serve the long term needs of the commuter bus patrons of Southern Maryland.

B. Establishment of the Project Area of Potential Effect (APE)

Pursuant to Federal Regulations for the "Protection of Historic Properties", 36 CFR Part 800.16(d), the Area of Potential Effect (APE) is defined as "the geographical area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking".

In accordance with Section 106, a project APE was established in consultation with the MTA and the MHT. Separate project APEs were established for historic architectural and archeological resources.

For the purposes of this project, both the historic architectural and archaeological studies focused on addressing cultural resource issues relevant to the proposed construction of the Dunkirk Park and Ride and associated stormwater management facilities. The project APEs were identified based on existing design information and in consultation with project team members.

For historic architectural resources, the proposed APE encompasses the 15-acre project site and the properties that are immediately adjacent to it (including the remaining portion of the Eisenman property located east of MD 4 (**Figure 1, Figure 3**)). Although the existing 85-acre Eisenman property encompasses land on both sides of MD 4, it is recognized that the existing highway is a physical barrier that separates the east and west halves of this property. Consequently, the existing MD 4 right-of-way line was identified as the western boundary of the proposed APE. The boundaries of the proposed APE were identified in recognition that the adjacent parcels may be introduced to new physical, audible, visual, or atmospheric effects by the proposed project.

For archeological resources, the project's maximum Limits of Disturbance (LOD), both vertical and horizontal, were established as the bounds of the project APE (**Figure 1, Figure 3**). The LOD was identified by taking into consideration the proposed design scheme, potential stormwater management areas, and the anticipated limits of grading. The bounds of the APE were established with the understanding that while the archeological survey would examine the overall archeological nature of the project parcel, the survey would focus on addressing cultural resource management issues in accordance with the limits of proposed work (horizontal and vertical).

C. Report Structure

This report contains the following sections: Environmental Setting (II), Regional Prehistory (III), Regional History (IV); Background Research (V), Research Design and Methodology (VI), Results of Historic Architectural Survey (VII), Results of Archaeological Survey (VII), and Conclusions and Recommendations (VIII). The technical narrative is followed by References Cited and two appendices. **Appendix I** and **Appendix II** contain an Artifact Catalog by Provenience and the qualifications of the investigators, respectively. Copies of MHT Historic Architectural Survey forms and Archeological Survey forms are on file at the MHT.

The project's research team consisted of several key McCormick Taylor cultural resource researchers. Barbara Silber served at the team's Principal Investigator. Macon Coleman served as project's the lead Archeologist and Field Director. Jason Smith served as the project's lead Architectural Historian and Historian. Keith Doms served as the project's Laboratory Director. Additional field support was provided by archeological and laboratory technicians.

II. ENVIRONMENTAL SETTING

The project APE is located on the Western Shore portion of Maryland's Coastal Plain physiographic province (**Figure 6**). The project APE falls within Maryland Archeological Unit (MARU) 9: Estuarine Patuxent Drainage (**Figure 7**). Specifically, the project APE is located in the South River watershed.

A. Geological Setting

Bounded by the Atlantic Ocean to the east and foothills of the Appalachian Mountains that define the Piedmont physiographic province to the west, the Coastal Plain encompasses both Maryland's Eastern and Western Shores. The landscape therein is characterized by a low topographic relief that ranges from gently rolling to nearly level sandy plains. Numerous interior tidal freshwater swamps, which drain into saltwater marshes toward the shoreline, are also present throughout the Coastal Plain. Waterways tend to be low energy. In general, drainage in the Coastal Plain is relatively poor. Soils of the Coastal Plain consist of fine sands and loams that are underlain by unconsolidated deposits of quarternary, tertiary, and cretaceous silts, sands, clays, and marls (www.mgs.dnr.gov; Widmer 1964). Silty to sandy soils interspersed with large surface deposits of cobbles and gravels are common throughout the province. Although loam, clay, and marl deposits can also be found throughout the Coastal Plain, these deposits tend to be found toward more interior portions of the physiographic province. Consequently, the more inland portions of Maryland's Coastal Plain tend to be more fertile. Maryland's Coastal Plain is part of a larger physiographic province, which is divided into various sections. In its entirety, the Coastal Plain spans much of the eastern seaboard of the United States.

B. General Soil Description

Figure 8 presents a map of the soil types in and around the project APE. This figure presents a digital overlay of the current United States Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS)'s Soil Survey Geographic database (SSURGO V3) on base mapping from the 1971 edition of the *Soil Survey of Calvert County, Maryland* issued by the USDA/Maryland Agricultural Experiment Station (MAES)¹.

¹ **Figure 8** was created by geo-referencing USDA/MAES (1971) base mapping with modern USGS mapping. Please note that the figure is provided for basic illustration purposes. It is commonly recognized that at close ranges, the ability to conduct accurate comparative spatial analysis of landscape features is difficult due to discrepancies in scale, image quality, and map projection, even with the assistance of GIS technologies.

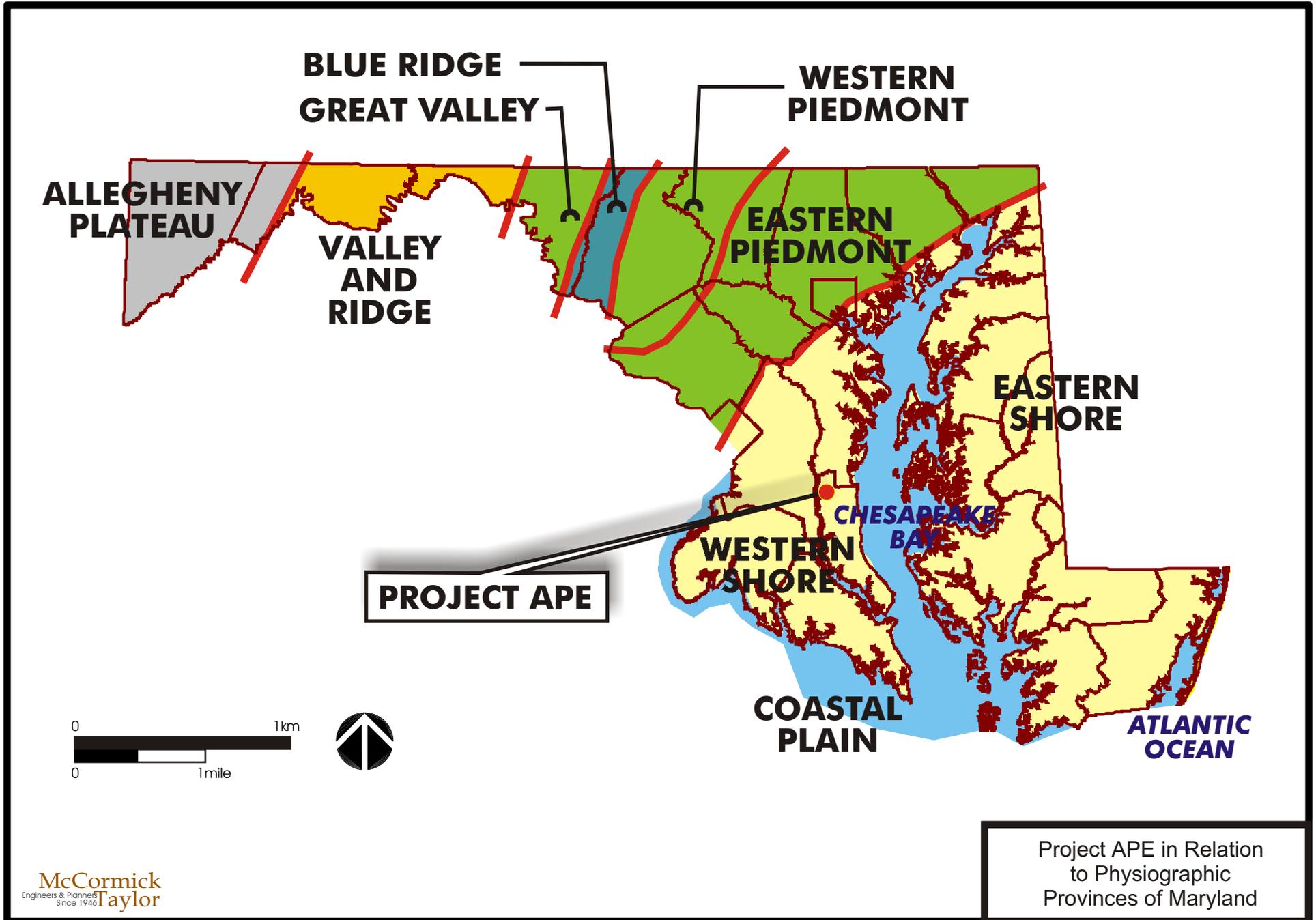
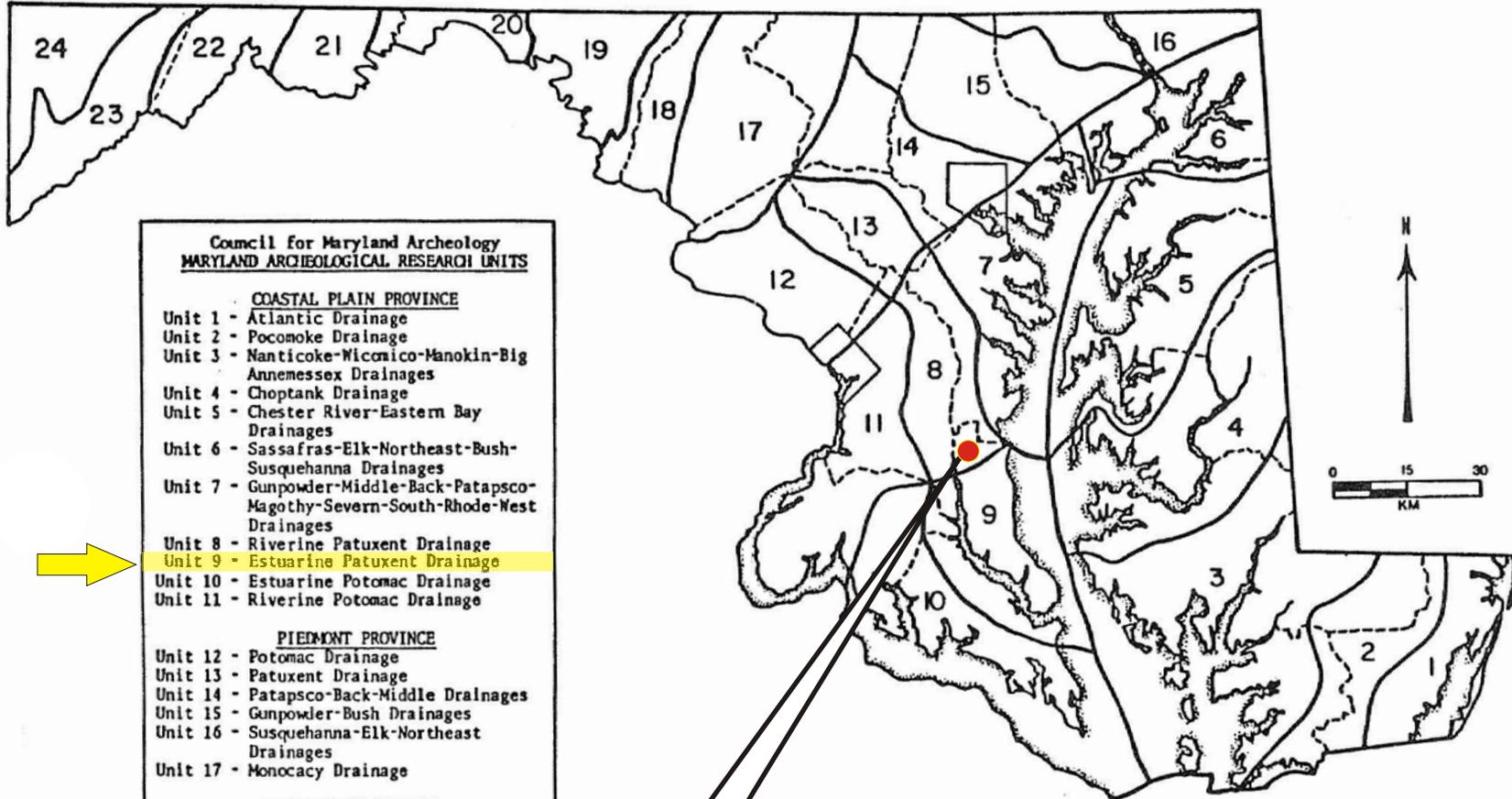


FIGURE 6



- Council for Maryland Archeology
MARYLAND ARCHEOLOGICAL RESEARCH UNITS**
- COASTAL PLAIN PROVINCE**
- Unit 1 - Atlantic Drainage
 - Unit 2 - Pocomoke Drainage
 - Unit 3 - Nanticoke-Wiconico-Manokin-Big Annemessex Drainages
 - Unit 4 - Choptank Drainage
 - Unit 5 - Chester River-Eastern Bay Drainages
 - Unit 6 - Sassafras-Elk-Northeast-Bush-Susquehanna Drainages
 - Unit 7 - Gunpowder-Middle-Back-Patapsco-Magothy-Severn-South-Rhode-West Drainages
 - Unit 8 - Riverine Patuxent Drainage
 - Unit 9 - Estuarine Patuxent Drainage
 - Unit 10 - Estuarine Potomac Drainage
 - Unit 11 - Riverine Potomac Drainage
- PIEDMONT PROVINCE**
- Unit 12 - Potomac Drainage
 - Unit 13 - Patuxent Drainage
 - Unit 14 - Patapsco-Back-Middle Drainages
 - Unit 15 - Gunpowder-Bush Drainages
 - Unit 16 - Susquehanna-Elk-Northeast Drainages
 - Unit 17 - Monocacy Drainage
- APPALACHIAN PROVINCE**
- Unit 18 - Catoclin Creek Drainage
 - Unit 19 - Antietam Creek-Conococheague Creek Drainages
 - Unit 20 - Licking Creek-Tonoloway Creek-Fifteenmile Creek Drainages
 - Unit 21 - Town Creek Drainage
 - Unit 22 - Evitts Creek-Georges Creek Drainages
 - Unit 23 - Potomac-Savage Drainages
 - Unit 24 - Youghiogheny-Casselmann Drainages

PROJECT APE

Maryland Archeological Research Units.

One should consult U.S. Geological Survey quadrangles to determine river drainages when project areas lie near the borders of Research Units.

Source: Shaffer and Cole (1994)

Project APE in Relation to Maryland Archeological Research Units (MARU)

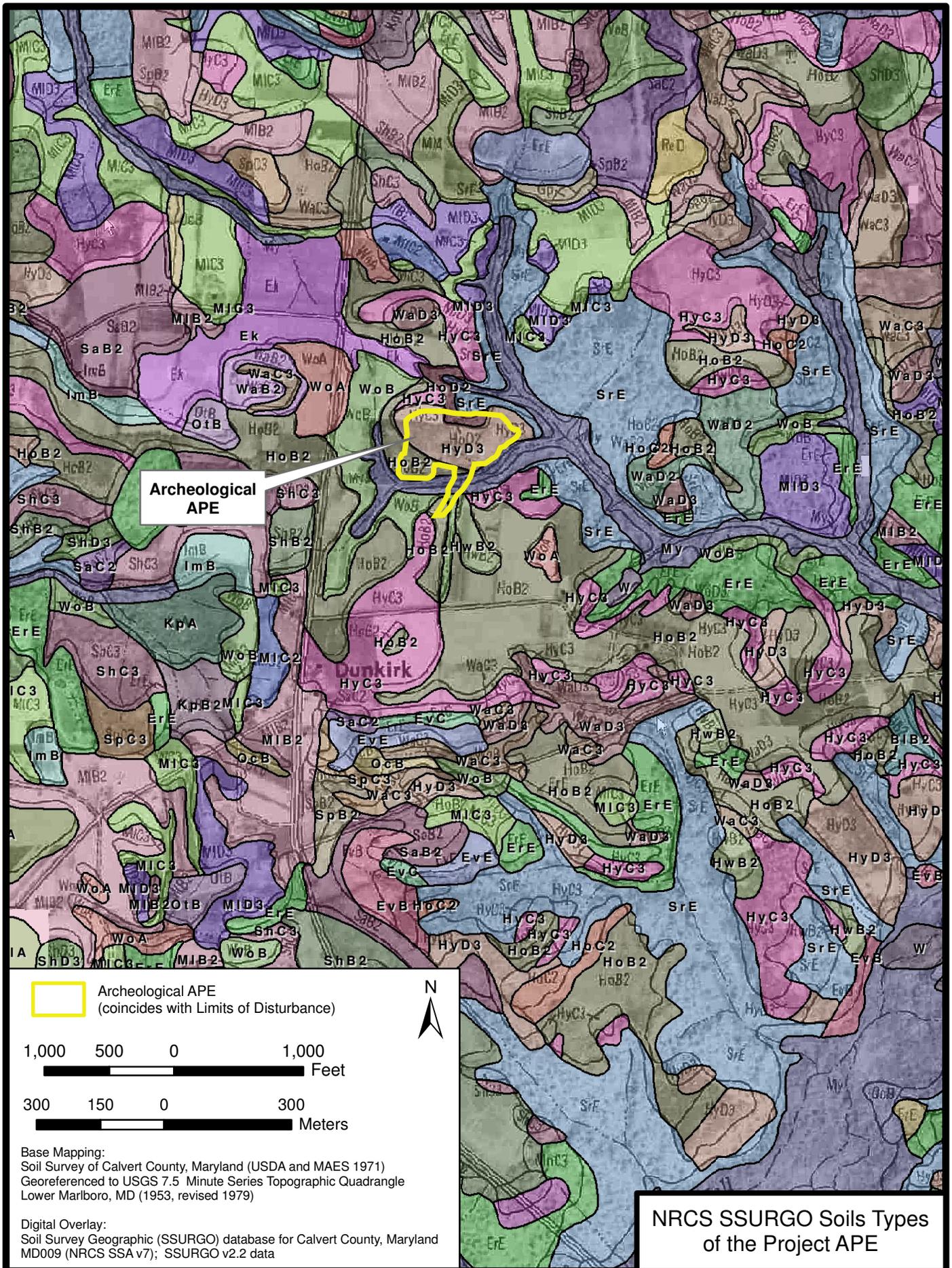


FIGURE 8

Since the majority of archeological literature for Calvert County has traditionally been based on USDA/MAES (1971) soil mapping, the following discussion provides soil descriptions that have been summarized from both the USDA/MAES (1971) and SSURGO soil classification systems. Although there are slight differences between the earlier USDA/MAES and current SSURGO systems elsewhere in the state, the soil mapping for the project APE is nearly identical in both the systems.

The presence of specific soil types within the archeological project APE are presented in **Table 1**.

**TABLE 1:
Soils Mapped by the USDA/MAES and USDA-NRCS in the Project APE**

| Soil Survey Mapping | Location within Archeological APE | Environmental Setting (within APE) |
|--|-----------------------------------|--|
| Howell fine sandy loam, 2%-6% slope, moderately eroded (HoB2) | southwest corner | top of stream terrace along unnamed tributary of Halls Creek |
| Howell fine sandy loam, 6%-12% slope, moderately eroded (HoD2) | north end | Upland setting (hill top, upper hillslope) |
| Howell clay loam, 12%-20% slope, severely eroded (HyD3) | west and east halves | lower hillslope and interior portions of stream terrace along unnamed tributary of Halls Creek |
| Mixed Alluvial Land (My) | southern and eastern edges | waterside edge of stream terrace and stream bed of unnamed tributary of Halls Creek |

Soils within the archeological project APE are noted as those of the Sassafrass-Marr-Westphalia association (USDA/MAES 1971). As mapped, soil transitions closely coincide with the changes in the terrain.

Howell soils are the primary soil series within the project APE. Overall, soils of the Howell series are associated with upland settings. These soils consist of deep, well-drained, fine-to-medium grained sandy loams that have formed in old, fine-textured sediments. Small amounts of glauconite (greensand) and diatomatic earth are not uncommon. Surface soils consist of a dark yellowish-brown fine-grained sandy loam atop a sticky, strong-brown, sandy clay loams, clay loams, and silty clays. These soils compose the upper depths of the subsoil. The lower subsoil usually lies around sixty inches (1.52 m) below the surface, and consists of pale-olive, clay mottled with brighter colors. Two Howell sandy loam variants, HoB2 and HoD2, are found within the project APE. Variant HoD2 is found on an upland setting at the north end of APE. Variant HoB2 is present in the southwest corner of the project APE, which is located on a stream terrace.

In landscapes that are susceptible to erosion and experience extensive run-off, the upper depths of the profile tends to have a more clayey loam character. Most of the project APE is composed of a Howell clayey loam. This variant, HyD3, is found on the various steep slopes that drain into the stream. Howell variants such as HyD3 are results of surface soils that have developed from former subsoils after original surface has washed away. Although hard when dry, these soils tend to be sticky and prone to puddling when wet.

Soils immediately surrounding the stream that runs along the south and east edges of the project parcel are classified as Mixed Alluvial Land (My). The presence of this soil type is unsurprising given the nature of the terrain. Mixed Alluvial Land tends to be found in floodplains and along drainages. This soil type is wet, poorly drained, and highly susceptible to flooding. In general, profiles are composed of irregular deposits of accumulated sands, gravel, silts, and clays.

C. Project Setting

The project parcel (and archeological APE) is located in a wooded lot that runs along the north side of the aforementioned stream (**Figure 3**, **Figure 4**, and **Figure 5**). The project parcel stretches across a landscape with dramatic changes in elevation and topography, which gives it a somewhat undulating character. Most of the changes in terrain are results of natural erosion and flooding processes.

The stream, an unnamed tributary of Halls Creek, runs through a deeply incised channel. The top of the stream bank is located on nearly-level terrace. The landward (north/northeast) side of the terrace runs along the toe of slope of the upland setting, which is a small hill. Steep slopes, the southern face of the hill, rise sharply northward at irregular angles above the terrace. Severe erosion of the hill is quite apparent. Across the hill, bluffs, benches, high plateaus, and small knolls are separated by erosional drainages and gullies. The top of the hill has eroded into a narrow crest. Evidence of past occasional flooding and scouring along the stream is also visible in the exposed faces of the stream channel.

The project APE is forested with a mix of deciduous trees and assorted scrub/shrub species. Most of the vegetation is clearly secondary growth; however, an occasional older tree (>50 years old) can be found therein. Ground covering along the stream is composed of wetland vegetation. Stunted forest and brush can also be found along its peripheries. Some surface evidence of previous modern, human subsurface disturbance (e.g., filling) and refuse dumping is visible throughout the project APE. These past disturbances were likely associated with agricultural activities in the fields to the north and southeast of the project APE.

III REGIONAL PREHISTORY

The prehistory of the Middle Atlantic region is commonly divided into three time periods; the Paleo-Indian Period (ca. 12,000 B.C. to 8,000 B.C.), the Archaic Period (ca. 8,000 B.C. to 1000 B.C.), and the Woodland Period (ca. 1,000 B.C. to A.D. 1600). Similarities and differences regarding subsistence strategies, settlement patterns, paleoenvironments, and technologies serve as criteria for defining these time periods.

In consideration of these criteria, Early, Middle, and Late sub-periods have frequently been identified within the Archaic and Woodland Periods. Often these sub-periods serve as a basis for better understanding the gradual transition from one time period into another. The following discussion of the regional prehistory of Maryland and its Eastern Shore represents a summary based on current prehistoric archeological research, as well as regional and statewide-established prehistoric research contexts, specifically Custer (1983, 1986, 1989, 1994); Dent (1995); Beckermann (1993); Steponaitis (1983); Wanser (1982); Davidson (1981), and Pogue and Smolek (1985).

While it is important to note that the transition from one time period to another is a gradual process and often varies from one environmental setting to another, the regional prehistory of Maryland is divided into four specific time spans; the Paleo-Indian/Early Archaic Period (ca. 12,000 B.C. to 6,500 B.C.), the Middle Archaic Period (ca. 6,500 B.C. to 3,000 B.C.), the Late Archaic/Early-Middle Woodland Period (ca. 3,000 B.C. to A.D. 1000), and the Late Woodland Period (ca. A.D. 1000 to A.D. 1650). A fifth time period, the Initial European Contact and Settlement Period (A.D. 1600 to A.D. 1645), which focuses on the interaction of Native American Indian populations with arriving European groups, will also be presented in this discussion because it marks the beginning of the decline of prehistoric lifeways in the Middle Atlantic Region. The Initial European Contact and Settlement Period coincides with the beginning of the historic context known as the Contact and Settlement Period (A.D. 1608 to A.D. 1770).

A. Paleo-Indian Period/Early Archaic Period (ca. 12,000 B.C. to 8,000 B.C.)/(ca. 8,500 B.C. to 6,500 B.C.)

The Paleo-Indian Period marks the beginning of human habitation in the Mid-Atlantic Region. The Paleo-Indian Period began around the end of the Pleistocene and ends with the onset of the Holocene. The transition between the Pleistocene and Holocene is marked by drastic climate changes. These changes consisted of shifts from cold glacially-influenced conditions of the Pleistocene Periods to alternating wet and dry climates, which ushered in the Holocene Period. The adaptations made by human populations to these fluctuating conditions characterizes the first part of this time frame, the Paleo-Indian Period. These

populations practiced a hunter-gatherer subsistence with animal resources comprising much of their diet. Several cold-weather faunal species such as the now-extinct mastodon, the since-migrated moose, as well as smaller, still present species, such as white-tailed deer, were supported by the various deciduous, boreal, and grassland environments which were once found throughout the Middle Atlantic region (Custer 1983, 1989; Marshall 1982).

Overall, throughout the time span of the Paleo-Indian/Early Archaic Period, settlement patterns remained relatively constant. Nomadic groups comprised of multiple or single family bands that focused on attractive hunting locales, such as watering holes, have been hypothesized (Custer 1983, 1986, 1989, 1996). Throughout the Middle Atlantic region, identified Paleo-Indian and Early Archaic site types have included quarry sites, hunting sites, base camps, as well as various associated support sites (Custer 1983, 1986, 1989, 1996).

Paleo-Indian tool kits reflect an emphasis on the procurement and processing of animal resources. Preferences for high quality lithic materials, such as chert and jasper, are apparent in lithic artifact assemblages recovered from Paleo-Indian sites. In addition, stone tools in these artifact assemblages show evidence of great care in stone tool maintenance and resharpening. One of the most distinctive artifacts associated with the Paleo-Indian Period is the fluted point, characterized by a channel which is removed from the center of the base to the center, or distal end, of the point.

One of the best known Paleo-Indian sites in the Chesapeake region is the Williamson Site, which is located on the western edge of Virginia's inner Coastal Plain in Dinwiddie County. Since its discovery in 1949, the Williamson Site has been subjected to extensive research (McCary 1983; Callahan 1979; McAvoy 1992; Dent 1995). In addition to debitage, the site has yielded 175 fluted bifaces as well as assorted scrapers, spokeshaves, preforms, drills, graters, perforators, wedges, denticulates, beaks, hammerstones, and anvils (Callahan 1979; McCary 1983; McAvoy 1992, Dent 1995). The majority of the knapped artifacts are made from Cattail Creek Chalcedony (a chert), a locally available material. Based on the excavation results, it is believed that the site was subjected to recurrent use throughout the Paleo-Indian Period (Dent 1995).

Although fluted points have been recovered throughout Maryland, unfortunately, many of these artifacts tend to represent isolated surface finds (Steponaitis 1983; Dent 1995). Nonetheless, two archeological sites in Maryland's Coastal Plain, the Paw Paw Cove Site Complex and the Higgins Site provide insight on the Paleo-Indian Period of this portion of Maryland, as well the state as a whole.

The Paw Paw Cove Site Complex is located on the eastern shore of Maryland in Talbot County. The complex consists of three main find spots (18TA211, 18TA212, and 18TA213) along a 500-meter stretch of the Chesapeake Bay shoreline. The site complex was once situated in an upland-type setting at the headwaters of two small tributaries; however, the site complex currently lies at the edge of the Chesapeake Bay due to sea level rise and severe erosion (Lowery 1989, 1990, 2002). Although most of the artifacts recovered from the Paw Paw Cove Site Complex were recovered from eroded and surface contexts along the

shoreline, recent excavations have revealed that more interior portions of the complex, away from the strand line, still contain intact buried deposits (Lowery 1989, 1990, 2002).

Located in the Inner Coastal Plain on Maryland's Western Shore in Anne Arundel County, the multi-component Higgins Site (18AN489) encompasses an upland promontory that rises above two small drainages. Excavations at the Higgins Site have resulted in the identification of intact Paleo-Indian archeological deposits. Artifacts recovered from these deposits include several fluted (Clovis) point fragments, various flake tools, and debitage. It has been concluded that during the Paleo-Indian Period, the Higgins Site served as a small, short-term campsite at which game was processed (Ebright 1994).

A third site, the Pierpoint Site also promises to contribute insightful information on Maryland's Paleo-Indian Period. Excavations and surface collection at this site located at the confluence of the Potomac River and Seneca Creek, have yielded several fluted points. Currently, comprehensive analysis of the site is ongoing (Dent 1995).

Despite the limited data regarding the extent of Paleo-Indian habitation in Maryland, fluted points found throughout the state do indeed indicate use of the region during this early time period (Steponaitis 1983; Custer 1983; Davidson 1981). Archeological research of the Paleo-Indian Period in the Middle Atlantic region has suggested various operational site types for the Paleo-Indian Period. Hypothesized site types range from small hunting camps to large sites associated with lithic material procurement activities (Custer 1983, 1989; Dent 1995; Marshall 1982; Bonfiglio and Cresson 1982).

For the most part, as is apparent by the coincidence of Paleo-Indian and Early Archaic occupations at various sites, Early Archaic sites seem to occur in similar environmental settings and exhibit many characteristics attributed to known Paleo-Indian Period sites (Watson and Custer 1990; Dent 1995). While similarities in the overall tool assemblages are apparent, Early Archaic point assemblages are marked by the introduction of side- and corner-notched projectile points. Regionally, the Early Archaic Period may represent minor adaptive shifts responsive to the rising emergence of Holocene environments toward the end of the Paleo-Indian/Early Archaic Period.

Aside from small occupations at some of the larger multi-component sites, such as the Higgins Site (18AN489), few Early Archaic Period occupations in Maryland have been subjected to thorough investigation.

One of the more studied Early Archaic sites of Maryland is the Crane Point Site (18TA221) in nearby Talbot County (Lowery and Custer 1990). Located on a small point that juts out into the Chesapeake Bay just east of the mouth of a small stream, the site contains several Late Paleo-Indian/Early Archaic occupations. Studies suggest that at the time of its use, the site fell within a more interior, upland knoll-type setting that was flanked with assorted freshwater wetlands. Systematic surface collection along the Crane Point beach line and test excavations at the site have yielded over 500 lithic artifacts. In addition to debitage, these artifacts include various projectile points, bifaces, cores, as well as flake and ground stone tools. Flake tools from the site include a diversity of scrapers, slug-shaped unifaces, graters,

denticulates, and wedges. Point types from the site include assorted Dalton/Hardaway, Amos, Charleston, and Kirk/Palmer notched variants. Flotation samples processed from an eroding hearth feature at the site yielded amaranth and *Chenopodium* seeds, as well as hickory nut and butternut fragments (Lowery and Custer 1990). Based on the excavation results, the Crane Point Site has been concluded to be the remains of a base camp (Lowery and Custer 1990).

One of the state's notable Early Archaic occupations has been documented at the multi-component Indian Creek V Site (18PR94), which occupies a broad floodplain adjacent to the confluence of Indian and Beaver Dam Creeks in Prince George's County (Leedecker and Holt 1991). Studies of the Indian Creek V Site (18PR94) have revealed that the site was repeatedly used as a short-term procurement station during the Early Archaic Period.

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

Several adaptive strategies of prehistoric human populations to the emergence of stable Holocene environments define the Middle Archaic Period. By 6,500 B.C. mesic forests of hemlock and oak flourished in several sections of the Middle Atlantic region, including Maryland's Eastern Shore (Custer 1983). Reduction of open grasslands forced the extinction or migration of many of the cold weather browsing megafauna which were critical to the subsistence of Paleo-Indian/Early Archaic Period groups. In addition, rises in sea level created interior swamp, marsh, and estuarine environments. These new environments supported a wide variety of floral and faunal species such as deer, migratory waterfowl, anadromous fish, and both fresh- and salt-water shellfish (Custer 1983, 1986, 1989). Consequently, Middle Archaic populations began to take advantage of the availability of these various new resources. Overall, the Middle Archaic Period is characterized by a noticeable shift from a hunter-gather strategy to a foraging lifestyle.

Middle Archaic tool kits in the region also reflect a more generalized foraging subsistence. Unlike the specialized hunting Paleo-Indian and Early Archaic tool kits, Middle Archaic tool kits often include plant processing tools, such as mortars and pestles, as well as ground stone tools, including adzes and axes. The appearances of these types of tools are indicative of a greater dependence on plant resources (Custer 1983, 1989). Like their predecessors, Middle Archaic groups were also nomadic; however, these groups migrated throughout the area to take advantage of the broad range of environmental settings and resources on a seasonal basis. Growth and reduction of group size also occurred seasonally.

Common point types of the Middle Archaic Period are bifurcate-based point types such as St. Albans, Le Croy, and Kanawha (Dent 1995; Custer 1984, 1994). Other Middle Archaic projectile points include Stanly, Morrow Mountain, Guilford, and Neville types (Dent 1995; Custer 1983, 1984, 1994).

Over the past decade, various comparative studies have provided new insight into projectile point types of the Middle Archaic Period. Studies such as Custer (1996, 2001) have examined several stemmed point variants, such as Poplar Island, Bare Island, Piney Island,

and Pequea points. Throughout the Middle Atlantic region, these stemmed variants often coincide with sites that contain Middle Archaic occupations. In the past, these stemmed variants have been recovered from good subsurface contexts and in clear association with occupations that ranged from the Middle Archaic Period to the Middle Woodland Period. In the past, these stemmed variants have been regarded as not particularly diagnostic because of their prolonged use. For similar reasons, traditionally, these points have also been attributed to later time periods. However, the results of comparative analyses of the spatial and temporal distribution of these points throughout the Middle Atlantic region indicate that the use of these stemmed variants was more common during the Middle and Late Archaic Periods than originally thought (Custer 1994, 1996, 2001). In addition to reflecting the continuity of cultural traditions, these findings also demonstrate the gradual transition from Middle Archaic to Late Archaic.

Throughout the eastern United States, including Maryland, Middle Archaic sites tend to be found in a variety of riverine, lacustrine, and coastal settings. In Maryland, the Middle Archaic Period also marks notable increases in the use of interior wetland settings, such as upland swamps, interior ridgetops, ponds, marshes, and springheads, and settings near stream junctures and along tributary floodplains (Gardner 1987; Wall 1990; Stewart 1989; Steponaistis 1983; Rappleye and Gardner 1979). These environments often contain a diversity of Middle Archaic site types that range from small processing or procurement sites to base camps of various sizes (Custer 1983, 1989, 1996).

While many of the larger multi-component sites date predominately to later periods, these sites often contain Middle Archaic occupations. Middle Archaic components have been encountered at the aforementioned Higgins Site and at the Surratts Road Site (18PR404), which is located along Piscataway Creek in Prince George's County (Munford 1993).

Occupations dating to the Middle Archaic Period have also been identified at the Indian Creek V Site (18PR94) in Prince George's County. Interestingly, by comparison, these occupations date to the earlier part of the Middle Archaic Period and are notably less well-represented at the site than those dating to the Early or Late Archaic time periods. It is believed, for the most part, use of the site was practically abandoned for most of the Middle Archaic Period. It has also been suggested that the disuse of the site during the Middle Archaic Period may be a reflection of changing environmental conditions of the site's setting (Leedecker and Holt 1991).

C. Late Archaic Period/Early-Middle Woodland Period (3,000 B.C. to A.D. 1000)

The Late Archaic/Early-Middle Woodland Period is defined by pronounced environmental alterations occurring throughout the Middle Atlantic region (Custer 1983, 1986, 1989). While the Late Archaic, Early Woodland, and Middle Woodland Periods all possess their own distinguishing characteristics, because of their overall similarities, cumulatively, these three periods have often been regarded as a general time period. For example, in the neighboring state of Delaware, this 4,000-year period of time has been called the Woodland I Period (Custer 1986, 1989, 1994; Watson and Custer 1990; Custer and Silber 1994), and in