

2.0 RESEARCH DESIGN



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### **2.1 Environmental Setting of the Project Area**

The project area is located within the Mid-Peninsular Drainage Divide of the Atlantic Coastal Plain Physiographic Province. The landform consists of a flat to gently sloping setting that divides the drainages between the Delaware Bay (east) and the Chesapeake Bay (west). Two small drainages of Glade Branch, part of the drainage basin for the Nanticoke River and the Chesapeake Bay, are found adjacent to the west side of the Area of Potential Effect (APE) along Farmington Road. The east side of the Farmington Road APE contains a small drainage that empties into Brown's Branch, a tributary of the Murderkill River and the Delaware Bay. As evidenced in Figure 1, low-lying swampy areas are prevalent in the undeveloped rural sections of the landscape, providing the headwaters for the small stream and creeks which feed into the larger waterways. Channelized drainage ditches were utilized to drain away the excess water and expand tillable land for crops. The two drainages of Glade Branch along the western edge of the Farmington Road APE are examples of this practice.

Fallsington-Sassafras-Woodstown Association soils within the project APE are level to sloping, poorly drained to well-drained, have a moderately permeable subsoil of sandy loam to sandy clay loam, and are often on uplands (Matthews et al 1971:5-6) (Figure 2). Five soil types are recorded within the project APE. They include Sassafras sandy loam (SaA), 0 to 2 percent slope; Evesboro loamy sand (EsB), 2 to 5 percent slope; Woodstown sandy loam (Wo), near level; Rumford loamy sand (RuB), 2 to 5 percent slope; and Fallsington sandy loam (Fa). In the undeveloped state these soils support a variety of vegetation types, from a mix of deciduous and coniferous trees established on the drier, elevated wooded sections of the landscape to swamp maple, holly, and wetland vegetation in low-lying swampy areas. While no forested ground or swampy areas were noted in the project APE, residential properties generally contained a small number of deciduous and coniferous trees, grassy lawns, and other ornamental plantings as part of the yard landscape.

## **2.2 Research Design**

The purpose of the Phase IB Archaeological Survey of the Harrington Truck Corridor project was to determine the presence or absence of potentially significant cultural resources within the project area. In this effort, research aimed to determine: 1) the sedimentary/pedological sequences within the project area; 2) the range of historic and prehistoric-era activities that occurred within the project area; and 3) the presence and relative integrity of such deposits within the project area. To achieve these determinations archaeological fieldwork was conducted within the project area, and the cultural material recovered from those excavations was processed and analyzed.

## **2.3 Initial Site Assessment**

Prior to the initiation of Phase I field excavations, staff members of A.D. Marble & Company conducted an initial site assessment of the project area. This was done in order to assess the potential for both prehistoric and historic archaeological resources and to define areas requiring subsurface testing. This assessment consisted of a literature review and a field view.

The site assessment began with a literature review. This included an examination of site file and archaeological reports filed at the Delaware State Historic Preservation Office (DESHPO) in Dover, Delaware. Historical maps, atlases, and general prehistoric and historic background information on the project area were examined at the Delaware State Archives; the University of Delaware Library in Newark, Delaware; and the Historical Society of Delaware in Wilmington, Delaware. Sanborn Fire Insurance maps and early plat maps of Harrington were reviewed at the Harrington Historical Society.

The literature review identified one previously recorded prehistoric archaeological site nearby but outside of the project area limits. 7K-G-77 (CRS K-6483) is recorded in a cultivated field approximately 457.2 meters (1500.0 feet) east of the Delmarva Power and Light substation east of Farmington Road and south of Tower Hill Road (Figure 1). This site is located on a J-shaped ridge adjacent to a bay/basin feature. Jerry Lane, a private collector, recovered Coulbourn ceramics, a hammerstone, a bifacially ground stone tool, fire-cracked rock (FCR) and flakes,

artifacts indicative of a Woodland I period procurement site (Stocum, personal communication 2004). Archaeological studies of the Delmarva Peninsula have found that bay/basin features, as well as low-lying swampy areas, were attractive features to Native American groups who hunted wild game drawn to these resources and collected plants indigenous to the wetland setting (Custer 1984, 1989, 1994). It is anticipated that undocumented Native American sites spanning Paleoindian through Woodland II periods may be found scattered across the immediate landform based on the proximity of numerous wetlands and drainages.

A PDC Project Handoff drafted for the Harrington Truck Route Study in March 2001 by Gannett Fleming, Inc., summarized the results of a Phase IA Archaeological Survey conducted by the firm for the Harrington Truck Route project. The survey identified no previously recorded historical archaeological sites in the current project area. However, one architectural resource, K-4618 (N. Williams' dwelling and farm buildings), located in the northwest corner of the Tower Hill Road and Farmington Road and on the edge of the current project area limits, had been demolished, creating a potential historical archaeological resource (Figure 1). Gannett Fleming conducted historic map research of the project area and identified several nineteenth-century sites, largely farmsteads, along the Farmington Road project area that have the potential for archaeological remains associated with outbuildings and other structures near the roadway. One resource, a school house, was identified along the south side of Tower Hill Road in proximity to U.S. 13 (Gannett Fleming 2001) (Figure 3). A 1918 topographic map of the project area lists the school as the Powell School, likely named after the Powell family who owned several properties along Tower Hill Road (Figure 4). Two potential historic districts, the Harrington Historic District (K-6973) and the Clark Street Historic District (K-6974), had previously been identified in the project area. The potential Harrington Historic District is bounded on the north by North Street and Simmons Road, on the east by Delaware Avenue, on the south by Reese Avenue, and on the west by West Street (Archibald et al 2005:21-22). The potential Clark Street Historic District is located outside of the current archaeological study area.

An architectural survey and evaluation conducted by A.D. Marble & Company in 2005 for the Harrington Truck Route project surveyed sixteen resources in the study area, 12 of which were previously identified. Three of the previously identified properties had been demolished at the

time of the survey: K-4618, K-2571, the “Fleming Estate” at 301 Vernon Road, and K-2242, Potter’s Store at the southeast corner of Reese Avenue and Commerce Street (Archibald et al 2005:23) (Figure 1). K-2571 was located at the corner of S.R. 14 and West Street, between the extant historic structure K-2572 to the west and West Street to the east. K-2242 once stood at the corner of West Street and Commerce Street, now the location of a small park. These sites were judged to retain the potential for historic archaeological resources associated with the respective structures.

A pedestrian review of the project area was subsequently conducted to assess existing surface conditions. Staff archaeologists traversed the entire project area and noted areas of obvious ground disturbance, potentially undisturbed landforms, and visible cultural features. The landowners within the APE were also informally interviewed at that time for information regarding any cultural finds located on their respective properties and any prior ground disturbances.

Based on the results of the literature review and the field view, and the proposed impacts within the project area, four sections of the project area were assessed as containing moderate to high potential for undocumented archaeological resources and therefore require archaeological testing to identify the presence or absence of archaeological remains. The section of the project area encompassing Tower Hill Road from U.S. 13 to Farmington Road contained moderate potential for undocumented prehistoric and historic archaeological resources. The 1868 map of the project area illustrates a school house at the eastern end of Tower Hill Road in the vicinity of U.S. 13, a structure associated with “J. B. R. Powell” on the north side of the road east of the railroad, and a third structure identified as “W. H. Powell” west of the railroad and south of Tower Hill Road (Figure 3).

The W. H. Powell residence was set back some distance from the road. Outbuildings and ancillary structures associated with the farm were likely established behind or to the sides of the main house so as not to impede the view of the house from Tower Hill Road. However, cultural materials associated with the domestic occupation of the residence, including middens and other farmstead refuse, likely was deposited away from the farmstead complex to maintain sanitary

conditions. The southwestern quadrant of the Tower Hill Road project area contains moderate potential for household refuse and other historic archaeological remains associated with the W. H. Powell residence.

The J. B. R. Powell residence is depicted somewhat closer to the road, but it is anticipated that any outbuildings were also located behind the main house, limiting cultural remains within the survey area. In addition, the 1918 and 1938 topographic maps of the project area depict two structures on the north side of Tower Hill Road at its eastern limits (Figure 4 and 5). The 1944 topographic map illustrates the same two structures, with one structure located in the northwest corner of the Tower Hill Road and U.S. 13 intersection (Figure 6). A modern commercial business is present in this lot today. Given the information presented in the historic maps, the northeastern quadrant of the Tower Hill Road project area between the railroad tracks and Fairground Entrance Road contains moderate potential for historic archaeological remains associated with the J. B. R. Powell residence. The section of the northeastern quadrant of the Tower Hill Road project area from Fairground Entrance Road to U.S. 13 contains low potential for archaeological remains based on extensive landscaping activities on the property containing the commercial business and drainage swale construction adjacent to U.S. 13 and Tower Hill Road.

The Powell School is depicted on the 1918 and 1938 topographic map adjacent to the south edge of Tower Hill Road (Figure 4 and 5). However, the 1944 topographic map illustrates the school on the east side of the newly constructed U.S. 13 roadway, indicating that the school is located outside of the Tower Hill Road survey area (Figure 6). While the school is located outside of the current project area, the southeastern quadrant of the Tower Hill project area is close enough to the school to contain moderate potential for archaeological remains associated with the operation of the school house, including privies and trash deposits.

Moderate to high potential for prehistoric archaeological resources is found in the southwestern and southeastern quadrants of the Tower Hill Road project area. The presence of Site 7K-G-77 adjacent to a bay/basin feature, approximately 304.8 meters (1000.0 feet) south of the APE, suggests that Native Americans utilized local floral and faunal resources found in these

geological features. Cooking possibly occurred as part of the site activities, given the recovery of fire-cracked rock in the artifact assemblage. Given the presence of drainages to the north and west of the Tower Hill Road project area, cultural remains from the occupation of Site 7K-G-77, as well as other undocumented prehistoric resources, may exist within the southwestern and southeastern quadrants of the Tower Hill Road project area.

Areas along the Farmington Road were examined to assess archaeological potential as well. A 53.3-meter-long by 12.2-meter-wide (175.0 feet by 40.0 feet) parcel of ground located on the west side of Farmington Road at Station 110+25 and an approximately 13.7-meter-wide by 146.3-meter-long (45.0 feet by 480.0 feet) proposed drainage ditch located approximately 304.8 meters (1000.0 feet) south of Fairground Road at Station 157+00 were assessed as containing moderate to high potential for undocumented prehistoric archaeological resources. These two parcels of ground are located adjacent to existing drainage ditches and may represent habitable ground that overlooked a wetland prior to historic ditching and draining of the property in order to expand arable land. A review of historic maps did not identify any farmsteads or other structures in these areas. The remaining project area along Farmington Road was located predominantly within the existing drainage ditch and swale network and was assessed as containing low potential for prehistoric and historic archaeological resources. These areas were not tested as part of the archaeological survey.

One lot located at the northeast corner of the intersection of Commerce Street and Reece Avenue was deemed to have moderate to high potential for historic archaeological resources due to the adjacent mid- to late-nineteenth-century dwelling (K-2304). A storage shed (K-7380) and a U-shaped gravel drive are located to the east of this lot. According to Robert Taylor, owner of the property, this small grassy lot was used as a display lot for farm machinery at one time in the 1960's, with machinery serviced in the block shed (Taylor, personal communication 2004). An 1868 map and topographic maps from 1918 and 1938 do not depict any structures on this lot (Figure 3 to 5). The 1944 topographic map depicts several structures in the lot fronting Commerce Street and Reese Avenue (Figure 6). By 1955, these structures are no longer present (Figure 7). The 1944 topographic map does not indicate the function of these buildings, but the information provided by Mr. Taylor suggests that these structures may have served as a sales and

service operation for farm machinery. The lot has high potential to contain foundation remains associated with these structures, as well as moderate to high potential for containing household refuse deposits from the adjacent mid- to late-nineteenth-century structure K-2304. The remaining sections of the proposed project area at the intersection of S.R. 14, West Street, Commerce Street, Reese Avenue, and Farmington Road consist of minor sliver takes for proposed turn widening effects. Numerous buried utilities and sidewalks were identified in the intersection project area, suggesting that these ground disturbances have reduced or eliminated the potential for intact deposits within the sliver takes of the project area.

The S.R. 14 and U.S. 13 project area, the Fairground Road and U.S. 13 project area, and the Tower Hill Road and U.S. 13 project area was assessed as containing low potential for prehistoric and historic archaeological remains. The proposed impacts to these project areas consist of minor improvements within areas previously disturbed by roadway construction. No further archaeological survey is warranted in these three areas.

The total survey area tested includes Tower Hill Road, 0.7 hectare (1.8 acres); 0.28 hectare (0.69 acres) area along Farmington Road, including the proposed drainage ditch; and 0.05 hectare (0.12 acre) at the intersection of Commerce Street and Reece Avenue. These three areas were surveyed to assess any potential archaeological resources.