Chapter 2

GEOGRAPHICAL SETTING AND ENVIRONMENT

The geography and environment of the U.S. Route 301 Corridor have been described in several project-related documents (A.D. Marble & Company 2006:4-5; Federal Highway Administration and Delaware Department of Transportation 2007: III-114 through III-129; Hayes 2009:2-4). This data is summarized here with specific reference to Section 2.

The environment of roughly 4.5 miles of Section 2 (Yellow) is in many ways representative of the whole U.S. Route 301 Selected Alternative Corridor (Figure 2.1). Lying in the Inland Plain of the Coastal Plain Province, the geology is primarily composed of the early- to mid-Pleistocene Columbia Formation, which extends to depths of more than 13 meters (42 feet) and lies on earlier sediments. This formation is composed of braided stream deposits whose potential cultural significance lies in their inclusion of gravel bars containing cobbles and pebbles of value for the production of lithic tools by prehistoric populations. Within Section 2, the Columbia Formation is a gently undulating plateau generally between 60 and 75 feet above sea level. This plateau forms the mid-peninsular drainage divide between the Chesapeake and Delaware Bays.

Soils in Section 2 are predominantly of the well-drained Matapeake-Sassafras Association, specifically Matapeake silt loams (Me-, Mk- and Ms-), with small areas of Sassafras sandy loams (Sa-) (Figure 2.2; see also Federal Highway Administration and Delaware Department of Transportation 2007 Figures III-14 and III-15). The valley bottoms are mapped as poorly drained Johnston Loam (Jo), a soil comprised of alluvial deposits and organic materials (Matthews and Lavoie 1970). In an unmodified state, the Matapeake soils supported a mixed hardwood forest under recent climate conditions. The slightly drier Sassafras sandy loams also support Virginia and shortleaf pine (Matthews and Lavoie 1970). In the geoarchaeological investigation area just west of the Section 2 alignment it was found that plateau soils have been repeatedly plowed, disturbed and deflated. Draws and other low-lying areas contain colluvial sediments that are primarily the product of deposition from historic cultivation (Hayes 2009).
The landscape in 2008 is one of open farmland that is suburbanizing rapidly. Areas of woodland are present, chiefly in the stream valleys or headwater areas where soils are less well drained (Figure 2.3). A more detailed description of the current conditions along the alignment is provided in Chapter 5.