

1.0 INTRODUCTION

Blackbird Creek begins as an entrenched spring-fed stream that becomes tidal and broadly embayed as it approaches the Delaware Bay. The headwaters of Blackbird Creek begin on the eastern edge of the ridge that forms the spine of the Delmarva Peninsula. This wide, low ridge separates streams flowing westward to the Chesapeake Bay from those like Blackbird Creek and the Smyrna River that flow eastward to the Delaware Bay. Marshes and estuaries line a network of embayed coastal streams along the Delaware Bay shoreline, and the flanks of the ridge form the first consistently elevated ground above the wetlands. Not coincidentally, this part of the peninsula has become important for modern settlement. Towns grew up at the foot of the ridge where coastal streams are no longer navigable, and major transportation corridors were established along the comparatively level and raised ground. The upgrading of one of these routes, U.S. Route 13, occasioned a federally mandated environmental review process that included the search for evidence of prehistoric and historical life in this part of the Delmarva Peninsula. This report presents the results of these archaeological investigations and emphasizes how these archaeological findings are crucial for reconstructing the life ways of the Blackbird Creek region's past inhabitants, especially American Indians who lived here prior to the earliest written accounts.

1.1 Project Description and History

As an element of the environmental review process, archaeologists conducted archaeological site evaluation (Phase II) and data recovery (Phase III) investigations at the Blackbird Creek site (7NC-J-195D), located within the Smyrna-to-Pine Tree Corners segment of State Route 1 (SR 1). The now constructed highway is an interstate standard relief route for the existing U.S. Route 13, in New Castle County, Delaware (Figure 1-1). The Smyrna-to-Pine Tree Corners corridor is approximately 5 miles long, with the highway right-of-way varying in width from 91–151 meters (m) (300-to-500 feet). The archaeological investigations detailed in this report were conducted by the Cultural Resources division that was associated at the time with Parsons, and has since, as of 2005, been transferred to Versar. To avoid potential confusion, these archaeologists are simply referred to in the remainder of this report as the Cultural Resource (CR) Division. Archaeological studies completed prior to the transfer in 2005 are still referred to as having been completed by Parsons.

The Delaware Department of Transportation (DelDOT), in coordination with the Federal Highway Administration and the Delaware State Historic Preservation Office (DE SHPO), created a planning strategy for cultural resources within the project area beginning in 1984. A probability model was developed in order to identify high, medium, and low probability areas for the discovery of archaeological and historical sites. In 1987, the Advisory Council on Historic Preservation developed a Memorandum of Agreement (MOA) for the execution of Section 106 requirements throughout the project area. The MOA provided for the mitigation of adverse effects to significant properties and sites if alternative measures such as avoidance proved unfeasible for sites later determined potentially eligible for the National Register of Historic Places (NRHP).

There have been ten previous archaeological investigations in the SR 1 corridor from Smyrna-to-Pine Tree Corners prior to the data recovery investigations. Two initial surveys

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(Phase I) were conducted by the University of Delaware Center for Archaeological Research (UDCAR), one in 1984 (Custer and Bachman 1986) and the second in 1992 (Bedell and Busby 1997). The remaining eight studies were undertaken by the Cultural Resource Group of Louis Berger & Associates, Inc. (LBA), and included additional survey of portions of the SR 1 corridor, and evaluation and data recovery investigations of sites identified as a result of the various surveys (Bedell 1996a, 1996b, 1996c; LeeDecker et al. 1996; Bedell 1997; Bedell et al. 1997a; Bedell et. al 1997b; Bedell and Jacoby 1998).

prehistoric artifacts from 19 tests. Artifacts consisted of thermally altered stone and flaking debris. In 1997, LBA conducted testing of a stormwater management pond near the site, recovering an additional nine flakes from six shovel tests, and expanding the site boundaries further eastward (Bedell and Jacoby 1998). Site measurements expanded to 150-x-200 m as a result of the LBA study. Although the artifact density was low, and all the artifacts were found in the plow zone, LBA recommended an archaeological evaluation based upon the site's potential for sub-plow zone prehistoric cultural features. LBA compared the Blackbird Creek site to 7NC-G-145 further north along SR 1, finding that both sites occupied a level surface adjacent to a steep slope above a drainage (Bedell et al. 1997a). Like the Blackbird Creek site, 7NC-G-145 had produced a low quantity of artifacts from the plow zone, but also contained possible storage pits found to extend below the plow zone.

Archaeological site evaluation was undertaken by the CR Division between March and August 1999, to determine the eligibility of the sites for listing in the NRHP. The prehistoric component of the site was determined eligible for inclusion in the NRHP under Criterion D, as containing information important to an understanding of Delaware prehistory (Auman and Bupp 1999). Concurrence was granted by the DE SHPO on November 24, 1999 (Appendix A). Highway construction plans as proposed would have had a direct and adverse effect on the sites. The sites could not be avoided, and thus in accordance with the MOA, data recovery excavations were recommended. Fieldwork was undertaken between November 1999 and February 2000. The full results of the evaluation and data recovery investigations are reported herein. A complete listing of project personnel is included in Appendix B.

In addition to the prehistoric occupations identified at the Blackbird Creek site, historical materials were recovered. These consisted of a series of historical post features and a scatter of 18th and 19th century domestic architectural debris. However, these features and artifacts were concluded to be associated with nearby Site 7NC-J-202, which was declared not eligible and demolished between 1992 and 1997. However, at least some of the artifacts (e.g., pearlware and mocha creamware) date from an earlier period than that associated with adjacent site 7NC-J-202. UDCAR originally recorded 7NC-J-202 in 1992, and interpreted as the late-19th-century standing farmhouse identified on the 1868 Beers map (Bedell and Jacoby 1998). The firm of Kise, Franks & Straw conducted an architectural assessment of the property in 1995, confirming that the farmhouse as the original structure owned by R. Ferguson per the 1868 Beers map. Numerous alterations to the house and the demolition of related outbuildings compromised the integrity of the resource and consequently, the DE SHPO determined the site not eligible for the NRHP in 1994. Subsequently, the historical component of the Blackbird Creek site was not considered NRHP-eligible at the completion of the evaluation investigations. Additional historical artifacts were encountered during the data recovery investigations. The frequency and type of artifacts did not provide new information on the historical component and thus, did not alter the original eligibility determination for that component. The archival research, artifact descriptions, artifact distributions, and references are presented in Appendix C.

Several management documents were prepared throughout the course of the archaeological investigations at the Blackbird Creek site. These documents can provide further detail on the development and evolution of the research design and methods employed at the site:

- *Management Summary: Phase II Evaluation of the Blackbird Creek Site, 7NC-J-195D, New Castle County, Delaware.* (Auman and Bupp 1999)
- *Determination of Eligibility, Blackbird Creek Site 7NC-J-195D, Smyrna to Pine Tree Corners, New Castle County, Delaware.* (Auman 1999a)
- *Data Recovery Plan, Blackbird Creek Site 7NC-J-195D, Smyrna to Pine Tree Corners, New Castle County, Delaware.* (Auman 1999b)
- *Phase III Closeout Summary, SR 1: Smyrna to Pine Tree Corners, Blackbird Creek Site 7NC-J-195D.* (Parsons 2000)

All of the cultural resource investigations at the Blackbird Creek site were conducted in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended. The archaeological investigations were carried out in accordance with the standards of the Advisory Council on Historic Preservation, and the National Park Service (36CFR800; 36CFR60; 36CFR66). All work was conducted under the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-44742). Fieldwork was conducted in close consultation with the DelDOT and the DE SHPO. The work conformed to DE SHPO standards as outlined in the *Guidelines for Architectural and Archaeological Surveys in Delaware* (DE SHPO 1993). Several reports were used as guides to address prehistoric and historical contexts, including *Delaware Comprehensive Historic Preservation Plan* (Ames et al. 1989), *A Management Plan for Delaware's Prehistoric Cultural Resources* (Custer 1986), *A Management Plan for the Prehistoric Archaeological Resources of Northern Delaware* (Custer and DeSantis 1986), and *Management Plan for Delaware's Historical Archaeological Resources* (De Cunzo and Catts 1990).

1.2 Report Organization

This technical report details the results of the site evaluation and data recovery investigations at the Blackbird Creek archaeological site. Following the current introductory material, a detailed Research Design for the data recovery investigation is introduced in Section 2.0. Sections 3.0 and 4.0 summarize environmental and cultural contexts associated with the site location, while Section 5.0 presents Field and Lab Analysis Methods. The findings of the site evaluation are briefly summarized in Section 6.0 followed by a federal compliance-related statement regarding the NRHP eligibility status of the site. Section 6.0 continues with analyses of the prehistoric component comprising the site based on information from the data recovery investigation. Section 7.0 examines the site in terms of the research questions posed as the basis for the project, and further, considers the relevance of the site in regional contexts. Finally, an assessment of the research conducted at the site is included in Section 8.0, along with concluding recommendations for further treatment of cultural resources under DelDOT management. A series of appendixes contain the qualifications of project personnel, relevant supporting analytical documentation, prehistoric feature descriptions, consultant reports, a summary of historical findings, and an artifact inventory.