

**Excavations Along the
State Route 1 Corridor in Delaware**

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For the past sixteen years, the Delaware Department of Transportation (DelDOT) has been conducting archaeological investigations within the 50-mile long right-of-way corridor for proposed State Route 1. Archaeology of the corridor began with work first undertaken by the University of Delaware Center for Archaeological Research (UDCAR) in 1984, followed by numerous other surveys performed in the following years by CRM groups in new alignments, access denied areas, and wetland mitigation areas. In January 1999, Parsons Engineering Science, Inc. (Parsons ES) on behalf of DelDOT initiated Phase II and III investigations of 23 sites previously identified by UDCAR and by the Cultural Resource Group of Louis Berger & Associates. These 23 sites are located within the last 5 mile long portion of the corridor remaining to be studied, which extends from Smyrna (north of Dover) northward to Pine Tree Corners in New Castle County. Seven sites contained exclusively prehistoric components, 3 sites were historical, and the remaining 13 sites contained both prehistoric and historical occupations.

PHYSIOGRAPHIC SETTING

The 5-mile segment falls within the Low Coastal Plain of the Delaware. From south to north, the proposed ROW corridor begins in a broad area of Coastal Plain uplands, continuing northward to cross two intermediate-order streams. The southernmost is Sandom Branch, which connects with Blackbird Creek east of the corridor. In contrast to the undulating terrain in the southern end of the corridor, the land north of Sandom Branch is characterized by broad, level upland terraces. Further north, the proposed corridor enters the wooded and poorly drained headwater valley of Herring Run. Numerous small bay/basins are present throughout the 5 mile project area, some containing surface water. Minor rises and ridge-like knolls are present along the valley floor.

The project area falls entirely within the Mid-drainage zone, ranked by Jay Custer (1986:16) as one of the richest ecological zones in Delaware because it is central to both brackish/tidal and fresh/headwater environments. In prehistoric times, the presence of bay/basins interspersed between higher, well-drained ground would have made for a diverse or “patchy” web of microenvironmental zones. This web of microenvironments would have offered a variety of resources normally not available together within ecologically more uniform locations.

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PREHISTORIC SITE RESEARCH POTENTIAL

To date, most of the prehistoric sites investigated within the overall SR 1 corridor have been situated along major drainages. These sites have been interpreted as “base-camp” or “macroband-camp” locations (Custer et al. 1994; Custer and Hsiao Silber 1995; Custer et al. 1995). The sites identified on the Symrna to Pine Tree Corners segment differed markedly. They are generally small and situated along lower-order streams, or in upland settings associated with bay/basins, suggesting that the sites may have been occupied as short-term, and perhaps specialized function camps. Nonetheless, study of these sites was predicted to yield important information concerning prehistoric chronology, lithic and ceramic technology, and settlement patterns. With less reuse and subsequent cultural disturbance than on larger multicomponent sites, some smaller sites can actually yield better quality data. Futuristically, findings from these small sites, when synthesized with data from earlier SR 1 excavations, should provide a more comprehensive understanding of the prehistoric settlement patterns of the area.

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HISTORICAL SITE RESEARCH POTENTIAL

While historical artifact field scatter is ubiquitous throughout Delaware, several of the sites contained evidence indicating 18th through early 20th century occupations. One of the sites (7NC-J-224), produced some postholes and ceramics dating as early as the late 18th century, but was cordoned-off and preserved, and investigation ended with completion of Phase II. One site (7NC-J-207) produced abundant features and artifacts, but also ended at the Phase II level due to severe disturbance. Two sites (7NC-J-195D and 7NC-J-204) continued on to data recovery. These sites are expected to address the historical themes of agriculture, manufacturing, and settlement patterns within the research priorities, or research “domains”, identified for historical sites in Delaware (De Cunzo and Catts 1990). The highest preservation priority in the Delaware State Plan (Ames et al. 1989) is identified as agricultural resources spanning these time periods.

PREHISTORIC SITES

Since time will not allow for a summary of 23 sites, only the sites recommended eligible for the National Register of Historic Places and subject to data recovery will be discussed.

Blackbird Creek Site (7NC-J-195D)

Roughly mid-central in the 5-mile segment, and on the terrace above the south bank of Blackbird Creek, is the Blackbird Creek Site. Though presently the tidal head is embayed, the waterway was navigable in historic times. Phase II fieldwork yielded a wide variety of prehistoric diagnostic artifacts ranging from the Early Archaic to Late Woodland. Most of these projectile points were fragmentary and/or exhausted. At the same time, a wide scatter of 18th and early 19th century historical ceramics and postholes was identified; the historical aspect will be touched upon briefly later. In general, artifact densities were light and the finds appeared to be representative of fairly ephemeral occupations, both prehistoric and historical.

We were prepared to end investigations at completion of the Phase II level. This site became a textbook example of how the most methodical, systematic and thorough Phase II field strategy can sometimes fail to identify or even allude to the presence of what one of our field directors called a "tasty" site. More intuitively ~~than~~ because archaeology suggested going further, the plowzone was mechanically removed from the terrace fronting Blackbird Creek. A substantial Early Woodland occupation was revealed: fifteen circular pit features were saucer-shaped, cylindrical or bell-shaped. Five contained early, flat-bottomed ceramics. Of the 96 identifiable ceramic sherds recovered, 98% were Dames Quarter with the remaining being Marcey Creek. Interestingly, some of the pit features were excavated into a poorly drained, clayey subsoil. Consequently preservation of carbonized material in the fill was exceptional and the features should yield a suite of radiocarbon dates for the Early Woodland Dames Quarter ceramic type.

Sandom Branch Site Complex (7NC-J-227/228)

About two-thirds of a mile south of the Blackbird Creek Site, and within a relatively narrow, sheltered valley along Sandom Branch were two sites collectively referred to as the Sandom Branch Site Complex. The Sandom Branch valley is wooded and portions of both sites had remained unplowed. Site 7NC-J-228 was situated on a terrace remnant overlooking the confluence of Sandom Branch and an unnamed first order tributary with 7NC-J-227 adjacent to the south. Site 7NC-J-227 contained a sizable Late Woodland component, identified through the recovery of a quantity of triangle points in association with Minguannan ceramics. Hell Island ceramics, and contracting-stemmed points, attributable to the first half of the Woodland, also were present.

Features were limited to FCR hearths, including at least three examples in which the component rocks had been placed or moved into a doughnut-like configuration. Site 7NC-228 also contained a Late Woodland component, although the bulk of the diagnostic artifacts dated to the first half of the Woodland and included a Teardrop and numerous contracting stemmed points. Fire-cracked rock hearths and pit features also were present at 7NC-J-228.

Black Diamond Site (7NC-J-225); Frederick Lodge Site Complex (7NC-J-97/98/99)

Two-thirds of a mile south of the Sandom Branch Site Complex, the SR-1 corridor crosses open and relatively undifferentiated terrain before entering an upland zone dotted with bay/basin features. These bay/basins vary from as little as 40 meters to over 300 meters in diameter. A total of four Phase III sites were present in this area. The first of these was the Black Diamond Site (7NC-J-225), situated on the crest of a low dune-like ridge associated with a small bay/basin. The much larger (i.e., 32 acres) adjacent Frederick Lodge Site Complex (7NC-J-97/98/99) included three sites located along the margins of two large bay/basins.

The Black Diamond artifact assemblage was characterized by thousands of flakes consisting of a distinctive, grainy red and grey quartzite, the source of which has not yet been identified. This debitage represented the full range of lithic reduction. The assemblage also included a large number of broken or unfinished and finished stemmed bifaces and points, manufactured on argillite and quartz. The extraordinary, spatially discreet nature of the artifact deposits, together with the occurrence of a single point style, strongly suggest that the occupation is single component. Based on the strong similarity of the stemmed bifaces to the Poplar Island and Savannah River types, a Late Archaic association is suspected.

The large number of features suggests that the site functioned as more than a lithic reduction station. The most striking of the features were three, shallow, square-to-rectangular pits, the largest of which measured over 3 x 3 meters. Sides were steep and all exhibited flat bottoms. One pit feature showed evidence of possible posts along its interior rim. A single unmodified quartzite boulder was recorded in a pit feature, indicating the on-site caching of raw material. In addition to the distinctive stemmed bifaces, other formal tool types recovered from the site include an awl, unifacial scrapers, and a large, carefully curated, multi-purpose cobble tool. Also recovered was a drilled slate pendant. Radiocarbon dates for the site are pending.

The Frederick Lodge Site complex presents an excellent opportunity to study the utilization of bay/basin settings through much of prehistory. When synthesized with previous bay/basin studies in Delaware, analytical results should yield significant information on local prehistoric settlement and adaptations. The site complex, which

included bay/basins, ridges and adjacent slopes, falls within a proposed wetland replacement area. At the time of the investigations, this area, including the bay/basins, were open and in recent agricultural use. The proposed wetlands area is situated within broad, rolling uplands which form a divide between Blackbird Creek and the adjoining drainage system. This part of the Delaware Coastal Plain is characterized by a high frequency of bay/basins. Sedimentary analysis on bay/basin ponds in the upper Blackbird watershed has been undertaken in conjunction with a paleoenvironmental study of the proposed SR 1 corridor (Kellogg and Custer 1994).

The two large bay/basins, measuring approximately 150 and 300 meters in diameter, are dry, and are associated with low dunes. These dunes are located along the northeast edge of both bay/basins, and were the favored prehistoric occupation loci within the Fredrick Lodge Site Complex. A third landform feature is present in the north-central portion, where a Columbia Formation component lies exposed on the surface as a relatively pronounced, gravelly knoll. With the exception of the eroded Columbia outcrop, surface soils are uniformly sandy. The dune areas are capped by roughly 60cm deep aeolian deposits, which buried an early Middle Archaic bifurcate component. An apparent Early/Middle Woodland component, characterized by small fire-cracked rock hearths and distinctive small, contracting and straight-stemmed points, was also partially buried by subsequent deposition. Below the aeolian package, the culturally sterile B-horizon graded into coarse, Columbia Formation sands. Extensive soil samples were taken from the silty deposits inside the bay/basins to recover radiocarbon material and potentially, pollen or macro-botanicals.

Controlled surface collection was conducted across the entire 32 acres on a 10m grid, followed by test units placed across artifact concentrations and key landform locations, and finally extensive contiguous block excavations to fully investigate the subsurface deposits. Components of all cultural periods were identified, from the Early Archaic (i.e., Kirk/Palmer points) through the Late Woodland (Triangle points), indicating that the bay/basin setting was an attraction for much of prehistory. In all, over 50 projectile points were found across the site complex. Many of these point forms are clearly diagnostic and provide good temporal markers. The bifurcate type represents the earliest major site occupations, consisting of small, discrete camps. The overwhelmingly dominant artifact types found in association with the bifurcate points are small chert finishing or retouch flakes. Small unifacial scrapers were also recovered.

Late Archaic use of the site appears to have been minimal, represented by two Poplar Island points and two Fishtails, one of the latter in direct association with a small fire-cracked rock hearth buried at the foot of a bay/basin slope. The greatest use of the site was apparently during the later Early/Middle Woodland. In addition to the small hearths, a single tier, linear fire-cracked rock scatter was identified that extended diagonally

across at least 4 one-meter units. The scatter is thought to be the result of the deliberate disposal of fire-cracked rock, possibly associated with a specific processing activity. Numerous stemmed points were found in association with the fire-cracked rock features. A minor Late Woodland occupation consisted of two triangle points recovered from plowzone contexts, several small plow-truncated post molds and the base of a large post, or small pit feature. The Late Woodland occupation was ephemeral, functioning perhaps as a hunting station or some other resource extractive camp. Soil samples from feature contexts are expected to produce good AMS or conventional C-14 dating of recovered carbonized material.

HISTORICAL SITES

Blackbird Creek Site (7NC-J-195D)

As mentioned earlier, almost every site had a historical component. Only two such sites, however, were subject to data recovery. The Blackbird Creek Site (7NC-J-195D) discussed earlier, produced tantalizingly evasive historical information at the Phase II level. Although the historical component of that site was recommended not eligible, data recovery of the prehistoric component resulted in same for the historical occupation.

Fifty-two historical features included 44 round and square postholes (some with residual postmolds), two modern pipe trenches, 4 unidentified stains, a shallow ditch and a possible second plowzone. Nine postholes align in what appears to be a fenceline, while none of the postholes appeared to be load bearing, structural supports. Nearly the entire historical assemblage was contained within the plowzone, and consisted mainly of brick fragments, window glass, cut or wrought nails, and ceramics. An assessment of the refined ceramics indicates that approximately 40% are pearlware, and 43% are transitional early 19th century whiteware.

While some concentrations of artifacts were initially noted (e.g., pre-1830 ceramics predominated in the western portion of the site, while 1830-1880 ceramics were found in the northern portion), none of the archival documentation mentions a structure(s) within site boundaries, and no structural remains were identified in the archaeological record. The final conclusion was that the 19th century landowners were not primarily farmers; all three men engaged in commercial activities (e.g., innkeeper; hotel operator; storekeeper, postmaster) in the nearby village of Blackbird (now, the Blackbird Historic District) and most likely had residences co-located with those businesses.

The Jones Site (7NC-J-204)

The Jones Site is the southernmost site in the 5-mile corridor, and is still undergoing investigation. This site was something of a dark horse at the beginning of Phase II studies, and has evolved into a true tease throughout data recovery. Artifacts from the site are mainly contained within the plowzone, which extends to a depth varying between 20-35 centimeters below grade. While artifacts were found in all portions of the site in shovel tests, concentrations of architectural material (mainly brick fragments) and ceramics (predominantly late 18th through mid-19th century in popular usage dates) were clustered in the north and south ends of the site, respectively. The initial conclusion was that structural footprints would be found below the plowzone in both north and south to explain the clustered artifacts.

Once again, like the Blackbird Creek Site, shovel testing and strategically placed test units did not explain the artifact distribution (i.e., brick fragments in the north, ceramics in the south), or the nature of the site. Both answers and new questions evolved when initial mechanical stripping of the plowzone revealed a brick clamp and clay pit and 6 postholes in a rectangular formation in the north and a slot fence or ditch, and possibly structural square or rectangular postholes/molds in the south. For those who do not know, a brick clamp was much like a brick kiln, except that a kiln was permanent in nature and reused, while a clamp was actually constructed of the brick slated for firing, and was thus designed to be used once or at best short-term. The 6 postholes next to the brick clamp were undoubtedly for a shed associated with brick manufacturing. The size and depth of the squarish postholes in the south suggested that they were load bearing, (i.e., structural), possibly representing a post-in-ground barn. Earlier this week, a well next to the square postholes in the south was found, which may be brick-lined. If so, the question of the presence of the brick clamp may be resolved.

CONCLUSIONS

As fieldwork is still ongoing, and detailed interpretation of the data has yet to really get underway, few definite conclusions are possible at this moment. On one level, we hope that analysis of over 100,000 prehistoric and historical artifacts, hundreds of features, soil analyses, and paleoenvironmental studies will help to refine and perhaps even redefine Delaware's history. Analysis will ascend to another level by synthesizing the the results of sites investigated within this 5-mile segment of the SR 1 corridor with other sites studied within the remainder of the corridor.

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