

APPENDIX III
DATA RECOVERY PLAN
FOR 7NC-D-100
HISTORIC COMPONENTS

by

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This data recovery plan, schedule and budget provide a recommended alternative for mitigation of the adverse effects of a proposed bridge replacement project upon the historic component of 7NC-D-100, New Castle County, Delaware. Execution of the data recovery plan is contingent upon the concurrence of the State Historic Preservation Officer's staff that a no adverse effect determination would be appropriate upon recovery of significant Archaeological data as per 36CFR 800.4c and the Advisory Council's "Treatment of Archaeological Properties: A Handbook".

BACKGROUND

The Whitten Road site (7NC-D-100) is located in White Clay Creek Hundred, northern New Castle County, Delaware, and was discovered by archaeologists from the University of Delaware Center for Archaeological Research during a location/identification survey of the proposed right-of-way for the replacement approaches and bridge over the Christina River on Whitten Road, (Delaware Route 346, Figure 1). Test excavations were carried out and a determination of eligibility was prepared.

The site is located in a region of Delaware that included relatively intensive settlement in the 18th century. The tract of land containing the site is in an area originally patented in the late 17th century and is within two and one-half miles of the Christina Historic District, a prosperous 17th and 18th century shipping and portage point on the Upper Delmarva Peninsula. Two additional 18th century inter-regional transportation centers for overland travel and community centers, Ogletown and Stanton, are also in the immediate area. The Whitten Road site does not appear on any of the published 19th century maps of the area namely the Map of New Castle County from Actual Surveys (Rea and Price 1849), Atlas of the State of Delaware (Pomeroy and Beers 1868), and the Atlas of New Castle County, Delaware (Baist 1893). A survey plot of the property made in conjunction with an Orphan's Court case in 1853 also shows no house on the site, but does show the extant Whitten House nearby. Further research is needed to pinpoint the beginning and end dates of the site.

Initial discovery of the archaeological site took place during a controlled surface collection which was carried out to determine the location of artifact concentrations and their areal extent. Subsurface testing was then carried out in the area of densest artifact concentration to determine the presence of buried, datable, and intact cultural materials, as well as the extent of modern disturbances to the site, and to assess the National Register eligibility of the site. A limited excavation program was initiated through the horizontal exposure of a 36' x 22' area beneath the plowzone. This excavation located the edge of a large trash midden and a structural postmold feature. While the midden appeared to be at least partially disturbed by plowing and erosion, the postmold feature is intact beneath the disturbed plowzone. Nevertheless, the artifacts seemed to be in good context. Additional testing using one foot test units and soil

augering delineated the extent of this feature outside of the initial excavation unit. The feature measured approximately 17' x 25'. Within the site area defined by the surface collection and from within the feature, early 18th century to early 19th century household artifacts were recovered. Other artifacts observed included building material (brick) and a number of prehistoric artifacts. No subsurface testing was done outside of the general area of the feature, but from results of the initial excavation, the controlled surface collection and knowledge of prior excavations on sites of this time period, the presence of additional archaeological features is very likely.

The presence of intact features associated with a temporarily distinct assemblage of artifacts from a rural farmstead site of the early-late 18th century is especially significant because no comparably dated rural sites have ever been excavated in northern Delaware. Furthermore, only one other comparable site (Thomas 1983) has been excavated in all the Delmarva Peninsula. Previous historic archaeological studies in northern Delaware have also indicated that pronounced changes in sites spatial utilization patterns take place in the middle decades of the 19th century (Coleman et al. 1983; Coleman et al. 1984). These previous studies have primarily focused on the sites which existed after the changes in spatial utilization took place. Therefore, 7NC-D-100 is especially interesting because it provides a chance to look at a rural site's spatial utilization prior to these changes. Because of the unique nature of the historic components at 7NC-D-100, the site is considered to be eligible for listing on the National register of Historic Places.

Site 7NC-D-100 lies within the right-of-way of the proposed bridge replacement of Whitten Road, and this project will have both direct and indirect effects upon the significant historic archaeological resources of the site. Alternatives for mitigation of adverse effect include no-build, redesign, preservation-in-place, and data recovery. The first three alternatives were determined to be unfeasible due to cost factors, the need for a new bridge, and the fragile nature of the site. Therefore, data recovery is the preferred mitigation alternative. Because the entire historic component of 7NC-D-100 will be destroyed by the proposed project, complete data recovery is necessary.

RESEARCH DESIGN AND RESEARCH METHODS

Excavation of sites similar to 7NC-D-100 in the Maryland and Virginia Coastal Plain (Kelso 1984; King and Miller 1984) has provided information on the spatial arrangement of activity areas at rural farmstead sites as did Thomas'(1983) study of a similar site in the Lewes area. Research at more recent historic archaeological sites in northern Delaware (Coleman et al. 1984) has also indicated that some of the most significant information to be derived from historic archaeological investigations is related to patterns of spatial utilization and their changes

through time. Therefore, a major study question for excavations at 7NC-D-100 will be to recover data on the spatial arrangement of activities at the site.

In order to study spatial utilization questions it will be necessary to open up large areas of the site. Because much of the site is plow-disturbed, and because the large feature is fairly shallow, it will be important to screen for and recover artifacts from the plowzone. It is proposed here to screen all plowzone soils by 5-foot squares to expose the entire main feature area. Outside the main feature area a series of 10-foot squares will be laid out. Within each 10-foot square a random 5-foot quadrant will be selected for screening (Figure 2), thus producing an aligned, stratified random sample. Finally, in areas beyond the secondary sampling area, a 10-foot grid of 2-foot test units of the plowzone will be excavated (Figure 2). This sampling program will provide an adequate sample of the spatial distribution of artifacts within the plowzone. The sampling grid will be ended when artifact densities drop below reasonable levels. The controlled surface collection data show a tight clustering of historic artifacts, so the area to be sampled is probably less than 150 feet by 100 feet. After the plowzone is sampled it will be stripped by mechanical equipment to look for features.

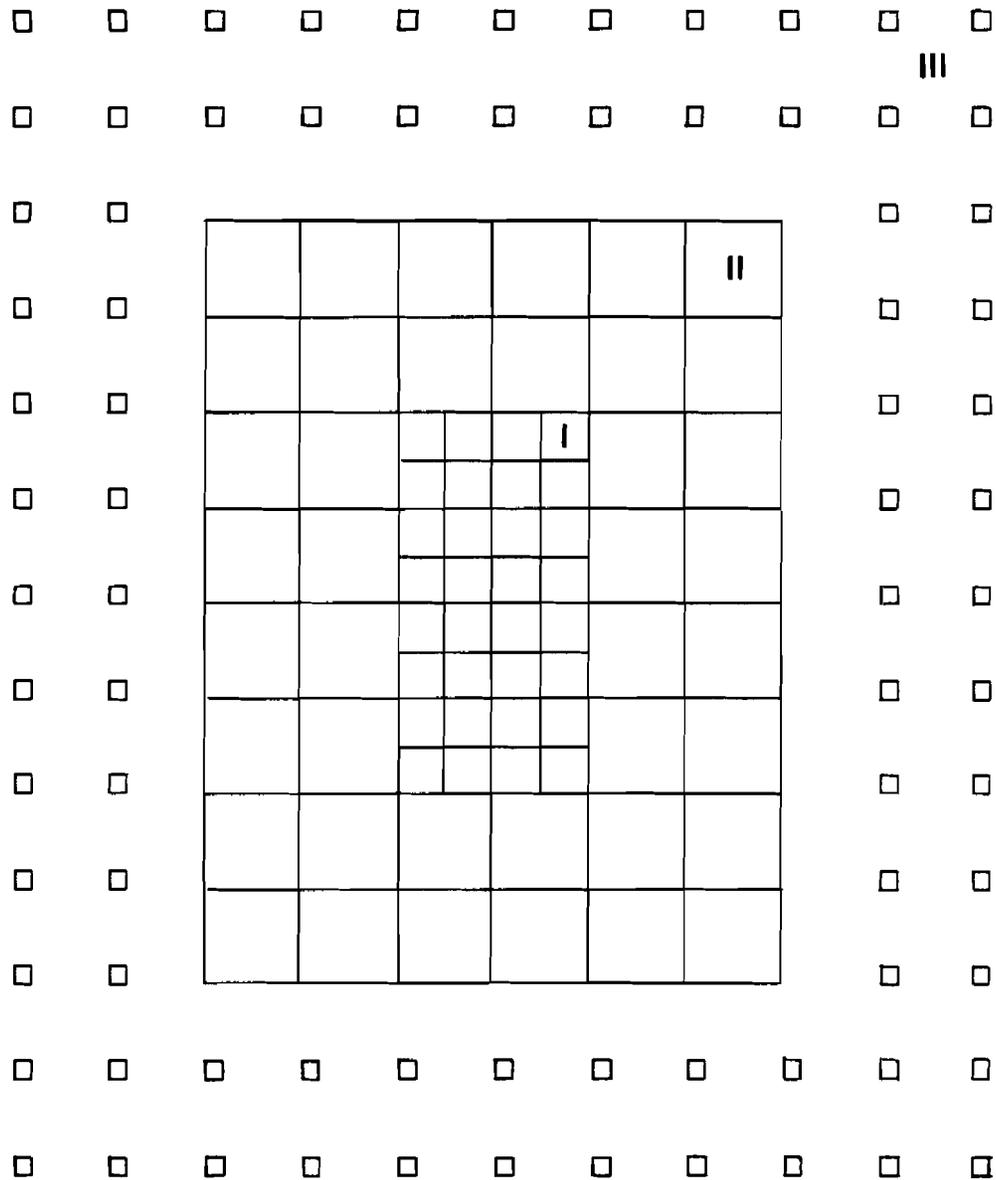
Any features discovered will be completely excavated using combinations of arbitrary, cultural, and natural levels. Special attention will be given to the recovery of food remains, bone and seeds, because recent studies (Coleman et al. 1984; King and Miller 1984) have shown that analysis of food consumption is an area of research where historic archaeology can make its own unique contributions. Careful plotting of fence lines, ditches, and other boundary features will be carried out. The combination of plowzone artifact distributions, feature plots, and boundary plots should adequately describe the spatial utilization at the site.

Field techniques will use standard methods developed on other DelDOT projects. All plowzone soils will be screened as a single stratigraphic unit through 1/4" mesh. Sub-surface features will be excavated in 1-foot blocks. Standard volume flotation and water screen samples will also be taken from all features.

Laboratory analysis will consist of standard processing and cataloging of artifacts following Island Field Museum Guidelines. South's (1979) functional artifact classes will be noted and used to generate artifact density maps to document spatial utilization patterns. Standard analytical procedures for floral materials will be used and faunal materials will be analyzed with special attention given to butchering and consumption patterns. In sum, field and laboratory data gathering will generate a data base from 7NC-D-100 which will be comparable to other local historic sites. Finally, it should be noted that additional archival research will be carried out in an attempt to further identify

Figure 2:

PROPOSED SAMPLING SCHEME FOR PLOW ZONE



- I - CORE FEATURE AREA (5'x 5' squares)
- II - SECONDARY FEATURE AREA (5'x 5' within 10' squares)
- III - OUTER AREA (2'x 2' squares)

the inhabitants of the site and their socio-economic standing within the local community.

After the basic data recovery and description of 7NC-D-100 has been accomplished, the patterns of spatial utilization, food consumption, and any other patterns will be compared to other local and regional sites. First, 7NC-D-100 will be compared with other comparably dated sites in the Maryland, Virginia, and New Jersey Coastal Plain, as well as to the only similar site in Delaware (Thomas 1983). Secondly, 7NC-D-100 will be compared to other later rural historic sites in other parts of northern Delaware. Comparisons of simple site structure will be accomplished using the first data set to see if variation in such site patterning can be related to regional socio-economic differences. The second data set will be used to investigate questions about rural culture change such as:

1) Are changes present in refuse disposal processes and techniques? Can changes be observed in the patterns of artifact distributions and are these changes indicative of varied spatial utilization at the sites? Furthermore, can such changes in patterns be related to historically-documented economic and social changes in the surrounding area or to changes in a larger area?

2) Are there changes in the presence/absence, or frequencies, of certain artifact classes among the various historic sites? Can these changes be related to the socio-economic position of the site's occupants or to local and regional economic conditions?

3) Can changes in either of the above categories of data be analyzed for meaningful covariance?