

III. TECHNICAL APPROACH

A. GENERAL PHASE II WORK PLAN

The general goal of the Phase II investigations was to determine the potential of the sites to provide important data about the past. Since one of the determinants of significance for plowzone sites was the presence or absence of sub-plowzone features, locating such features was a key goal. Another goal was to obtain a larger and more complete sample of artifacts from the sites, to aid in dating and characterizing their occupations. Most of the artifacts from these sites came from surface collections, which are biased in favor of easily visible objects (such as potsherds) and against those that are difficult to see (such as nails).

The overall work plan for the Phase II program included the following elements.

<i>Background Research</i>	As needed to answer questions about the ownership and occupation of the sites.
<i>Test Unit Investigations</i>	A number of 3x3-foot test units were excavated across all of the sites to obtain a larger, more complete artifact sample and to search for features.
<i>Backhoe Stripping</i>	An option was provided for limited mechanical plowzone removal, at the discretion of DelDOT and the DESHPO.
<i>Feature Testing</i>	Limited testing was carried out at features exposed during backhoe stripping.
<i>Laboratory Processing</i>	Cleaning, cataloging, and preparing the artifacts for permanent curation.
<i>Final Analysis and Reporting</i>	Preparation of a management summary and then a final report.

B. ARCHIVAL RESEARCH

Additional archival research was carried out to assist in evaluating these sites. A review of tax records and estate papers was carried out for the Bowman property, searching for information on possible tenants. The agricultural census was consulted for information about how the Bowman property was farmed, and U.S. Census for information on resident households. Research was carried out at the New Castle County Historical Society and the Delaware State Archives.

C. PHASE II FIELD INVESTIGATIONS

The main goals of the field investigations were to obtain a larger and more representative artifact sample from the sites; to determine the presence or absence, nature, and location of sub-plowzone features; and to delineate the boundaries of NRHP-eligible features and deposits with regard to the Limit of Disturbance (LOD). The level of information obtained had to be sufficient to support decisions regarding NRHP eligibility and to provide adequate information for the development of treatment plans for NRHP-eligible resources.

The first step in the investigation of each site was to relocate the Phase Ib survey grid and establish a Phase II grid, including the placement of at least two permanent points (using rebar).

GPS coordinates were taken for the site datum points and incorporated into a GIS database for each site.

1. Test Unit Excavations

The test unit excavations were used to obtain a larger artifact sample and to search for sub-plowzone features. In general, units measured 3x3 feet. Most units were dug only to the base of the plowzone. Some units were placed on a grid (systematic spacing) to sample all areas of the sites, and others were placed to investigate particular features, such as concentrations of brick or artifacts.

In areas where prehistoric artifacts were found, a sample of units was excavated into the subsoil. The subsoil was excavated by natural strata; strata deeper than 0.3 foot were excavated in arbitrary 0.3-foot levels. All soils was screened through 0.25-inch hardware cloth to recover artifacts. Each stratum and level of the unit was described on standardized excavation forms that include information on the soil texture and Munsell color, the depth of the stratum, features encountered, and artifacts recovered.

Obviously recent artifacts such as aluminum foil or nylon cloth were noted and discarded. Other artifacts, including animal bone, were bagged by provenience for shipment to the laboratory for analysis. Because the fields had been fertilized with chicken litter, chicken bones were discarded. Coal was noted on the excavation forms but not retained for analysis and curation. Building materials, such as brick and stone, were treated differently depending on how many were found. Where only a few pieces were found (including the Bowman Tenant Site), all brick was retained, but at the other sites a sample of about 10 percent was kept. Units were backfilled upon completion.

2. Backhoe Stripping and Feature Testing

At the conclusion of the initial test unit excavations, a field meeting was held involving the Principal Investigator, DelDOT archaeologists, and a representative of the DESHPO. At that time it was determined whether there should be additional investigation of the site by further test unit investigations or backhoe stripping.

Backhoe stripping was authorized for both the Bowman Tenant and Bowman #3 Sites. Plowzone removal was done in strips or trenches 4 feet wide, rather than blocks, to preserve much of the plowzone on the site for possible future excavation. All mechanical excavation was closely monitored by archaeologists. All features exposed were photographed and mapped on the site grid. Possible cultural features were exposed at both sites, and they were tested to determine their depth and sample their contents. The features were excavated by natural strata, and all soils were screened. Plan and profile drawings were made.

D. LABORATORY PROCESSING AND ANALYSIS

The laboratory work was carried out in two phases, with cleaning and rough sorting done under the field contract and the final analysis later. Both parts are now complete, and the materials have been prepared for curation at the Delaware State Museum. All artifacts were washed or dry brushed as appropriate, then sorted according to major artifact classes and placed in separate

resealable plastic bags along with cards indicating provenience. Information on the cards includes the field provenience information as well as the assigned site number and catalog numbers.

Cataloging was carried out using Berger's electronic database, which can record up to 24 different descriptors for each artifact. Historic artifacts are cataloged as described in standard works for the region (e.g., Noël Hume 1970; South 1977), using the class, type and variety approach (for example, class = glass, type = bottle, variety = case). Prehistoric artifacts are cataloged in the same database but using a somewhat different system, based on standard works of lithic and ceramic analysis (Callahan 1979, Clark 1986, Crabtree 1972, Flenniken 1981, Gould 1980, and Parry 1987). Ceramics have been cataloged according to temper, surface treatment, surface decoration and assigned to a formally defined ware if possible. A more detailed description of analysis and cataloging methods is given in Appendix A.

The tables in this report do not combine the data from the Phase I and Phase II investigations. Instead, the two data sets are presented separately. This choice was made because the two laboratories seem to use different criteria for identifying some artifacts, especially Astbury ware, of which several sherds were identified by A&HC but none by Berger, and refined ceramics such as whiteware, pearlware, and creamware.