

III. TECHNICAL APPROACH

A. GENERAL WORK PLAN

The general goal of the Phase II investigations was to determine the site's NRHP eligibility, i.e., to provide important data about the past. Since one of the determinants of significance for plowzone sites is the presence or absence of subplowzone 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 the Noxon's Tenant and Dale 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>Archival Research</i>	To answer questions about the site remaining after the Phase I research.
<i>Geophysical Investigation</i>	The area of the Dale Site was mapped with a high resolution magnetometer by a specialist in these investigations, with the goal of mapping subplowzone features.
<i>Test Unit Investigations</i>	A number of 3x3-foot test units were excavated across the site to obtain a larger, more complete artifact sample and to search for features.
<i>Laboratory Processing</i>	The artifacts were taken to an archaeological laboratory, cleaned, cataloged, and prepared for curation at the state museum.
<i>Final Analysis and Reporting</i>	The finds have been analyzed in the light of what is known about rural life in nineteenth-century Delaware, and the results are presented in this report.

B. ARCHIVAL RESEARCH

Additional archival research was performed to assist in evaluating the site. Research was carried out at the New Castle County Historical Society and the Delaware State Archives. Since chains of title were already available for the site, the research focused on answering certain remaining questions about each site and learning more about the owning families. Important data were found in the account book of James Mansfield of Achmester and in the New Castle County Deeds.

C. FIELD INVESTIGATIONS

The main goals of the field investigations were to obtain a larger and more representative artifact sample from the site; to determine the presence or absence, nature, and location of subplowzone features; and to delineate the boundaries of significant 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 the site was to relocate the Phase IB survey grid and establish a new 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. *Geophysical Survey*

Geophysical survey was carried out by Dr. Timothy Horsley using a high-resolution magnetometer. The findings and methods used are described in Appendix A.

2. *Test Unit Excavations*

The test unit excavations were used to obtain a larger artifact sample and to search for subplowzone features (Figure 8). 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. Some test units were placed to target probable feature locations identified by the magnetometer survey.

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 soil 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. 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 much was found. Where large amounts of brick were found, only a sample was retained. All brick from each unit was weighed in the field before any was discarded, in keeping with the discard policy agreed upon between DelDOT and the DESHPO for the U.S. 301 project. Units were backfilled upon completion.

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 Louis 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



FIGURE 8: Excavating a Test Unit in Locus 1 of the Dale Site

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; Parry 1987). Ceramics were cataloged according to temper, surface treatment, and surface decoration and assigned to a formally defined ware if possible. A list of potentially diagnostic artifacts was kept in the field and used to guide the preliminary analysis.

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 refined ceramics such as whiteware, pearlware, and ironstone. Also, the Phase I tables lump the entire site together, whereas the Phase II analysis treats each locus separately.