between Christiana and Newark and totally reconstructed the Ogle's corner intersection. By this time private commercial development had removed the John Ruth Inn structure from its location on the northwest corner of the intersection of Red Mill Road and Route 4. The final highway construction in the project area was a 1982 project which widened the south side of Routes 4 and 273 in the project area and this project had no effect on cultural resources. The construction projects described above had significant impacts on the above mentioned cultural resources; however, the most extensive damage to the cultural resources has occurred since the 1970's in conjunction with right-of-way property aquisition by the Delaware Department of Transportation for the planned Ogletown improvements (Figure 18, Coleman and Custer 1985:Figure 4). Many of the structures and dwellings in the project area that had survived into the 20th century were demolished and removed during the property acquisition. The resulting landscape (Plates 1-3) is almost devoid of structures and looks nothing like either the 18th or the mid-20th century environment.

RESEARCH METHODS

PRELIMINARY RESEARCH

Phase I research consisted of two steps: 1) background and archival research, and 2) field survey. Background and archival research consisted of consultation with the staff of the Delaware Bureau of Archaeology and Historic Preservation (BAHP), review of all inventories of prehistoric and historic cultural resources maintained by the BAHP, review of historic atlases and maps,

interviews with local landowners and experts in local history, review of archival materials such as deeds, tax assessments, probate records, road books and petitions, and other court records, and inspection of aerial photographs on file at the Soil Conservation Service (SCS) - Glasgow Office. Information from previous archaeological investigations within the project area were extensively consulted (Thomas 1980). The results of this earlier survey within the Ogletown project area are summarized in Appendix I and will be discussed where appropriate in the following text. Primary documentary research focused on the time period prior to 1850 because historic atlases and maps published after this date contained the basic information regarding site location and ownership necessary for the completion of a Phase I survey. Earlier time periods, on the other hand, have no such readily accessible sources. The background research for prehistoric sites also included a review of prehistoric archaeological literature on applicable predictive models (Custer 1984, 1983; Custer and Wallace 1982; Custer and DeSantis 1986; Gardner 1978).

Field survey methods for the Phase I Field Reconnaissance Survey included a pedestrian survey of all sections of the project area including the entire ROW to reveal cultural resources such as standing structures or structural foundations which might be present, and to determine the general nature of the corridor for subsequent application of surface survey or subsurface testing. In areas of low visibility augering was carried out to identify areas of undisturbed soils and buried landscapes. Preliminary surface collections were systematically

carried out where there was sufficient surface exposure. Because much of the project area was not under cultivation, a testing design was developed for prehistoric resources. This testing design, and the procedures employed for Phase I surface and subsurface survey and testing are described below.

PHASE I SURFACE RECONNAISSANCE PROCEDURES

Phase I surface reconnaissance of plowed fields was conducted exclusively in the northern section of the project area during the 1986 cultural resource survey. All fields bordering the ROW with surfaces exposed through cultivation were systematically surveyed for cultural material. The locations of all cultural material encountered during reconnaissance were marked by flagging. Areas within the direct or indirect impact zone of the ROW were systematically collected in 10m collection units.

PHASE I AND II SUBSURFACE TESTING PROCEDURES

In areas where surface visibility was low within the proposed ROW, where undisturbed and buried landscapes were expected, and within high probability zones described above, 1m test units and/or shovel test pits were excavated at 20 meter intervals. In high probability areas, testing was also conducted at 10 and 20m intervals perpendicular to the ROW centerline due to potential secondary impact to cultural resources from proposed construction. All excavated soils were screened through 1/4" mesh, and test units were excavated to a sufficient depth, usually 60 centimeters, to reach soils too old to contain

artifacts. All cultural materials recovered were bagged according to individual test units and excavation levels. Field records for each excavated test unit noted the thickness, color, and textural characteristics of soils encountered, and the cultural materials recovered. If prehistoric cultural materials were encountered, additional test units were excavated at five or ten meter intervals surrounding the original unit. Based on whether these tests yielded additional cultural material, a decision was made whether or not to undertake Phase II investigations. Appendix II lists the total number of artifacts recovered from each site during Phase I/II excavations.

Phase II location/identification testing was carried out to determine the National Register eligibility of any sites discovered during the Phase I survey. Phase II testing consisted of the systematic excavation of 1m or 3'x3' test units to determine the integrity, limits, and stratigraphic context of archaeological sites. In floodplain areas, Phase II testing specifically considered the depositional integrity of overlying soils and included preparation of geological cross sections.

RESULTS OF PHASE I AND II INVESTIGATIONS

To facilitate discussion of the cultural resource survey the project area was divided into seven segments 1) Route 273 - Birchwood Park to Greenleaf Manor; 2) Salem Church Road Industrial Park to Red Mill Road; 3) Route 4 Improvements; 4) Route 273 Greenleaf Manor to Amtrak RR; 5) Route 273 - Amtrak RR tracks to Cool Run; 6) Route 273 - Cool Run to Avon; 7) Segment 7 - Access Road - New 273 to old 273 (Figure 2).