RESEARCH DESIGN AND METHODOLOGY

The primary goal of the final Phase II research was the gathering of archaeological data necessary for a determination of eligibility of the Wilson-Slack site for listing on the National Register of Historic Places. While most of the fieldwork was oriented toward data description, it was still possible to discuss numerous research questions. The analysis of the data from this site provides important comparative data from which to interpret other historic sites in New Castle County. In order to obtain comparable data, the research methodology of the present research follows that used in other recent DelDOT projects (Catts and al., 1983; Coleman et al. 1982, 1983). These past projects have provided a regional sampling scheme for northern Delaware and the opportunity to study the geographic distribution and social/economic interaction within what could be loosely called a rural community. When complete the Route 4 Cultural Resource program will have sampled ten historic sites spanning numerous time periods, socio-economic classes and site functions. The data base that will result will be similar in scope, but not in scale, to the recent Tombigbee Waterway Project (Cleland in Neuman, 1983). A synthesis of the Route 4 data will be made in a future DelDOT publication.

The Phase I/II cultural resource survey at the Wilson-Slack Agricultural Implements Works and Farmstead brought forth a situation relatively unique in historical archaeology. Available to the researchers were: 1) the business records of Alexander Wilson for 1850-1875 and his son J. Wilson for 1910-1912: 2) the architectural remains of his agricultural implements works and the family domestic residence and support buildings; 3) a living descendent of A. Wilson, his granddaughter, Mrs. Norman (Sarah) Slack, and 4) archaeological remains in partly undisturbed context dating to the industrial use of the site. The fieldwork was guided by the recommendations made in the preliminary Phase I/II report (Bachman

et. al. 1983) and by consultation with the SHPO staff, and all decisions were made in order to provide data to satisfy the ongoing research questions developed for the Route 4 Corridor.

Thus, in addition to providing National Register eligibility information, the research methods were designed to provide a comparative data base on archaeological site content and site structure. While the artifact pattern concept of South (1977) has been widely used, and employed on previous DelDOT archaeological sites, it was felt that the artifact sample obtained from this testing was not suitable for this type of analysis. Rather, the artifact information from the excavations was analyzed for its distributional information and to determine the date and function of the features encountered. In general, the variety of cultural information available for the site was amenable to a more broadly-based intepertative framework for pattern recognition than offered by South.

Previous research at the Wilson-Slack site indicated that the site would provide an excellent opportunity to gain a better understanding of the changing lifeways of a northern Delaware businessman and entrepreneur. Three general study topics were developed to guide the field and laboratory investigations of the DelDOT project:

1) Patterns of artifact distribution and spatial utilization
2) Purchase and/or consumption habits
3) Covariation of change between topics 1 and 2

Because of the limits to the extent of archaeological testing, archaeological data could not be gathered to satisfy the data requirements to archaeologically test all hypotheses concerning the above topics. However, the wealth of documentary evidence left by A. Wilson allows these questions to be addressed.

Research on Topic 1 focused on archaeological data and was mainly concerned with studying the distribution of various artifact classes across the site.

Consequently, a 10' x 10' postholer/shovel test grid was excavated across all undisturbed areas of the site. Similarly, test units were excavated adjacent to known standing structures and projected locations of structures no longer extant. These excavation units helped to clarify functional areas and also to further study the context and function of the structures.

The research questions involved in Topic 2 assessed the effects of industrialization, expanding markets, and improved transportation networks on a rural manufacturing economy and the economic status of the proprietor of such a business. Because of the small sample of the archaeological data, mainly archival data were used to address this question. In order to best accomplish this task, study of the actual business documents was combined with an analysis of tax assessment data using methods previously employed at the William M. Hawthorn Site (Coleman et. al 1984). It appears that both of these data sources provide a more reliable base for interpretation than the use of probate inventories employed by Carr (1980), Jones (1980), and others. Account books, unlike probate inventories, allow us to observe merchants and consumers in the prime of their economic life (Wilson 1981). Also necessary to interpret properly the economic status of the sites occupants was some general understanding of regional and local economic trends. This background information is taken largely from the historical overview found in Coleman et al. (1984). Additional research was undertaken to further study the development of manufacturing and industry in 18th and 19th century northern Delaware.

Besides tax assessment comparisons for Pencader Hundred, the U.S. Census of Manufactures for 1850-1880 was employed to provide an economic ranking scheme for manufacturers in Pencader Hundred and surrounding hundreds. Data were obtained on individuals engaged in the same general occupation as Alexander Wilson, and their incomes, wages, and products were compared. These subjective

rankings provide an added dimension within which to interpret the archaeological, architectural, and documentary evidence. This same data base was used by Del Sordo (1981), and the results of his analysis were also used for the present study.

To further study the rural community concept and the effects of increased industrialization, one additional research avenue was pursued using the idea of the sphere of business and the catchment area of A. Wilson's business. The idea of catchment area has previously been employed by prehistoric archaeologists to define the area within which people travel to procure food and other resources. A given catchment area usually possesses well defined boundaries, such as a single river valley rimmed by high ridges, that restrict movement. In the historic context the factors that restrict this area also might include natural barriers, ie. a river, but would also include artifically imposed ones created by ethnic, racial or political factors. Previous research has shown that one of the primary limiting factors in early colonial trade and communication was the distance that a horse and rider could effectively cover in a single day. The present research attempted to identify other variables controlling purchasing and settlement pattern structure by plotting the locations of A. Wilson's customers on contemporary maps. In a way, this approach to the study of settlement and purchasing patterns was quite different from traditional approaches. Most historic settlement pattern studies seek to predict site locations and have met with only mixed success. Cleland (1983) points out that in general archaeologists have uncritically borrowed models developed by and for geographers designed to describe, not explain the observed patterning. On the other hand one of the most important factors in elucidating the process by which the interaction patterning forms, are the boundary conditions that restrict the flow of goods. Through the use of the business records of A. Wilson it was hoped that some of the controlling variables of this interaction could be recognized through analysis of empirical data. This type of analysis of large-scale interaction

spheres is thought to be helpful in explaining local influences on the cultural processes which stimulate and constrain the flow of goods across behaviorly bounded space (Cleland 1983: 42). In the same way, the catchman area of A. Wilson can be studied. This is the geographical area within which Wilson's raw material goods were purchased and could be examined in this project through examination of a collection of documents known as the Alexander Wilson Papers. (Special Collections, U of D.). The result of these analyses produce a much different picture of a site's context than could be produced by the usual site specific reports. Also, the process of social interaction in a community also seems to be of more interest to the general public. As Leone (1983) states, the anthropological historical archaeologist should understand that the questions he asks and answers must be interpreted for a mass audience. If historic research is presented in this fashion, the general public can gain some understanding of their own historic background so that their present values and other features of their everyday lives can be better shaped. Especially interesting about the present research is the fact that it focused on a active individualistic entrepeneur in the most complete sense. This is one of the unique characteristics of American capitalism originating as early as the 17th century and still active today.

Field Methods

All excavation units were excavated in natural levels. If a natural level greater than .4' in thickness was encountered, it was separated into a new level. Units were terminated when culturally sterile, undisturbed natural soils were encountered. All soil was sifted through ¼ inch wire mesh screen. Profiles of all test units were drawn and described using textural and color descriptions. Photographs were taken of structural features, test units, and the general setting of the site and project area.

Cataloging and analysis of the artifacts focused primarily on the chronological implications of the artifacts. Artifact form and function were also determined in order to allow for the plotting of the distributional information.

Artifacts were processed and conserved in accordance with the State of Delaware Bureau of Archaeology and Historic Preservation standards and were placed on repository at the Island Field Museum, South Bowers, Delaware (the official State repository) along with field notes, maps, and all excavation records. Copies of the report were distributed to the local archaeological community, libraries, and schools, and additional copies are on file at the Delaware Department of Transportation, the Island Field Museum, and the Bureau of Archaeology and Historic Preservation.