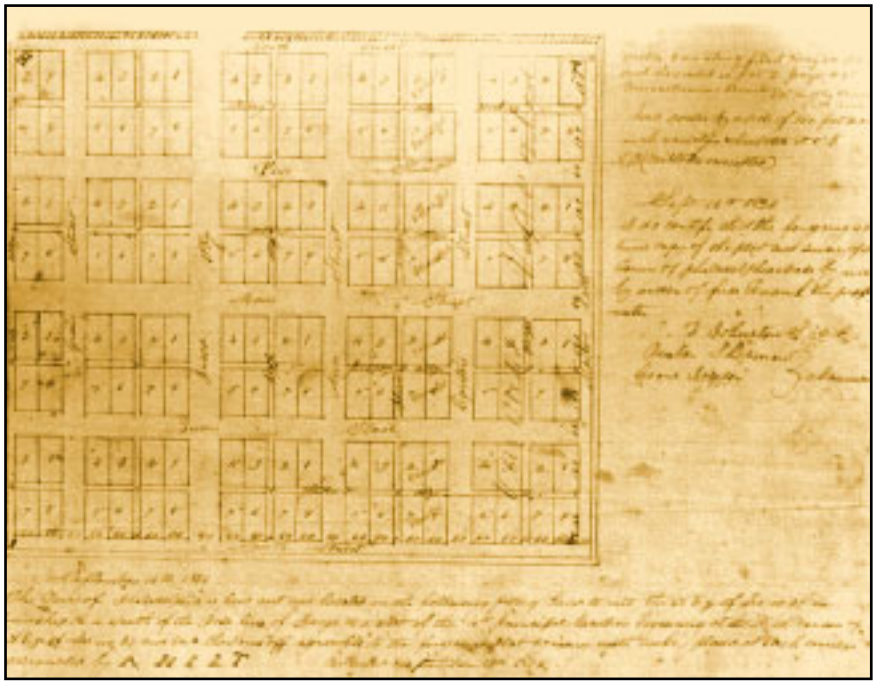
New Philadelphia Project Pedestrian Survey: Final Report and Catalog

Phase I Archaeology at the Historic Town of New Philadelphia, Illinois

Tom Gwaltney



June 2004

arGIS Consultants, LLC
4902 Newport Avenue
Bethesda, Maryland 20816

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The New Philadelphia Project Pedestrian Survey was conducted in 2002 and 2003 under the auspices of the University of Illinois at Springfield for Dr. Vibert L. White, Chair and Associate Professor of African-American Studies and Director of the New Philadelphia Project, and the New Philadelphia Association, Mr. Philip E. Bradshaw, President, in cooperation with the Illinois State Museum, Dr. Terrance J. Martin, Curator of Anthropology, and the Center for Heritage Resource Studies at the University of Maryland College Park, Dr. Paul A. Shackel, Director.

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Tom Gwaltney
arGIS Consultants
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Management Summary

The historic town of New Philadelphia is located in Pike County, Illinois three miles east of Barry, Illinois and approximately twenty miles east of the Mississippi River. Founded in 1836 by "Free Frank" McWorter, New Philadelphia is the first known town incorporated by an African American. In order to preserve the site and commemorate Free Frank's achievement, community leaders formed the New Philadelphia Association. In concert with the Association, the University of Illinois at Springfield, the University of Maryland, and the Illinois State Museum, volunteers from the community worked with archaeologists to conduct a pedestrian survey and surface collection of the 42-acre site over three long weekends in the late fall of 2002 and early spring of 2003.

The goals of the pedestrian survey for the New Philadelphia Project were two-fold: one, to demonstrate that archaeological resources exist at the New Philadelphia site, and two, to identify surface artifact concentrations that could be co-registered with the New Philadelphia plat. Verifying the presence of archaeological resources at the site is important because it will facilitate the site's interpretation and commemoration. Additionally, the identification of surface artifact concentrations at New Philadelphia provides clues as to which lots may contain remnant historic structures or other archaeological resources and which areas may warrant further archaeological investigations.

The pedestrian survey consisted of a systematic walkover of newly-plowed fields in order to visually examine exposed sections of soil for artifacts or archaeological features. Artifacts were identified and flagged during the 10-day survey, and materials were collected for analysis. The location of each collected artifact was then mapped for visualization of the distribution of the materials. Artifacts were then prepared by the Illinois State Museum for cataloging including washing each artifact and rebagging it in archivally stable plastic bags with provenience tags.

The prehistoric artifacts and faunal assemblage were cataloged at the Illinois State Museum, while the historic assemblage was cataloged by arGIS Consultants in 2004. Historic artifacts were cataloged according to the Automated National Cataloging System as adopted by the National Park Service, and all dateable artifacts were assigned date ranges to delineate the occupational landscape of the town. A detailed review of the pedestrian survey and cataloging methodologies is provided in Chapter 2.

Of the 7,073 historic and prehistoric artifacts collected during the survey, 5,932 artifacts were identified as historic, and the balance was identified as prehistoric or non-cultural material. From the historic assemblage, 2,084 were dateable, i.e. a manufacturing start date (at a minimum) could be assigned to the object. Classifications of materials into general material types, such as *Architectural, Domestic, Kitchen,* and *Personal,* were derived and mapped and are detailed in Chapter 3.

The two goals of the pedestrian survey, as outlined above, were satisfied: the existence of archaeological resources was demonstrated at the site, and artifact concen-

trations were identified. From this result, follow-on research should be conducted to ascertain the site's eligibility for nomination to the National Register of Historic Places. This historic site has tremendous research potential, and while modern disturbance to the surface landscape is evident, additional archaeological investigations will bring the story of this important site to national prominence.

Chapter 1

Historical Background:
Free Frank McWorter and the Founding of New Philadelphia

The historic town of New Philadelphia, Illinois – located in the rural landscape of Pike County, approximately twenty miles east of the Mississippi River – was founded in 1836 by "Free Frank" McWorter. Born a slave near the Pacolet River in South Carolina, there is little direct documentation of Frank's earliest years. In 1795, at the age of 18, Frank was relocated to the Kentucky frontier by his owner, George McWhorter. Once in Kentucky, Frank helped settle and develop his owner's properties in Lincoln and Pulaski Counties. In 1799, Free Frank married his wife, Lucy, who was enslaved in Pulaski County as well, and in 1800 their first child was born, whom they named Juda, after Frank's mother (Walker 1983:19-25).

Frank McWorter, like other enslaved individuals in frontier regions, was "actively involved in developing and defending his master's land" (Walker 1983:26). His skills were not limited to cultivation and harvesting, however, and George McWhorter hired Frank out as a jack-of-all-trades around Pulaski County. By 1810, in addition to being hired out by George McWhorter, Frank was hiring out his own time, with the goal of earning money to eventually purchase his growing family's freedom as well as his own (Walker 1983:28, 32-34).

In the first decade of the nineteenth century, George McWhorter purchased additional property in Kentucky and Tennessee. Leaving Frank behind to manage his Pulaski County farm, George McWhorter relocated to his new homesteads, first in Wayne County, Kentucky and later in Lincoln County, Tennessee. Although he was saddled with the tremendous responsibility of managing his owner's farm, by the second decade of the nineteenth century Frank had succeeded in establishing his own saltpeter mining operation, the only one in Pulaski County at the time (Walker 1983:34-36).

In 1815, George McWhorter died without making any provisions for Frank's manumission, although his heirs acknowledged that he intended to do so. In April 1817, after seven years of hiring out his own time and skills, Frank succeeded in purchasing his wife Lucy's freedom for the substantial sum of $800. This ensured that their son Squire was born free in September of that same year. Two years later, in September 1819, Frank purchased his own freedom at a cost of $800. The importance of this event to Frank and his family cannot be overstated; in the 1820 census, Frank, rather than choosing a surname, had his name listed for the first time as "Free Frank" (Walker 1983:38, 41-42, 48).

Free Frank continued to reside in Pulaski County after his manumission in 1819, manufacturing saltpeter and also expanding his entrepreneurial activities into land speculation and development. In the 1820s, he established a branch of his saltpeter works in the larger nearby town of Danville, where he was able to realize a greater profit. In 1829, he traded his highly profitable Danville saltpeter enterprise for the freedom of his

son Frank, Jr. In September, 1830, Free Frank and part of his family – his wife Lucy, and their free children Squire, Commodore, Lucy Ann, and Frank, Jr. – left Kentucky for the free state of Illinois, where Frank had purchased land. They were forced to leave behind Frank's three remaining children – Juda, Sally, and Solomon, as well as their spouses and children – who were still enslaved in Kentucky. Free Frank, however, eventually succeeded in purchasing their freedom after the family settled in Illinois (Walker 1983:49, 59-61, 71-74,157).

After a long, dangerous, and arduous journey, Free Frank and his family settled on their Pike County, Illinois property in early spring, 1831. By 1833, Free Frank's farm was productive and profitable, and in 1835, only four years after his initial settlement in Illinois, Free Frank earned enough money to purchase his son Solomon from slavery for $550 (Walker 1983:75, 87-89).

That same year, Free Frank began purchasing the land tracts on which the town of New Philadelphia would eventually be laid out, and in 1836, New Philadelphia was platted with 144 lots, each measuring 60 by 120 feet; indeed, New Philadelphia is the earliest known town incorporated by an African-American. As the town's sole proprietor, Free Frank was responsible for marketing and promoting the town, and with Pike County's favorable location in a prime agricultural area in the Illinois-Mississippi River Valley, New Philadelphia attracted both black and white settlers. By 1839, the first business in New Philadelphia, a grocery, was established. By 1850, New Philadelphia also boasted a post office, stagecoach stand, blacksmith shop, wheelwright, two shoemakers, and two cabinet makers. Free Frank was a respected member of the local community; as Pike County historian Charles Chapman has noted, "Mr. McWorter was a live, enterprising man, a reputable worthy citizen, kind, benevolent and honest. He labored hard to free his posterity from the galling yoke of southern slavery" (quoted in Walker 1983:164). Indeed, although Free Frank died in 1854 at the age of 77, his hard work and entrepreneurial skills eventually secured the freedom of all his remaining children, grandchildren, and great-grandchildren (Walker 1983:93, 105-110).

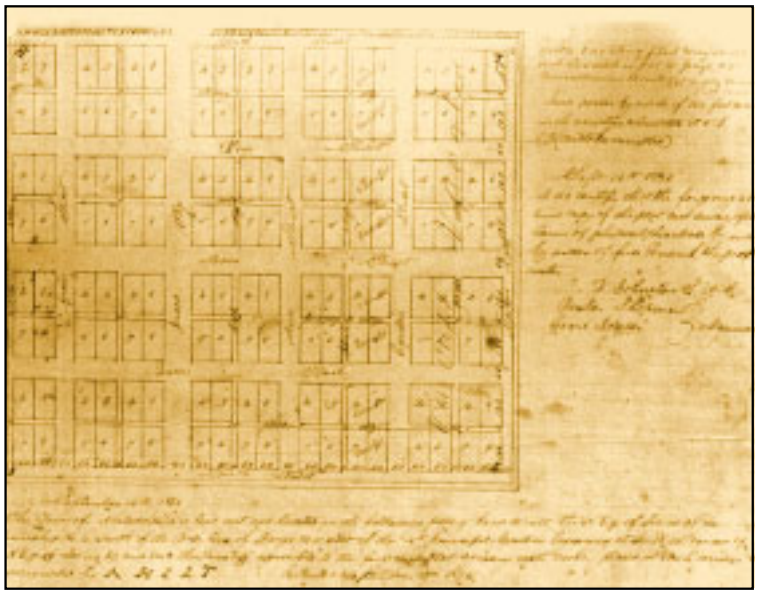

Figure 1. The plat of New Philadelphia prepared in 1836 for Free Frank.

The town flourished during the mid-nineteenth century, experiencing its greatest growth in the 1860s. New Philadelphia began to decline in the 1870s, however, after the railroad bypassed the town in 1869, causing merchants to relocate to areas served by the railroads. The decline of New Philadelphia as a market center hastened population decrease, and the town was finally unincorporated in 1885 (Walker 1983:164-169).

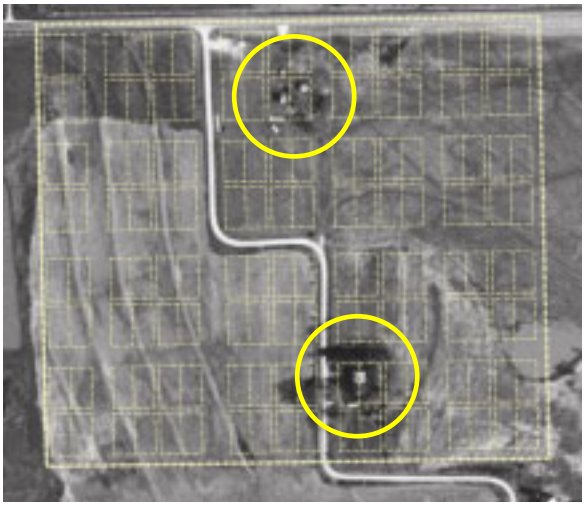

Figure 2. New Philadelphia plat shown overlaid on present-day landscape. Structures remaining within the town plat (circled above) include a few remnant foundations and a house with outbuildings.

Today, most of the land that originally comprised the town has returned to agricultural use, and only a few foundations, a gravel road, and a sign marking the field as the site of New Philadelphia indicate the site of the historic town (Figure 2). So, in 1996, community leaders in Pike County, Illinois formed the New Philadelphia Association to preserve the site and to commemorate Free Frank's enterprise and the social history of the many families who lived in this integrated town. The Association, working with the University of Illinois at Springfield, the University of Maryland, and the Illinois State Museum organized a pedestrian survey of the town to examine more fully the development of this integrated community on the western frontier. Archaeologists and volunteers from local colleges and universities and the surrounding community conducted a pedestrian survey and surface collection of the 42-acre site in the late fall of 2002 and early spring of 2003.

Chapter 2

Pedestrian Survey and Artifact Catalog Methodologies

Pedestrian surveys are designed to delineate archaeological properties and to identify their cultural affiliation and research potential, and are particularly useful in the assessment of large land tracts where widespread subsurface testing is not feasible. The field portion of the pedestrian survey at New Philadelphia was a three-step process comprising a floating baseline pedestrian survey, artifact collection, and artifact location survey. This research design was selected to optimize time, personnel, and available funding. Individual survey and collection teams composed of archaeologists and volunteers were frequently assigned different locations on the 42-acre site, often conducting different aspects of the survey process simultaneously. This procedure ensured that all artifacts could be located, marked, collected, and surveyed within the predetermined timeframe. It also ensured that each volunteer was able to participate in as many aspects of the survey process as possible. Subsequently, collected artifacts were washed, bagged, and cataloged to permit detailed analysis of the assemblages. This chapter outlines the field and laboratory methods employed for the survey.

Prior to commencement of the survey, the project area was plowed and disked in order to break up the crop roots and sod. This generally provided a greater than 75% ground visibility over the majority of the plowed areas. Subsequent precipitation and weathering of the site greatly improved artifact visibility and translated into nearly optimal survey conditions. Twenty-six and one-half acres – approximately 63 percent of the 42-acre site – were plowed (Figure 3).

Figure 3. The pedestrian survey encompassed the highlighted areas outlined above within the town boundary – approximately 26 ½ acres.

Two large areas within the New Philadelphia site were necessarily excluded from the survey: a 2 ¼-acre area near some remnant foundations and reconstructed buildings which contains protected native prairie grasses that could not be plowed (top center in Figure 3), and a 3 ¾-acre area where owner permission had not been obtained (left side of bottom-right quadrant in Figure 3). Nine and one-half acres, scattered across the site, were not plowed due to terracing for soil conservation, tree cover, roads, or water features. Additionally, early spring field conditions prevented a small section of the site from being disked; instead, this area was prepared using a harrow prior to the pedestrian survey.

Artifact Collection: Field Methodology

Step One – Floating Baseline Pedestrian Survey

The first step in the process involved a floating baseline pedestrian survey. Teams of volunteers and archaeologists formed a line at the edge of a plowed field to be surveyed, with team members spaced approximately five feet apart. The survey team systematically walked over the survey area in transects, marking each visible historic or prehistoric artifact on the ground surface with a flag (Figure 4). Once a transect or survey area had been completed, the teams regrouped and systematically surveyed the adjacent transect or survey area. This process was repeated until the entire 42-acre project area had been examined.

Figure 4. A survey team of archaeologists and volunteers completes marking a transect at New Philadelphia. View facing north.

Delineation of Collection Areas

In order to save time, the survey teams utilized existing visual markers whenever possible – such as roads, highways, or field terrace margins – to establish transect boundaries. Many areas of the New Philadelphia site are open fields, however, and do not contain natural or constructed visual barriers; therefore, when necessary, visual markers were established in order to ensure that the survey progressed in a systematic fashion. This was accomplished in a number of ways; for example, as time permitted, survey area boundaries within open fields were delineated using colored flags or strings. The limitations of time and personnel, however, often made the establishment of formal collection transects or units impractical.

When pre-marking the transects was impractical, an alternate method was employed and involved the use of "anchors" – individuals who maintained and marked a regular pace for the survey team. In the "anchor" method, the individuals at the end of a line of surveyors formed the anchors and were responsible for pulling a 300-foot tape or placing a line of flags that delineated a "floating baseline" along the edge of the transect. When the survey team reached the end of a survey transect, the 300-foot tape or the line of flags formed the baseline for the next transect. The survey progressed in this fashion until the entire survey area had been covered.

Step Two – Artifact Collection

The second step in the survey process involved the collection of the flagged artifacts. Working in teams of two to four members, archaeologists and volunteers formed collection teams and utilized log sheets containing blocks of sequential numbers that

would form the unique provenience identifier or "NP number" for each artifact (e.g. NP 0001, NP 0002, etc.). Each block of numbers was signed out on a master log sheet, typically in groups of 50-100 numbers, and each collection team was issued a different color of plastic flagging tape. This helped ensure that individual collection areas and number blocks were distinguishable while facilitating the artifact location survey process and helped make certain that every flagged artifact was collected.

Once a block of numbers and a flagging tape color had been assigned, the collection team systematically collected each flagged artifact and placed it in a zipper-locking plastic bag. The artifact was identified by general type (e. g. "curved colorless glass," or "undecorated whiteware," etc.) and recorded on the log sheet in sequential order. A paper tag was bagged with each individual artifact, and included the identification or "NP" number, the date of collection, and the initials of the collection team. The flag marking the collected artifact was then uniquely identified with the collection team's color-coded flagging tape on which the artifact's provenience number was recorded. The collection process proceeded accordingly until the entire sequence of assigned numbers had been utilized.

Once the entire sequence of allocated numbers had been assigned, the survey team "checked in" all of the collected artifacts. "Check in" involved each team comparing the bagged artifact and bag tag against the log sheet. This process helped minimize collection and survey errors. When all of the artifacts had been checked in and any errors corrected, they were aggregated into a larger zipper locking bag and labeled with the numeric sequence and date of collection.

Step Three – Artifact Location Survey

In coordination with the floating baseline survey and artifact collection, a survey of the spatial location of each artifact ("target") was performed. To establish provenience for artifacts collected, a site-specific 10,000 × 10,000 foot grid was defined for the site using the land survey data and markers established by Likes Land Surveyors prior to commencement of archaeology. A primary control point (NP CP 0001) was established at the northwest corner of block 13, lot 4 and designated 5000N 5000E, and a secondary control point (NP CP 0002) was established at the southwest corner of block 8, lot 5 and designated 5080N, 5000E. This created a site grid oriented to the historic town blocks and lot layout. Additional control points were established as required by lines of sight to target locations.

With internal control for the site established, targets were surveyed sequentially using an electronic total station and each target's spatial location was recorded with an electronic data recorder. The site-specific spatial location information was annotated with the artifact's unique provenience ID assigned by the artifact collection teams (e.g. NP 0001). The spatial location and annotation recorded for each target were downloaded from the data recorder to a computer for translation to and analysis by geographic information system (GIS) software.

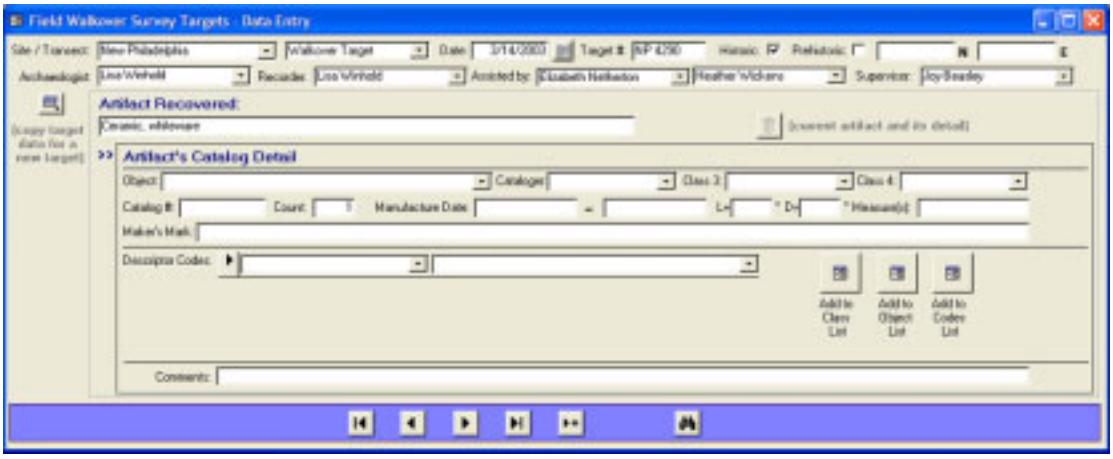

Figure 5. Data entry screen for survey targets.

Attribute Data Entry

In parallel with the artifact location survey, the attribute information logged by the artifact collection teams was entered into a relational database, recording each unique artifact provenience ID, preliminary artifact identification, collection date, and collection team members (Figure 5). The field log data was then "normalized" to create basic continuity among the collection teams' records. This included spell-checking all records and adding a primary category tag where necessary (e.g. ceramic, glass, metal, etc.). The site-specific spatial location of each artifact was then entered from the spatial survey data, and a unique spatial-location-to-attribute tag was generated from these data for each artifact to facilitate the linking of spatial and attribute data within the GIS.

With the spatial location and artifact characteristics recorded, a translation file was created to map the site-specific grid coordinates to Universal Transverse Mercator (UTM) coordinates and allow co-registration of site aerial photographs (digital orthophotos), the historic town plat, and artifact locations. The spatial data acquired from the field survey was generated as a layer within the GIS and linked to the attribute database. Using this attribute-to-location linkage, preliminary queries on the data were performed and a preliminary categorization of artifact types was created and visualized.

Artifact Preparation and Cataloging: Laboratory Methodology

Over 7,000 artifacts were recovered from the New Philadelphia town site during the pedestrian survey, including over 5,800 historic-period artifacts. As with the field work, three basic steps were followed – artifact preparation, historic artifact cataloging, and delineation of the catalog assemblages. Museum staff and volunteers in cooperation with faculty and staff from the University of Illinois at Springfield analyzed the faunal and prehistoric assemblages. Artifact analysis of historic-period artifacts was performed

by arGIS Consultants, LLC of Bethesda, Maryland. (A complete catalog of all historic-period artifacts and their provenience is included in Appendix IV.)

Step One – Artifact Preparation, Prehistoric Assemblage and Faunal Materials Cataloging

All recovered artifacts were processed by the Illinois State Museum (ISM) staff and volunteers under the guidance of Dr. Terrance J. Martin. Processing of the artifacts was designed to prepare them for analysis and permanent storage. Each artifact collected during the pedestrian survey was hand-washed, air-dried, sorted, and sealed – where practical – in aerated, clear, archivally-stable plastic bags. Survey provenience – the permanent New Philadelphia survey (NP) number assigned to the artifact – was recorded on the outside of each bag. Each artifact was labeled with its corresponding NP number, where possible, on the artifact and in addition on an acid-free tag recording the provenience and collection information of each artifact included in its plastic bag. Artifacts were grouped by basic type, such as brick, ceramic, metal, etc., to simplify cataloging.

Under the guidance of Dr. Lynn Fisher, the prehistoric artifact assemblage was cataloged, and Dr. Terrance J. Martin of ISM cataloged the faunal materials. While an in-depth discussion of the prehistoric and faunal materials is beyond the scope of this report, a brief overview of the faunal assemblage is provided in Chapter 3.

Step Two – Historic Assemblage Cataloging

All historic artifacts were identified, classified, and cataloged according to the accepted protocols and typology set forth in the National Park Service's (NPS) Museum Handbook, Part II (2000) using the coding structure under the Automated National Cataloging System (ANCS+). Artifacts, photographs, field notes, and other documentary data are stored at the Illinois State Museum in Springfield, Illinois.

Under the NPS protocol, each historic artifact was cataloged by recording unique identification and descriptive information. This included recordation of the NP number which uniquely identified each artifact and linked it to its spatial location within the town tract, an object name, quantity, manufacturing dates when determinable, and descriptive codes enumerating material(s), manufacturing technique(s), decorative element(s), color(s), and part characteristics of each artifact. Maker's marks were noted where present and comments were also recorded where elaboration was required beyond predefined codes.

Each historic artifact, by definition, falls into the NPS categories of *Archeology* (Class 1) and *Historic* (Class 2). Then, each historic artifact was broadly categorized as *Animal, Mineral,* or *Vegetal* (Class 3). Within these broad categories, a Class 4 assignment was made as itemized in Table 1. Please note that Table 1 is not the complete classification under the NPS protocol, but rather a subset applicable to the New Philadelphia Pedestrian Survey assemblage.

Table 1. Hierarchy of Class 3 and associated Class 4 classifications used in the New Philadelphia Pedestrian Survey historic artifact catalog

Class 3	Class 4
Animal	Bone
	Shell
Mineral	Ceramic (includes brick)
	Glass
	Metal
	Other Mineral Materials
	Synthetic
Vegetal	Wood
Unidentified Material	Unidentified

Once broadly classified, historic artifacts were assigned an object name. Certain terms used in the object name list are specially defined. *Container* (e.g. *Container, Bottle, Unidentified*) refers to packages that contained a product. *Tableware* (e.g. *Tableware, Teacup*) refers to utensils designed for table use. *Utilitarian* refers to utility ware objects, for example *Utilitarian, Jar / Crock. Vessel* is used when the specific form of a tableware or utilitarian ware is not recognizable. *Vessel* is not, however, used in conjunction with a container. *Hollowware* is used with tableware or utilitarian ware and refers to fragments with enough curvature to indicate volume and depth but unrecognizable as to specific form. *Flatware* is also used with tableware and utilitarian wares where fragments are more or less flat but where the specific form is unknown. Lastly, *Unidentified* is used when the function or form of an artifact cannot be identified (e.g. *Unidentified, Vessel* or *Unidentified, Flat Glass*). (A complete list of object names used for the catalog is provided in Appendix I.)

Classification codes are broken into seven broad groups: *manufacturing technique, decorative technique, decorative design, decorative element, color, part,* and *material type*. (See Appendix II for a complete list of codes in use for this catalog and Appendix III for a brief glossary of additional terms used in the catalog.) Sets of codes are then assigned to each historic artifact as appropriate to the item. So, for example, a historic ceramic noted as whiteware might be fully defined as:

CLASSES 3, 4:	Mineral, Ceramic
OBJECT NAME:	Tableware, Bowl
COUNT:	1
MANFACTURING DATE:	1820+
MATERIAL:	Earthenware
MANUFACTURING TECHNIQUE:	Whiteware
DECORATIVE TECHNIQUE:	Undecorated
PART:	Rim

For dateable ceramics, a manufacturing start and end date was assigned based on standard reference materials. Interpretation of these standards was made by the cataloger in certain instances where dateable characteristics overlapped. Typically the *tighter* date range was used, so the later *terminus post quem* (date after which or *TPQ*) and the earlier

terminus ante quem (date before which or *TAQ*) were applied. Some date ranges, however, are "open ended," meaning that the ceramic type is still in use, for example undecorated whitewares as shown above. For these cases, a TAQ of 1940 was applied as the latest date of occupation of the town was ca. 1940. Finally, a *mean ceramic date* (MCD) was calculated for the ceramic (e.g. undecorated whiteware would have an MCD of 1880 based on a *TPQ* of 1820 and a *TAQ* of 1940). It must be noted, however, that such calculations can be estimates only. Ceramics, of course, may be used beyond their MCD or even their referenced *TAQ*. Therefore, the exact dating of blocks and lots within the town site is not possible based on these artifact dates. Rather they may be used as a relative dating tool for assisting in the determination of areas where further detailed investigations are warranted, as detailed in Chapters 3 and 4.

As a final step in preparation for storage, artifacts were regrouped by NP number in groups of fifty (NP 0001 – NP 0049, NP 0050 – NP 0099, etc.). Within these groups, materials were separated by Class 4 type (Table 1). Each group was bagged in archivally stable plastic bags and each bag was labeled. Oversized objects by weight or dimension were segregated to avoid breakage. A master list of the historic artifacts was placed in each group's bag. Any missing artifacts were highlighted on the list in red, while oversized artifacts were highlighted in green.

Step Three – Visualization and Analysis

Coded artifacts were entered into a relational database, checked for completeness, and prepared for linking to the spatial data for visualization. After they were linked to the spatial database for correlation of each artifact's attributes with its location within the town boundaries, each artifact was coded as to block and lot (e.g. 04:1) or street designator (ST:) if not within a historic block. If an artifact was in a block, but within one of the alleys and not a specific lot, it was coded simply with the block number (e.g. 04:). As a few of the collected historic artifacts were outside the town boundaries, they were coded as OUT (OU:). The spatially linked data were visualized and queries performed to ascertain areas of interest. These queries and visualizations will be discussed in more detail in the Chapters 3 and 4.

As previously discussed, the pedestrian survey's focus was limited to determination of the presence of archaeological resources and identification of particular artifact concentrations. Because of the limitations of this survey methodology, in-depth landscape and artifact assemblage analyses were not undertaken. The artifacts recovered were classified by material type as part of the ANCS+ cataloging process. Each cataloged artifact was assigned, where possible, to a single functional category so its analysis could be facilitated. Functional categories utilized in artifact analysis include *Architectural*, *Domestic*, *Kitchen*, and *Personal*.

Artifacts in the *Architectural* category include nails, structural spikes, brick, mortar, roofing slate, flat glass, and door or window hinges (Figure 6). *Kitchen* artifacts included all objects related to the storage, serving, or preparation of food or beverages such as glass and ceramic vessels, serving and eating utensils, etc. (Figure 7).

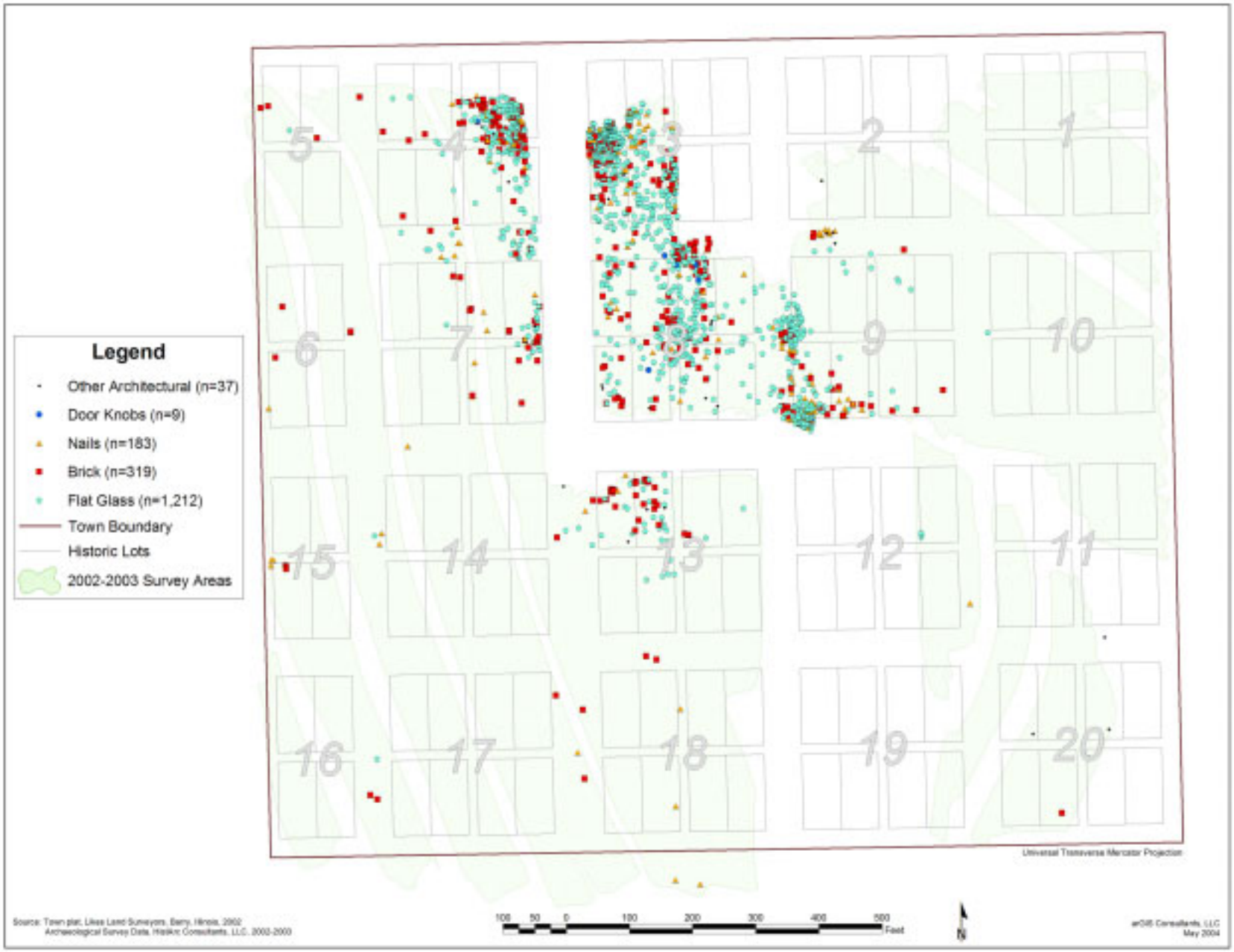

Figure 6. Architectural material distribution over the town site.

Figure 7. The distribution of "kitchen" artifacts over the survey area.

Personal artifacts include clothing-related items such as buttons or buckles as well as coins, sewing-related items, tobacco pipes, etc. (Figure 8). The *Domestic* category functioned as a set which distinguishes household-related items that do not easily fit into either the *Kitchen* or *Architectural* categories such as clothing items or containers which cannot be identified as to type (Figure 9). As several doll parts and other *Toy* artifacts were recovered, this category of personal items is separated in the results (Figure 10).

Methodological Limitations

As noted, the New Philadelphia Project Pedestrian Survey was designed to optimize the use of time, funding, and personnel. The success of the survey relied greatly on the participation of volunteers, primarily composed of students from local colleges and universities, as well as local citizens from the community. For this reason, the survey was conducted over three long weekends: October 11-14 and November 8-10, 2002, and March 14-16, 2003.

A number of biases inherent in the survey process must be noted, as they might affect the overall results of the survey. Field conditions varied from weekend to weekend, as the amount of precipitation fluctuated. Due to the extraordinary number of artifacts recovered at the site, the survey could not be completed within the original October-November timeframe and therefore the last segment of the survey had to be completed in the early spring of 2003. This permitted the final walkover segment to weather four additional months. Moreover, the first segment of the survey was completed during Daylight Savings Time, so the light quality changed somewhat over the three survey weekends. Both of these factors may have affected general artifact visibility and also made certain artifacts, such as nails or other small rusted objects, less visible.

Another bias was imposed by variability in the archaeological expertise and experience of the volunteers. Less experienced volunteers did not always recognize certain objects as artifacts, a factor which could potentially minimize the presence of certain artifacts in the collection. A professionally-trained archaeologist was assigned to every survey and collection team, however, to mitigate this bias, and volunteers were instructed to flag an object as an artifact even if there was doubt whether it was cultural or non-cultural.

Variability within the New Philadelphia site itself was also a factor; certain parts of the site were so densely covered with artifacts that it was not practical to collect a 100 percent sample. In these instances, artifacts were collected at the discretion of the archaeologist managing each collection team.

While these factors may have affected the survey process and the results, they did not hamper the overall success of the project. Indeed, discrete concentrations of historic and prehistoric cultural materials were identified and mapped during each of the three survey segments.

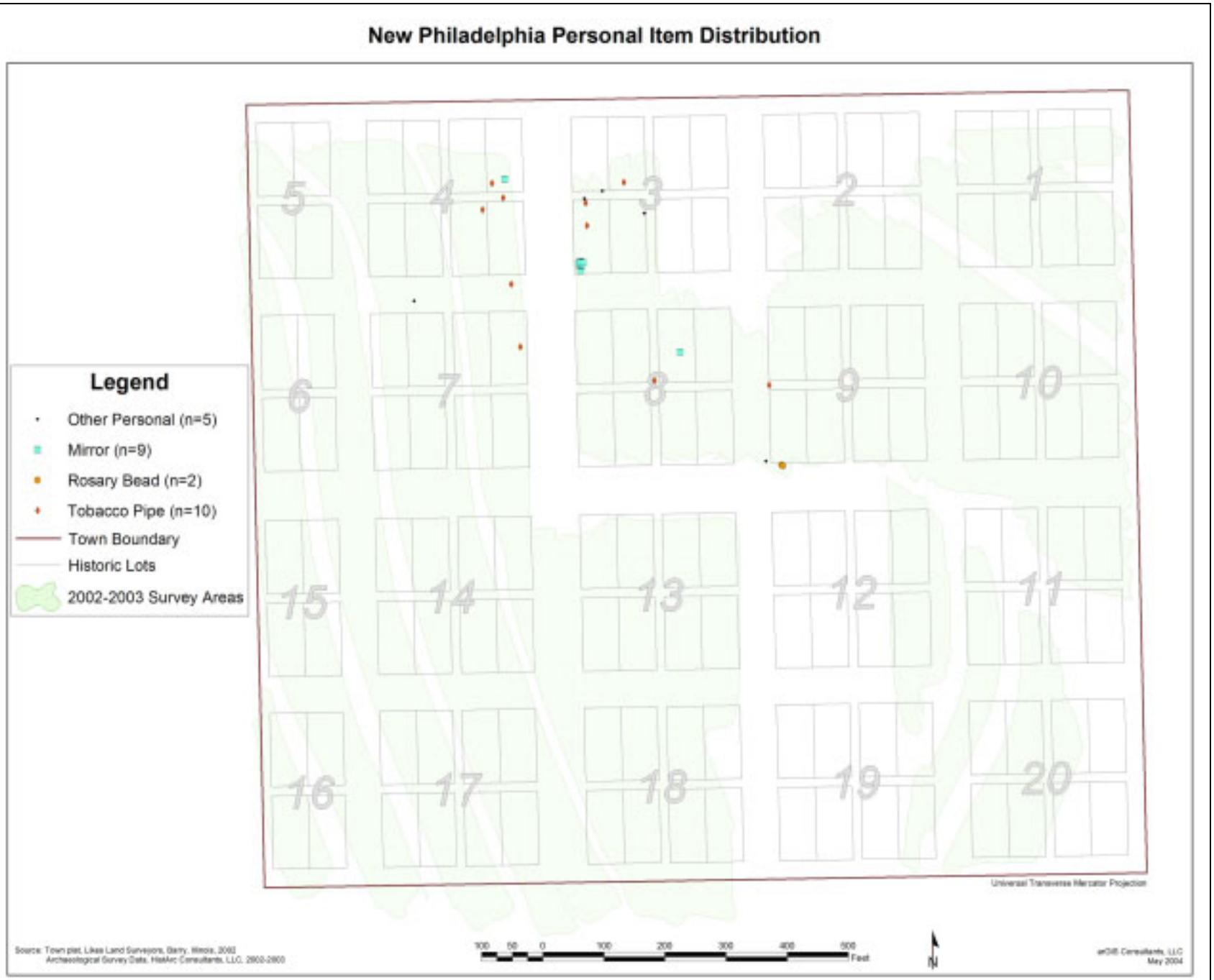

Figure 8. Personal items, including tobacco pipe, mirror, and religious bead fragments, are mapped with relation to the town blocks and lots.

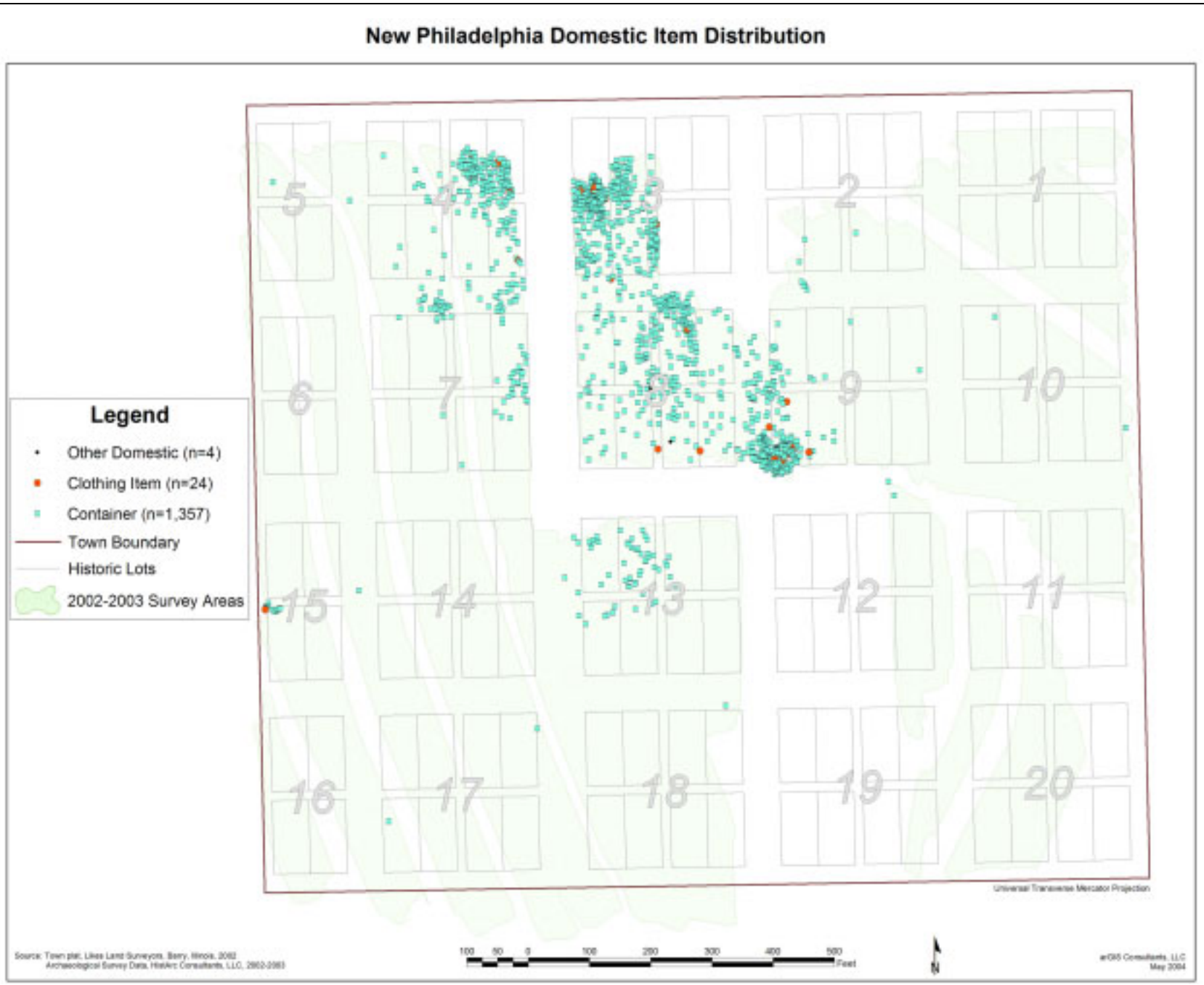

Figure 9. "Domestic" materials mapped with relation to the town blocks and lots.

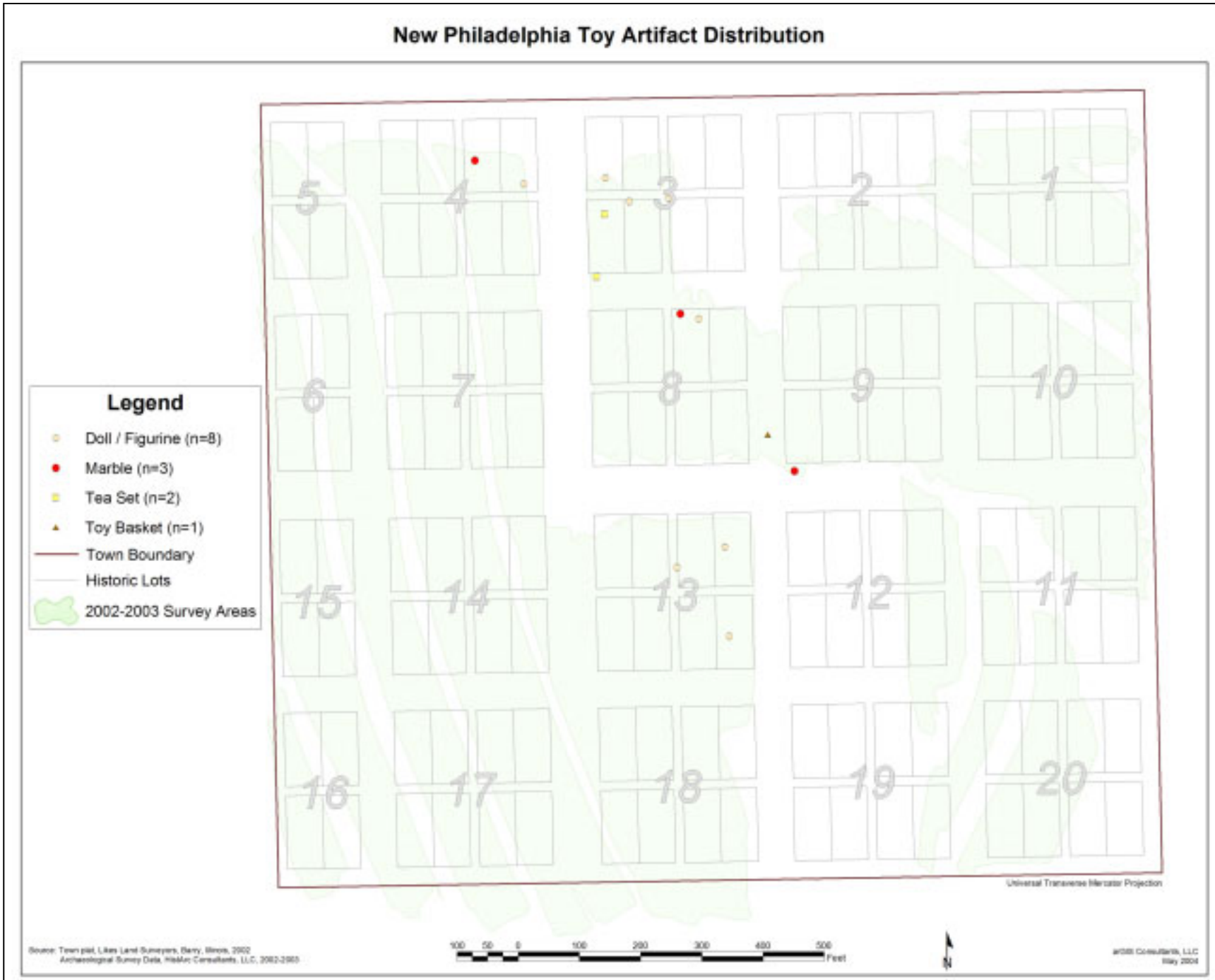

Figure 10. Toy and doll parts mapped over the town site.

Chapter 3

Results

7,073 historic and prehistoric artifacts were identified, collected, and mapped over the 10-day survey. 5,932 artifacts (including 43 faunal items) were considered "historic," and the balance was prehistoric or non-cultural material. (Distributions of historic and prehistoric materials are shown in Figures 11 and 12.)

Categories of Historic Materials Recovered

Among the many different kinds of artifacts flagged, collected, and surveyed were domestic materials such as broken glassware and ceramics, architectural debris such as brick fragments or nails, and lithic tools or chipped stone (the debris from the manufac-

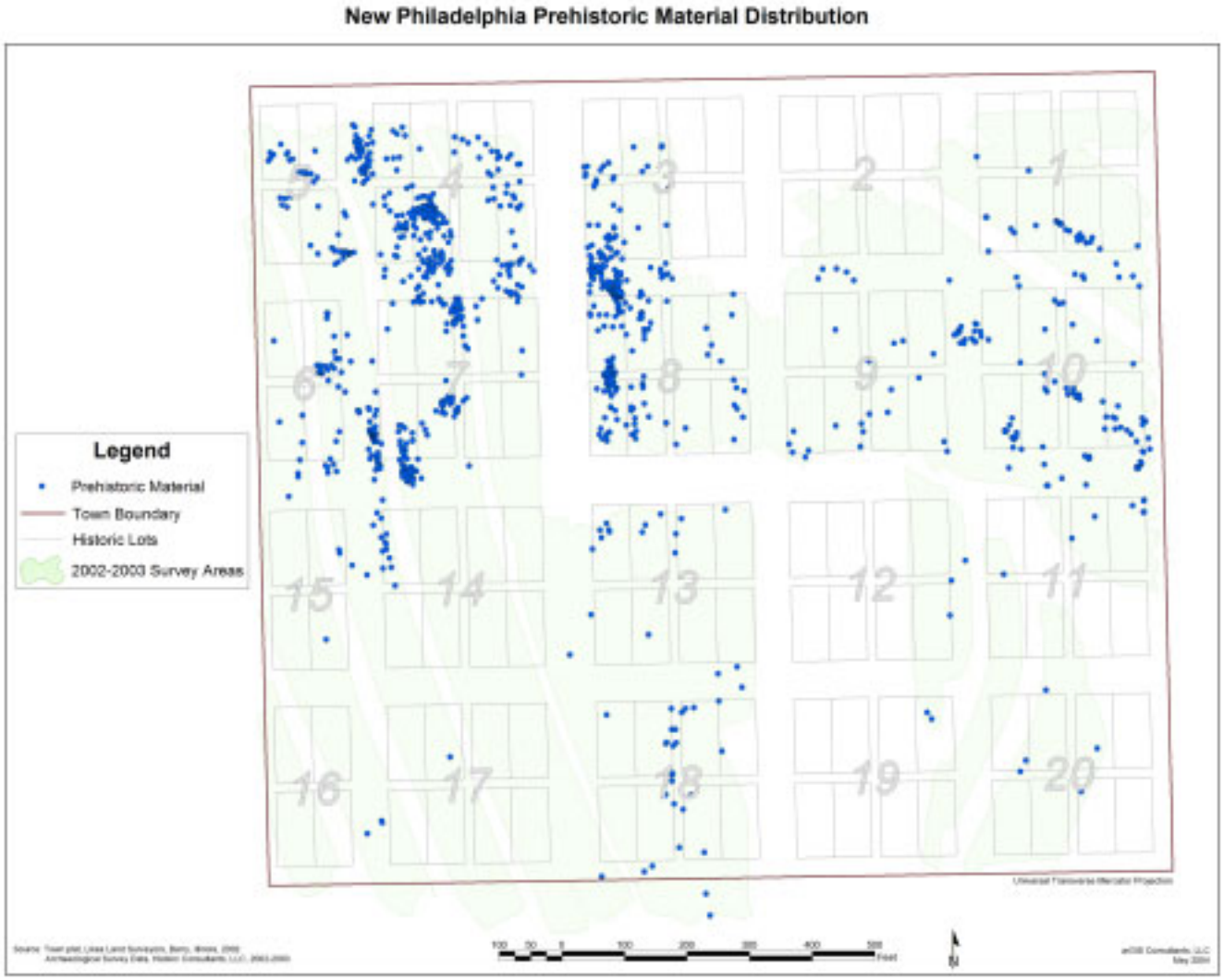

Figure 11. Prehistoric material distribution is mapped on the New Philadelphia town plat. Diagnostic artifacts from the prehistoric assemblage date from the Early to Middle Archaic era.

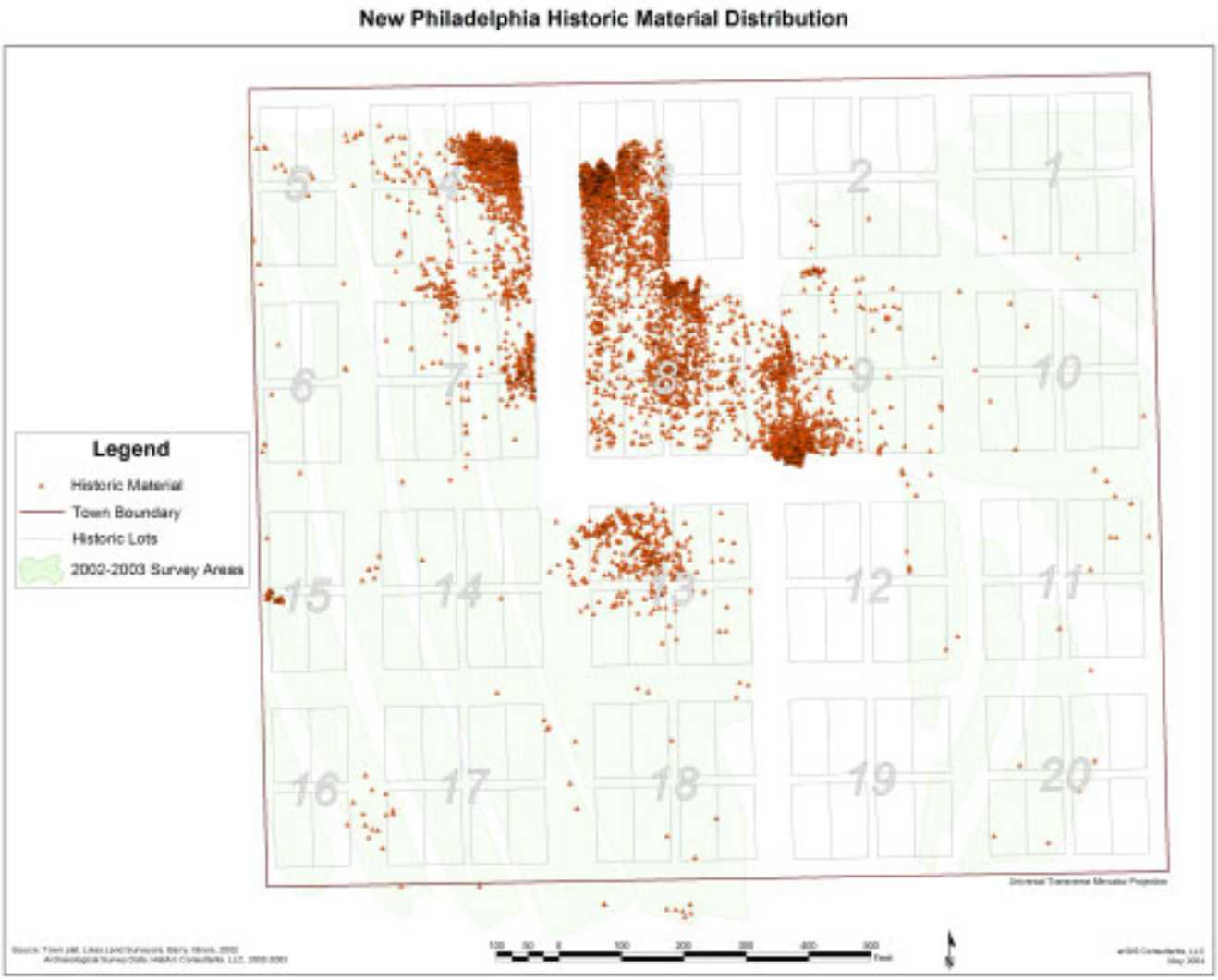

Figure 12. Historic material distribution is mapped on the New Philadelphia town plat. High concentrations of artifacts may be noted in blocks 3, 4, 7, 8, 9, and 13.

ture of prehistoric stone tools). While artifacts were scattered throughout the project area, a number of very dense historic deposits were identified and may be noted on the maps. Several discrete, bounded prehistoric artifact concentrations were also located, although they were not the focus of this investigation. Table 2 details the types of historic materials collected.

Determining Relative Dating of the Artifact Assemblage

Of the historic artifacts cataloged, 2,084 (35.1%) are dateable, i.e. manufacturing or peak usage date ranges are cited in the literature (Conroy 1998; Jones, et al 2001; Noel-Hume 1980; Oswald, et al 1982; Ramsay 1939; South 1977; Stelle 2001; Sussman1977; Zilmer 1987). Some materials, such as whitewares, are still in use, so while a manufacturing start date may be estimated, it is not possible to provide an end manufacture date. For purposes of analysis, however, an end date or *terminus ante quem*

Table 2. Summary of historic artifacts recovered during Pedestrian Survey[1]

Brick	**319**	**5.4%**
Buttons	**19**	**< 1.0%**
Ceramics		
Earthenware		
Bennington / Rockingham	15	
Buff paste	2	
Gray paste	5	
Pearlware	33	
Red paste	13	
Saltglazed	2	
Whiteware	1,031	
Whiteware, hardpaste	361	
Yellowware	35	
Other	12	
	1,509	**25.4%**
Porcelain	**164**	**2.8%**
Stoneware		
Brown paste	4	
Buff paste	460	
Gray paste	160	
Red Paste	7	
Other	2	
	633	**10.7%**
Terra Cotta	**4**	**< 1.0%**
Ferrous		
Machine cut nails or fragments	94	
Wire nails or fragments	44	
Other ferrous materials	304	
	442	**7.5%**
Glass		
Flat glass	1,223	
Curved / other glass	1,484	
	2,707	**45.6%**
Kaolin / Ball Clay	**4**	**< 1.0%**
Mortar / Plaster	**13**	**< 1.0%**
Slag	**17**	**< 1.0%**
Slate	**10**	**< 1.0%**
Faunal	**43**	**< 1.0%**
Other	**48**	**< 1.0%**
Total	***5,932***	

(*TAQ*) of 1940 was assigned to such materials as the end of the historic occupation of New Philadelphia. It is assumed for purposes of this analysis that dateable historic materials recovered during the survey were deposited prior to that year. Using standard

[1] Sixteen artifacts (< 0.3%) were found to be missing before or during cataloging and were cataloged to the extent possible from field notes. One additional artifact was unaccounted for after cataloging, but all attributes were recorded. These artifacts are highlighted in red in the catalog (Appendix IV).

reference sources, date ranges were assigned where possible and a *mean ceramic date* (*MCD*) was calculated. For example, *MCD*s calculated for ceramics include:

Table 3. Mean Ceramic Dates (MCDs) for select ceramic materials recovered during the survey.

Bennington / Rockingham earthenware	**1873**
Bristol glazed stoneware	**1888**
Albany-type slip glazed stoneware	**1863**
Parian porcelain (toy doll parts)	**1866**
Pearlware (various decors)	**1804 – 1808**
Whiteware (various decors)	**1833 – 1924**
Yellowware	**1865**

Dates were also assigned to other materials where possible, such as one-piece flat buttons, specific types of container glass, etc.

From these data, a *weighted mean date* of 1870 is calculated for the town. This *weighted mean* is skewed toward later dates, however, because of the preponderance of open-end–date, undecorated whitewares in the sample. If dateable materials with open-ended *MCD*s are discounted, the site mean date is 1862. This may be correlated with historical land records for a reasonable estimate of the site's peak occupation period. A summary of *mean dates* by block and lot based on pre-1880 materials is provided in Table 4 to show relative dating of blocks and lots based on artifacts recovered. These dates break out as follows:

Table 4. Mean date estimates for blocks and lots based on mean ceramic dates of select ceramic materials recovered during the survey.

Block: Lot[2]	Dateable Artifact Count	Mean Date	Earliest MCD	Latest *MCD*
3 : 3	31	1864	1835	1870
3 : 4	25	1850	1805	1870
3 : 5	31	1865	1845	1878
3 : 6	26	1861	1804	1874
3 : 7	3	1864	1863	1865
3 : Alleys	60	1862	1805	1873
Block 3	***176***	***1861***		
4 : 1	26	1859	1804	1870
4 : 2	43	1860	1808	1878
4 : 3	1	1870	1870	1870
4 : 4	4	1854	1810	1878
4 : 5	1	1878	1878	1878
4 : 6	1	1860	1860	1860
4 : 7	4	1862	1850	1870
4 : 8	23	1844	1800	1878
4 : Alleys	17	1855	1804	1878
Block 4	***120***	***1856***		

[2] Only blocks with more than 10 artifacts are represented

Block: Lot	Dateable Artifact Count	Mean Date	Earliest MCD	Latest *MCD*
7 : 1	23	1854	1805	1873
7 : 8	5	1869	1863	1878
7 : Alleys	8	1859	1805	1878
Block 7	***36***	***1857***		
8 : 1	7	1860	1835	1870
8 : 2	22	1863	1845	1873
8 : 3	7	1864	1863	1870
8 : 4	11	1865	1860	1878
8 : 5	2	1870	1870	1870
8 : 6	2	1868	1863	1873
8 : 7	6	1865	1863	1870
8 : 8	4	1864	1860	1870
8 : Alleys	14	1864	1850	1873
Block 8	***75***	***1864***		
9 : 2	3	1844	1805	1878
9 : 4	2	1863	1863	1863
9 : 5	30	1859	1805	1878
9 : 6	6	1853	1805	1863
9 : 7	1	1870	1870	1870
9 : Alleys	1	1863	1863	1863
Block 9	***42***	***1858***		
13 : 2	2	1862	1860	1863
13 : 3	12	1864	1863	1873
13 : 4	7	1864	1860	1870
13 : 7	2	1871	1863	1878
13 : Alleys	1	1866	1866	1866
Block 13	***23***	***1864***		

Dating of individual lots given such a small sample of datable materials is highly problematic. Rather, the dates for both lots and block should be considered as an indicator of the relative dates of occupation, i.e. which lots may have been occupied first during the town's settlement period.

Creating Functional Categories for Analysis and Visualization

All artifacts for each block were then analyzed by functional categories without respect to date. *Architectural* (n=1,760), *Domestic* (n=1,387), *Kitchen* (n=2,361) (with tableware and utilitarian items separated where identifiable), and *Personal* items (n=26) were detailed. The *Kitchen-Tableware* subcategory was used for utensils or ceramics designed for table use. This includes bowls suitable for serving at the table, cups, forks, refined hollowwares, drinking glasses, knives, plates, spoons, etc. The *Kitchen-Utilitarian* subcategory was used to designate objects that are utility wares to include bottles, crocks, jars, and jugs. When an artifact was identifiable as a kitchen item, but not

able to be categorized as *Tableware* or *Utilitarian*, it was assigned to the basic category *Kitchen*. Table 5 below shows the percentage breakout of these categories within town blocks as well as the percentages that each block assemblage represents of the whole. Of interest in these raw data is the ratio of tableware to utilitarian materials. In block 3, for example, tableware (n=456) are roughly 2.3 times more common than utilitarian items (n=198). In block 4, the ratio is 2.1 to 1 (n=371 vs. n=124). Similar ratios are found in almost all other blocks:

Table 5. Functional category breakout of artifacts by block.

Block	Category	Count	% within Block	% within Survey
1	Kitchen, Tableware	**1**	100.0%	**0.0%**
2	Architectural	1	20.0%	
	Domestic	3	60.0%	
	Kitchen	1	20.0%	
		5		**0.1%**
3	Architectural	539	31.4%	
	Domestic	405	23.6%	
	Kitchen	17	1.0%	
	Kitchen, Tableware	456	26.6%	
	Kitchen, Utilitarian	198	11.5%	
	Personal	13	0.8%	
	Toy	4	0.2%	
	Other	85	5.0%	
		1,717		**28.9%**
4	Architectural	273	26.5%	
	Domestic	217	21.0%	
	Kitchen	10	1.0%	
	Kitchen, Tableware	371	35.9%	
	Kitchen, Utilitarian	124	12.0%	
	Personal	4	0.4%	
	Toy	2	0.2%	
	Other	31	3.0%	
		1,032		**17.4%**
5	Architectural	3	37.5%	
	Domestic	1	12.5%	
	Kitchen, Tableware	3	37.5%	
	Other	1	12.5%	
		8		**0.1%**
6	Architectural	**2**	100.0%	**0.0%**

Block	Category	Count	% within Block	% within Survey
7	Architectural	55	23.6%	
	Domestic	37	15.9%	
	Kitchen	5	2.1%	
	Kitchen, Tableware	74	31.8%	
	Kitchen, Utilitarian	47	20.2%	
	Personal	1	0.4%	
	Other	14	6.0%	
		233		**3.9%**
8	Architectural	323	38.0%	
	Domestic	214	25.1%	
	Kitchen	7	0.8%	
	Kitchen, Tableware	164	19.3%	
	Kitchen, Utilitarian	96	11.3%	
	Personal	2	0.2%	
	Toy	2	0.2%	
	Other	43	5.1%	
		851		**14.3%**
9	Architectural	160	25.0%	
	Domestic	142	22.2%	
	Kitchen	27	4.2%	
	Kitchen, Tableware	187	29.3%	
	Kitchen, Utilitarian	61	9.5%	
	Personal	1	0.2%	
	Other	61	9.5%	
		639		**10.8%**
10	Domestic	1	20.0%	
	Kitchen, Tableware	1	20.0%	
	Kitchen, Utilitarian	2	40.0%	
	Other	1	20.0%	
		5		**0.1%**
11	Kitchen, Tableware	2	40.0%	
	Kitchen, Utilitarian	2	40.0%	
	Other	1	20.0%	
		5		**0.1%**
12	Architectural	3	50.0%	
	Kitchen, Tableware	2	33.3%	
	Kitchen, Utilitarian	1	16.7%	
		6		**0.1%**

Block	Category	Count	% within Block	% within Survey
13	Architectural	67	19.5%	
	Domestic	50	14.5%	
	Kitchen	16	4.7%	
	Kitchen, Tableware	124	36.0%	
	Kitchen, Utilitarian	54	15.7%	
	Toy	3	0.9%	
	Other	30	8.7%	
		344		**5.8%**
14	Kitchen, Tableware	**2**		**0.0%**
15	Architectural	5	11.6%	
	Domestic	10	23.3%	
	Hardware	6	14.0%	
	Kitchen, Tableware	2	4.7%	
	Kitchen, Utilitarian	1	2.3%	
	Other	19	44.2%	
		43		**0.7%**
16	Kitchen, Utilitarian	**1**	100.0%	**0.0%**
17	Domestic	1	50.0%	
	Kitchen, Tableware	1	50.0%	
		2		**0.0%**
18	Architectural	2	50.0%	
	Other	2	50.0%	
		4		**0.1%**
20	Architectural	4	66.7%	
	Kitchen, Tableware	2	33.3%	
		6		**0.1%**
Not in a Block (in street or off site)	Architectural	323	31.7%	
	Domestic	305	29.9%	
	Kitchen	17	1.7%	
	Kitchen, Tableware	168	16.5%	
	Kitchen, Utilitarian	113	11.1%	
	Personal	5	0.5%	
	Toy	3	0.3%	
	Other	92	9.0%	
		1,026		**17.3%**
		5,932		

These ratios are somewhat unexpected given the dating of the site, as it would be anticipated that early settlers would be using utilitarian items such as red-paste earthenware more than refined tableware. The ratios seen in Table 5, however, reflect the large quantities of open-ended date whiteware recovered which have *MCD*s of ca. 1880 and later. When only dateable, pre-1880 materials are analyzed by functional group (Table 6), the ratios reflect the pattern expected with early settlement:

Table 6. Tableware vs. utilitarian breakout of dateable, pre-1880 artifacts by block.

Block	Category	Count	% within Block
3	Tableware	21	11.8%
	Utilitarian	157	88.2%
		178	
4	Tableware	25	21.4%
	Utilitarian	92	78.6%
		117	
7	Tableware	7	20.6%
	Utilitarian	27	79.4%
		34	
8	Tableware	6	7.9%
	Utilitarian	70	92.1%
		76	
9	Tableware	8	19.0%
	Utilitarian	34	81.0%
		42	
13	Tableware	2	8.7%
	Utilitarian	21	91.3%
		23	

It may be argued, however, that such filtering of later-dated materials is deterministic, as it skews the sample to earlier pieces which are not refined and eliminates items which are not dateable. This is an inherent limitation in a pedestrian survey methodology as artifacts are divorced from their sub-surface context due to disturbance.

Visualization of Other Materials of Possible Phase II Interest

Certain distributions of materials were visualized to provide input to and comparison with the Phase II investigations. These included ferrous material scatter (Figure 13) which shows distinct nail concentrations in blocks 3, 4, and 9. Also, burned and melted materials were plotted (Figure 14) to see if there were concentrations. Doorknobs were plotted to show possible associations with sub-surface features (Figure 15).

Figure 13. Ferrous material scatter is mapped over the New Philadelphia town plat. Nail concentrations may be noted in blocks 3, 4, and 9.

Figure 14. Burned or melted artifacts are shown over the town plat.

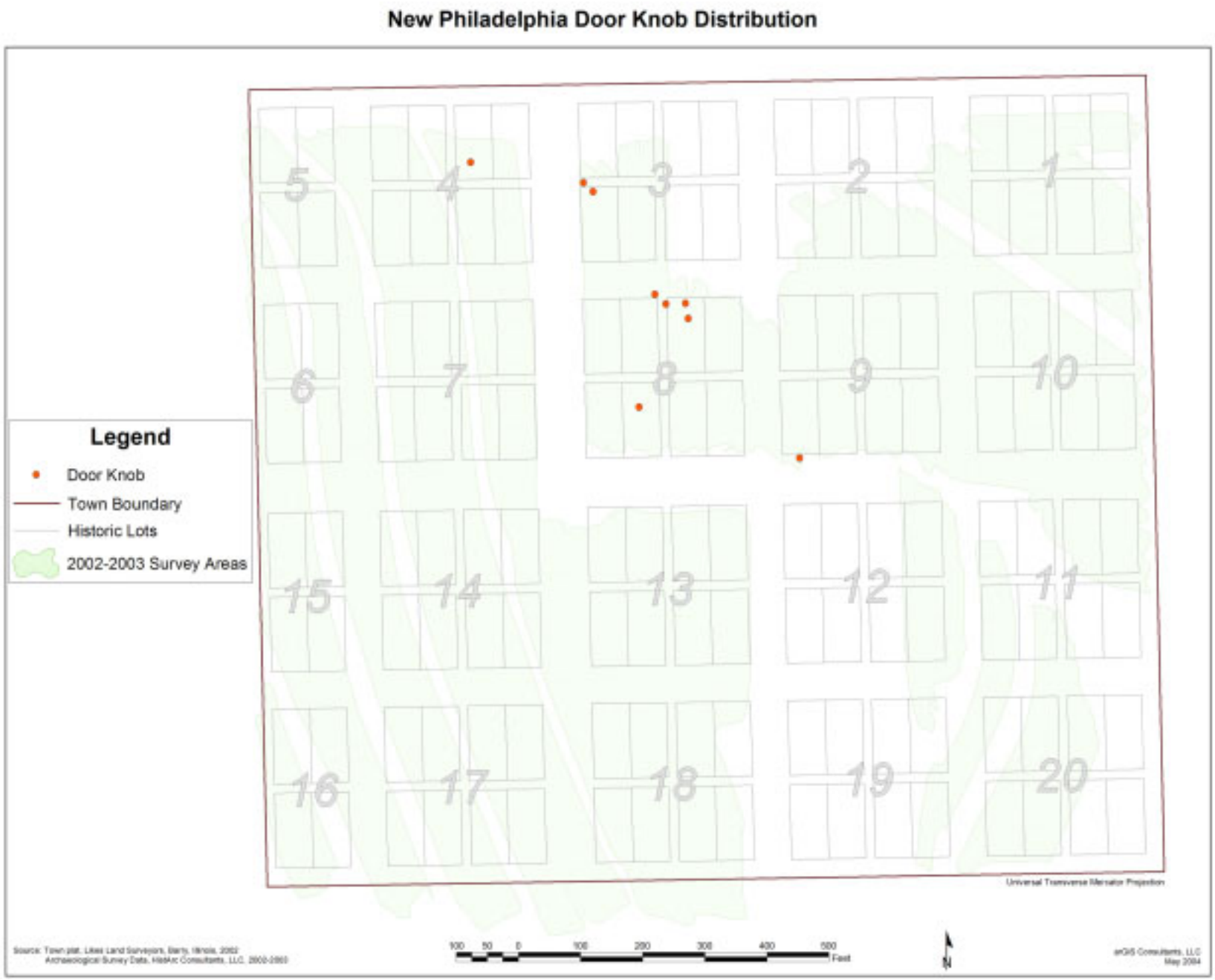

Figure 15. The distribution of door knobs recovered is shown over the town plat.

Faunal Materials: A Brief Overview

The majority of faunal remains were cataloged at the Illinois State Museum by Dr. Terrance J. Martin. Forty-three faunal specimens were recovered during the survey including cat (n=3), cow (n=2), deer (n=1), large mammal (n=1), medium mammal (n=3), freshwater mussel shell (n=23), pig (n=7), rabbit (n=1), sheep or goat (n=1), and unidentified (n=1) remains. It may be noteworthy that the majority of faunal materials recovered are freshwater mussel shell (53%). As Martin noted, the materials are most likely historic as the temporally diagnostic lithics are suggestive of Early to Middle Archaic occupation with the faunal materials too well preserved to date to that era. He further notes, "It will be interesting to see if excavations reveal local freshwater mussel shells in 19th-century contexts," perhaps used for making shell buttons (Martin 2004: personal communication). Distinct concentrations of faunal materials may be noted in blocks 4, 9, and 13 (Figure 16).

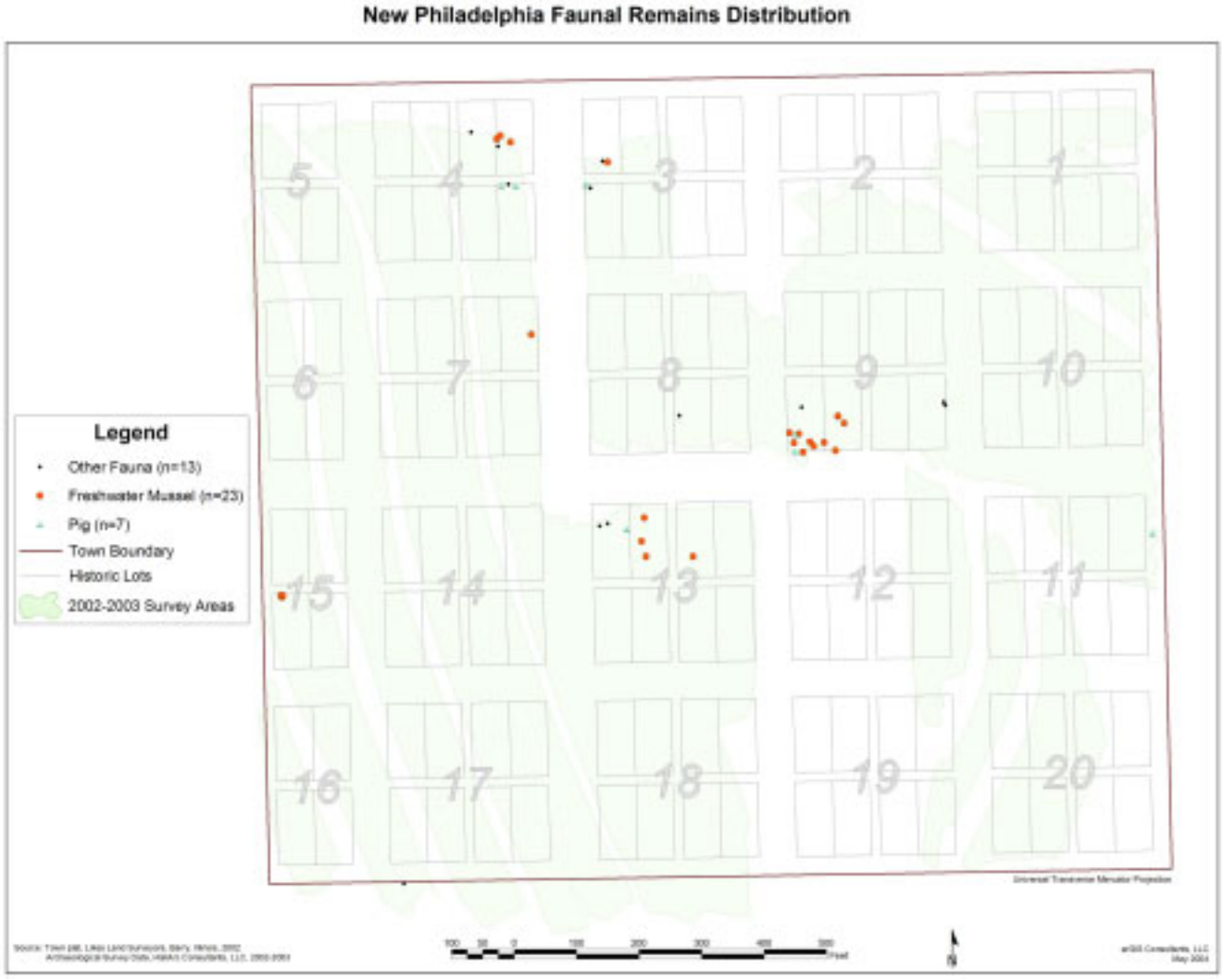

Figure 16. Faunal materials are mapped on the New Philadelphia town plat. Concentrations of freshwater mussel shell fragments may be noted in blocks 4, 9, and 13.

Conclusion

As previously discussed, the materials recovered during the pedestrian survey are necessarily from a disturbed context. Erosion, agriculture, and other natural or human modifications to the landscape distort the true character of artifact distributions. Pedestrian survey methodologies by their nature restrict detailed interpretation because they do not tie recovered artifacts to associated features nor do they allow for accurate seriation of materials. Thus, while the upcoming archaeological and geophysical surveys will further define the integrity of the New Philadelphia site, the recovery context of the pedestrian survey must be considered with regard to the results and recommendations noted here.

Chapter 4

Summary and Recommendations

In addition to the two primary goals of the 2002-2003 pedestrian survey outlined, a further goal of any follow-on archaeological and historical research of New Philadelphia is the determination of the site's eligibility for nomination to the National Register of Historic Places. Sites listed on the National Register are recognized for their significance to the nation, state, and community; are considered in planning for federally-assisted projects; may be eligible for federal tax benefits; and may qualify for federal historic preservation funds.

To this end, the primary objectives of the 2002-2003 pedestrian survey were the determination of whether archaeological resources exist at the New Philadelphia Town site and the determination of areas of concentration of historic materials within the site. The 10-day Pedestrian Survey met these objectives as it identified the presence of historic artifacts at the New Philadelphia site, and isolated several artifact concentrations within the town. The results of the survey show that both domestic and architectural cultural resources are present on the site and that discrete concentrations may be noted in the categorizations.

Follow-on research should be directed towards the identification and evaluation of intact sub-surface cultural resources pursuant to nominating the site under National Register Criterion D (U.S. Department of Interior, NPS, 36 CFR 60.4). While the site has significance and may meet several criteria for nomination to the Register, the primary criterion pertinent to the pedestrian survey results is that the site has "yielded, or may be likely to yield, information important in prehistory or history." In order to demonstrate this, additional archaeological investigations should be undertaken at the site, and indeed, are in preparation for summer 2004.

It is recommended that such additional investigations be focused on specific areas within the town site. Based on the cataloged data, as detailed in the preceding results section, specific areas of concentration should be considered high priority for further research. These include town blocks 3 (primarily lots 3-6), 4 (lots 1, 2, and 8), 7 (lot 1), 8 (scatter in lots 1-8), 9 (lot 5), and 13 (lots 3 and 4). Concentrations of dateable materials are not weighted evenly, however. Block 4 with the second highest concentrations is the "earliest" block with a *mean date* of 1856 and with lot 8 dating to ca 1844. Block 7, lot 1 is also fairly early at ca. 1854. Thus, when these concentrations are viewed chronologically, the ca. 1860 and earlier artifact assemblages appear to be concentrated in blocks 3, 4, 7, and 9. After ca. 1860, additional materials appear to concentrate in these same blocks as well as in block 13. Some post-1860 artifacts are also scattered in the vicinity of block 8 (Figure 16). But, as noted previously, these materials are from a disturbed context and such dating may only provide a sense of relative dates within the site.

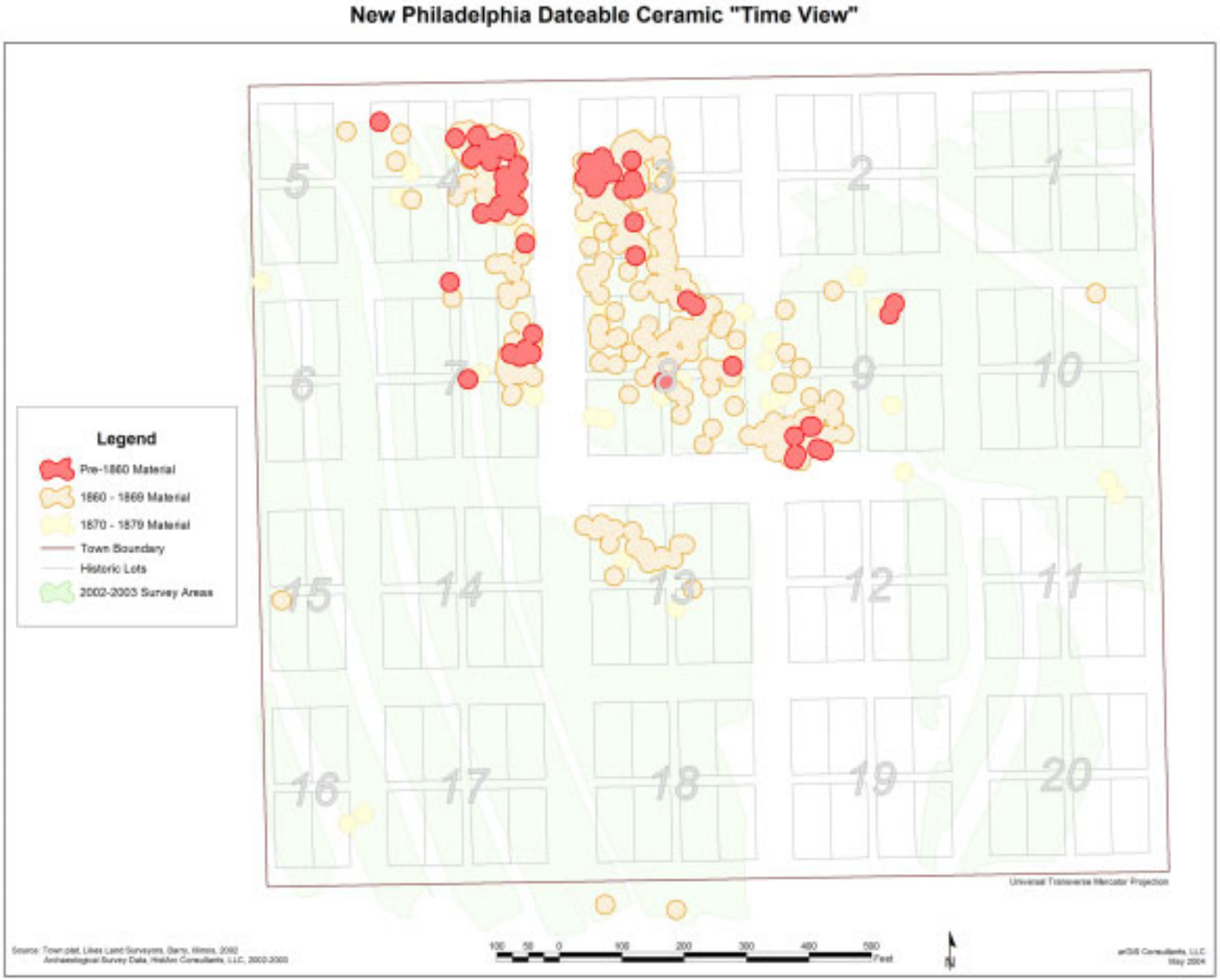

Figure 17. Dateable materials plotted by date range, demonstrating the earliest concentrations and a "time view" of the change in the occupational landscape as indicated by artifact distributions.

This survey was not designed to be an exhaustive inventory or excavation of the cultural resources associated with the historic town, but the pedestrian survey's results confirm that significant archaeological materials are present. Thus, while the results of this survey are necessarily preliminary, they provide considerable research and interpretive opportunities for New Philadelphia. The information provided by the historic artifact assemblage can be used to assist the New Philadelphia Association and its partners in the proper management, protection, development, and interpretation of this important historic site. In addition, this information will provide the basis for focusing the more intensive archaeological research and investigation now being planned.

Additional Phase I testing is recommended for these areas in order to focus Phase II investigations. Geophysical surveys currently planned at the site may provide additional focus for Phase II efforts; however, due to high levels of disturbance in areas of concentration near the modern-day road (blocks 3 and 4), it may be advisable to augment such surveys with shovel test pits (STPs) on a regular interval in these locations. STPs would permit a rapid evaluation of sub-surface conditions below the plow zone prior to Phase II excavations.

A great deal of information can be gained from any such archaeological research and excavation. Sub-surface archaeological investigations might yield more information regarding the time frame and nature of the sub-surface features associated with the artifact concentrations identified during the walkover, as well as their level of integrity. Full data recovery of any structures and archaeological features uncovered may determine their construction dates and period of usage more precisely and provide a greater understanding of the occupational landscape and built environment through time of the town.

Conclusion

In sum, the pedestrian survey at New Philadelphia reveals that the landscape has tremendous research potential. Modern disturbance associated with the modern-day road, farm access road, and agriculture may have had an impact on the resources at the site, but significant intact archaeological deposits may exist given the extent of the materials recovered. Such archaeological deposits and features which exist at the site might be located through follow-on research and investigation and may verify the site's significance under Criterion D, as noted. While beyond the scope of this report, the site also has significance under National Register Criteria A, as a site that is "associated with events that have made a significant contribution to the broad patterns of our history," and B, a site that is "associated with the lives of persons significant in our past," and should be evaluated in that light when assessing its eligibility.

If any ground-disturbing activities are proposed for the site in the future, additional archaeological testing should be taken into consideration at the planning stage so appropriate measures may be undertaken. Finally, with further documentation of sub-surface archaeological deposits, determination of National Register eligibility should be

undertaken so that New Philadelphia is recognized for its unique place in our national story.

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Appendices

Appendix I

Object names from the National Park Service's Automated National Cataloging System in use for the 2002 – 2003 New Philadelphia Pedestrian Survey:

- Agricultural, Blade
- Agricultural, Other
- Agricultural, Plow Share
- Ammunition, Cartridge
- Ammunition, Cartridge Case, .32 Caliber
- Ammunition, Shotgun Shell, 12 gauge
- Architectural, Brick
- Architectural, Concrete
- Architectural, Mortar
- Architectural, Plaster
- Architectural, Roofing Slate
- Architectural, Tile, Roofing
- By-Product, Clinker / Slag
- Clothing, Buckle
- Clothing, Buckle, Belt
- Clothing, Button
- Clothing, Button, 2 Hole
- Clothing, Button, 4 Hole
- Clothing, Rivet
- Clothing, Shoe, Sole
- Communication, Slate Pencil
- Container, Bottle, Alcohol
- Container, Bottle, Beverage
- Container, Bottle, Household Cleaner
- Container, Bottle, Medicinal
- Container, Bottle, Other
- Container, Bottle, Unidentified
- Container, Can, Other
- Container, Can, Unidentified
- Container, Jar, Lid Liner
- Container, Jar, Unidentified
- Container, Unidentified
- Container, Vial
- Electrical, Battery, Carbon Rod
- Electrical, Connector
- Electrical, Insulator
- Fauna, Cat
- Fauna, Cow
- Fauna, Deer
- Fauna, Mammal, Large
- Fauna, Mammal, Medium / Large
- Fauna, Mussel
- Fauna, Pig
- Fauna, Rabbit
- Fauna, Sheep / Goat
- Fauna, Unidentified
- Food Preparation, Cooking Pot
- Furniture, Caster
- Furniture, Other
- Hardware, Barbed Wire
- Hardware, Bolt
- Hardware, Bolt, Carriage
- Hardware, Bracket
- Hardware, Chain, Link
- Hardware, Door Knob
- Hardware, Eye
- Hardware, Hinge
- Hardware, Hinge Strap
- Hardware, Hook
- Hardware, Nail, Common
- Hardware, Nail, Finishing
- Hardware, Nail, Unidentified
- Hardware, Nut
- Hardware, Other
- Hardware, Ring
- Hardware, Screw, Wood
- Hardware, Spike
- Hardware, Spike, Railroad
- Hardware, Spring
- Hardware, Staple, Fence
- Hardware, Strap
- Hardware, Unidentified
- Hardware, Washer
- Hardware, Wire
- Harness Hardware, Horseshoe
- Household Accessory, Unidentified
- Lighting, Unidentified
- Machinery, Other
- Military, Button

- Mineral, Coal
- Mineral, Unidentified
- Personal, Bead
- Personal, Mirror
- Personal, Unidentified
- Plumbing, Pipe
- Plumbing, Pipe, Sewer
- Religious Item, Rosary Bead
- Tableware, Bowl
- Tableware, Cup
- Tableware, Drinking Glass
- Tableware, Flatware
- Tableware, Hollowware
- Tableware, Knife
- Tableware, Other
- Tableware, Plate
- Tableware, Spoon
- Tableware, Spoon, Serving
- Tableware, Unidentified
- Tableware, Utensil
- Tableware, Vessel
- Tobacco, Ashtray
- Tobacco, Pipe
- Tool, Hoe
- Toy, Doll
- Toy, Figurine
- Toy, Marble
- Toy, Tea Set
- Toy, Unidentified
- Unidentified, Buckle
- Unidentified, Ceramic
- Unidentified, Flat Glass
- Unidentified, Glass
- Unidentified, Metal
- Unidentified, Object
- Unidentified, Sheet Metal
- Unidentified, Slate
- Unidentified, Vessel
- Utilitarian, Bottle / Jug
- Utilitarian, Crock
- Utilitarian, Hollowware
- Utilitarian, Jar
- Utilitarian, Jar / Bottle
- Utilitarian, Jar / Crock
- Utilitarian, Vessel

Appendix II

Descriptor codes for typing materials according to the National Park Service's Automated National Cataloging System in use for the 2002 – 2003 New Philadelphia Pedestrian Survey. While these codes are used to normalize data entry, they are translated into the definition for catalog display and storage.

Manufacturing Technique

1AM001 Machine Made
1AM006 Centerfire

1BC001 Crown Finish
1BC005 Folded Lip
1BC006 Lipping Tool
1BC009 Flared / Prescription Lip
1BC010 Threaded Finish
1BC011 Unidentified Finish
1BC012 Bare Iron Pontil
1BC015 Cup Bottom
1BC017 Ground-Off Pontil
1BC019 Pontil
1BC022 Ring-Shaped Pontil
1BC025 Two-Piece Mold
1BC026 Three-Piece Mold
1BC027 Automatic Machine Molded
1BC029 Blown in the Mold
1BC030 Molded Technique Unknown
1BC030.500 Paneled
1BC033 Pressed Glass
1BC034 Cut / Ground
1BC035 Manufacturing Technique Unknown
1BC036 Circular
1BC040 Rectangular
1BC041 Square
1BC043 Unidentified Form
1BC044 Brandy Finish
1BC045 Beaded Finish
1BC047 Patent/Extract Finish
1BC052 Wine / Champagne Finish

1BE014 Tube Drawn

1BN001 Identifiable Bone
1BN002 Unidentifiable Bone

1BU002 Cast, One-Piece
1BU003 Cast, Two-Piece
1BU004 Cut
1BU009 Sew-Through
1BU010 Shank Molded 1 Piece
1BU015 Wire Shank Cast in Place

1CE001 Agateware
1CE003 Ball / Kaolin
1CE004 Bennington/Rockingham
1CE005.500 Buff Paste Earthenware
1CE018 Pearlware
1CE020 Red Paste Earthenware
1CE023 Unidentified Color Paste Earthenware
1CE024 Unidentified White Paste Earthenware
1CE027 Whiteware
1CE028 Whiteware, Hardpaste
1CE031 Yellowware, Utilitarian

1CL000.250 Burned
1CL000.500 By-Product
1CL001 Carved
1CL002 Cast
1CL004 Combination (more than one material)
1CL006 Die Cut
1CL007 Drilled
1CL010 Extruded
1CL013 Ground
1CL019.500 Machine Made
1CL020 Manufacturing Technique Unknown
1CL020.250 Melted
1CL020.500 Mixed
1CL021 Molded
1CL023 Other Manufactured
1CL024 Painted
1CL027 Plated
1CL029 Punched
1CL029.500 Quarried
1CL030 Cut
1CL035 Soldered
1CL039 Unmodified Natural Material
1CL039.500 Unidentified Technomorphology

1CP001 Carved
1CP002.500 Industrial Porcelain
1CP004 Parian
1CP006 Unidentified Porcelain
1CP007 Hotel Ware Porcelain
1CP008 Refined Porcelain

1CS001 Albany Type Slip Glazed
1CS002 Alkaline Glazed
1CS004 Brown Paste Stoneware
1CS005 Gray Paste Stoneware
1CS007 Bristol Glazed
1CS007.500 Buff Paste Stoneware
1CS011 Slip Glazed
1CS011.500 Red Paste Stoneware
1CS014 Salt Glazed
1CS016 Knurled (rigid surface)
1CS016.500 Unidentified Stoneware
1CS020 White Saltglazed

1GC001 Coarse
1GC002 Exterior (glazed)
1GC003 Iron Oxide Glazed
1GC004 Interior (glazed)
1GC005 Other Glazed
1GC007 Unglazed
1GC008 Unidentified
1GC009 Slip Glazed
1GC010 Unidentified Ceramic

1GL001 Flat Glass
1GL007 Molded, Machine
1GL009 Silvered (mirror)
1GL012 Unidentified Glass

1ME002 Machine Made
1ME003 Manufacturing Technique Unknown

1NA003 Machine Cut
1NA005 Wire
1NA006 Manufacturing Technique Unknown
1NA007 Unidentified, Machine Cut or Hand Wrought

"Decorative Technique"

2AM008 Fired

2BC001 Embossed
2BC002 Applied Color Labeling

2BN000.500 Burned
2BN001 Broken
2BN004 Butcher Marked (axe, cleaver)
2BN005 Modified/Decorated/Other
2BN007 Sawn
2BN009 Unidentified Damage or Modification
2BN011 Carnivore Scavenged

2CE001 Annular / Banded, Painted
2CE002 Annular / Banded, Slipped
2CE005 Color Glaze, Opaque
2CE006 Color Glaze, Translucent
2CE007 Colorless Glaze
2CE009 Decalcomania, Overglaze
2CE009.500 Decalcomania, Underglaze
2CE010 Edge Decorated
2CE012 Flow Transfer Printed
2CE016 Painted, Overglaze, Enameled (e.g. Imari)
2CE017 Painted, Overglaze, Monochrome
2CE018 Painted, Overglaze, Polychrome
2CE019 Painted, Underglaze, Monochrome
2CE020 Painted, Underglaze, Monochrome, Blue
2CE021 Painted, Underglaze, Polychrome
2CE030 Sponge / Spatter
2CE032 Transfer Printed, Overglaze, Monochrome
2CE033 Transfer Printed, Overglaze, Polychrome
2CE034 Transfer Printed, Underglaze, Monochrome
2CE035 Transfer Printed, Underglaze, Polychrome
2CE036 Undecorated
2CE037 Decorative Technique Unknown
2CE038 Washed/Dipped (slipped, no decoration)

2CL001 Beaded
2CL004 Carved
2CL010.500 Cut
2CL011 Embossed
2CL012 Etched (acid)
2CL016 Fluted
2CL017 Frosted

2CL018 Gilded
2CL019 Impressed
2CL020 Incised (engraved)
2CL023 Marked
2CL024 Mirrored
2CL025 Molded
2CL028 Painted
2CL029 Paneled
2CL036 Smoothed
2CL037 Stamped
2CL038 Textured
2CL040 Undecorated
2CL042 Interior (INT)
2CL043 Exterior (EXT)

"Decorative Design"

3BN004 Frontal
3BN008 Unidentified Cranial Element
3BN009 Canine
3BN012 Molar
3BN018 Lumbar Vertebra
3BN026 Scapula
3BN031 Humerus
3BN039 Femur
3BN040 Tibia
3BN043 Unidentified Long Bone
3BN054 Unidentified Bone Element

3CL001 Annular
3CL002 Architectural
3CL009 Circular
3CL010 Classical
3CL013 Curls
3CL022 Figure(s)
3CL026 Floral
3CL027 Foliate
3CL028 Fret
3CL029 Geometric
3CL033 Historic / Commemorative
3CL039 Insignia
3CL043.500 Landscape
3CL044 Letter(s)
3CL044.500 Line
3CL051 Numbers
3CL053 Oriental / Chinoiserie
3CL054 Other Design
3CL060 Plume Pattern
3CL066 Ribbed
3CL074 Stippling
3CL075 Sunburst
3CL079 Unidentified Design
3CL084 Willow

3MD002 Bead and Reel
3MD005 Crimped / Pie Crust Edge
3MD008 Feather Edged
3MD009 Fish Scale
3MD010 Floral, Molded
3MD011 Foliate, Molded
3MD015.500 Scalloped Edge
3MD016 Shell Edged

"Decorative Elements"

4BN001 Left
4BN002 Right
4BN003 Unidentified Side
4BN004 Proximal
4BN005 Distal
4BN006 Shaft
4BN008 Epiphysis
4BN009 Upper Jaw

4BU013 Raised Center
4BU018 Sunken Center

4CL004 Arrows
4CL007 Beaded
4CL008.500 Berries
4CL012 Branch / Branches
4CL016 Building
4CL016.500 Butterfly
4CL022 Circle(s)
4CL023 Circle w/ Dot in Center
4CL027 Concentric Circle(s) Base
4CL028 Concentric Circle(s) Body
4CL029 Concentric Circle(s) Rim
4CL031 Cross Hatching
4CL032 Cross or 4-Pointed Star
4CL033 Crown
4CL039 Diamond
4CL040 Dog
4CL041 Dot(s)
4CL042 Eagle
4CL046 Female
4CL052 Fleur-de-Lis
4CL053 Flowers

4CL058 Gashes
4CL059 Geometric
4CL077 Leaves
4CL079 Letter(s)
4CL080 Male
4CL082 Mountains/Hills
4CL090 Plume(s)
4CL093 Rays
4CL095 Ribs
4CL101 Sharp or Narrow Line(s)
4CL104 Shield
4CL110 Squares
4CL111 Stars
4CL111.500 Stems
4CL113 Stripe(s) / Band(s) / Line(s)
4CL122 Triangles
4CL126 Unidentified Decorative Element
4CL130 Wavy Lines

Color (or Bone Fusing)

5BN001 Unfused

5CR001 Amber
5CR002 Amethyst
5CR003 Aquamarine
5CR003.250 Aqua / Blue
5CR003.500 Aqua / Green
5CR004 Black
5CR005 Blue
5CR006 Blue, Dark
5CR007 Blue, Light
5CR009 Brown
5CR010 Brown, Dark
5CR011 Brown, Light
5CR012 Buff
5CR013 Cobalt Blue
5CR014 Colorless
5CR015 Copper
5CR018 Gold
5CR020 Green
5CR021 Green, Dark
5CR022 Green, Light
5CR023 Greenish-Grey
5CR024 Grey
5CR026 Mulberry
5CR027 Olive
5CR028 Olive, Dark
5CR030 Orange
5CR031 Orangish-Brown
5CR032 Pink
5CR035 Purple
5CR036 Red
5CR037 Reddish-Brown
5CR039.500 Straw
5CR040 Tan
5CR041 White
5CR042 Yellow

Part or Segment of Object

6PT001 Base
6PT002 Body
6PT003 Bowl
6PT004 Complete
6PT005 Finish
6PT006 Footring
6PT007 Fragment
6PT009 Handle
6PT010 Handle Terminal
6PT011 Head
6PT013 Lip
6PT015 Mends
6PT015.500 Profile (rim, base, and body or neck and finish)
6PT016 Neck
6PT017 Rim
6PT018 Shank
6PT023 Stem

Material

7AR002 Brick
7AR003 Cement/Concrete
7AR004 Mortar
7AR004.500 Plaster
7AR008 Terra Cotta
7AR011 Slate, Roofing
7AR012 Unidentified Architectural

7CE001 Earthenware
7CE002 Stoneware
7CE003 Porcelain
7CE004 Kaolin / Ball Clay
7CE005 Terra cotta (unglazed red paste)
7CE019 Burned Ceramic
7CE020 Stained/Worn Ceramic

7CE021 Unidentified Ceramic

7GL002 Glass
7GL004 Glass, Frosted
7GL007 Glass, Milk
7GL008 Glass, Patinated
7GL009 Glass, Soda
7GL009.500 Glass, Solarized
7GL012 Burned Glass
7GL013 Stained / Worn Glass

7ME001 Aluminum
7ME009 Cupric Alloy
7ME010 Ferrous Alloys
7ME017 Silver
7ME018 Stainless Steel
7ME023 Unidentified Metal

7MN002 Coal
7MN011 Unidentified Mineral

7MS002 Unidentified, Material

7OM012 Plastic
7OM014 Rubber, Hard
7OM015 Slag
7OM018 Synthetic

7OR002 Bone
7OR003 Calcium Carbonate (shell)
7OR024 Wood
7OR027 Enamel

7ST023.500 Slate
7ST025 Unidentified Stone

Appendix III

A brief glossary of selected terms used in the catalog[3]:

Agateware — Produced by mixing two or more different colored body clays which generate the veins of color that pass through the ware simulating an agate stone. This technique was used for both refined and utilitarian vessels as well as doorknobs, marbles, and white pipe clay.

Albany Type Slip Glaze — Albany slip is a clay discovered in Albany, New York in the early 1800s. Popular because it had the ability to melt and cover a vessel as a glaze, it is typified by its deep chocolate brown color.

Alkaline Glaze — A yellow to green translucent glaze in which the principle flux is alkaline. Examples include vegetable ash, calcium oxide, and barium oxide.

Annular — Having a ring or series of concentric rings.

Bennington / Rockingham — An American hard-bodied, utilitarian, yellow earthenware with a thick, molasses-like lead glaze that creates an uneven, blotchy brown surface. (19^{th} – 20^{th} centuries.)

Bristol Glaze — A smooth off-white to white glaze developed during the Victorian era in Bristol to decorate stoneware. (Mid to late 19^{th} century.)

Decalcomania — Also referred to as lithography. Used extensively for the production of transfers for ceramics. The image is usually printed on a sticky varnish on a transfer paper and dusted with a powdered ceramic color for transfer to the vessel.

Earthenware — A low-fired, porous ceramic. It can be glazed, rendering the earthenware less permeable to liquids, or unglazed. Coarse earthenwares are a crude, inexpensive, minimally decorated, *utilitartian* pottery used primarily in the kitchen and the dairy for food preparation. Refined earthenwares are delicate, fine-grained ceramics which usually exhibit some form of decoration. These refined wares were used at the dinner and tea table.

Edge Decorated — Decoration composed of a molded or molded and painted border which is almost always confined to flat forms such as plates and platters.

[3] Glossary adapted from the NPS Museum Handbook (2000).

Flow Blue Pigment for underglaze printing is fired in a chlorinated atmosphere to induce color to blend or "flow" into the glaze. The intent is to create a smooth, even tone in order to increase the depth in the pattern, particularly in the case of landscape patterns. When overdone, the flow results in a blurry image.

Impressed Using relief stamps or rollers to impress decorations into soft clay.

Incised Cutting of a decoration into dry clay as with engraving.

Iridescence Color effect in glass due to the partial decomposition of the surface and the formation of innumerable thin scales, resulting in an uneven, flaky surface.

Kaolin Kaolin is a clay composed of the mineral kaolinite. It is characterized by it's white color. Often used for tobacco pipes due to its high melting temperature.

Lead Glaze A low temperature, siliceous glaze containing lead as a flux.

Maker's Mark An identifying mark stamped, printed, or painted on vessels to indicate the manufacturer.

Parian A white, vitreous, porcellaneous body resembling the white marble of Paros, Greece. Introduced in England ca. 1842, it was used for the reproduction of scaled-down replicas of sculpture. Also used for dolls and figurines.

Pearlware The development of pearlware is commonly attributed to Josiah Wedgwood who first marketed it in 1779. Pearlware is essentially a creamware body modified to make it whiter by the inclusion of kaolin clay in the paste and the addition of cobalt to the glaze, giving it a bluish cast.

Porcelain A translucent, high-fired, vitrified, self-glazing ceramic. The basic ingredients of porcelain are kaolin and petunste. Kaolin is a fine-grained, natural white clay, while petunste is a feldsparic stone with a high quartz content.

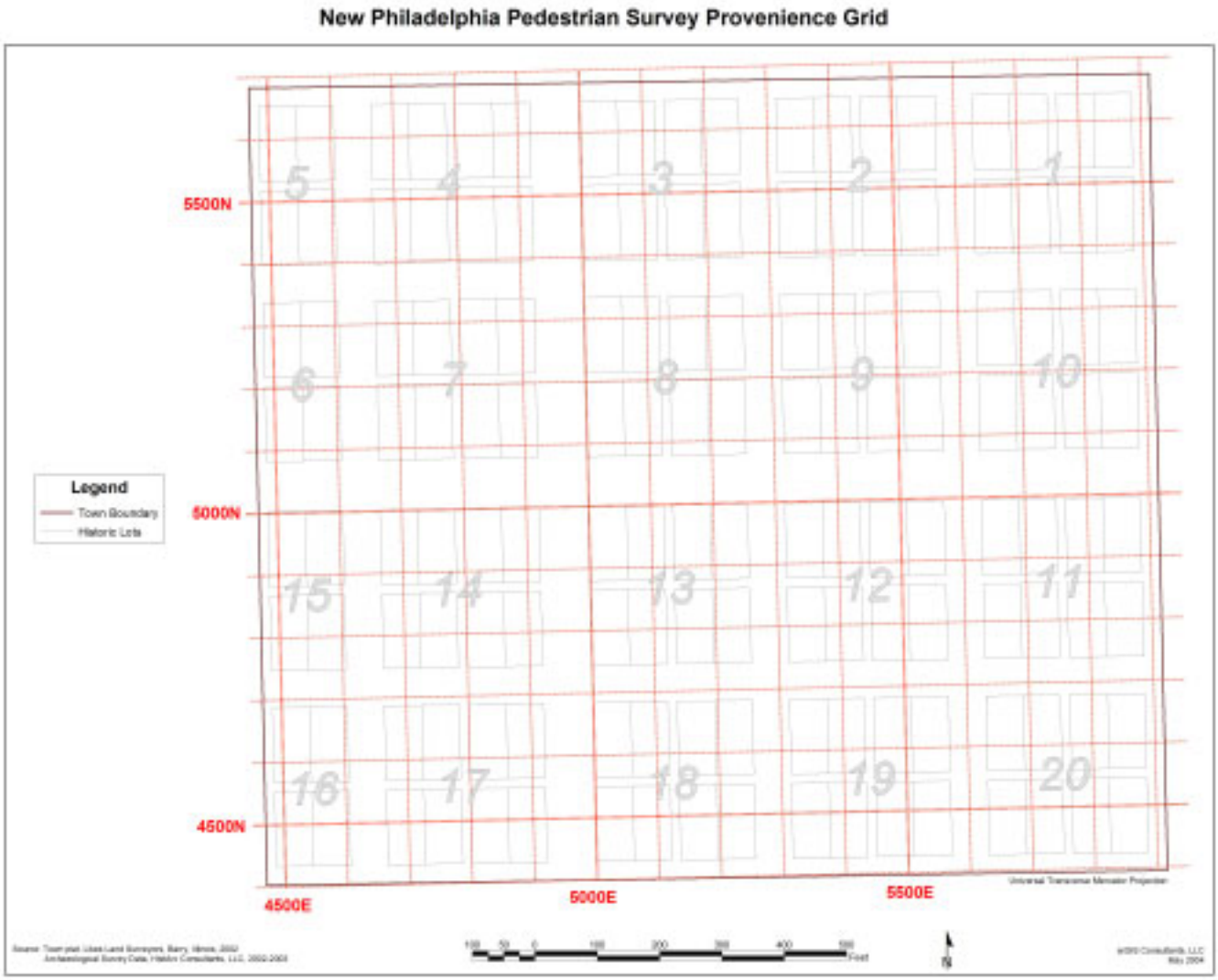
Redware An earthenware with a distinctly red paste.

Salt Glazed A technique in which common salt is introduced into the kiln when the firing is well advanced, forming a thin, hard glaze typified by an "orange peel" texture. The color is directly influenced by the clay. A moderate to high iron content produces

	various hues of brown; low iron oxide content produces pale brown if oxidized or gray if reduced. (17^{th} – 20^{th} centuries.)
Solarized Glass	Certain types of colorless, transparent glass which are exposed to sunlight for an extended period develop a pink or purple cast. Manganese dioxide is introduced into glass to "decolorize" it and make it colorless. However, with prolonged exposure to UV light, manganese becomes photo-oxidized and can make the glass look pink or purple. Cerium and selenium when used as decolorizers and exposed to light can develop colors ranging from yellow to amber (Corning Museum of Glass:2004).
Spalling	Shallow losses or flaking from the surface of a stone or ceramic.
Sponge	Decoration involving the application of various colors to the surface of a vessel with an inked sponge.
Stoneware	Stoneware is a ceramic type having a hard, durable, non-porous body from firing at high temperatures. Paste colors range from gray to buff to yellow-red. Stonewares typically have thick walls.and are used for utilitarian vessels such as jugs, crocks and pitchers (Stelle:2001).
Transfer Printed	Indirect painting of a vessel in which the pattern is obtained from an engraving, lithograph, or silk screen print on transfer paper applied to the ware using various methods.
Washed / Dipped	Covering a vessel with a thin, watery coat of color.
Willow Pattern	On ceramics, a transfer-printed design of two lovers on a bridge fleeing the father of the girl. A ship is seen in the background with pagoda and two flying birds also in the scene.
Yellowware	An earthenware made from yellowish clay ranging from pale buff to mustard yellow Popular for kitchen and utilitarian wares during the 19^{th} century.

Appendix IV

Catalog of Historic Artifacts



Artifacts were recorded on a provenience grid with 5000N 5000E as the "center" (see Chapter 2 for details). Provenience information is provided for each artifact in the catalog as a northing / easting coordinate and may be approximately located within the town using the grid overlay above.

arGIS Consultants, LLC
4902 Newport Avenue
Bethesda, Maryland 20816