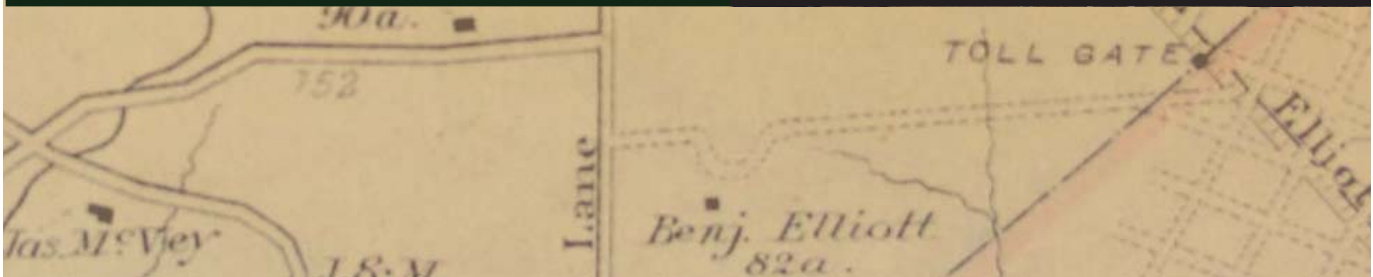
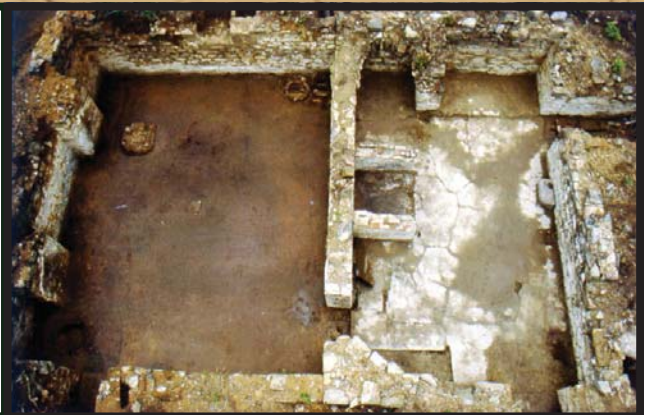




REMEMBERING OUR PAST:

Life On a Delaware Dairy Farm in the 1800s



Archaeological Data Recovery Excavations
at the Weldin Plantation Site, 7NC-B-11
Brandywine Hundred, New Castle County, Delaware



<http://deldot.gov/archaeology/>

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McCormick
Engineers & Planners
Since 1946 **Taylor**

Cover: Artist's rendering of the how the Weldin Plantation Site would have looked around 1805 and a photograph of the basement of the house during the archaeological excavations.

Cover background: 1881 G. M. Hopkins Map of New Castle County.

Inside cover photograph: 1789 George Washington Inaugural button.

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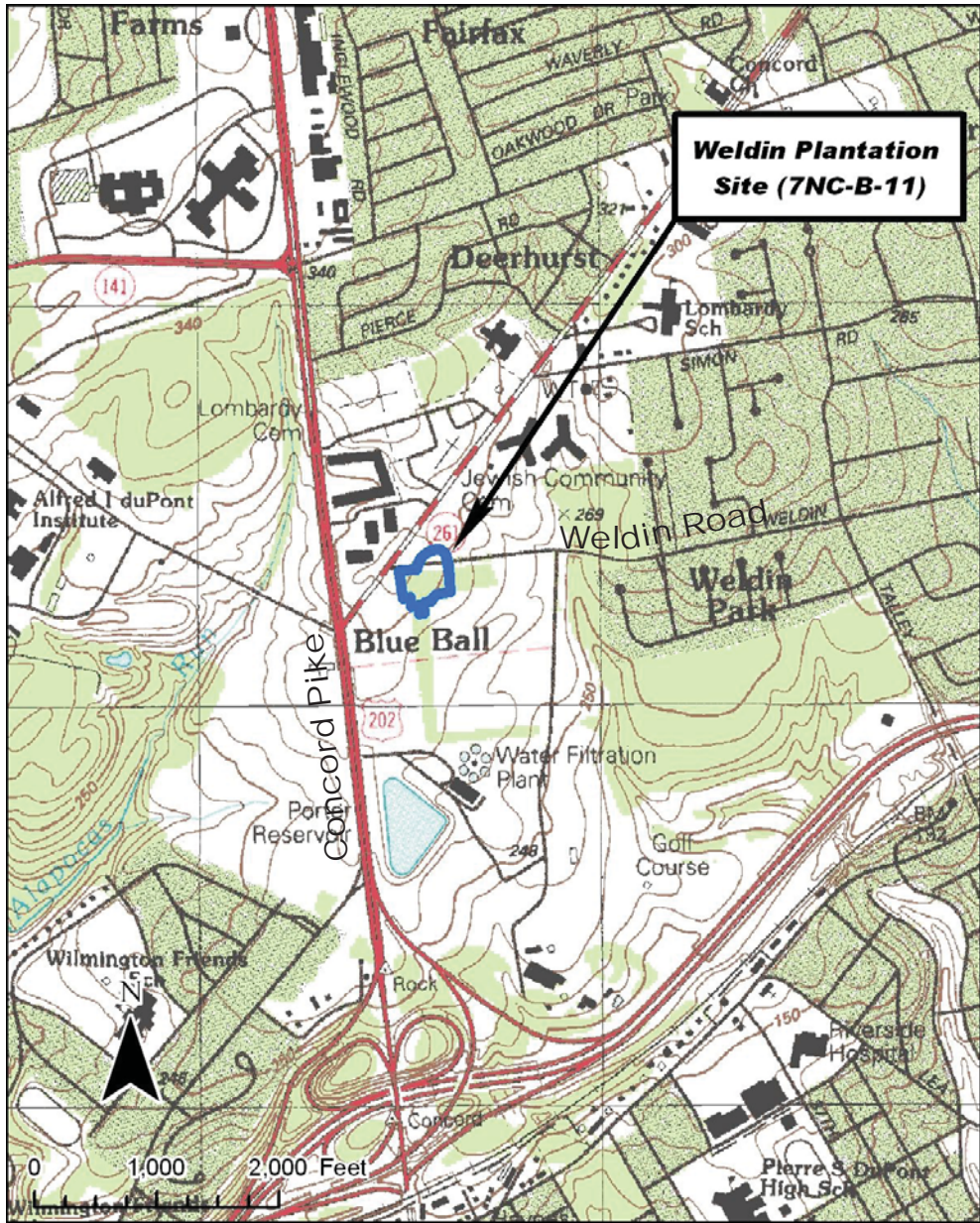
FINDING AND LEARNING ABOUT THE SITE

The Weldin Plantation Site, 7NC-B-11, was excavated by the Delaware Department of Transportation (DelDOT) and the Federal Highway Administration (FHWA) because part of the site was going to be destroyed by the construction of the Blue Ball Properties Area Transportation Project. DelDOT and FHWA hired archaeologists who work for consulting companies to excavate the site. The site is located near the Concord Pike (Route 202) north of Wilmington in Brandywine Hundred, New Castle County, Delaware.

The Weldin Plantation Site was named after Jacob R. Weldin, who bought the property and moved there in 1862 with his wife, Hannah, and their children. His family lived there for about 80 years. When they left, the site was abandoned. By 2000, most of the buildings had collapsed or were



Stone corner of the main house, still standing in 2000.



Location of the Weldin Plantation Site on Weldin Road, slightly to the east of the Concord Pike.

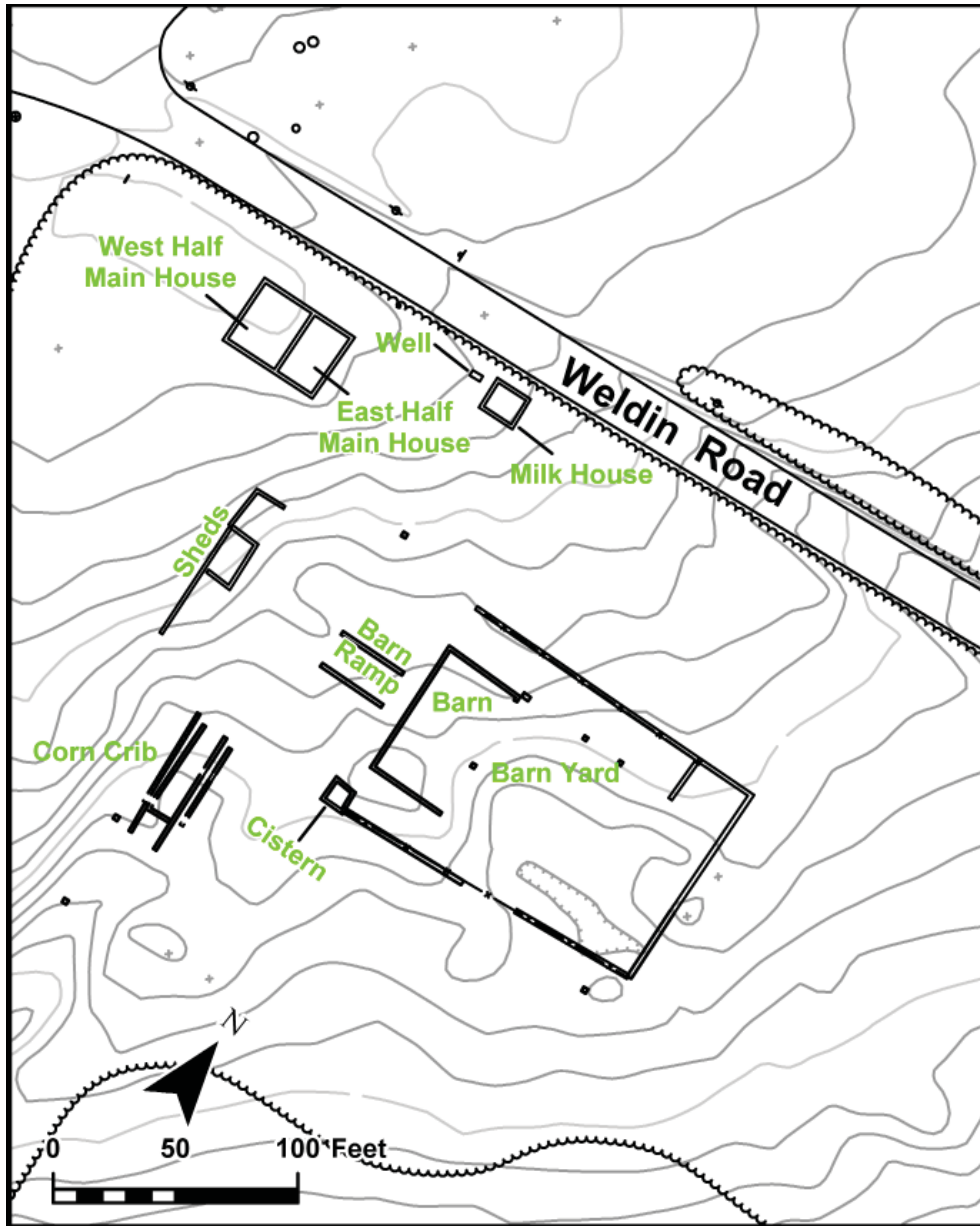


Stone walls of the milk house.

dismantled, but some of the stone walls of the farmhouse, milkhouse, barn, and barnyard were still partially standing. There were also foundations of a corncrib and some sheds. The ramp leading to the second story of the bank barn was still there as well.

In addition to being named the Weldin Plantation Site, the archaeological site also has an official designation using the Smithsonian Trinomial System, which is 7NC-B-11. The "7" is for the State of Delaware, "NC" is for New Castle County, "B" is the area within New Castle County that the site is located, and "11" means that it is the 11th archaeological site given a designation within that area.

Once DelDOT and FHWA realized that the Weldin Site was in the area of construction for their project, they hired archaeological consultants to learn more about the history of the site and to conduct archaeological excavations.



Plan showing the house foundations and the farm buildings at the Weldin Plantation Site.



Barn ramp for bank barn.

The earliest records that can be found for the site date to 1680, although it is unknown if anyone lived there then. The first mention of a house on the property was 1710, so we know that people were living there by that time. At some times during its history, the site was occupied by the people who owned it, but during other times, the people who lived there were tenants who farmed the land in the owner's absence.



The back of the stone house as it looked around 1920. The stone has been covered with wooden siding.

WELDIN PLANTATION TIMELINE

1680-1685	Owned by Hans Peterson; unknown if anyone lived here
1685-1722	Owned by Cornelius Empson Family; someone was living here by 1710
1722-1745	Owned and occupied by Israel Peterson
1745-1785	Owned and occupied by Joseph and Regina (Peterson) Mortonson
1785-1808	Owned by John Dickinson; occupied by various tenants
1808-1862	Owned by Dickinson's daughter and son-in-law, "Albanus and Maria Logan; occupied by various tenants. From 1849-1862, John Bradford was the tenant.
1862-1891	Owned and occupied by Jacob R. Weldin
1891- <i>about 1942</i>	Owned and occupied by Weldin's descendants



The Weldin Site around 1920. The barn ramp is to the left and is covered with snow. Behind it is a windmill on top of a cistern. The cistern is just outside the barnyard and would have provided water for the animals. The two-story corncrib is in the center. To the left are sheds.

The first house built at the site would probably have been a small, one-and-a-half story log house. A stone house was built sometime around 1745. It faced east and had a log or frame kitchen addition to the north. Around 1840, a large stone addition was added to the western side of the house – this addition was larger than the original house. The log/frame kitchen addition was torn down at the same time, and the front of the house became the north side, instead of the east side. Most of the farm buildings for which we have standing walls and foundations (the milk house, barn, barnyard, corncrib, and sheds) were built by Jacob R. Weldin after he bought the property in 1862.

The part of the Weldin Site that wasn't destroyed through road construction was included in Alapocus Run State Park, administered by the Delaware Department of Natural Resources and Environmental Control (DNREC). The milk house has been stabilized and DNREC plans to install interpretative signs in the future as part of a walking trail around the foundations.



Monument for Jacob R. Weldin and his wife and family in the nearby Newark Union Cemetery. Jacob R. died in 1891.

ARCHAEOLOGICAL EXCAVATIONS AND ANALYSIS

The archaeological excavations were conducted in three phases. The first two phases included testing across the entire site. The Phase I consisted of 24 round shovel test pits (about 1 foot in diameter) and 31 test units (3 feet x 3 feet). During the Phase II, 170 shovel test pits and 20 test units were excavated. By the time of the Phase III, the project design had been changed, and only the house was slated to be destroyed by the project. As a result, the Phase III excavations concentrated on the house and attached kitchen foundations and yard immediately around the house. This work included the excavation of 89 test units. Subsequent to the excavation of the test units, a backhoe was used to remove the topsoil and search for additional features, such as foundations and pits, that could be seen in the undisturbed subsoil.



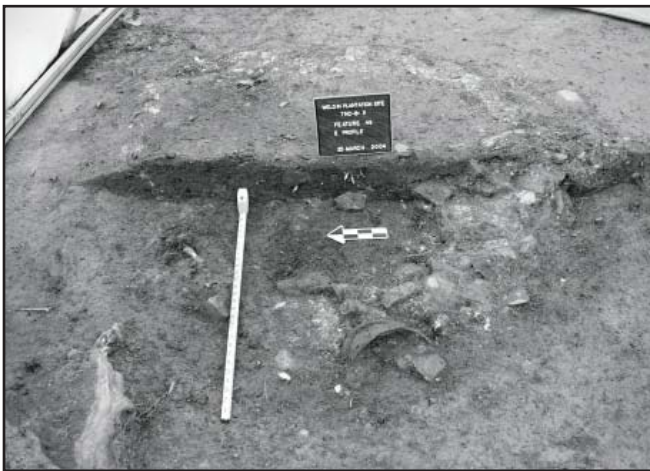
The basement of the house during the archaeological excavations, showing both halves of the stone house.



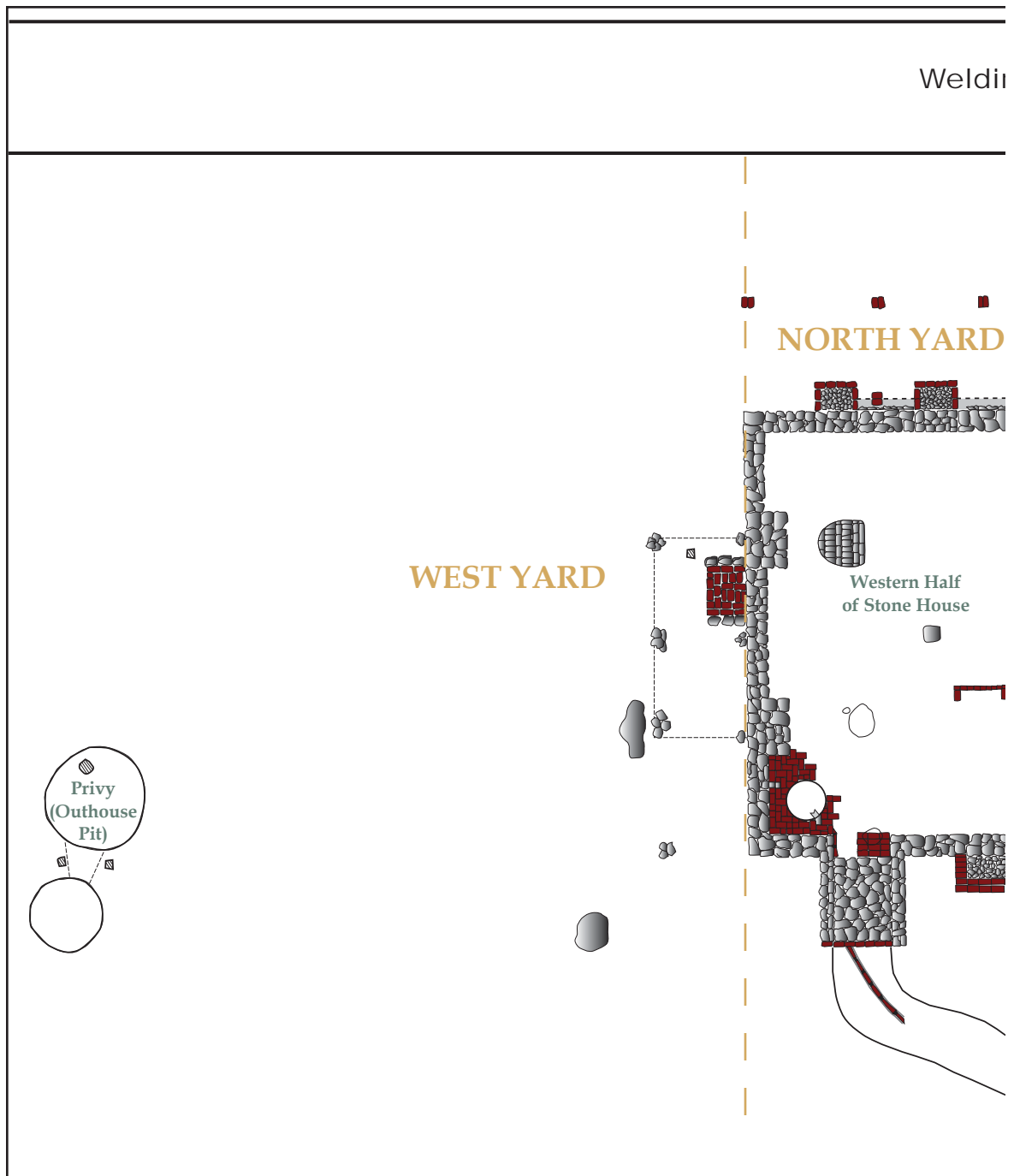
Excavations in the eastern half of the basement.

Over 65,000 artifacts were found during the excavations through the process of screening. This involves placing the excavated soil into a sturdy box

with a screen on the bottom. The screens have $\frac{1}{4}$ inch openings and the soil is pushed through them, leaving the artifacts behind. The artifacts are then picked out of the screen and taken back to the laboratory for washing, inventorying, labeling, and packing for curation at the Delaware State Museum.

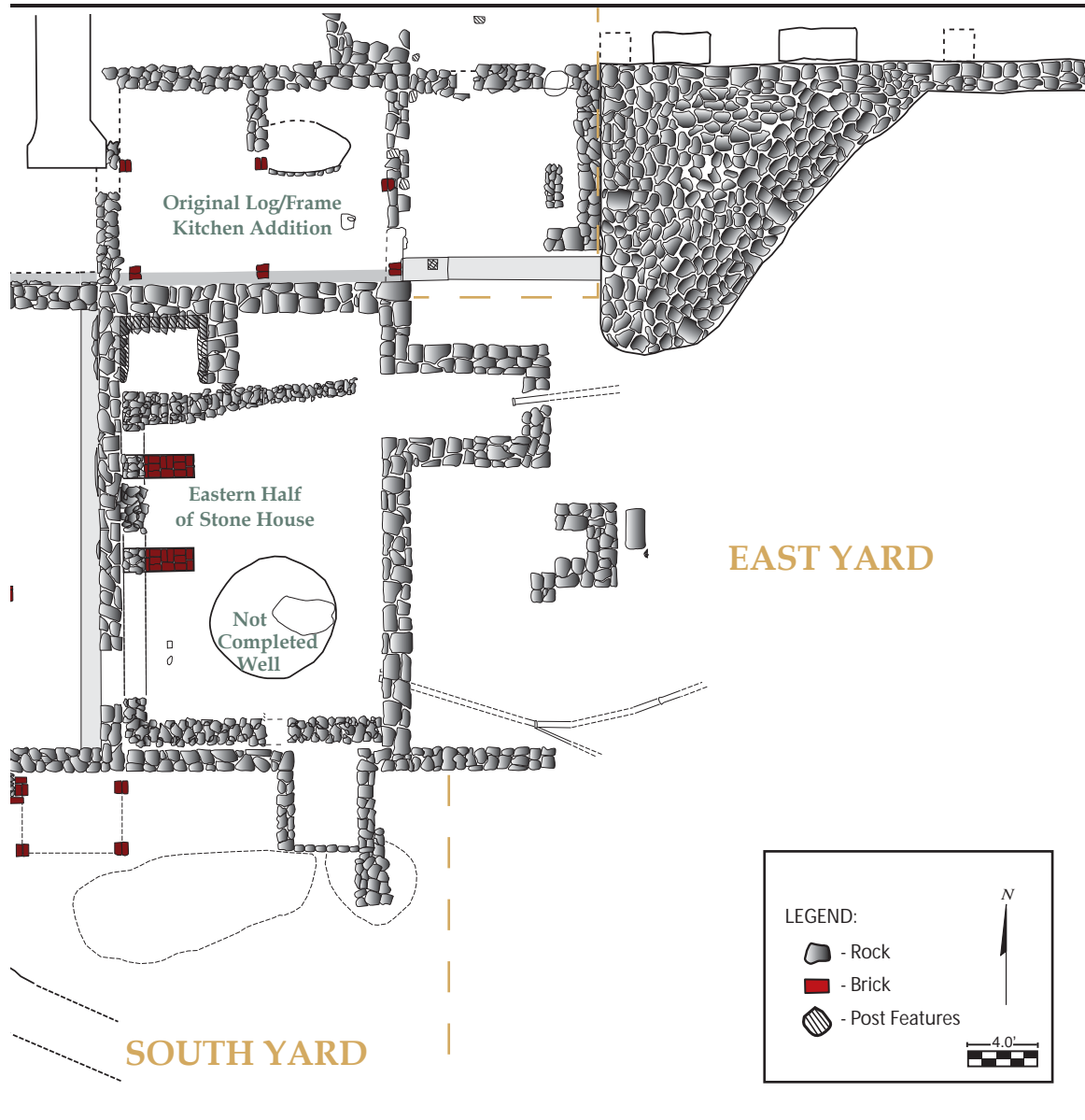


The privy (outhouse pit) while it was being excavated. Privies often contain many items that were thrown away by the people who lived there.



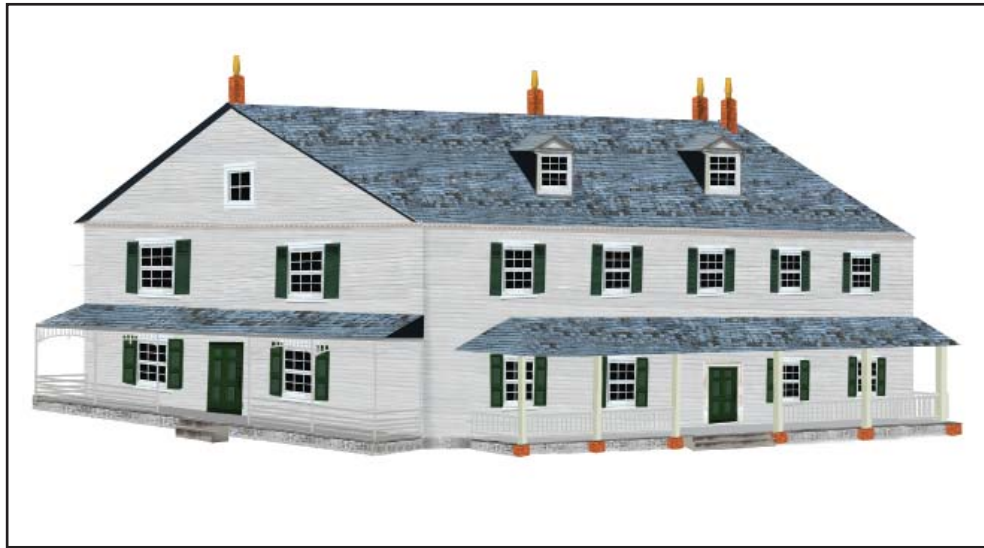
Foundations of stone house and associated features.

n Road





Artist rendering of what the main house would have looked like around 1805. The house was facing east. The left portion was stone and the right portion was log or frame; both portions were covered with stucco.



Artist rendering of what the main house would have looked like around 1875. The house was facing north. The log or frame addition had been torn down. The original stone block is the left and a stone addition is to the right. Both portions were covered with stucco.



Different types of ceramic sherds, representing vessels dating from the mid-eighteenth century to the late nineteenth century.



Acme nursing bottle, manufactured between 1882 and 1900.

The artifacts recovered during the excavations included things that the families would have used while they were living at the site (ceramic sherds, glass, sewing items), things related to buildings (nails, brick fragments, window glass), coins, buttons, and a variety of other items. We also found bones and seeds, which told us something about what the people living at the site were eating.



Coins: Top row: 1800 cent, 1816 cent, 1828 cent, unreadable date cent. Bottom row: 1807 King George III coin, 1787 New Jersey State coin, early 1800 half cent.



1789 George Washington Inaugural button found at the Weldin Site. The first initial of each of the 13 states in the new United States is inscribed around the edge.



Toys found at the site included marbles, dominoes, and jacks. The toys pictured here were likely used during the late nineteenth century.



1864 Lincoln Campaign pin found at the Weldin Site and picture of how it would have looked when it was new.

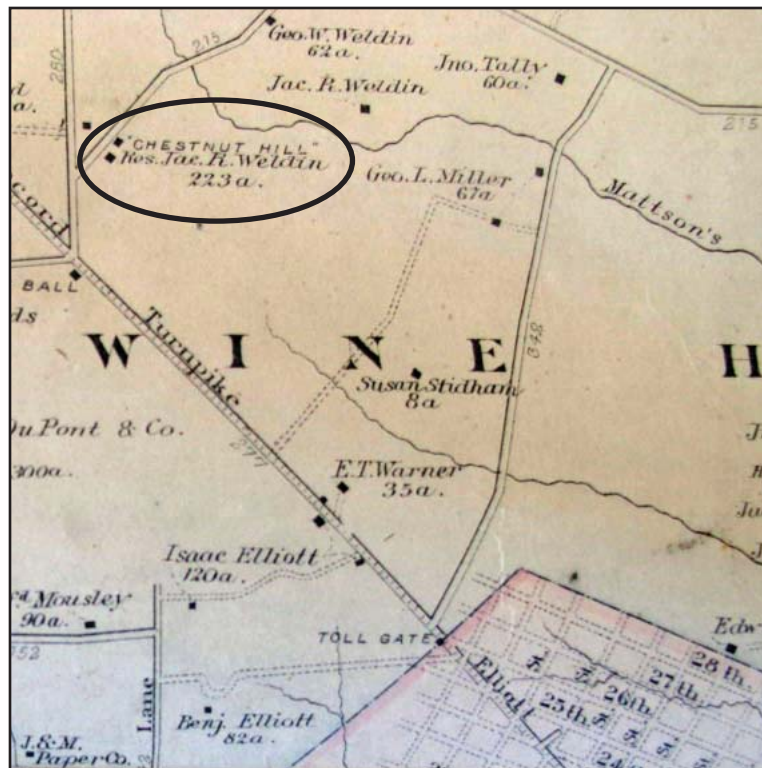
WHAT DID WE LEARN?

The information from the research about the history of the site, the archaeological excavations, and the analysis of the artifacts are combined to help us learn about the lives of the families that lived there. There were two important research questions for this site:

- *What can the built landscape and use of space at the site tell us about the people who lived there?*
- *Were there differences between the lives of families who owned and lived at the site versus the families who were tenants?*

Looking at the built landscape, layout, and use of space at the site, we can tell that the families who lived there were influenced by three factors: the Georgian mindset, progressive farming, and the rise of the dairying industry.

Historians and archaeologists today use a concept called the “Georgian mindset” to help us organize our understanding of people’s behavior during the eighteenth century. The Georgian mindset focused on balance, order, and symmetry. People were concerned with privacy and having specific places in the home and on the farm for different activities. Newly constructed and renovated homes contained more specialized rooms so that different tasks could be conducted in different spaces, instead of doing all of the indoor work in one or two rooms. The construction of the kitchen addition on the house shows that the people living here were interested in separating activities.



Jacob R. Weldin's residence is shown on this 1881 map of New Castle County.

Progressive farming became popular in the late 1700s and was concerned with improving the home and farm. Progressive farmers were interested in new technology, ways to increase productivity, and efficiency. The Weldin Site was owned by John Dickinson from 1785 until his death in 1808. Dickinson was a signer of the United States Constitution. His daughter and son-in-law owned the property until 1862. Dickinson and his descendants were wealthy and made improvements to the property. They were interested in having tenants who were willing to try innovative technology, crop rotation, and fertilization. The layout of the main house reflects these ideas. The addition, which was actually bigger than the original house, was constructed during the Dickinson family ownership. The newly renovated house was larger and more comfortable to attract tenants who were hard-working and interested in progressive techniques.

The largest influence on the archeological remains at the Weldin Site was the rise of the dairying industry. The farm functioned as a dairy farm from the mid-1800s onward. The layout of the farm needed to be rearranged so that farmers could specialize in dairying. Changes seen on farms that were converted to dairying included the construction of more and larger outbuildings, adjustments to the layout of the buildings for more efficient dairying operations, and new activity areas where tasks were undertaken. Jacob Weldin constructed almost all of the farm buildings for which there are foundations today, including the milk house, bank barn and barnyard, corncrib, and sheds. The extensive renovations he and his family conducted on the property reflect the rise of the dairy industry and how it affected use of space on farms.



Equipment sheds are to the left in the front, with the barn behind the sheds. The corn crib is to the right in the front, with the windmill over the cistern behind the crib.

The second research question looked at the differences between the lives of families who owned and lived at the site versus the families who were tenants. John Bradford was a tenant at the site from 1849 to 1862, while the property was owned by John Dickinson's daughter and son-in-law. Tax records and other documents allowed us to compare the productivity of John Bradford and Jacob Weldin's farm and the amount of wealth that each family

had. Different archaeological deposits on the site from before the Weldins bought the farm and after they bought it were also compared.

To our surprise, the two families seemed to have been living similar lifestyles. The Bradfords and the Weldins were both large-scale commercial dairy farmers. They were both producing and selling large quantities of butter. Both families practiced progressive farming and used modern technology. Both families were wealthier than average, owned expensive household items, and had similar diets. One difference, however, is that the Bradford family did not own the property, so they did not invest in it by building new barns and outbuildings like the Weldins did. They would have put more of their profits into livestock and equipment.



The great number and kinds of different dishes found at the site indicate that the families who were living there were well-off. The wealthier a family was, the more likely they were to have more possessions, as well as a greater diversity of possessions. These dishes date from the mid-eighteenth century to the late nineteenth century.

A SPRING DAY IN 1870 AT THE WELDIN SITE

It was a beautiful spring day in 1870, and Jacob and Hannah Weldin woke up before dawn. Their lives were filled with work that involved the entire household. Jacob, 48, and Hannah, 53, had three children: Eliza, 24; (Jacob) Atwood, 14; and Thomas (Tom), 12. They had lost their two young sons Isaac and Lewis, born between Eliza and Atwood, to whooping cough within two days of each other in 1853, a loss which still haunted them. In addition, Eliza was handicapped and was limited in the chores she could perform. The Weldin family had been farmers in this area of Brandywine Hundred for nearly 150 years but not at the commercial scale of Jacob and Hannah's dairy operation. Jacob had tripled the size of his farming operation eight years earlier when he purchased their farm, and the family was working hard to pay off the mortgage on the property.

After rising, Jacob, Hannah, Atwood, and Tom, as well as their 27-year old hired man, Lewis (Lou) Squibb went to the ground floor of the newly



enlarged bank barn to care for the family's 25 milk cows. While Jacob, Hannah, and Lou were milking the cows, about eight each, Atwood and Tom fed the cows a mixture of chopped grain, including corn and oats, and some cured hay from one of the barn's hay mows above.

The milk house today. It has been stabilized and is in Alapocus Run State Park.

Atwood and Tom also carried the buckets of fresh milk to the stuccoed stone milk house, located about 120 feet northwest of the barn's stables. The milk house had also been constructed in the last couple of years, and its thick stone walls helped ensure its cool interior. Approximately half of the Weldins' milk was used to make butter, and the other half was taken as fluid milk to Wilmington for sale. In the milk house the fragrant, warm milk was strained and either put into metal cans or metal pans. Of course, a couple of quarts of milk were reserved each day for drinking and household cooking purposes. Once the cans were filled, Atwood placed the heavy cans in a trough of cold water to cool the milk.



Redware milk pan fragments. Redware milk plans were used from the eighteenth century to the mid-nineteenth century before metal ones were widely available.

The young men had to hand pump water into the watering trough in the barnyard. After all of the cows were milked and fed, they were let out of their stalls into the barnyard where the water trough had been filled and was ready to quench their thirst. Once the cows had finished drinking, Atwood and Tom drove them from the barnyard to one of the Weldins' meadows for the day. The Weldins' ten other cattle, mostly young heifers, were already pasturing in another meadow.

After the milking was completed, the family returned to the house where the domestic servants, Matilda (Tillie) Squibb (Lou's wife) and Rebecca (Becky) Hand had cooked a hearty breakfast. Prior to eating, Jacob, a staunch Methodist, offered a prayer of thanks. The large breakfast was eggs from the Weldins' flock of chickens, homemade bread from locally ground flour, smoked bacon from a hog the Weldins had butchered the previous winter, fried sliced potatoes from their cold cellar, fresh milk from their dairy, and store-bought coffee. After breakfast the boys headed off to school, while Jacob and Lou made sure all of the farm's meadow fences were secure.

Today the hay was ready for its first cutting, and Jacob cut the timothy grass with a single-horse mower. Jacob's mower, a new invention made by the Pennock brothers in Kennett Square, Pennsylvania, reduced the cost by about two-thirds what it would have cost to mow hay with a hand held scythe, the norm twenty years earlier.

Lou returned to the milk house with the milk wagon which had been stored in the wagon shed adjoining the barn. He checked the lids on the milk cans to see if the day's milk was cool enough for shipment to the city. Lou then loaded the single-horse hitched milk wagon with cans of the cooled milk and drove the two-



Jacob R. and Hannah Weldin's initials scratched into one of the stones on the ramp for the bank barn.

and-a-half mile journey on the Concord Pike to a milk station in Wilmington. Here the cans were weighed and unloaded, and Lou was given a stamped slip noting the farmer's name, date, and weight of the milk delivered that day. The fluid milk was processed at the station and was bottled for delivery to the city's homes. Jacob received a check each month for the milk delivered during that time. Wednesdays and Fridays were market days in Wilmington,

and on those days Lou picked up some items at the market that Hannah asked for after delivering the milk. After returning from Wilmington, Lou took out a wagon load of manure from the barnyard and scattered it on a small field which would soon be planted in potatoes.

After breakfast, Eliza, Tillie, and Becky gathered the eggs and tended to the chickens and farm fowl. The eggs were taken to the cool house cellar for storage until they could be shipped to the farmer's market in Wilmington. Market day for the Weldins was Friday, and every Thursday afternoon, Hannah and Tillie went to the cellar where they would grade and separate the eggs. The eggs were boxed according to their grade to be ready for the market on Friday.

Tillie and Becky then returned to the milk house to gather cream from the previous day's milk. The Weldins churned butter on Mondays and Thursdays. Cream rose to the top of the eight-quart tin pans in which the milk had been poured, and Tillie and Becky collected the cream off the top with a tin skimmer. The cream collected each day was stored in tin cans which were placed in cold water until churning day. On churning day, the cream from the three previous days' milking was worked or churned to remove the buttermilk. Churning was an arduous task, and the two women took turns cranking the churn. After the butter was churned, it was washed with cold water to ensure all of the buttermilk had been removed. It was then lightly salted and formed into one-pound lumps and stamped with a butter mold. The finished butter was stored in wooden firkins (a type of bucket) until market day. All of the buckets, pans, and utensils had to be washed each day to ensure cleanliness of their milk and butter products. Despite the close proximity of the well to the milk house, butter making was very labor intensive.



Nineteenth century firkin
(not recovered from the
Weldin Site).

On Friday both the butter and eggs were loaded on the Dearborn market wagon and taken to the Fourth Street Market in Wilmington. Market day was a welcome opportunity, during an otherwise busy week, for both Jacob and Hannah to spend time together, enjoying the fruits of their labor, visiting with their neighbors, catching up on the latest news, and discussing current grain and produce prices with their friends. While in Wilmington, they could also purchase other foodstuffs and sundries, including recently harvested oysters and clams, beer bottled by J. B. Bryant, and cough medicine produced by local organic chemist, Nathan B. Banforth, whose concoctions were sold nationwide.

The men returned from the fields for the mid-day meal, dinner, which had been prepared by Hannah with the assistance of Tillie and Becky. Dinner included home-cured ham cooked with potatoes and green beans. The green beans had been canned as part of the previous year's garden crop. Bread, butter, and various jams were standard fare for meals in the Weldin house.



Nathan B. Banforth
Pharmaceutical
Bottle, dating from
1880 to 1900.



J.B. Bryant beer bottle,
dating between 1860
and 1880.

After dinner, Jacob worked on various business accounts while Lou made sure that the other farm animals, such as the swine, were cared for. On this particular day, Jacob returned to the fields to continue mowing hay while Lou began tedding (spreading the hay to dry it) the previously mowed hay. Jacob's newly purchased hay tedder hastened the curing of the hay in the field. In a day or two, depending on the weather, the hay would be raked into windrows. Then Jacob would drive one of his hay wagons into the field while Lou used a new light-weight pitch fork to throw the hay onto the wagon. The fully loaded wagon would then be taken up the barn's long ramp to be unloaded into one of the hay mows.

Tuesdays were wash days at the Weldin farm. Dirty laundry was deposited in a bin in the cellar beneath the new section of the main house. Water was heated on the coal-fueled cast iron stove that was located in the basement, where Tillie and Becky would use wash boards and hand-made lye soap



Pitchfork which would have been used on the farm.

to clean the family's laundry. One wash tub contained soapy water and another tub contained the rinse water. After each piece was washed, rinsed, and wrung out, it was put in a clothes basket to be taken outside to dry on a clothesline in the yard. On rainy Tuesdays the wet clothes were hung out on the lines in the house's attic. The clothes were usually washed after breakfast, and by mid-afternoon, depending on the weather, they were taken off the clothesline and put into baskets. The clothes were then sorted by whether they would need to be ironed or not. Socks, for example did not need to be ironed, but shirts did. Clothes

that did not need to be ironed were put away in the appropriate chests of drawers, but the clothes to be ironed remained in a basket until Wednesday which was ironing day. On Wednesdays after the breakfast chores were completed, Tillie and Becky pressed the clothes with cast-iron sad-irons (an iron which has a removable handle and is pointed at both ends) which had been heated on the kitchen cook stove.

Returning from school in the late afternoon of a typical day, Atwood and Tom herded the milk cows from the meadows into the barnyard where the cows could drink water and loaf until milking time. Lou, Atwood, and Tom chopped wood for the cook stove and other fireplaces in the house. At milking time, the boys assisted in bringing in the cows from the barnyard and chaining them in stalls where they were milked. (A single chain around the neck kept them in their stall or stanchion.) When Jacob and Lou returned from the fields, they joined Hannah and Becky for another round of milking

and feeding. After the milking was completed, straw was spread in the stalls for the comfortable bedding of the cows overnight.

The family went back to the farmhouse where supper had been prepared by Hannah, Tillie, and Becky. The meal included cooked chicken (one from their own flock) and gravy, fried potatoes, and freshly picked asparagus from the garden. Bread, jams, and coffee were served too. Hannah had also baked a rhubarb pie that day from freshly picked spring rhubarb. While Tillie and Becky washed the dishes after supper, Hannah and Eliza did the sewing and mending of Jacob and the boys' clothes. Jacob worked on his business accounts and read the newspaper while the boys did their homework. Just prior to retiring for the day the family would gather around the kitchen stove where one of the family, usually Jacob, would read verses from the Bible. After a 12-14 hour day, the family was ready for bed by 9:00 that evening.



Sewing and clothing-related items, including scissors, eyelets, shoe heel, suspender, and various buttons. These items were found in a privy which was filled during the early twentieth century.

What Do Archaeologists Do?

The most common question archaeologists get is “Do you find dinosaur bones?” Archaeologists don’t actually look for dinosaur bones, although some archaeologists may find them by accident occasionally. Archaeology is the scientific study of the human past through the recovery of material remains and the analysis of those remains. Dinosaurs became extinct about 65 million years ago. Modern humans did not evolve until about 200,000 years ago at the very earliest, so dinosaurs were gone for at least 64 million years before people appeared. People have lived in North America for at least 13,000 years.

Here in Delaware, archaeologists study the past lives of people who have lived here both before and after the European colonization of the New World. There are four basic components to an archaeological study: background research, fieldwork, laboratory analysis, and documentation. Each of these components is equally important, and fieldwork should never be undertaken unless the other three are also going to be completed.

Background research should be conducted before beginning any field work. Background research tells us what is already known about an area, including where archaeological sites are already recorded



Delaware Public Archives, Dover.

and what work has been done at those sites. It also allows us to develop a context for the site. A historic context contains information about what is already known regarding a site’s specific time period, location, and type. The context is the framework within which the site’s importance can be evaluated. Background research will often continue throughout the field work, laboratory work, and report write-up, as new information from the excavations and analysis comes to light.

Fieldwork is the on-site investigation of an area or archaeological site. Field work can consist of a variety of different activities.



Excavation of shovel test pits during subsurface sampling.

- **Field reconnaissance** involves walking over an entire area to assess the conditions. During the walk-over, the archaeologists look for previously disturbed areas, evidence of archaeological sites on the surface (such as artifacts or foundations), water sources, how steep the ground is, and any other factors that might help them determine if there might be any archaeological sites present.
- **Controlled surface collection** is the systematic collection of artifacts that are visible on the surface of the ground. It is usually done immediately after a field has been plowed and after it rains, as this often brings artifacts to the surface. When archaeologists are walking fields looking for artifacts during a controlled surface collection, they walk in rows that are a set distance apart, and they record the location of the artifacts they find with a GPS unit.
- **Subsurface sampling or testing** of an area is often done to determine if sites are present. Also, subsurface sampling or testing of a known site is done to assess whether the site is significant. It usually includes the excavation of shovel test pits or test units. Shovel test pits are round holes that are approximately 2 feet in diameter and test units are square

holes that are approximately 3.3 by 3.3 feet. Sometimes backhoes can be used to cut trenches or to remove overburden that is covering up a site.

- **Intensive excavations** are usually full-scale investigations where a large portion of the site is excavated to recover the important information that can be learned from the site. It usually includes excavating blocks of test units and any features that are identified.

Laboratory analysis is the processing of the artifacts found during field work. It includes washing, labeling, inventorying, analyzing, and packing the artifacts in appropriate containers for curation. **Curation** is the storage and maintenance of archaeological artifacts in an appropriate facility. The artifacts should be stored in archivally safe bags and boxes and the facility should be climate controlled. A very important aspect of curation is that the artifacts are made available to other people in the future who might want to use them for additional research.

Documentation is writing up the results of the archaeological investigations and making them available to other researchers and the general public. There are usually at least two different types of documentation. A detailed technical document, which may be very long and dry, is prepared for other archaeologists. It usually includes all of the data that was generated during the excavations and analysis, so that other archaeologists can use that data for their research. The second is a booklet (such as this one), brochure, poster, exhibit, website, or other avenue for the public to learn about the site and the important information that was learned from the site.



Artifacts are returned to the laboratory for processing and analysis.

Getting Involved in Archaeology?

The best way to get involved with archaeology is to join the Archaeological Society of Delaware (ASD). ASD's mission (<http://www.delawarearchaeology.org/>) is to educate both their members and the public about archaeology, support professional archaeological investigations, report on activity within Delaware and the surrounding region, and promote interest and participation in archaeology and related activities.



Volunteers, both adults and children, can make valuable contributions during archaeological investigations.

For more information about Historic Preservation in Delaware see the link below
<http://history.delaware.gov/default.shtml>

