

II. NEWARK STATION

A. INTRODUCTION

The Newark Light Rail Station is now in operation where South College Avenue crosses the Amtrak Northeast Corridor tracks. A small shelter for commuters and a landscaped parking lot stand on the southern side of the tracks, just west of the South College Avenue overpass. Before the station was built, the spot was just the corner of one of the parking lots around the Chrysler Corporation factory complex (Figure 2). These parking lots did not look like promising spots for the survival of archaeological remains, but there was a small triangle of wasteland between the parking lots and the train tracks that

had not been graded and seemed to have some potential. In August 1995, Berger carried out an archaeological survey of this small lot, along with background research on the history of the property (Bedell 1995a). Archaeological remains were found during the survey, and the historical research showed that they were the remnants of a small community that stood at this crossroads in the 1800s. This small corner of a big parking lot proved to have a fascinating history. The plans for the station also called for eventual expansion east of South College Avenue, on land now owned by the University of Delaware, but that expansion has not been scheduled and no archaeological work was carried out on that property.

B. THE HISTORY OF A RAILROAD CROSSING COMMUNITY

1. *The First Step: Checking Historical Maps*

Whenever a new road, bridge, or other transportation improvement is to be built, historians and archaeologists are called in to find out what traces of the past the new construction may obscure or destroy. This is history at its most local level: what happened here? Often things happened at a given spot that reflect the history of the region, or even the whole nation: the land is cleared for settlement in the colonial period, crossed by railroads in the nineteenth century, marched over by soldiers of the Revolution or the Civil War, subdivided for suburban development in the 1920s or the 1950s. But some places have unique histories that don't fit the patterns we expect. They may be places with unusual topography, backwaters missed by the general trend of progress, or the sites of experiments that failed. When we can learn about the people who lived there, every site is unique, because every person's life is its own surprising story. To understand the way millions of separate stories about people and places add up to form the story of a nation is one of the most pressing challenges in history, and one of the most fascinating.

The Newark Light Rail Station is located in Pencader Hundred, but the town of Newark is actually in White Clay Creek Hundred. Because of this area's highly fertile soil and numerous small streams, it was one of the first inland areas of Delaware to be developed. By the early eighteenth century numerous farms were present in the region, and the town of Newark developed at a crossroads in the 1730s. After the coming of the railroads in the nineteenth century many crossroads towns, such as Christiana Bridge and Cantwell's Bridge (Odessa), declined, but Newark flourished through a combination of industrial

development and, through the University of Delaware, education. Because of the Newark area's rich history, it was thought possible that important historical remains might be present in or near the project area, and detailed historical research was therefore carried out.

The historical research archaeologists conduct for properties they study often begins with a review of historical maps. In the 1800s Americans followed a fashion for making detailed local maps and atlases that show individual buildings. Many of the buildings are identified on the maps, either by function ("blacksmith's shop," "schoolhouse") or by the name of the owner. The maps were sold by subscription, and putting the property owners' names on the maps seems to have been, in part, a device to get them to purchase the maps for display in their parlors. These maps are reasonably accurate, although not perfect, and they can be a quick and easy way to find out whether a site was occupied in the nineteenth century. Four such maps and atlases were made of New Castle County, dating to 1849, 1868, 1881, and 1893.

For the little property at the junction of South College Avenue and the Amtrak Northeast Corridor tracks, the 1849 Rea and Price *Map of New Castle County*, is perhaps the most interesting (Figure 3). This map shows that the railroad tracks were already in place; at that time they were part of the Philadelphia, Wilmington, and Baltimore Railroad, which had opened in 1837 and was one of the oldest lines in North America. The road now known as College Avenue was also present, running approximately where it does today. At that time it was known as Depot Road, and it had recently been improved to carry traffic from the railroad station to the town (Barrett and Lopata 1983). Before the railroad came, a cart road known as "the road from Newark to Cooch's Bridge" had run along approximately the same route.

The Rea and Price map shows the old train depot, which at that time was west of Depot Road, immediately north of the project area. Other

buildings are also shown nearby. Southwest of the crossing is a "Female Seminary," or girls' school. Immediately south of the Seminary is a "Store." A short distance to the west is an unidentified structure, probably some kind of railroad service building. These three buildings are all very close to the project area and any of them could have been within it, given the imperfect accuracy of the map. East of Depot Road the map shows a farmhouse belonging to "Russel."

The Beers 1868 *Atlas of the State of Delaware* shows further development around the crossing (Figure 4). North of the railroad tracks are a "Grain Ho[use]," a "Store," and a house owned by J.W. Evans. The train depot is now southwest of the crossing, apparently just west of the project area. There are still two buildings east of the

depot, but they seem farther apart than the Female Seminary and Store buildings shown on the Rea and Price map; the access road to the railroad depot runs between them. These are probably the same buildings as the 1849 school and store, and the difference between the two maps may simply be a result of the mapmakers' styles. One of the buildings on the 1868 map (it is not clear which) is identified as belonging to "S.Y. Wilson."

By 1881, as the G.M. Hopkins & Co. *Map of New Castle County* (1881) shows (Figure 5), the southern structure had disappeared, but the northern building, the one closest to the crossing, was still present; from this map one can see it was this northern building that belonged to S.Y. Wilson. The train station had moved again, to the Victorian station built northeast of the crossing in 1877 (Barrett and Lopata 1983). The old depot is

identified as "R.R. Co." property. The farm southeast of the crossing is identified as Edward R. Wilson's, and is said to comprise 214 acres.

Around 1900, a new kind of map became available to researchers, the United States Geological Survey's very precise topographical sheets. These government maps are more accurate than any of the commercial maps; however, they do not identify buildings or property owners. The 1900 USGS Elkton Quadrangle shows two structures southwest of the intersection, probably the same two (S.Y. Wilson and R.R. Co.) shown on the 1881 Hopkins map. However, the 1953 USGS Newark West quadrangle shows that by that date both of the structures had disappeared.

2. Researching the Ownership History of the Property

A quick review of historical maps showed that several structures stood on the site of the new

Newark Commuter Rail Station at different times between 1849 and 1900, including a school, a house, and a store. The maps show nothing east of College Avenue except the Edward R. Wilson farm, which is still standing, well south of the proposed station. The next step in learning more about the history of the site was to research the ownership history of the property. The documents that record the changes of ownership are kept at the office of the New Castle County Recorder of Deeds in Wilmington. At the time of the archaeological survey, the property belonged to the Chrysler Corporation, which had acquired several properties in 1947 for the construction of its factory. One of those properties, in the far northeastern corner of their acquisitions, was 0.68 acre bought from the PB&W Railroad. This property had been bought by the railroad only the year before, but at that time it was said to include "1 acre 3 roods" of land, or about 1.02 acres. The missing one-third acre was probably used to add additional tracks to the railroad (there are now four tracks), and some of the structures that once stood at the crossing may therefore have stood where the tracks now run.

The "1 acre 3 roods" property can be traced back through several owners (see Appendix A for the full chain of title). In 1899, when the property was purchased by David and Mary Rose of Wilmington, it was said to include a "messuage or tenement," that is, a house that was leased to tenants. In 1899 the property sold for \$3001. In tracing the property back further, however, it was discovered that when the heirs of Samuel Y. Wilson sold the same 1-acre 3-rood parcel at auction in 1881 it fetched \$14,000. The great decline in price presumably means that the house on the property had greatly decayed, or perhaps had burned down or been otherwise destroyed and replaced with a less valuable structure. The nature of the earlier structure was revealed by a

deed of 1865, when Samuel Y. Wilson purchased the property from some Wilmington-based speculators. The deed describes “that certain lot piece or parcel of land with a large three story brick house thereon erected.”

This brick house, and the 1-acre 3-rood tract on which it stood, was traced back through two more owners to James S. Martin. Martin was a Philadelphian who had moved to Newark in 1840, buying up several large farms in the vicinity. The 1849 Rea and Price map (see Figure 3) shows his main residence a mile north of the project area. It was there that he built Deer Park, a grand house that became an important local landmark and stood until the 1970s. Martin was an important enough person to merit mention in local histories of Newark, and one of these histories states that he built a large brick house, known as Linden Hall, to house a female seminary run by the Reverend Samuel Bell and Mrs. Pierce Chamberlain (Barrett and Lopata 1983). It was Martin who improved Depot Road, presumably with an eye toward developing his adjacent properties. Martin also built the Deer Park Hotel, still a Newark landmark.

Despite the impressive figure he cut during his lifetime, Martin died broke in 1862. His properties were sold off piecemeal to pay his many debts, and his heirs seem to have ended up with next to nothing. The “1 acre 3 roods” property was created at this time and purchased by one of Martin’s creditors. It seems likely that the Female Seminary, which is not shown in the 1868 Beers Atlas, had been forced to seek new quarters by that time. A separate two-acre property just south of the Linden Hall tract was also carved out of Martin’s estate and put up for auction; none of the deeds for this tract mention buildings that may have stood on it, but two acres is too small a property to be used for farming, and this lot was presumably the site of the “store” of 1849 and the unidentified building of 1868.

Prior to Martin’s ownership, the history of the Newark Station property is not completely clear.

Martin purchased many different parcels during the 1840s and 1850s, and the boundaries of those parcels are mostly described in terms of long-vanished trees and boundary stones, making it difficult to locate them precisely. The Newark Station tract was probably part of the 264-acre farm that Martin bought from Henry Whitely when he first moved to Newark in 1840. However, Martin also purchased two acres “near the depot” in 1841 from Alexander Coulten, and all or some of this property may have become part of the two tracts at the station. Either way, the station property was once part of the very large estate (more than 1,000 acres) that Andrew Fisher left when he died in 1805. Fisher’s main residence was southwest of the project area, on the upper Christina River, where he owned a gristmill; this property is shown as still belonging to “A. Fisher” on the 1849 Rea and Price map (see Figure 3). Nowhere in the Orphan’s Court case file for Fisher’s estate, compiled between 1805 and 1811, or in any of the other deeds down to the 1840s, is there any mention of a house on the road from Newark to Cooch’s Bridge. It seems likely, based on the historical research, that the Newark Station property was first occupied after the railroad was built, and that “Linden Hall” was the first house built in the project area. However, none of the deeds mentions the “store” clearly shown on the 1849 map, so a house that escaped the attention of deed writers cannot be ruled out.

3. The Newark Female Seminary

The Female Seminary shown on the 1849 map was immediately intriguing, and the discovery that it was built by James Martin and run by Reverend Samuel Bell and Mrs. Pierce Chamberlain provided a way to begin learning about its history. One thing that quickly became clear about the school was that it existed before the brick house called “Linden Hall” was built, which must have been in the 1840s, and continued to exist after the brick house was sold to pay James Martin’s debts in 1862. The period during which the school was run in Linden Hall was therefore only part of the building’s history.

The Reverend Samuel Bell was a Presbyterian minister who first appears in the Delaware records in 1808. At that time he became minister of both the Pencader Presbyterian Church and the St. Georges Presbyterian Church, and he held both offices until 1833 (Scharf 1888:944). He probably preached alternately in the two locations. Bell was very interested in education; he was the assistant treasurer and one of the trustees of Delaware College, the future University of Delaware, when that institution was created in 1834. At that time he was already operating his Female Seminary, probably somewhere in Newark. The exact date of the Seminary's

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founding is not known, but the 1830 U.S. Census indicates that Bell's household included 21 females aged 10 to 15 and one aged 16 to 20, so the Seminary was certainly in existence by 1830. (The 1820 census shows only Bell's own family.)

Bell has the distinction of having his own "affair," the "Samuel Bell affair," recorded in the history of the university. On Sunday, August 21, 1835, the regular faculty were all absent from the college, and Reverend Bell, having been asked to take charge, called an evening prayer service. For some reason, however, the 42 mostly teenaged students resented either him or the service. "Cat calls and derisive cries broke up the prayer meeting," and Bell was "assaulted" on his way home, "probably with a shower of sticks and stones and epithets" (Munroe 1986:62). Six students were suspended for their part in the affair, and three others immediately left the school in sympathy. Many members of the school's board of trustees objected strongly to the suspensions (some children of trustees were among those suspended), which led to a lengthy dispute and a redefinition of the powers of the faculty. The records do not explain why the students reacted with so much hostility, but John

Munroe (1986:63) suggests that perhaps they resented the restrictions Bell placed on socializing by the female students under his charge.

We can form some idea of the curriculum of the Newark Female Seminary under Bell's leadership from two interesting documents. The first is an account of the sale of Bell's personal property in 1854, which lists many of his books and gives some idea of his intellectual interests (New Castle County Records, Probate Records, File for Samuel Bell [New Castle County Probate] 1854). As one might expect, most of the named books are Bibles and Protestant religious works, including John Calvin's *Institutes of the Christian Religion*, Foxe's *Book of Martyrs*, Scott's *Commentaries* in four volumes, and collections of sermons by Samuel Wetherspoon, John Rogers, and several others. Bell also owned a *Bible Atlas* and a book of *Views of the Holy Land*, as well as *The Young Christian*. Basic textbooks on hand included readers and *The Young Scholar's Companion*, as well as an encyclopedia, Samuel Johnson's *Dictionary*, and texts in Greek, French, and Spanish. The Reverend Bell owned a copy of *Geography for Young Ladies* and an extensive collection of maps covering the entire world. Other sale items included a Bell's *Anatomy*, an *Atlas of the Heavens*, a "lot of books on botany," numerous unnamed "novels," and a set of *Harper's* magazine (New Castle County Probate 1854). The good Reverend owned a collection of Montaigne's *Essays*, but one may doubt whether the young ladies were allowed to read the works of that skeptical, Roman Catholic, and sexually frank writer.

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The second source on the Newark Female Seminary is a group of three letters written by Ann George when she was a student at the school

in 1838. The letters were published by Mary McCurdy (1976) in *Delaware History*. They were addressed to Ann's uncle, Joseph Lewis of Frederica, Delaware, who was acting as her guardian. At that time Ann was 18 years old. The letters are formal in tone and concerned only with education and family life. One imagines Ann's uncle as a stern and proper Victorian, not the sort of relative with whom a girl would share personal details. The first letter, dated February 1, 1838, begins:

My Dear Uncle,

I received your kind and acceptable letter of the 10th, and was much pleased to hear you were all enjoying good health. You wished me to inform you if I wished to return home in the Spring, this is my desire, and as to remaining at school any longer I will leave that to your superior judgment to decide. I hope my improvement at the end of this year will be creditable to myself and my teachers, and meet your approbation, and should it be agreeable, I should like to continue at school until next fall.

I have commenced the study of Natural Philosophy with which I am very much pleased. Our class in grammar is parsing blank verse, and correcting false syntax, and will in a few days commence parsing the Thompson Seasons. In Geography I have progressed as far as Europe, and am concluding the First Book in History. I attend daily to Reading Writing Arithmetic and Composition and Orthography. In Geography of the Heavens we have studied all the constellations that are visible at this season of the year, and are now reviewing them. It is delightful to go out in the evening, and trace out different constellations.

After commenting on her own good health and asking after various relatives, Ann described her Sunday routine. She was reading the Bible through from the beginning and had reached the Book of Joshua, but had not been to chapel for several weeks. The preachers had been ill, she explained, and the roads bad, so she felt she could

use her time better at home. Still, she had a Bible lesson in the morning, followed by a recitation. "After dinner," she continued, "we read good books taken from the school library until evening at candle light."

The letter mentions that Ann's brother was in good health; he may have been a student at Delaware College nearby. The second letter, dated May 19, 1838, informs us that Ann's sister Mary, who was 10 years old, had joined her at the Seminary:

Mary is very well and very much pleased with her school mates and teachers, and she and Caroline Warren are very intimate and love each other very much, the studies that occupy her attention from day to day are Reading Writing Arithmetic Grammar Geography History and Composition. I think that she has improved some since she came here for she looks more healthy.

Ann was looking forward to the summer term, when the school would have only 30 students, including both day students and boarders. Ann had commenced studying chemistry and botany, which she said she enjoyed; she found botany in particular to be "a very interesting and delightful study."

The third letter, written in November, is shorter than the others. Ann begins:

I received your kind and acceptable letter yesterday, and was very happy to hear that you arrived home safely, but was sorry to hear that you were all laboring under bad colds, but I hope, however, that you are restored to better health before this time.

Our winter term has commenced and we all like it much better than formerly as we have so much better order. We are all very much pleased with our new Teacher. My studies are the same as they were last session with the exception of Woodbridge's Geography and Rhetoric with which I am very much pleased.

She said that she and her sister Mary were both looking forward to spring, when they hoped to see their friends and relatives; probably she was intending a trip home over the spring break. She had had dresses made from fabric sent by her aunt, and she sent her thanks. She apologized for writing such a short letter, saying she was busy with her studies, and closed:

Please remember me very affectionately to Aunt Cousins and Brother. Your Affectionate

*Niece
Ann D. George*

As sources for life in the school, these letters are quite limited. They tell us that in the summer of 1838 the school had 30 students, including both boarders and day students, and that this was less than the usual number. The students ranged in age from 10 to 18, at least, since those were Mary and Ann George's ages. The letters give us a picture of the students learning the constellations under the night sky and taking to the fields to study plants, but otherwise they focus exclusively on the classroom and the chapel. It is interesting that Ann George found botany "a very interesting and delightful study," since she was writing when the great Victorian botany fad was just getting under way (Fortey 1998). Throughout the 1840s, 1850s, and 1860s, thousands of proper ladies in England, Germany, and North America, inspired by the great scientific expeditions of the era, took to the woods and fields with trowels to dig up specimens and with guide books to identify them by their proper Latin names. They surrounded

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their homes with gardens displaying prized plants from all over the world; plants too fragile for outdoor planting were brought indoors and often placed in a glass terrarium. Perhaps Ann George and her classmates were caught up in the same

great enthusiasm and practiced these same rituals. Together with Reverend Bell's books, Ann George's letters provide a good account of the school's academic curriculum, and what they tell us is quite interesting. They portray a wide-ranging program, from Greek to blank verse to chemistry. In the 1830s — indeed, throughout the whole of the nineteenth century — a great debate raged in America about what sort of education was proper for girls. Many educators and moralists thought girls should have only such instruction as would train them to be proper wives and mothers, and that this education should be above all moral and religious, emphasizing a woman's role as domestic helper and repository of virtue. Girls were told to "Make it part of your duty to please," and "Cultivate the habit of making others happy daily." As a woman, wrote one commentator, "you can't expect every day to do some great thing, but you can do a courtesy" (Ryan 1975:150). Enough reading to get through the Bible and enough writing to frame a simple letter were all the academic skills required, and girls spent most of their time learning how to care for babies, cook, sew, and run a household. Even some schools for children of wealthy families slighted academic subjects for girls in favor of "painting, embroidery, French, a song or two for company, playing the harpsichord, and the making of wax or shell ornaments" (Lutz 1964:11).

Another school of thought held that girls ought to get an education every bit as rigorous as that provided for boys, because only then could the girls properly fill their moral and maternal roles. The most prominent leader of this movement was Emma Willard, who took over the Middletown Female Seminary in New York in 1807 and taught her female students rhetoric, languages, history, geography, arithmetic, geometry, and philosophy, for which her texts included the works of John Locke and Seneca (Arnold 1984; Lutz 1964). In 1819 she published *A Plan for Improving Female Education*, which circulated widely and was praised by Thomas Jefferson and James Monroe. Her *Plan* advocated a course of study that included moral and religious training, some

domestic skills, and an academic program as rigorous as that at any American college of the day. She even wanted her students to have "philosophical apparatus" for performing scientific experiments. Reverend Bell and Mrs. Chamberlain clearly set up the Newark Female Seminary along the lines advocated by Willard. The course of study described by Ann George matches closely that of Willard's *Plan*, and even the name of the institution echoes Willard's own school. The Newark Female Seminary was therefore in the forefront of women's education at that time.

In the early 1840s Samuel Bell retired from running the Seminary. There is some confusion about who took his place. Handy and Vallandingham (1982) say that Bell "was succeeded by his son in law, Rev. Mr. Hood, who carried on the school in the building near the depot known as Linden Hall." Powell (1893) says that in 1843 the principal was Thomas Ball, A.M., while Cooch (1936) says that the Reverend Elijah Wilson became principal in 1845. Perhaps all of these sources are right, and both Hood and Ball simply had very short tenures, but it seems more likely that at least one of these accounts is in error. Ball and Hood seem to have left no traces in the records, and nothing could be learned about them.

Elijah Wilson's life was documented in much more detail, and a book of sermons he edited includes an introduction describing his life (Wilson 1855). According to that account, he was

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born in Philadelphia to Scottish immigrant parents and attended various schools in Pennsylvania and New York. He experienced a profound religious conversion in 1831 — according to his editor, he "received the baptism of the Holy Ghost" — and enrolled at Rutgers College in New Jersey to study for the ministry. There, in 1836, in the

college chapel, he was suddenly struck completely blind. After a period of deep despair, he resumed his studies at the Auburn Theological Seminary in New York, where other students read him his lessons. In 1842, after completing his schooling, he went to Delaware and became pastor of both the Head of Christiana and Newark Presbyterian churches. He also married Ann Gray, the daughter of a Newark family. In 1845 he became principal of the Newark Female Seminary. (This is the same date given by Cooch [1936] and may, in fact, be the source of Cooch's information.) However, his health declined, and his duties proved too much for him. He gave up his pulpits in 1846, and the next year he resigned from the Seminary. Worse was to come: in 1848 his wife died. He then returned to Pennsylvania, and after another long struggle with despair preached for a time in Wrightsville and then in Philadelphia, where he edited his book. By 1880 he was said to be residing in Ohio (McCarter and Jackson 1882:104).

Elijah Wilson's term as principal of the Newark Female Seminary was only a short episode in a life full of work and, as his editor put it, "severe trials." We can learn almost nothing from his life about the Seminary, although his editor does mention that in the school "about forty young ladies pursued a wide range of studies" (Wilson fruitful. We therefore know little about the school during the time it was actually located in Linden Hall on the Newark Station site. In particular, nothing could be discovered about the connection between the school and James Martin, who owned the property where Linden Hall stood and is said to have built the house. Martin's will does not survive, and no family papers could be found, so his interest in the education of young women and his connection to Samuel Bell both remain unknown.

Although no direct evidence was found, it seems likely that the Newark Female Seminary of the 1830s and 1840s was the same school as the Newark Female Seminary that reappeared in 1873 with Hannah Chamberlain as its principal. According to one source, her school had met for

a while in the Deer Park Hotel, another Newark building associated with James Martin (Cooch 1936). Miss Chamberlain was also the daughter of the Mrs. Pierce Chamberlain who had been associated with Samuel Bell in establishing the school. Hannah Chamberlain was an important advocate of education for women in Delaware, and her school enters the records in 1873 because it was merged with Delaware's oldest and most prestigious boys' school, the Newark Academy. Miss Chamberlain became principal of the combined school. The Newark Academy was closely associated with Delaware College, and the merging of the two secondary schools was part of an experiment in coeducation at the college. From 1873 to 1887 women could attend Delaware College; they resided at the Academy, where Hannah Chamberlain served as their chaperone. Although Delaware College stopped admitting

women in 1887, it seems that the Newark Female Seminary was never reestablished, and the best female students went on to newer schools in Wilmington. Because of its pioneering role in providing academic instruction to the young women of Delaware, however, the Newark Female Seminary deserves to be remembered.

C. THE ARCHAEOLOGICAL SURVEY

1. Project Setting

The Newark Light Rail Station is located adjacent to the overpass that carries South College Avenue over the Amtrak Northeast Corridor electrified tracks, on the southern side of the tracks. The project area is west of South College Avenue, and at the time of the survey it consisted of a small triangle of wasteland and a paved access road and

parking lots for the Chrysler Corporation parts plant. It was bounded by the access road on the southwest, the railroad tracks on the north, and College Avenue on the east (Figure 6). The archaeological survey focused on the wasteland. The land on the eastern side of College Avenue is part of the University of Delaware experimental farm.

College Avenue is now carried over the railroad tracks by an overpass, but at the time of the survey the older, ground-level road was still in existence, just west of the overpass. The road grade lay about three feet below the ground surface on both sides, perhaps to carry it down to the level of the railroad tracks. The area between old College Avenue and the overpass had been built up by filling to a height of more than six feet above the old road and appeared badly disturbed; it was not tested during this project. The western end of the project area was buried beneath numerous dump-truck loads of gravel, asphalt, and other road-construction debris. The only accessible portion of the project area was the wasteland in the center. This area was overgrown with trees, most of them small but including one large hemlock, and had a ground cover of English ivy.

No previous archaeological surveys had been carried out in the immediate vicinity of the project area. However, several historic buildings in the area have been identified, including the Newark Rail Depot, a National Register of Historic Places property located on the northern side of the train tracks just east of College Avenue, and N-5808, the Edward R. Wilson House, a farmhouse dating to the mid-nineteenth century. Several historic houses in Newark have also been identified in the state files.

2. *Methods*

The archaeological fieldwork was performed in August 1995 (Bedell 1995a). Because of the project area's history and the buildings that we know stood nearby, the whole area was at first considered to have potential to contain

archaeological remains. Much of the project area had been disturbed, however, and only a small part was eventually tested. Archaeological testing under the piles of gravel and asphalt would have been very difficult, and, because of concerns about chemical contamination, we did not try. There was little hope for archaeological remains under the parking lots or in the disturbed area adjacent to College Avenue. Even within the small central area, a portion had been disturbed by the installation of a gas main and a small substation. The area available for testing measured about one-quarter of an acre (1,100 square meters). The Light Rail Station may eventually impact approximately six acres, so only a small portion was actually surveyed.

The accessible part of the project area was surveyed using shovel tests, which are small, round holes dug with a shovel. The holes were placed at intervals of 33 feet (10 meters) (see Figure 6). A total of 11 shovel tests were excavated. The same protocol was used for shovel testing in all three of the projects discussed in this report, as follows: The holes measured about 18 inches (50 centimeters) in diameter and were excavated at least 4 inches (10 centimeters) into sterile subsoil. The excavated soil was screened through ¼-inch hardware cloth to recover any artifacts. Schematic soil profiles, including soil texture and Munsell soil color notation, were recorded for each shovel test on a standardized form. Each shovel test was backfilled upon completion.

3. *Findings*

One archaeological site, consisting of historic structural remains and a surrounding artifact scatter, was located during the testing. This site was designated Site 7NC-D-196, the Newark Light Rail Station Site.

The shovel testing showed that there had been considerable disturbance even within the accessible portion of the site. In some places the topsoil had been almost entirely graded away, probably with a bulldozer, leaving only a very

thin humus over sterile subsoil. In other places, a topsoil up to eight inches deep was present, but it was found to contain very recent artifacts, such as aluminum pull tabs (invented in 1965). Only four of the 11 shovel tests encountered soils that appeared to be reasonably undisturbed.

Numerous artifacts, including architectural items, such as brick and nails, and domestic items, such as potsherds, were found across the entire site. Brick rubble was recovered from 10 shovel tests (all but Shovel Test 1), and a scatter of brick rubble was visible on the surface around Shovel Tests 8 and 10. Shovel Test 8 encountered what appeared to be an intact brick feature, most likely a foundation. The bricks appeared to be nineteenth-century in date, and most of the mortar was moderately hard lime mortar; some very hard Portland cement (post-1890) was also encountered. There was no sign of a cellar hole. Large numbers of nails were also found, both cut and wire. Forty-four cut nails were recovered from Shovel Test 6, suggesting that a wooden structure, possibly a porch or shed, had been located in this vicinity. More than 40 pieces of window glass were recovered from Shovel Test 10.

The domestic artifacts recovered from the site, which were far outnumbered by the architectural remains, consisted mostly of ceramics and glass. The ceramics included two sherds of pearlware dated between 1775 and 1840; several sherds of whiteware, a type of ceramic introduced around 1815 and still in use; and porcelain decorated with "decals," a technique introduced in 1897. The glass included fragments of glass lamp chimneys, bottle glass, and milkglass. The only shovel tests that yielded more than three domestic objects were Shovel Tests 10 and 11. Shovel Test 10 yielded more than 40 pieces of bottle glass, 14 pieces of lamp chimney glass, a sherd of ironstone (post-1840), a sherd of redware, and a small piece of bone. Shovel Test 11 yielded six pieces of whiteware, a sherd of decal-decorated porcelain, an aluminum pull tab, and six sherds of bottle glass. The assemblage, although rather limited, seemed to date primarily to the second half of the

nineteenth century, which matches the dates suggested by the map evidence.

D. CONCLUSIONS AND RECOMMENDATIONS

The Newark Light Rail Station Site included the remains of a structure with brick foundations and a surrounding scatter of historic artifacts. The site occupied the entire tested area, and at one time probably extended beyond it to the north and west. The site was most likely the remains of the brick house known as Linden Hall. Linden Hall was apparently built as a school, but it later served as a private residence. It is also possible that the site was the remains of the "store" shown on the 1849 and 1868 maps, but this structure was apparently gone by 1881, and the archaeological evidence suggests that the site was occupied into the twentieth century. The large amount of brick in the soil also suggested that a brick building had once stood on the site or nearby. If the Newark Light Rail Station Site was the location of Linden Hall, the combination of documentary and archaeological evidence can be used to date it rather precisely. Linden Hall was built in the 1840s. The house is shown on the 1900 USGS map, and the English ivy still growing on the site indicates landscaping in the not-too-distant past. The 1953 USGS map shows that the structure was gone by that time. The available information suggests a date range of about 1845 to 1930.

At the time of the evaluation the landscape showed no evidence of use related to education or nineteenth-century domestic life.

Although Linden Hall has a fascinating history, including its association with the Newark Female Seminary, the project area did not contain any clear physical evidence of that history. At the time of the evaluation it was evident that the landscape had been used for industrial and transportation purposes and then abandoned; the landscape showed no evidence of use related to

education or nineteenth-century domestic life. Without strong associations with its earlier history, the site does not meet the criteria for listing in the National Register of Historic Places. It cannot inform us about life in the nineteenth century (Criterion D), and its connection with the history of women's education in Delaware (Criteria A and B) has dissipated amid parking lots and piles of asphalt.

The historical information most likely to be provided by further study of a site like Linden Hall would relate to domestic life in the nineteenth century. Since the structure served both as a school and as a private residence, it might provide information about both school and home life. In all likelihood, nothing could be learned from excavation of the site about the intellectual side of schooling; any discoveries would almost certainly pertain to the physical world of the school. Information could conceivably be obtained from school sites about the diet of the students, their clothing, and, through their dishes and other furnishings, the overall aesthetic tone of school life. The archaeological study of domestic households, such as those of the people who lived at Linden Hall after 1862, is guided in Delaware by historic contexts prepared by the Delaware State Historic Preservation Office. De Cunzo and Garcia's *Historic Context: The Archaeology of Agriculture and Rural Life, New Castle and Kent Counties, Delaware, 1830-1940* (1992) is particularly important. The themes discussed by De Cunzo and Garcia that seem most applicable to the Newark Light Rail Station Site are Domestic Economy and Material Culture Studies. Domestic Economy embraces both the production of goods within the household and the consumption of goods. Material Culture Studies is a general term to describe research that uses objects to study the values and behavior of a society, including, for example, the use of furnishings to explore the Victorian cult of domesticity.

The Newark Light Rail Station Site has been too greatly disturbed to contribute to our knowledge in any of these areas. The site's complex history

would probably have produced a complicated archaeological record. It would probably have proved difficult even under the best of circumstances to identify deposits that derived exclusively from the Newark Female Seminary or to distinguish objects used by the students from those used by later residents. The later residents included several different households, some of them owners and some of them tenants. Since the price of the property declined so precipitously between 1865 and 1900, the residents were probably of differing social classes. Even if intact deposits could be identified on the site, it would be very difficult to interpret them. Furthermore, the physical state of the site makes it unlikely that such deposits exist. The current railroad corridor, which includes four tracks and an access road along its southern side, is undoubtedly much wider than the original corridor. Because the nineteenth-century train station is still standing on the northern side of the tracks, the corridor was probably widened toward the south. In addition, a major gas line runs across the project area just south of the railroad corridor. The widening of the tracks and the construction of the gas line undoubtedly destroyed the northern portion of the Linden Hall property and may even have removed part of the house foundations. The Chrysler Corporation parking lots and access roads to the south and the large spoil heaps to the west left only a small part of the project area available for archaeological investigations.

It seems that at least part of Linden Hall stood in that accessible one-quarter acre of waste ground, and that the Newark Light Rail Station archaeological site is part of its remains. While a piece of the structure's foundations may be intact, there was evidence of major disturbances close by. Some shovel tests encountered soils that had been truncated by bulldozing, probably at the time the house was demolished. As a source of information about the past, therefore, the Newark Light Rail Station Site has been severely damaged by construction and earth-moving activities.

The possibility has also been considered that the site might be significant because of its association

with the history of women's education in Delaware, and with two somewhat important figures in women's education, Samuel Bell and Hannah Chamberlain (National Register Criteria A and B). Again, the site simply lacks the required integrity. Linden Hall is completely gone, and instead of the landscaped one-acre lot that probably once stood around it, the archaeologists found a small patch of weedy woodland surrounded by the electrified railroad tracks, a concrete bridge, piles of asphalt, and parking lots. Also, the association of the site with Samuel Bell and Hannah Chamberlain, and their efforts on behalf of women's education, is quite tangential. Samuel Bell founded the Newark Female Seminary and headed it before it was located at Linden Hall, and Hannah Chamberlain was principal of the Seminary after it had moved from Linden Hall, but neither is known to have had a direct association with the Linden Hall structure. Hannah Chamberlain's school may have met for a time in the Deer Park Hotel, a structure that is still standing in Newark. Because of its lack of integrity, and because its association with the progress of women's education in Delaware is not strong, the Newark Light Rail

Station Site is also not considered significant for its historical associations.

During the background research portion of the project, no evidence was found to suggest occupation in the portion of the proposed station east of College Avenue. That area appears to have been part of the Russell/Wilson farm throughout the nineteenth century, and the buildings of that farm are still standing south of the project area. The area does not, therefore, have high potential for historic archaeological resources. Environmental variables that would indicate high potential for prehistoric archaeological resources, such as proximity to wetlands (Custer 1994), are also not present. Even if construction does eventually take place east of College Avenue, archaeological testing in this area is not recommended.

No further archaeological work is recommended in the Newark Light Rail Station project area. Some consideration might be given to placing a plaque at the station to inform train riders that Linden Hall and the Newark Female Seminary were once located on the spot.