

RESULTS OF PHASE I AND II ARCHAEOLOGICAL INVESTIGATIONS

The right-of-way for two associated construction projects determined the Route 896 Transmission Pipeline project area. The DelDOT construction right-of-way for the widening of Route 896 was located 30 feet from the edge of the road on either side, and the ESNG right-of-way for the placement of a pipeline trench was located 40 feet beyond the edge of the DelDOT right-of-way. Part of the ESNG construction included three pipeline cross-over casing areas measuring 20 feet east/west by 40 feet north/south from the edge of the DelDOT right-of-way, or the edge of the road if no DelDOT construction was to be done, on both sides of Route 896. In order to facilitate the completion of field investigations and to aid in the discussion of results, the entire project area was arbitrarily divided into six segments (Figure 14). Segments 1, 2, and 3 are located on the west side of Route 896, and Segments 4, 5 and 6 are situated on the east side. Segment 1 includes Casing 1 at its southern end, Casing 2 was located within Segment 3, and Segment 6 contains Casing 3. The results of the Phase I and II archaeological investigations in each of these segments will be presented below, and will include a discussion of the background research for each particular segment, the testing conducted, whether any sites or other cultural resources were identified, and the recommendations concerning those sites and/or cultural resources.

Segment 1

Segment 1 is the southern-most portion of the Route 896 Transmission Pipeline project area and includes Casing 1 at its southern limit (Figure 14). Archaeological testing of Segment 1 included pedestrian survey and shovel test pit excavation within the DelDOT and ESNG right-of-way. Surface collection recovered a limited amount of artifacts including bottle glass and whiteware ceramic fragments. Fifty-six shovel test pits were excavated in two parallel rows (Figure 15), and a simple stratigraphy of plow zone and subsoil was revealed. The plow zone consisted of a medium brown silty loam and extended to a depth of approximately 1.0 foot below ground surface. Below the plow zone was yellow-brown sandy silt subsoil. A total of 50 artifacts were recovered from the shovel test pits in Segment 1. Artifact types included brick, pearlware, redware and whiteware ceramic fragments, and bottle glass (Appendix I). The distribution of artifacts, as seen in Figure 15, does not reveal any areas of concentrated material. Kellogg (1993a) did not predict any potential historical or prehistoric sites in this portion of the project area. Based on the limited number of artifacts recovered, their apparent recent origins and pattern of distribution, and the absence of any subsurface cultural remains no further archaeological work is recommended in this area.

Casing 1 was located at the southern limit of Segment 1 (Figures 14 and 15). Eight shovel test pits were excavated on the west side of Route 896, but only two contained any cultural material (six machine-made bottle glass fragments). Nine shovel test pits were excavated on the east side of Route 896 and 21 artifacts were recovered including modern bottle glass, brick, two creamware fragments and one fragment of whiteware. Figure 15 shows the placement of shovel test pits within Casing 1 and artifact distribution. Soil levels on both sides of the road were similar to those recorded for shovel test pits in Segment 1. Subsurface testing of Casing 1 did not reveal any significant cultural remains; artifacts recovered from this area were found in the disturbed plow zone, mixed with twentieth century road trash. No further archaeological work is recommended for Segment 1 or Casing 1.

TABLE 3

Andrew Eliason Site (7NC-F-69), Summary of Land Ownership

| Date | Grantor/Grantee | Acres | Reference | Cost |
|-------------------|------------------------------------------------|-----------------------------------------------------------------|-------------|---------|
| 1775 | Archibald Douglass from John Thompson, sheriff | 2 parcels: 166 acres, 76 perches and 28 acres, 93 perches | B-2-612 | £5, 14s |
| September 9, 1794 | Archibald Douglass from William Weir and wife | 11 acres, 24 perches | O-2-135 | |
| 1801 | Sarah Douglass from Archibald Douglass | 230 acres | B-5-179 | \$1,120 |
| 1825 | James J. Eliason from Sarah Douglass | one-half part of all three parcels | B-5-179 | |
| 1825 | John D. Eliason from Sarah Douglass | one-half part of all three parcels | B-5-179 | |
| May 6, 1837 | Andrew Eliason from John D. Eliason | one-half part of all three parcels | B-5-179 | |
| October 17, 1838 | Andrew Eliason from James J. Eliason | one-half part of all three parcels | B-5-178-182 | |

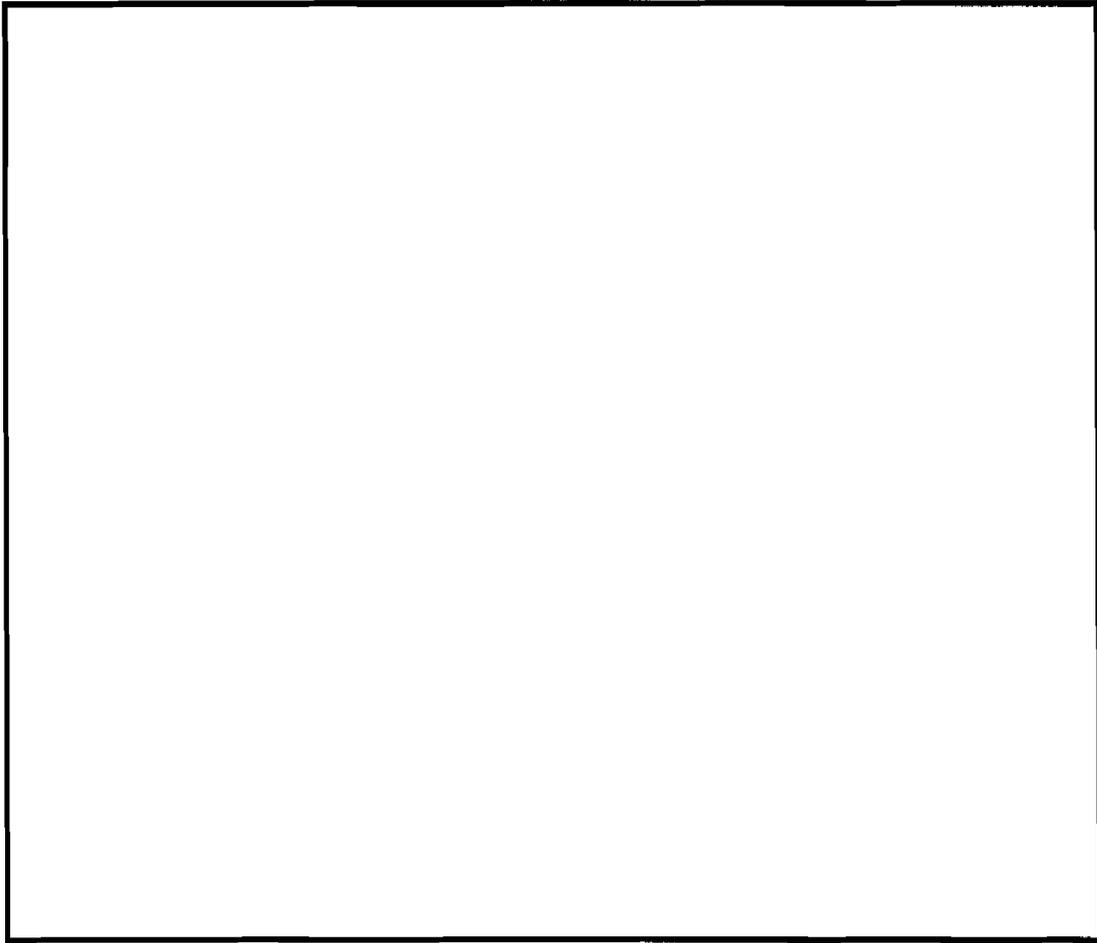
Segment 2: Andrew Eliason Site (7NC-F-69)

Segment 2 of the Route 896 Transmission Pipeline project area is located on the west side of the road, south of the Summit Airport, within Pencader Hundred, and is defined by the limits of the Andrew Eliason Site (7NC-F-69; Figure 14). This site was initially identified by Kellogg (1993a) as a potential historical archaeological site (Figure 7; Table 2). State archival records and Scharf (1888) provided information about land ownership and a summary of deed transactions for this property is presented in Table 3. Phase I and II archaeological testing revealed the remains of an occupation dating to approximately 1838. Segment 2 is located within a low probability zone for the location of a prehistoric site (Kellogg 1993a).

The earliest documentary records of this 194-acre property indicated that it was part of a larger tract originally purchased by Archibald Douglass in a 1775 sheriff sale to pay the debts and damages of Benjamin Lockerman. The low value of the property (five pounds and fourteen shillings) suggests that no existing structures were located on the property in 1775. Douglass added to his holdings in 1794 by purchasing 11 acres of adjoining property from William and Elizabeth Weir of Red Lion Hundred.

The property at the time of Archibald Douglass' death in 1801 totaled 230 acres and consisted of two log dwellings, one log barn and stable, a small granary, and two other old, log buildings. The property included an orchard of 28 apple trees and 50 peach trees (New Castle County Orphans Court Records). The land was inherited by his widow, Ann, and a daughter, Sarah. Ann married Samuel McGregor in 1802 and it is his name that is depicted on the Latrobe survey map of 1803 (Figure 12). A court ordered assessment in 1809 stated that all buildings, except for one of the old, log buildings, were extant but in very bad repair and the orchard was diseased. Sarah Douglass married William Eliason in 1811 and became step-mother to Andrew Eliason. Sarah died intestate in 1825 leaving her father's estate to her natural born sons, James and John Eliason.

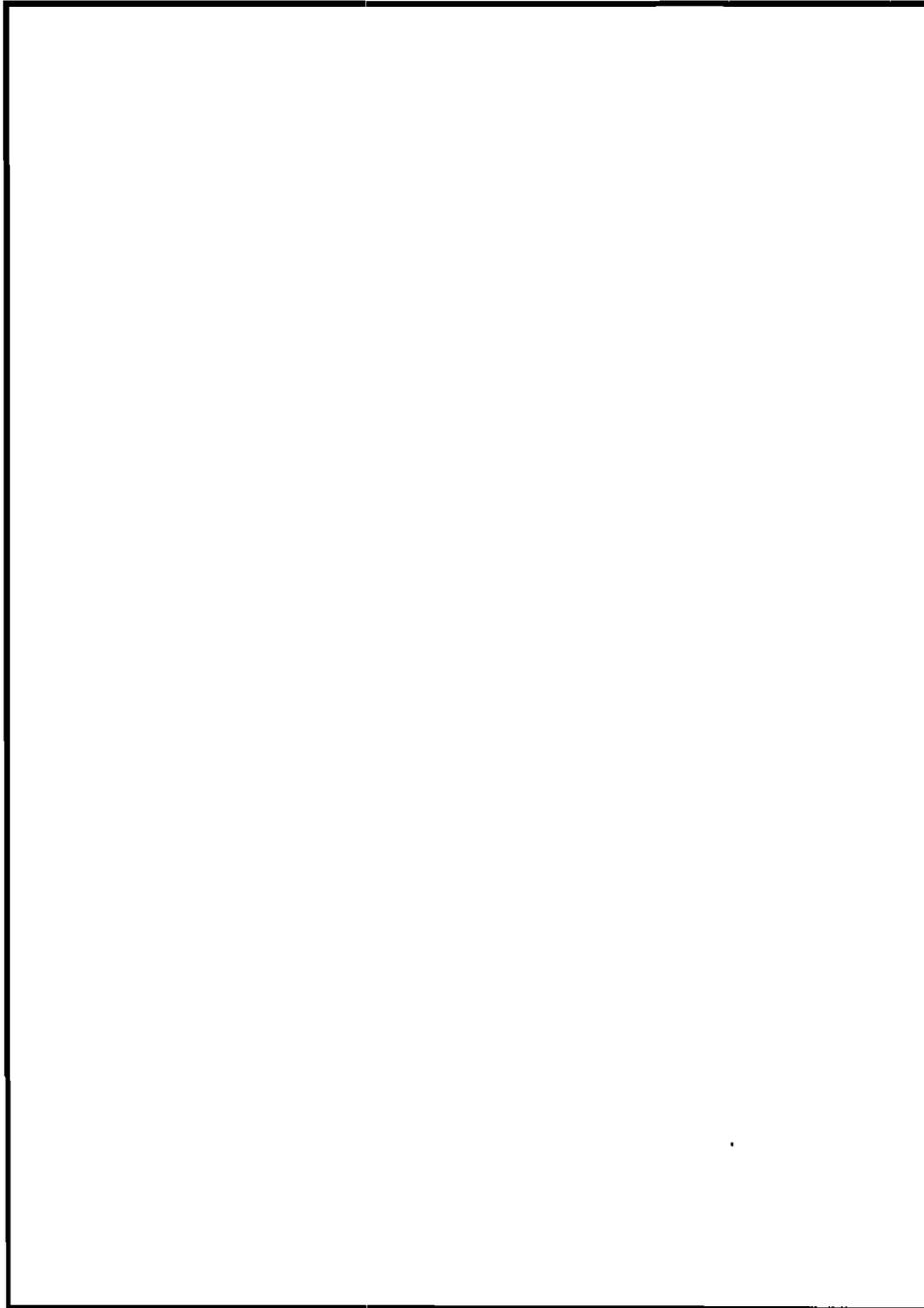
PLATE 2
Andrew Eliason's "Hermetage" (N-413)
as it Appears Today



Andrew Eliason purchased the land inherited by his step-brothers, James and John, in 1837 and 1838 and moved his family into the log dwellings once owned by Archibald Douglass. Eliason prospered as a farmer and a peach grower during the 1840s and 1850s and by 1856, he constructed a three-story, brick mansion across the road (present day Route 896) from his old dwelling (Scharf 1888:984).

Andrew Eliason was an important member of the New Castle County community. He was elected to the House of Representatives of the State of Delaware in 1864, 1866, and 1880. Eliason influenced legislature in Delaware through the introduction of the first bill securing property rights to married women, and the passage of a law prohibiting the sale of intoxicating liquors on election day (Scharf 1888:985). Eliason was a member of the board of trustees of the Forest Presbyterian Church of Middletown since its organization in 1850 and was elected a trustee of the old Forest Church in 1840. Eliason's importance in the community may also be measured by his position of director of the People's National Bank of Middletown. Further descriptions of his character and achievements have been documented by Scharf (1888) and are discussed in the Determination of Eligibility form for the National Register of Historic Places (Appendix III).

PLATE 3
Welsh Tract Historical Marker



Eliason's old log house was still standing in 1868 as depicted on Beers' Atlas (Figure 5). Hopkins' 1881 map also shows a structure in the same location, and Eliason's brick mansion is depicted as well and is referred to as "the Hermetage" (Figure 13 - CRS# N-413). Plate 2 shows the Hermetage as it appears today. The log dwelling was tenant-occupied until approximately 1893; a structure was no longer present within the site area as indicated by the 1893 Baist Atlas of Delaware or the Wilmington quadrangle map of 1906. However, a 1937 aerial photograph of the Summit Bridge area indicated that the orchard was still in existence and the yard area surrounding the domestic site was still intact (Plate 1). By 1954, the yard area had been plowed over and the orchard had fewer trees. A 1962 aerial photograph showed the site area as it exists today - completely obscured by agricultural activities.

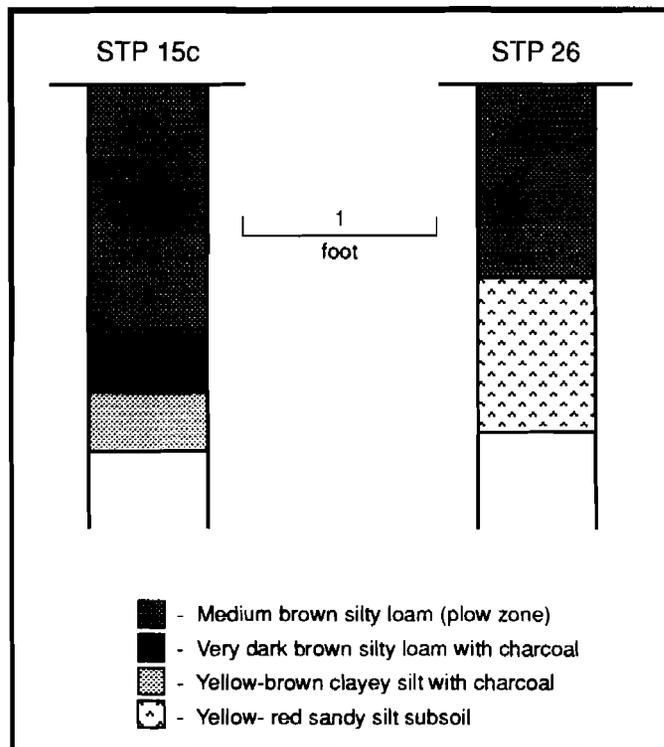
Phase I testing consisted of a pedestrian survey of the plowed field at what was thought to be the location of the Andrew Eliason Site based on background research and its position in relation to the Hermetage, a standing structure documented by the maps mentioned above and its record with the DESHPO (N-413; Figure 7, Table 2). An area of high surface artifact density was identified and a row of 19 shovel test pits was excavated at 20 foot intervals within the ESNG pipeline right-of-way (Figure 16). Artifact distributions from the Phase I testing of the Eliason Site revealed two activity areas, one domestic and one agricultural.

Shovel test pits in the area of high surface artifact density revealed a simple plow zone/subsoil stratigraphy as shown in Shovel Test Pit 26 (Figure 16). A historical marker for the southern limit of Welsh Tract described in Catts, Hodny, and Custer (1989a) was present at the site location (Plate 3) and Shovel Test Pit 23 was placed immediately adjacent to it, but did not identify any subsurface remains of a physical boundary predating the sign. Early nineteenth century artifacts recovered from the 210- by 100-foot high artifact density area (Figure 16) included large amounts of glass, brick fragments, whiteware, redware, porcelain, pearlware, and iron nails. A total of all artifacts recovered from the Andrew Eliason Site is presented in Appendix I.

Shovel test pits 15, 15B, 15C, and 16 revealed an area of unique stratigraphy of a medium brown silty loam plow zone that extended from 1.1 to 1.6 feet ground below surface, a level of very dark brown silty loam containing charcoal that measured 0.4 feet below the plow zone, and an underlying yellow-brown clayey silt subsoil (Figures 16 and 17). Random auger tests determined that the extent of the very dark brown soil was limited to a 70- x 75-foot area located 120 feet north of the area of high artifact density (Figure 16). This deposit is thought to be the remains of the orchard described in the Orphans Court Records and the 1809 assessment of the property, as suggested by its location in respect to the remainder of the site area, the Hermetage, and its location in the 1937 (Plate 1), 1954, and 1962 aerial photographs.

The orchard area contained fewer artifacts than the remainder of the site area, however, this is logical considering the use of this portion of the site for agricultural purposes. Artifacts recovered from the orchard area include brick, iron fragments, glass, and whiteware sherds that are typical of field scatter. Based on the results of Phase I testing further work was necessary to determine site limits, locate any intact subsurface features or architectural remains, and to determine the site's eligibility for inclusion on the National Register of Historic Places.

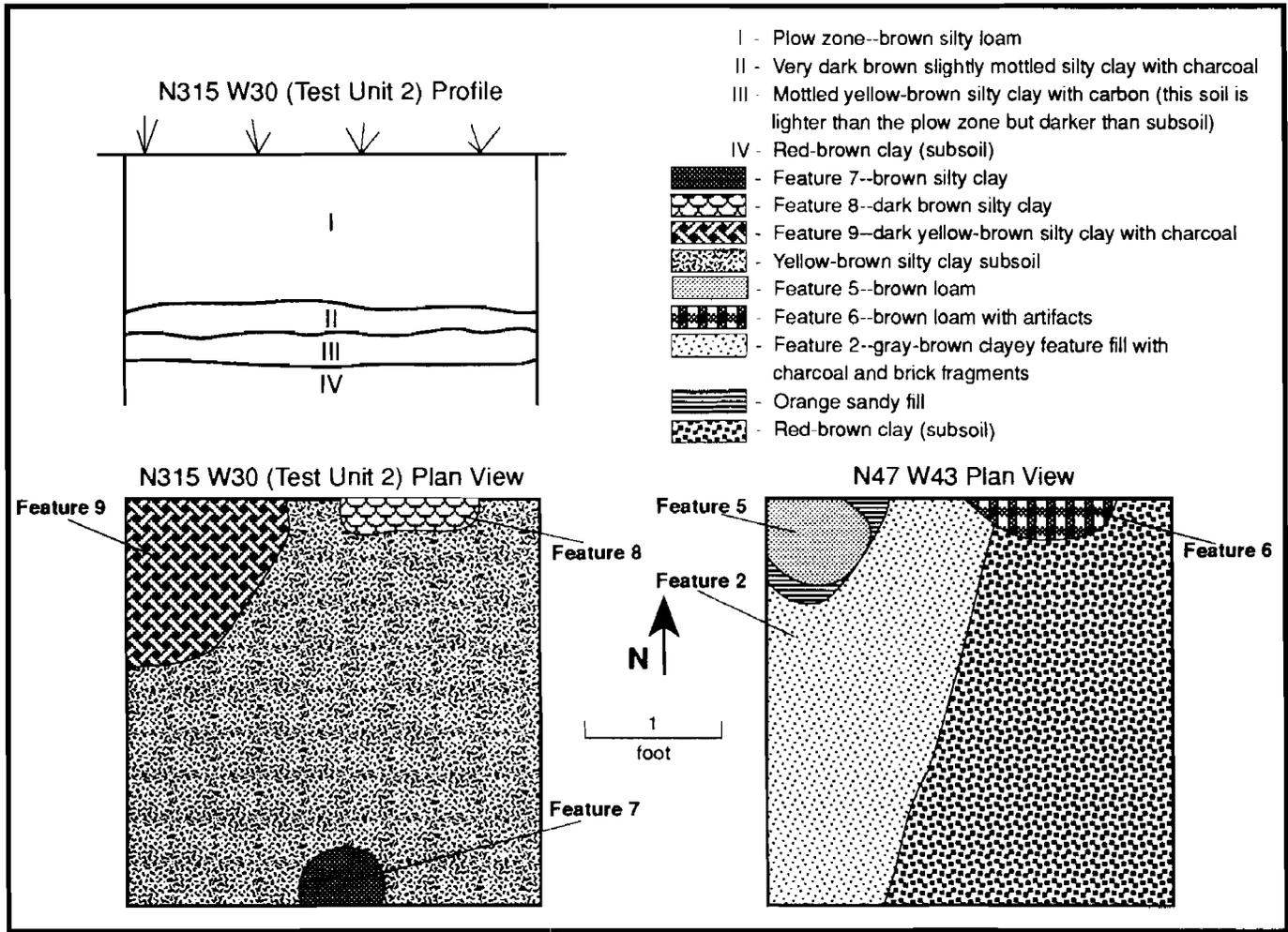
FIGURE 17
 Andrew Eliason Site (7NC-F-69), Profiles
 of Shovel Test Pits 15c and 26



Phase II testing consisted of the excavation of 66 shovel test pits and 39 test units laid out in a grid over the site area. Five test units were excavated in the northern portion of the site in the expected location of the orchard based on archival research and aerial photo interpretation (Figure 16). Test units N335 W30, N315 W30, N335 W55, N330 W45, and N320 W20 were excavated in natural levels. Level 1 consisted of the plow zone, a medium brown silty loam that extended 1.6 feet below ground surface. Level 2 consisted of a very dark brown silty loam with charcoal that was approximately 0.2 feet deep, and Level 3 consisted of yellow brown silty loam flecked with charcoal the extended from 1.4 to 1.8 feet below ground surface and may represent a buried plow zone (Figures 16 and 18). Excavation of the test units by level allowed for differentiation by level of the artifacts recovered; all of the artifacts were recovered from the modern plow zone (Level 1). Artifacts recovered from these five units included five fragments of whiteware and redware, two window glass fragments, five unidentified and wire nails and 105 bottle glass fragments (69 modern beer bottle fragments), and roadside litter. Levels 2 and 3 contained no cultural material and probably represents the remains of the Douglass/Eliason apple and peach orchard. Feature 7, a brown, silty clay, circular stain identified as a possible fence post hole; and Features 8 and 9, root stains from two trees that appear as dark yellow-brown, silty clay stains flecked with charcoal (Figure 18) were identified at the surface of Level 2, N315 W30, but were still visible at the surface of the subsoil (Table 4).

The excavation of test units N7 W48 and N47 W43 within the proposed right-of-way revealed four subsurface cultural features (Features 1, 2, 5, and 6). Feature 1 was exposed after excavation of the plow zone of Unit N7 W48 and consisted of a 1.5-foot gray-brown silty loam deposit heavily flecked with brick and mortar fragments that extended beyond the limits of 3- x 3-foot unit. A total of

FIGURE 18
 Andrew Eliason Site (7NC-F-69), Plan View and Profile
 of Unit N315 W30 and Plan View of Unit N47 W43



131 artifacts were recovered from the plow zone of Test Unit N7 W48 and included a variety of ceramic types such as redware, blue and green shell-edge whiteware, pearlware, creamware, yellowware, stoneware, olive bottle glass, 80 grams of brick, 194 grams of plaster, and cut iron nails. Feature 1 can be tentatively identified as the filled-in brick lined cellar of one of the log dwellings located on this property. The excavation of Test Unit N47 W43 revealed the edge of a large gray-brown clayey soil (Feature 2) as well as two post hole features (Features 5 and 6 - Figure 18). Plow zone soils above Feature 2 contained a total of 68 artifacts including window glass, bottle glass, redware, pearlware, yellowware, whiteware, porcelain and bone china fragments, iron nails, and brick fragments. The architectural and domestic nature of these artifacts suggest domestic activity, and Feature 2 is proposed to be the floor of an outbuilding and Features 5 and 6 may represent the framework of a post-in-ground structure.

The remains of two large structures were discovered approximately 60 feet west of Feature 1 (Figure 16). Feature 3, the possible remains of a structure estimated to have been 15 x 15 feet in size, covered the entire floor of three test units (N40 W100, N40 W110, and N30 W110) and its edge was

TABLE 4

Andrew Eliason Site (7NC-F-69), Feature Record and Description

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| <p>Feature 1: Possible brick-lined cellar of post-in-ground structure. Soil matrix consists of gray-brown silty loam flecked with brick and mortar. Probed to depth of approximately 1.5 feet below surface. High quantity of artifacts recovered from plow zone of Test Unit N7 W48, above feature.</p> <p>Feature 2: Possible floor of outbuilding. Appears as a large gray-brown clayey stain flecked with brick and charcoal. Located by Test Unit N47 W43.</p> <p>Feature 3: Visible in three test units (N40 W100, N40 W110, N30 W110, and N30 W100) and estimated to represent a structure 15 x 15 feet in size. Soil matrix consists of yellow-brown clayey silt mixed with brick and charcoal. Located outside of right-of-way.</p> <p>Feature 4: Covers floor of 2 1/2 test units (N10 W100, N0 W100, and N0 W110). Represents a structure approximately 10 x 12 feet in size. Feature fill is made up of yellow-brown clayey silt mixed with brick and charcoal. Located outside of right-of-way.</p> <p>Feature 5: Circular post hole of orange sandy fill with post mold of brown loam located in Test Unit N47 W43. Lies within stain of Feature 2. May represent framework of post-in-ground structure.</p> <p>Feature 6: Circular post hole of brown loam also containing artifacts. Located in Test Unit N47 W43 at the edge of Feature 2.</p> <p>Feature 7: Small circular post hole of brown silty clay located in Test Unit N315 W30. Located within the buried plow zone in the orchard area.</p> <p>Feature 8: Edge of a root bundle stain identified in Test Unit N315 W30 located in orchard area. Appeared as a dark yellow-brown silty clay stain flecked with charcoal.</p> <p>Feature 9: Dark yellow-brown silty clay stain flecked with charcoal, identified as the remains of a tree root bundle. Discovered in Test Unit N315 W30, located in the orchard area.</p> |
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visible in Test Unit N30 W100. The feature fill consisted of yellow-brown clayey silt mixed with brick and charcoal fragments. Each test unit contained high quantities of artifacts of domestic, structural, and personal use including whiteware, pearlware, redware, yellowware and bone china sherds, bottle glass, cut iron nails, brick, window glass, a kaolin pipe fragment, and a brass button. A similar artifact assemblage was recovered from the plow zone in Test Units N10 W100, N0 W100, and N0 W110 located above Feature 4. The estimation of the size of the structure is 10 x 12 feet based on the absence of features in the units surrounding the three test units above Feature 4 (Figure 16). Artifacts similar to those found in Feature 3 were recovered from Feature 4. Although Features 3 and 4 lie 20 feet out of the ESNG pipeline right-of-way they are associated with the Andrew Eliason Site dwelling and are probably the remains of the log barn, stable, or granary mentioned in the 1809 court assessment of this property. All features mentioned above are summarized in Table 4.

The Phase II test excavations at the Andrew Eliason Site revealed one domestic activity area consisting of one dwelling and three possible outbuildings and one agricultural activity area consisting of a nineteenth and twentieth century orchard. Prehistoric artifacts were also recovered during the shovel test pit and test unit excavations, but all of these came from disturbed plow zone context. The Phase I and II testing of the Andrew Eliason Site indicated that although the site had been repeatedly plowed, artifacts and subsurface features dating to the early nineteenth century were still present in good context. Subsurface historical features were identified during Phase I and II testing relating to the Eliason occupation of the site. It is possible that other subsurface features remain intact beneath the plow zone within the boundaries of the site.

Archival research, map and aerial photograph interpretation, and the results of the Phase I and II field excavations indicated that the Andrew Eliason Site exhibited many of the characteristics of an Agricultural Complex. As defined by De Cunzo and Garcia (1992) an Agricultural Complex, dating to the 1830-1940 period, consists of a farmstead that encompasses at least one dwelling along with domestic and agricultural outbuildings and the yards, gardens, and activity areas associated with them. The Andrew Eliason Site is considered to be eligible for listing on the National Register of Historic Places under criteria B and D (Appendix III). The site is eligible under criterion B because the contributions that Andrew Eliason made as a member of the Delaware House of Representatives were significant to Delaware's history. The Andrew Eliason Site is the remains of the first of four farms that Andrew Eliason purchased, and the first to become his home. The early home, a simple log house, was abandoned in 1856 for a grander brick mansion located nearby. De Cunzo and Garcia (1992:315) suggests that in order for an Agricultural Complex, such as the Andrew Eliason Site, to be significant because of its association with a person significant in local and regional history, it must contain intact and undisturbed archaeological resources directly associated with that person. The archaeological resources at the Andrew Eliason Site does indeed meet those requirements.

The site is eligible under criterion D because it has yielded and is likely to yield information important to the history of Delaware. Historical artifacts from the late eighteenth to mid-nineteenth centuries were recovered from surface, plow zone, and undisturbed contexts. Intact subsurface structural features of an agricultural complex, such as a dwelling-related cellar, three outbuildings, and an orchard were identified. The historical state plan recommends that research at domestic sites dating to the 1770-1830 and 1830-1880 periods should focus on three interrelated topics: architecture and land use, dietary patterns and self-sufficiency, and market participation (De Cunzo and Catts 1990). The documentary and archaeological resources associated with the Andrew Eliason Site could be used to address these topics and aid in the reconstruction of the past social, demographic, and economic landscape of Delaware. Avoidance of the Andrew Eliason Site is the preferred plan of resource management to minimize the impact of pipeline construction. If the site cannot be avoided, full data recovery excavations are recommended.

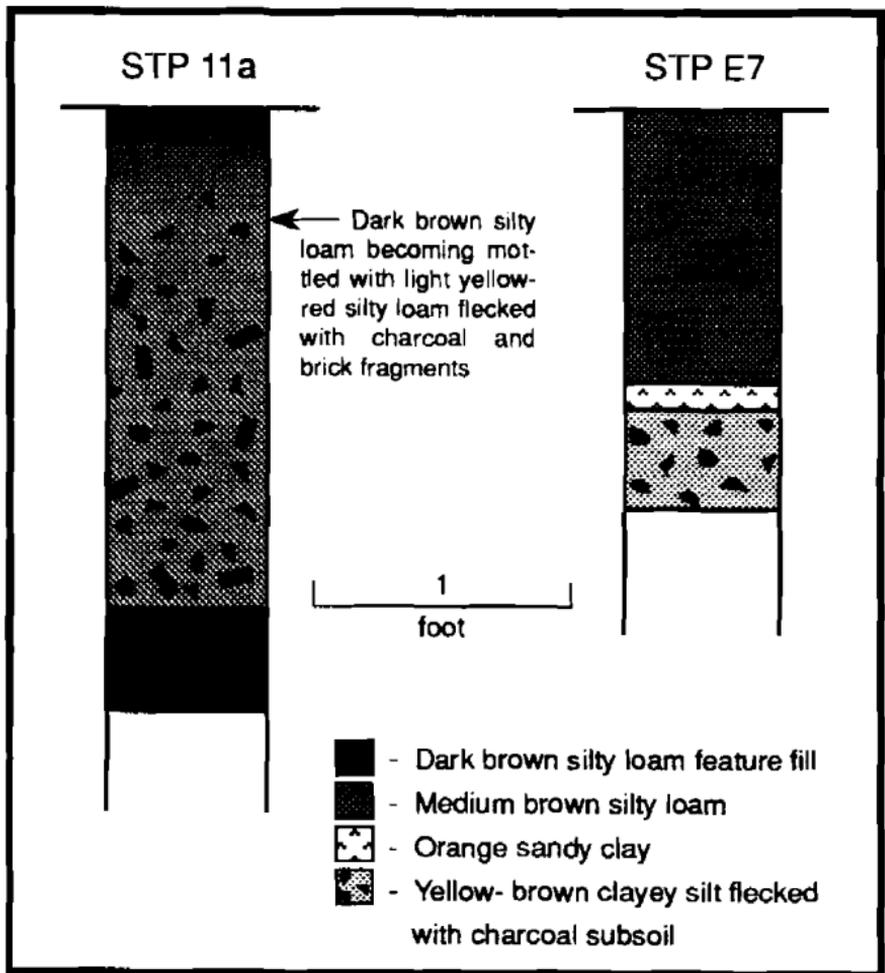
Segment 3

Located on the west side of Route 896, Segment 3 is bordered to the north by Casing 2 and to the south by the northern limit of the Andrew Eliason Site (Figure 14). The entire 1,100-foot right-of-way area was tested by 58 shovel test pits at approximately 20-foot intervals (Figure 19). There was a high likelihood of locating a historical site as determined by the background research conducted by Kellogg (1993a), and historical maps of the Summit area. This segment had low to medium potential of containing a prehistoric site (Figure 8).

Appleton Site (7NC-F-70). Figure 7 shows the location of a potential standing structure within the boundaries of Segment 3. This structure can be located on Beers' Atlas of 1868 (Figure 5) and appears on Hopkins' 1881 map under the name of J. Appleton (Figure 13). However, no structure is depicted at this location on the Latrobe survey of 1803 (Figure 12). As predicted by Kellogg (1993a), the Appleton structure is extant and has been assigned a Cultural Resource Survey number (N-12813), but is beyond the limits of the right-of-way as are its associated outbuildings that are located behind the house as seen in Plate 1. However, an area of high artifact density was identified by Phase 1 testing in the front yard area of the Appleton house (Figure 19). A total of 51 artifacts including redware, whiteware and pearlware, creamware and yellowware ceramic sherds, brick fragments, and bottle and window glass were recovered from within the Appleton Site (7NC-F-70).

FIGURE 20

Segment 3, Profile of Shovel Test Pit 11a
(Appleton Site, 7NC-F-70) and E7



A possible feature was identified in the profile of Shovel Test Pit 11a (Figure 21). Other shovel test pits in the area of high artifact density revealed a simple plow zone of medium brown, silty loam soil to a depth of approximately 1.0 foot below surface underlain by yellow-brown clayey silt subsoil. Shovel test pits lying south of the southern-most paved driveway showed evidence of construction in the yellow-brown sandy silt and orange sandy clay mottled soils they revealed. Testing north of the northern-most paved driveway also revealed disturbed soils caused by the drain field present at that location, thus destroying the northern limit of the Appleton Site. The shovel testing scheme was sufficient to identify the Appleton Site (7NC-F-70) and determine its southern limits, but further testing was necessary to determine the integrity of subsurface deposits at the site.

FIGURE 21

Appleton Site (7NC-F-70), Profile and Plan View of Test Unit 1

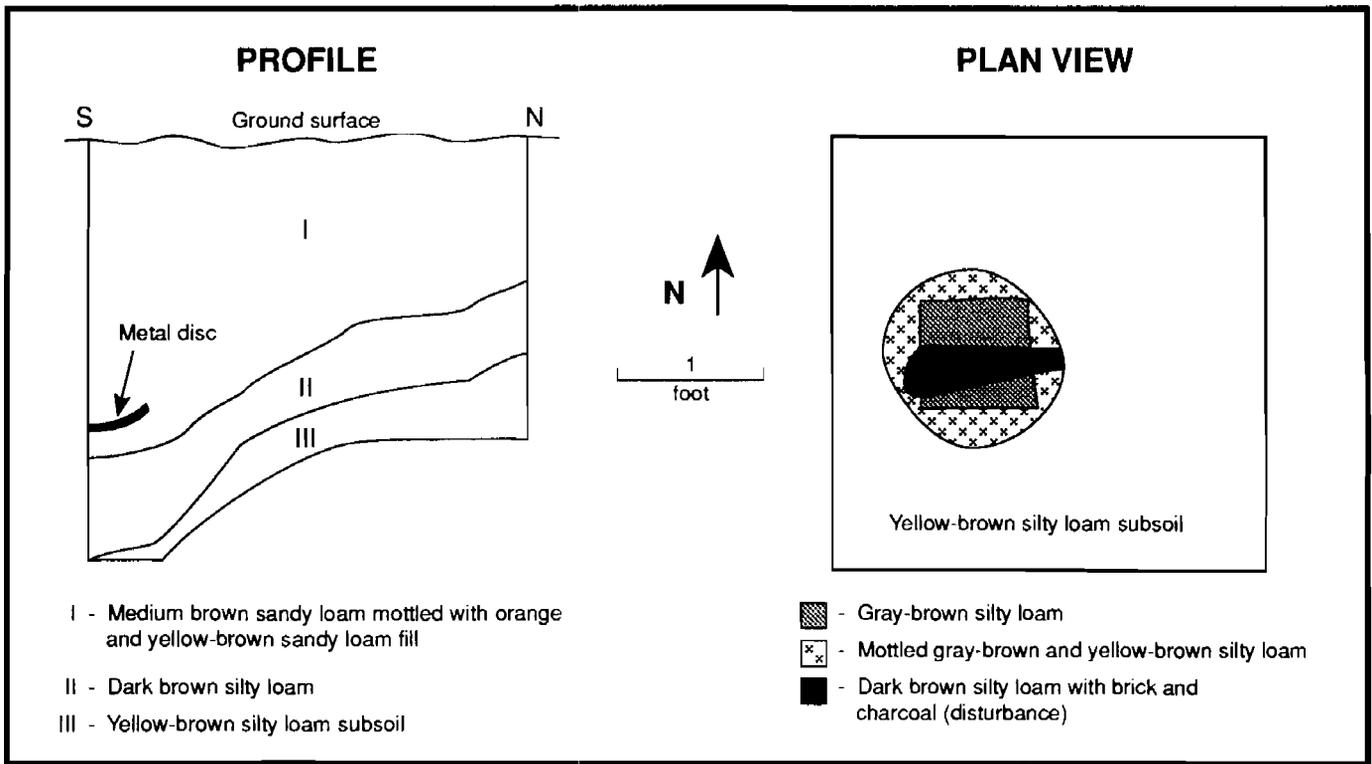


FIGURE 22

Segment 3, Plan View of Test Units 2 and 4

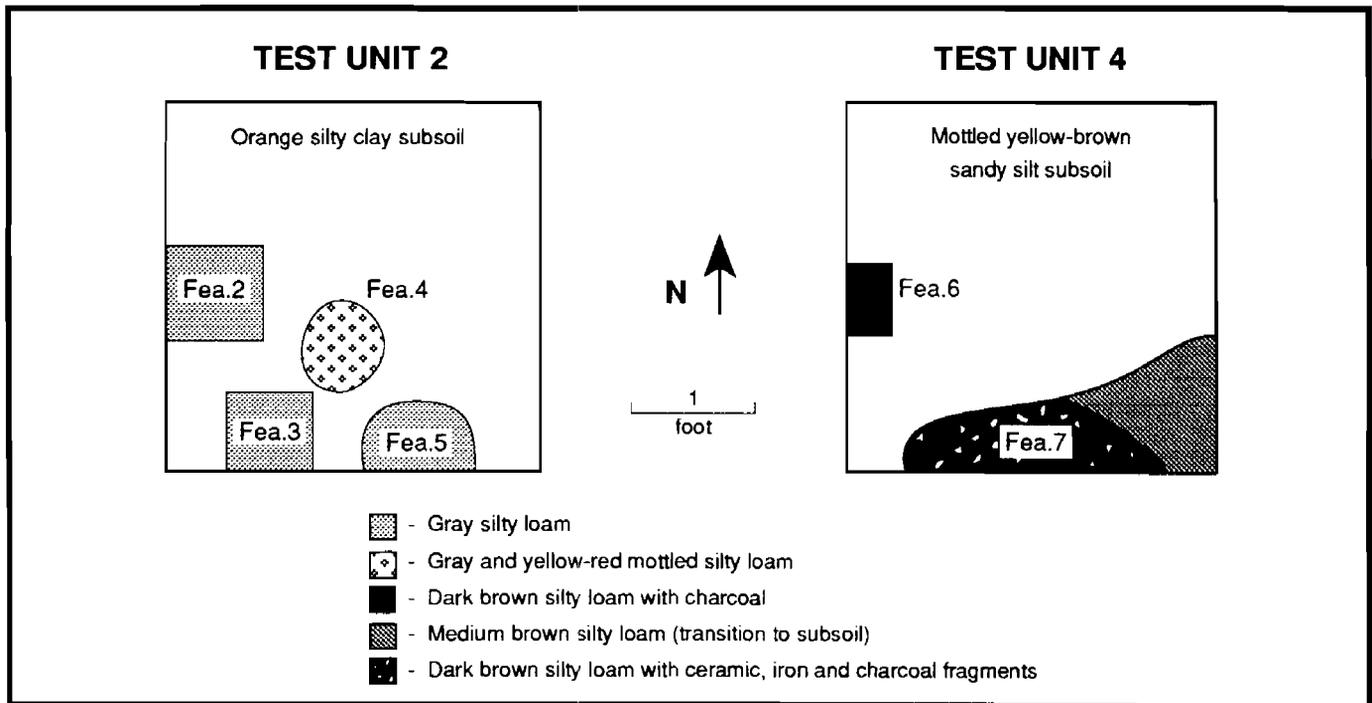


TABLE 5

Appleton Site (7NC-F-70), Feature Record and Description

Feature 1: Circular post hole of mottled yellow and brown silty loam with a square post mold of gray-brown silty loam, intruded by a rodent tunnel. Located in Test Unit 1.

Feature 2: Square post hole of gray silty loam located in Test Unit 2 in front yard of Appleton house.

Feature 3: Located in Test Unit 2, this square post hole appears as a gray silty loam stain surrounded by orange silty clay subsoil.

Feature 4: Small circular stain of gray and yellow-red mottled silty loam located in Test Unit 2 and identified as a post hole.

Feature 5: Soil matrix consists of gray silty loam in a circular shape. Identified as a possible post hole. Discovered on the surface of the subsoil after excavation of the plow zone of Test Unit 2.

Feature 6: Possible square post hole consisting of dark brown silty loam flecked by charcoal. Located at the base of the plow zone in Test Unit 4.

Feature 7: Large amorphous to circular shaped stain of dark brown silty loam with ceramic, iron, and charcoal fragments. Possible post/trash pit feature located in Test Unit 4.

Limited Phase II testing was conducted through the excavation of six test units (Figure 19). Excavation of these test units also revealed that much of the Appleton Site had been disturbed by construction by Summit Aviation as seen in the profile of Test Unit 1 (Figure 21). Seven features were discovered below the plow zone in three of the test units. Test Unit 1 contained Feature 1, a circular post hole with a square post mold that was disturbed by rodent intrusion (Figure 21). Test Unit 2 contained two square possible post holes (Features 2 and 3) and two circular possible post holes (Features 4 and 5). Feature 6, a square possible post hole, and Feature 7, a dark brown silty loam stain with ceramic, nails and charcoal fragments, were discovered in Test Unit 4. Figure 22 depicts the plan views of Test units 2 and 4, and all features identified are summarized in Table 5. Artifacts recovered from all six test units total 176 and include redware, pearlware, whiteware, porcelain, brick, wire fragments, shell, and a kaolin pipe stem.

The integrity of this site has been compromised by a modern drain field in the northern portion of the site and private construction in the southern portion of the site. Based on the 1937 aerial photograph (Plate 1), all outbuildings were located behind the house. There is a small possibility that domestic features could be exposed below the plow zone within the right-of-way limits based on the one possible post/trash feature (Feature 7) identified during Phase II testing. The six post features probably represent a fenceline and did not seem to be structurally related.

The Delaware historical archaeological management plan (De Cunzo and Catts 1990:192-196) and the historic context for the 1830 to 1940 period for agriculture in Delaware (De Cunzo and Garcia 1992:298-300) provide guidelines for evaluating the potential and significance of nineteenth and twentieth century agricultural complexes like the Appleton Site. The historical documentation for the site is adequate, but the archaeological integrity of the site is poor, due to modern construction in the northern and southern portions of the site. Only a small portion of the agricultural complex is located within the pipeline right-of-way. The archaeological evidence of the farmstead within the right-of-way consists of a scatter of historical artifacts from disturbed contexts and remnants of ditches and fences. The portion of the Appleton Site that would be disturbed by the proposed pipeline is not historically significant and is not eligible for inclusion on the National Register of Historic Places; therefore no further archaeological work is recommended within the proposed pipeline right-of-way.

It must be noted that the extant dwelling, outbuildings, and landscape of the agricultural complex located outside the pipeline right-of-way was not subjected to archaeological testing and its eligibility for nomination to the National Register of Historic Places cannot be determined within this report. However, potential historically significant cultural materials are located less than 100 feet of the western limits of the pipeline right-of-way and the area surrounding the extant structures and undisturbed yard areas should be protected and unaltered during construction of the proposed pipeline.

A possible prehistoric feature was revealed in the profile of Shovel Test Pit E7 near the southern limits of Segment 3 (Figures 20 and 23). This area was located in a medium probability zone for locating prehistoric sites as defined by Kellogg (1993a). Twenty fire-cracked rocks and six quartz flakes were recovered from plow zone contexts over the entire stretch of Segment 3, but were not concentrated in any one area (Figure 23). Further testing of the area near Shovel Test Pit E7 was conducted to investigate the potential of a prehistoric site in this area. Three test units were excavated and a total of 106 historical artifacts including 73 fragments of modern bottle glass, five molded bottle glass fragments, window glass, unidentifiable nails and metal fragments, brick and coal fragments, three pearlware, five whiteware, and three redware ceramic fragments and only two prehistoric artifacts, one quartz and one quartzite flake, were recovered. Test Unit 2 was excavated beside Shovel Test Pit E7 to investigate the feature soil. A yellow-brown silty clay flecked with charcoal was identified at the base of the plow zone, 0.25 meters below ground surface of the unit. This soil was excavated as a 10 centimeter level from which no cultural material was recovered. There was no level of unique soil distinct from the plow zone or subsoil visible in the profile of Test Units 1 or 3. There were no intact prehistoric or historical deposits below the disturbed plow zone, no diagnostic prehistoric artifacts, no significant historical artifacts were recovered, and no area of prehistoric artifact concentration could be identified. No significant cultural resources were identified within Segment 3; therefore no further archaeological work is recommended.

Casing 2. Casing 2 lies just north of the Appleton Site (Figure 10) and 8 shovel test pits were excavated on each side of Route 896 (Figure 24). Shovel test pits on the west side recovered eight artifacts including machine made bottle glass, brick, redware, and two fragments of scratch blue stoneware. Only four artifacts, including brick and unidentifiable nails and glass, were recovered from shovel test pits on the east side of the road. Both portions of Casing 2 were located in a plowed field and this was evident in the simple plow zone/subsoil stratigraphy. The small amount of artifacts were recovered from disturbed contexts and no subsurface cultural deposits were identified in Casing 2. No significant cultural resources were identified in Casing 2, therefore no further archaeological testing is recommended.

Segment 4

The right-of-way of Segment 4 begins on the east side of Route 896, just north of Casing 2. Segment 4 includes the area from Casing 2 approximately 550 feet north to a woodline and an intermittent branch of Crystal Run (Figure 14). Phase I testing was carried out through pedestrian survey of the plowed field and the excavation of 22 shovel test pits at 40-foot intervals (Figure 24). Neither procedure of testing discovered much evidence of historical or prehistoric occupation. Only four artifacts were recovered including redware, whiteware, and a window glass fragment. Shovel test pit profiles were indicative of the plowed field in which they were located and there were no features identified below the plow zone. Based on Phase I testing, no significant cultural resources were identified and no further archaeological testing of Segment 4 is recommended.

Segment 5

Segment 5 of the project area is located in a plowed agricultural field on the east side of Route 896, opposite Summit Aviation (Figure 14). The approximately 500 feet of right-of-way lies north of Segment 4 and shares a woodline and an intermittent branch of Crystal Run as its southern boundary. Its northern limit is another woodline.

Richard Griffith Site Area A (7NC-F-71A). Investigation of cultural resources for **A Cultural Resources Reconnaissance Planning Study of the Proposed Delaware Route 301 Corridor, New Castle County, Delaware** (Kellogg 1993a), located a potential historical archaeological site within the limits of Segment 5 (Figure 7; Table 2). This land was originally included in the tract called “Green’s Forest” owned by Edward Green in 1686. Table 6 summarizes the ownership of the portion of land that contains the Richard Griffith Site Area A (7NC-F-71A). In 1750 Richard Griffith bought 305 acres of the Green Forest tract in two separate transactions and the meets and bounds are depicted in Figure 25. Richard Griffith is mentioned in Scharf’s **History of Delaware** as being listed in the 1791 tax assessment of Pencader Hundred with a value of 20 pounds, and on the 1798 tax assessment as well (1888:952-953). The property was occupied by the Griffith family until at least 1803 as indicated by a structure and property lines matching those described in the deed of sale depicted on Latrobe’s map under the name of R. Griffith (Figures 12 and 25).

After 1803 the ownership of the property becomes unclear. The tract of land once belonging to Griffith was partitioned by the administration of the estate of Peter S. Rothwell as recorded in the New Castle County Chancery Court on April 24, 1821, but how and when the property was conveyed to Rothwell is unknown. The property and structure was sold within the Rothwell family (Table 6) and was purchased by Samuel H. Rothwell in 1833. The property remained in his possession to at least 1893. Beers’ Atlas of 1868 (Figure 13), Hopkins’ map of 1881 (Figure 13), and Baist’s map of 1893 show a structure owned by S. H. Rothwell, but the structure is *not present* on the 1906 USGS Quadrangle map.

The early occupation of the site can be attributed to the Griffith family, and then to the Rothwells. Although the original structure had been reduced to archaeological remains, the original property lines owned by Richard Griffith were still visible on the 1937 aerial photograph of the project area (Figure 25, Plate 1). Segment 5 is located in the northern tip of Griffith’s acreage.

TABLE 6
Richard Griffith Site Areas A and B
(7NC-F-71A and B), Summary of Land Ownership

| Date | Ownership | Acres | Reference |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------|
| May 29, 1686 | Edward Green - - "Green's Forest" | 2742 | |
| August 21, 1691 | Edward Green to John Scott | | |
| May 16, 1707 | Walter Scott, heir of John Scott to Mathias Van Bibber | | |
| | Matthias and Hermana Van Bibber to Andrew Hamilton for himself, George Yeates and David French | a portion of the tract | |
| | Andrew Hamilton to James Hamilton | 1/3 share | NCC Deed Q-1-496 Q-1-489 |
| July 4-5, 1745 | George Yeates to John Inglis | 1/3 share | |
| | David French to John Moland (to cover the debts of John Legate who was entitled the land as per French's Last Will and Testament) | 1/3 share | |
| November 16, 1750 | James Hamilton, John Inglis, and John Moland to Richard Griffith (in two separate transactions) | 302.5 acres 2.5 acres | |
| June 22, 1752 | Richard Griffith to Richard Griffith (Jr.) | 305 acres | NCC Register of Wills Richard Griffith, 1752 |
| 1801 | Richard Griffith (Jr.) dies - intestate | | |
| April 24, 1821 | Administrators of the estate of Peter S. Rothwell to Ebenezer Rothwell | 2 shares | NCC Chancery Court Case J #6 |
| March 28, 1833 | Ebenezer Rothwell to Samuel H. Rothwell | 5 acres including 2 brick house and outhouses | NCC Deed R-4-186 |

Initial survey consisted of surface collection of the plowed field and the excavation of 32 shovel test pits at 20-foot intervals within the right-of-way (Figure 26). A total of 153 historical artifacts and only two prehistoric artifacts were recovered. Historical artifacts include glass, brick, nails, tobacco pipe fragments, redware, whiteware, pearlware, and stoneware. Prehistoric artifacts include a chert flake and one fire-cracked rock. An area of high artifact density was located through shovel pit testing (Figure 26) which indicates the presence of a historical occupation.

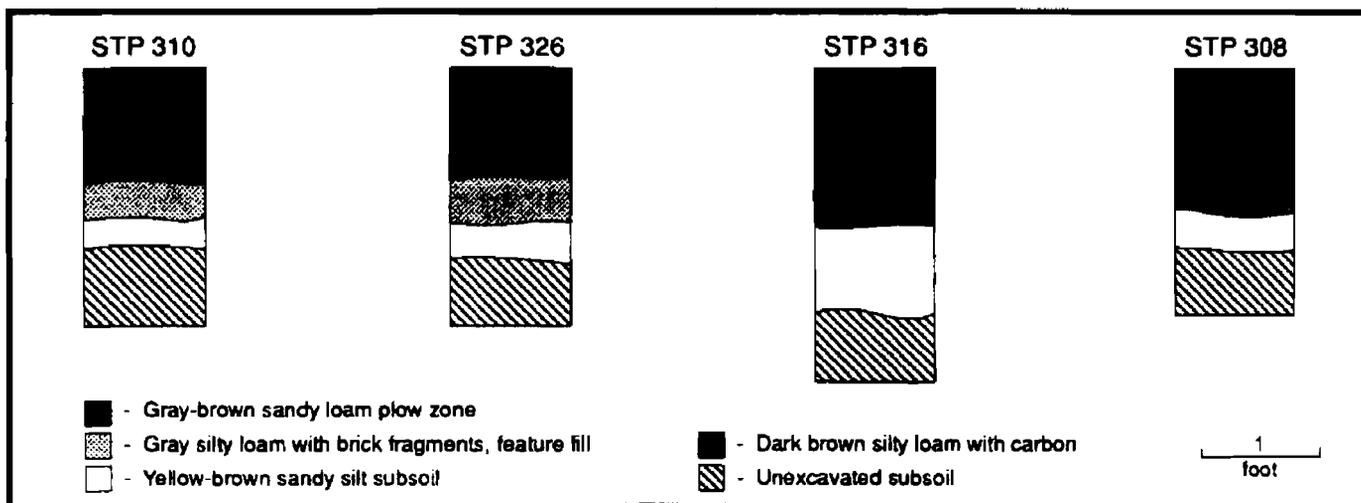
The stratigraphy, as revealed in Shovel Test Pit 308 (Figure 27), is a simple plow zone of gray-brown sandy loam underlain by yellow-brown sandy silt subsoil. A level of dark brown silty loam with carbon was discovered below the plow zone in Shovel Test Pit 316 (Figure 27) indicating the presence of a subsurface feature. A level of gray silty loam feature fill with a large amount of brick was located beneath the plow zone in shovel test pits 310 and 326 (Figure 27). Archaeological evidence including subsurface features and artifacts dating to the late eighteenth to the early nineteenth century, as well as background research, suggests that this section of Segment 5 is the location of Richard Griffith Site Area A (7NC-F-71A; N-12814).

In order to define the site limits and assess whether or not the site is eligible for nomination to the National Register, Phase II testing was conducted. Fifty-eight additional shovel test pits were plotted within the area of high artifact density and to the east of the right-of-way. An area encompassing approximately 120 feet east/west by 390 feet north/south contained the highest quantities of plow zone artifacts and was determined to be the limits of the Richard Griffith Site Area A (Figure 26). Two shovel test pits (218 and 219) contained a level of gray silty loam with carbon just beneath the plow zone, indicating the presence of a possible feature. Twenty-eight 3- x 3-foot test units were excavated in locations of the site where Phase I testing had indicated potential subsurface features or high quantities of artifacts (Figure 26).

Sixteen features were identified in 15 test units. A summary of feature descriptions is presented in Table 7 and feature locations are shown in Figure 28. Four possible structures have been estimated from the layout of the features and artifacts recovered from the plow zone of test units. Three of the structures (Structures 1, 2, and 3) are located within an area of high ceramic concentration in the plow zone (Figure 28). In this area, between 50 and 80 percent of the artifacts recovered from the plow zone test units were ceramic fragments.

Structure 1 is comprised of Features 1 and 2 located in Test Units 30 and 35, respectively. Feature 1 is a dark brown silty loam stain with carbon and artifacts such as bone, brick, and mortar, that covers the north half of the floor of Test Unit 30 (Plate 4). A one-foot square was excavated in Feature 1 against the north wall of Test Unit 30 to sample the artifacts and reveal a clearer profile of the feature fill (Plate 4). The depth of Feature 1 was 0.6 feet below the base of the plow zone. The small portion of Feature 1 that was excavated contained brick, bone, and

FIGURE 27
Richard Griffith Site Area A (7NC-F-71A),
Profiles of Shovel Test Pits 310, 326, 316, and 308



creamware ceramic sherds. Feature 2 contained the same soil type as Feature 1 and appears to be the corner of a structure that included a large circular shaped stain that is the remains of a corner post (Plate 5). Feature 2 was tested in a similar manner to Feature 1 and domestic artifacts such as brick, bone, creamware, pearlware and whiteware ceramic fragments were recovered. A total of 183 historical artifacts were recovered from the plow zone of Test Units 30 and 35 including architectural artifacts such as nails, brick, mortar, and window glass, and domestic and personal artifacts such as blown and molded bottle glass, buttons, bone, and tobacco pipe fragments. Ceramics comprised 77 percent of the recovered artifacts, including redware, pearlware, creamware, and a very small amount of whiteware. The approximate north/south dimension of Structure 1 is 14 feet. Shovel Test Pit 316 contained the same fill as Features 1 and 2; however, the east wall of Structure 1 was not revealed and the east/west dimension cannot be estimated. Based on the types of artifacts recovered from the feature soil and the plow zone above the features, this structure could have served as a dwelling.

Structure 2, located 20 feet south of Structure 1, was identified in Test Units 15, 17, and 22, and consisted of Features 3 and 4 (Figure 28). Feature 4, the southern wall of Structure 2, was exposed in Test Units 15 and 17 (Figure 29). The large gray-brown silty loam stain had brick and charcoal fragments throughout. A similar stain, Feature 3, was visible in the southwest corner of Test Unit 22 and appeared to be the northeast corner of Structure 2 (Figure 29). Neither Test Unit 27 to the east nor Shovel Test Pit 314 to the west contained any evidence of Features 3 and 4, therefore Structure 2 is limited to 13 feet east/west, and at least 8 feet north/south. A total of 259 artifacts were recovered from the plow zone above Features 3 and 4 in Test Units 15, 17, and 22 and may represent domestic activity associated with a dwelling. Seventy-three percent of the artifacts include redware, slip-decorated earthenware, pearlware, creamware, stoneware, and whiteware. Other artifacts included tobacco pipe fragments, window and bottle glass, brick, shell, and nails.

Two possible structures were also identified; Feature 6 represents the remains of Structure 3, and Feature 15 represents the remains of Structure 4. Feature 6, located in Test Unit 25 (Figure 28), is comprised of gray-brown silty loam with carbon that covers the entire floor of the 3- x 3-foot test unit and the feature soil was similar to the fill of Structures 1 and 2. Feature 15 covers the entire floor of

TABLE 7

Richard Griffith Site Area A (7NC-F-71A), Feature Record and Description

Feature 1: Covers half of the floor of Test Unit 30 and is related to Feature 2 as the south wall of Structure 1. The feature fill is dark brown silty loam and contains charcoal and artifacts such as brick and bone. Feature 1 was partially excavated to a depth of 0.6 feet below the surface of the subsoil.

Feature 2: Located in Test Unit 35, Feature 2 appears to be the northwest corner of Structure 1 and consists of a corner post hole feature, approximately 1.0 foot in diameter, and a larger stain, possibly the floor of the structure. The feature fill is dark brown silty loam. Feature 2 is 0.6 feet deep against the east wall of Test Unit 35.

Feature 3: Mottled yellow-brown and gray-brown silty loam stain, measures approximately 1.0 foot square, and is located in the southwest corner of Test Unit 22. Feature 3 is potentially the northeast corner of Structure 2.

Feature 4: Gray-brown silty loam stain with brick and charcoal fragments. Feature fill covers the entire floor of Test Unit 15 and the northern half of adjacent Test Unit 17. Feature 4 is the remains of the south wall of Structure 2.

Feature 5: Gray-brown silty loam stain located in Test Unit 24. This circular shaped stain is probably a post hole feature, approximately 0.6 feet diameter.

Feature 6: The entire floor of Test Unit 25 is covered by a mottled light gray and yellow-brown silty loam feature fill that is the remains of Structure 3.

Feature 7: Oval-shaped, gray silty loam stain located in the southeast corner of Test Unit 23. Identified as a post hole feature.

Feature 8: Gray-brown silty loam stain with brick fragments, square-shaped post hole feature. Feature 8 is located in Test Unit 13.

Feature 9: Large amorphous stain of gray-brown sandy-loam. This feature was discovered in Test Unit 8 and is possibly the remains of a trash pit feature.

Feature 10: Located in Test Unit 10, Feature 10 is a 0.4 foot square post hole feature that most likely represents the fenceline at the back of the Griffith property.

Feature 11: Located in Test Unit 11 and is similar in size and shape to Feature 10. Features 10 and 11 align with one another to form a segment of a fenceline at the rear of the site.

Feature 12: Gray silty loam, small, circular post hole feature located in Test Unit 23.

Feature 13: Amorphous stain of tan-gray sandy loam located in Test Unit 18. May represent a trash pit feature.

Feature 14: Small, oval stain of gray-brown silty loam that extends only 0.2 feet into the subsoil. Feature 14 is located in Test Unit 14 and is the remains of a shallow post hole.

Feature 15: The entire floor of Test Unit 16 is covered by a mottled tan-gray silty loam with brick fragments. A potential outbuilding, Structure 4, is identified by this stain.

Feature 16: A small, oval shaped stain of gray-brown sandy loam mottled with tan sandy clay identified as a post hole located in Test Unit 8.

Test Unit 16 (Figure 28) and the feature fill was also similar to the fill of Structures 1 and 2. The limits of Structures 3 and 4 were not discovered during Phase II testing. The artifacts associated with Structures 3 and 4 are both structural and domestic in nature: brick and nails, bottle glass, buttons, and redware, pearlware, creamware, and whiteware ceramic.

Post holes were the most common type of feature discovered. The rear fenceline of the property may be represented by Features 10 and 11 located in Test Units 10 and 11 respectively. Each of these post hole features is a small, gray-brown stain, approximately 0.4-foot square (Figure 30). The placement

PLATE 4
Richard Griffith Site Area A (7NC-F-71A),
North Wall Profile of Test Unit 30

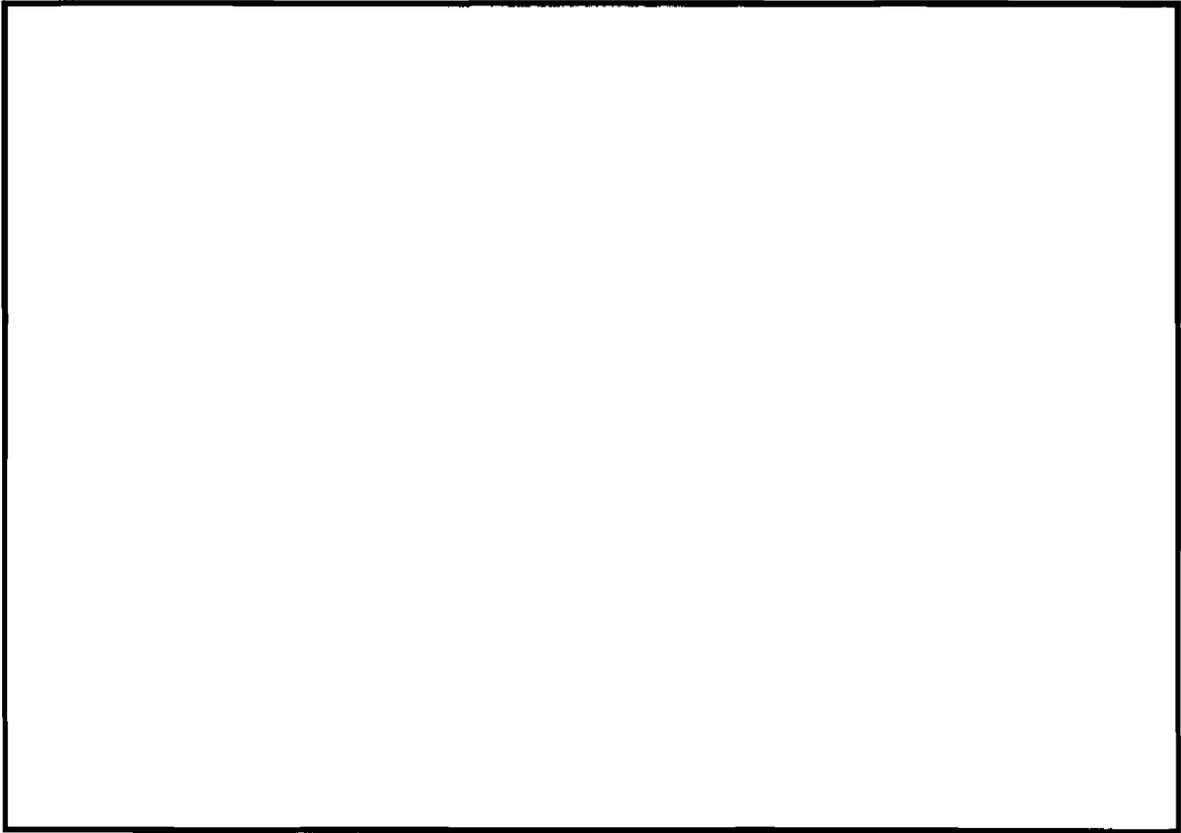
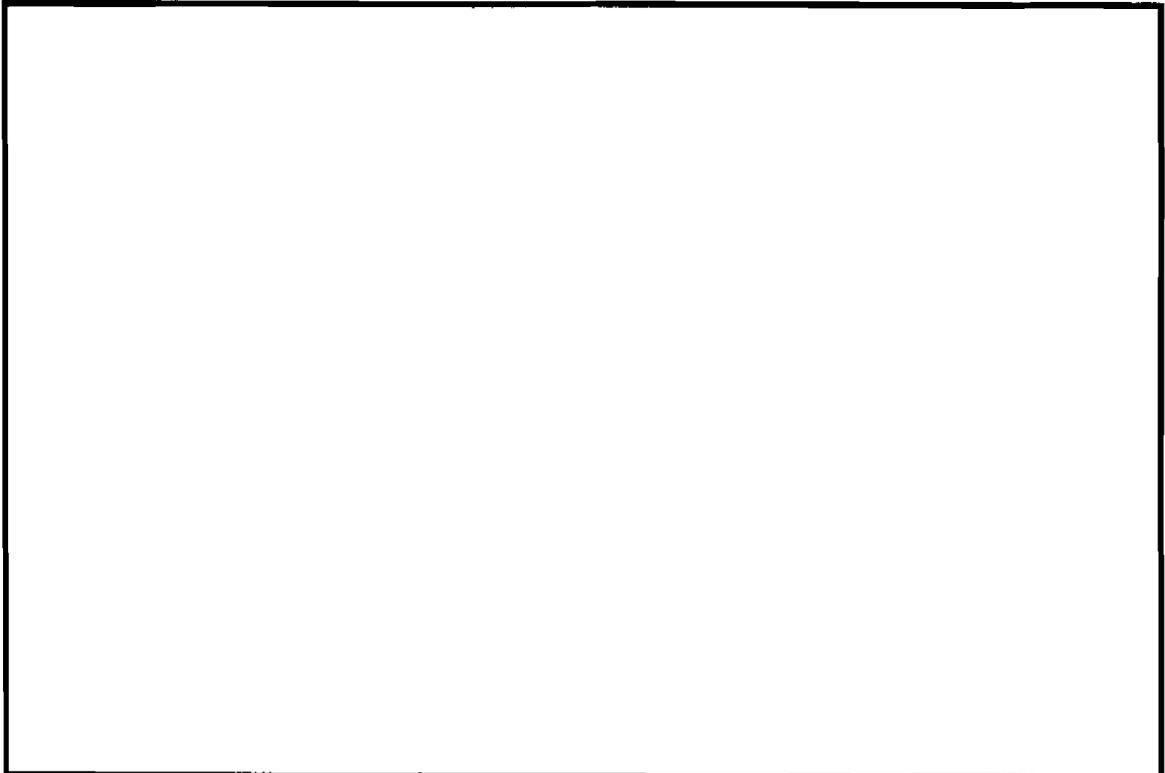


PLATE 5
Richard Griffith Site Area A (7NC-F-71A), Plan View of Test Unit 35



of the test units and the features located in them align with each other and are parallel to the edge of Route 896 (Figure 28). Six additional post hole features were located randomly over the site area (Table 7; Figure 28) and may be related to fencelines or outbuildings. Figure 30 shows the plan view of Feature 16 which is representative of other post holes found at the site.

Two features were discovered that were larger in size than the post hole features and had no definite shape. Feature 9, located in Test Unit 8, is a gray-brown sandy loam stain (Figure 28 and 30). An auger test revealed feature fill to a depth of 0.6 feet below the plow zone. Feature 13, located in Test Unit 18 (Figure 28 and 30), was similar to Feature 9, but the depth was not tested. The size and shape of these features suggest that they may have served as trash pits.

In addition to the historical artifacts from the Richard Griffith Site Area A, eight flakes and 12 fire-cracked rocks were recovered from Phase II test units. However, no diagnostic prehistoric artifacts were recovered, and the flakes and fire-cracked rocks were dispersed randomly among the test units revealing no specific area of concentration. All prehistoric artifacts were found in disturbed context, therefore further investigation of a prehistoric component of the Griffith Site is unnecessary.

The archaeological remains of the Richard Griffith Site Area A (7NC-F-71A) consist of the intact subsurface remains of a dwelling (Structure 1), outbuildings (Structures 2, 3, and 4), a rear fenceline, trash pit features, and other post hole features. The presence of the type of features mentioned above, the recovered artifacts, and archival research indicate that the Richard Griffith Site Area A has all the characteristics of an agricultural complex as defined by the State Plan (De Cunzo and Catts 1990). The Richard Griffith agricultural complex was occupied by the Griffith family from at least 1752 until the early nineteenth century. The Rothwell family occupied the farmstead during the mid-to-late nineteenth century. The majority of the structural features

FIGURE 29
 Richard Griffith Site Area A (7NC-F-71A),
 Plan View of Test Units 22, 15, and 17

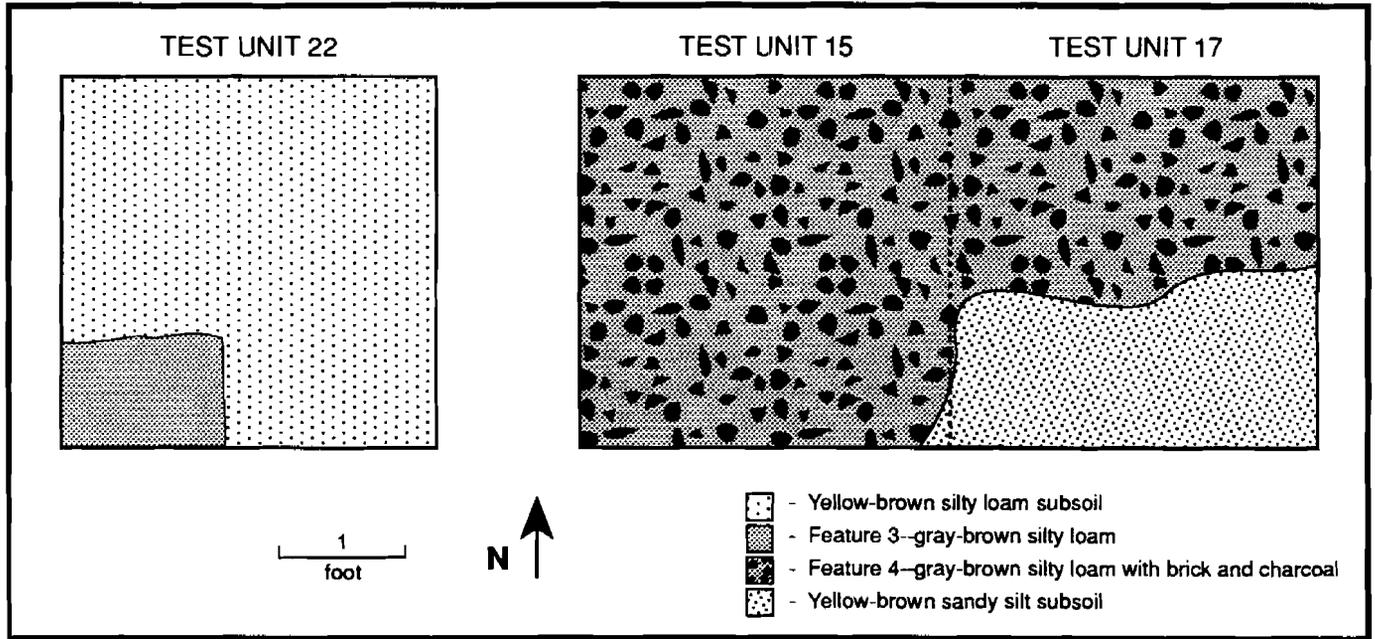
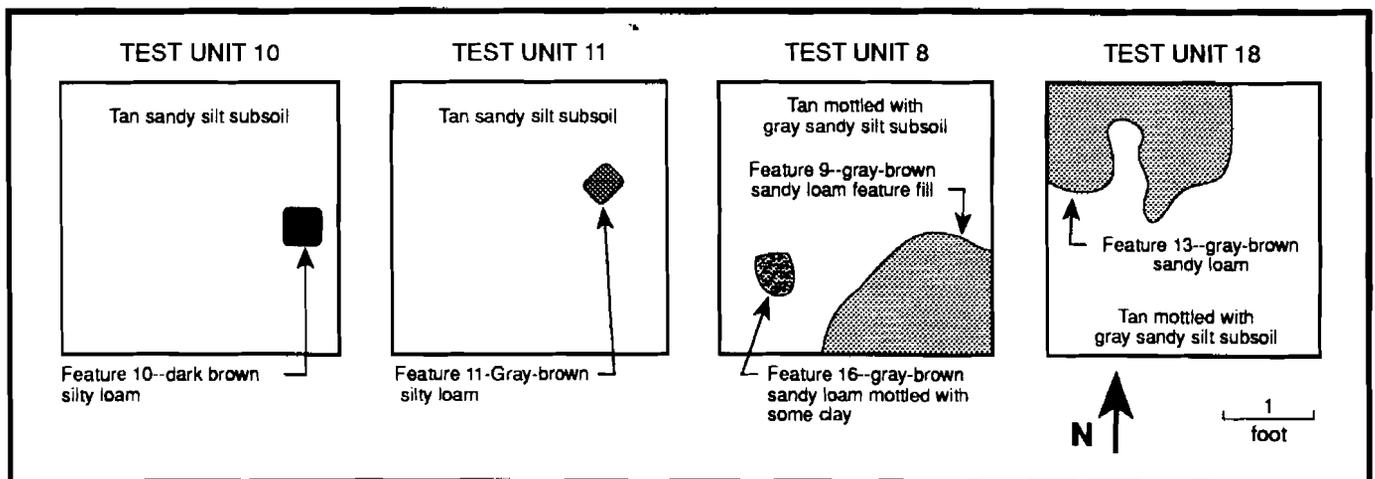


FIGURE 30
 Richard Griffith Site Area A (7NC-F-71A),
 Plan View of Test Units 10, 11, 8, and 18



and the highest artifact densities were located directly within the proposed pipeline right-of-way, along the newly widened Route 896. Based on historical maps (Latrobe, Beers, Baist, and Hopkins) the dwelling located on this property has been continually depicted close to Route 896, as have other agricultural complexes within this project area (Andrew Eliason and Appleton sites). The Eliason and the Appleton houses were located between 50 and 100 feet from the existing Route 896 and all outbuildings were located behind the houses. Assuming a similar layout for the Richard Griffith Site Area A, the integrity of the archaeological deposits has not been compromised by the newly constructed lane of Route 896.

Guidelines for evaluating the potential and significance of late-eighteenth and nineteenth century rural agricultural complexes like the Richard Griffith Site Area A are provided in the Delaware historical archaeological management plan (De Cunzo and Catts 1990:192-196) and the historic context for the 1830 to 1940 period for agriculture in Delaware (De Cunzo and Garcia 1992:311-315). In general these sites will produce significant data if there are well-preserved subsurface features, good contextual integrity, sufficiently high artifact densities to generate spatial distribution maps, and extensive and diverse documentation. The historical documentation for the Richard Griffith Site Area A is adequate and the dwelling, outbuildings, trash features, and landscape features were in good condition. The dwelling and outbuildings lie within the direct impact zone of the proposed pipeline and will be adversely affected by construction. The Richard Griffith Site Area A (7NC-F-71A; N-12814) is eligible for nomination to the National Register of Historic Places under criterion D. Avoidance is the preferred mitigation alternative; however, data recovery excavations are recommended if avoidance is not possible.

Segment 6

Segment 6 begins at the woodline marking the northern limit of Segment 5 and ends 1,400 feet north at the project terminus (Figure 31). Casing 3 was contained within Segment 6 and will be discussed separately.

Casing 3. Pipeline construction priorities necessitated early completion of archaeological testing of Casing 3 East and West areas, therefore Phase I testing of the Casing areas was undertaken first, followed by testing of the remainder of the project area.

The eastern portion of Casing 3 was located 230 feet north of the woodline marking the boundary between Segments 5 and 6 (Figure 31). Kellogg (1993a) identified this area as a high probability zone for the location of prehistoric sites and no potential historical sites were predicted in Casing 3 East. Eight shovel test pits were excavated in the eastern casing and only five artifacts were recovered, including whiteware, plastic, and bottle glass. No subsurface cultural features were identified. Phase I testing of Casing 3 East identified no significant prehistoric or historical cultural resources within Casing 3 East, therefore no further archaeological testing is recommended.

The western portion of Casing 3 was located directly across Route 896 from Casing 3 East and is associated with a Delmarva Power and Light (DP and L) Meter and Regulator (M and R) station (Figures 31 and 32). The M and R station was located directly south of Casing 3 West and measured 24 x 30 feet (Figure 32). An additional 25- x 25-foot extension was added to the western limit of M and R station on August 12, 1992. The M and R station and the western Casing 3 are adjoining areas and are summarized as one area, but designated as two areas on Figure 32.

As defined by Kellogg (1993a), this area was located in a medium probability zone for locating prehistoric sites. Two potential historical archaeological sites, Porter and Appleton, were identified west of Route 896 in this area by the Route 301 planning survey (Kellogg 1993a). These two potential sites were depicted on Beers' 1868 atlas (Figure 5), Hopkins' 1881 (Figure 13), and the USGS quadrangle map of 1906, but not on Rea and Price in 1849. Measurements from both Beers and Hopkins placed the Porter structure approximately 1,400 feet and the Appleton tenant structure 880 feet north of the Appleton Site (7NC-F-70; Figures 5 and 13; Table 8). An aerial photograph of the area in 1937 depicted one of these sites across Route 896 from the triangle of land created by a woodline and a branch of Crystal Run that surrounds the Griffith Site (Plate 1). It was concluded, based on comparisons between aerial photo measurements and Beers' measurements, that this farm was the location of the Porter structure depicted on Beers and Hopkins. The Appleton tenant structure would have been located approximately 520 feet south of the Porter farm depicted on the 1937 aerial photograph (Plate 1). Casing 3 was located approximately 1,800 feet north of County Road 415 and the J. Appleton Site (7NC-F-70) and approximately 400 feet north of the Porter Site.

Phase I testing consisted of the excavation of 26 shovel test pits within the casing and M and R right-of-way (Figure 32). Stratigraphic profiles of the shovel test pits revealed that a gray brown loam mottled with orange clay modern fill, measuring from 0.9 to 1.5 feet in depth, overlaid the entire project area, except for a small area along the grassy ditch of Route 896 (Figures 32 and 33). Typical artifacts excavated from the modern fill layer included plastic, rubber, molded bottle glass, window glass, milk glass, brick fragments, unidentifiable nails and metal fragments, oyster shell fragments, one 1967 dime, and fragments of redware, whiteware, pearlware, and ironstone ceramics. Shovel Test Pits 1, N60 W10, and N70 W10 contained one modern brown bottle glass fragment, one unidentifiable glass fragment, two whiteware ceramic fragments, and one unidentifiable nail in a normal brown loam plow zone (Figure 34).

TABLE 8

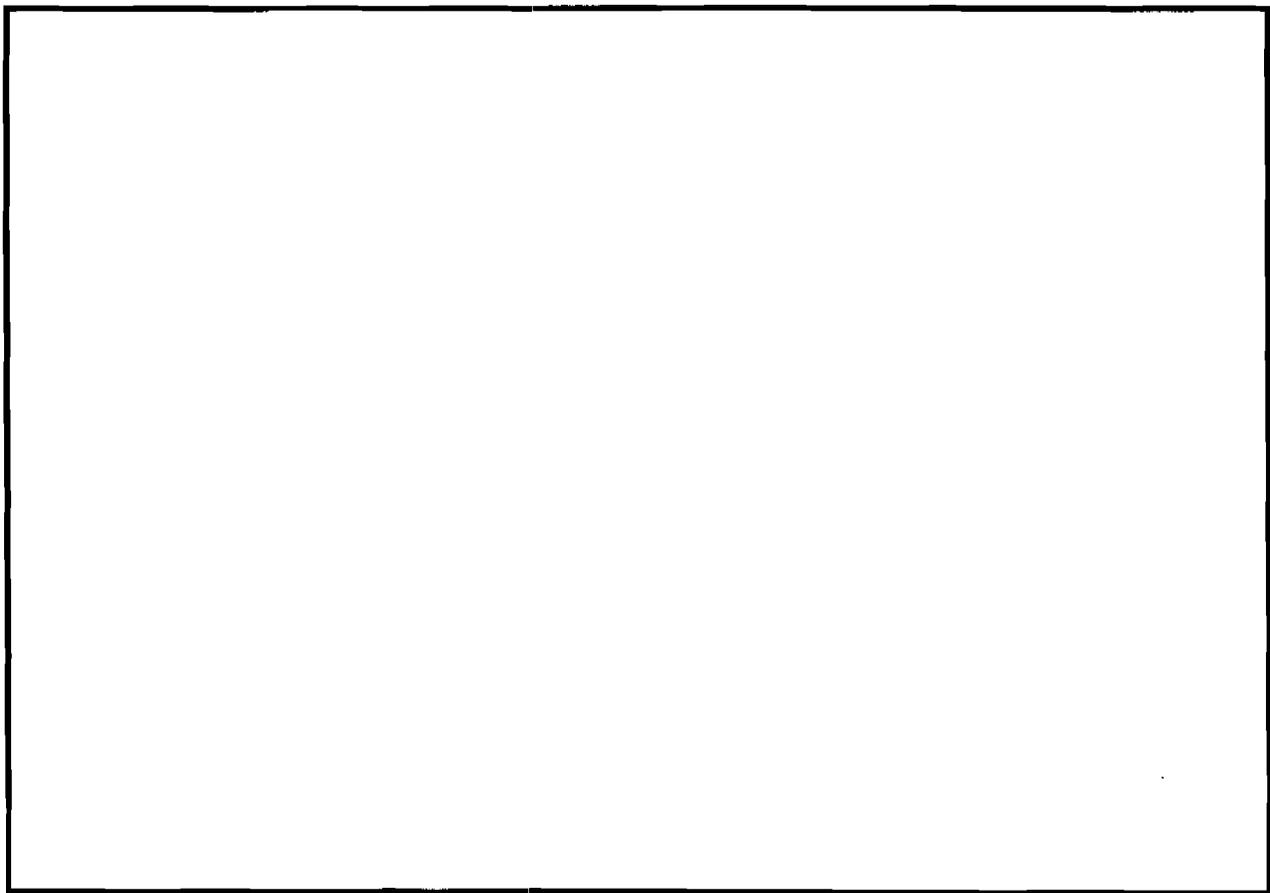
Distance to the Appleton Tenant and R. Porter Sites and Casing 3 West from the Appleton Site (7NC-F-70)

| Distance | From | To |
|-----------------|-----------------------------|----------------------|
| 880 feet north | J. Appleton Site (7NC-F-70) | Appleton Tenant Site |
| 1400 feet north | J. Appleton Site (7NC-F-70) | R. Porter Site |
| 1800 feet north | J. Appleton Site (7NC-F-70) | Casing 3 West |
| 1780 feet north | J. Appleton Site (7NC-F-70) | M and R Station |

Based on Beers 1868 Atlas

PLATE 6

M and R Station, North Wall Profile of Test Unit 5, Showing Buried Plow Zone

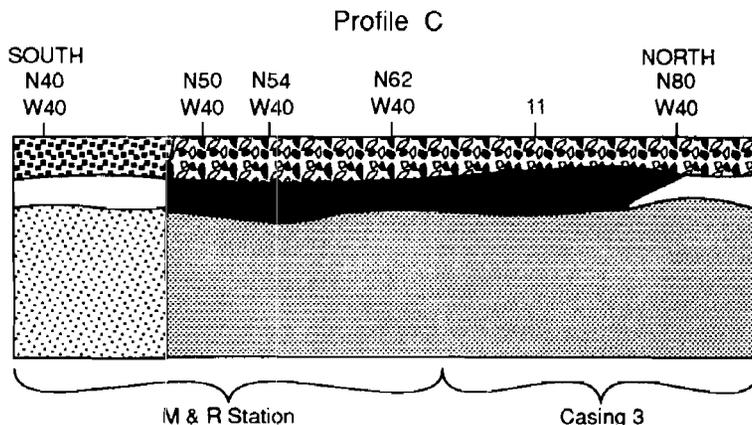
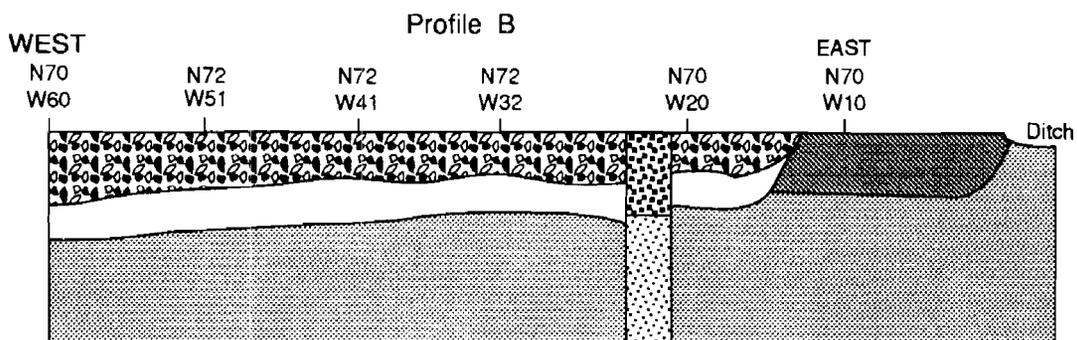
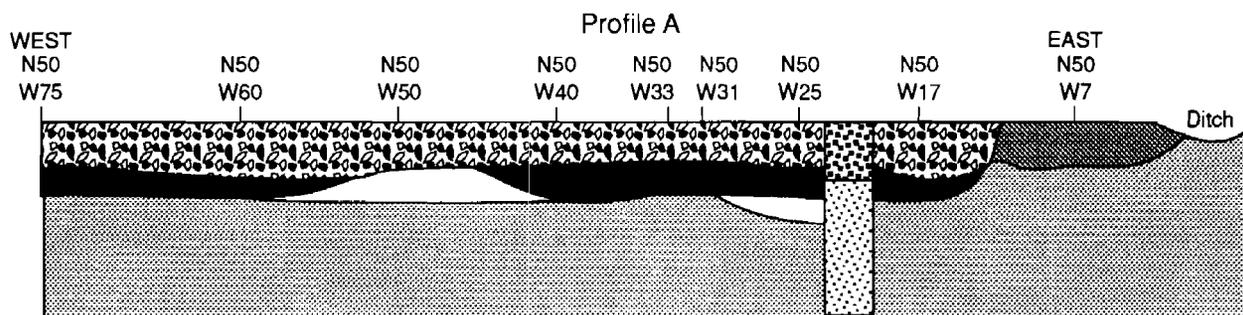


The depth of the buried plow zone ranged from 0.4 to 1.0 feet below the base of the modern fill level, extending at least 2.0 feet below ground surface (Figure 33; Plate 6). The buried plow zone consisted of a gray brown loam with the color ranging from light to medium to dark gray brown loam.

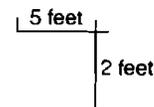
Both dark and light gray brown soil were very compacted and contained iron oxide concretions, typically found in areas that retained water for extended periods of time. Some shovel test pits contained only the dark loam, while others contained both light and dark soils (Figure 33). Artifacts recovered from the two types of buried plow zone did not seem to vary. Typical artifacts, ranging in date from 1805 to 1885, recovered from the buried plow zone included blown and molded bottle glass, molded jar glass, milk glass, window, table and lamp glass, wire nails, a cut spike, slag, fragments of brick, oyster shell, and unidentifiable metal, tobacco pipe and bowl fragments, ironstone, redware, yellowware, whiteware, pearlware and unidentifiable earthenware ceramic fragments. No cultural features were identified during the Phase I testing procedure.

FIGURE 33

Soil Stratigraphy of Casing 3 West and M & R Station



-  - Buried plow zone, dark gray-brown loam
-  - Buried plow zone, light gray-brown loam
-  - Yellow-brown silty loam subsoil
-  - Orange sand (pipe trench fill)
-  - Gray-brown loam mottled with orange clay with crush and run and macadam fill
-  - Gray and orange mottled sandy loam (pipe trench fill)
-  - Normal plow zone, brown loam



*Vertical exaggeration

In order to determine the extent of the buried plow zone soils and to identify any possible intact cultural features, Phase II testing was conducted. Nineteen additional shovel test pits and six test units were excavated within Casing 3 West and the M and R station. A four-foot wide linear orange sandy soil extending north/south along the eastern edge of the ESNG Pipeline right-of-way and a large extension to the west was identified on the ground surface (Figure 32). A metal "Valvco" gas cover was located at N74 W22 and at N43 W28 within the sandy soil. This area was disturbed by the pipe trench as evident in Shovel Test Pit N40 W40 and in Test Unit 1 (Figure 33). The soil profile of the north wall of Test Unit 1 indicated that the modern fill was 1.1 feet deep and the buried plow zone graded from dark gray brown loam into a light gray brown loam. Thirty-one artifacts were recovered from both levels of the buried plow zone including window and molded bottle glass, shoe leather, and fragments of redware and whiteware ceramics. There were no indications of intact cultural features below the plow zone of Test Unit 1.

Test Unit 2 and Test Unit 3 were excavated within the western Casing 3 area (Figure 32). Test Unit 2 soil profile indicated that the buried plow zone consisted of the light gray brown loam and contained 21 historical artifacts (Figure 34), including window, lamp and molded bottle glass fragments, unidentified nails and metal fragments, brick fragments, and fragments of tobacco pipe stem and bowl, whiteware, redware and stoneware. No cultural features were present at the base of the plow zone in Test Unit 2. Test Unit 3 soil profile was similar to Test Unit 1 in that the buried plow zone graded from dark gray brown loam to the light gray brown loam. Seventeen artifacts were excavated from the buried plow zone, including window and molded bottle glass, unidentifiable nails and metal fragments, and fragments of oyster shell and whiteware (Figure 34). No cultural features were exposed at the base of the plow zone in Test Unit 3.

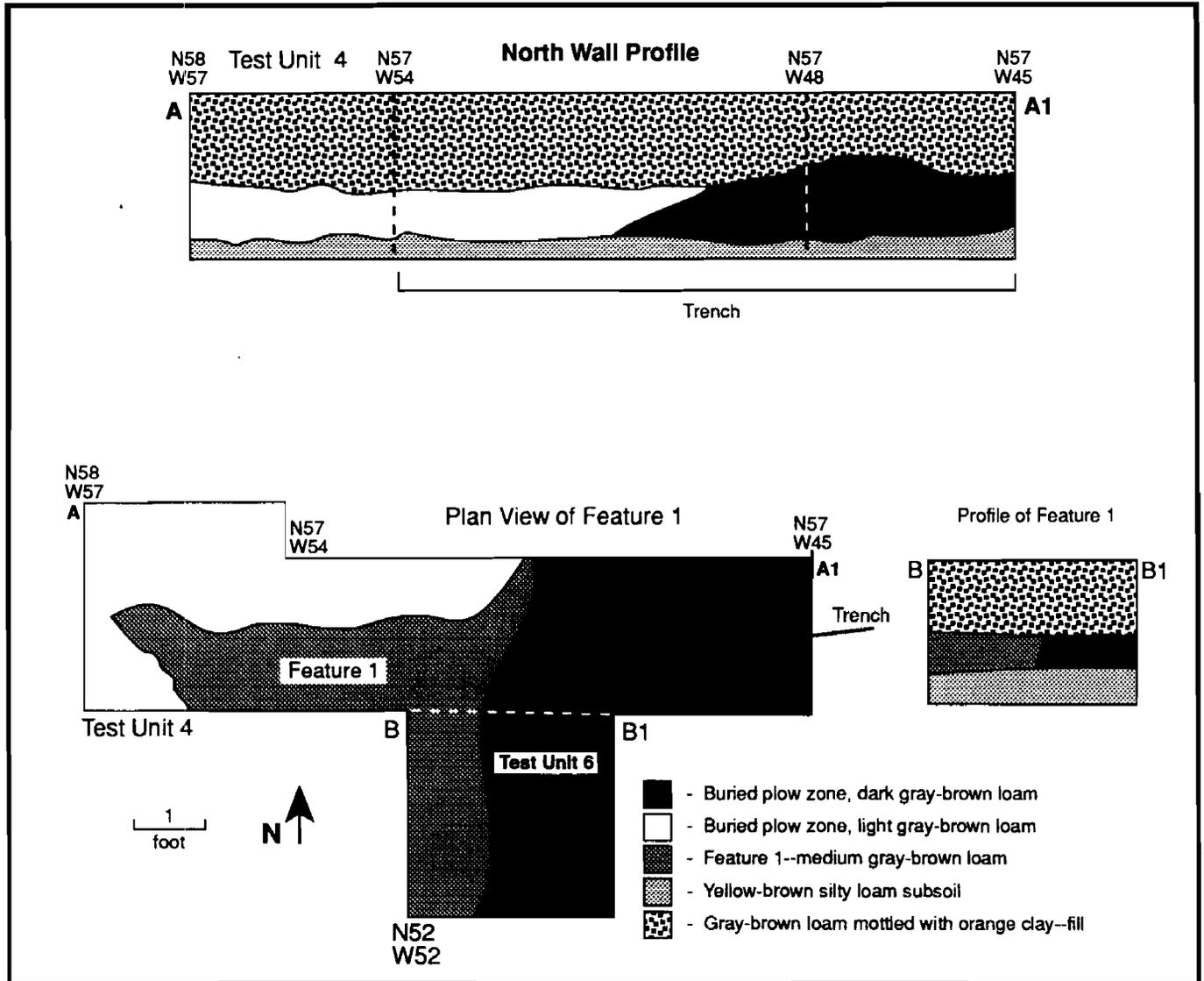
Test Unit 5 was located in the center of the dark gray brown buried plow zone area within the M and R station (Figure 33). The buried plow zone extended from 1.0 to 2.0 feet below ground surface and consisted of dark gray brown loam. The first six inches of this horizon contained 25 artifacts, including window, serving, molded bottle and jar glass, unidentifiable nail and metal fragments, whiteware and yellowware ceramic fragments. The remainder of the buried plow zone contained 18 artifacts, including molded bottle glass, milk glass, unidentifiable nails and metal fragments, a brass lamp fragment, and pearlware and unidentifiable refined earthenware ceramic fragments. No cultural features were identified in Test Unit 5.

Test Unit 4 was excavated within the extended M and R station area (Figure 32). A possible cultural feature (Feature 1) was identified in the light gray brown buried plow zone, below the modern fill level. The modern fill contained 10 artifacts including a 1967 dime and the buried plow zone contained 35 artifacts including molded container glass, window glass, unidentifiable nails, a spike, brick fragments, whiteware, redware, and pearlware. Feature 1 soil consisted of a medium gray brown loam and was amorphous in shape. A trench was excavated to the east of Test Unit 4 to expose Feature 1 and the disturbed plow zone soil within the trench was not screened (Figures 32 and 35). When following the linear stain of the feature soil, the soil color graded from the medium gray brown loam to the dark brown loam present in Test Unit 1, Test Unit 5 and 13 of the shovel test pits (Figures 33 and 35). The north wall profile of the trench clearly shows where the light gray brown soil horizon ends (Figure 35). Feature 1 soil was slightly lighter in color than the dark gray brown loam found in the east half of the trench.

Test Unit 6 was excavated on the southern edge of the trench at the soil transition area, in an attempt to further define Feature 1 and the changing soils. The buried plow zone of this unit contained seven artifacts including redware, pearlware, molded bottle glass, lamp and window glass, asbestos tile, and unidentifiable metal.

A north/south linear stain (Feature 1) was identified in Test Unit 6 at the base of the fill level. The west half of Feature 1 consisted of the medium gray brown soil and the east half contained dark gray brown loam. Each was excavated separately. Feature 1 contained seven artifacts, including tumbler, bottle, and window glass, one unidentifiable nail, one redware fragment and one burned vinyl record fragment. The east half contained one molded bottle glass fragment, one unidentifiable metal fragment, one redware and one finger-painted pearlware ceramic fragment. A clear line between Feature 1 soil and the dark gray brown loam soil was present on the surface of the buried plow zone, but there was no clear soil color change as the feature excavation progressed (Figure 35). Feature 1 did not seem to be a structural feature, but rather just a different colored buried plow zone. It was possible that this area could have been a trash disposal area utilized by the inhabitants of the Porter house located approximately 400 feet to the south. This area most likely contained periods of standing water, based on the iron concretions present within the buried plow zone. It was possible that when Summit Aviation covered this entire area with 1.0

FIGURE 35
 North Wall Profile of Test Unit 4 and Trench,
 and Plan View and Profile of Feature 1



foot of fill, the previously exposed plow zone could have been churned up by the machinery used in the process, thus creating the different buried plow zone soil colors. Soil profiles in selected areas of the casing and station depict the changing soil horizons (Figures 33 and 35).

Over 150 artifacts were recovered from the modern fill level of all six test units and 45 shovel test pits. Over 230 artifacts were recovered from the buried plow zone levels of the various test units and shovel test pits and Figure 35 shows their distribution.

Although artifacts dating from the same time period as the R. Porter Site occupation were recovered from Casing 3 West and the M and R station, they were recovered from the disturbed contexts of the modern fill level and the buried plow zone. The R. Porter Site was located 400 feet south of Casing 3 West and the M and R station, therefore outside of the construction right-of-way. Only one subsurface feature was identified during Phase I testing and it may not be cultural. Due to the disturbed nature of this area and the lack of historically significant subsurface cultural features, no further archaeological work in Casing 3 West and the M and R station is recommended.

Richard Griffith Site Area B (7NC-F-71B). Construction of the Route 896 shoulder along the north-bound lanes created a large top soil spoils pile within the ESNG pipeline right-of-way, thus limiting the archaeological testing scheme. Phase I testing within Segment 6 consisted of the excavation of a series of shovel test pits at 40-foot intervals along the eastern edge of the ESNG right-of-way (Figure 31). A total of 29 historic and two prehistoric artifacts were recovered from 33 shovel test pits. The distribution of artifacts is shown in Figure 31. Shovel Test Pits 177 - 183 contained a higher artifact count compared to other shovel test pits in the area, therefore 12 additional shovel test pits were excavated to the east and one prehistoric and 10 historical artifacts were recovered (Figure 31). A jasper projectile point associated with the Woodland I Period, along with one fragment of white granite ceramic and one oyster shell fragment, was recovered from the plow zone of Shovel Test Pit 195.

Limited Phase II testing was undertaken in an area containing a slightly elevated artifact density, between the woodline and Casing 3 East (Figure 31). A surface scatter of historical domestic artifacts, including American redware, American salt-glazed stoneware, whiteware, molded and machine bottle glass, window glass, and brick fragments was identified in this area prior to the Route 896 shoulder construction. However, during the Phase I and II testing of Segment 6, the corn field had a low surface visibility and the majority of the pipeline right-of-way was obscured by a large spoils pile created by road construction.

The plow zone in this area was approximately 0.8 feet deep and consisted of gray brown sandy loam. The excavation of the plow zone of the seven test units recovered over 250 historical artifacts including machine and molded container glass, window glass, milk glass, white granite stoneware, whiteware, yellowware, redware, American redware, salt-glazed stoneware, pearlware, and creamware ceramic fragments, brick, mortar, kaolin clay pipe stems, a porcelain doll head, cut and unidentifiable nails, oyster shell, and slag (Figure 36).

Five possible cultural features were identified in four test units (Figures 36 and 37). Feature 1 was located at the base of the plow zone in Test Unit 5 and consisted of a yellow brown sand mixed with gray sandy loam that extended only 0.3 feet into the subsoil. No cultural material was recovered from Feature 1 upon excavation of the feature.

Four historical post features were identified during the Phase II testing and one was excavated (Figure 38). Feature 5 was the remains of an oval post located in Test Unit 5 that measured 0.4 x 0.5 feet and extended 0.3 feet into the subsoil. No cultural material was recovered from the feature. Feature 4, located in Test Unit 6 (Figures 36 and 37), was the remains of a square post that measured 0.8 x 0.8 feet, but was left in situ. Features 2 and 3 were unexcavated possible post features located at the base of Test Unit 3 (Figure 37).

Although no cultural features were located in Test Units 19 and 21, the plow zone of these units contained large quantities of historical cultural material. Test Unit 19 contained 93 artifacts including window glass, molded, pressed, and machine made container glass, brick, unidentifiable metal fragments, and salt-glazed stoneware, whiteware, white granite stoneware, American redware, and pearlware ceramic fragments. Test Unit 21 contained 52 artifacts within the plow zone consisting of types similar to those artifacts recovered from Test Unit 19.

A series of shovel test pits were excavated north of Test Unit 19 to determine site limits. Artifact distributions of Shovel Test Pits A through M are presented in Figure 31. No subsurface features were encountered. Northern site limits are between Test Unit 7 and Casing 3 East. The very low density of artifacts recovered from the plow zone and the absence of subsurface features or artifacts suggests that Casing 3 East is outside the site limits. Shovel test pits excavated north of this casing contained no cultural material. Eastern site limits are east of Shovel Test Pits K, L, and M; however this area is more than 100 feet beyond the limits of pipeline impact. Western site limits do extend into the pipeline right-of-way, but the construction-related spoils pile blocked access to the area.

There was no indication of a potential historic site in this area based on the Route 301 planning survey (Kellogg 1993a). The Richard Griffith Site Area A, located in Segment 5 - 200 feet south of the woodline separating Segments 5 and 6, was predicted by Kellogg (1993a) and was found archaeologically during this pipeline survey. Latrobe (1803) depicts the property lines of the Richard Griffith holdings (Figure 12). The structure depicted on the map is the location of the Richard Griffith Site Area A. A small triangular-shaped section of land, north of a branch of Crystal Run, abuts present-day Route 896 and is the approximate location of the woodline separating Segments 5 and 6. The archaeological site identified within Segment 6 is probably located within this section of Griffith land, therefore the site identified within Segment 6 is probably associated with Richard Griffith or Samuel Rothwell and will be referred to as the Richard Griffith Site Area B (7NC-F-71B).

The post features identified during the Phase II testing of the Richard Griffith Site Area B did not seem to be structurally related, but could possibly represent the remains of fence posts. However, the high quantity of domestic and architectural artifacts in the disturbed plow zone indicates the probability of domestic occupation within this area. The mix of diagnostic artifacts, such as creamware, pearlware, whiteware and white granite stoneware ceramics suggests an early-to-late nineteenth century time period of site occupation or use. No artifacts were recovered from intact deposits. It is possible that this area was used as a trash disposal area during the Richard Griffith and the later Samuel Rothwell occupation of the Richard Griffith Site Area A located 120 feet south.

A transaction between Ebenezer Rothwell and Samuel H. Rothwell in 1833 mentions a five-acre parcel on which “a brick house, outhouses” and other improvements were set aside for Rachel Rothwell as “her dower” (N.C.C. Deed R-4-186 - Table 6). The meets and bounds listed within the deed were vague, but the property was bounded by the lands of Samuel H. Rothwell, the Public Road (present-day Route 896), and the lands of Ephraim Beaton. The

majority of the artifacts recovered from the plow zone of the Richard Griffith Site Area B consisted of mid-to-late nineteenth century ceramic fragments (whiteware, white granite stoneware, and yellowware) and large pieces of brick observed within the site area and suggests that the Richard Griffith Site Area B may be the location of Rachel Rothwell's dower house.

None of the historical maps, Beers' (Figure 5), Rea and Price, Hopkins' (Figure 13), and the 1906 Wilmington Quadrangle depict two dwellings on the Rothwell property. No structural remains relating to the dower house were identified during the Phase II testing and no locational map of the dower property was found during the archival research; therefore it cannot be said with certainty that the cultural resources identified within the Richard Griffith Site Area B are associated with the Rothwell dower house or if they represent the remains of a trash disposal area associated with the Richard Griffith/Rothwell Agricultural Complex. If the cultural resources located within the site are indeed a trash disposal area associated with Area A of the Richard Griffith Site, then these resources would reflect the activities of the residents of the complex. Features, soil chemicals, material cultural assemblages, and faunal remains within Area B could provide information on land use and dietary patterns as recommended by the State Plan (De Cunzo and Catts 1990). The cultural resources contained in the Richard Griffith Site Area B are considered to be historically significant and the site is considered to be eligible for listing on the National Register of Historic Places under criterion D.

Phase I and II testing of the Richard Griffith Site Area B identified cultural features below the plow zone and a high density of early-to-late nineteenth century domestic and architectural artifacts within the plow zone located outside the direct impact of the ESNG pipeline construction. The western portion of the site was located within the pipeline right-of-way; however, the integrity of this portion of the site was compromised by the shoulder construction of Route 896. Topsoil from other construction areas was brought into Segment 6 and piled within the ESNG Pipeline right-of-way. Heavy machinery removed the topsoil pile, but gouged out portions of the underlying soil. The low area created by the machines now retains water and cannot be subjected to archaeological testing. Even if this area were to dry out, debris from other areas of construction were displaced into this area, compromising the integrity of the portion of the Richard Griffith Site Area B that is within the pipeline right-of-way. No further archaeological work is recommended within the proposed pipeline right-of-way. It must be noted that significant cultural resources related to the Richard Griffith Site Area A are located just outside the direct impact of the proposed pipeline right-of-way. The undisturbed portion of the Richard Griffith Site Area B is part of an agricultural complex that has yielded and is likely to yield additional information relating to the Rothwell occupation of the Richard Griffith Site Area A and as such, should be protected and remain undisturbed during construction of the proposed pipeline.