

III. Research Design

A. Research Objectives

The research objective for Archaeological Identification and Evaluation Survey was to identify all properties within the APE that are eligible for listing in the National Register of Historic Places. An evaluation of the Cauffiel Estate was the main objective for the Architectural Evaluation Survey.

DNREC has prepared a *Historic Preservation Planning Survey, Cauffiel and Volpe Properties, Brandywine Hundred, New Castle County, Delaware* (Blume 1991). In addition, Michael Scholl and Cara Lee Blume developed a proposal for Phase I and Phase II Archaeological Excavations for the Cauffiel-Volpe-Hessler tract (1993), which is the Cauffiel tract as discussed in this document. Scholl and Blume indicate that resources located on the tract could include archaeological remains associated with prehistoric occupations, a seventeenth century Swedish farmstead and/or mill, an eighteenth century log house, a nineteenth century agricultural complex, and an early twentieth century residence. They noted that areas along the Delaware River have a moderate to high probability for prehistoric archaeological sites. They also stressed the possibility that the archaeological remains of a Swedish settlement, as discussed previously, could exist on the tract.

The potential for prehistoric sites within the APE for this project was evaluated using information on site locations provided in *A Management Plan for Delaware's Prehistoric Cultural Resources* (Custer 1986). Known sites dating to the Paleoindian period in northern Delaware are most heavily concentrated near primary sources of high-quality cryptocrystalline lithic material (e.g. the Delaware Chalcedony Complex) located to the west of the current APE (Custer 1986: Figure 5). The APE is subsumed under "Paleo-Study Unit II", which is hypothesized to contain non-quarry sites related to the Delaware Chalcedony Complex (Custer 1986: Figure 8). Due to its distance from these lithic sources, base camp settlements are not predicted for the APE, although hunting sites are a possible resource type, particularly if the wetland adjacent to the APE was in place during the Late Glacial/Early Holocene transition (Custer 1986: Table 5).

For the Archaic period, the APE falls within "Archaic Study Unit I, Piedmont Uplands" (Custer 1986: Figure 14). Resource procurement sites are predicted in proximity to the swampy floodplains of low order streams during this period, while micro-and macro-band camps appear to be associated with terrace positions near higher-order streams or extensive swamps. The former setting best approximates the current APE, and an Archaic period procurement camp may be expected. It is important to note, however, that functional site types for both the Paleoindian and Archaic periods are based on surface collections; there are no intact, excavated examples of "macro-band", "micro-band", or "procurement" sites or any of the hypothesized Paleoindian site types in the Delmarva Peninsula (Custer 1989:93, 127-128). The proposed settlement patterns are based on those developed elsewhere in the Middle Atlantic region and the likely locations of any given site type are predicted primarily by inferred prehistoric resource potentials. This caveat is necessary because our understanding of prehistoric resource distributions, particularly those of the Late Glacial and Early Holocene, are imperfect and subject to change.

By Woodland I, the rate of sea level rise associated with final deglaciation had slowed to the point where more stable estuarine environments had developed in the lower Delaware drainage. This would have likely increased aquatic resource potentials near the APE and resulted in a landscape position that was more river-proximal than had been the case during earlier times. For the Woodland I period, the APE is contained in the "Delaware River Shore Zone Study Unit" (Custer 1986: Figure 26). However, Custer (1986:118) notes that there is little change from Archaic period site locations in the northern portion of this zone. Resource procurement sites are predicted, however, data quality is assessed as poor (Custer 1986: Table 12), so there is some potential for more functionally diverse sites within the APE. For the Woodland II period, the APE is included in the "Piedmont Zone Study Unit" (Custer 1986: Figure 31). Based on the landscape position of the APE adjacent to a low-order stream, resource procurement sites of the Woodland II period might be expected (Custer 1986: Table 15). However, inclusion of this area within a settlement pattern model/Study Unit developed for the Piedmont Uplands may be premature when elevated aquatic and wetland resource potentials associated with the nearby Delaware River are taken into account. Both macro- and micro-band camps may have been situated in settings similar to that of the APE to take advantage of wetland/tidal flat resources, anadromous fish runs, and wintering areas along the Atlantic flyway. Based on site location predictions contained in *A Management Plan for Delaware's Prehistoric Cultural Resources* (Custer 1986), small, resource procurement-related sites from all prehistoric periods are likely to be present within the APE, with some potential for more functionally diverse site types during the Woodland I and II periods.

Since the Cauffiel Tract has been occupied since the mid to late seventeenth century, archaeological and/or architectural properties have the potential to be significant in every historic period identified in the *Delaware Comprehensive Historic Preservation Plan* (Ames *et al.* 1989). These periods include Exploration and Frontier Settlement (1630-1730), Intensified and Durable Occupation (1730-1770), Transformation from Colony to State (1770-1830), Industrialization and Capitalization (1830 to 1880), and Urbanization and Suburbanization (1880-1940). Lu Ann De Cunzo and Wade Catts have prepared a *Management Plan for Delaware's Historic Archaeological Resources* (1990). The *Plan* outlines the property types that might be associated with each of the historic periods in different settings. The Cauffiel Tract is located on the Piedmont, and several different research contexts, including domestic economy; manufacturing and trade; landscape; and social identity, behavior, and interaction are proposed in the *Plan*. These contexts combined with the history of the Cauffiel property were used to predict the types of archaeological sites that might be present on the property during each of the historic periods. Scholl and Blume have discussed the potential for historic archaeological resources on the Cauffiel Tract in greater detail (1993).

During the Exploration and Frontier Settlement Period a Swedish settlement was located on the Cauffiel Tract, which was referred to as Vertrecht Hook. In 1673 a land grant was issued to Olie Franson, Niels Nielson, and Marcus Laurenson. It appears that the mill was constructed by 1675, as a land transfer in that year states "...of Stony Creek and the mill which they have built..." It appears that the mill was located on the south side of Stony Creek on the Cauffiel Tract (Scholl and Blume 1993). This was a volatile time in this region, as the region changed hands between the English and the Dutch several times. Most of the farmers in this region were growing tobacco, rye, and barley on

a subsistence basis. By the first quarter of the eighteenth century, agriculture had become more market based, producing wheat for export (Ames *et al.* 1989).

De Cunzo and Catts note that two of the types historic archaeological resources associated with the Exploration and Frontier Period are Swedish and Dutch farmsteads and grist and saw mills (1990). These resources, if identified, could be significant in the domestic economy and manufacturing and trade contexts. Although the archaeological resources of the mill itself, if they still exist, are most likely out side of the archaeological APE for this project, other Swedish buildings for which no records exist could be located in the southern portion of the APE.

Thomas Cartmell acquired the property in 1725, and it was owned by his family throughout the Intensified and Durable Occupation and Transformation from Colony to State Periods and into the Industrialization and Capitalization Period. During the Intensified and Durable Occupation a large number of immigrants arrived in area along the Delaware River, particularly in Philadelphia and Wilmington. Wilmington was chartered in 1739 and became the largest and most important urban center in the area. Local agricultural produce was transported to Wilmington for shipment on the Delaware River. Agriculture was the primary occupation for 80-90% of the population of the region. Wheat continued to be the most important grain, and livestock production for exportation was also a significant part of the economy (Ames *et al.* 1989). Producing fruit for commercial markets also became more popular during this period. Thomas Cartmell died in 1759 and his will indicates that there is an orchard on the property. It is likely that Cartmell and his family lived on the property and constructed a residence and numerous farm and outbuildings. The first documentation of an extant log house on the property is in 1789, when Cartmell's daughter Sarah Brooks, died. Her will notes a log house. It is unknown exactly what other buildings existed on the property during this period.

George Cartmell, the son of Sarah Brooks nephew, inherited the house when she died on February 12, 1789. During the Transformation from Colony to State Period, and particularly after the American Revolution, soil exhaustion from mono-cropping, along with other factors, caused a decline in the agricultural economy of the region. However, in the Wilmington area there was a rapid growth of industrialization and urbanization (Ames *et al.* 1989). Other than the log house owned by Sarah Brooks, it is not known what buildings were on the Cauffiel Tract during this period.

The Industrialization and Capitalization Period in the Wilmington and Piedmont region of Delaware witnessed tremendous growth in population, industrialization, and urbanization. In addition, agriculture again became an important economic factor as modern agricultural techniques and technology grew to be popular. Baltimore became an important market for the region, shifting some of the focus away from Philadelphia (Ames *et al.* 1989). The first map depicting buildings on the property is the 1849 New Castle County Atlas (**Figure 6**). There is a cluster of four buildings immediately to the south of the intersection of Philadelphia Pike and Stoney Run. The area is referred to as "Quarryville". One of these four buildings is the Sarah Brooks Log House, another is probably the residence/office building that still exists on the property, and the other two were probably out buildings that were no longer extant.

The majority of the buildings that currently exist on the Cauffiel Tract were constructed during the Urbanization and Suburbanization Period. Almost all of the industrialization and commercialization in Delaware was concentrated in the Piedmont, where Wilmington is the most important center. Charles Lore acquired the portion of the property where the Cauffiel House stands today as part of a sheriff's sale in 1876. The 1893 Atlas of New Castle County (*Figure 8*) shows three buildings in the area where the Cauffiel House is located. As mentioned earlier, most of the buildings currently located on the Cauffiel Tract were constructed during Lore's ownership of the property. These include the Pennsylvania Barn, the tenant house, the pump house, the carriage house, and the chicken coup. A Victorian house was also constructed; however it was moved in 1928 when the current house was constructed.

Farmsteads and other domestic sites where residents were involved in on-site manufacturing and trade are property types dating to all the historic periods that are likely to be present on the Piedmont (De Cunzo and Catts 1990). It is known the farmstead was occupied on the Cauffiel tract throughout the history of the property, and nascent industries, related to orchards and other agricultural industries, were occurring on the property.

Three archaeological resources, 7NC-C-12A (Stoney Run Site Locus A), 7NC-C-12B (Stoney Run Site Locus B), and 7NC-C-13 (Sarah Brooks House Site) were known to exist on the Cauffiel Estate. The Archaeological Identification and Evaluation Survey was designed to identify any additional archaeological resources within the APE and to determine if the portions of the known resources within the APE had the potential for contributing significant information in prehistory or history.

B. Architectural Survey Field Methods

An Evaluation level survey was conducted for the Cauffiel Estate. An Evaluation level survey, applied to architectural resources, involves detailed descriptions of buildings, boundary determinations, and photographs. Evaluation level surveys also require sufficient research and documentation to place the resources within their appropriate historic context, as discussed in *Guidelines for Architectural and Archaeological Surveys in Delaware* (Delaware State Historic Preservation Office 1993). The survey for the Cauffiel Estate included a thorough search of primary and secondary historic research sources. Information was obtained from the Delaware State Archives in Dover including land grants, wills, historic atlases, aerial photographs, and maps. Extensive research was also conducted at the Hagley Library. Pierre S. DuPont of the DuPont Company founded the Hagley Library, near Wilmington. The DuPont Company employed Daniel Cauffiel as Real Estate Officer. Therefore, there was significant information on Cauffiel's life and career in the form of business and personal letters, purchase orders for items used on the estate, and related material. Deeds were searched at the New Castle County Deed Recorder's Office, in Wilmington. Deeds from as early as 1673 indicate that Swedish settlers owned the Cauffiel estate and that a mill existed on the south side of Stoney Creek. Research conducted at the American Swedish Historical Museum in Philadelphia concentrated on early Swedish colonial architecture and on Swedish mill construction techniques.

Background research gave insights into the various time periods in which the historic resources on the Cauffiel Estate were constructed. This was useful in evaluating the architectural resources within the region, contexts, and themes set forth in the *Delaware Comprehensive Historic Preservation Plan*. Upon completion of the historic research, an architectural survey of the Cauffiel Estate was conducted. This included taking black and white photographs of buildings, outbuildings, and structures on the estate. The photographs included gate posts, fences, stone walls and other small landscape features on the estate. Observational field notes were taken at the time of the photographic survey including the material used in construction, and the size and shapes of buildings. Sketch site plans also were drawn in the field. Final site plans included all known historic, architectural, archaeological and cultural resources on the Cauffiel Estate (**Figure 10**). Final site plans were based on digital GIS files to ensure the accuracy of the boundaries of the property.

All of the architectural resources were identified in terms of their style. Sources used to identify the resources include Virginia and Lee McAlester's *A Field Guide to American Houses*, which is a good reference for identifying architectural styles of ordinary houses as opposed to high style buildings. *Identifying American Architecture* by Blumenson was also used for describing various architectural details of the buildings. Since the Sarah Brooks house on the Cauffiel Estate may be of late seventeenth or eighteenth century origin, Morrison's *Early American Architecture* was consulted as a reference. For houses of Swedish origin, Amandus Johnson's *Swedish Settlements on the Delaware* contains descriptions of early Swedish house types. Folk houses and other buildings on the Cauffiel Estate were identified using Henry Glassie's *Pattern in the Material Folk Culture of the Eastern United States*. Glassie's book was used as a source of information on I-houses, log construction, and barns and outbuildings. Robert Ensminger's *The Pennsylvania Barn* was useful as a reference in describing the Pennsylvania Barn on the Cauffiel Estate. Previous surveys of the Cauffiel Estate, and of the William DuPont Estate (Bellevue State Park), conducted by the Delaware State Historic Preservation Office were also consulted.

Once the background research, field survey, and analysis was completed, a National Register of Historic Places nomination form was completed (**Appendix B**).

C. Archaeological Survey Field Methods

1. Previous Archaeological Investigations

Several archaeological surveys were previously conducted by DNREC on the Cauffiel tract, both within and outside of the APE for the proposed project (**Figure 11**).

The first archaeological survey of the Cauffiel tract was conducted June 17-18, 1995 by DNREC with the help of the Delaware Time Travelers, as part of the Cultural Heritage Program's public outreach component. Twenty-eight shovel test pits (STPs) and one 1x1 meter test unit (TU) were excavated on the lower terrace of the Cauffiel Tract during this survey. Both historic and prehistoric artifacts were recovered, and several fairly large stones were identified. The stones were interpreted as a potential dry-laid stone footing and associated builders' trench (Clark 1995). The site was designated 7NC-C-12A; a portion of the site is located within the APE for this project.

Additional archaeological testing took place within 7NC-C-12A during the fall of 1995, the spring and fall of 1996, and the spring of 1997. In the fall of 1995, an additional twenty-five STPs and four 1x1 meter units were excavated within the site. Three of the units were excavated in a block (Block E) around the potential dry-laid stone footing and associated builders' trench. Prehistoric artifacts were also recovered, and included Mingaunon ceramics, which are associated with the Woodland II Period (Clark 1996).

In 1996 eight additional STPs and 13 additional 1x1 meter test units were excavated. Seven of the test units were excavated in Block G, which is outside of the APE (to the east) for the current project. The soils in Block G were previously disturbed; however, it was not possible to make interpretations concerning the nature of the disturbance; *i.e.* if they were caused by historic activity and were therefore potentially significant archaeological resources. A total of nine 1x1 meter test units, known as Block E, were excavated to explore the potential dry-laid stone footing and associated builder's trench (Corbett and Clark 1997). The Block E excavations are within the APE for the Cauffiel Connector Project.

In 1997, an additional unit (N161 E301) that contained a sub-surface feature was excavated within the site. Excavation of the feature demonstrated that it was a square posthole. Artifacts recovered from the unit included prehistoric artifacts as well as coal. A shallow trench feature was identified in an adjacent unit (N160 E301). Possible interpretations were that the trench was for an early earth fast structure and the posthole was a later post associated with the structure. Corbett and Clark speculated that this could be the remains of a seventeenth century Swedish structure, as the later English construction techniques did not normally include earth fast structures (1997). These units are not within the APE for the current project; they are located to the west of the proposed road alignment.

Archaeological testing was completed by DNREC for the Delaware Aquatic Center's overflow parking lot and entrance road. The overflow parking lot is located within two hundred feet of the Sarah Brooks House, an eighteenth century stone and log house determined during this survey to be eligible for listing on the National Register of Historic Places as part of the Cauffiel Estate. A total of 85 STPs was excavated, followed by mechanical removal of the plowzone. Both prehistoric and historic artifacts were recovered from the excavation. Diagnostic artifacts included a contracting stem quartz point, cut nails, creamware, whiteware, and porcelain. The site was designated 7NC-C-13, the Sarah Brooks Site. The prehistoric component of the site was interpreted as a Woodland I procurement site. The low density of prehistoric artifacts and lack of features was noted. The historic component of the site was associated with the occupants of the Sarah Brooks House, which was constructed prior to 1789. No historic features were identified (Cheshaek 1996b). Because the topsoil was removed mechanically and no features were identified in the subsoil, there is no potential for additional archaeological resources within this area and no further testing is necessary.

DNREC also conducted an archaeological survey on the Cauffiel tract during the summer and fall of 1995 for the proposed Cauffiel Tract Bikeway that extends from Philadelphia Pike, along Stoney Run, and ends at Governor Printz Boulevard. One hundred and thirty-two STPs were excavated, as

well as thirteen 3x3 foot TUs (Cheshaek 1996a). The project was divided into four segments, three of which are within the APE for the current project.

Segment 1 was excavated near the Sarah Brooks House adjacent to the excavations summarized above for the Delaware Aquatic Center's overflow parking lot and entrance road. It appears that 28 STPs and one 3x3 foot test unit (TU 13) was excavated within Segment 1. Seven prehistoric artifacts and 159 historic artifacts were recovered during these excavations. The site is an extension of 7NC-C-13, the site identified during the Delaware Aquatic Center's overflow parking lot and entrance road (Cheshaek 1996a).

Segment 2 was located immediately to the south of the Sarah Brooks House and 7NC-C-13. This area had been disturbed during the summer of 1995 through landscaping activities. The plowzone had been mechanically removed and archaeologists examined the subsoil to determine if any cultural features were present. No features were identified. As with the excavations for the Delaware Aquatic Center's overflow parking lot and entrance road, because the plowzone had been removed and no subsurface features were identified, there is no remaining archaeological potential in this area (Cheshaek 1996a).

A portion of Segment 3 was located within the APE for the current project. Testing by DNREC within this area included the excavation of 103 STPs and twelve 3x3 foot test units. It appears that approximately 73 of the STPs and seven of the test units are within the APE for the Cauffiel Connector project. Although artifacts were recovered from most of these contexts, it was determined that the majority of them were deposited in slopewash, and so were no longer in their original context. One locus of artifacts was believed to have the potential to contain artifacts that might not have eroded into their current location. A concentration of prehistoric and historic artifacts was encountered near the northeastern boundary of the APE designated for the current project. One test unit, TU 2, was excavated in the locus of artifacts. Eleven prehistoric and 45 historic artifacts were recovered from eight levels within TU 2. The historic artifacts were recovered from every level; and the prehistoric artifacts were recovered from both Levels 1, the plowzone and 8, the level immediately above the subsoil. The locus was designated 7NC-C-12B. Additional archaeological testing was recommended at the site to determine whether there were any intact buried horizons (Cheshaek 1996a).

DNREC also performed excavations in 1996 on the Cauffiel tract that were entirely outside of the APE for the current project. During the excavations of the portion of Segment 3 for the bike path that are outside of the APE for the current project, a late nineteenth/early twentieth century dump was identified. The site was identified through the excavation of STPs and at that time three test units were excavated in the dump (Cheshaek 1996a). Additional excavations were completed at the dump during a later stage of testing to determine the eligibility of the dump site. Twenty additional STPs at 20 foot intervals were excavated during this next stage of testing. The conclusions of the investigations were that the dump site is not eligible for listing in the National Register of Historic Places (Cheshaek and Blume 1997).

No archaeological testing was conducted by MTA in areas that had been previously tested by DNREC. The entire portion of 7NC-C-13 within the current APE was previously investigated by DNREC for the Delaware Aquatic Center's overflow parking lot and entrance road (Cheshaek 1996b) and the proposed bike path (Cheshaek 1996a). The plowzone was mechanically stripped from the site and no features were identified. DNREC determined that this portion of the site does not have the potential to contribute significant information. During a field view held February 4, 1999, DNREC, DelDOT, and the SHPO agreed that no further archaeological testing is necessary at this site within the APE for this project (*Appendix C*). The portion of this site within the APE is a non-contributing resource to the National Register eligible Cauffiel Estate. MTA completed archaeological testing adjacent to the testing for Segment 3 for the bike path, but did retest the area previously tested.

2. Archaeological Identification Survey

The Archaeological Identification Survey was conducted by MTA in January and February, 1999. The archaeological APE is a corridor 30 meters (approximately 100 feet) wide extending approximately 580 meters (approximately 1900 feet) from Philadelphia Pike to the northwest and Governor Printz Boulevard to the southeast. The size of the archaeological APE is approximately 4.3 acres. *Figure 11* portrays the area of Cauffiel tract investigated by McCormick Taylor during the Identification Survey, in addition to the areas previously surveyed by DNREC as described in the previous section.

a. Geomorphological Evaluation Survey

Dr. Daniel P. Wagner performed a geomorphological evaluation of the APE on February 3, 1999 (*Appendix D*), while the Identification Survey was in progress. He examined several the profiles of several shovel test pits (STPs) and excavated auger borings at selected locations on each landform within the APE.

b. Archaeological Testing

The APE was tested with STPs, approximately 57 centimeters in diameter, at 15 meter (approximately 50 foot) intervals. Three transects of STPs were excavated: one at the centerline (Transect CL), one at the southwestern edge of the APE (Transect W) and one at the northeastern edge of the APE (Transect E) (*Figures 12, 12A, 12B, 12C, and 12D*). The northwestern and southeastern termini of the proposed project had been investigated by DNREC. Additional STPs were excavated at 7.5 meter (25 foot) intervals around some of the STPs from which artifacts were recovered to better define the boundaries of the artifact concentrations within the APE. Two 1x1 meter test units, one at 7NC-C-12B (*Figure 13*) and one at 7NC-C-12A (*Figure 14*), were excavated during the Identification Survey to assist in gaining a better understanding of the soil stratigraphy. Shovel test pits and test units were excavated according to natural strata. Within the TUs, natural strata were subdivided into arbitrary 10 centimeter levels in order to maintain vertical control of artifact distribution. Soil profiles were recorded and soil colors were described using a Munsell

Color Chart. All soils, except where noted, were screened through 1/4 inch hardware cloth and artifacts were bagged according to excavation unit, stratigraphic level, and feature when present.

c. Laboratory Analysis

All recovered artifacts were processed in accordance with the Delaware State Museum's *Curation Guidelines and Standards for Archaeological Collections*, 1997. The artifacts will be curated at the Grass Dale Center, Division of Parks and Recreation, DNREC.

3. Archaeological Evaluation Testing

A field view was held on February 4, 1999, during which time it was agreed that an Archaeological Evaluation Survey should be conducted for 7NC-C-12A and 7NC-C-12B. This fieldwork was completed in May and June of 1999.

a. 7NC-C-12B

Based on the results of the previous archaeological investigations, the size of the locus within the APE was estimated to be approximately 1350 meter². Twenty-three additional 1x1 meter TUs were excavated within the locus during the Evaluation Survey (*Figure 13*). During the Identification and Evaluation Surveys, approximately 2.1% of the site was sampled. All soils removed from the STPs and TUs were screened through 1/4 inch mesh, with exceptions noted below. Flotation samples were removed from the southwest quadrant of each stratum encountered below the fill/slopewash in each TU.

The grid for the Evaluation Survey was established by using two iron pipes previously laid-in by DNREC. The grid ran perpendicular to the straight line between these two markers. The pipe to the west of the APE was designated with the coordinate N200 E200, while the one to the east represented coordinate N200 E395. The site was divided into nine 150-meter blocks and a random number from 1-150 was generated. This random number marked the location for the individual test units within each block.

A buried plowzone (A_{pb} horizon) was identified during the geomorphological evaluation and Archaeological Identification Survey. This buried horizon was also noted by DNREC during their testing of the area (Cheshaek 1996a). The horizons above the A_{pb} were determined to be the result of fill and slopewash which has banked up against a late nineteenth century trolley bed (*Appendix D*). The trolley grade is depicted on *Figure 13*. During the Archaeological Evaluation Survey the fill/slopewash horizons, where encountered, were removed manually but not screened. Screening was resumed at approximately 0.1-0.2 meters above where the A_{pb} was thought to be located in each unit. At this elevation, the soils were excavated in arbitrary 0.1 meter levels within each natural strata.

At the beginning of the fieldwork, when the A_b was encountered, all subsequent levels/strata were removed in 0.25 meter quadrants within each 1x1 meter TU. After it became apparent that relatively

few artifacts were being recovered from the Apb or the subsoil below, the excavation of quadrants was terminated.

b. 7NC-C-12A

Based on the results of DNREC's and MTA's Identification Survey the size of the locus within the APE was estimated to be approximately 1500 square². Initially, eleven 1x1 meter test units were randomly placed within the locus during the Evaluation Survey to provide information regarding artifact densities across the site.

As mentioned previously, prior archaeological testing had been completed by DNREC. Their fieldwork involved the excavation of a block of nine 1x1 meter test units (Block E) bordering the eastern boundary of the APE. A feature identified in Block E during DNREC's survey was further examined by MTA with TU 2 during the Identification Survey. Test Unit 2 was placed just southwest of DNREC's Block E (*Figure 15*). DNREC interpreted the stones as a potential dry-laid stone footing and associated builders' trench (Clark 1995). This feature became the focus of MTA's efforts during subsequent Evaluation testing. Approximately 2.7% of the site was sampled during the Identification and Evaluation surveys.

The grid for the evaluation survey was established by using previously surveyed DeIDOT centerline stakes. The grid was perpendicular to the straight line between Marker 0 + 728 and 0 + 725, with 0 + 728 representing coordinate N20 E500. The grid was then broken into 10 blocks and a random number was chosen in each block to determine the first 10 random 1x1 meter test units. The random TUs were numbered 30-39. The first 5 random TUs (numbers 34, 35, 37, 38, 39) were excavated and screened by natural strata, ending excavation after two arbitrary 0.1 meter levels of sterile subsoil were removed. Because artifact density was low screening was abandoned, and TUs 30-33, and 36 were excavated down to subsoil so they could be examined for cultural features. Two features, intrusive to the subsoil, were encountered in the southern half of TU 31, and as a result, an eleventh TU (TU 45) was placed adjacent to TU 31 to investigate these anomalies.

Block Z, consisting of thirty 1x1 meter test units including TU 2, was located approximately 5 meters north of Governor Printz Boulevard at the southern edge of Locus A (*Figure 15*). The purpose of Block Z was to expose and interpret Feature 1, encountered during the Phase I Survey in TU 2. Both TU 2 and DNREC's Block E were reopened to further examine the horizontal relationship of the soil anomaly found within these two areas.