VI. RESULTS OF INVESTIGATIONS

A. PHASE I SURVEY FINDS

Berger's Phase I investigations of the three stormwater basins and the two wetland replacement areas (see Figure 1) were undertaken to supplement previous Phase I work conducted by Heite and Blume (1992, 1995a). Of particular concern was the Stormwater Basin No. 3 area, located adjacent to the White Marsh Site, which was investigated as part of the original Phase I survey (Heite and Blume 1992). No sites were located as a result of the supplemental survey conducted by Berger, but a few isolated finds were recovered. Selected soil profiles from the Phase I investigations are shown in Figures 4a and 4b.

1. Stormwater Basin No. 1

The artifacts recovered from 22 shovel tests excavated on a grid pattern in Stormwater Basin No. 1 (Figure 5; see Figure 4a) consisted primarily of recent historic materials such as bottle glass, brick fragments, nail fragments, plastic, and unidentified metal fragments. These items were found in STPs A-2, B-3, C-1, C-2, D-1, D-2, D-4, and D-6. STP D-6 also contained two pieces of jasper block shatter debitage. A typical soil profile in this survey area showed a sandy loam A-horizon ranging from 18 centimeters (7 inches) to more than 30 centimeters (12 inches) deep, overlying a sandy loam or loamy sand B-horizon. The scatter of recent historic artifacts and the isolated find of debitage were not considered to be archaeologically significant. No associated structural remains or other historic features were found in this survey area. Due to the sparseness of finds and their isolated nature, no further work is recommended in this area.

2. Stormwater Basin No. 2

Only two shovel tests out of the 37 excavated produced artifacts in Stormwater Basin No. 2 (Figure 6; see Figure 4a). The finds consisted of one historic ceramic sherd, one piece of glass, and two brick fragments. The soil profiles in this survey area were comparable to those in Stormwater Basin No. 1, but more variable. Sandy loams predominated, with some areas underlain by sandy clay loam B-horizons. Shovel tests were excavated well into B-horizon subsoils in all units. The low number of finds precludes the need for any further work in this area.

3. Stormwater Basin No. 3

In Stormwater Basin No. 3 only two shovel tests out of 45 produced artifacts (Figure 7; see Figures 4a and 4b). The finds included one quartzite early reduction flake from STP M-2 and two pieces of whiteware and one redware sherd from STP C-2. A typical soil profile in this survey area included either sandy loam or loamy sand A-horizons and variable B-horizons, ranging from a sandy texture to sandy clay loam. Some of the shovel tests reached depths of more than one meter below surface. On the basis of the sparse and isolated finds, no further work is recommended for this area.

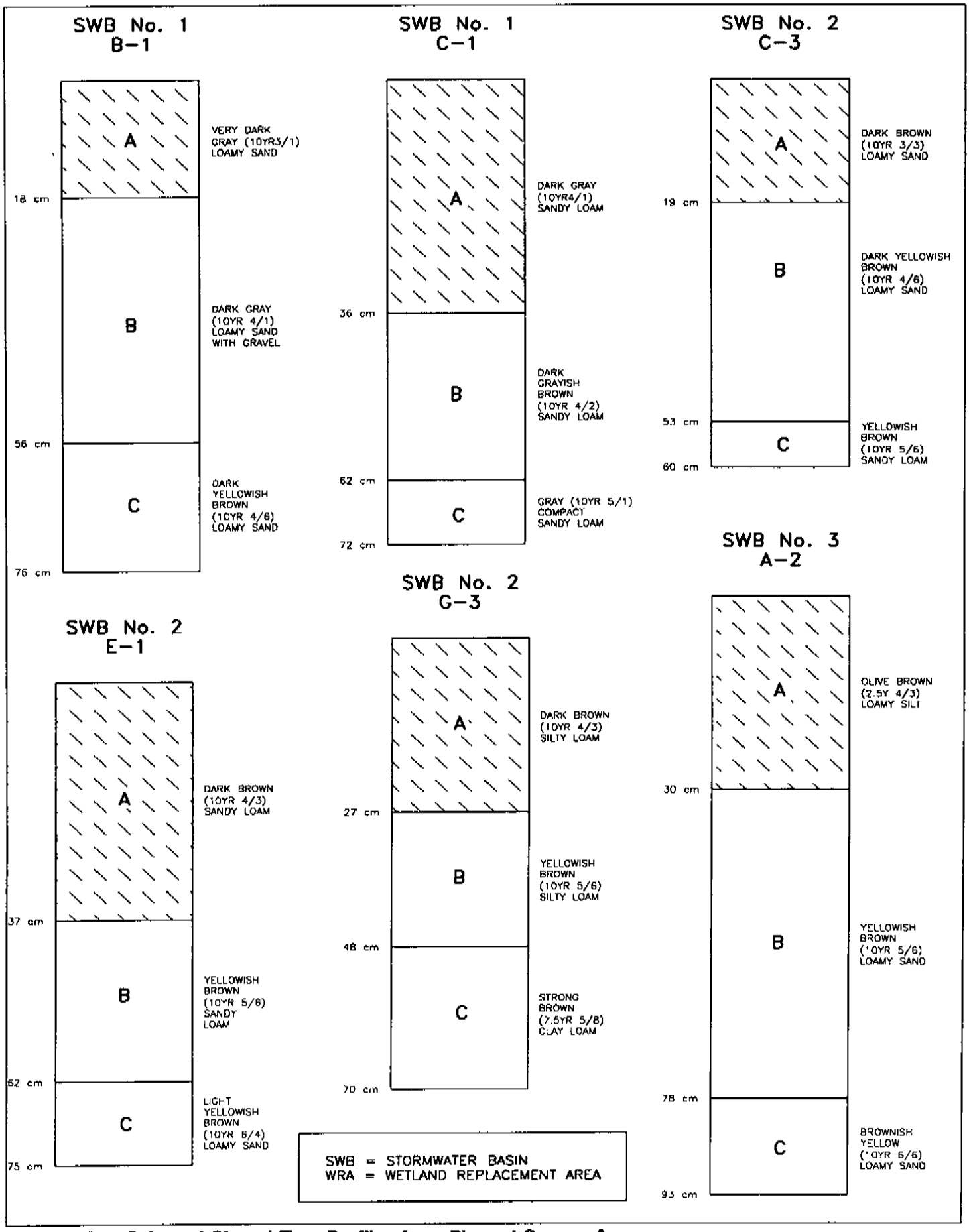

FIGURE 4a: Selected Shovel Test Profiles from Phase I Survey Areas

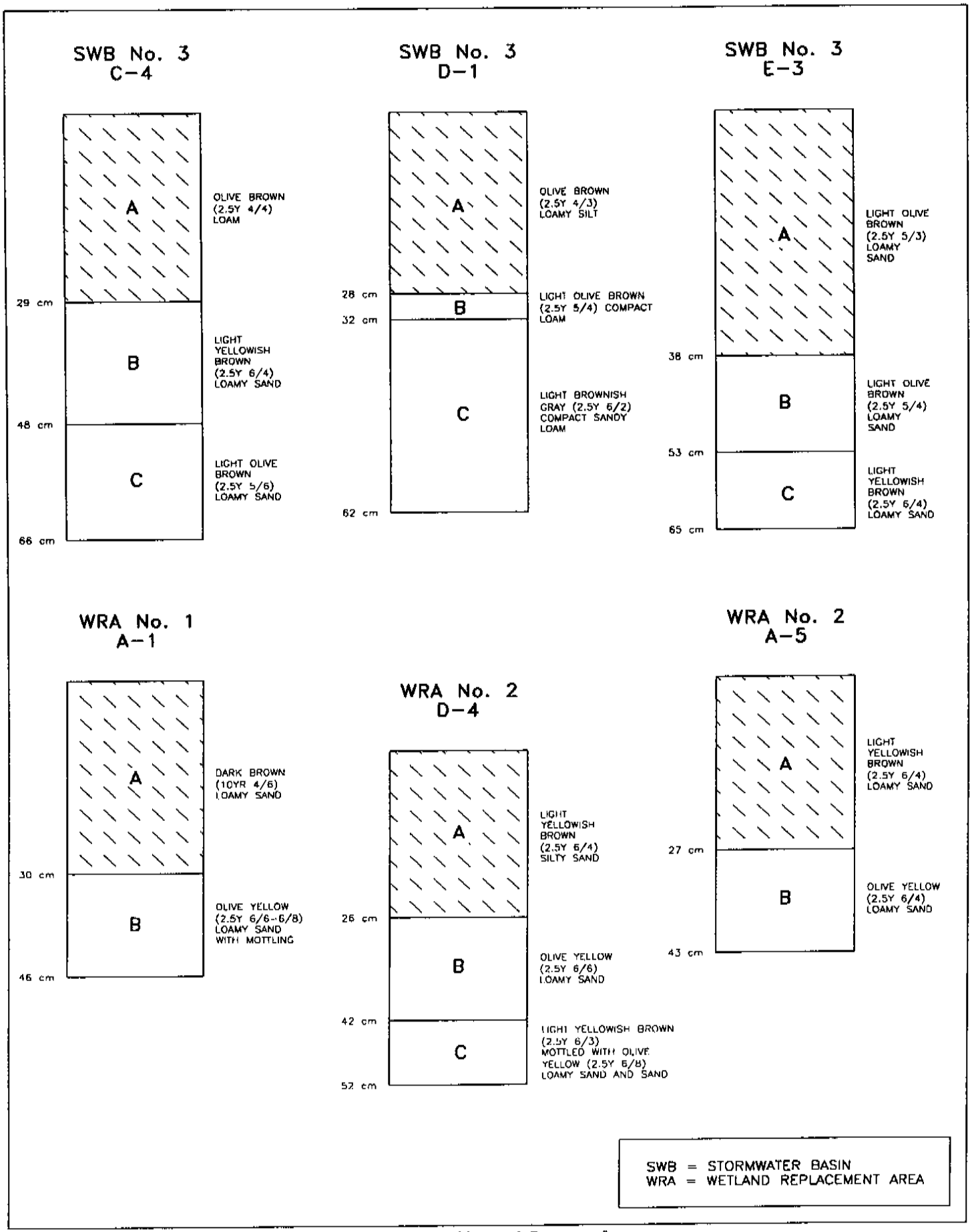

FIGURE 4b: Selected Shovel Test Profiles from Phase I Survey Areas

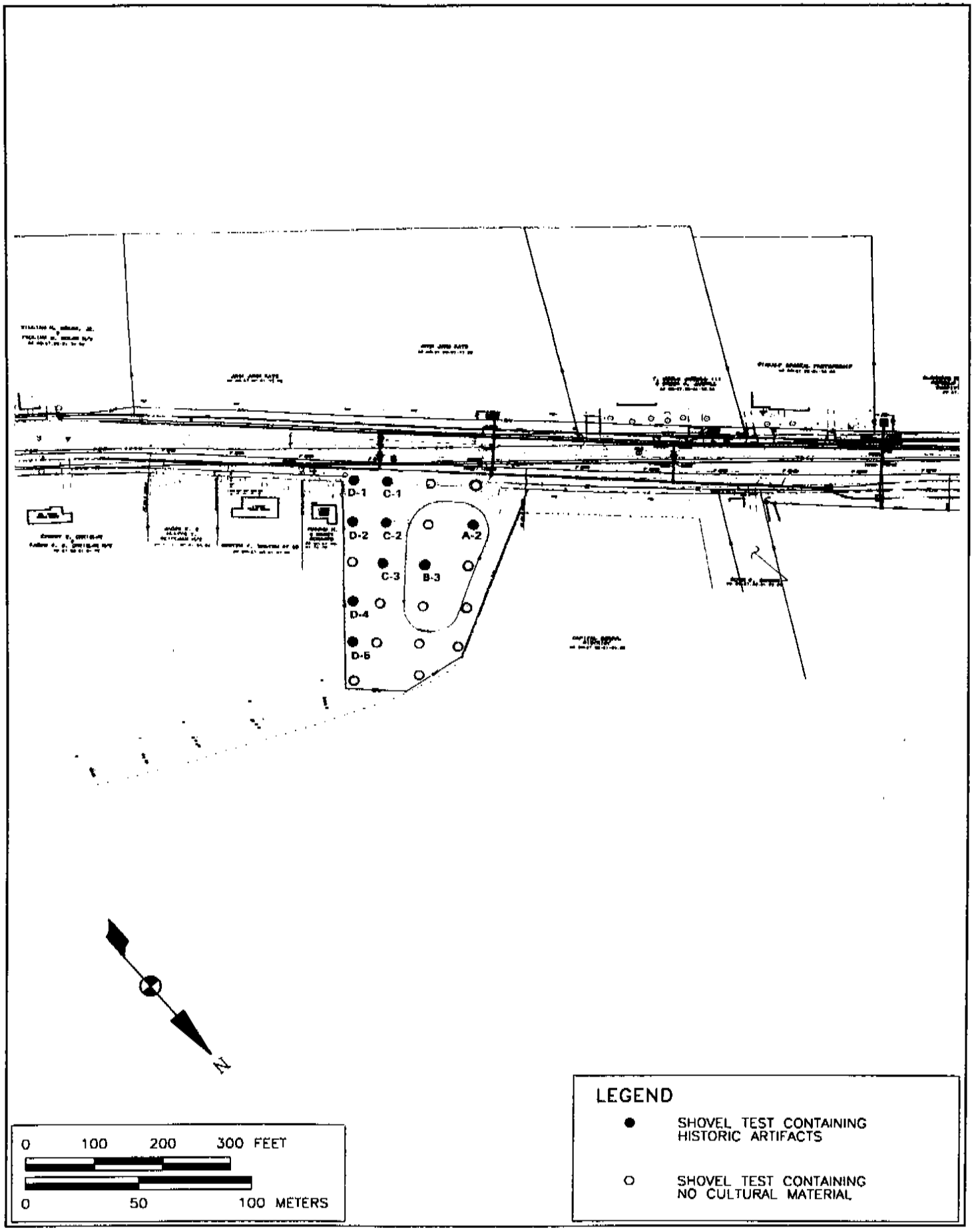

FIGURE 5: Stormwater Basin No. 1 Shovel Test Grid

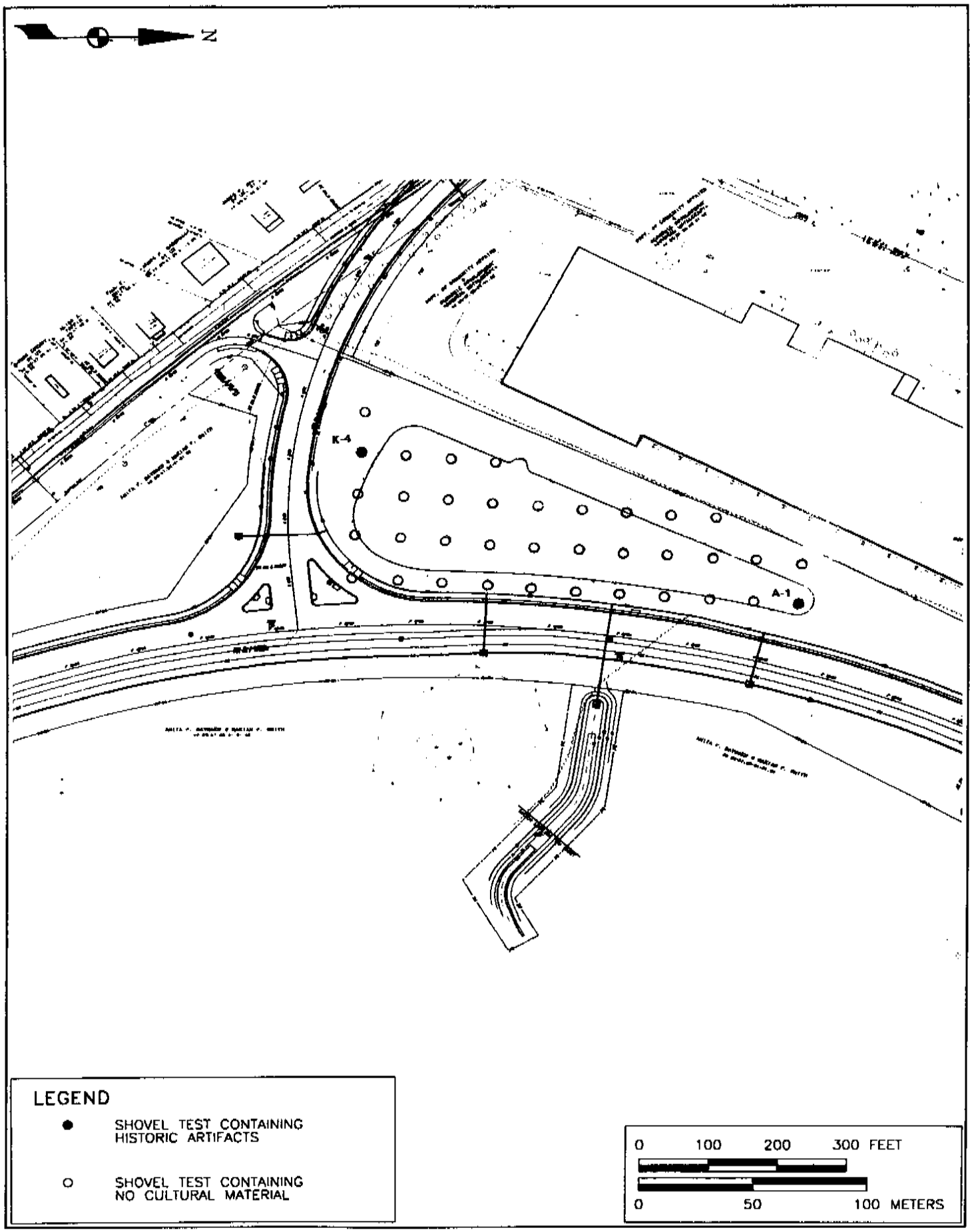

FIGURE 6: Stormwater Basin No. 2 Shovel Test Grid

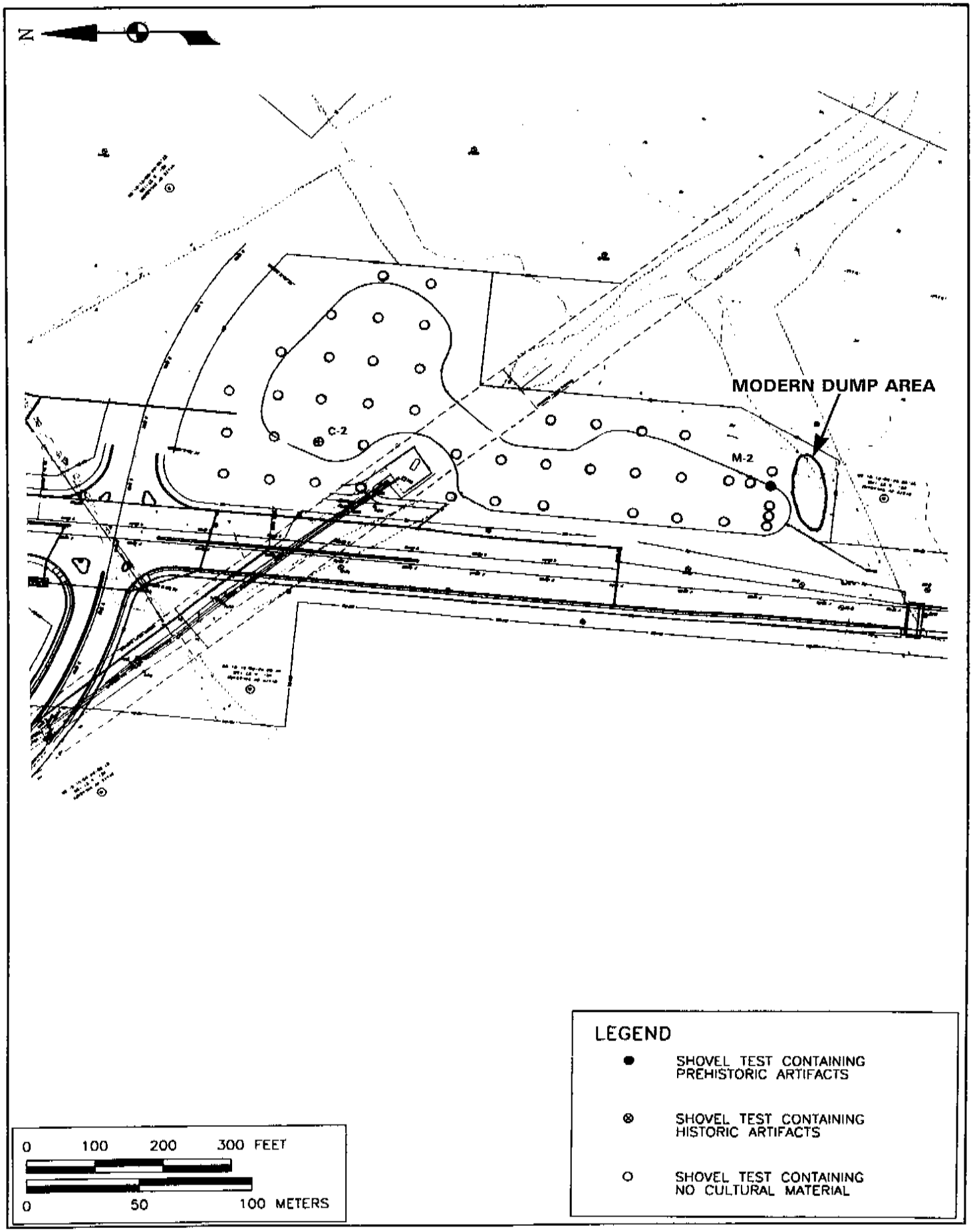

FIGURE 7: Stormwater Basin No. 3 Shovel Test Grid

4. Wetland Replacement Area No. 1

Eleven shovel tests on a grid pattern were excavated in Wetland Replacement Area No. 1 (Figure 8; see Figure 4b). This area is adjacent to the athletic field area that was previously tested by Heite and Blume (1992). No artifacts were found within this wetland replacement area. Typical soil profiles showed a loamy sand overlying B-horizon subsoils of variable texture, from silty loam to sandy loam. Excavation depths ranged from approximately 40 centimeters (16 inches) below surface to more than 60 centimeters (24 inches) below surface.

5. Wetland Replacement Area No. 2

Wetland Replacement Area No. 2 (see Figures 8 and 4b) was partially tested by Heite and Blume as part of a Phase I survey of the corridor (Heite and Blume 1992:67). The finds made at that time were given the site number 7K-C-388. Heite and Blume excavated three hand-dug units and three trenches by means of a gradall. Although a number of historic period artifacts were found in these tests, no intact remains of occupations were encountered. No further work was recommended.

The subsequent work conducted by Berger as part of the present Phase I investigation involved the excavation of 67 shovel tests on a grid pattern that included a portion of the Heite and Blume (1992) survey area as well as surrounding property. A variety of historic period artifacts were found scattered in small clusters across the survey area (see Appendix C); none were associated with any features or buried architectural evidence. A few prehistoric artifacts were also recovered (see Appendix B).

The prehistoric artifacts recovered included three flakes (two quartz and one quartzite) and an early-stage biface of jasper (Cat. No. 6; shown in Section C, Plate 3, i). The biface shows a medial break, which appears to have occurred during the thinning process, as the point of impact is visible on the cortex edge. The piece was made from a cobble. These finds were from the area east of the basketball courts (see Figure 8).

The areas containing historic period artifacts (see Appendix C) included two locations west of the existing basketball courts, one location north of the basketball courts and on both sides of a small grove of trees, and one location on the eastern edge of the survey area. Shovel tests in the area west of the basketball courts yielded one redware sherd, one piece of glass, one wire nail, and one white clay pipe bowl fragment. East of the basketball courts and in the vicinity of the small grove of trees, shovel tests produced three very small brick fragments, two clear pieces of glass, one piece of plain pearlware ceramic, one sherd of delftware (white glaze with blue decoration), and one piece of brown bottle glass. On the eastern edge of the survey area, a cluster of shovel tests produced a few sherds of pearlware (one plain and one shell-edge blue), creamware (one dipped and two plain), and redware (two unglazed and two with light brown glaze), and a small collection of modern architectural debris (machine-cut nail, asphalt roofing tile, rubber, and concrete).

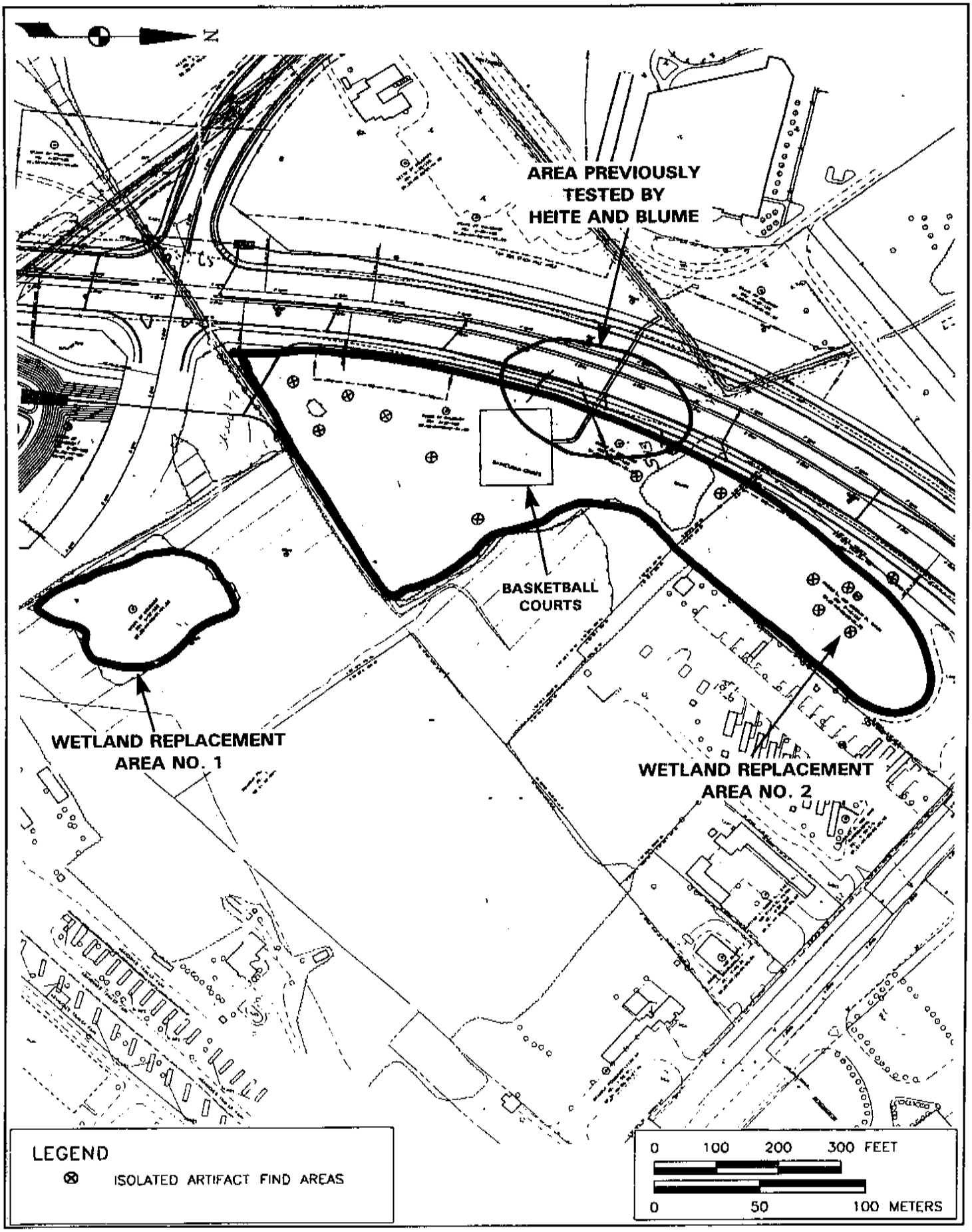

FIGURE 8: Wetland Replacement Areas, Showing Scatter of Isolated Finds

Typical soil profiles showed loamy sands in the A-horizon and in many instances in the B-horizon as well. The B-horizon soils did vary somewhat: some silty clay loams were encountered at shallow depths in a few locations, and other areas had silty loam subsoils. Excavation depths ranged from approximately 35 centimeters (14 inches) below surface to greater than 70 centimeters (28 inches) below surface.

B. Ford Farm Site

Following the location and re-excavation of the Phase I units (Heite and Blume 1995a) and the placement of shovel tests across the site, Berger's Phase II excavations at the Ford Farm Site (7K-C-386E) commenced with the placement of four 1x2-meter units. The Phase I units and the additional shovel tests placed across the site in the Phase II work provided a clearer delineation of site boundaries from which to plan the Phase II unit placement (see Figure 2). Two of the 1x2-meter units were placed in line with Phase I Unit 195 but further away from the bluff edge. The other two 1x2-meter units were placed on both sides of Phase I Unit 193. The re-excavation of Phase I Unit 193 was undertaken specifically to expose the possible feature described in the Phase I report (Heite and Blume 1995a:55-56).

Low artifact yields from the initial 1x2-meter units resulted in a change in the testing strategy, and 1x1-meter units were subsequently scattered in high-probability areas to pinpoint locations with higher artifact frequencies. A 2x2-meter block (Units 12, 13, 14, and 15) was also excavated, to provide better exposure for the delineation of features. One quarter of the 2x2-meter unit was sifted through ⅛-inch mesh to improve artifact recoveries and to sample the microdebitage and other materials that are normally lost through ¼-inch mesh screens.

The prehistoric artifact distributions documented across the site are shown by level in Table 2. The final count from the Phase II unit excavations is 206 artifacts, including the FCR.

The only diagnostic lithic specimen recovered from the Phase II investigations was a single stemmed projectile point fragment from Unit 14, Level B3. The subplowzone occupations identified consist of Woodland I (Early Woodland and probable Archaic) period components, defined by Marcey Creek, Wolfe Neck, and Dames Quarter ceramics, and a deeper but very sparse lithic scatter lacking diagnostic artifacts.

The majority of the occupation across the site is confined to the first four levels, or within 40 centimeters (16 inches) of the surface. There appears to be no clear separation of components in these upper levels and it is likely that most of the cultural material relates to a single Woodland I occupation. Postdepositional factors associated with bioturbation appear to have been responsible for the spread of this primary occupation through the upper four levels.

For the purpose of discussion, the site may be divided into west, bluff edge, and east areas. Differences among the three areas are based on stratigraphic observations and artifact data. Unit

Table 2. Lithic and Ceramic Artifact Frequencies by Arbitrary 10-Centimeter Levels, Ford Farm Site

Excavation Level	Lithics	Ceramics	FCR (weight in grams)
1	10	6	337.4
2	20	24	55
3	13	6	1,136.8
4	24	3	2,011.1
5	26	5	80.3
6	6	1	69.4
7	1	-	-
8	3	-	-
9	2	-	-
10	0	-	-
11	3	-	-
12	2	-	-
13-20	0	-	-
Total	110	45	3,690.0

designations in the discussions below are given by consecutive number, or in some cases, where expansions of the units were undertaken, by combinations of numbers (e.g., Unit 1-2 and Unit 3-4-23). The 19 shovel tests excavated within the site area were predominantly negative. The positive tests (Nos. 3, 5, 6, 7, and 8), along with information from the Phase I investigations, guided unit placement. Artifacts recovered from the positive shovel tests were as follows:

STP 3 - 1 chert biface reduction flake from the A-horizon
STP 5 - 1 jasper flake fragment from the B-horizon
STP 6 - 1 jasper block shatter from the A-horizon
STP 7 - 1 chert biface reduction flake from the B-horizon
STP 8 - 1 jasper flake fragment from the A-horizon and 1 piece of FCR from the B-horizon

The area of the site very close to the bluff edge contained the lowest densities of artifacts (see Figure 2). Soil profiles in this area, based on field observations, exhibited what appeared to be more recent (late Holocene) deposits capping the deeply buried Pleistocene strata.

1. West Area

The west area of the site contains Phase I Units 190 and 191 and Phase II Units 1-2 and 3-4-23. The lithic artifacts recovered from these units consisted of debitage, a single point, and FCR only, although two thick steatite-tempered sherds (15.3 grams) were recovered from Unit 3-4-23. The occupations, with the exception of Unit 3-4-23, are generally shallow and are confined for the most part to the plowzone and E-horizon contexts immediately beneath the plowzone. The deepest and most substantial occupation encountered was in Unit 3-4-23, where artifacts were found as deep as Level 5. The primary occupation in this unit appears to be confined to Levels 3 and 4, or at the plowzone/E-horizon interface.

In Unit 1-2, a single jasper early reduction flake and one quartz block shatter fragment were recovered from the A-horizon, along with one fragment (215 grams) of fire-cracked rock (FCR). In Unit 3-4-23, the A-horizon contained three pieces of FCR (total 20 grams), one jasper point fragment exhibiting heat damage, and three flakes (two chert and one quartz). The B-horizon, in Levels B2-B5, contained eight pieces of FCR (totaling 1,050 grams) scattered through the four levels, along with five flakes: three jasper, one quartz, and one quartzite. The small collection of flakes exhibits evidence of both decortication and biface reduction activities.

The units excavated during the Phase I study by Heite and Blume (1995a) contained comparable amounts of debitage and FCR and encountered no features. In Phase I Unit 190, one quartz chunk and two FCR fragments were recorded in the upper 20 centimeters (8 inches) of the unit, and nothing was found in deeper contexts. In Phase I Unit 191, similar recoveries (one FCR and two flakes) were made from the same stratigraphic position.

No features or patterned activity areas of any kind were recorded in the west area of the site. Overall, the findings in this area were meager and did not provide any indication that more substantial remains exist nearby.

2. Bluff Edge Area

Units 9, 10, 11, and 17 were positioned closer to the bluff edge in an attempt to identify activities associated with this narrowly defined viewing area overlooking the wetlands of the St. Jones River. None of these units produced substantial remains. Unit 9 contained only a single piece of FCR (18 grams), in the A-horizon. Unit 10 contained a jasper bipolar core in the A-horizon, and one jasper biface reduction flake, one piece of jasper flake shatter, and one quartz early reduction flake in the B- horizon, Levels B4 and B5. Unit 11 contained no artifacts and Unit 17 contained only three pieces of FCR (totaling 383 grams) and a single quartzite early reduction flake. The FCR was found in Levels A1 and B3, sufficiently close together to be related to the same event but not substantial enough to comprise a discrete feature or activity area.

The re-excavation of Phase I Unit 195 (i.e., removal of backfill material to re-examine the profile) in the bluff edge area of the site and sampling of the wall of the unit by means of the 30x50-

centimeter Unit 24 yielded only one piece of FCR, a small (5.7-gram) jasper pebble fragment. During the Phase I excavation, Unit 195 had yielded a little more material than the other two Phase I units (190 and 191) nearby in the west area of the site, and at greater depths. The upper levels had contained only a few quartz, chert, and jasper flakes and chunks, and FCR. Between 45 and 70 centimeters (18 and 28 inches) below surface, two more flakes, a jasper small-stemmed point, and three FCR fragments had been recorded. In Level 4 (70-95 centimeters [28-37 inches] below surface), only a grinding stone fragment had been recovered, and nothing below it (Heite and Blume 1995a:108-109).

3. East Area

The east area of the site was the location of Phase I Unit 193 and Phase II Units 5-6-22, 7-8, 12-13-14-15 (a 2x2-meter unit), 19-20, and three individual 1x1-meter units, Units 16, 18, and 21. Together these units composed an elongated (35x10-meter) cluster of units that contained the majority of the site occupation, both Early Woodland and Archaic (see Figure 2).

In Unit 7-8, a 1x2-meter unit, only two flakes and a single ceramic sherd were recovered. The ceramic crumb came from Level 2 (A-horizon), and one quartz flake fragment came from Level 3. A small jasper pressure flake was recovered from Level 9; this artifact may be associated with deep but extremely light recoveries from nearby units.

In Unit 16, approximately 7 meters (23 feet) to the east, a few small (total of 3.8 grams) Dames Quarter sherds were recovered along with a small amount of debitage and FCR. The occupation in this unit appeared in all of the upper six levels, with most of the items recovered from Levels 4 and 5, approximately 40 to 50 centimeters (16-20 inches) below surface. This component may represent a single occupation that has become somewhat dispersed through the profile as a result of postdepositional disturbances in the relatively coarse-textured soils.

The debitage is predominantly early-stage reduction debris, including quartzite and jasper early reduction flakes, block shatter, and decortication flakes. No biface reduction flakes were recovered. The debitage in Levels 3-5 appears to represent a single occupation during which quartzite and jasper cobbles were reduced. The quartzite debris is more substantial, with the largest piece of block shatter weighing 22.9 grams. The association of these materials with Woodland I Dames Quarter sherds provides a time frame (1000 to 750 BC) for this activity. The single piece of FCR (5.6 grams) recovered from Level 2 suggests a nearby hearth location, perhaps a focal point for the activities represented.

The 2x2-meter square (Units 12, 13, 14, and 15) contained the longest record of occupation documented at the site, with artifacts recovered as deep as Level 12. There was no apparent break in the occupation surfaces for the first 90 centimeters (35 inches) below surface, and artifact frequencies were not particularly high—the maximum number of artifacts was nine, in Level 5. Artifact variety was more diverse in this excavation unit than in the other units, however, with a single stemmed projectile point, one hammerstone/mano, two endscrapers, 26 flakes, and a single

fragment of FCR recovered. The debitage is mostly early-stage reduction debris, although two jasper pressure flakes were recovered in the deeper levels. No ceramics were recovered from this unit. The re-excavation of nearby Phase I Unit 193 and sampling of the wall of the unit by means of Unit 21 revealed that the apparent feature reported during Phase I was actually a tree burn. Characteristic root staining and dispersed burn patterns distinguished this anomaly. Flotation samples (3 liters) recovered from Level 15 of Unit 21 (Appendix D) revealed wood charcoal only, consisting of white and red oak.

Much of the ceramic evidence from the site was obtained in the three-unit cluster, Unit 5-6-22. The predominant ware represented is the quartz-tempered Wolfe Neck cordmarked variety, although a few sherds of fabric-impressed Wolfe Neck ware were also recovered. Only a few flakes were obtained from this unit, and they were found at a relatively deep level, approximately 80 and 110 centimeters (31 and 43 inches), below the surface. The flakes may represent part of an earlier Archaic occupation, although no diagnostic artifacts were recovered. The flake recoveries include a few jasper pressure flakes, a chert biface reduction flake, and a quartz flake fragment. A small amount of FCR was recorded in the levels containing Woodland I ceramics (Level 3) along with a quartzite early reduction flake. A single jasper early reduction flake was recovered from the A-horizon of this unit.

At the eastern edge of this occupation area, a relatively large amount of debitage was recovered from Unit 19-20, but only one ceramic sherd. All of this material was confined to the upper 60 centimeters (24 inches) of the profile. The debitage is predominantly jasper and includes a variety of flake types, evidencing all stages of biface reduction as well as bipolar reduction.

In Unit 18, a 1x1-meter unit at the eastern edge of the site, a few steatite-tempered Marcey Creek Woodland I (Early Woodland) sherds and a few flakes and pieces of FCR were obtained from the upper 40 centimeters (16 inches). The recoveries from this unit compare favorably with those recorded in Unit 16, described above. The debitage, although sparse, is predominantly jasper and quartzite early-stage workshop debris, including block shatter, decortication flakes, and early reduction flakes. Again, the association of a small amount of FCR in Levels 2 and 3 (total of 37.2 grams) suggests the presence of a hearth feature nearby, and the ceramics date the event to the Woodland I period.

Overall, the eastern part of the site produced a much larger number of artifacts compared to the western part. There are also at least two components evident. One is a Woodland I occupation, evidenced by ceramics, a few formal tools, and a limited amount of workshop debris. The small amount of workshop debris suggests short-term tool manufacturing activities, core reduction, and individual tool resharpening. The deeper component, which may be Middle to Late Archaic in age (although no diagnostic artifacts were recovered), is represented by limited workshop debris in Unit 6 and the 2x2-meter unit 12-13-14-15. There appears to be a preference for jasper as a raw material in this earlier component. There are also more pressure flakes represented in the earlier component, suggesting individual tool resharpening efforts rather than manufacturing activities or primary reduction.

C. Artifact Analysis

The artifact descriptions presented in this section refer to the Ford Farm site collection only. The isolated artifacts recovered from the Phase I survey areas are briefly discussed, where appropriate, in the Phase I results discussion. Comprehensive inventories for all artifacts from both Phase I and II investigations are listed in Appendices A, B, and C.

1. Laboratory Methods

All artifacts and analytical samples recovered from the Phase II investigations were transported to the Berger laboratory in East Orange, New Jersey, for processing and analysis. After washing of the prehistoric lithics and ceramics, they were separated and placed in resealable plastic bags with an acid-free provenience card containing the following information: site number, catalog number, unit, level, stratum, date of excavation, and excavator's initials. Depending on the nature of the collection, the artifacts were sorted and analyzed according to morphological, material, and functional classes. Temporally or culturally diagnostic artifacts were described according to the established types currently in use in the Middle Atlantic region. Diagnostic artifacts were labeled with their appropriate site number and catalog number.

Artifact analysis was completed in two phases. The initial phase included preparation of an inventory of the materials recovered from the site. The results of this phase of analysis are presented in Appendices A, B, and C. The second phase of the analysis involved a more detailed examination of the prehistoric artifacts, the results of which are discussed below.

Lithic and ceramic artifacts make up the entire prehistoric artifact assemblage from the Ford Farm Site. Lithic tools and debris were analyzed with regard to function, technology, and raw material. The results of the lithic analysis provide at least some preliminary information regarding site function, raw material procurement strategies, and certain aspects of aboriginal technology. The methods employed in the lithic analysis are outlined below.

Projectile points, bifaces, and other lithic tools were described by raw material, measured, and examined for distinctive kinds of wear patterns. Fire-cracked rock was cataloged by raw material, weighed, and examined for evidence of use other than for hearth/stone boiling, the use traditionally inferred for FCR.

Prehistoric ceramics recovered from the site were classified according to the major culture-historical wares defined for the Delmarva Peninsula. They were subsequently sorted into categories reflecting the portion of the vessel they represent: for example, body sherd, rim, basal portion.

Analysis of the data from the classifications outlined above concentrated on defining distinct activity areas or occupational episodes across the site. Comparison was made between defined occupational areas or episodes to determine the degree of redundancy, or the lack thereof. The contents of each

spatially discrete occupational episode or activity area were then analyzed to determine what they represented in terms of functional or culturally specific adaptive patterns.

2. Lithic Raw Material Analysis

The identification of raw materials was based on macroscopic characteristics—color, texture, inclusions, cortex, and hardness. Geological and archaeological type specimens in the Berger type collection were used for comparative purposes to aid in the identification of raw materials. A 10X hand lens and 23X binocular microscope were employed to facilitate the identification of raw materials. For example, various levels of magnification were used to identify inclusions, such as fossils in cherts. The different geological origins of several raw materials are attested to by their distinctive macroscopic characteristics, which permits a high level of confidence in the identification of lithic raw materials.

With respect to chipped-stone artifacts, the majority of the raw materials present in the Ford Farm Site assemblage were grouped into five raw material types: jasper, quartz, quartzite, chert, and argillite. Only one specimen of argillite, a projectile point fragment, was recovered. In the debitage and chipped-stone tool collection (non-FCR and cobble tool artifacts), the most common raw material recovered was jasper, with a total of 76 pieces. Also recovered were 15 quartz artifacts and 12 specimens each of chert and quartzite. Most of the raw material appears to have been obtained from local streambeds and terraces.

3. Prehistoric Ceramic Analysis

The ceramic assemblage recovered from the Phase II investigations consists of 45 sherds, including a number of spalls and crumbs (see Appendix A). The identifiable sherds within this sample can be divided into three distinct ware groups, all representing a Woodland I time frame and found in the same area of the site (see Figure 2). They include Marcey Creek (five sherds; 44.1 grams) (Manson 1948), Dames Quarter (six sherds; 3.0 grams) (Wise 1975), and Wolfe Neck ceramics (18 sherds; 169.3 grams) (Griffith and Artusy 1977). One of the Wolfe Neck specimens includes a basal sherd, but no rims of this type or of any of the other types are represented in the collection.

Surface treatment on most of the sherds, where visible, is s-twist cordmarking, with the exception of a single quartz-tempered sherd which is impressed with final z-twist cordage. Overstamping of cordmarked surface treatment is evident on one of the Wolfe Neck sherds. Cordmarking is evident only on the quartz-tempered sherds. The Marcey Creek sherds are mostly plain, with the exception of two mended sherds that exhibit a herringbone incised surface decoration across the exterior (Plate 2). The incision pattern consists of three parallel lines forming a zig-zag pattern across the sherd. While a few sherd mends were made, most of the ceramics were too small or too poorly preserved for the numbers of vessels to be determined.

PLATE 2: Incised Marcey Creek Sherd from Ford Farm Site

PLATE 3: Lithics from Ford Farm Site and Phase I Investigations:

a. Chert Projectile Point, Locus B (Catalog No. 95)
b. Chert Projectile Point, Locus B (Catalog No. 96)
c. Jasper Bifacial Core (Catalog No. 35)
d. Jasper Projectile Point (Catalog No. 88)
e. Jasper Utilized Flake (Catalog No. 12)
f. Jasper Endscraper (Catalog No. 45)
g. Jasper Endscraper (Catalog No. 45)
h. Argillite Projectile Point (Catalog No. 47)
i. Jasper Early-Stage Biface, Wetland Development Area No. 2 (Catalog No. 6)

4. Lithic Artifact Analysis

Chipped-stone artifacts (see Appendix B) from the site were separated into tools and debitage, and cobble tools and FCR were analyzed separately. It is often difficult to discern whether a broken cobble was actually fractured as a result of thermal stress. The chipped-stone items were identified on the basis of morphology and use-wear. Surfaces and edges were examined for traces of use-polish and damage with the unaided eye and with a 10X hand lens. A conservative approach is taken in the identification of utilized and edge-retouched flake tools, because a number of processes other than intentional use or modification can create edge damage/retouch: for example, trampling on living surfaces, spontaneous retouch during flake detachment, and trowel and shovel damage. Only a single cobble tool was recovered and it was examined for utilization as a hammer or mano.

Chipped-stone tools and debitage were sorted into the following categories: flakes, cores, flake tools, and bifaces. Each category was quantified by count and weight, with length, width, and thickness measurements taken on complete or nearly complete tools. Chipped-stone tools (i.e., cores, bifaces, and flake tools) are described in detail below in the discussion of the primary artifact assemblage from the site.

Field investigations at the Ford Farm Site recovered 206 lithics (see Plate 3 for a sample of selected tools from the site). Appendix B presents an inventory of these materials by provenience. The lithic artifacts include flakes, cores, bifaces, flake tools, and a variety of debitage, exhibiting pebble core technology, bifacial tool manufacturing, and bipolar work.

a. Early Assemblage

The early assemblage from the Ford Farm Site comprises the small number of flakes and the single fragment of FCR found in the deepest levels of the site. It is possible that this deeper component is Middle to Late Archaic in age, although none of the artifacts recovered were diagnostic. The low number of recoveries and the possibility of downward movement of artifacts through the profile make this a tentative assessment. However, the very close proximity of the Blueberry Hill Site, with its deep contexts, gives further credence to this interpretation at Ford Farm. As has been stated above, this component was encountered in the eastern part of the site, within a small area encompassed by the single 2x2-meter unit and Unit 6 (see Figure 2). The component is arbitrarily defined by the collection of artifacts recovered from Levels 8-12 in these two units. The fact that these deep recoveries were clustered in the same area of the site and were found nowhere else (where deep units were also excavated) suggests an association among them.

In all, one piece of FCR and nine pieces of debitage were recovered. The debitage consists of one jasper biface reduction flake, three jasper pressure flakes, one jasper potlid, two jasper flake fragments, one piece of quartz block shatter, and one chert biface reduction flake. The small collection suggests that tool resharpening rather than manufacturing took place on the site. Two of the flakes exhibit cortex. This component of the Ford Farm Site may have been a marginal activity

area related to the nearby Blueberry Hill Site. The scatter of artifacts is too light to permit a more definitive interpretation of the assemblage.

b. Primary Assemblage

The primary artifact assemblage recorded for the Ford Farm Site contains Woodland I ceramics, a few isolated projectile points, and debitage. It is assumed that most of the occupation in the upper five levels of the site relates to this Woodland I time frame, but some ambiguity remains because of the lack of clear natural or cultural stratigraphy.

(1) Bifaces

Only two bifaces were found in the Ford Farm Site excavations (Cat. Nos. 88 and 47; see Plate 3, d and h). Two additional bifaces were surface finds (see Plate 3, a and b) made in Locus B, a beanfield, during the course of general survey work related to site mapping. One of the bifaces (Cat. No. 47) from Locus E, a projectile point, was recovered from Unit 14, Level 3. The point is made from argillite and has a damaged tip and basal stem. The flake scars and edges of the point are eroded and obscure owing to the softness of the raw material. The other biface from Locus E is a heat-damaged jasper point fragment (Cat. No. 88) that was recorded in the A-horizon of Unit 23. It has been broken transversely, leaving the distal end and most of a single lateral edge. The surface of the point is burned red and potlidded. No obvious use wear was observed macroscopically along the edge or on the tip of the specimen.

The surface finds from Locus B include a contracting-stemmed point (Poplar Island) (Cat. No. 95; see Plate 3, a) of chert with a resharpened tip, a crudely chipped base, and step fractures and edge damage along the lateral edges. The edge damage could have been the result of heavy use wear or retouching. The other surface find appears to be a chert Brewerton corner-notched point (Cat. No. 96; see Plate 3, b), which in profile retains much of the original flake curvature. The tip is broken but does not exhibit clear impact damage. The base has been ground, a characteristic typical of Brewerton projectile points.

(2) Unifaces

Three unifacial tools were recovered from the primary component during the Phase II excavations, consisting of two formal scrapers and one flake tool that appears to have been used as a scraper. The flake tool (Cat. No. 12; see Plate 3, e), made from jasper, exhibits some bifacial flaking along the edges surrounding the platform. A large flake was also removed from the ventral surface in the same location. Both the single flake removal and the bifacial retouch appear to have been undertaken to facilitate hafting. The distal end of the flake shows evidence of minimal retouch and some use wear along most of the edge, all on the dorsal surface. The flake has been modified only along the working edge and the hafting area. The rest of the tool remains unmodified.

Two scrapers (both Cat. Nos. 45; see Plate 3, f and g), also made from jasper, were recovered from Level 4 of this component. Both appear to have been made from split pebbles, one sheared in half and retaining its circular form, the other sheared from a larger pebble that was unevenly shattered in the process. The circular scraper (see Plate 3, g) has been retouched along the entire edge. There is no bifacial retouch on the piece and the edge angle varies from 45 to 90 degrees. Use wear is evident along the edges as microflaking damage. The second scraper (see Plate 3, f) also has a variable working edge angle (45-90 degrees), with most of the retouch and use wear evident on the end of the specimen. Edge damage is particularly heavy on the tip of this piece.

(3) Cores

Only a single core (Cat. No. 35; see Plate 3, c) was recovered from the site. This bipolar core is made from jasper and is a small angular piece with deep flake scars and little evidence of consistent flake removal. There are no remnant platforms visible on the specimen and it has the appearance of a large piece of shatter.

(4) Cobble Tools

The only cobble tool recovered from the site is a hammerstone, made of sandstone, that appears to have also functioned as a mano. There is a limited amount of battering damage on the end of the cobble, indicating a hammer function. Evidence of abrasion is limited to a few smooth surfaces that do not appear to be the result of natural agents (i.e., stream abrasion).

(5) Debitage

Debitage accounts for the majority (N=111) of the lithic artifacts retrieved from the Phase II investigations. The debitage shows evidence of all stages of lithic workshop activity from early-stage preparation and decortication to bifacial tool manufacturing and resharpening. Bipolar technology is also represented, but is not evident to the same degree as bifacial work. This is probably due to the difficulty of recognizing bipolar reduction, a process that produces a great deal of shatter. Approximately one-third of the debitage relates to some form of early reduction activity involving bipolar or bifacial work. Much of the evidence appears to be derived principally from the working of cobbles into a usable form for tool manufacture. Cortex is found on all of the raw materials, in varying amounts, and both block cortex and cobble cortex are represented. Much of this material seems to have been locally available and to have been used for both biface and flake-tool production. Platform attributes of several flakes indicate that some biface production did take place, although some flakes indicate the results of biface maintenance rather than biface production.

Tables 3 and 4 are presented to simplify comparison between Woodland areas of the site. In the early (pre-Woodland) component of the site, only 10 lithics were found below Level 7. They consisted of one piece of FCR and nine pieces of debitage (one jasper biface reduction flake, three jasper pressure flakes, one jasper potlid [heat spall], two jasper flake fragments, one piece of quartz block shatter, and one chert biface reduction flake).

From the sample of prehistoric artifacts recovered during Berger's investigations at the Ford Farm Site, it appears that the main occupation of the area investigated occurred during the Woodland I period. Common activities represented are cobble reduction for tool manufacture, flake-tool production, biface resharpening, and hearth usage. The last of these is suggested by the presence of FCR. Raw material use was based almost exclusively upon locally available cobble raw materials such as jasper, chert, quartz, and quartzite.

Table 3. East Area Debitage Assemblage (Upper Component), Ford Farm Site

Flake Type	Jasper	Quartz	Quartzite	Chert	Total
Biface Reduction	7	-	-	-	7
Pressure Flake	-	-	-	-	0
Early Reduction	6	4	4	-	14
Decortication	3	-	2	-	5
Block Shatter	6	-	3	2	11
Flake Shatter	2	-	1	-	3
Flake Fragment	4	4	1	1	10
Other Flake Type	2	-	-	-	2
Total	30	8	11	3	52

Table 4. West Area Debitage Assemblage (Upper Component), Ford Farm Site

Flake Type	Jasper	Quartz	Quartzite	Chert	Total
Biface Reduction	1	-	-	-	1
Early Reduction	2	1	1	-	4
Decortication	2	-	-	1	3
Block Shatter	-	1	1	-	2
Flake Fragment	-	1	-	1	2
Total	5	3	2	2	12

The lithic raw materials recovered from the site are typical for the Delaware Coastal Plain—jasper, quartz, quartzite, and chert, including a number of flakes derived from cobble sources. Very few finished tools were recovered, only a single argillite stemmed projectile point fragment, a jasper point fragment, a jasper bipolar core, two jasper scrapers, and a hammerstone. The ceramic assemblage is more diverse, containing three Woodland I types (Marcey Creek, Dames Quarter, and Wolfe Neck) in a collection of only 45 sherds.