ARCHAEOLOGICAL SURVEY OF THE PROPOSED UPPER AND LOWER PONDS AT THE WINKLER BOTANICAL PRESERVE, ALEXANDRIA, VIRGINIA

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April 1991

ABSTRACT

In February and March, 1991 an archaeological survey of two separate areas, termed Upper and Lower Ponds, was conducted for The Mark Winkler Company. These areas will be inundated by the proposed construction of two dams within the Winkler Botanical Preserve.

A survey strategy for the area was developed in cooperation with Alexandria Archaeology and consisted of five foot squares on a 45 foot grid pattern that were raked off and surface collected. Additionally, 15 shovel test units were excavated to determine the stratigraphic profile and cultural occupation in selected areas.

One previously registered site, 44AX12, lays within the survey area and it was both surface collected and shovel tested.

No new sites were located or artifact concentrations noted and additional work was not recommended.

PUBLIC REPORT SUMMARY

An archaeological survey of two areas that will be inundated by construction of two dams within the Winkler Botanical Preserve was conducted in February and March, 1991. The survey was undertaken for the Winkler Botanical Preserve and forTheMark Winkler Company by International Archaeological Consultants in cooperation with Alexandria Archaeology.

Two separate ponds will be created by damming existing drainages.These ponds, and the associated storm water control devices, will be used to help control erosion within the Preserve to create new wetland areas and for storm water control for the entire watershed. The Upper Pond will be formed along several hundred feet of a radically sloped drainage and the Lower Pond will cover approximately 1.8 acres of a floodplain.

The prehistoric history of the City of Alexandria area shows occupation by aboriginal inhabitants from the Paleo-Indian period (approx. 10,000 B.C.) until the last indian village disappeared in the mid 1600's. A majority of the sites that have been recorded in the area have cultural associations to the Archaic Period (8,300-1,600 B.C.) and to the Woodland Period that extends from the Archaic to the time of contact with European colonists.

The earliest historical records show that the survey area was owned by William Henry Territt in 1741. The property changed ownership many times over the years with portions of the property remaining in the Territt family as late as 1900. No Civil War activities have been identified within the survey area and the concentration of forts, including Fort Ward, lies to the east . The survey area and surrounding properties were acquired by Mr.and Mrs. Mark Winkler in the late 1930's and early 1940's and the survey area lays within the Winkler Botanical Preserve.

A survey methodology was developed in consultation with Alexandria Archaeology and consisted of a 100% walkover of the area, examination of the extensive drainage channel exposure and raking off and surface collecting five foot squares on a 45 foot grid pattern. A total of 43 -5'x5' units were examined with an additional 15 shovel tests excavated to determine the stratigraphic profile and the presence of cultural occupation.

The Upper Pond was thoroughly tested without the discovery of any lithics of cultural origin. This area is characterized as a ravine between two terraces that has recently formed a well defined drainage as a result of storm water from the watershed being channeled into the ravine.The Upper Pond during prehistoric times was apparently little more than a cleft between two terraces with slopes of perhaps greater than 10% that made it unattractive for habitation.

The Lower Pond area is characterized as a floodplain area formed by the confluence of three drainages, one of which is the drainage where the Upper Pond will be formed in the future. An extensive survey yielded only a few historic artifacts; four widely dispersed brick fragments and two ceramic sherds. Both of the ceramics, a plate base and a gravy/sauce boat fragment were identified as "Chinaware" a semi-vitreous, low grade white porcelain. A makers mark on the bottom of the gravy boat indicated it was manufactured for the United States Quartermaster Corps. in the late1930's or by the mid 1940's. The origin of the brick fragments and ceramics are probably attributed to the trash piles that were in the area prior to the Botanical Preserve's restoration activities.

One previously registered site, 44AX12, lays partially within the survey area. This area was surface collected, shovel tested and the exposed drainage banks closely examined. Only a single secondary lithic flake was recovered at the edge of the drainage during surface collection of the exposed ground surface.

A single modified flake was surface collected near the southwestern end of the proposed Lower Pond. Additional shovel tests surrounding the location yielded no other artifacts.

Both the Upper Pond area , with its steep slopes, and the Lower pond area, with its low lying floodplain, would not have been the most attractive area for habitation. No new sites were located or artifact concentrations noted and further work was not recommended.

ACKNOWLEDGEMENTS

A number of individuals have added greatly to this project. The assistance of Mr. Nelson Bowman and his staff at the Winkler Botanical Preserve has been most appreciated.

The guidance and assistance of Dr. Steven Shephard and Dr. Pamela Cressey from Alexandria Archaeology has been invaluable.

My gratitude to Mrs. Tori Thomas for the opportunity to work with a cooperative and progressive corporation and a special thank you to Mr. Bill Nussbaum and Ms. Wendy Stevens for their support and assistance.

TABLE OF CONTENTS

Section	Page
Abstract	i
Public Summary	ii
Acknowledgements	iv
Table of Contents	v
List of Figures	vi
INTRODUCTION	1
PHYSICAL ENVIRONMENT	2
PREHISTORIC AND HISTORIC OVERVIEW	4
METHODOLOGY	7
RESEARCH OBJECTIVES	9
UPPER POND RESULTS	10
LOWER POND RESULTS	16
CONCLUSIONS AND RECOMMENDATIONS	29
REFERENCES CITED	30
APPENDICES	
A. Artifact Catalog	
B. IAC Shovel Test Forms- Lower Pond	
C. VRCA--Site Survey Form, 44AX12	

LIST OF FIGURES

		Page
Figure 1	Alexandria and Annandale USGS maps with survey area highlighted.	3
Figure 2	1962 aerial photo of Winkler properties showing disturbance mistaken for Civil War period earthworks.	6
Figure 3	Severe erosion at Upper Pond. Looking downstream.	11
Figure 4	Upper Pond profile showing steep slope and clay subsoil.	12
Figure 5	Upper Pond showing concrete and asphalt eroding out of drainage bank.	13
Figure 6	View downstream of Upper Pond. Horitzontal line of flagging tape indicates proposed dam position and water level.	14
Figure 7	View upstream of Upper Pond. Horitzontal line of flagging tape indicates proposed dam position and water level.	14
Figure 8	View looking west from rock storage area towards fill pile showing disturbed areas.	17
Figure 9	View from top of fill pile looking west towards Botanical Preserve office.	17
Figure 10	Profile view of "Chinaware" gravy/sauce boat.	18
Figure 11	Bottom markings of "Chinaware" gravy/ sauce boat.	20
Figure 12	North bank of drainage just below the Linear Lakes showing overhanging topsoil	22
Figure 13	Profile drawings of Lower Pond shovel tests.	24
Figure 14	View of 44AX12 from Linear Lakes looking downstream.	25
Figure 15	Profile drawings of shovel test at 44AX12.	28
Figure 16	Map showing locations of Civil War period forts in the area.	31
Figure 17	Map of Lower Pond disturbed areas. Scale 1: 50	32
Figure 18	Map of Upper Pond showing limits of construction, shovel tests and artifact locations. Scale 1:50.	33
Figure 19	Map of Lower Pond showing locations of 5'x5'units and shovel tests.	Map pocket

Introduction

International Archaeological Consultants has recently completed a survey of an area that will be inundated by the proposed construction of two ponds at the Winkler Botanical Preserve. The survey also included the areas that will be disturbed by the actual construction of two dams and associated stormwater piping. The area lays primarily within very well defined drainage channels and in a wetland areas floodplain. A portion of the area has been disturbed by previous construction and other activities.

Included within this report are three plan maps. One of these maps, Figure17, show the areas to be disturbed by the construction, and areas previously disturbed in the Lower Pond at a 1:50 scale. Another 1:50 scale map of the Upper Pond, Figure 18, shows the limits of the proposed construction and the location of the artifacts recovered.An oversized map is enclosed in a map pocket at the end of the text and it is a site plan showing the locations of the 5 foot square test areas, shovel test units and artifact locations in the Lower Pond area at a 1:20 scale.

The survey yielded a very small number of artifacts that represent no identifiable intact cultural association and no further testing is recommended in the either of the two areas.

Physical Environment

The survey area is part of a larger tract of land owned by the Winkler Botanical Preserve, the Winkler family and its related entities. It is located near the western limit of Alexandria and the areas surveyed have been highlighted on a portion of the Alexandria USGS map (USGS 7.5 minute - Photorevised 1983) (Figure 1).

This drainage system was formed in Pliocene gravels and the well formed drainage channels are part of the Holmes Run watershed. The two pond areas have distinctly different geomorphic histories and they are discussed individually.

The area of the Upper Pond in its prehistoric configuration was probably little more than a ravine between two upland terraces. It may have accommodated some water as a result of percolation of groundwater through the porous gravels. Its current configuration has been altered in the recent past from the severe erosion due to the development of the watershed, as this drainage channels runoff water from a relatively large area, both inside and outside of the existing Mark Center.

The Lower Pond area is located at the confluence of the Upper Pond drainage and two other drainage channels where they form a floodplain averaging approximately 100 feet in width. The prehistoric geomorphology of the area is difficult to interpret but it is believed that the stream, before its recent increase in flow, was much shallower in depth and that the stream bed was much less defined than it is today. This shallower stream bed may have allowed for easier diversion of the stream channel from overbanking episodes and obstructions. It is postulated that the stream course has meandered across the floodplain over time and has caused a wide variation in the soil types. The recent increase in rainwater runoff, including that of Shirley Highway/ I-395, has greatly increased the flow and carrying capacity of the stream. This increase in capacity has served to accelerate the downcutting action of the stream bed and to define the stream course. Little sign of lateral accretion was noted anywhere along the drainage and the only deposition noted was colluvial deposits in several areas.

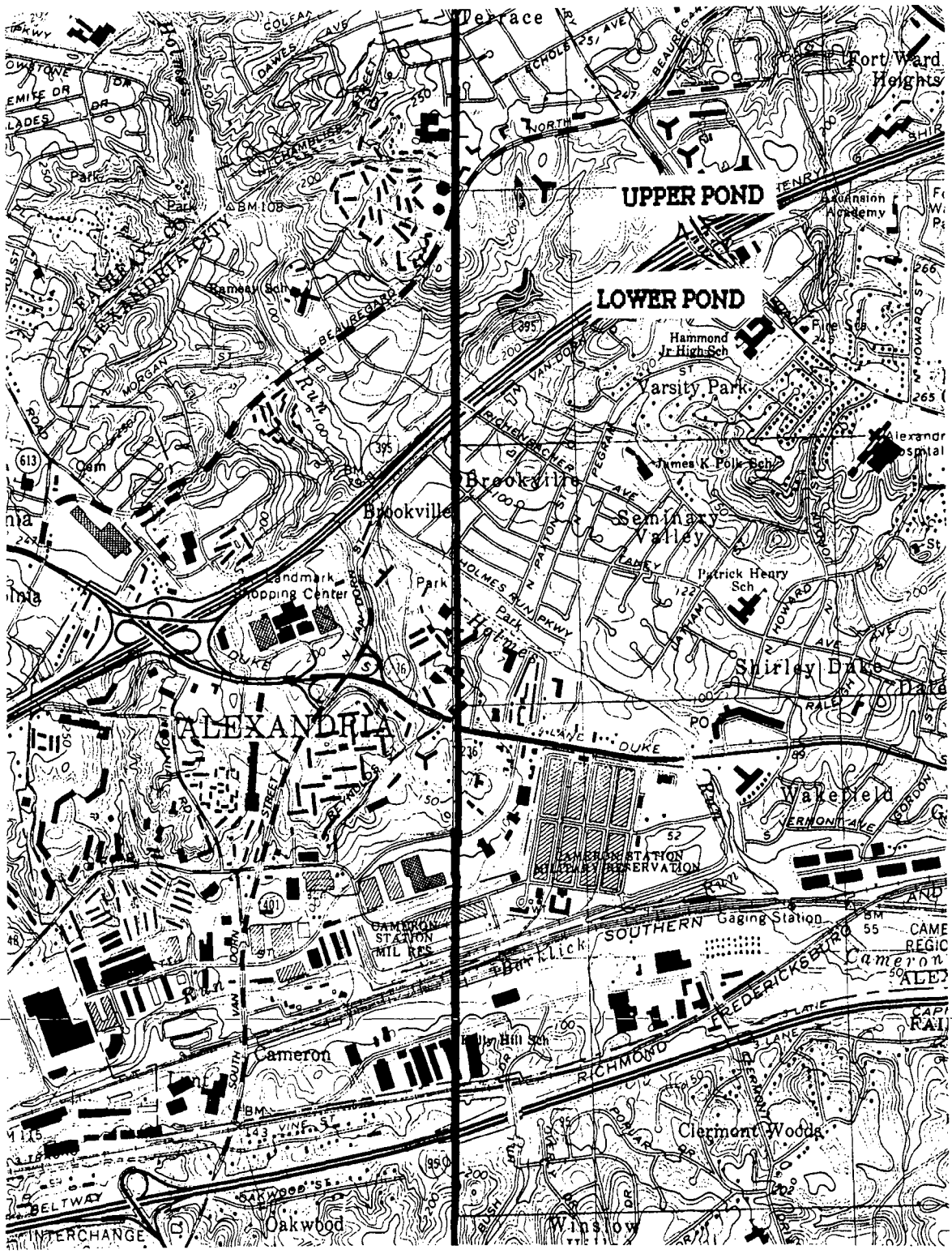


Figure 1 Alexandria and Annandale USGS maps with survey area highlighted.

Prehistoric and Historic Overview

The prehistoric history of the area has been aptly described in a number of publications and reports and for the sake of brevity it will not be repeated in this text. It is clear that this general area was inhabited in prehistoric times but the population density throughout the different periods is yet to be clearly defined. The area's physiographic configuration and presence of water, in some form, suggests a higher probability for at least limited food procurement activities. A number of prehistoric sites have been documented on the Winkler properties by Alexandria Regional Preservation Office (Klein,1979), (Coleman, Klein,1980), Alexandria Archaeology (Klein,1985) and the later investigations by Engineering Science (Pfanstiehl et. al., 1988). Several of these sites are in the general proximity of the survey area, primarily on the surrounding knolls or upland terraces, and their presence is considered in interpreting the area. Only one of these sites, 44AX12, lays partially within the survey area and will be discussed later in this report.

The historical record for the area has been briefly examined to identify any historic occupation that may have occurred within the survey area. Earliest records for the property indicate a purchase or land grant of 982 acres by William Henry Territt in 1741. It is interesting to note that portions of the current Winkler property were still in the possession of Territt family members as late as 1900. The locations of any dwelling(s) associated with the Territts, or the many other land owners over the years, has yet to be determined. But, it is clear that no remains of any historic structures were present within the undisturbed portions of the survey area. A review of The Mark Winkler Company title records show numerous changes of ownership but lends little indication of the presence of structures or their locations. A number of plats were included within the title documents but no indications of structures were evident although references to other plats on file will be investigated in the future.

Activities associated with the Civil War are often given their own subdivision within a historical review because of its anomalous nature and cultural features. More than a dozen forts were located on the western edge of Alexandria in 1862 and were separated by only a few miles. The closest to the survey area were Forts Worth, Ward, and Blenner just to the east while the Rose Hill entrenchments were a few miles to the west.(See Figure 16, p. 31) No specific troop movements or temporary camp areas have yet to be defined and no major military engagements occurred in the immediate area.

In addition, no Civil War period artifacts were recovered in the survey area nor in any other archaeological work preformed to date on the Winkler property. The report of possible earthworks by Klein during his 1979 survey can be discounted as the dirt piles in question located on the upland terrace above the survey area, are both too high to be used for field artillery and have no strategic command of the area. Further substantiation can be gleaned from examining the aerial photographs provided by Mr. Bill Nussbaum that show their formation as a result of the construction activity in 1962 (Figure 2).

The record of historical activity on the property during the late 19th and 20th centuries remain sparse. Review of the property titles did not mention improvements, structures or any other features. It is assumed from this cursory review, that the property was primarily used for agrarian purposes.

Mr. and Mrs. Winkler began acquiring properties in the area in the late 1930's with most of their acquisitions made before the mid 1940's. At the time of the purchase, the general area was being used as a pig farm and few details are available as to the locations of any structures or farm related features. Since the property was purchased by the Winklers, the survey area has remained undeveloped and the area where the fill pile and rock storage area are located was utilized by the Winkler Grounds Department for storage and some unauthorized dumping by the public occurred as well.

Figure 2 1962 aerial photograph of Winkler properties showing disturbance mistaken for Civil War period earthworks.

Methodology

The methodology for studying the area had been developed over a period of time during discussions between The Mark Winkler Company and Alexandria Archaeology. Considerations for non-invasive techniques and the preservation ethic of the Botanical Preserve led to a method where, for the Lower Pond, a series of 5 foot square areas would be raked off, examined and collected. These squares would be placed on a 45 sq. ft. grid pattern to cover the survey area. In addition, a walkover of the entire Upper and Lower pond areas would be undertaken to locate any cultural material laying exposed on the surface. It is my understanding that these procedures were included within the preliminary site plan approval. During discussions among Drs. Cressey and Shephard, Bill Nussbaum and myself at the Alexandria Archaeology offices on Jan. 7,1991, I expressed the need for a limited number of shovel test pits to be excavated. I felt that they were necessary to determine the stratigraphic sequence and to assist in understanding the geomorphological processes present in the area. At the meeting, Dr. Shephard had expressed an interest in reviewing the survey area after work had begun and both of these suggestions were added to the work plan.

Subsequent to the meeting, several telephone discussion with Steven Shephard discussed the possibility of revising the grid pattern to conform with a metric system for the anticipated prehistoric sites to be encountered. Further discussions ended with the decision to return to the original plan using the English system as it would be easier to coordinate the survey with the existing survey stakes in the area as no benchmark could be located in the vicinity. (Note: The previous engineering survey conducted in 1990 utilized the State Plane Coordinate or Virginia State Grid system which uses the English system of measurement).

In the Lower Pond area, the grid system was laid out with the use of a Leitz Sokishka BT 20 transit with barrel compass and the assistance of several of the Botanical Preserve staff. A number of modifications had to be made during this procedure in consideration for the Botanical Preserves objectives for preservation and non-disturbance. Distances between points were measured with a fiberglass tape and are considered to be linear distances. This technique was used to eliminate numerous mathematical calculations in the field and can be justified by the relatively flat topography of the floodplain area. In addition, it was known that a number of the location

of the test squares would have to be moved to avoid sensitive plant materials and because of physical considerations. (i.e trees, units too close to the river bank , etc.)

The datum used for the grid system was located at State Plane Coordinate point N 425745 E2392600.There were a number of problems involved with using this point and tying into the State Plane System. In an effort to clarify these difficulties I spoke to the survey company that had done the work. They were are unable to tell me which figure they had used for magnetic declination or where their original datum had been located. The variation between the published USGS declination from 1983 and the current declination as verified from the USGS Denver office was 1 degree 34 minutes. It was decided, based on simplicity and the anticipated need to reposition numerous grid squares using a Suunto sighting compass, that a grid using the magnetic cardinal directions would be used that originated from the datum point noted above.

The Upper Pond area, because of its limited size and linear dimensions, did not require a grid system. All exposed areas along the drainage were examined which included stream banks, the stream floor and erosional cuts above the stream course. Shovel tests were excavated to determine the stratigraphic profile near the edge of the drainage. These shovel tests were recorded on shovel test forms that included all pertinent information and soil smears from each stratigraphic level that was encountered. The locations of the shovel tests and artifacts recovered were noted on a 1: 50 scale map.

Research Objectives

Several implicit research objectives were considered during the investigation. Foremost is the question of presence or absence of cultural habitation, and if habitation is shown, what function did these areas perform? Considerations were made whether there is a temporal change in habitation or functions of these sites or if these lowland areas may be secondary occupation areas (i.e not as attractive as the upland terraces). Also, it was considered whether the natural processes of flooding , sheetwash , or cultural activities had displaced artifacts from nearby /adjacent sites (e.g. 44AX13).

A number of objectives were considered in broader terms that relate this area to associations with other cultural activities. These contexts include interactions, on several levels, during the 18th and 19th centuries between urban Alexandria and the primarily agrarian activities in the survey area to the west of the urban center.The relationship between changes in major transportation arteries and its effects on both and economic and social activities were considered. On an even larger scale, it can be asked, What role did this area and its residents play in the development and growth of the American Plantation system of the 17th to the mid 19th centuries.

On a smaller scale, the integration or influence of nearby institutions (i.e Civil War forts, Seminaries) on the economic and social well being of the community is one of the interesting relationships that must be considered when examining any cultural remnants that may be present.

Upper Pond Results

The Upper Pond area is characterized by a severely eroded stream channel that has undercut the existing banks and has numerous trees either fallen into the drainage or in a precarious state (Figure 3). There is very little area that is not radically sloped and the few small terraces that are present may be recent secondary deposits. The slopes leading to the drainage are well covered primarily with oak and beech leaves and there is a relative abundance of crane fly orchids (*g.s. tipularia discolor*) on these slopes. The stream bed has eroded down to a clay or hard pan basement(Figure 4) and abundant modern trash has been caught in the exposed tree roots along the drainage. At the downstream portion of the survey area, near the location of the proposed dam, numerous chunks of asphalt and concrete can be seen both in the stream channel and eroding out of the bank (Figure 5). These chunks had been placed in the drainage to control erosion and some of them having been completed buried over the years and are now reexposed. The presence of these asphalt and concrete chunks indicates the dynamic character of the drainage and lends credence to the story that the stream a few years ago was "large enough to park a semi in".

One shovel test pit was excavated in each of the two separate terraces or shelves that may have been wide enough for habitation at one time. Both of these tests revealed approximately 45 cm. of gravel resting atop a red-orange clay subsoil.(Figure 18,p.33) No artifacts were recovered and no definable stratigraphy was noted. These results corroborate the anecdotal evidence that the stream bed had been much wider in years past and that the efforts at erosional control may have succeeded in redepositing materials in these small accreted terraces.

Several disturbed areas were noted at the downstream portion of the area near the proposed dam (Figure 6 & 7). One area, it was explained, was where the stream bank had been cut away to help extract a geophysical drilling truck that had become stuck in the drainage. Only a few feet further downstream a relatively flat area had been disturbed when a modern concrete slab had been removed by Botanical Preserve staff members . In the same area three low mounds were identified as being recently placed there as planting beds for the purposes of displaying mosses.

Figure 3 Severe erosion at Upper Pond. Looking downstream.

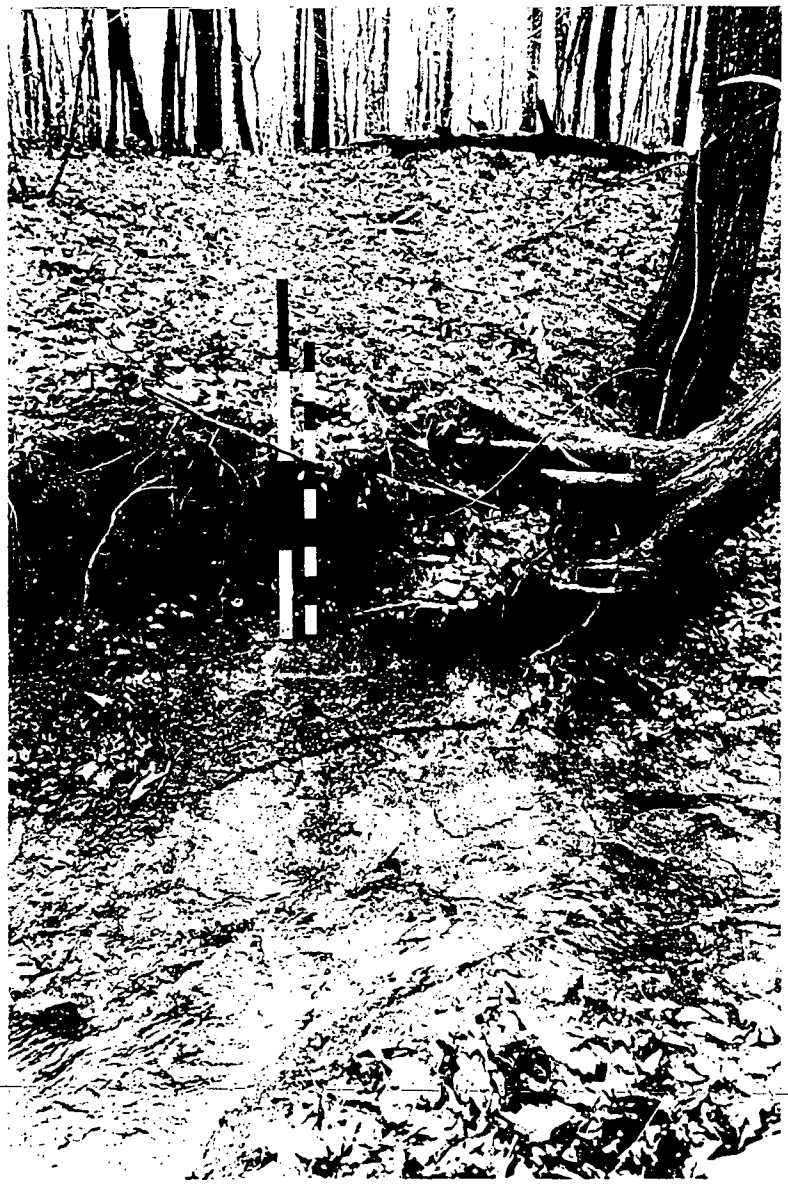


Figure 4 Upper Pond profile showing steep slope and clay subsoil.

Figure 5 Upper Pond showing concrete and asphalt eroding out of drainage bank.

Figure 6 View downstream of Upper Pond. Horitzontal line of flagging tape indicates proposed dam position and water level.

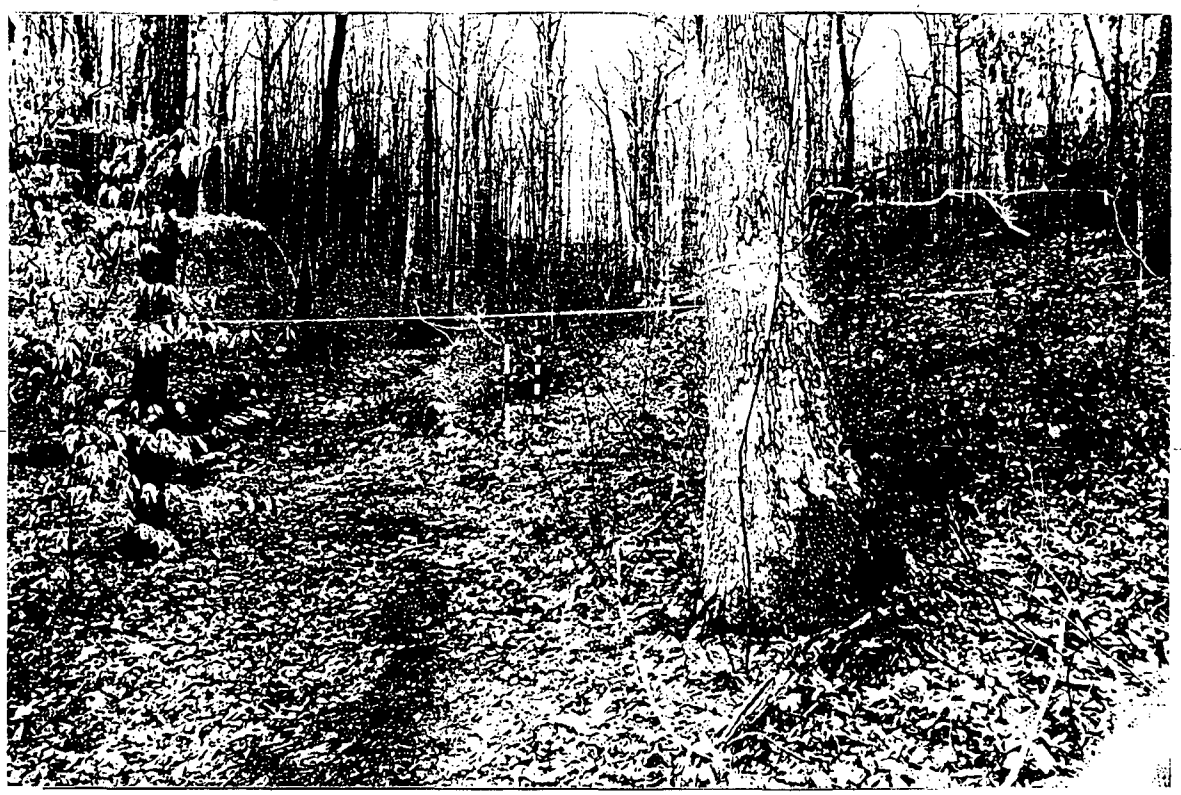
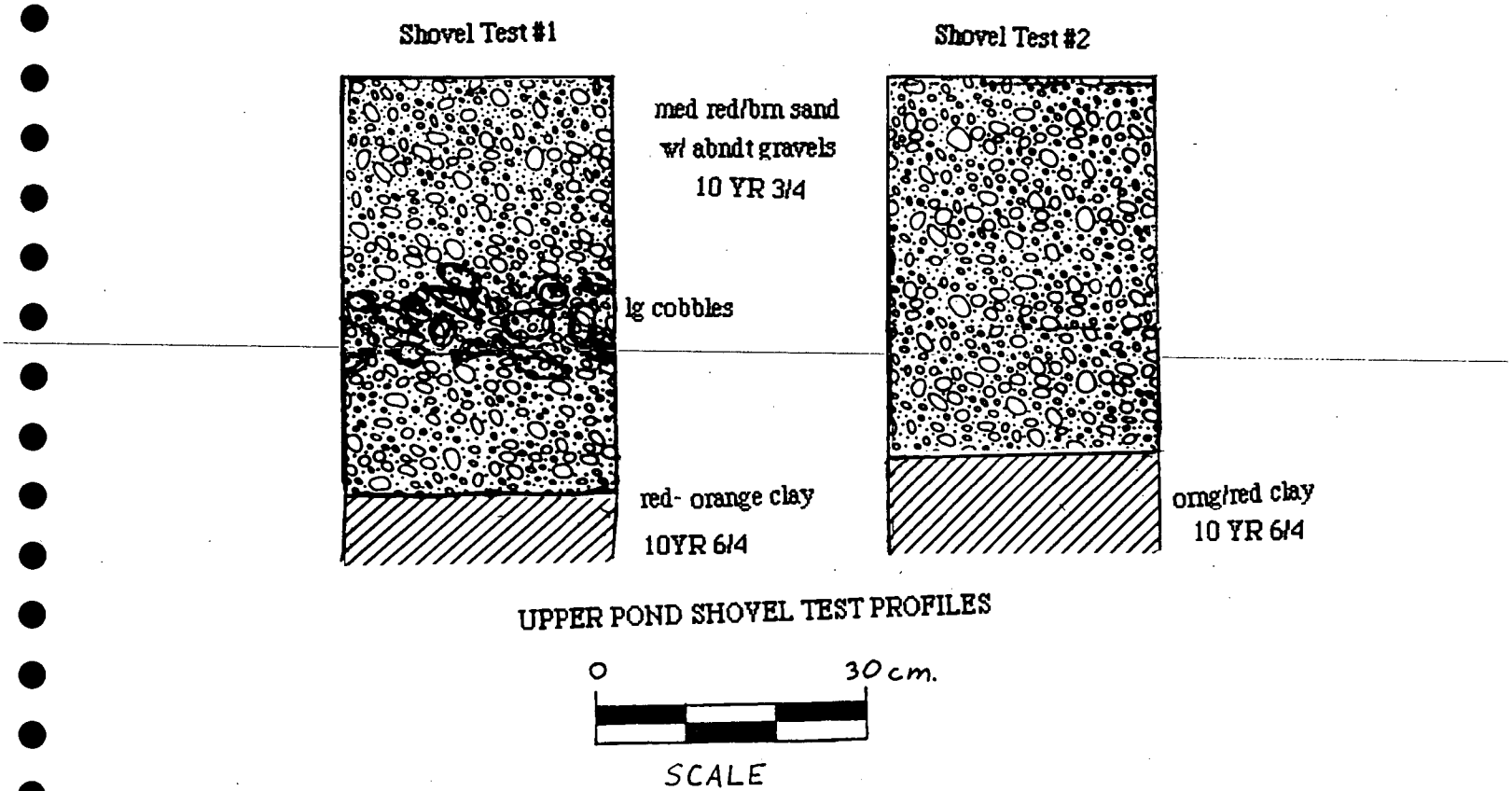


Figure 7 View upstream of Upper Pond. Horitzontal line of flagging tape indicates proposed dam position and water level.

The best exposure of the underlying stratigraphy was evident in the examination of the drainage banks and the materials that had eroded from these banks. Three lithics were recovered from the banks or the stream bed itself and their locations are indicated on the 1:50 construction map. Artifact #1 is a clear quartz secondary chip (1.0 x 0.7 cm.) with no definable platform, bulb of percussion and has cortex present. After closer examination, artifact #2 was determined to be natural quartz shatter and was discarded. Artifact #3 is clear quartz decorticate shatter (1.1 x 0.7 cm.) and both this artifact and artifact #1 are probably from a non-cultural origin.



UPPER POND SHOVEL TEST PROFILES

Lower Pond Results

The walkover of the Lower Pond area showed that large portions of the area have been previously disturbed. These areas include the construction of the parking lot for the Botanical Preserve, the area where several thousand yards of fill have been deposited, the corridor disturbed by the installation of a sewer line and the perimeter of the fill area that had been cleared during a major trash removal project . The area, east of the fill pile, is now being used as a rock storage area for future landscaping projects (Figure 8&9 also see Figure 17,p.32). This perimeter area is most easily identifiable by the presence of secondary growth, primarily greenbriars (*g. smilax*). The entire disturbed area was the subject of an intense clean up project when the Botanical Preserve was initiated and I have been told that 75 truckloads of rubbish were removed as the area had been used as a dumping or storage area for many years (Pers. comm. Nelson Bowman, 2/21/91)

Two other areas showed limited disturbance; the area adjacent to the corner of the Winkler Maintenance Building at the downstream limit of the construction area and the area just west of the road that crosses the drainage to the Linear Lakes at the southeastern edge of the survey area. This second area, just west of the road and north of the drainage, was disturbed as part of the road construction and small hummocking from soil and debris are still evident in the area. The disturbed areas can be seen in Figure 17, p.32.

The area that appears as an appendage trending northwest on the 1:50 scale map showing the survey and disturbed areas is the area that will be disturbed by the installation of a stormwater drainage line. This area has a slope of nearly ten degrees and has a few areas that were easily exposed by raking. As anticipated because of the steep grade, no artifacts were recovered.

The results of the complete walkover of the area yielded three artifacts. One artifact, a white "Chinaware" ceramic gravy/sauce boat, was located very near the surface and apparently been recently displaced (Figure 10). The two other artifacts were located by Steve Shephard- a white "Chinaware" ceramic plate base fragment and one quartz modified flake. Both the gravy

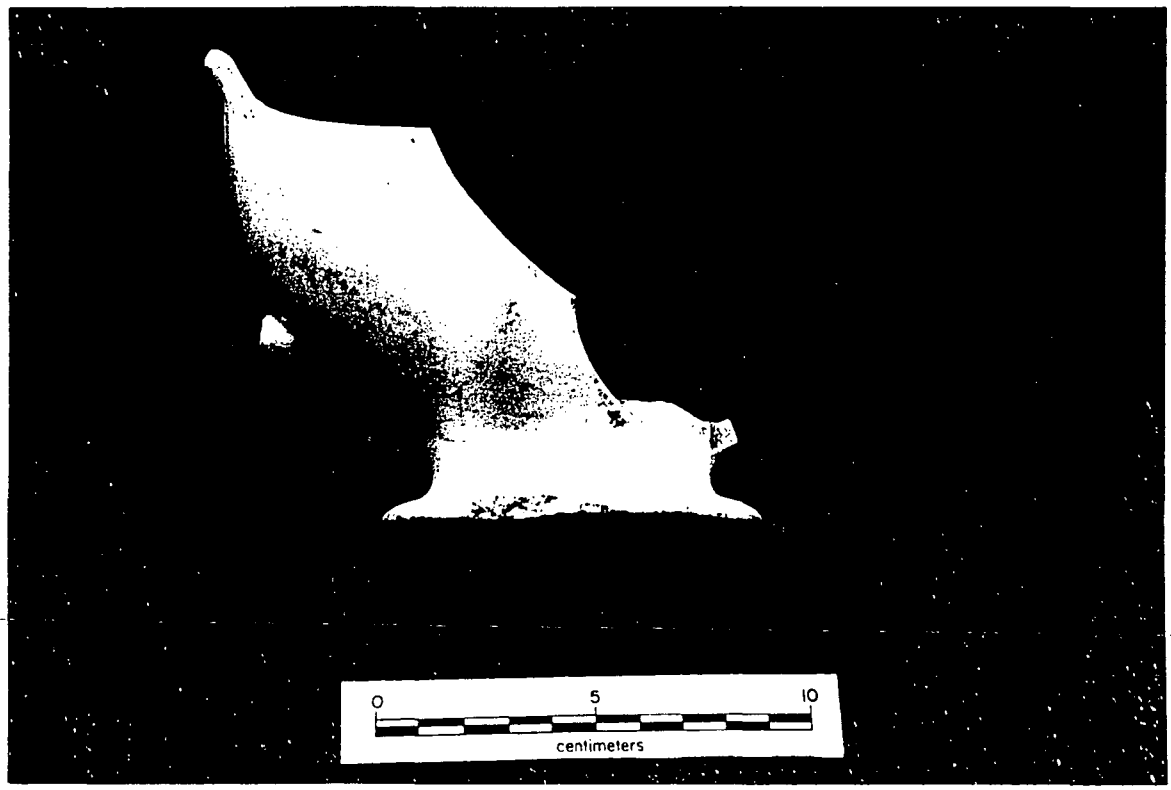


Figure 10 Profile view of "Chinaware" gravy/sauce boat.

boat and the plate base are of the same material; a low quality "mess hall porcelain" that is very similar in appearance to the more familiar "ironstone". The base of the gravy boat is initialed with the letters "U.S.Q.M.C." and directly below it the numbers "3665 - P - 30" (Figure 11). Below these markings are the makers insignia which is an open book with the name " The Bailey Walker" written vertically on the left- hand page and on the right-hand page not actually readable is"Vitrified China" The initials at the top are for the United States Quarter Master Corps which has been a governmental procurement entity, under different names, off and on since the Revolutionary War. The "Corps" was formed in 1912 and all materials before this date carry the initials " U.S.Q.M.D." when it was officially a Department. The first four digits of the following line are in question and form a classification or order number scheme which has not been identified to date. The maker, the Bailey-Walker China Company of Bedford, Ohio was formed as a merger/reorganization in 1923 and between 1941-43 it became the Walker China Company (Lehner, 1988:497-98). I have spoken to Mr. Luther Hanson, Quarter Master Museum, Fort Lee, Virginia who has identified it as "Chinaware" and classified it as a "lightware" (wares less than one-half inch in body thickness). The piece dates from the late 1930's to perhaps 1941-43.

It is probable that the gravy boat and plate base fragment are derived from the same source and that they may have been deposited as trash in the area. It follows that they may have been recently redeposited as a result of the massive cleanup operation that was undertaken in the fall of 1986.

The single modified flake recovered by Steve Shephard represents the most interesting prehistoric artifact that was found. Under binocular microscope examination, the flake shows both abrasion and retouching of an apparently original surface. This flake, measuring only 2.8 x 1.8 cm., may have been used as a small scraper or for a number of other functions. To determine whether additional cultural materials were present, four additional shovel tests were excavated at 10 ft. intervals in the four cardinal directions from where the flake was recovered, N425754 E 2392539. Because of the abundance of gravel from two of the shovel tests, the materials from these tests were wet screened though 1/4 " mesh screen to improve identification of any cultural material.

Figure 11 Bottom markings of "Chinaware" gravy/ sauce boat.

These tests showed a wide variance in their stratigraphic profile. Two of the shovel tests that were excavated had very abundant gravels while the two others had almost no gravels present. Topsoil varied from being totally absent to 14 centimeters in thickness. This wide variation indicates a dynamic floodplain and no artifacts were recovered from any of the tests.

The systematic raking of the 5 foot squares for surface collection was undertaken after the area had been examined and approved by Botanical Preserve personnel. In a number of cases the location of the units were shifted several feet either to avoid sensitive plant materials or to provide a better sampling because of its physical location. A total of 43 units were examined and no artifacts were recovered (Figure 19, Map pocket). The typical unit was covered with a substantial leaf cover composed primarily of several varieties of oak, an abundance of beech and some maple as well as other species. Often, below the leaves, the ground exposure was good and it exposed a dark brown sandy loam (Munsell 10 YR 3/2) In a number of the units a well developed root mass had formed and ground visibility was limited.

As a result of the increased erosion, both banks of the stream and the stream bed that cut though the Lower Pond floodplain provided an excellent opportunity to locate cultural material. These cultural materials, if present, would have eroded from the bank and been deposited at its base or later would have ended up in the stream bed itself (Figure 12). The significant amount of erosion along the stream provided the equivalent of many thousands of shovel tests and it was anticipated that at least some prehistoric materials, i.e. projectile points, would have been exposed. Unfortunately, no prehistoric artifacts were recovered.

Although no prehistoric artifacts were recovered, four historic handmade brick fragments were recovered widely dispersed along the length of the stream. The locations of the brick fragments and one iron strap are shown in Figure 19-Map pocket. Brick fragments #1,2, &4 were recovered from the stream bed and their origins are questionable. The brick fragment #1 recovered at the upstream portion , near the Linear Lakes, may have been deposited as a result of the drainage of Shirley Highway/ I-395. Brick batt fragment #4 may have entered the stream as a result of the construction of the

Figure 12 North bank of drainage just below the Linear Lakes showing overhanging topsoil.

Botanical Preserve parking lot and this is substantiated by the recovery of brick batt #3 and an associated iron strap at the edge of the stream below the parking lot. Brick batt #3 and the associated iron strap were recovered in close proximity to a modern automobile hub cap and their context was definitely disturbed. The iron strap measures 2 inches wide, 36 inches long and 1/16 inch thick with both ends of the strap being preserved. When the strap was originally recovered it was thought that it might be a barrel hoop. If so, calculations indicate the cask diameter would be somewhat smaller than 11.4 inches - suitable perhaps for a small wine cask. But, after some mechanical cleaning near both ends of the strap, there are no apparent holes or rivets to identify the strap as a barrel /cask hoop.

Five shovel tests were excavated in an effort to determine the stratigraphy of the floodplain and to possibly encounter buried cultural materials. The locations of these units appear in Figure 19-Map pocket and their locations were chosen to cover each of the isolated areas bisected by the stream courses. The 30 centimeter diameter shovel tests were excavated to an apparent subsoil with all materials screened through a 1/4 inch mesh screen. No artifacts were recovered in any of these shovel tests and the stratigraphy from these tests showed distinct variations. These tests ranged in depth to subsoil from 29-70+ cm. and average 40 cm. A general profile for the shovel test are a 3 cm. layer of a dark brown sandy loam (Munsell 10YR 3/2), followed by a medium brown sandy loam that varied in color from a Munsell 10YR 4/4 or 3/4 to a 7.5YR 4/3. The depth of this stratum varied widely and the abundance of gravel varied but is not easily quantified. A graphic representation of the five shovel tests can be seen in Figure 13 and the copies of the field recording forms have been enclosed as Appendix B to assist in the interpretation of the graphics. It can be seen that the variation in profiles indicate either a widely spaced sampling or more probably the typical wide variation of sediment profiles of an active floodplain.

At the southeastern limit of the survey area , near the Linear Lakes, a small floodplain area approximately 10 x 30 meters had been designated as site 44AX12 during the 1979 survey (Figure 14). After reviewing the 1979 survey report and field

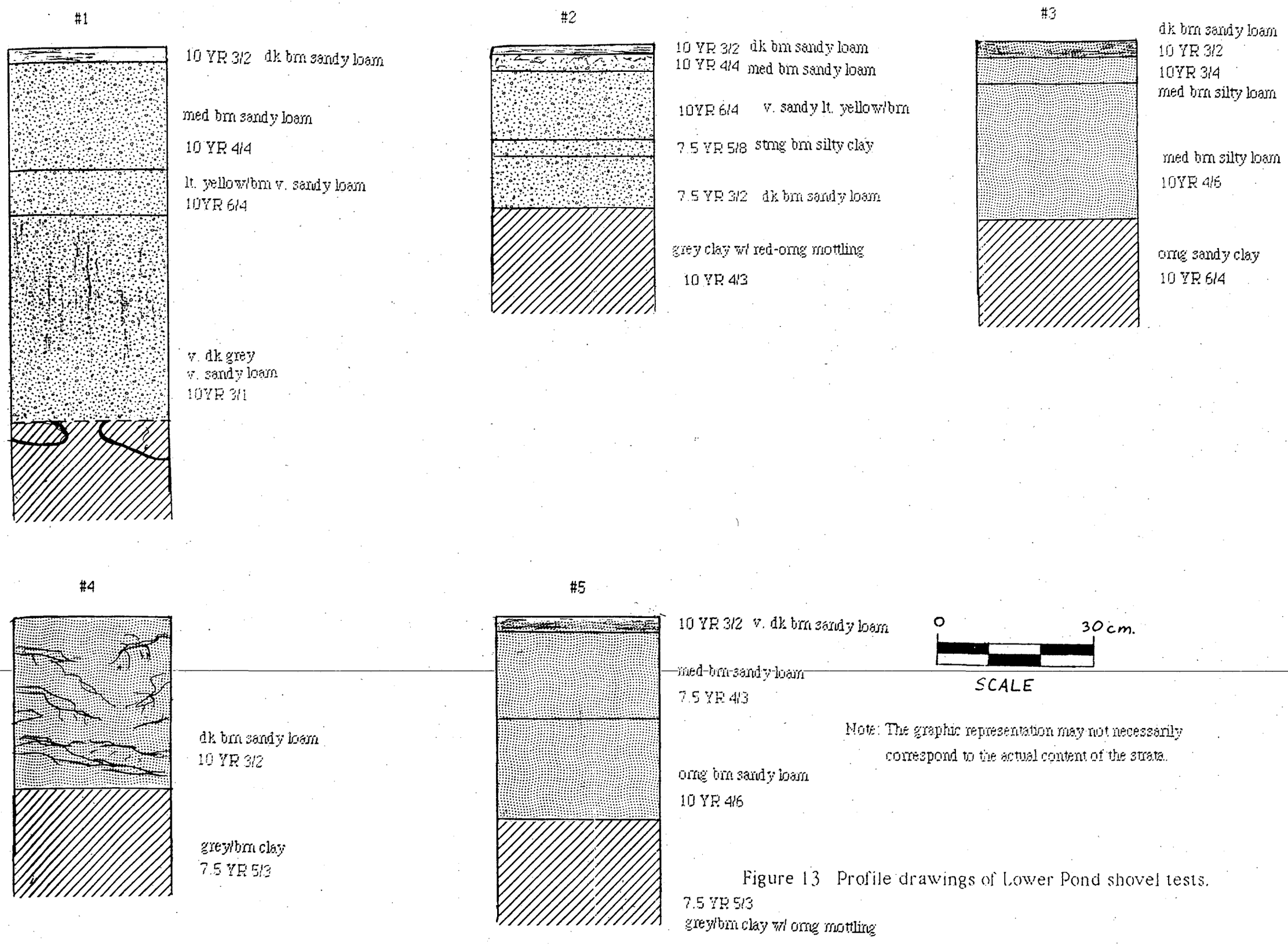


Figure 13 Profile drawings of Lower Pond shovel tests.

Figure 14 View of 44AX12 from Linear Lakes looking downstream.

notes at Alexandria Archaeology and the VRCA- Site Survey Form at the VDHR in Richmond, I noted a discrepancy in the site location. I have enclosed a copy of the Site Survey Form that is on file with the Commonwealth and draw your attention to its description as a less than 3% floodplain (Appendix C). It appears that a simple mistake was made in plotting the site and I have replotted it in its correct location and will send a copy of the correction with a brief letter of explanation to both Alexandria Archaeology and the VDHR.

The field notes for the survey indicate that three flakes were noted during surface collection of the site 44AX12 and that the flakes were not collected. In an effort to investigate the site, most of which lays outside the survey area, one 5-foot square was surface collected and 6 additional shovel test units were completed over the entire site area. No artifacts were recovered from the 5-foot square as the root mass was well established and ground visibility was poor. In an effort to closely examine all materials from the shovel tests from this site area all gravels smaller than approx. two centimeters were bagged and later wet screened to assure a thorough examination and that no cultural materials would be overlooked.

The results of these six shovel tests produced one quartzite broken secondary flake that is of questionable cultural origin. The portion of the flake itself is 2.9 x 2.8 cm. and is approx. 0.6 cm. thick. The platform-like surface is cortex, fairly large (1.3 x 0.9 cm.) and shows no sign of preparation or a definable bulb of percussion. At least one face of the artifact indicates a hard hammer strike or percussion. It appears, if this is an actual flake, that it is broken and the platform-like cortex represents the distal end of the flake. These observations leave serious reservations as to the cultural origin of this material. One quartz secondary flake was recovered on the surface within inches of the stream bank and is the only apparently culturally produced artifact recovered from the site.

The tests showed a wide variability in the underlying stratigraphy, perhaps as a result of the extreme topography to the south and the recent alterations and flooding events caused by the construction of Interstate 395. The surface humus layer was consistent over most of the site except within a few feet of the edge of the stream bank where overbanking had deposited gravels on the ground surface. Shovel tests varied in depth to subsoil from 18-50 cm. (avg.38 cm.) and showed a wide variety of soil types and gravel concentrations. In at least one shovel test, a large well rounded rock was encountered that is similar to the large stones that can be seen deposited at the base of the

slope along the southern most hill in the Preserve. These stones are deposited at the base of the slope as a result of deflation and it is possible that the stone that was encountered was deposited by this process or secondarily by transport downstream from its original point of entry into the drainage. Other shovel tests produced an abundance of gravel before encountering the consistent orange-red sandy clay subsoil. In other units, a more well sorted soil was encountered that had fewer and smaller gravels. It is clear that this floodplain has a dynamic past and its formation had many geomorphological factors (Figure 15).

Conclusions and Recommendations

Certain generalities have emerged as the survey has progressed and the basic principal that rises to the top of the list is that the Lower Pond floodplain was not the best suited for habitation. Especially, when one considers that attractive flat top knolls were literally only a few feet away and have been recorded as prehistoric sites. The same analogy applies to the area of the Upper Pond where in prehistoric times the steep slopes were almost certainly uninhabitable.

Another more speculative generality is that the prehistoric geomorphology of the Lower Pond area consisted of a shallow braided stream with damp sand and gravels that may have changed course during heavy rains. This consideration, along with the factors of strategic defensibility and perhaps to minimize ones presence to the wildlife in this limited "canyon-like" area, all suggest that taking the higher, immediately adjacent knoll, was better, more comfortable and smarter.

Because of the lack of data/artifacts recovered, few of the research objectives can be answered related to the function of sites, i.e.if there were changes in their use over time or to what extent was there transport of cultural materials by natural or cultural processes? At least one conclusions can be drawn ; that the area in question was not a primary or heavily occupied habitation area.

It is clear that within the boundaries of the survey area that there has been little or no detectable cultural habitation. The recovery of so few artifacts of definable cultural origin suggest that no further work is recommended.

References Cited

Klein, Terry H., Archaeological Reconnaissance Report Winkler Tract Impact Area
1979 Alexandria Regional Preservation Office, Alexandria,VA.

Coleman, E. and Klein, T., Archaeological Testing report 44 AX 6, The Winkler Site,
1980 Alexandria Regional Preservation Office, Alexandria, VA.

Klein, Terry H., Archaeological Testing Report 44 AX 6, The Winkler Site, Alexandria
c. 1985 Archaeology, City of Alexandria,VA

Pfanstiehl,Cynthia et.al., Winkler Tract Phase I and II Archaeological Investigations,Engineering
1979 Science, Washington D.C.

Lehner, Lois, Lehner's Encyclopedia of U.S. Marks on Pottery, Porcelain and Clay, Collectors
1988 Books, Paducah, Kentucky

McDowell,Gen. Irvin,"Map of Northeast Virginia and the Vicinity of Washington" Aug. 1,1862 in Atlas to Accompany the Official Records of the Union and Confederate Armies,1891-1895.This map can also be found in Stephenson, Richard W.,Cartography of Northern Virginia, p. 62/Plate 48.

Figure 16 Map showing locations of Civil War period forts in the area. (McDowell: 1862)

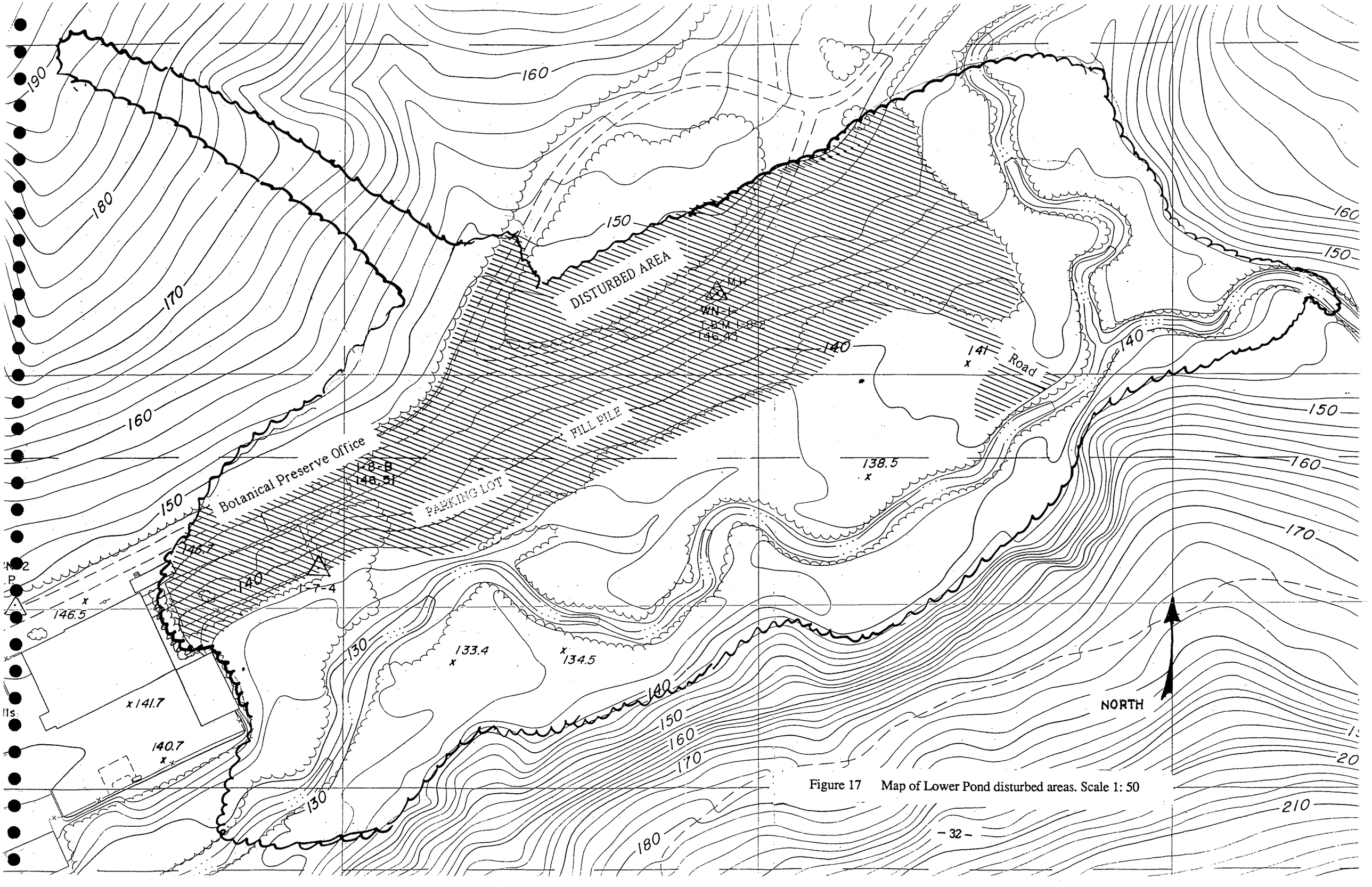
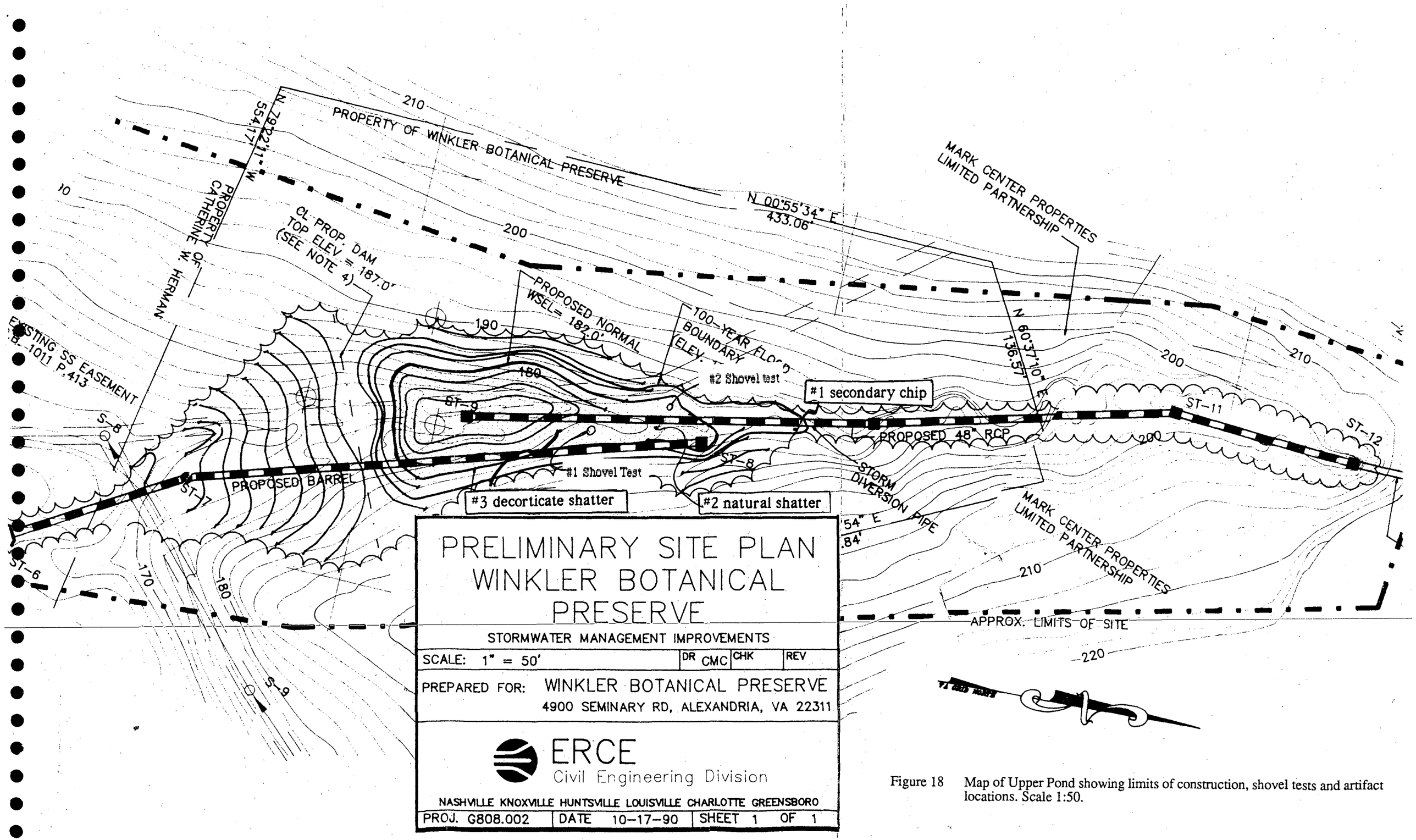


Figure 17 Map of Lower Pond disturbed areas. Scale 1: 50



PRELIMINARY SITE PLAN
WINKLER BOTANICAL PRESERVE

STORMWATER MANAGEMENT IMPROVEMENTS

SCALE: 1" = 50'	DR CMC	CHK	REV

PREPARED FOR: WINKLER BOTANICAL PRESERVE
4900 SEMINARY RD, ALEXANDRIA, VA 22311

ERCE
Civil Engineering Division

NASHVILLE KNOXVILLE HUNTSVILLE LOUISVILLE CHARLOTTE GREENSBORO

PROJ. G808.002	DATE 10-17-90	SHEET 1 OF 1

Figure 18 Map of Upper Pond showing limits of construction, shovel tests and artifact locations. Scale 1:50.

APPENDIX A

ARTIFACT CATALOG

Upper Pond
(See 1:50 scale map)

#1-clear quartz secondary chip with cortex (probably non-cultural)

#2-natural quartz shatter (discarded)

#3-clear quartz decorticate shatter (probably non-cultural)

Lower Pond

Surface collection

1- white "Chinaware" gravy/sauces boat (partial)
N 425790 E2392540

1- white "Chinaware" plate base fragment
N425873 E2392746

1- milky quartz modified flake
N 425754 E2392539

1- clear quartz secondary flake (probably cultural)
N 425770 E2392870, Site 44AX12

Located in or along stream bed
(See 1:50 scale map)

#1-Brick fragment-handmade

#2-Brick Batt-handmade

#3-Brick Batt-handmade, iron strap-2"x36"x1/16"

#4-Brick fragment-handmade

Shovel Test

1-tan quartzite broken secondary flake (probably non-cultural)
N425772 E2392858

APPENDIX B

International Archaeological Consultants
1145 Mountain View Boulevard
Rawlins, Wyoming 82301

PROJECT Winkler
SITE#
SITE NAME Lower Pond
SHOVEL TEST# 1
TRANSECT
LOCATION (N) S 25104 (E) W 92465
EXCAVATOR RMO
RECORDER RMO
DATE 3/7/91

Ground Surface (description) exposed dk brn sand loam

Level	Depths Top	Depths Bottom	Soil Description (color & composition)	Munsell	Artifacts/ Comments	Soil Sm
1	0	3 cm	dk brn sandy loam very dk grayish brn –	10YR 3/2	Ø	
2	3	23 cm	med brn sandy loam dk yellowish brown	10YR 4/4	Ø	
3	23	31 cm	v. sandy loam light yellowish brn	10YR 6/4	Ø	
4	31	70+ cm	very dk. gray v. sandy loam	10YR 3/1	Ø	

Temporal indicators - yellow flagging, 1954 penny, plastic pistol part in bottom of STP

OBSERVATIONS: Level 3 - some hematitic staining/banding
Level 4 - some pockets of hematite/Fe staining
Level 4 - to 70 cm encounter large stone or bedrock abnd. gravel a few inches before bottom
All levels, except 3, appear to have some gravels.

International Archaeological Consultants
1145 Mountain View Boulevard
Rawlins, Wyoming 82301

PROJECT Winkler
SITE#
SITE NAME Lower Pond
SHOVEL TEST# 2
TRANSECT
LOCATION N/S 25754 E/W 9255
EXCAVATOR RMO
RECORDER RMO
DATE 3/7/91

Ground Surface (description) maple, oak leaf cover
profile south wall

Level	Depths Top	Depths Bottom	Soil Description (color & composition)	Munsell	Artifacts/ Comments	Soil Sm
1	0	3	detritus dk brn sandy loam Mon - v. dk grayish brn	10YR 3/2	Ø	[illegible]
2	4	7	med brn sandy loam "dk yellowish brn"	10YR 4/4	Ø	[illegible]
3	7	16	vy. sandy loam lightyellowish brn (coarse grain	10YR 6/4	Ø	[illegible]
4	16	19	silty clay strong brown	7.5YR 5/8	Ø	[illegible]
5	19	29	dk brown sandy loam	7.5YR 3/2	Ø	[illegible]
6	29	—	~~strong~~ "dark brown" grey clay mottled red	10YR 4/3	Ø	[illegible]

OBSERVATIONS: 9 ft. north 2 ft east from stake N25745 E 92555 - Few gravels throughout, less than STP#1
also more clay in soil - more plastic

International Archaeological Consultants
1145 Mountain View Boulevard
Rawlins, Wyoming 82301

PROJECT: Winkler
SITE #:
SITE NAME: Lower Pond
SHOVEL TEST #: 3
TRANSECT:
LOCATION: N 25845 E W 92703
EXCAVATOR: RMY
RECORDER: RMY
DATE: 3/7/91

Ground Surface (description): Mostly oakleaves, greenbriers
~6 ft. NW of stream bank edge

Level	Depths Top	Depths Bottom	Soil Description (color & composition)	Munsell	Artifacts/ Comments	Soil Sm
1	0	3	dk brn sandy loam leaf detritus etc		surface Ø	[redacted]
2	3	8	med brn ~~sandy~~ silty loam "dk yellowish brown"	10YR 3/4	Ø	[redacted]
3	8	33	silty loam some plasticity "dk yellowish brown" ↑ very close	10YR 4/6	Ø	[redacted]
4	33	~~[illegible]~~ ↓	orange sandy clay "light yellowish brown"	10YR 6/4	Ø	[redacted]

OBSERVATIONS: From stake N25835 E 92690 - 10 ft. North
13 ft. East to N25845 E 92703
- at ~8 cm a thin layer of 1-2 cm gravels.

33

International Archaeological Consultants
1145 Mountain View Boulevard
Rawlins, Wyoming 82301

PROJECT Winkler
SITE#
SITE NAME Lower Pond
SHOVEL TEST# 4
TRANSECT
LOCATION N/S 25925 E/W 92705
EXCAVATOR pmg
RECORDER pmg
DATE 3/18/9

Ground Surface (description) oak leaf cover over exposed surface

Level	Depths Top	Depths Bottom	Soil Description (color & composition)	Munsell	Artifacts/ Comments	Soil Sm
1	0	32 cm	dk brn sandy loam w/ abnd + lg. roots	10YR 3/2	Ø	[illegible]
2	32	↓	grey brown clay "brown"	7.5YR 5/3	Ø	[illegible]
	tested depth 36 cm					

OBSERVATIONS: Hole shifted ~ 2 ft. south to fine area w/ fewer roots with little improvement
almost no gravel

International Archaeological Consultants
1145 Mountain View Boulevard
Rawlins, Wyoming 82301

PROJECT Winchester
SITE#
SITE NAME Lower Pond
SHOVEL TEST# 5
TRANSECT
LOCATION (N) S 25835 (E) W 9275
EXCAVATOR RMG
RECORDER RMG
DATE 3/18/91

Ground Surface (description) oak, beech & maple leaf canopy over established root mass

Level	Depths Top	Depths Bottom	Soil Description (color & composition)	Munsell	Artifacts/ Comments	Soil Sa
1	0	3 cm	vy dk brn sandy loam detritus/humus layer	10 YR 3/2	∅	
2	3	19	med brn sandy loam "dark brown"	7.5 YR 4/3	∅	
3	19	38	orange brn sandy loam "dark yellowish brn"	10 YR 4/6	∅	
4	38	↓	gray/brn clay w/ orange mottling - ferrous "brown"	7.5 YR 5/3	∅	
		46 cm				

OBSERVATIONS: almost no gravels, established roots at ~15cm

APPENDIX C

VIRGINIA RESEARCH CENTER FOR ARCHAEOLOGY
SITE SURVEY FORM

Name of site: Gyrisco Site

Site number: 44 Ax 12

Type of site: Lithic Scatter

Cultural affiliation: Unknown

Map reference: USGS Alexandria Quad

Latitude ° ' " north. Longitude ° ' " west.
U.T.M. Zone 18 Easting 315,900 Northing 4,299,590.
(or distance from printed edge of map: bottom edge ____ : right edge ____)

Owner/address: Mark Winkler Management, Inc.
~~Tenant~~/address: 4660 Kenmore Avenue, Alexandria, Virginia 22304
Attitude toward investigation: Enthusiastic
Informant/address:
Surveyed by: M. Swernoff, Alexandria Regional Preservation Office
Date: 6/2/79

General surroundings:
Site is on south bank of small stream. Area is small narrow floodplain of less than 3% slope. Site is in deciduous forest with minimal undergrowth.

Nearest water: nature, direction and distance:
0m to north (flows along the north boundary of the site).

Dimension of site:
Approx. 33m by 11m

Description: depth, soil, collecting conditions:
No subsurface testing done.

Specimens collected: kinds, quantities, materials:
None collected. Surface materials include quartz flakes.

Specimens reported, owners, address:
None.

Other documentation: reports, historical data:
None.

Condition: erosion, cultivation, excavation, construction:
North edge of site eroding into stream and is being cut by the water action.

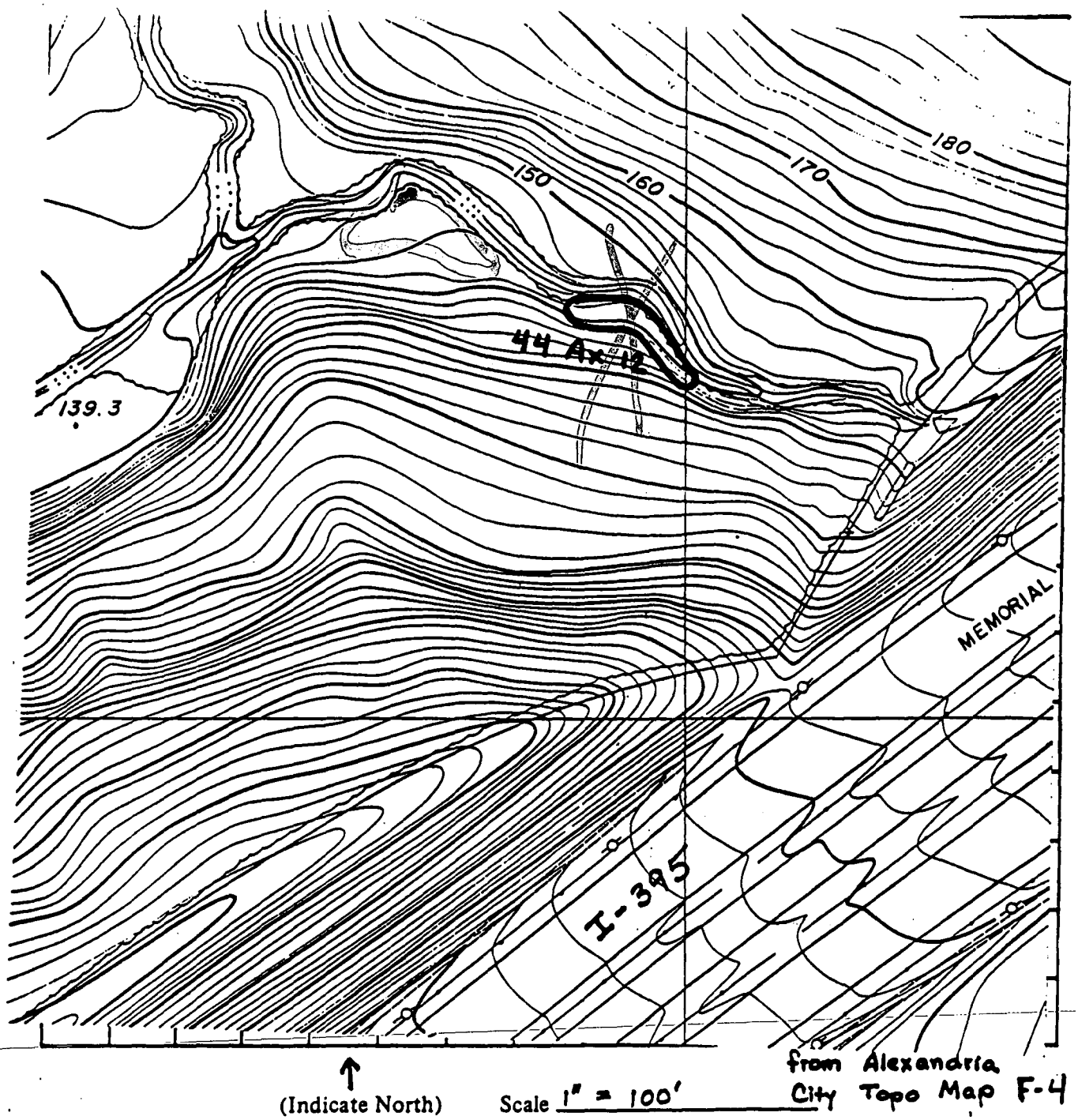
Recommendations:
Subsurface testing to determine true site extent.

Photo: None
Map: 6/2/79
Recorded by: S. Henry
Date: S. Henry

(Use reverse side of sheet and additional pages for sketches of site and artifacts)

County Alexandria
Map Sheet USGS Alexandria Quad
Site Number 44 Ax 12

SKETCH MAP



(Indicate North) Scale 1" = 100'

Additional comments:

Corrected map showing the actual location of site 44AX12. Revised by (Adams ,1991)Archaeological Survey of the proposed Upper and Lower Ponds at the Winkler Botanical Preserve, Alexandria, Virginia