LOUDOUN COUNTY
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TECHNICAL REPORT

CULTURAL RESOURCES SURVEY

SUBMITTED PURSUANT TO 42 U.S.C. 4332(2)(C)

DULLES AIR CARGO, PASSENGER & METRO ACCESS HIGHWAY

PREPARED BY
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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION &
VIRGINIA DEPARTMENT OF TRANSPORTATION

CULTURAL RESOURCES SURVEY
ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED DULLES AIR CARGO, PASSENGER, AND METRO ACCESS HIGHWAY
LOUDOUN COUNTY, VIRGINIA

VDOT PROJ. NO. R000-053-032, P101; UPC 103929; VDHR File # 2013-0109

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ABSTRACT

Coastal Carolina Research (CCR), a wholly owned subsidiary of Commonwealth Cultural Resources Group, Inc., has completed cultural resources surveys addressing above-ground historic architectural resources and archaeological resources for the proposed Dulles Air Cargo, Passenger, and Metro Access Highway in Loudoun County, Virginia. The surveys were conducted for Whitman, Requardt, and Associates, LLP (WRA) and the Virginia Department of Transportation (VDOT) in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 and the Advisory Council on Historic Preservation's regulations for compliance with Section 106, codified as 36 CFR Part 800. The investigations were conducted according to the Secretary of the Interior's *Standards and Guidelines for Historic Preservation Projects* (Federal Register, Vol. 48, No. 190, September 1983, P. 44716-44742, et seq.), the Virginia Department of Historic Resources' (VDHR) *Guidelines for Conducting Historic Resources Survey in Virginia* (2011), VDOT's *Expectations and Standard Products for Cultural Resources Surveys* (2010), and the *Programmatic Agreement Between the Virginia Departments of Transportation and Historic Resources Concerning Interagency Project Coordination* (1999). The purpose of the surveys was to determine if architectural or archaeological resources on, eligible for, or potentially eligible for the National Register of Historic Places (NRHP) are located within the project's Area of Potential Effects (APE) for direct and indirect effects. The APE is based upon is based upon the locations of two location study corridors (Alternatives 2 and 3) incorporating four potential Build Alternatives (2, 3A, 3B, and 3C).

Forty-seven previously recorded resources and twenty-four newly recorded resources (VDHR #s 053-6316 through 053-6338) were documented in the APE for above-ground historic architectural resources as part of the current study. Of the previously recorded resources, 15 are no longer extant, which is largely reflective of developmental pressures in the project vicinity, and the remaining are previously determined or currently recommended not eligible for the NRHP. The previously recorded late nineteenth-century Palmer Family Cemetery (VDHR# 053-6146), while recommended not eligible for the NRHP, is subject to state statutes regarding cemeteries and may require delineation to identify any unmarked graves. None of the newly recorded resources, which include twentieth-century dwellings, office buildings, outbuildings, and a workshop, are recommended eligible for the NRHP based on the current survey.

For archaeology, as a result of previous systematic surveys or other types of archaeological investigations resulting in site recordation, a total of 21 previously recorded sites are located within or abut the current APE. These sites range from Archaic lithic scatters to twentieth-century trash scatters. All but two were not previously evaluated by VDHR in terms of final eligibility in conjunction with a compliance project, although a number had been recommended not eligible for the NRHP during the course of non-Section 106 compliance surveys for Loudoun County. Primarily due to loss of integrity, but also because many of the sites represent low density scatters or common site types, none of the previously recorded site areas investigated during the current project appear to contain significant information that would contribute to NRHP eligibility. Four new archaeological sites were recorded within the APE as a result of the current survey. These include two nineteenth- to twentieth-century farmsteads (44LD1634 and 44LD1635), a twentieth-century domestic site (44LD1633), and a mid-twentieth century trash dump or refuse pile (44LD1636). All four are recommended as not eligible for NRHP.

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1.0 INTRODUCTION

1.1 PROJECT OVERVIEW AND COMPLIANCE

Coastal Carolina Research (CCR), a wholly owned subsidiary of Commonwealth Cultural Resources Group, Inc., has completed cultural resources surveys addressing above-ground historic architectural resources and archaeological resources for the proposed Dulles Air Cargo, Passenger, and Metro Access Highway in Loudoun County, Virginia. The surveys were conducted for Whitman, Requardt, and Associates, LLP (WRA) and the Virginia Department of Transportation (VDOT) in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 and the Advisory Council on Historic Preservation's regulations for compliance with Section 106, codified as 36 CFR Part 800. The investigations were conducted according to the Secretary of the Interior's *Standards and Guidelines for Historic Preservation Projects* (Federal Register, Vol. 48, No. 190, September 1983, P. 44716-44742, et seq.), the Virginia Department of Historic Resources' (VDHR) *Guidelines for Conducting Historic Resources Survey in Virginia* (2011), VDOT's *Expectations and Standard Products for Cultural Resources Surveys* (2010), and the *Programmatic Agreement Between the Virginia Departments of Transportation and Historic Resources Concerning Interagency Project Coordination* (1999).

The purpose of the surveys was to determine if architectural or archaeological resources on, eligible for, or potentially eligible for the National Register of Historic Places (NRHP) are located within the project's Area of Potential Effects (APE) for direct and indirect effects. The APE is based upon is based upon the locations of two location study corridors (Alternatives 2 and 3) incorporating four potential Build Alternatives (2, 3A, 3B, and 3C) (Figure 1.1-1). The Alternative 2 study corridor connects with the proposed Bi-County Parkway interchange at US Route 50 and follows a new alignment extending approximately one mile northeast until just south of Evergreen Mills Road (Route 621). From this point, the study corridor extends for approximately 1.7 miles and includes overpasses at Belmont Ridge Road (Route 659) and Evergreen Mills Road (Route 621) as well as a connection with Old Ox Road (Route 606)/Loudoun County Parkway. The Alternative 3 study corridor represents approximately four miles of improvements along existing US Route 50 and Loudoun County Parkway with

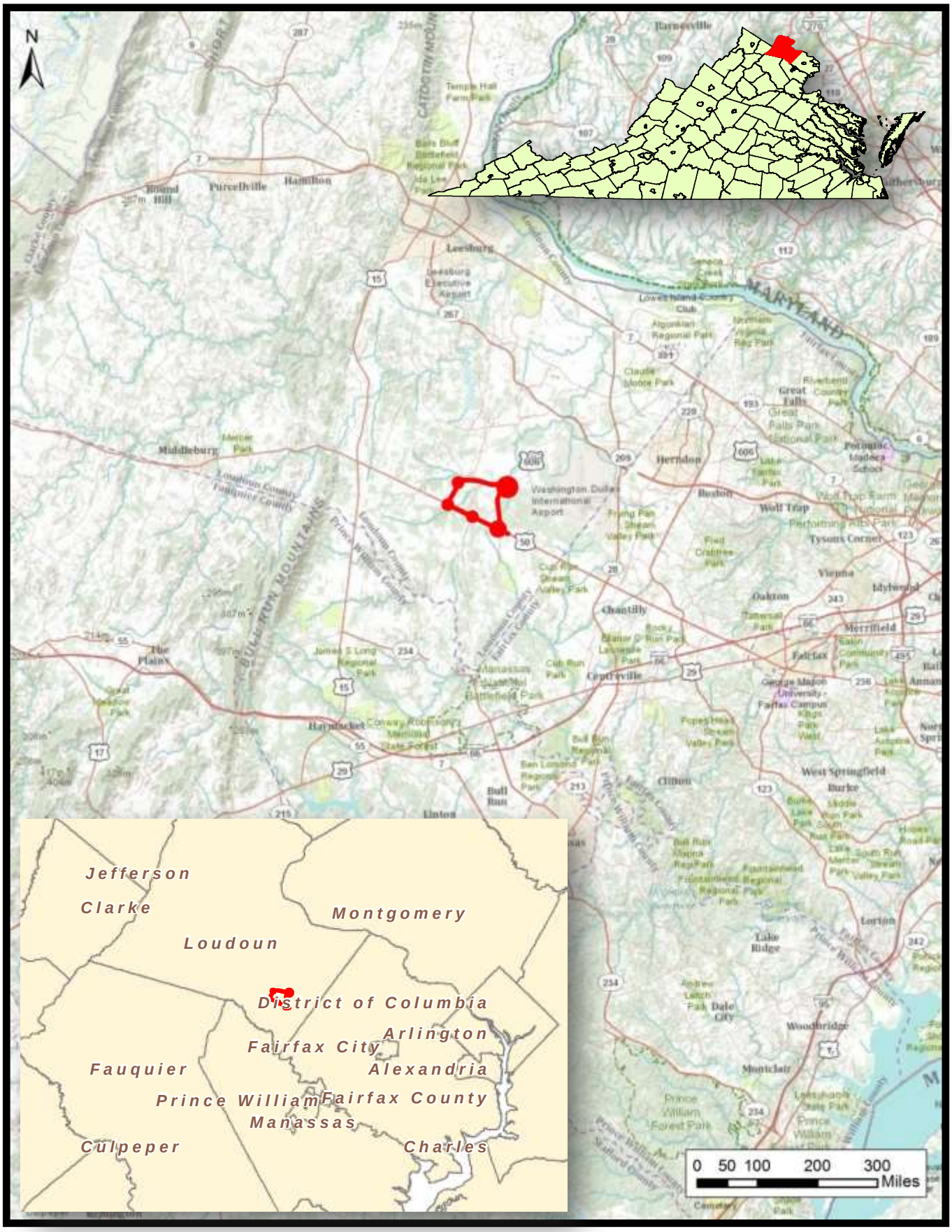

Figure 1.1-1: General Location of the Study Corridors.

studied connections at the proposed Bi-County Parkway, Gum Springs Road (Route 659), the Loudoun County Parkway, and Old Ox Road (Route 606). The study corridors are generally 1,000 ft wide along the mainline, and circular interchange study areas are included for connections. The radius of the largest circular study area, for the intersection at Old Ox Road (Route 606), is 2,000 ft, while the remaining circular intersection study areas have a radius of 1,500 ft or less.

For direct and indirect effects on above-ground historic architecture, the APE includes the study corridor intersection areas and 1,000-ft mainline sections (Figure 1.1-2), as well as those resources visible from the study corridors. Issues including known (previously recorded) resources, potential viewsheds, and noise were considered in using the 1,000-ft corridors and including visible resources. The potential maximum height of interchange configurations (50 ft) was also considered in assessment of visible resources during the fieldwork. For archaeological resources, the APE considers potential direct effects and is based upon a mainline corridor width of 350 ft as well as the proposed interchange study areas (Figure 1.1-3). The 350-ft width was selected as the most cost-effective survey width accommodating a four-lane divided roadway with turning lanes as well as the potential widening along existing routes.

1.2 PROJECT TIMELINE AND STAFF

Susan E. Bamann, Ph.D., RPA, was the project manager, Jeroen van den Hurk, Ph.D., was the architectural historian, and J. Eric Deetz, M.A., RPA was the archaeological principal investigator. Fieldwork for the architectural survey was conducted between January 23 and March 22, 2013. The archaeological survey was conducted between January 31 and March 15, 2013. Susan E. Bamann, Ph.D., RPA, was the project manager and J. Eric Deetz MA, RPA, was principal investigator, and Jeroen van den Hurk, Ph.D., conducted the architectural survey. Kelly Hagenmaier, M.A., and Lindsay Flood, M.A., assisted with field supervision for the archaeological survey, and Amanda Keeny was the archaeological crew chief. The field technicians included H. Jason Krim, Alex Anthony, Rachel Davies, Jessica Edwards, and Kathleen Kearns Pollard. Susan Bamann, Jeroen van den Hurk, and J. Eric Deetz conducted the background research. D. Allen Poyner was the GIS coordinator for the project, and J. Eric

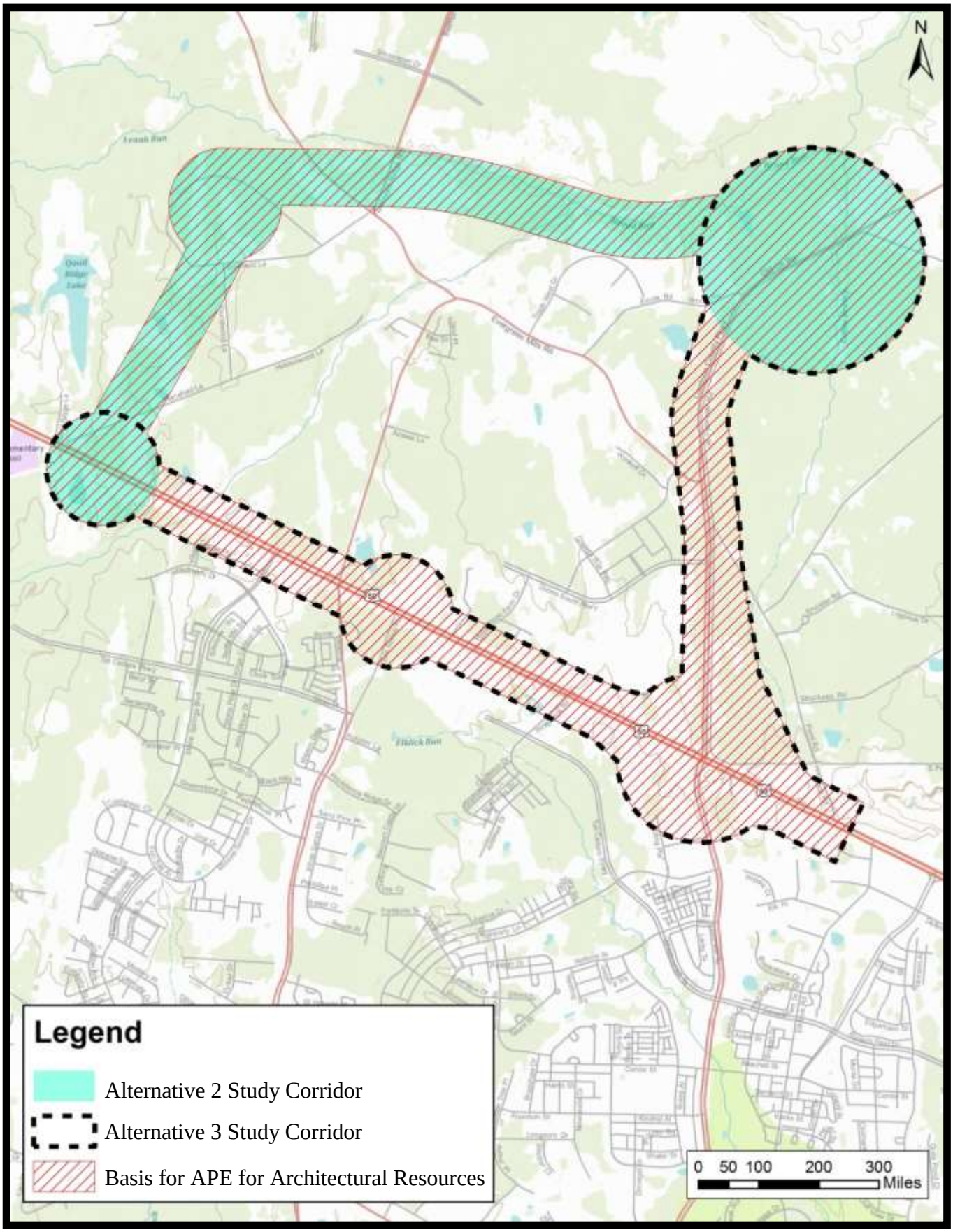

Figure 1.1-2: Depiction of Alternative 2 and 3 Study Corridors and Basis for Architectural APE Including Resources Visible from the Study Corridors.

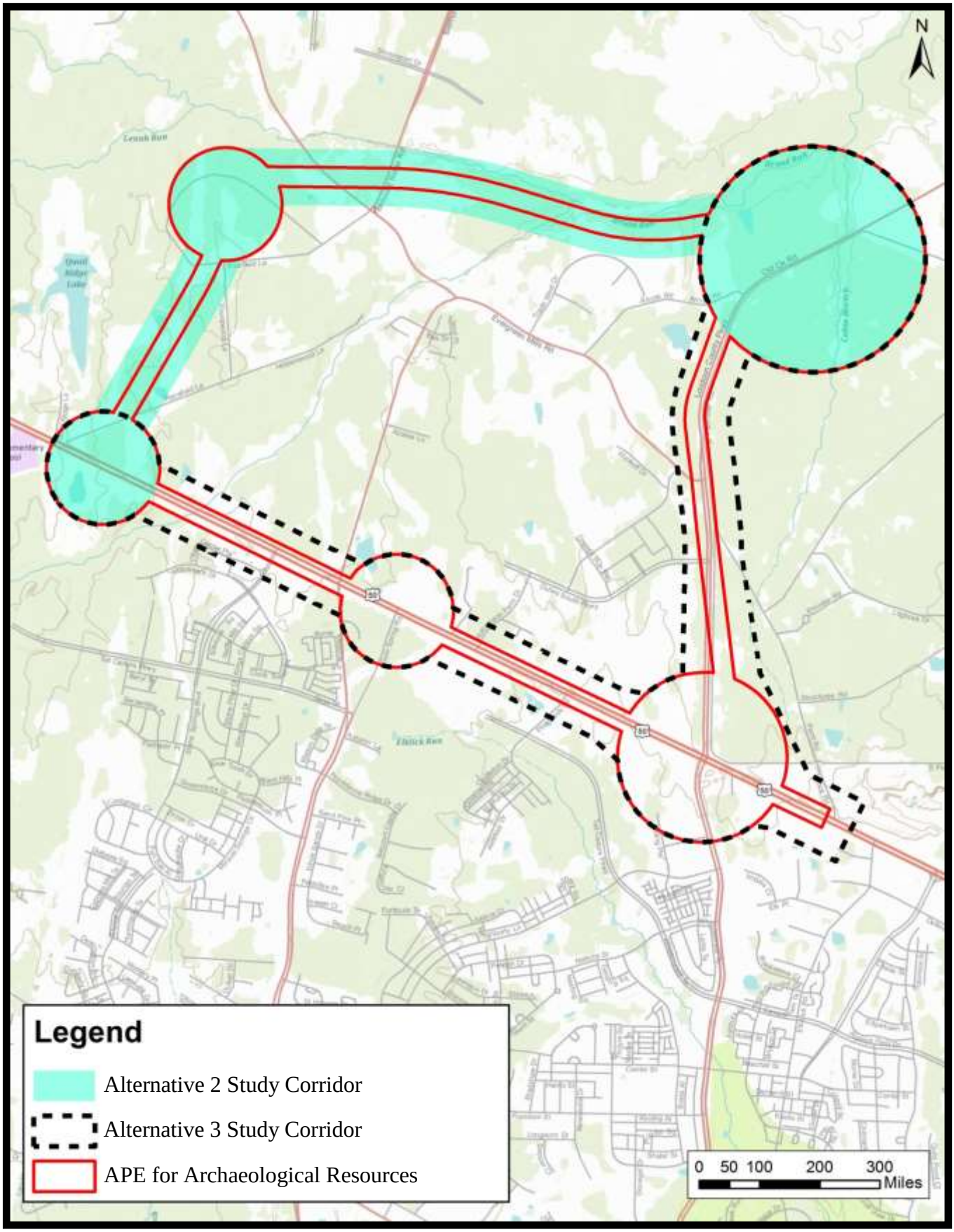

Figure 1.1-3: Depiction of Alternative 2 and 3 Study Corridors and APE for Archaeological Resources.

Deetz, Lindsay Flood, Amanda Keeny, and Susan Bamann processed and analyzed the recovered artifacts. Lindsay Flood and Amanda Keeny assisted with report, graphics, and VDHR Data Sharing System form (DSS) preparation.

1.3 REPORT CONTENTS

This report contains the background, methods, and results for the architectural and archaeological resources survey. Following this introduction, Section 2 presents the environmental and historic backgrounds for the project area. Section 3 addresses the methods of the investigations, while Sections 4 and 5 address the results of the architectural and archaeological resources surveys. Conclusions and recommendations are presented in Section 6. Section 7 contains the list of references cited throughout the report. Appendix A includes the architectural DSS forms prepared of updated for the project, while Appendix B includes the archaeological DSS forms. Appendix C lists artifacts recovered from the shovel tests while Appendix D provides representative shovel test profiles. Finally, Appendix E lists the qualifications of the senior investigators.

1.3.1 Mapping Disclaimer

The mapped data contained within this report is to be used solely for locating the cultural resource component and cannot be substituted for data provided by registered land surveyors or any licensed architect or engineer.

1.4 ACKNOWLEDGEMENTS

CCR would like to thank Nora Sheehan and Heidi Siebentritt with the Loudoun County Department of Planning for assistance with cultural resource survey reports on file at county offices. John Mullen of Wetland Studies and Solutions (Thunderbird Archaeology) shared a copy of a county compliance report for the evaluation of 44LD1003, and the VDOT Fredericksburg District provided an electronic copy of the recent survey for the Dulles Loop-Route 606 project. We also appreciate assistance from VDHR archivist Quatro Hubbard,

particularly regarding the resolution of DSS resource numbering and mapping discrepancies and with corrections to DSS boundary depictions for the Dulles Airport historic property. Finally, CCR would like to acknowledge the assistance with Dulles property access and historic sites information provided by Michael Hewitt and Richard Hill of the Metropolitan Washington Airports Authority (coordinated on our behalf by Amanda Baxter of WRA).

2.0 NATURAL SETTING AND HISTORIC CONTEXT

2.1 PHYSIOGRAPHY

The current project area lies in the northern portion of the Piedmont physiographic region of Virginia. The Piedmont is the nonmountainous portion of the older Appalachians, and generally slopes from the Mountains to the Coastal Plain (Fenneman 1938). Structural control of drainage is usually absent, and the rivers cross belts of gneiss, schist, and slate without change of pattern. This region consists primarily of rolling hills with a few monadnocks of erosion-resistant rock. It is apparent that the Piedmont has been exposed to chemical weathering for a long period of time because much of the region is covered by a deep layer of saprolitic soil (Fenneman 1938; Thornbury 1965). According to Fisher (1983), the agricultural practices of early settlers in the Virginia Piedmont resulted in severe erosion, soil exhaustion, and siltation of stream valleys, and modern agriculture has made these conditions worse. The fact that the Piedmont of Virginia has the smallest number of recorded archaeological sites per acre of the three physiographic regions (Coastal Plain, Piedmont, and Mountain) may be explained by the presence of these destructive forces (Fisher 1983).

2.2 GEOLOGY

The project corridor is underlain by sedimentary and intrusive igneous rocks of a Mesozoic Basin (Rader and Evans 1993). The sedimentary rocks are members of the Upper Triassic Newark Supergroup, which includes conglomerate, conglomerate with carbonate or greenstone clasts, breccia, sandstone, siltstone, and shale. The intrusive igneous material consists of diabase from the Lower Jurassic period. The western edge of the project area is adjacent to sedimentary and extrusive igneous rocks of the Lower Jurassic Newark Supergroup. These include conglomerate, sandstone, siltstone, shale, and basalt.

Archaeologists are just now beginning to recognize that Triassic period deposits can contain isolated areas of high-quality lithic materials that were used by pre-contact peoples. Within the Durham Basin in North Carolina, a vein of chert was identified that had been mined to

exhaustion in the pre-contact period. While no temporally diagnostic artifacts of the chert were recovered, Middle and Late Archaic materials were associated with chert debitage (Lautzenheiser and Eastman 1993). The material from this small deposit was so similar to chert recovered from the Ridge and Valley region that its discovery has implications for interpretation of trade networks.

Within northern Virginia, but southwest of the current project corridor, a jasper quarry found in Triassic deposits dates to the Paleoindian period (Voigt 2001). Artifacts from this site date to ca. 11,500 B.P. and expand our knowledge of the earliest human occupations of North America. The project area has the potential to contain additional discrete deposits of high-quality lithic material from Triassic contexts.

2.3 SOILS

In Loudoun County, soils within the project area are derived from Triassic sandstones and shales of the Piedmont (Porter 1960). These soils are described as loam, silt loam, stony silt loam, shaly silt loam, gravelly silt loam, or rocky land. Subsoils range from silt loam to plastic clay. Some of the soils are deep, undulating, and well drained. These are suited to a variety of crops and pasture. Other soils tend to be shallow and/or stony. These are generally suited to forest, pasture, or limited crops such as hay.

2.4 HYDROLOGY

The Southern portion of the project area is drained by tributaries to the Occoquan River by way of Elk Lick Run that drains into Bull Run, a major southeast-trending stream that forms the boundary between Prince William and Loudoun Counties. The northern and western portions of the project area are drained by Broad Run that flows northeasterly and drains into the Potomac River.

2.5 VEGETATION AND CLIMATE

The Oak-Pine Forest has been defined as the dominant forest type of the Piedmont physiographic region (Braun 1964; Watts 1983). Except on the poorer soils and in drier spots, the pines are usually temporary and are ultimately replaced by deciduous species.

Modern temperatures were reached in Virginia by about 11,000 B.P. (Delcourt and Delcourt 1985). During the mid-Holocene (or Hypsithermal Interval), from 8500 to 4000 B.P., the climate shifted from cool temperate to warm temperate, creating warmer and drier conditions. During the late Holocene, 4000 B.P. to the present, cooler and moister conditions returned. The modern Oak-Pine Forest was established in the project area by 3500 B.P. (Delcourt and Delcourt 1985).

Current vegetation in some of the project area is related to agriculture. Sod farming is prevalent and has resulted on severe losses of topsoil. Logging of tree cover within the Dulles Airport property has contributed to disturbance and erosion. Much of the disturbance relating to agriculture has occurred since some of the previously recorded sites in the current project area were initially registered.

2.6 HISTORIC CONTEXT

Table 2.6-1 summarizes the historic context of the study area vicinity and reflects the background review conducted by CCR in order to understand the project's archaeological and historic resource potential. The study area is within the Northern Piedmont cultural region described by VDHR (2011) and lies northwest of Washington D.C. Native American settlement of the region dates to at least the Paleoindian period; sites of all precontact Native American periods may be present in the project vicinity, but it is unlikely that large horticultural villages of the Woodland period would have been in or near the project area due to a lack of broad floodplains and associated major watercourses.

Table 2.6-1: Tabular Summary for Brief Historic Context of the Study Area.

Period	**Themes/Context**	**Sources Consulted During Background Review**
Paleoindian (11.500-8000 B.C.)	Native American occupation of eastern North America dates to at least 13,450 calendar years ago (approximately 11,500 B.C.), the conventional temporal boundary associated with the Clovis tradition. There is substantial evidence suggesting the presence of both Clovis and pre-Clovis traditions in Virginia.	Anderson et al. (2007); Barber and Barfield (1989); Carr (1975); Gardner (1974, 1989); Goebel et al. (2008); Johnson (1996); McAvoy and McAvoy (1997, 2003); Waters et al. (2011)
Early Archaic (8000-1000 B.C)	The Early Archaic period is typified by small corner-notched projectile points (such as Palmer and Kirk) and an increase in the use of hafted end scrapers. During this period groundstone tools, such as adzes, celts, axes, and grinding stones, made their first appearance.	Anderson and Sassaman (2012); Egloff and McAvoy (1990); Coe (1964); Custer (1990)
Middle Archaic (6800 to 3500 B.C.)	A shift occurred in the environment toward the warmer and drier conditions prevalent today. Projectile point types characteristic of this period include Stanley, Morrow Mountain, Guilford, Halifax, St. Albans, LeCroy, and Kanawha.	Anderson and Sassaman (2012); Custer (1990); Gardner (1989)
Late Archaic (3500 to 1200 B.C)	This period is marked by distinctive projectile point types and continuation of band-level organization with impermanent settlement systems and site types. Among other types, Late Archaic broad-blade or "broadspear" types such as Savannah River Stemmed are frequently associated with soapstone vessels and other soapstone objects.	Blanton (2003); Dent (1995); Mouer (1991)
Early Woodland (1200 to 800 B.C.)	Large broad points are replaced by smaller notched, stemmed, and lanceolate points. Steatite-tempered ceramics (Marcey Creek wares) are introduced ca. 1200 B.C.	Egloff (1991); Klein (2003); McLearen (1991)
Middle Woodland (300 B.C. to A.D. 1000)	This period is marked by the introduction of triangular projectile points and a general increase in regionalization/sedentism in Virginia Piedmont cultures (e.g. larger hamlets and villages). Ceramics include grit- and sand-tempered varieties with net-, cord-, and fabric-impressed surfaces.	Hantman and Klein (1992); McLearen (1992)
Late Woodland (A.D. 1000 to 1600)	There is a steady increase in population and a continued trend toward regionalization in ceramic styles. Increased sedentism is related to reliance on domesticated crops. Settlement systems include resource procurement sites, small household clusters, and eventually palisaded villages, however, Middle or Late Woodland villages or larger hamlets would not be expected in the current project area given the lack of large floodplain areas. In the Piedmont, sand-tempered ceramics with cord-marked and fabric-impressed surface treatments are typical.	Gallivan (2003); Hantman and Klein (1992); Hodges (2004)

Period	Historic Event/Map	Sources Consulted During Background Review and Related Illustrations
Settlement to Society (1607-1750)	Early settlement in what became Loudoun County occurred north of the current study area around present-day Lovettsville. This area was populated by German settlers arriving from Pennsylvania around 1726, or 1727. Tobacco was the primary crop in the south and east of the county. Due to river access there was little need to establish towns as trading centers in the early years of settlement	Scheel (1978); Clark and Arrington 1933
Colony to Nation (1751-1789)	Grains surpassed tobacco in economic importance in Loudoun county after the Revolutionary War. Water powered mills were established throughout the region as the population increased. Loudoun County was established in 1757. The road that is now US 50 was constructed by this time but a lack of other adequate roads hindered settlement	Scheel (1987); Head (1998 [1908]); Osbourn (1998)
Early National Period (1790-1829)	Diminished agricultural production in the late eighteenth century led to depopulation and a southern migration. The early nineteenth-century adoption of the "Loudoun System" of agriculture led to higher production and higher land prices. This system of grain farming utilized crop rotation and amending the soils with lime. This system also required less labor and plantations with large numbers of slave workers became less common. The Little River Turnpike, one of the oldest roads in the United States, was completed in 1806. Since it was paved with cut stones, it was superior to existing unpaved roads that turned muddy and impassable in wet weather. The road extended west from Washington through the lower portion of Loudoun County, passing through the current project area where US 50 is located today	Janney (1998); Sweig (1992); Evans (1989); Douglass (1974); Virginia Historic Landmarks Commission Staff (1970)
Antebellum Period (1830-1860)	Improvements in transportation brought about by the railroad during this period influenced the growth of the region. In the 20 years prior to the Civil War, the economy of the region improved and the population increased. A large number of farms were purchased by northerners who revitalized the economy of the region	Hickin (1992)
Civil War (1861-1865)	Loudoun County was the site of considerable military activity during the Civil War especially after the battle of Antietam. Most of the activity took place in and around Leesburg and the northern parts of the county. Mosby's Rangers were based in nearby Middleburg for much of the war	Divine et al. (1998); Wert (1990)
Reconstruction and Growth (1866-1916)	After the war most of eastern Virginia required a considerable reconstruction effort. Local governments had to be reformed; schools, churches, homes, barns , and outbuildings needed to be rebuilt. Food was scarce. Due to the depressed economy many residents moved west to	Evans (1989); Black History Committee (2001)

Period	Historic Event/Map	Sources Consulted During Background Review and Related Illustrations
	start over. Immediately after the war the African-American population was aided by the Freedman's Bureau. Activism that began at the turn of the century led to the establishment of African-American schools.	
World War I and World War II (1917-1945)	During and after prohibition illegal production of corn whisky was prevalent in Loudoun County, especially in the western mountains. The enforcement of tax revenue laws led to the killing of two Federal agents in the 1920s and 30s. On the eve of World War II many rural Virginians seeking employment migrated towards manufacturing centers and military installations	History of Loudoun County, Virginia (n.d.); Martin-Purdue and Purdue (1996)
The New Dominion (1946 to the present)	In the 1950s Loudoun County contained areas of "outer Suburbia" with relatively expensive land. In 1958 the Federal government condemned 9800 acres for the construction of Dulles Airport. This included the removal of Willard, a predominately African-American town. This period also saw the construction of Interstate 66 and the Capitol Expressway, both of which improved access to Washington D.C. The population grew 40 percent in the 1960s and development and growth continue to the present day.	Gottman (1969); Dulles Area Historical Database (2011)

2.7 HISTORIC MAP REVIEW

Significant historic settlement of the region started in the mid-eighteenth century, but analysis of maps dating to the mid-nineteenth century through the first half of the early twentieth suggests that the project study area was not densely inhabited and remained largely rural (Figures 2.7-1 through 2.7-5). Maps indicate the potential for historic sites would be based on rural farming operations and late eighteenth- to early twentieth-century residential/commercial. The Civil War brought engagements to Loudoun County, but the focus of activity was outside the current study area making the potential for Civil War-related sites low.

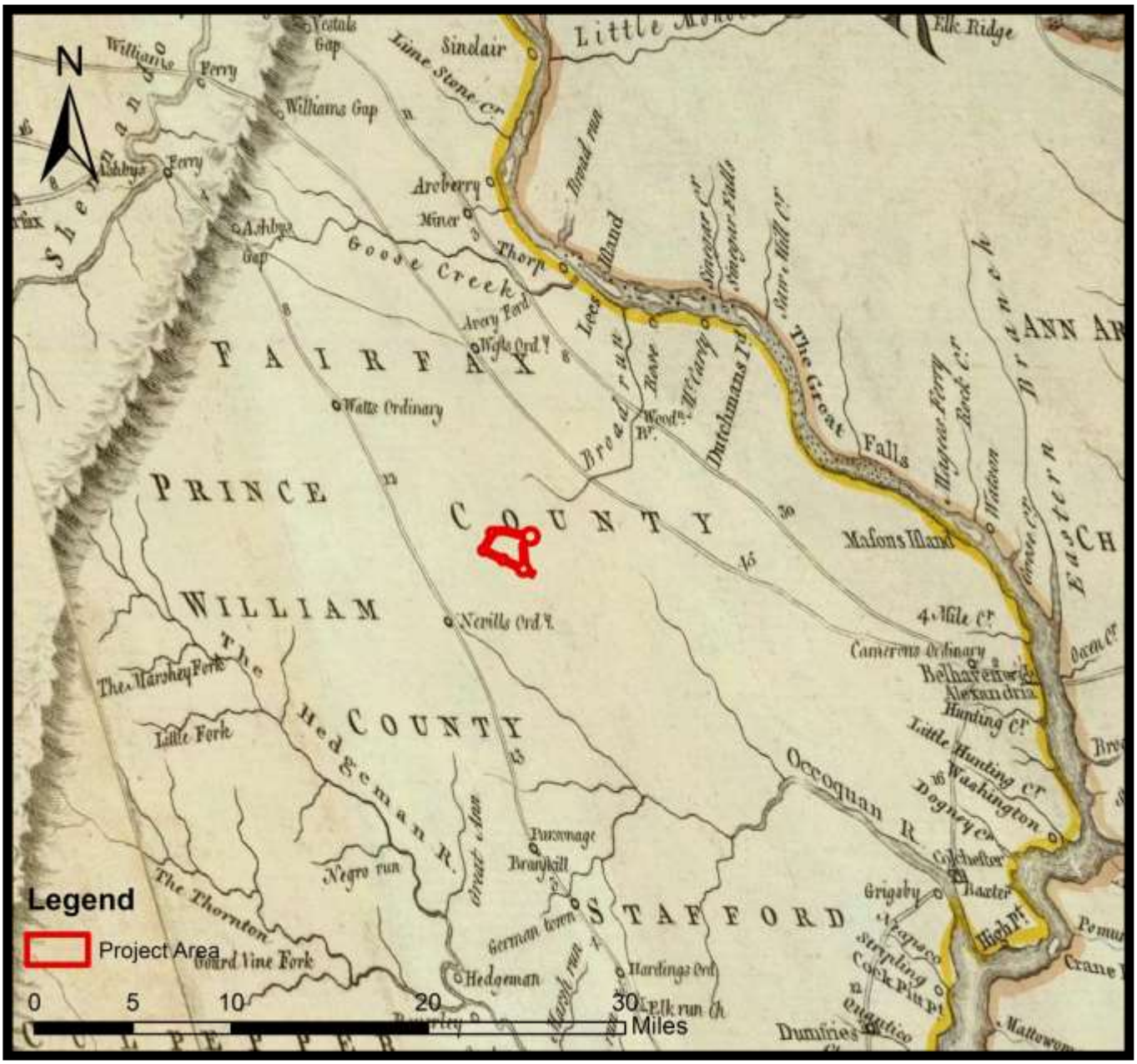

Figure 2.7-1: Approximate Location of the Project Area on the 1776 Fry Map (Fry and Jefferson 1776).

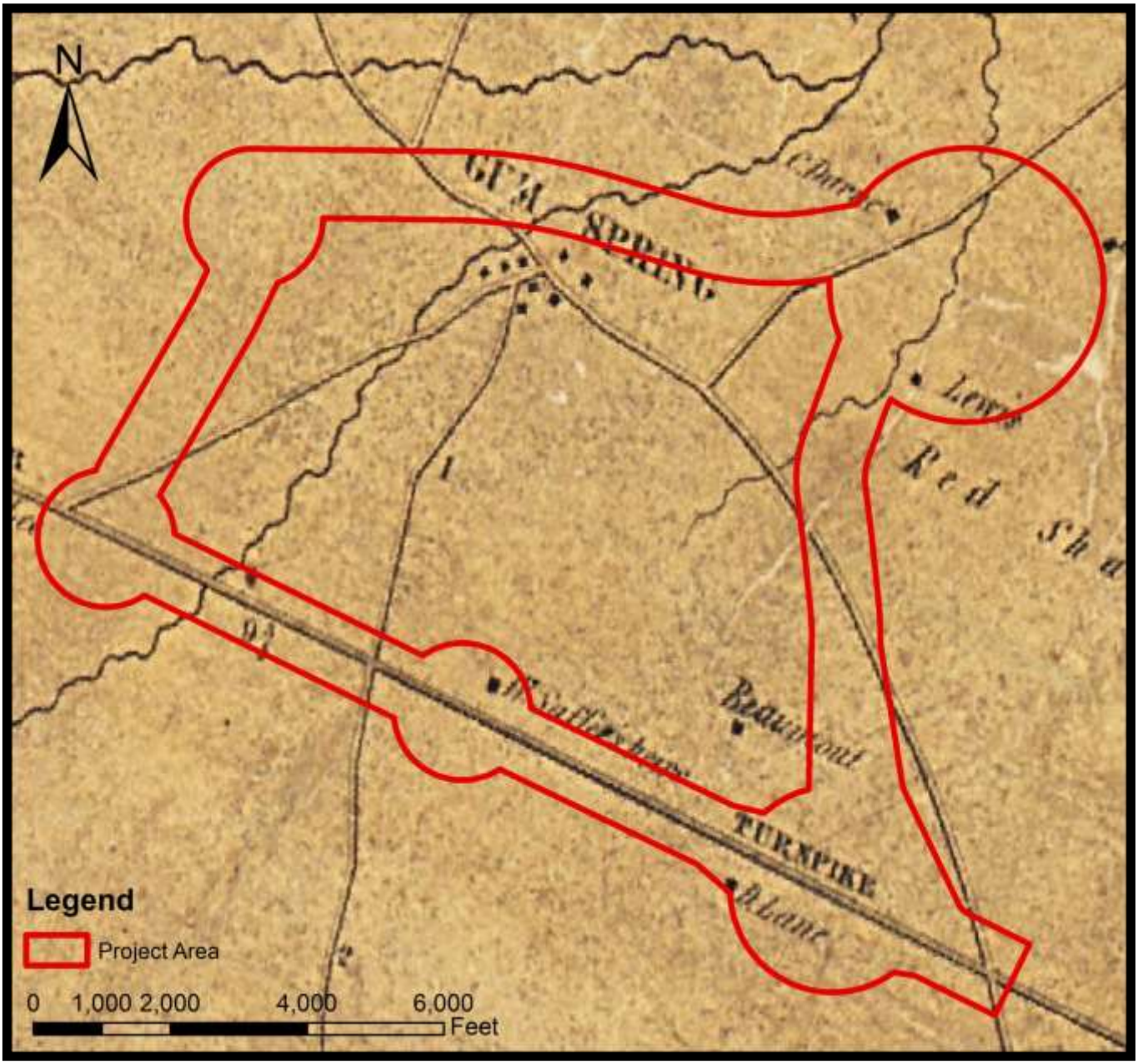

Figure 2.7-2: Approximate Location of the Project Area on the 1853 Taylor Map (Taylor 1853).

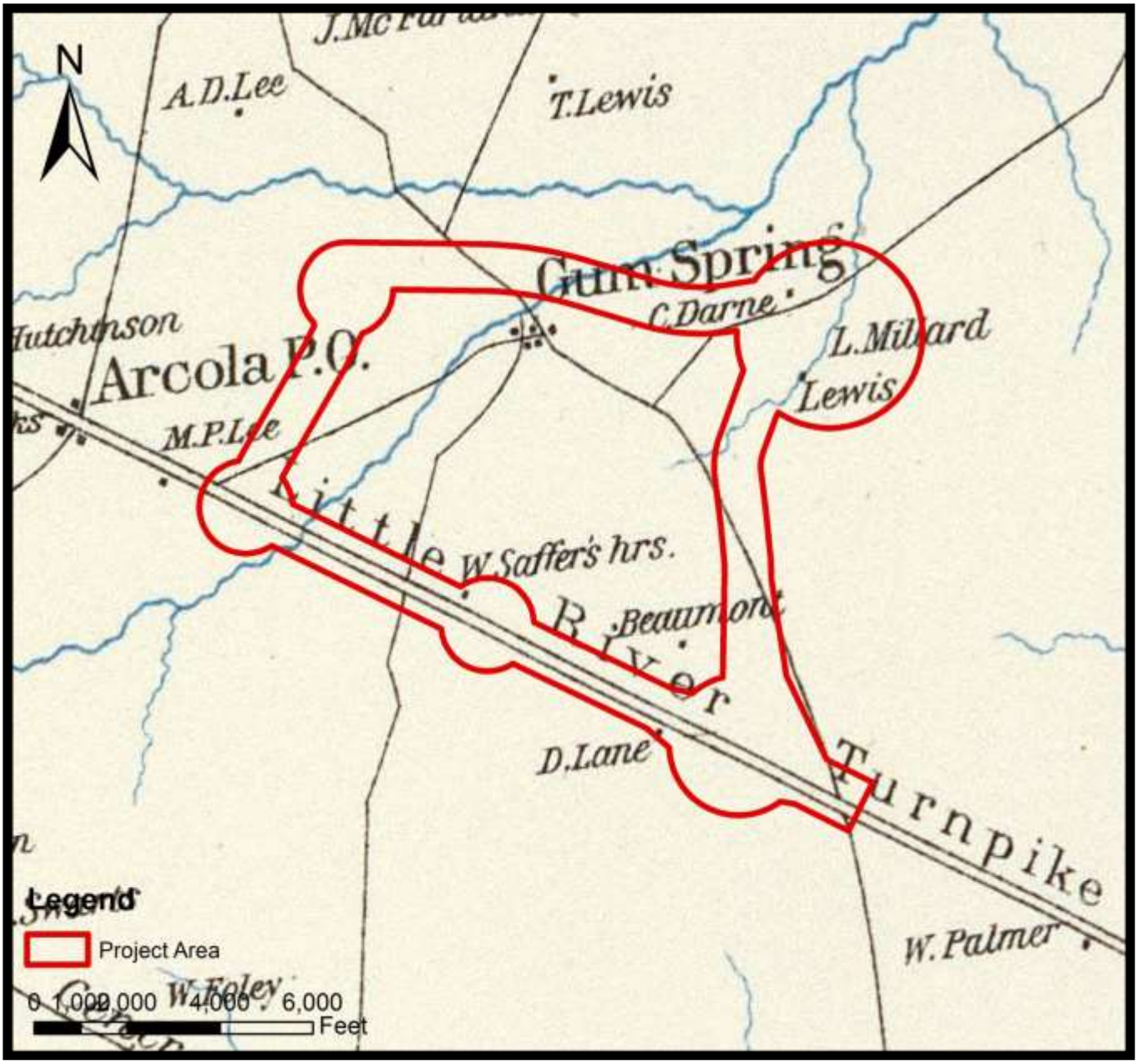

Figure 2.7-3: Approximate Location of the Project Area on the 1862 Hesselbach and Young Map (Hesselbach and Young 1862).

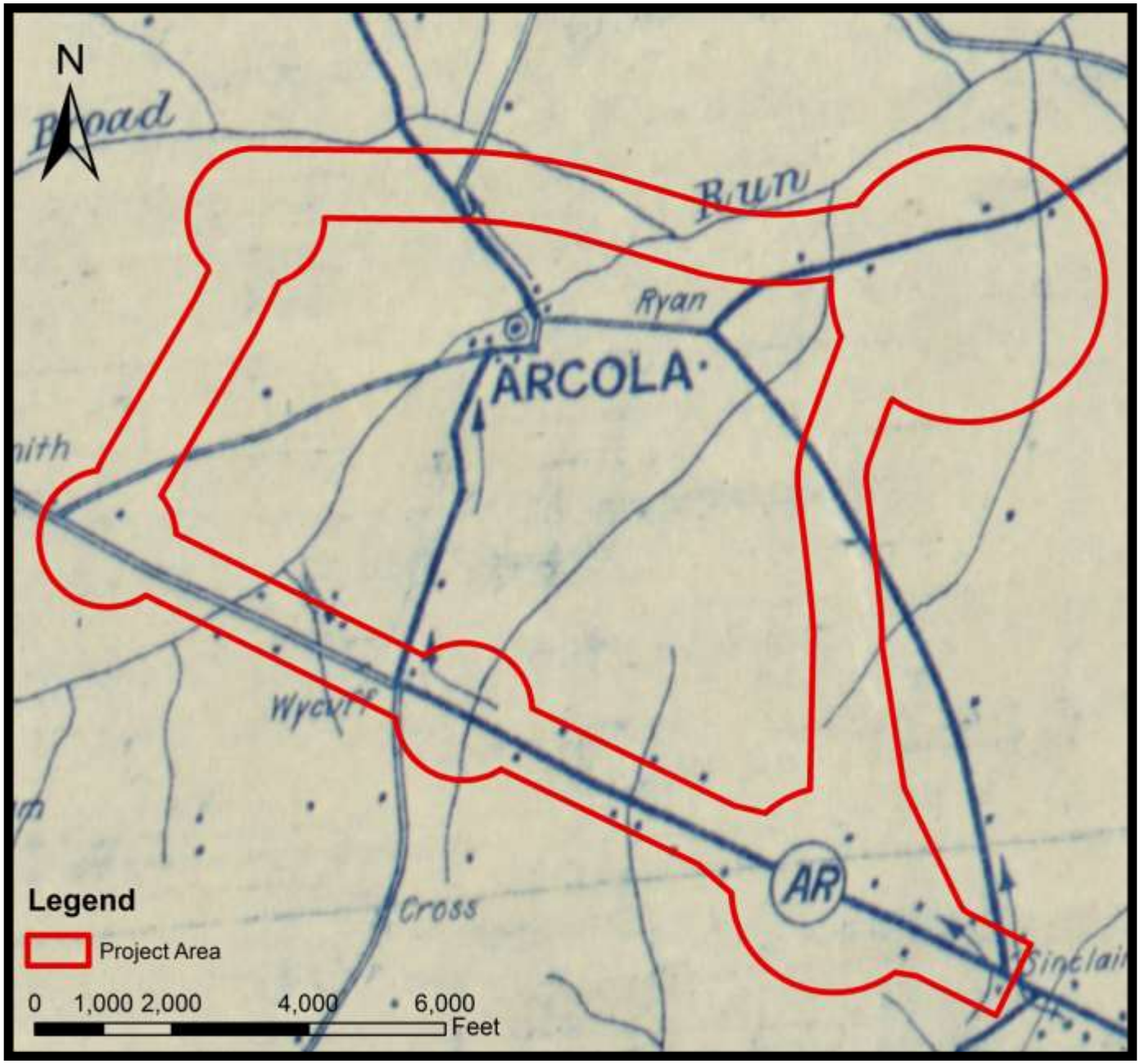

Figure 2.7-4: Approximate Location of the Project Area on the 1920 Postal Route Map (United States Post Office Department 1920).

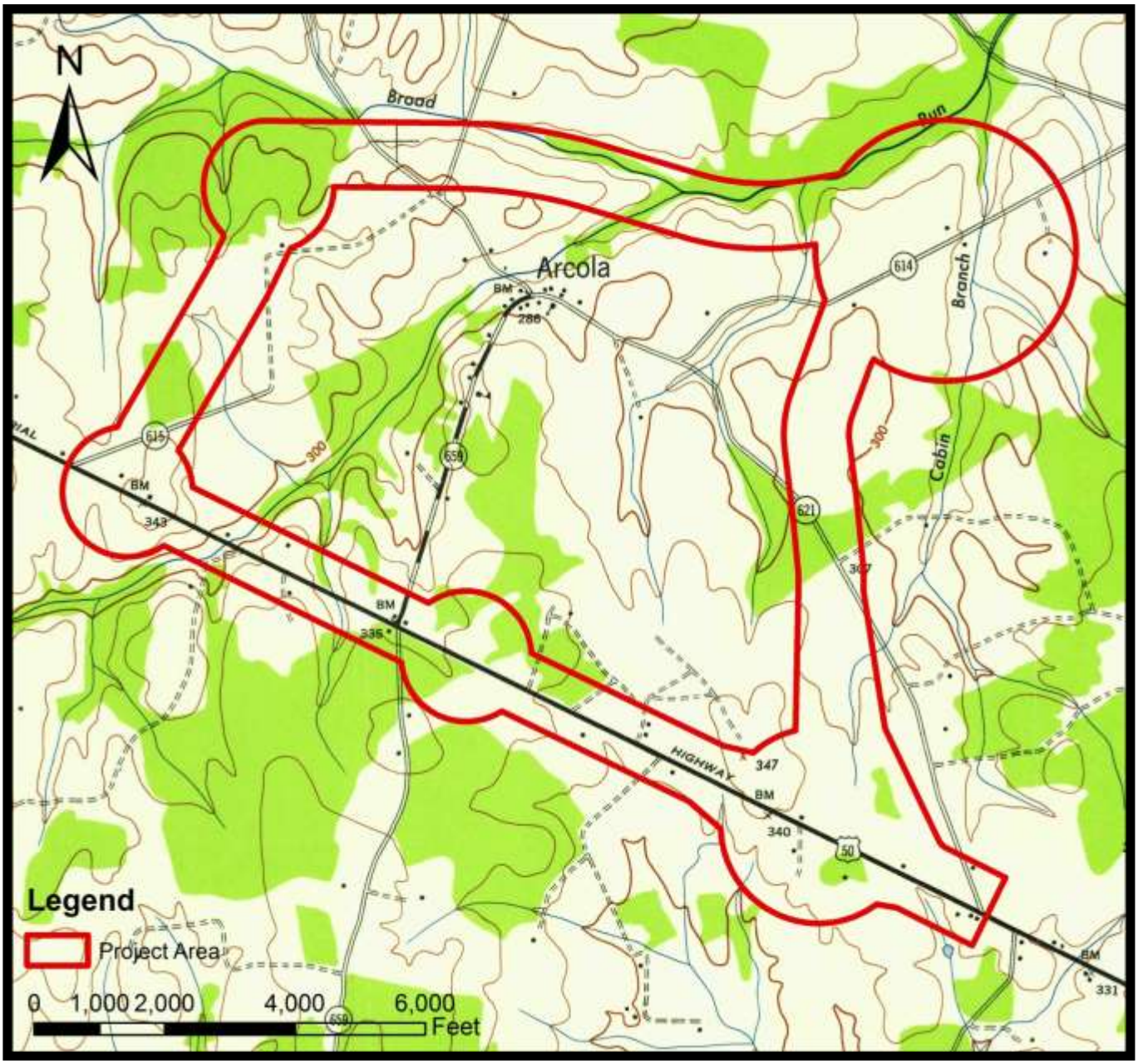

Figure 2.7-5: Approximate Location of the Project Area on the 1943 7.5 Minute USGS Arcola Va., Topographic Quadrangle.

3.0 METHODS

3.1 INTRODUCTION

The purpose of the cultural resources survey work was to determine if resources on, eligible, for, or potentially eligible for the NRHP are located with the APE including the APE for indirect effects. Resources are assessed against the NRHP criteria in order to make recommendations on eligibility. These criteria require that the quality of significance in American history, architecture, culture, engineering, or archaeology should be present in buildings, structures, objects, sites, or districts that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that the buildings, structures, objects, sites, or districts:

A. are associated with events that have made a significant contribution to the broad patterns of our history;
B. are associated with the lives of persons significant in our past;
C. embody the distinctive characteristic of a type, period, or method of construction or that represent the work of a master, or possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. have yielded, or may be likely to yield, information important in prehistory or history (National Park Service 2013).

For historic architecture, potential significance at the local, state, and/or national level was given consideration in evaluating the resources and any potential historic districts. Evaluation of the resources also considered potentially significant themes represented by individual resources or potential historic districts such as architecture, early exploration and settlement, social history, and community planning and development. Resources or districts possessing potential significance as noted at the survey level may be recommended for additional research (potentially eligible) as part of intensive evaluation under a separate phase of study.

In general, archaeological sites that lack sub-plow zone artifact-bearing deposits, have low-density artifact distributions, contain evidence of deep plowing or topsoil loss, lack spatial integrity, lack artifact concentrations, or exhibit signs of earth-disturbing activities do not appear to be good candidates for inclusion in the NRHP. Sites that contain concentrations of artifacts, intact surface features, or intact subsurface remains may be recommended for additional evaluation to determine if they are eligible for inclusion in the NRHP.

3.2 BACKGROUND RESEARCH

Background research was conducted to identify any previously recorded architectural and archaeological resources in or adjacent to the project area, to obtain information on project-specific historical, precontact, and architectural trends, and to review the results of cultural resource investigations in the region. Information was gathered from a variety of sources that include VDHR in Richmond; the Library of Virginia in Richmond; the library of CCR in Tarboro; the Loudoun County Planning Department; the Loudoun County, Virginia, WebLogis-Online Mapping System; and the digital map collection of the Library of Congress. To the extent possible, previous information collected during CCR studies for the VDOT Bi-County Parkway Location Study was utilized.

3.3 METHODS FOR THE ARCHITECTURAL INVESTIGATION

Fieldwork for the investigation of the architectural APE was conducted by vehicle and on foot. The purpose of the study was twofold: 1) to provide specific information concerning the location, nature, and significance of buildings, districts, and objects more than 50 years old in the APE; and 2) to identify resources that appear to be potentially eligible for the NRHP. Any resource that was determined to be more than 50 years old was recorded and photographed. If possible, property owners were interviewed regarding the history of each structure. Property tax dates were obtained from Loudoun County's online access site.

3.4 METHODS FOR THE ARCHAEOLOGICAL INVESTIGATION

All portions of the APE were given full consideration during the survey, which included visual inspection as well as intensive survey. Due to lack of surface visibility in the APE, shovel testing was required for intensive survey in areas that were not steeply sloped, low and wet, or obviously disturbed. In areas of lower probability for intact sites, such as landforms with signs of erosion or deflation, shovel tests were placed at 75-ft (approximately 23-m) intervals or judgmentally placed no more than 75 ft (23 m) apart. In selected higher probability areas including potentially less-eroded or less-disturbed habitable landforms as well as areas in the vicinity of previously recorded sites, shovel tests were placed at 50-ft (approximately 15-m) intervals. These intervals, in combination with potential judgmental testing and radial tests in site areas, ensured that the habitable portions of landforms and other areas of site potential were sufficiently investigated for the presence and documentation of archaeological sites. Shovel tests were approximately 38 cm (15 inches) in diameter and were excavated at least 10 cm into the subsoil or sterile soil. All soil was screened through 6.35-mm (0.25-inch) hardware cloth. The shovel test locations were noted on project maps, and profiles were measured and recorded along with general notes on the terrain. Areas that were wet, steeply sloped, or obviously disturbed or built-upon were briefly examined and documented, but not intensively surveyed. Digital photographs were used to document the general conditions of the project area, and a GPS unit (Trimble GeoXT) was used to establish APE boundaries and to geo-locate positive shovel tests.

An archaeological site was defined by the recovery of three artifacts in reasonable association. Discoveries consisting of fewer than three artifacts are reported as artifact locations. The approximate horizontal and vertical extent of the site, as well as the internal configuration, was defined by the excavation of shovel tests placed at no more than 37.5-ft (11.5-m) intervals. Site boundaries were defined based on the location of positive shovel tests and/or the distribution of artifacts recovered from the surface. Artifacts recovered during site excavations were placed in bags labeled with the appropriate site provenience information.

The recovered artifacts were processed and analyzed by CCR staff members. The artifacts from sites will be submitted to the curatorial facility of VDHR. Labeling and packaging is consistent

with VDHR's 2011 standards and guidelines. Analysis included identification of material and attributes with reference to regional typologies and associated date ranges.

4.0 ARCHITECTURAL SURVEY RESULTS

4.1 PREVIOUSLY RECORDED RESOURCES

Forty-seven previously recorded architectural resources (Figure 4.1-1; Table 4.1-1) are located within the current APE for architecture. Forty of these resources are dwellings dating between ca. 1800 and 1962, three are automobile service stations/repair shops (VDHR #s 053-5663, 053-5887, and 053-6240), one is a shed (VDHR # 053-6239), one a restaurant (VDHR # 053-5896), one a farmstead (VDHR # 053-5683), one is the Glascock Airfield (VDHR # 053-6090), and one the Palmer Family Cemetery (VDHR # 053-6146). Twenty-five of these resources were previously determined not eligible by VDHR staff, a number of them in relation to recent VDOT studies for adjoining projects (Goode and Traum 2012; Stewart and Lautzenheiser 2004). The remaining previously recorded resources had not been evaluated as part of a Section 106 project. Fifteen of the previously recorded resources are no longer extant (VDHR #s 053-5662 through 5664, 053-5668 through 5672, 053-5690, 053-5886 and 053-5887, 053-6018, 053-6042, 053-6239, and 053-6240). Many of the demolished resources were located along John Mosby Highway in Study Corridor 3; they have been lost due to rapid suburban developments within the last decade. None of the extant previously recorded but unevaluated structures appear to retain architectural significance, associative value, and/or the integrity necessary for NRHP eligibility. The Palmer Family Cemetery is a small, late nineteenth-century family cemetery that would not be likely to yield significant information for studies of the burial population per NRHP Criterion D based on the small number of graves and low likelihood of a great number of unmarked additional graves. Per Criteria Considerations C and D, the cemetery also does not appear to have significant associations and lacks great age or high artistic values (see DSS form in Appendix A); however, relevant Virginia statutes regarding the treatment of burials sites would apply to this resource. These include statutes addressing the protection of human remains and requirements for removal of such remains (§18.2-126 to 127; §57-36 to 39). It should be noted that cemetery boundary delineation, to address the possibility of some additional unmarked graves, will likely be necessary for compliance with these statutes. Appendix A includes copies of updated DSS packets prepared for those resources without a previous eligibility determination as well as copies of DSS updates for the demolished previously recorded resources.

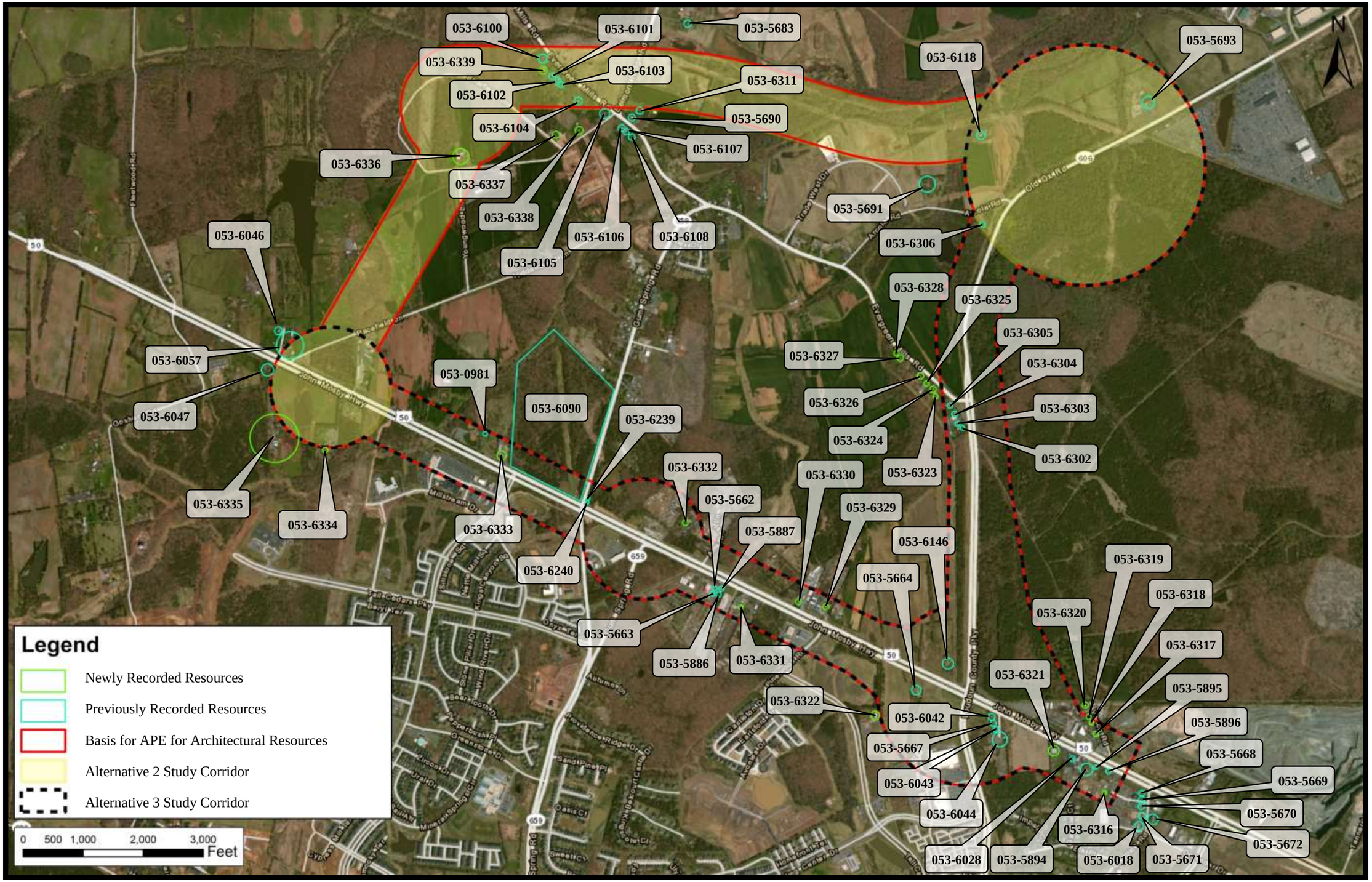

Figure 4.1-1: Locations of Previously Recorded and Newly Recorded Architectural Resources in the Current APE.

Table 4.1-1: Summary of Previously Recorded Architectural Resources Within the Current APE.

VDHR #	Resource Description	Study Corridor	Previously Determined Eligibility or Current Recommendations/Status
053-0981	Bessie S. Wilson House, 42100 John Mosby Hwy, ca. 1800	3	Recommended Not Eligible/Ruin
053-5662	House, 42469 John Mosby Hwy, ca. 1890	3	No Longer Extant
053-5663	Auto Repair Shop, John Mosby Hwy, ca. 1920	3	No Longer Extant
053-5664	House, 42679 John Mosby Hwy, ca. 1920	3	No Longer Extant (2008)
053-5667	House, 24905 Shady Grove Ln, ca. 1955	3	Recommended Not Eligible
053-5668	House, 25039 Elk Lick Rd, ca. 1945	3	No Longer Extant
053-5669	House, 25047 Elk Lick Rd, ca. 1946	3	No Longer Extant
053-5670	House, 25055 Elk Lick Rd, ca. 1949	3	No Longer Extant
053-5671	House, 25061 Elk Lick Rd, ca. 1948	3	No Longer Extant
053-5672	House, 25072 Elk Lick Rd, ca. 1952	3	No Longer Extant
053-5683	Farmstead, 23723 Belmont Ridge Rd, ca. 1950	2	Determined Not Eligible
053-5690	House, 24510 Evergreen Mills Rd, ca. 1948	2	Determined Not Eligible/No Longer Extant
053-5691	House, 42954 Arcola Rd, ca. 1930	2	Determined Not Eligible
053-5693	Houses, 43220-43228 Old Ox Rd, ca. 1840 & ca. 1945	2/3	Determined Not Eligible
053-5886	House, 42539 John Mosby Hwy, ca. 1954	3	No Longer Extant
053-5887	Garage, 42503 & 42495 John Mosby Hwy, ca. 1958	3	No Longer Extant
053-5894	House, 43091 John Mosby Hwy, ca. 1950	3	Recommended Not Eligible
053-5895	House, 43107 John Mosby Hwy, ca. 1910	3	Recommended Not Eligible
053-5896	Restaurant (House), 43137 John Mosby Hwy, ca. 1950	3	Recommended Not Eligible
053-6018	House, 25077 Elk Lick Rd, ca. 1950	3	No Longer Extant
053-6028	House, 43073 John Mosby Hwy, ca. 1935	3	Recommended Not Eligible
053-6042	House, 42953 John Mosby Hwy, ca. 1950	3	Determined Not Eligible/No Longer Extant
053-6043	House, 24927 Shady Grove Ln, ca. 1950	3	Determined Not Eligible
053-6044	House, 24932 Shady Grove Ln, ca. 1870	3	Determined Not Eligible
053-6046	Shockley House, 24267 Quail Ridge Ln, ca. 1935	2/3	Determined Not Eligible
053-6047	Pearson House, 41737 John Mosby Hwy, ca. 1947	2/3	Determined Not Eligible
053-6057	Shockley House, 24282 Quail Ridge Ln, ca. 1944	2/3	Determined Not Eligible
053-6090	Glascock Airfield, Gum Springs Rd, 1941	3	Recommended Not Eligible
053-6100	House, 24315 Evergreen Mills Rd, ca. 1954	2	Determined Not Eligible
053-6101	House, 24351 Evergreen Mills Rd, ca. 1956	2	Determined Not Eligible
053-6102	House, 24363 Evergreen Mills Rd, ca. 1957	2	Determined Not Eligible
053-6103	House, 24367 Evergreen Mills Rd, ca. 1955	2	Determined Not Eligible
053-6104	House, 24389 Evergreen Mills Rd, ca. 1957	2	Determined Not Eligible
053-6105	House, 42296 Briarfield Ln, ca. 1953	2	Determined Not Eligible
053-6106	House, 24493 Evergreen Mills Rd, ca. 1954	2	Determined Not Eligible
053-6107	House, 24505 Evergreen Mills Rd, ca. 1954	2	Determined Not Eligible
053-6108	House, 24531 Evergreen Mills Rd, ca. 1954	2	Determined Not Eligible
053-6118	House, 42954 Arcola Rd, ca. 1950	2/3	Determined Not Eligible

053-6146	Palmer Family Cemetery, John Mosby Hwy, post-1882	3	Recommended Not Eligible for NRHP; Follow Relevant State Statutes for Treatment of Burials, Delineation May be Necessary
053-6239	Shed, Gum Springs Road, ca. 1800	3	No Longer Extant
053-6240	Service Station, John Mosby Hwy, ca. 1968	3	No Longer Extant
053-6302	House, 25289 Evergreen Mills Rd, ca. 1953	3	Determined Not Eligible
053-6303	House, 25285 Evergreen Mills Rd, ca. 1955	3	Determined Not Eligible
053-6304	House, 25269 Evergreen Mills Rd, ca. 1956	3	Determined Not Eligible
053-6305	House, 25247 Evergreen Mills Rd, ca. 1962	3	Determined Not Eligible
053-6306	House, 42911 Arcola Rd, ca. 1860	3	Determined Not Eligible
053-6311	House, 23896 Belmont Ridge Rd, ca. 1957	2	Recommended Not Eligible

4.2 NEWLY RECORDED RESOURCES

Twenty-four newly recorded resources, VDHR #s 053-6316 through 053-6339, are located in the APE for architecture (Table 4.2-2; see Figure 4.1-1). Copies of DSS recordation packets prepared for these resources are also included in Appendix A.

Table 4.2-2: Summary of Newly Recorded Architectural Resources Within the Current APE.

VDHR #	Resource Description	Study Corridor	CCR Recommended Eligibility
053-6316	House, 43149 John Mosby Hwy, ca. 1915	3	Recommended Not Eligible
053-6317	House, 25557 Vance Rd, ca. 1955	3	Recommended Not Eligible
053-6318	House, Vance Rd, ca. 1957	3	Recommended Not Eligible
053-6319	House, 25471 Vance Rd, ca. 1957	3	Recommended Not Eligible
053-6320	House, 25445 Vance Rd, 1955	3	Recommended Not Eligible
053-6321	Office Building, 43045 John Mosby Hwy, ca. 1950	3	Recommended Not Eligible
053-6322	Workshop, 24900 Riding Plz, ca. 1955	3	Recommended Not Eligible
053-6323	House, 25227 Evergreen Mills Rd, ca. 1961	3	Recommended Not Eligible
053-6324	House, 25213 Evergreen Mills Rd, ca. 1955	3	Recommended Not Eligible
053-6325	House, 25195 Evergreen Mills Rd, ca. 1955	3	Recommended Not Eligible
053-6326	House, 25173 Evergreen Mills Rd, ca. 1959	3	Recommended Not Eligible
053-6327	House, 25137 Evergreen Mills Rd, ca. 1949	3	Recommended Not Eligible
053-6328	House, 25119 Evergreen Mills Rd, ca. 1950	3	Recommended Not Eligible
053-6329	House, 42660 John Mosby Hwy, ca. 1954	3	Recommended Not Eligible
053-6330	Office Building, 42630 John Mosby Hwy, ca. 1960	3	Recommended Not Eligible
053-6331	House, 42539 John Mosby Hwy, ca. 1954	3	Recommended Not Eligible
053-6332	House, 42382 John Mosby Hwy, ca. 1955	3	Recommended Not Eligible
053-6333	House, 42128 John Mosby Hwy, ca. 1960	3	Recommended Not Eligible
053-6334	House, 41859 John Mosby Hwy, ca. 1959	2/3	Recommended Not Eligible
053-6335	House, 41753 John Mosby Hwy, ca. 1944	2/3	Recommended Not Eligible
053-6336	Outbuildings, 42018 Briarfield Ln, ca. 1915	2	Recommended Not Eligible
053-6337	House, 41567 Briarfield Ln, ca. 1958	2	Recommended Not Eligible
053-6338	House, 42254 Briarfield Ln, ca. 1960	2	Recommended Not Eligible
053-6339	House, 24335 Evergreen Mills Rd, ca. 1961	2	Recommended Not Eligible

None of the newly recorded resources, which include eighteen mid-twentieth-century dwellings one dwelling dating to the early twentieth century, two office buildings, one workshop, and one set of early twentieth-century agricultural outbuildings are recommended eligible for the NRHP. No potential commercial or residential districts involving any of the newly and/or previously recorded resource were noted in the APE. Although some of the newly recorded resources retain integrity, many of the dwellings along John Mosby Highway (US Route 50) have been converted to commercial use and some have alterations including replacement of original materials. Furthermore, the newly recorded resources typically represent common designs for the period of construction and place.

4.3 SUMMARY OF RECOMMENDATIONS

Forty-seven previously recorded resources and twenty-four newly recorded resources (VDHR #s 053-6316 through 053-6338) were documented in the APE for above-ground historic architectural resources as part of the current study. Of the previously recorded resources, 15 are no longer extant, which is largely reflective of developmental pressures in the project vicinity, and the remaining are previously determined or currently recommended not eligible for the NRHP. The previously recorded Palmer Family Cemetery (VDHR# 053-6146), while recommended not eligible for the NRHP, is subject to state statutes regarding cemeteries and may require boundary delineation, per the possibility of unmarked graves, as part of compliance with these statutes. None of the newly recorded resources, which include twentieth-century dwellings, office buildings, outbuildings, and a workshop, are recommended eligible for the NRHP based on the current survey.

5.0 ARCHAEOLOGICAL SURVEY RESULTS

5.1 INTRODUCTION

The archaeological survey covering Study Corridors 2 and 3 utilized a segment-based recording system to make it possible to have multiple teams in the field if needed. CCR divided the corridor into twelve segments labeled A through M (J was omitted to avoid confusion with CCR's use of J to denote judgmental shovel tests), with segment breaks placed at convenient crossroads or access points. This resulted in seven linear segments of varying lengths between 2,488 ft and 5,153 ft, as well as five circular intersection areas (three that are 2,000 ft in diameter, one that is 3,000 ft in diameter, and one that is 4,000 ft). The survey covered approximately 870 acres inclusive of overlapping areas of the alternative Study Corridors. Over 300 acres were found to be disturbed, wet, or steeply sloped, but a total of 1,950 shovel testing were still excavated including shovel tests for site delineation.

Survey strategies included systematic shovel testing at 23-m intervals in disturbed or low probability areas with the interval judgmentally at 15 m in higher probability areas or when in the proximity of previously recorded sites not appearing heavily disturbed. Additional judgmental shovel testing was used to ensure coverage of high probability landforms. Figure 5.1-1 illustrates the survey conditions along the corridor as well as the survey strategies employed in different areas. It also depicts those areas that have been previous surveyed at an intensive level based on review of survey polygons in DSS and verification of survey areas and survey methods using reports on file at VDHR. Quite a number of professional cultural resource management surveys have been conducted within the APE, either as a result of compliance with Section 106 or as a result of compliance with Loudoun County regulations addressing local development. As a result of these systematic surveys covering nearly 200 acres, or other types of archaeological investigations resulting in site recordation, a total of 21 previously recorded sites are located within or extend within the current APE, as will be discussed below (see Table 5.1-1 placed at end of chapter). To provide additional detail relevant to conditions and survey coverage in each segment, the following subsections include a brief heading template with summary statistics.

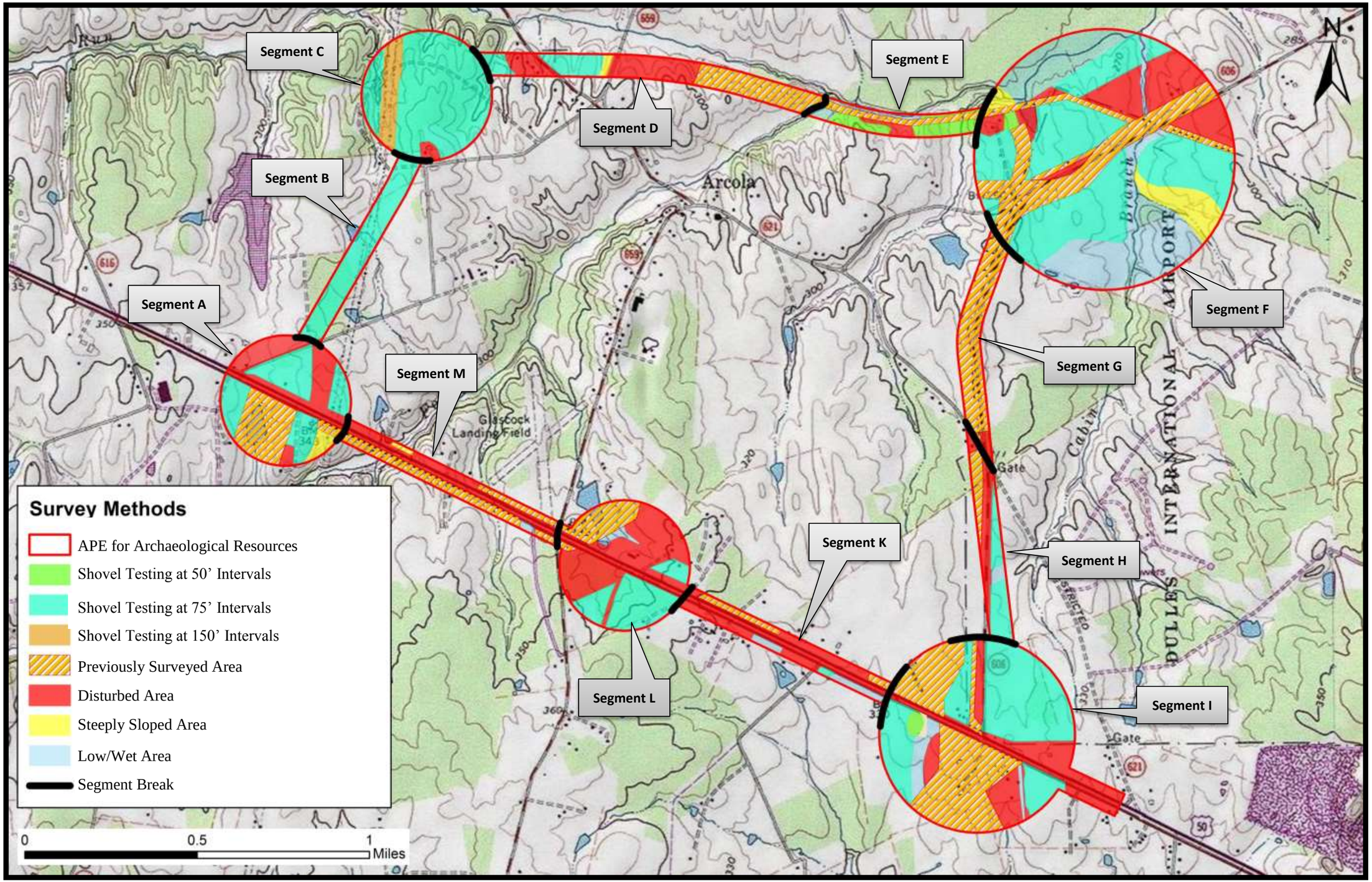

Figure 5.1-1: Survey Conditions and Strategies.

5.2 RESULTS OF THE ARCHAEOLOGICAL SURVEY BY SEGMENT

Segment A	
Approximate Length	N/A
Total Area	72 acres
Area with Shovel Test Survey at 75-ft Interval	27.37 acres
Area Surface Surveyed (with Judgmental STs)	0 acres
Total Area Disturbed, Wet, or Steeply Sloped	26.29 acres
Total Area Previously Surveyed	18.34 acres
Total # of Shovel Tests	167
# New Sites Recorded	1
# Isolated Finds Recorded	0

Segment A is a circular segment starting approximately 200 ft west of Racefield Lane and centered on John Mosby Highway/US Route 50. Land within Segment A is a mix of agricultural and wooded areas with most of the area used for horse pasture or sod farming. This segment is located on the Penn-Calverton-Croton soil unit. Soils recorded during the shovel tests were consistent with the general soil mapping in the area. The soils include various silty loams with silty clay subsoils. Generally this portion of the Virginia Piedmont has been subject to significant erosion. In the specific testing areas the erosion varied from moderate to severe. There is one previously recorded site (44LD1357) partially in the current APE, and one new site (44LD1633) in this segment (Figure 5.2-1).

Segment B	
Approximate Length	3,181 ft
Total Area	25.68 acres
Area with Shovel Test Survey at 75-ft Interval	25.52 acres
Area Surface Surveyed (with Judgmental STs)	0 acres
Total Area Disturbed, Wet, or Steeply Sloped	0.16 acres
Total # of Shovel Tests	128
# New Sites Recorded	0
# Isolated Finds Recorded	0

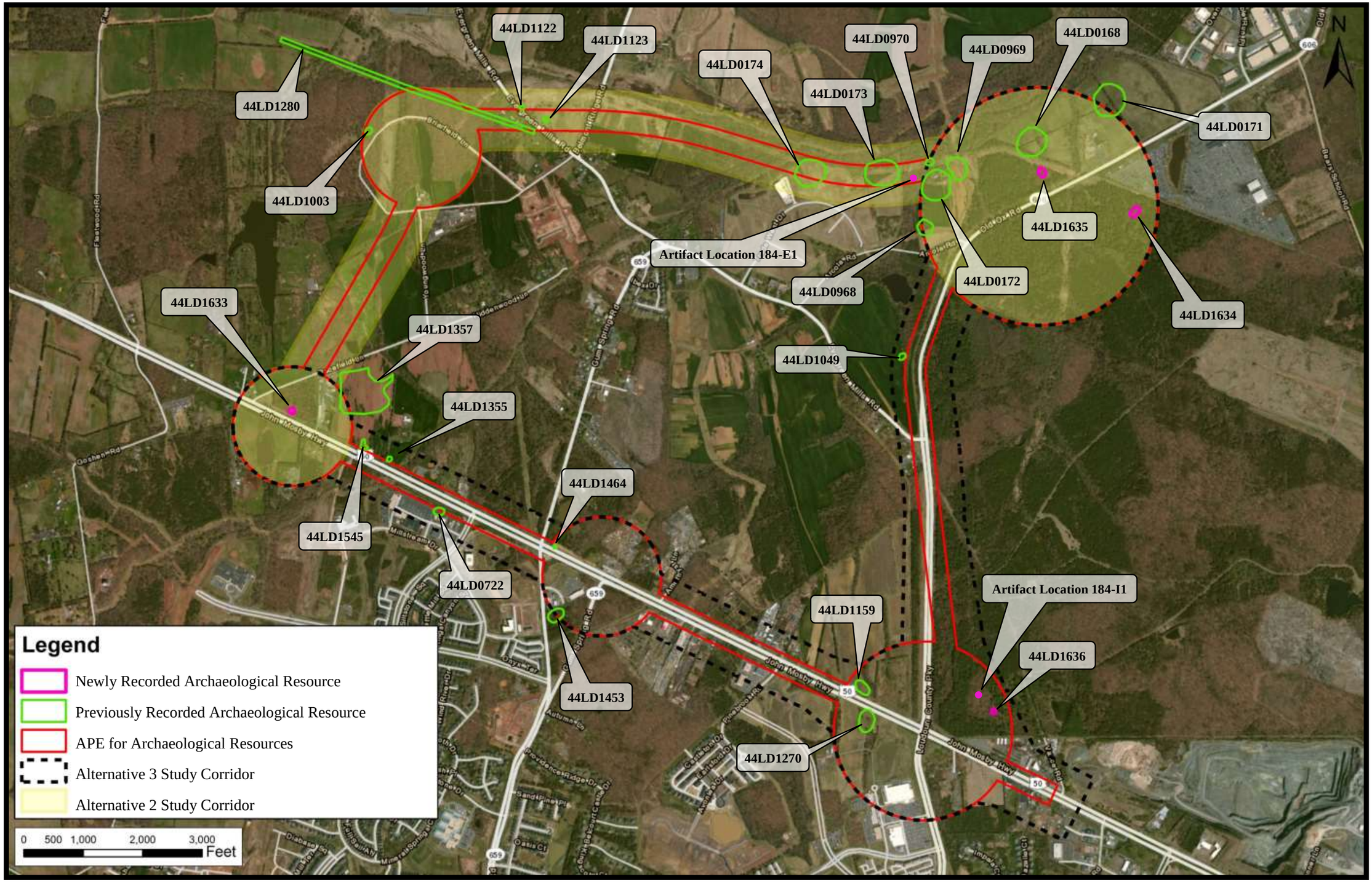

Figure 5.2-1: Depiction of Alternative 2 and 3 Study Corridors and APE for Archaeological Resources, Showing the Locations of Newly Recorded and Previously Recorded Archaeological Resources.

Segment B is a 350 ft corridor approximately 3,200 ft long running from the north side of Segment A and terminating at the south side of Segment C. Land within Segment B is mixed of agricultural and wooded areas and is moderately flat. Most of the area used for sod farming and as a result has suffered a loss of topsoil. This segment is located on the Penn-Calverton-Croton soil unit. Soils recorded during the shovel tests were consistent with the general soil mapping in the area. The soils include various silty loams with silty clay subsoils. In the specific testing areas the erosion varied from moderate to severe. No previously recorded sites or new sites were documented.

Segment C	
Approximate Length	N/A
Total Area	72 acres
Area with Shovel Test Survey at 75-ft Interval	60.37 acres
Area with Shovel Test Survey at 150-ft Interval	9.92 acres
Area Surface Surveyed (with Judgmental STs)	0 acres
Total Area Disturbed, Wet, or Steeply Sloped	1.71 acres
Total # of Shovel Tests	405
# New Sites Recorded	0
# Isolated Finds Recorded	0

Segment C is a circular segment that is located just to the north of the intersection of Youngwood Lane and Briarfield Lane in the northwest corner of the project area. The land use is a mix of sod farm and wooded areas. There is also a power transmission line corridor that runs north/south in the western half of the segment. This segment is located on the Penn-Calverton-Croton soil unit. Soils recorded during the shovel tests were consistent with the general soil mapping in the area. The soils include various silty loams with silty clay subsoils. In the areas that have been used for sod farming (Figure 5.2-2) there has been a significant loss of topsoil. Elsewhere within the segment erosion varied from moderate to severe. There are two previously recorded sites partially within the APE in Segment C (see Figure 5.2-1). Site 44LD1003 is a domestic site dating to the late eighteenth to mid-nineteenth century is on the far western boundary if the segment. It was previously subjected to Phase II evaluation testing and was recommended as not eligible for the NRHP due to loss of integrity (Sipe and Smith 2010). Site 44LD1280 is the remains of an unfinished railroad. No new sites were recorded in this segment.

Figure 5.2-2: View of One of the Many Sod Farms in the Project Area from the South End of Segment C, Looking East.

Figure 5.2-3: Typical Terrain Along the Northern Portion of the Project Area in Segment E, Looking East Along the South Side of Broad Run. Note the Water Control Berm.

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Segment D	
Approximate Length	5,153 ft
Total Area	41.76 acres
Area with Shovel Test Survey at 75-ft Interval	9.75 acres
Area Surface Surveyed (with Judgmental STs)	0 acres
Total Area Disturbed, Wet, or Steeply Sloped	16.63 acres
Total Area Previously Surveyed	15.38 acres
Total # of Shovel Tests	86
# New Sites Recorded	0
# Isolated Finds Recorded	0

Segment D is a 350 ft corridor running east west from the east side of Segment C, or approximately 1,500 ft west of the intersection of Evergreen Mills Road and Briarfield Lane, to the confluence of South Fork and Broad Run. The land use is a mix of residential properties, fallow fields, wooded areas, and a tree farm. This segment is located on the Calverton-Readington-Croton soil unit. Soils recorded during the shovel tests were consistent with the general soil mapping in the area. The soils include various silty loams with silty clay subsoils. There was significant soil disturbance within the boundary of the tree farm, and elsewhere within the segment erosion varied from moderate to severe. There is one previously recorded site (44LD1123) fully within the APE, and there are two additional sites partially within the APE (44LD1280 and 44LD1122) (see Figure 5.2-1). Site 44LD1280 is an abandoned railroad grade that is still visible on the landscape, and no evidence was found of 44LD1122 within the APE. No new sites were recorded in this segment.

Segment E	
Approximate Length	2,488 ft
Total Area	20.44 acres
Area with Shovel Test Survey at 50-ft Interval	8.95 acres
Area Surface Surveyed (with Judgmental STs)	0 acres
Total Area Disturbed, Wet, or Steeply Sloped	5.59 acres
Total Area Previously Surveyed	5.9
Total # of Shovel Tests	163
# New Sites Recorded	0
# Isolated Finds Recorded	1

Segment E is a 350-ft-wide by 2,500-ft corridor that begins at the east side of the confluence of South Fork and Broad Run and continues east to where it meets Segment F north of the intersection of Arcola Road and Loudoun County Parkway. Land use in this segment has historically been agricultural, but has undergone some development in the area of the Dulles Trade Center as well as along the Brambleton-Greenway transmission lines. This segment is located on the Calverton-Readington-Croton soil unit. Soils recorded during the shovel tests were consistent with the general soil mapping in the area. The soils include various silty loams with silty clay subsoils. The more recent agricultural use of the property was for sod farming, which has resulted in significant topsoil loss. Elsewhere within the segment erosion varied from moderate to severe, and earthmoving activities have altered some portions of the landscape (Figure 5.2-3). Portions of three previously recorded sites, 44LD0174, 44LD0173, and 44LD0970 fall within the current APE in this segment (see Figure 5.2-1). Due to the previously recorded sites and the high probability landforms in the vicinity of Broad Run, shovel testing was conducted on a 15-m interval throughout this segment. No positive shovel tests were recorded within the recorded boundaries of these sites, and all showed signs of severe erosion and/or recent disturbance. There was a single artifact location (see Figure 5.2-1), but no new sites were recorded in Segment E.

Segment F	
Approximate Length	N/A
Total Area	287.61 acres
Area with Shovel Test Survey at 50-ft Interval	1.2 acres
Area with Shovel Test Survey at 75-ft Interval	109.67 acres
Area Surface Surveyed (with Judgmental STs)	0 acres
Total Area Disturbed, Wet, or Steeply Sloped	127.27 acres
Total Area Previously Surveyed	49.47 acres
Total # of Shovel Tests	601
# New Sites Recorded	2
# Isolated Finds Recorded	0

Segment F is a very large circular interchange area (4,000-ft diameter) centered on State Route 606 (Old Ox Road) in the northeastern section of the project area. There have been multiple previous surveys for transportation and power corridors within this segment and along the

present road alignment. There are four previously recorded sites (44LD0168, 44LD0172, and 44LD0970) fully within the APE, two previously recorded sites partially in (44LD0171 and 44LD0968), and two newly recorded sites (44LD1634 and 44LD1635) within this segment (see Figure 5.2-1). Roughly 171 acres are on Washington Dulles International Airport property, most of which showed signs of significant disturbance in the form of drainage channels excavated throughout the wooded area.

Segment G	
Approximate Length	3,261 ft
Total Area	26.58 acres
Area with Shovel Test Survey at 75-ft Interval	0
Area Surface Surveyed (with Judgmental STs)	0
Total Area Disturbed, Wet, or Steeply Sloped	1.55 acres
Total Area Previously Surveyed	26.58 acres
Total # of Shovel Tests	0
# New Sites Recorded	0
# Isolated Finds Recorded	0

Segment G is a 350-ft-wide by 3,200-ft corridor along and includes the present alignment of State Route 606 (Loudoun County Parkway). It runs from approximately 650 ft southwest of the intersection of Arcola Road and Loudoun County Parkway and south to Evergreen Mills Rd. This segment has been previously surveyed for a recent VDOT project (Goode and Traum 2012) and was not resurveyed as part of the current project. There is one previously recorded site immediately adjacent to the current APE (Site 44LD1049, a late nineteenth- to late twentieth-century trash dump) along the west side of Route 606 (see Figure 5.2-1). The site does not appear to extend into the current APE based on documentation in Goode and Traum (2012).

Segment H	
Approximate Length	3,076 ft
Total Area	24.13 acres
Area with Shovel Test Survey at 75-ft Interval	10.15 acres
Area Surface Surveyed (with Judgmental STs)	0 acres
Total Area Disturbed, Wet, or Steeply Sloped	9.17 acres
Total Area Previously Surveyed	4.81 acres
Total # of Shovel Tests	49
# New Sites Recorded	0
# Isolated Finds Recorded	0

Segment H is a 350-ft-wide by 3,200-ft corridor that diverges to the east to the south of Evergreen Mills Road for approximately 2,700 ft. Most of the segment is east of the existing roadway within the secure area of Washington Dulles International Airport, with a narrow strip on the west side near Evergreen Mills Road. The area is primarily wooded, with younger growth consistent with recent logging (Figure 5.2-4) and moderate erosion evident. The silty clay subsoil was generally near the surface, as little topsoil was encountered. There are no previously recorded sites in this segment, and no new sites were recorded during the present survey.

Segment I	
Approximate Length	N/A
Total Area	169.93 acres
Area with Shovel Test Survey at 50-ft Interval	2.37 acres
Area with Shovel Test Survey at 75-ft Interval	67.28 acres
Area Surface Surveyed (with Judgmental STs)	0 acres
Total Area Disturbed, Wet, or Steeply Sloped	43.69 acres
Total Area Previously Surveyed	56.59 acres
Total # of Shovel Tests	280
# New Sites Recorded	1
# Isolated Finds Recorded	1

Figure 5.2-4: Typical Condition Within the Dulles Airport Property, Segment H.

Figure 5.2-5: Low/Wet Area in Segment K, Looking South.

Segment I is a circular intersection area centered on the existing intersection of John Mosby Highway and State Route 606 (Loudoun County Parkway). It is a mix of fallow agricultural fields, wooded areas, and developed areas. There have been multiple surveys within this segment, with these covering roughly a third of the area. A portion of the intersection area (northeast quadrant) is within the secure area of Washington Dulles International Airport. This features low and wet areas with storm-damaged timber and fallen tree ground cover. Other quadrants of the intersection area have varying degrees of heavy development that has reduced site potential. There are two previously recorded sites (44LD1159 and 44LD1270), one newly recorded site (44LD1636), and one artifact location (see Figure 5.2-1). The Palmer Family Cemetery (VDHR# 053-6146) is in the northwest quadrant (see architectural discussion).

Segment K	
Approximate Length	3,482 ft
Total Area	27.90 acres
Area with Shovel Test Survey at 75-ft Interval	0.61 acres
Area Surface Surveyed (with Judgmental STs)	0 acres
Total Area Disturbed, Wet, or Steeply Sloped	22.95 acres
Total Area Previously Surveyed	4.34 acres
Total # of Shovel Tests	3
# New Sites Recorded	0
# Isolated Finds Recorded	0

Segment K is a 350-ft-wide by 3,482-ft segment that is centered on John Mosby Highway beginning approximately 1,400 ft west of Loudoun County Parkway and continuing west to Segment L that begins at Hutchins Farm Road. The entire APE in Segment K appeared to be disturbed or developed and low or wet (Figure 5.2-5). No previously recorded sites are located within this segment.

Segment L	
Approximate Length	N/A
Total Area	73.43 acres
Area with Shovel Test Survey at 75-ft Interval	21.99 acres
Area Surface Surveyed (with Judgmental STs)	0 acres
Total Area Disturbed, Wet, or Steeply Sloped	40.41 acres
Total Area Previously Surveyed	11.03 acres
Total # of Shovel Tests	68
# New Sites Recorded	0
# Isolated Finds Recorded	0

Segment L is a circular intersection area that is centered on John Mosby Highway between Hutchins Farm Road and Gum Springs Road. This segment is a mix of developed lots and wooded areas. North of John Mosby Highway, the segment includes automobile junkyards and construction yards, and testing was conducted in remnant areas that appeared less disturbed. Shovel tests showed eroded profiles. South of John Mosby Highway, the undeveloped areas included deciduous woods with shallow topsoil still present and some low and wet areas. There are two previously recorded sites in this segment, 44LD1453 and 44LD1462 (see Figure 5.2-1). No new sites were recorded.

Segment M	
Approximate Length	3,680 ft
Total Area	29.43 acres
Area with Shovel Test Survey at 75-ft Interval	0
Area Surface Surveyed (with Judgmental STs)	0 acres
Total Area Disturbed, Wet, or Steeply Sloped	14.67 acres
Total Area Previously Surveyed	14.76 acres
Total # of Shovel Tests	0
# New Sites Recorded	0
# Isolated Finds Recorded	0

Segment M is a 350-ft-wide by 3,800-ft linear corridor centered on John Mosby Highway running from Gum Springs Road west to a point approximately 1,750 east of Racefield Lane.

All along the north side of John Mosby Highway the APE is disturbed by gas and water line corridors. The south side of the highway has been previously surveyed, and is heavily developed with habitable land areas that are not low and wet now heavily developed. There are three previously recorded site mapped as extending into the current APE (44LD0722, 44LD1355, and 44LD1545) (see Figure 5.2-1).

5.3 PREVIOUSLY RECORDED SITES

There are 21 previously recorded sites within, extending into, or immediately adjacent to the current APE (see Figure 5.2-1 and Table 5.1-1), 19 of which have not had final NRHP eligibility evaluations in consultation with VDHR. Appendix B contains updated DSS forms for those sites that were revisited in order to provide eligibility recommendations. Appendices C and D contain information on the artifacts and shovel test profiles obtained from the revisited sites.

The previously recorded sites largely reflect the number of previous professional cultural resource management surveys that have been conducted within the APE as a result of compliance with Section 106 of the NHPA or as a result of compliance with Loudoun County regulations addressing local development. Several also reflect noncompliance investigations that did not involve systematic subsurface investigation. The 21 sites range from Middle Archaic lithic scatters to twentieth-century farmsteads and the remnants of an unfinished rail line. Two of these sites, 44LD0722 and 44LD1159, have been previously determined not eligible for the NRHP in consultation with VDHR. Six of the sites (44LD0168, 44LD0172, 44LD0173, 44LD0174, 44LD0969, and 44LD0970) are Native American lithic scatters previously determined potentially eligible for the NRHP, as indicated on VDHR DSS forms, and the rest have not been evaluated in consultation with VDHR. Within the current APE, each of the potentially eligible sites, as well as the remaining unevaluated sites, were revisited during the current survey. None of the previously recorded sites or portions of previously recorded sites within the current APE yielded, or have yielded, data that would support eligibility for the NRHP.

No artifacts were recovered during shovel testing across the previously recorded potentially eligible sites, which are located along the south side of Broad Run in heavily disturbed areas (44LD168, 44LD172, 44LD173, 44LD174, 44LD969, and 44LD970). The same eroded soils and lack of artifacts was recorded in the portion of site 44LD1357, a twentieth-century domestic scatter, within the current APE. The highly eroded nature of the soils and lack of topsoil is to some extent related to decades of sod farming in the years since the sites were recorded. At sites 44LD0171 and 44LD0968, also including Native American artifact scatters along Broad Run, shovel testing recovered no artifacts, and portions of the sites have been heavily disturbed.

Minimal material was found at sites 44LD1123 and 44LD1270 (late eighteenth- to nineteenth-century domestic sites) and both sites lacked subsurface integrity. The portion of site 44LD1453, a twentieth-century farmstead, that is within the current APE lacked subsurface integrity and has been the site of refuse dumping. Site 44LD1003 is a domestic site dating to the second half of the eighteenth century through the early nineteenth century. CCR revisited the site to assess the present condition but did not conduct subsurface testing. The site underwent a Phase II evaluation in 2010 conducted by Thunderbird Archaeology (Sipe and Smith 2010), and the evaluation testing confirmed the presence of eighteenth and early nineteenth-century material as well as some limited architectural remains. The testing determined that the site had been significantly disturbed, likely at the time the structure was razed, and as a result the contexts at the site were mixed leaving no discreet deposits. Thunderbird Archaeology recommended the site as not eligible due to the lack of subsurface integrity and obtained concurrence from the Loudoun County archaeologist (Sipe and Smith 2010). CCR briefly revisited the site and concurs with this recommendation, as discussed below. Sites 44LD1049, 44LD1122, 44LD1355, 44LD1464, and 44LD1545, which include historic artifact scatters, do not survive (or extend into) the current APE. Finally, the approximately 2,300-ft section of the unfinished Manassas Gap branch rail line ditch feature within the current APE (44LD1280) was documented but does not appear significant.

5.3.1 Discussions of Previously Recorded Revisited for the Current Survey

***SITE NUMBER**:* 44LD0168
SITE TYPE: Unattributed Native American lithic scatter
SOIL TYPE: Calverton silt loam, undulating; Penn silt loam, rolling; Readington silt loam, undulating
SITE SIZE: 150 x 150 m (492 x 429 ft)
SELECTED ARTIFACTS: N/A
***COMMENTS**:* This site was first recorded as a surface scatter in 1981 and was reported on a VDHR site form with a recommendation for further work. At the time the field was under cultivation. The site was originally attributed to the Late Archaic period due to the presence of stemmed projectile points, but the current VDHR DSS form was updated to unattributed based on an indeterminate study by the William and Mary Center for Archaeological Research (WMCAR) in 1997. In 2006, VDHR considered the site potentially eligible for the NRHP after a study conducted for the Brambleton-Greenway transmission line (Butler et al. 2006). This was due to the fact that only a small internal portion of the site was reexamined with subsurface tests, which were negative. Upon revisiting the site, systematic shovel testing on regular transects covering areas not obviously disturbed or wet encountered no cultural material in the extremely eroded northern half of the site (Figure 5.3.1-1), and the southeast portion of the site was buried with fill as were the adjacent fields. The southwest portion of the site was under standing water, possibly due to altered drainage patterns as a result of the fill. A typical soil profile at this site had 12 to 17 cm of a reddish brown (5YR4/4) silty clay loam above a yellowish red (5YR4/6) silty clay subsoil.
RECOMMENDATIONS: A resurvey of the site found no cultural material and clear evidence of erosion and earthmoving at the site. It is unlikely that this site would yield important information on the precontact period in the Northern Piedmont region of Virginia; therefore is recommended as not eligible for the NRHP.

***SITE NUMBER**:* 44LD0171
SITE TYPE: Woodland period Native American
SOIL TYPE: Readington silt loam, undulating; Calverton silt loam undulating
SITE SIZE: 150 x 200 m (492 x 656 ft)
SELECTED ARTIFACTS: N/A
***COMMENTS**:* The site was recorded as a surface scatter in 1981 and was reported on a VDHR site form with a recommendation for further work. It is located on a northwest-facing side slope

Figure 5.3.1-1: Testing at Site 44LD168 Looking North.

Figure 5.3.1-2: Testing at Site 44LD171 Showing the Non-Disturbed Area in the APE Looking East.

just east of where Cabin Branch meets Broad Run, and a small portion extends into the current APE. The site was initially recorded as a Late Archaic to Late Woodland site. WMCAR revised the DSS in 2006 to a more general Woodland period attribution based on the type of ceramics present. It appears that the site has never been investigated beyond the initial pedestrian survey that resulted in the discovery of the site. No cultural material was recovered in the APE during systematic transect shovel testing of a small section of the site to the north of a hedgeline (Figure 5.3.1-2); to the south of this hedgeline, the site has been modified by the earthmoving activities resulting in deep fill (Figure 5.3.1-3). A typical soil profile for the unfilled portion of the site was 12-16 cm of a strong brown (7.5YR4/6) silty clay loam above a brown (7.5YR5/4) silty clay subsoil.

RECOMMENDATIONS: Most of the site is situated outside of the current APE with just the southwestern edge of the recorded boundary falling inside. The portion of the site within the APE would not yield important information on the precontact period in the Northern Piedmont region of Virginia and would not contribute to any eligibility for the NRHP.

SITE NUMBER*:* 44LD0172
SITE TYPE: Nineteenth-to twentieth-century historic domestic; Late Archaic period Native American
SOIL TYPE: Calverton silt loam; Penn silt loam
SITE SIZE: 116 x 235 m (380 x 770 ft)
SELECTED ARTIFACTS: N/A
COMMENTS*:* Site 44LD0172 was first recorded in 1981 as a result of a pedestrian survey in agricultural fields and was reported on a VDHR site form with a recommendation for further work. The field was sown with corn at the time of the discovery. In the thirty three years since, there have been land uses that have contributed to the disturbance of the site and the surrounding fields. Erosion, sod farming (Figure 5.3.1-4), nearby construction, and the clearing of timber for utility lines have all contributed to s a significant loss of soil in the area. No cultural material was found as a result of limited shovel testing within the site boundaries as part of the Brambleton-Greenway transmission line in 2006 (Butler et al. 2006), and the site was considered potentially eligible by VDHR since the studies had not covered the entire site area. In 2012, a portion in the APE for the VDOT survey of the Dulles Loop-Route 606 project (Goode and Traum 2012) was found to be destroyed. CCR recovered no cultural material during systematic

Figure 5.3.1-3: Soil Pile on the Southern Part of Site 44LD171 Looking East.

Figure 5.3.1-4: Sod Farm at Site 44LD172 Looking Southeast.

transect shovel testing across potentially undisturbed portions of the site. Severe erosion was evident, and a typical soil profile was 10-13 cm of a yellowish red (5YR4/6) silty clay loam above a dark reddish brown (5YR3/4) silty clay subsoil.

RECOMMENDATIONS: The site is recommended as not eligible for the NRHP. Due to the eroded nature of the soils, the lack of cultural material, and disturbance documented during previous surveys, this site lacks the potential to contribute significant information on the precontact and historic periods in the Northern Piedmont region.

SITE NUMBER*:* 44LD0173
SITE TYPE: Unattributed Native American lithic scatter, twentieth-century outbuilding
SOIL TYPE: Penn silt loam; Readington silt loam
SITE SIZE: 150 x 150 m (492 x 492 ft)
SELECTED ARTIFACTS N/A
COMMENTS*:* Site 44LD0173 was originally recorded as a small lithic scatter in 1981 and was reported on a VDHR site form with a recommendation for further work. The site is located in a fallow agricultural field and cedar grove on a low ridge south of Broad Run. The site was revisited in 2006 for the Brambleton-Greenway transmission line, and the limited shovel tests within the site boundaries were negative (Butler et al. 2006). The 2006 survey did not encompass the entire site, and as a result VDHR considered the site potentially eligible for the NRHP. The current survey also did not encompass the entire site as it is mapped in the VDHR's DSS database (the approximate southern third of the site is outside of the current APE for direct effects). No cultural material was recovered from systematic transect shovel tests at the location of 44LD0173 during the current survey. Erosion was evident, and a typical soil profile in the vicinity of this site had 5 to 10 cm of a brown (7.5YR4/4) silty clay subsoil above a light reddish brown (5YR6/4) silty clay subsoil. A group of concrete footings was recorded on the surface in the cedar grove. The footings were comprised of twelve 38 x 8 in piers, six each side of a 10 x 8 ft concrete bay (Figures 5.3.1-5 and 5.3.1-6). A structure is visible at this location on aerial photographs from 1949 (Figure 5.3.1-7). This structure was an outbuilding associated with a farmstead to the south (VDHR # 053-5691), and no associated artifacts were recovered.

RECOMMENDATIONS: Erosion, sod farming, nearby construction, and the clearing of timber for utility lines have all contributed to a significant loss of soil in the area of this site. Due to the eroded nature of the soils and the lack of cultural material or intact subsurface strata during a recent survey as well as the current survey, this site lacks the integrity to yield significant

Figure 5.3.1-5: Concrete footings at site 44LD173.

Figure 5.3.1-6: Site 44LD173 "U" shaped bay in the middle of the line of unidentified outbuilding footings.

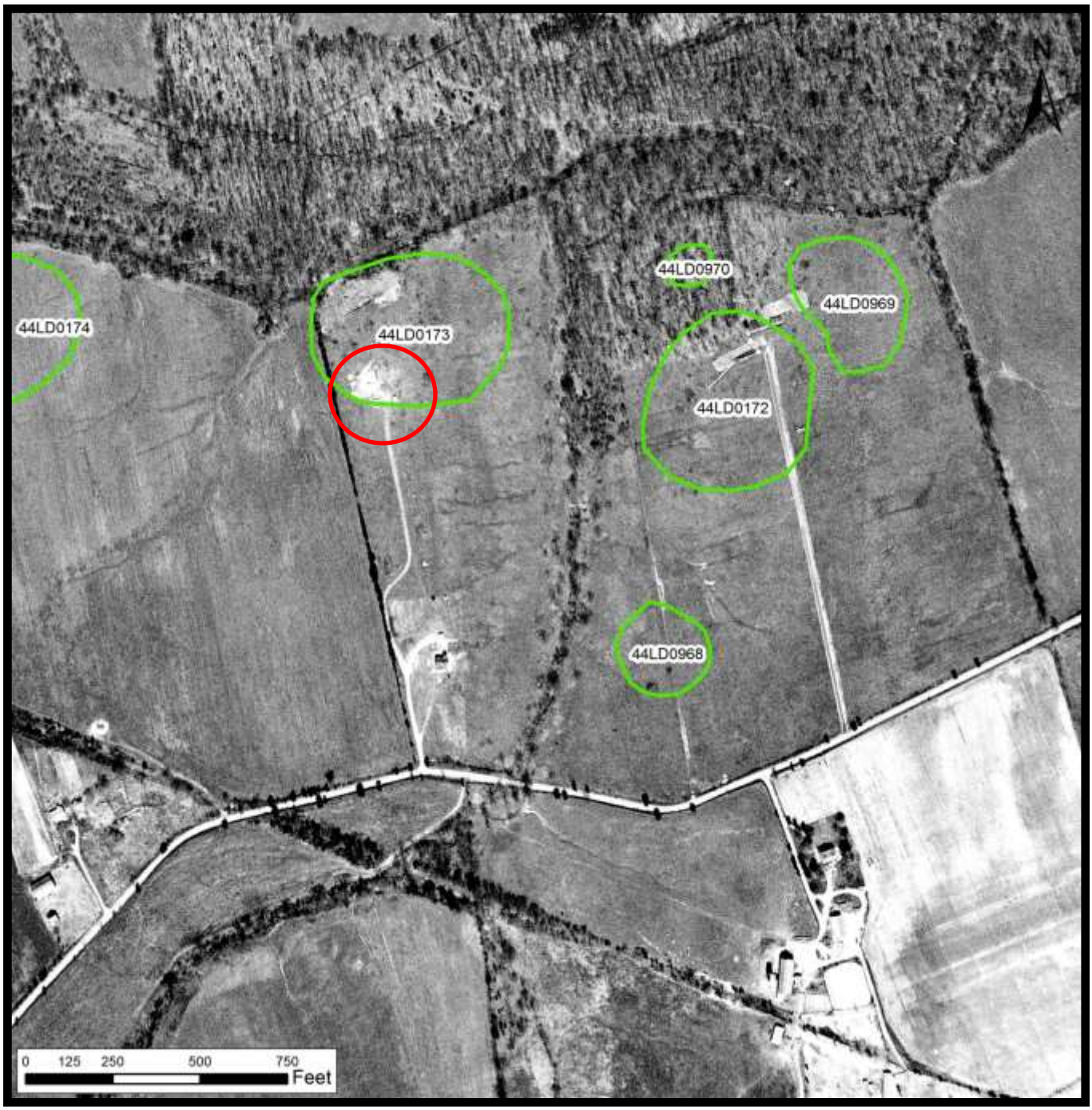

Figure 5.3.1-7: 44LD0173 Shown on 1949 Aerial Photograph, Note the Red Circle Marking the Location of the Foundations Recorded During the Recent Survey (USGS EarthExplorer 2013a).

information on the precontact and historic periods in the Northern Piedmont region and is recommended as not eligible for the NRHP.

***SITE NUMBER**:* 44LD0174
SITE TYPE: Unattributed Native American lithic scatter
SOIL TYPE: Penn shaly silt loam, eroded rolling phase
SITE SIZE: 150 x 150 m (492 x 492 ft)
SELECTED ARTIFACTS: N/A
***COMMENTS**:* Site 44LD0174 was recorded as an Archaic lithic scatter in 1980 as a result of a pedestrian survey in agricultural fields and was reported on a VDHR site form with a recommendation for further work. The DSS form was changed to unattributed in 1997 when WMCAR reconsidered stemmed projectile points initially seen as diagnostics. The field was sown with corn at the time of the initial discovery. In the thirty three years since the site was recorded, there have been land uses that have contributed to the disturbance of the site and the surrounding fields. Erosion, sod farming, nearby construction, and the clearing of timber for utility lines have all contributed to a significant loss of soil in the area. The site was revisited in 2006 for the Brambleton-Greenway transmission line, and the limited shovel tests within the site boundaries were negative (Butler et al. 2006). The 2006 survey did not encompass the entire site, and as a result VDHR considered the site potentially eligible for the NRHP. No cultural material was found as a result of systematic transect shovel testing within the site boundaries during the current survey (Figure 5.3.1-8). Erosion was evident, and a typical soil profile in the vicinity of this site was 8-13 cm of a reddish brown (5YR4/4) silty clay loam subsoil above a dark reddish brown (5YR4/4) sandy clay subsoil with decomposing shale bed rock.
RECOMMENDATIONS: Due to significant disturbance and the absence of cultural material recorded during the current survey as well as a previous survey, this site is unlikely to yield important information about the precontact period in the Northern Piedmont region of Virginia and is recommended as not eligible for the NRHP.

***SITE NUMBER**:* 44LD0968
SITE TYPE: Unattributed Native American, nineteenth- to twentieth-century trash scatter
SOIL TYPE: Penn silt loam, 2-7 percent slopes
SITE SIZE: 60 x 90 m (200 x 300 ft)
SELECTED ARTIFACTS: N/A
***COMMENTS**:* This site is located in an operating sod farm and has previously been recommended as not eligible for the NRHP as the result of a non-Section 106 survey due to low

Figure 5.3.1-8: Site 44LD174 Looking East.

Figure 5.3.1-9: The Southern End of Site 44LD968 Looking East, Showing Recent Earth Moving.

artifact density and disturbance (Goode et al. 2003). In addition, Goode and Traum (2012) noted that the eastern portion had been destroyed by a road cut. The western portion of the site is just outside of the current APE. No artifacts were recovered during systematic shovel tests for the recent survey. The site appears to be significantly altered by sod farming and recent grading for road construction (Figure 5.3.1-9). There was very little topsoil at this site; where there was some it was less than 10 cm of a dark reddish brown (7.5YR3/4) above a yellowish brown (7.5YR5/6) sandy clay subsoil with decayed shale bedrock.

RECOMMENDATIONS: The portion of the site in the current APE did not yield cultural material during the current survey and appears to lack integrity. This area would not be likely to yield important information about the precontact period in the Northern Piedmont region of Virginia and would not contribute to any NRHP eligibility based on the portion just west of the APE.

SITE NUMBER*:* 44LD0969
SITE TYPE: Unattributed Native American lithic scatter
SOIL TYPE: Penn silt loam 6 to 8 percent slope
SITE SIZE: 75 x 75 m (250 x 250 ft)
SELECTED ARTIFACTS: N/A
COMMENTS*:* This site was defined on the basis of a surface scatter of lithic material, and it is located on an east facing side slope above an unnamed tributary of Broad Run. Goode et al 2003 recommended is as not eligible for the NRHP based on a non-Section 106 compliance survey in which no artifacts were recovered in shovel tests. Most of this site is located in the previously surveyed area for the VDOT Dulles Loop-Route 606 project (Goode and Traum 2012), with this survey noting site destruction within that project's APE due a waterline and road cut. No positive shovel tests were recorded during systematic shovel test transect survey in the previously unsurveyed portion of the current APE (along the western edge of the site, Figure 5.3.1-10). A typical soil profile in that area suggested severe erosion and was 10 to 20 cm of reddish brown (2.5YR4/4) silty clay loam above a red (2.5YR 4/6) silty clay subsoil.

RECOMMENDATIONS: Due to significant disturbance and lack of evidence for remaining cultural material or intact deposits, this site is unlikely to yield important information about the precontact period in the Northern Piedmont region of Virginia and is recommended as not eligible for the NRHP.

Figure 5.3.1-10: Location of Site 44LD969 Looking East.

Figure 5.3.1-11: Site 44LD970 Looking West. Note signs of recent clearing.

***SITE NUMBER**:* 44LD0970
SITE TYPE: Late Archaic Native American lithic scatter
SOIL TYPE: Penn silt loam
SITE SIZE: 7.6 x 7.6 m (25 x 25 ft)
SELECTED ARTIFACTS: N/A
***COMMENTS**:* This site was initially defined by three positive shovel tests and was interpreted as a small lithic reduction site during a non-Section 106 compliance survey (Goode et al. 2003). The initial investigators recommended the site as not eligible for the NRHP due to heavy deflation and plowing. There has been significant disturbance of the site since that time. Recent earthmoving has reduced approximately 90 percent of the site down to the clay subsoil. The area was visually inspected, but no additional shovel tests were excavated.
RECOMMENDATIONS: This site has suffered significant disturbance since the time it was initially recorded. It appeared to have little potential for significant information in 2003, due to disturbance, and now is even more disturbed and is unlikely to yield important information about the precontact period in the Northern Piedmont region of Virginia. This site is recommended as not eligible for the NRHP.

***SITE NUMBER**:* 44LD1003
SITE TYPE: Mid- to Late Eighteenth-Century through Early Nineteenth-Century tenant dwelling; Middle Archaic temporary camp
SOIL TYPE: Penn silt loam, 2 to 7 percent slopes; Nestoria channery silt loam, 7 to 15 percent slopes, severely eroded
SITE SIZE: 91 x 76 m
SELECTED ARTIFACTS: N/A
***COMMENTS**:* 44LD1003 is a multicomponent site that was recorded in 2003 by Thunderbird Archeological Associates, Inc., (TAA) during an archaeological survey of the Shockey Suburban and Marshall Properties (Walker et al. 2003). In 2004, additional Phase I investigations were conducted on the site by URS Corporation (Cuddy 2006), and in 2010, TAA conducted Phase II investigations at the site (Sipe and Smith 2010). The site has not been evaluated in consultation with VDHR, due to the fact that the previous work was for non-Section 106 compliance. The site is located on a wooded ridge toe immediately west of an unnamed tributary of Lenah Run, and approximately 435 m (1,427 ft) south-southwest of where Lenah Run drains into Broad Run. The site boundary was revised during the TAA Phase II investigation, and is approximately 91 m (300 ft) north-south by 76 m (250 ft) east-west (Sipe and Smith 2010) (Figures 5.3.1-12 and 5.3.1-13).

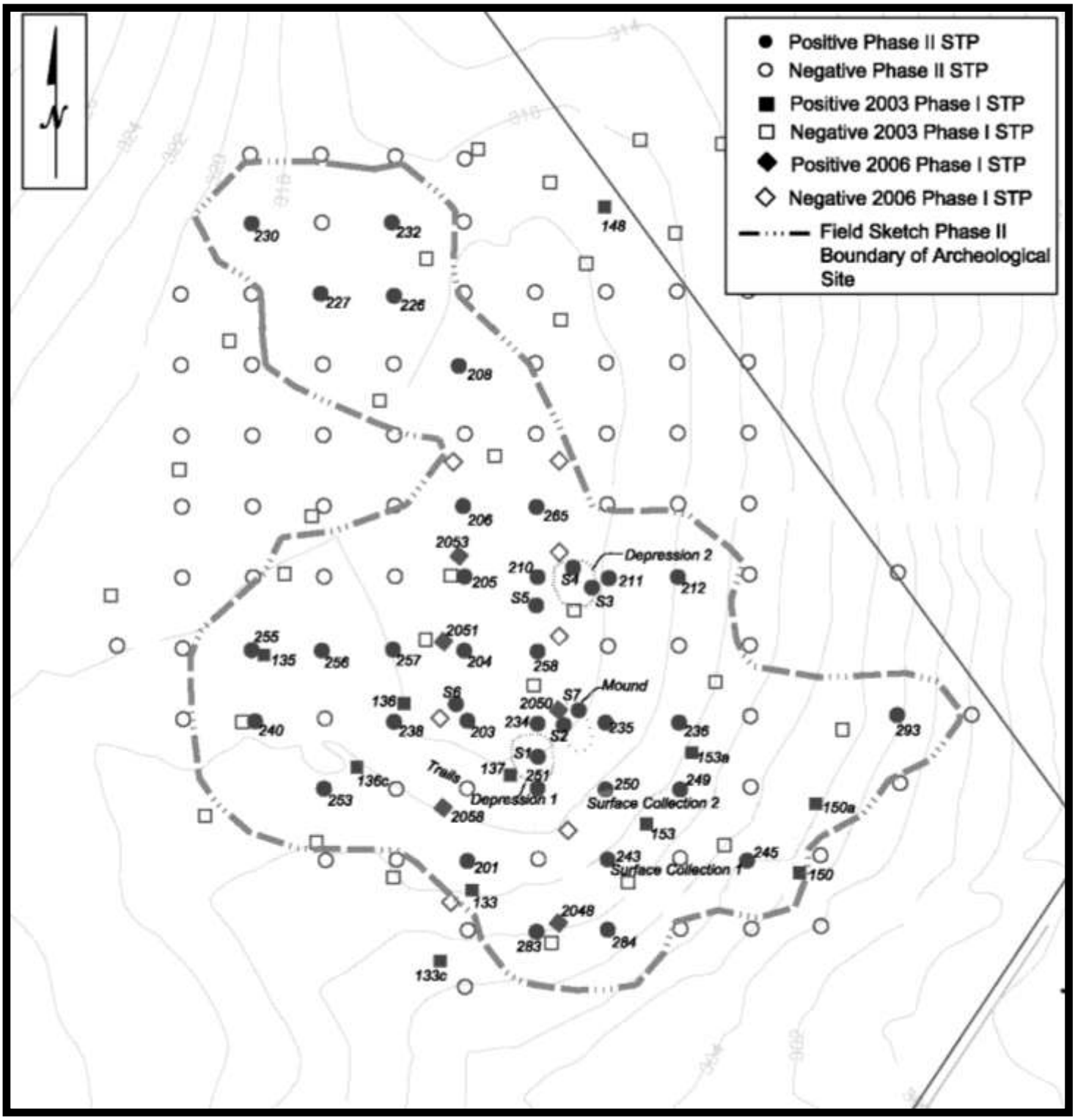

Figure 5.3.1-12: Sketch Map of Site 44LD1003 Showing Shovel Test Locations From 2003 and 2006 Phase I Investigations and 2010 Phase II Investigations (Sipe and Smith 2010).

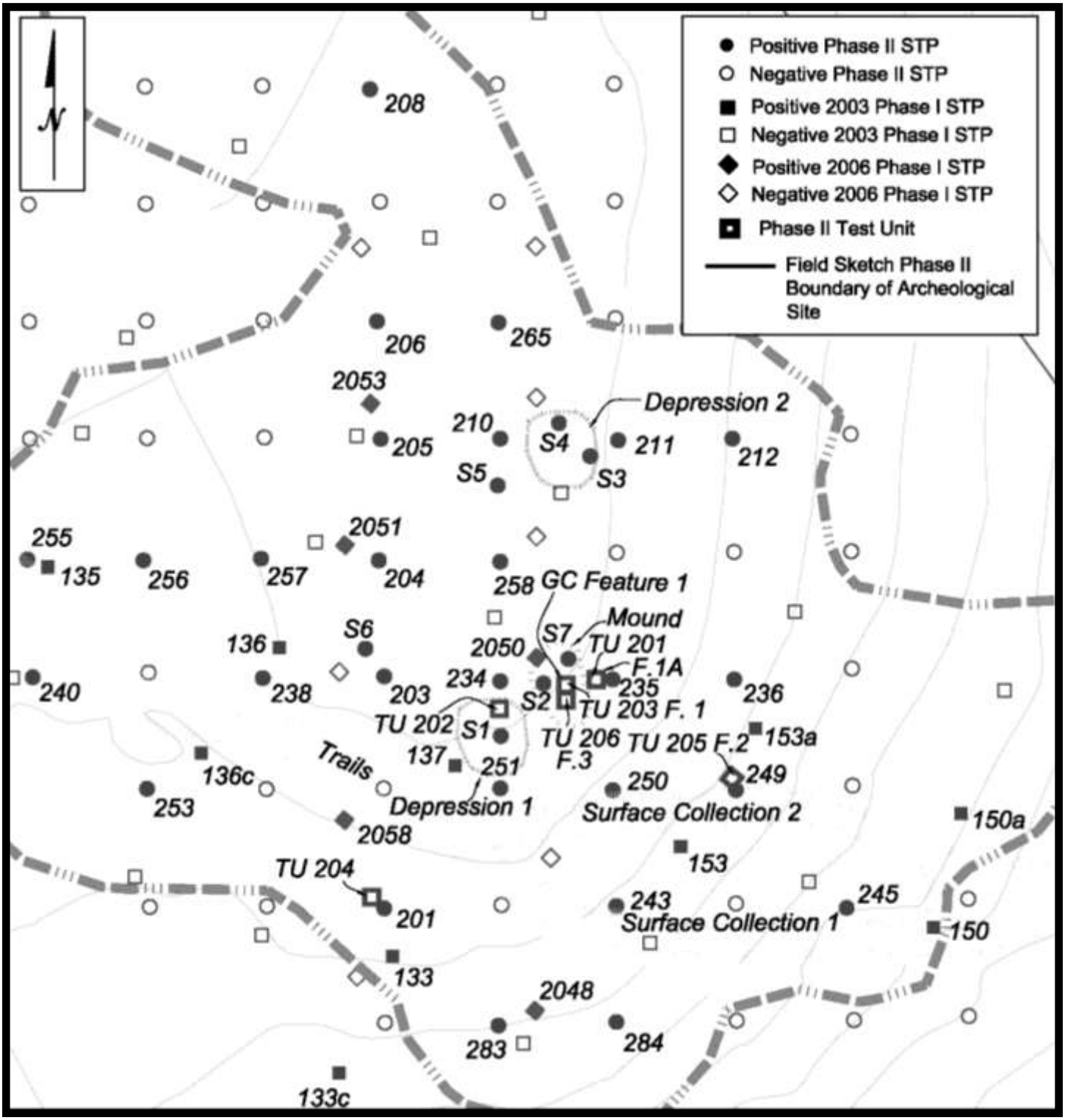

Figure 5.3.1-13: Sketch Map of Site 44LD1003 Showing Test Unit Locations from 2010 Phase II Investigations in Relation to Shovel Tests Locations from 2003, 2006, and 2010 (Sipe and Smith 2010).

The site consists of a mid- to late eighteenth-century through early nineteenth-century domestic component believed to be associated with a tenant dwelling. Site 44LD1003 also includes a prehistoric component comprised of a low density scatter thought to represent a Middle Archaic period temporary camp (Sipe and Smith 2010). The Phase II investigations of 44LD1003 were focused on the historic component of the site. Based on the results of the Phase I survey, no additional work was recommended for the prehistoric component because of low artifact density and the absence of artifacts below the plow zone. The Phase II investigations supported the conclusion that the prehistoric component of the site is not eligible for NRHP (Sipe and Smith 2010).

During the initial archaeological survey in 2003 artifacts were recovered from the ground surface and from positive shovel tests. The historic artifacts recovered during this survey included white ball clay pipe fragments; ceramics such as white salt-glazed stoneware, creamware, and pearlware; glass; and metal such as buttons and a nail. The prehistoric artifacts recovered during this survey included a middle stage quartz biface and a possible Brewerton quartz projectile point (Sipe and Smith 2010). A depression was also observed near the center of the site that was believed to have been from a former structure. The site was interpreted as the remains of a Euro-American tenant dwelling from the late eighteenth to early twentieth centuries. It was recommended that if the site could not be avoided by the proposed development for the Shockey Suburban and Marshall Properties then Phase II investigations should be conducted on the site (Sipe and Smith 2010). By 2004 the area was still not been developed, and URS Corporation conducted a survey of the area for the Arcola assemblage during the summer of that year. The artifacts recovered by URS were similar to those originally recovered by TAA, and included items such as ceramics, glass, and white ball clay pipe fragments, in addition to two fragments of quartz shatter (Cuddy 2006). Cuddy (2006) stated that the findings of URS generally corroborated with those of TAA in 2003. Both Phase I surveys recorded the typical shovel test profile as plow zone (Ap horizon) overlying subsoil (B horizon).

In 2010 the area had still not been developed and TAA was contracted by a land acquisitions company to conduct Phase II investigations on 44LD1003. These investigations included the excavation of six 3-x-3-ft test units (see Figure 5.3.1-13), additional shovel test excavations at

closer intervals, an informal metal detector survey, and documentary research. During the Phase II investigations 98 shovel tests were excavated on the site at an interval of 25 ft (approximately 7.6 m) or less (Sipe and Smith 2010). An examination of Figure 5.3.1-12 shows that approximately 89 shovel tests were excavated within the revised site boundary during the three different archaeological investigations at the site, and of these 53 were positive for cultural material. Numerous sterile shovel tests were also excavated outside of the site boundary.

The placement of the six test units was based on artifact concentrations and soil profile data obtained from the shovel test excavations (see Figure 5.3.1-13). Test Unit 201 contained two fill deposits overlaying subsoil. The artifacts recovered from this test unit came mostly from the upper fill level and included lithics, historic ceramics, container glass, wrought and cut nails, bone, and shell (Sipe and South 2010). Feature 1A (described below) was also documented in this test unit. Test Unit 202 was excavated on the edge of the depression documented during the initial survey, and also had two fill zones atop the subsoil. The upper fill zone contained historic ceramics, glass, and nails, in addition to a modern knife, while the lower fill zone contained relatively few artifacts. Test Unit 203 was located near the center of the site and contained Features 1 and 3 (described below). Test Unit 206 was excavated adjacent to Test Unit 203 and Feature 3 extended into this unit as well. Both of these units also had two fill zones atop subsoil. The artifacts recovered from Test Unit 203 and 206 included historic ceramics, container glass, bone, shell, wrought nails and cut nails, and one prehistoric lithic. The majority of the artifacts were found in the upper fill zone while the majority of the faunal remains were recovered from the lower fill zone (Sipe and Smith 2010). Test Unit 204 was located northwest of Test Unit 201 and had a humic zone over top of a plow zone with subsoil below. The artifacts recovered from this unit included historic ceramics and container glass, as well as sansdstone fragments that may have been associated with building materials. Test Unit 205 contained two fill zones overlying subsoil. Feature 2 (described below) was recorded in this unit. The historic artifacts recovered from this unit appeared to come mostly from the feature, and included historic ceramics; container and window glass; wrought and cut nails; faunal material such as bone; carbonized materials such as charcoal and coal; as well as daub and sandstone. Test Unit 205 also had two chert projectile point fragments identified as Big Sandy Side-Notched (Sipe and Smith 2010).

In addition to the previously recorded concave circular depression thought to be from a former structure (Depression 1), four cultural features were recorded during the Phase II investigation. These included a stone foundation or hearth base (Feature 1) and a possible stone pier (Feature 1A), both thought to represent architectural elements of the no longer extant structure. Artifact analysis indicated that this dwelling was probably log and/or stone, and it was likely destroyed by a fire (Sipe and Smith 2010:127-128). An accumulation of hearth or firebox soils (Feature 3) was also found near Feature 1. These features were located in an area of the site that had not been plowed because of the rubble and debris (Sipe and Smith 2010:128). On the slope just east of Depression 1 was a small pit feature (Feature 2) that had a light distribution of historic artifacts. This pit appeared to be caused by secondary disposal of refuse and was likely not associated with the primary occupation of the dwelling but rather with the dwelling's destruction (Sipe and Smith 128).

Some of the temporally diagnostic artifacts recovered from the Phase II investigations include ceramics such as white salt-glazed stoneware, creamware, pearlware, and whiteware, as well as cut nails and wire nails (Sipe and Smith 2010). The artifact density was described by Sipe and Smith (2010:128) as generally low with a few concentrations such as that found at Feature 2 and on a slope south of Depression 1. The concentration on the slope is believed to have been caused by secondary deposition or soil erosion. Analysis of the temporally diagnostic artifacts along with documentary research suggests that the site was possibly occupied by a tenant James Rightmire from the mid- to late eighteenth century through the early nineteenth century (Sipe and Smith 2010).

During the Phase II investigations the site was documented as having significant disturbance, most likely associated with the destruction of the dwelling or clearing of structural debris. The intact subsurface contexts that were documented also appear to be associated with this destruction and clearing of the dwelling rather than the actual occupation of the site. This disturbance along with limited evidence for identifiable activity areas led the researchers to conclude that the site lacks potential for intra-site comparisons (Sipe and Smith 2010:130). The site also appears to have poor preservation based on the relatively few faunal remains that were recovered; therefore, this site also appeared to have low potential for foodways research.

RECOMMENDATIONS: A revisit to this site during the current survey involved visual inspection, which confirmed that it remains undeveloped and has no new significant disturbance. This site was previously recommended as not eligible for the NRHP by TAA following the Phase II investigation described above (Sipe and Smith 2010). However, this recommendation has not been reviewed by the VDHR. Given the significant disturbance that was well-documented in TAA reporting on 44LD1003, it is recommended that no further work be conducted and that this site lacks the sub-surface integrity to have the potential to provide additional information on the Native American or historic lifeways within this region of Virginia. The site is therefore recommended as not eligible for the NRHP for the purposes of the current project.

SITE NUMBER*:* 44LD1049
SITE TYPE: Late nineteenth- to twentieth-century trash scatter
SOIL TYPE: Ashburn silt loam, 0-7 percent slopes
SITE SIZE: 76 x 61 m (250 x 200 ft)
SELECTED ARTIFACT: N/A
COMMENTS*:* This site abuts the edge of the current APE on west side of Loudoun County Parkway. It was recorded as a surface scatter during a non-Section 106 survey for the Loudoun Chantilly Center and was previously recommended not eligible for the NRHP due to lack of material in 50-ft-interval shovel tests (Outlaw et al. 2003). The material included modern soda bottle, Mason jars, milk glass, and whiteware and could be a secondary deposit. The first shovel test stratum was a brownish-red silty clay suggesting subsoil at the surface. Goode and Traum (2012) found no evidence for this site extending into their APE during the VDOT Dulles Loop-Route 606 project.
RECOMMENDATIONS: Previous recommendations regarding this site appear to be well-supported, and it appears unlikely that this site will yield significant information on twentieth-century settlement of the Northern Piedmont region of Virginia. CCR therefore concurs with the previous recommendation that this site is not eligible for the NRHP.

SITE NUMBER*:* 44LD1122
SITE TYPE: Eighteenth- to nineteenth-century farmstead
SOIL TYPE: Penn silt loam
SITE SIZE: 15 x 30 m (50 x 100 ft***)***
SELECTED ARTIFACT: N/A

***COMMENTS**:* This previously unevaluated site is reported on a VDHR site form and lies along the edge of the northern boundary of the current APE. It was recorded as part of a 2004 non-Section 106 compliance survey for which no report is available. No evidence of the site was found during systematic shovel test transect survey of the current APE. Typically soils at this location were 10-12 cm of a yellowish red (10YR4/6) sandy loam topsoil above a dark reddish brown (10YR3/4) sandy clay subsoil. The soils were eroded and the landform would suggest that the site is to the north outside of the APE.

RECOMMENDATIONS: There was no evidence of the site within the APE but it may survive on the landform to the north. The portion of the site within the current APE would not contribute to any eligibility or be likely to yield important information about the historic period in the Northern Piedmont region of Virginia.

***SITE NUMBER**:* 44LD1123
SITE TYPE: Late eighteenth- to early nineteenth-century domestic
SOIL TYPE: Penn silt loam
SITE SIZE: 150 x 150 m (492 x 429 ft)
SELECTED ARTIFACTS: creamware, pearlware, hand-blown colorless tumbler glass
***COMMENTS**:* This site was identified during a shovel test survey for a non-Section 106 compliance survey in 2004, but a report is not available. It is located on a northeast facing ridge top south of Broad Run along the north side of Evergreen Mills Road, which is on a historic road alignment dating at least back as far as the 1853 (see Figure 2.7-2). There is no indication of a structure at this location on the historic map of the area. The current DSS form indicates that seventeen artifacts were recovered during the initial 2004 survey, and an additional five were recovered when CCR revisited the site for systematic shovel testing as part of the current survey (Figures 5.1.1-14 and 5.3.1-15). All artifacts were recovered from plow zone contexts in two positive shovel tests, and there were no subsurface features of strata noted. The artifacts include creamware (n=2), pearlware (n=1), and hand-blown tumbler glass (n=2), with the creamware dating as early as the late eighteenth century. Like most of the surrounding areas the soils at this site have suffered significant erosion from prior agricultural use. A typical soil profile at this site was 15 to 18 cm of a brown (7.5YR4/4) silty clay loam plow zone above a light reddish brown (5YR6/4) slity clay subsoil.

RECOMMENDATIONS: Due to significant erosion and the absence of any buried strata or discernible artifact patterning, this site is unlikely to yield important information about the late

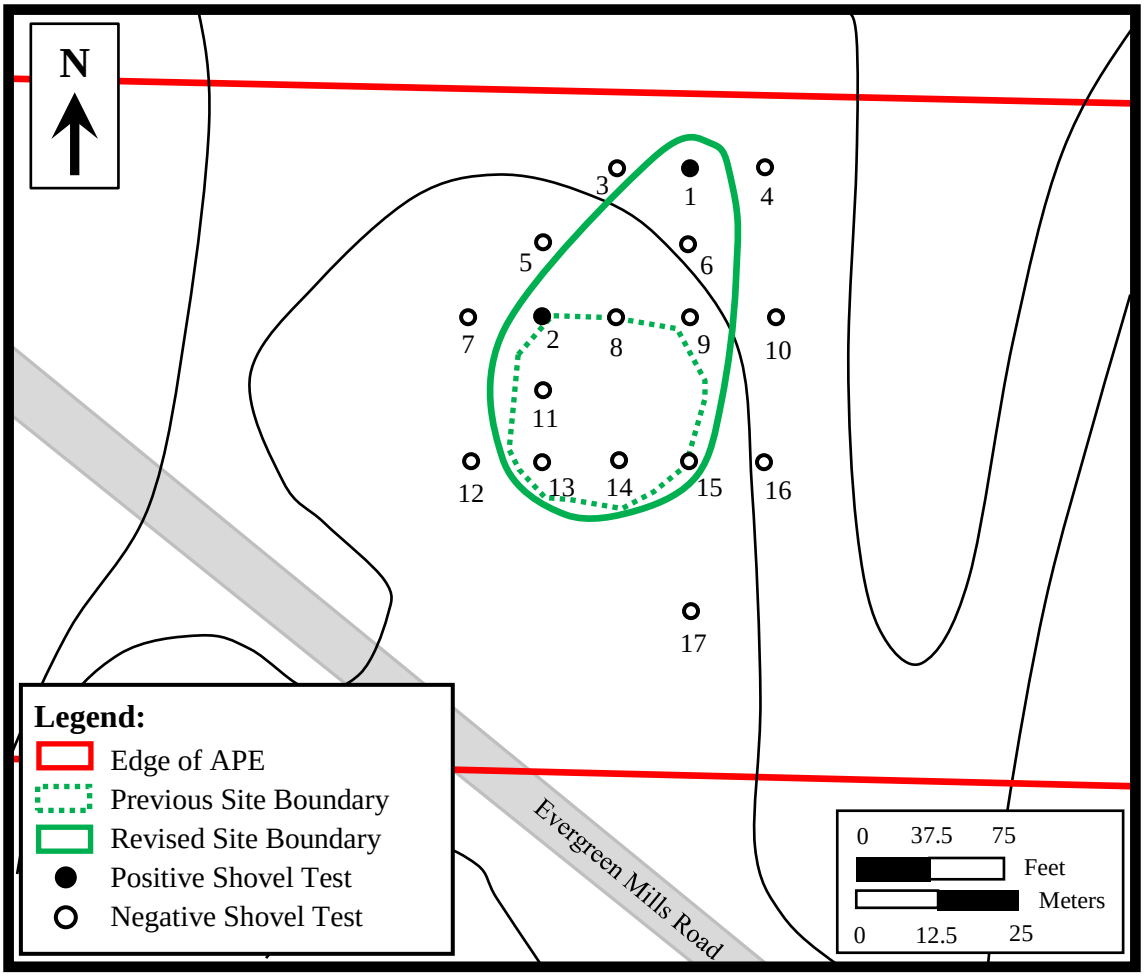

Figure 5.3.1-14: Site 44LD1123, Sketch Map Showing Site Boundary and Shovel Test Locations.

Figure 5.3.1-15: Site 44LD1123, General View of Site, Looking North.

eighteenth- to nineteenth-century settlement in the Northern Piedmont region of Virginia and is recommended as not eligible for the NRHP.

***SITE NUMBER**:* 44LD1270
SITE TYPE: Late eighteenth- to nineteenth-century domestic
SOIL TYPE: Sycoline-Kelly complex, 2-7 percent slopes
SITE SIZE: 106 x 91 m (350 x 300ft)
SELECTED ARTIFACTS: olive green case bottle glass, pearlware, whiteware, granite china, machine made container glass
***COMMENTS**:* Previously recommended as not eligible during a non-Section 106 compliance survey (CRI 2005) due to lack of integrity, and attributed do demolition of an earlier house, this site is significantly disturbed by the demolition of a later twentieth-century house and pool. Systematic transect shovel testing during the current survey yielded typical soil profiles with 16 to 20 cm of a dark yellowish brown (10YR4/4) silty clay loam above a yellowish brown (10YR5/8) silty clay subsoil. Twenty-four artifacts were recovered from three positive shovel tests, all of which were in Zone 1, which was probably a plow zone prior to being part of a twentieth-house area (Figures 5.3.1-16 and 5.3.1-17). The material is similar to that collected by CRI (2005) and included olive green bottle glass, pearlware, whiteware, granite china, and machine-made glass, with the pearlware supporting the late eighteenth century beginning date for the site. Earlier and later material was mixed in the Zone 1 context.
RECOMMENDATIONS: No intact strata were recorded during the recent survey and the eighteenth-century artifacts were all from contexts mixed with later material such as machine-made container glass. This site has very little potential to yield important information about late eighteenth- to nineteenth-century settlement in the Northern Piedmont region of Virginia and is recommended as not eligible for the NRHP.

***SITE NUMBER**:* 44LD1280
SITE TYPE: Mid-nineteenth century unfinished railroad, branch of Manassas Gap Rail Line
SOIL TYPE: Penn-Calverton-Croton association
SITE SIZE: 23 x 730 m (75 x 2400 ft)
SELECTED ARTIFACT: N/A
***COMMENTS**:* This site represents a 2,300-ft section of an unfinished portion of the Manassas Gap Railroad bed that was being constructed prior to the Civil War. Construction ceased before at the start of the war in 1857 (Johnson 2004). The site was previously recommended as not eligible during a non-Section 106 compliance survey that noted the presence of a trash-filled cut

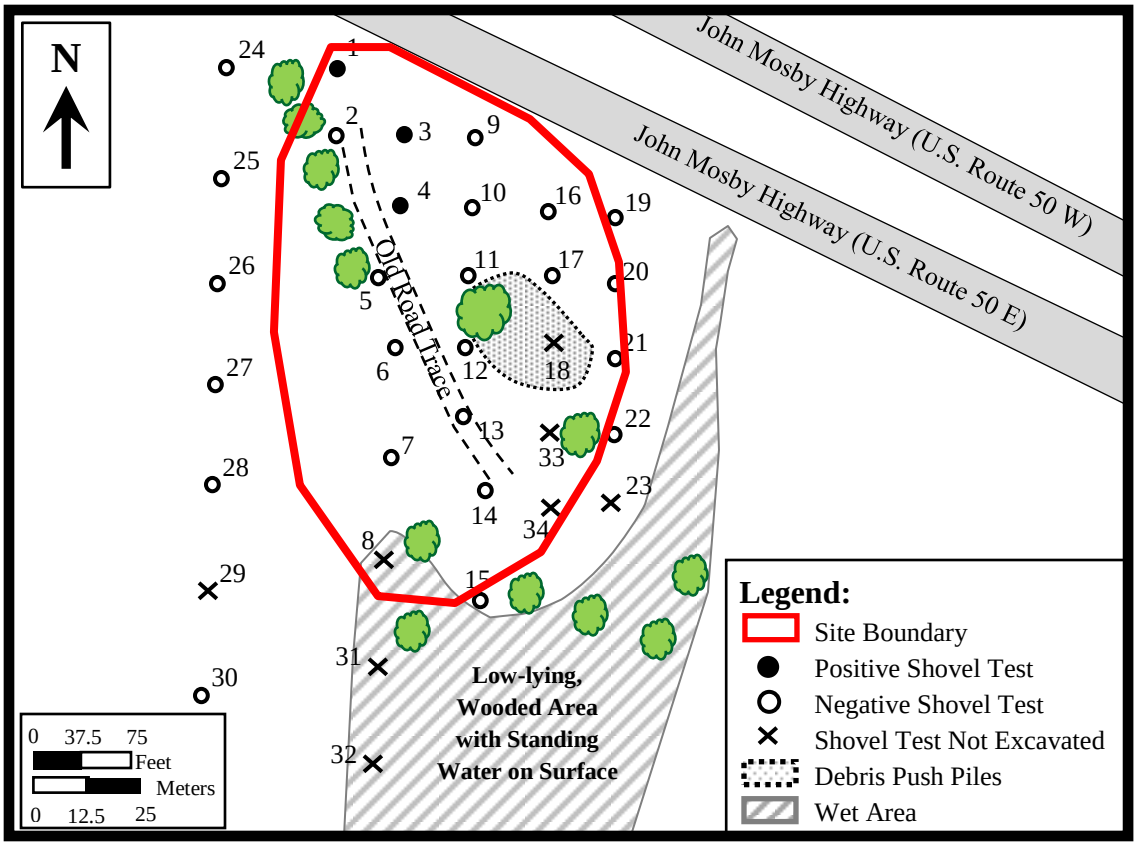

Figure 5.3.1-16: Site 44LD1270, Sketch Map Showing Site Boundary and Shovel Test Locations.

Figure 5.3.1-17: Site 44LD1270, View of Road Trace, Looking South.

(Cuddy 2006). The cut referenced by Cuddy (2006), as well as some built up sections, are still visible.

RECOMMENDATIONS: This site represents the cuts and bed sections for a section of railroad bed that was never completed and lacks additional features. The portion of this unfinished railroad that is in the current APE lacks association with significant historic events or engineering significance and would not contribute any NRHP eligibility that may be established for the resource in other areas of its alignment.

SITE NUMBER*:* 44LD1355
SITE TYPE: Early twentieth-century dwelling
SOIL TYPE: Ashburn silt loam
SITE SIZE: 15 x 30 m (50 x 100 ft)
SELECTED ARTIFACT: N/A
COMMENTS*:* This site of an early twentieth-century is on the northern edge of the APE along the north side of John Mosby Highway. It was recorded as part of a 2006 non-Section 106 compliance survey for which a report is unavailable; the current DSS form indicates recovery of wire mails, bottle glass, and refined white earthenware. The portion of the site within the APE has been disturbed by gas and water lines. No additional shovel tests were excavated at this site.
RECOMMENDATIONS: Any remnant portion of the site within the current APE is heavily disturbed and would not contribute to any NRHP eligibility for areas extending north outside the APE.

SITE NUMBER*:* 44LD1357
SITE TYPE: Twentieth-century trash scatter
SOIL TYPE: Panorama silt loam, 2 to 7 percent slopes
SITE SIZE:
SELECTED ARTIFACTS: N/A
COMMENTS*:* This site is located in an agricultural field that has been used for sod farming. It was recorded as part of a 2006 non-Section 106 compliance survey for which a report is unavailable. The DSS form, however, indicates recovery of whiteware, glass, a possible pearlware fragment, and one brick fragment. Only a small portion of the site's recorded boundary, in the southwest corner, falls within the current APE. There were no artifacts found during the course of systematic transect shovel testing during the current survey. The soils at this site location were typically 12 to 15 cm of a brown (7.5YR4/4) silty clay loam plow zone above a light reddish brown (5YR6/4) silty clay subsoil. The site is located in an active turf

farm, and the current farmer suggested that the artifacts from the initial survey could represent Washington, D.C., restaurant waste included in organic fertilizers added to the field.

RECOMMENDATIONS: No artifacts were recovered during the current survey in the small portion of the site that falls within the current APE. This area is heavily deflated by sod farming, and it would appear that the portion of the site in the APE would not contribute to any NRHP eligibility that the site may have based on areas to the northeast.

SITE NUMBER*:* 44LD1453
SITE TYPE: Mid-twentieth century farmstead
SOIL TYPE: Kelly silt loam
SITE SIZE: 88 x 114 m (290 x 375ft)
SELECTED ARTIFACTS: N/A
COMMENTS*:* This site was recorded during a 2007 non-Section 106 compliance survey for which a report is currently unavailable. According the current DSS form, the site had no integrity although it was located in a wooded lot. It had yielded porcelain, asphalt, colorless glass, drainage pipes, rubber fragments, and a balustrade fragment. The bulk of the site, including the former location of a related farmhouse is outside of the current APE. The area has been used as a modern trash dump, so it is unclear how much of the modern surface scatter relates to the related farmhouse or represents unrelated dumping. Systematic transect shovel testing yielded no historic cultural material. A typical soil profile in this area had 7 to 11 cm of a brown (10YR5/4) silty clay topsoil above a light yellowish brown (10YR6/4) silty clay subsoil.

RECOMMENDATIONS: The portion of the site within the APE would not appear to contribute significant information on twentieth century settlement of the Northern Piedmont region of Virginia and would not contribute to any NRHP eligibility based on areas outside the APE.

SITE NUMBER*:* 44LD1464
SITE TYPE: Nineteenth-century trash scatter
SOIL TYPE: Sycoline kelly complex
SITE SIZE: 15 x 14 m (50 x 50 ft)
SELECTED ARTIFACTS: N/A
COMMENTS*:* This site was recorded during a 2005 non-Section 106 compliance survey for which a report is currently unavailable. According the current DSS form, the site was defined by a single positive shovel test in disturbed soils, which yielded stoneare, whiteware, and redware.

The location of the site is currently within the limits of a large construction site and likely nothing remains.

RECOMMENDATIONS: The site is disturbed and essentially destroyed, and does not appear to have the potential to contribute significant information on the nineteenth-century settlement in the Northern Piedmont region of Virginia. It is therefore recommended as not eligible for the NRHP.

SITE NUMBER*:* 44LD1545
SITE TYPE: Late Archaic/Early Woodland Native American and nineteenth- to twentieth-century domestic
SOIL TYPE: Dulles silt loam; Albano silt loam
SITE SIZE: 70 x 44 m (230 x 145 ft)
SELECTED ARTIFACTS: N/A
COMMENTS*:* This site was recorded during a 2009 non-Section 106 compliance survey conducted by Dovetail Cultural Resources, Inc. Because the project was halted, a report was never finalized. The current DSS form notes that the site has low potential; the Native American and historic material included quartz debitage, a Bare Island point, whiteware, and stoneware. A small portion of the site falls within the current APE and the rest lies to the north. The portion in the APE has been disturbed by water and gas line construction. No additional shovel tests excavated at this site location.

RECOMMENDATIONS: The portion of the site within the APE would not appear to contribute significant information on precontact or historic settlement of the Northern Piedmont region of Virginia and would not contribute to any NRHP eligibility based on areas outside the APE.

5.4 NEWLY RECORDED SITES

Four new sites were recorded within the APE as a result of the current survey. These include two nineteenth- or twentieth-century farmsteads (44LD1634 and 44LD1635), a twentieth-century domestic site (44LD1633), and a mid-twentieth century trash dump or refuse pile (44LD1636). All four are recommended as not eligible for NRHP.

SITE NUMBER: 44LD1633
SITE TYPE: Mid-twentieth-century dwelling
SOIL TYPE: Dulles silt loam, 0 to 2 percent slopes
SITE SIZE: 30 x 30 m (100 x 100 ft)
SELECTED ARTIFACTS: twentieth-century container glass, cinder blocks, machine made bricks
SITE DESCRIPTION: The site is located on an upland flat along the north side of John Mosby Highway approximately 200 m east of the intersection with Racefield Lane. A structure is extant at this location on a 1949 aerial photograph (USGS EarthExplorer 2013b; Figure 5.4.1-1). It is no longer visible on a 1981 aerial photograph of Loudoun County. There is a structure indicated on USGS quads from as early as 1944. Evidence of this structure is present on the site in the form of brick piles and cinderblocks. The piers are no longer in situ but concentrations of bricks and blocks are present. There is no evidence to suggest the structure had a fireplace or hearth. None of the shovel tests in the vicinity of the architectural debris were positive (Figures 5.4.1-2 and 5.4.1-3). A typical soil profile had 15 to 20 cm of a dark yellowish brown (10YR 4/4) topsoil over a dark yellowish brown (10YR 4/6) subsoil. The site dimensions were established by the extent of a scatter of refuse, both architectural and household-related, within this wooded area. Most of the refuse, consisting of concentrations of cans, bottles, appliance parts, and car parts, appears to be the product of dumping rather than relating to the structure. Given the superposition of the household refuse in relation to the architectural debris, it is clear the site of this mid-twentieth century dwelling, that is no longer extant, has also been used as a trash dump site for trash not related to the occupancy.

RECOMMENDATIONS: The architectural remains at site 44LD1633 are minimal and disturbed. Shovel testing at the site recorded no intact subsurface strata or features. With the lack of subsurface features and the significant amount of post-occupation dumping at the site, there would be no way to separate the material dating to the occupancy of the site from later depositions. As a result this site has little research value and would not contribute significant information related to twentieth-century settlement of the Northern Piedmont region of Virginia. The site is recommended as not eligible for the NRHP.

Figure 5.4.1-1: Site 44LD1633 shown on 1949 Aerial Photograph (USGS Explorer 2013b).

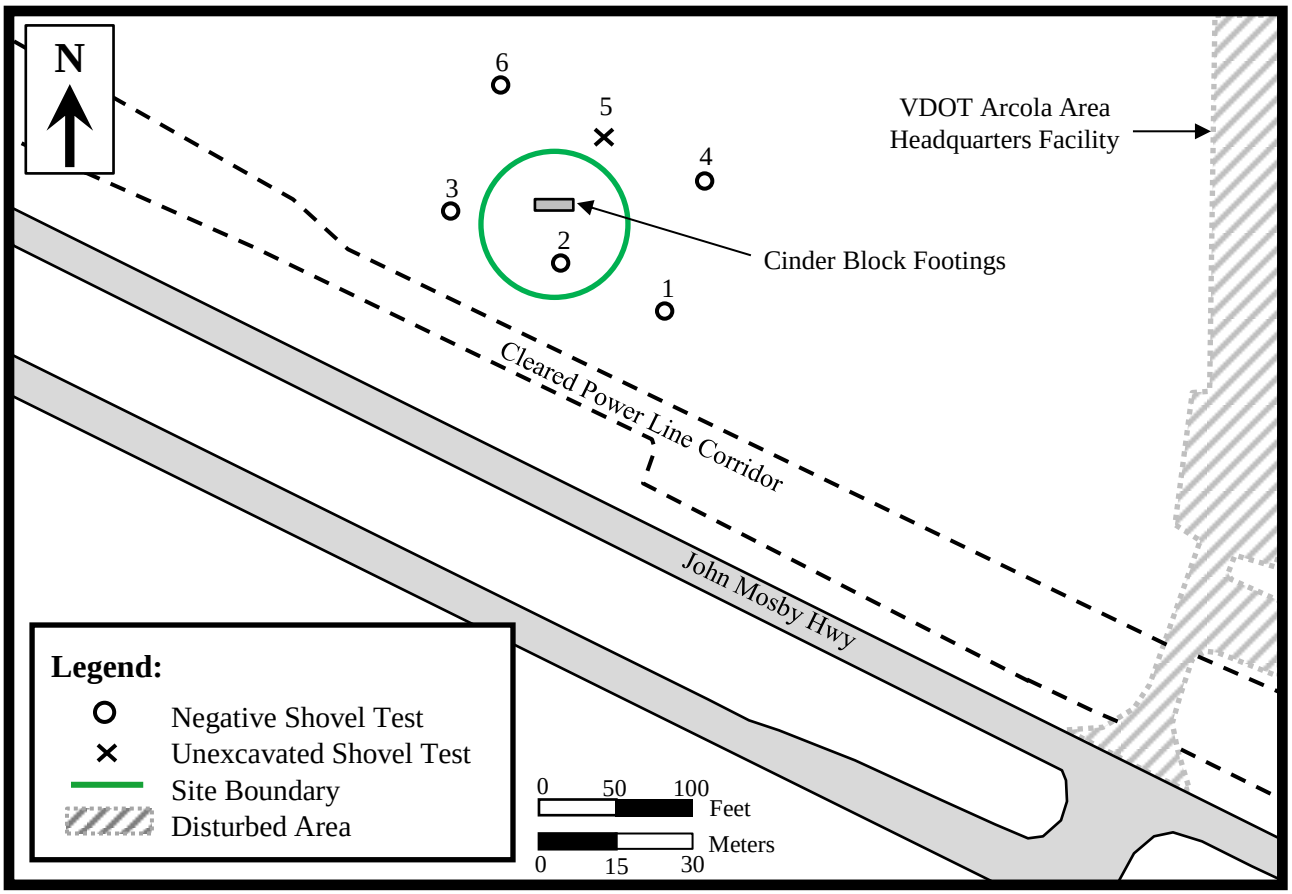

Figure 5.4.1-2: Site 44LD1633, Sketch Map Showing Site Boundary and Shovel Test Locations.

Figure 5.4.1-3: Site 44LD1633, View of Cinder Block Footings, Looking North.

SITE NUMBER: 44LD1634
SITE TYPE: Nineteenth- to mid-twentieth-century farmstead
SOIL TYPE: Penn silt loam; Udorthents
SITE SIZE: 46 x 61 m (150 x 200 ft)
SELECTED ARTIFACTS: pale/light-colored creamware, cut nails, milk glass, brown and aqua machine-pressed container glass, colorless container glass, manganese-solarized container glass
SITE DESCRIPTION: Site 44LD1634 is located on an upland flat approximately 335 m (1,100 ft) east of Cabin Branch and 270 m (890 ft) southeast of Old Ox Road (Route 606) (Figure # and #). The site was defined by ten positive shovel tests, a surface scatter of debris, and a concrete block wellhouse footing (Figures 5.4.1-4 and 5.4.1-5). All of the shovel tests had two soil zones. Typically there was a very dark grayish brown (10YR 3/2) silty loam topsoil measuring between seven and 22 cm thick, atop a brownish yellow (10YR 6/8) silty clay subsoil. None of the shovel tests, negative or positive had more than the topsoil/subsoil profile. The surface material was all twentieth-century refuse, likely associated with a razing of the farmstead after the acquisition of the property by the Civil Aeronautics Administration (CAA) for the construction of Dulles Airport (Dulles Area Historical Database 2011). The farmstead is visible on a 1957 aerial but is no longer present in the 1963 aerial (Historic Aerials 2011). All of the artifacts recovered from shovel tests came from Zone 1. Thirty of the forty artifacts recovered from the shovel tests were either architectural (n=12), such as cut nails and window glass or twentieth-century container glass (n=18). Of the remaining there were five small sherds of pale, light-colored creamware, recovered from Shovel Test 1 and two sherds of red-bodied coarseware (one each from Shovel Test 2 and 8). Even though creamware has a Terminus Post Quem (TPQ) of 1762, the later the creamware is, the paler it is. This is a product of improving glaze refinement over time. With the later creamware and the lack of other eighteenth century material coupled with the cut nails that post-date 1805, it would be difficult to date the site earlier than the early nineteenth century.
RECOMMENDATIONS: Given the fact that the farmstead was razed, causing a significant disturbance, and the lack of evidence for buried strata, extensive deposits, or intact features, the site is unlikely to yield important information on rural lifeways in the northern Piedmont of Virginia in the nineteenth and twentieth century. Therefore 44LD1634 is recommended as not eligible for the NRHP.

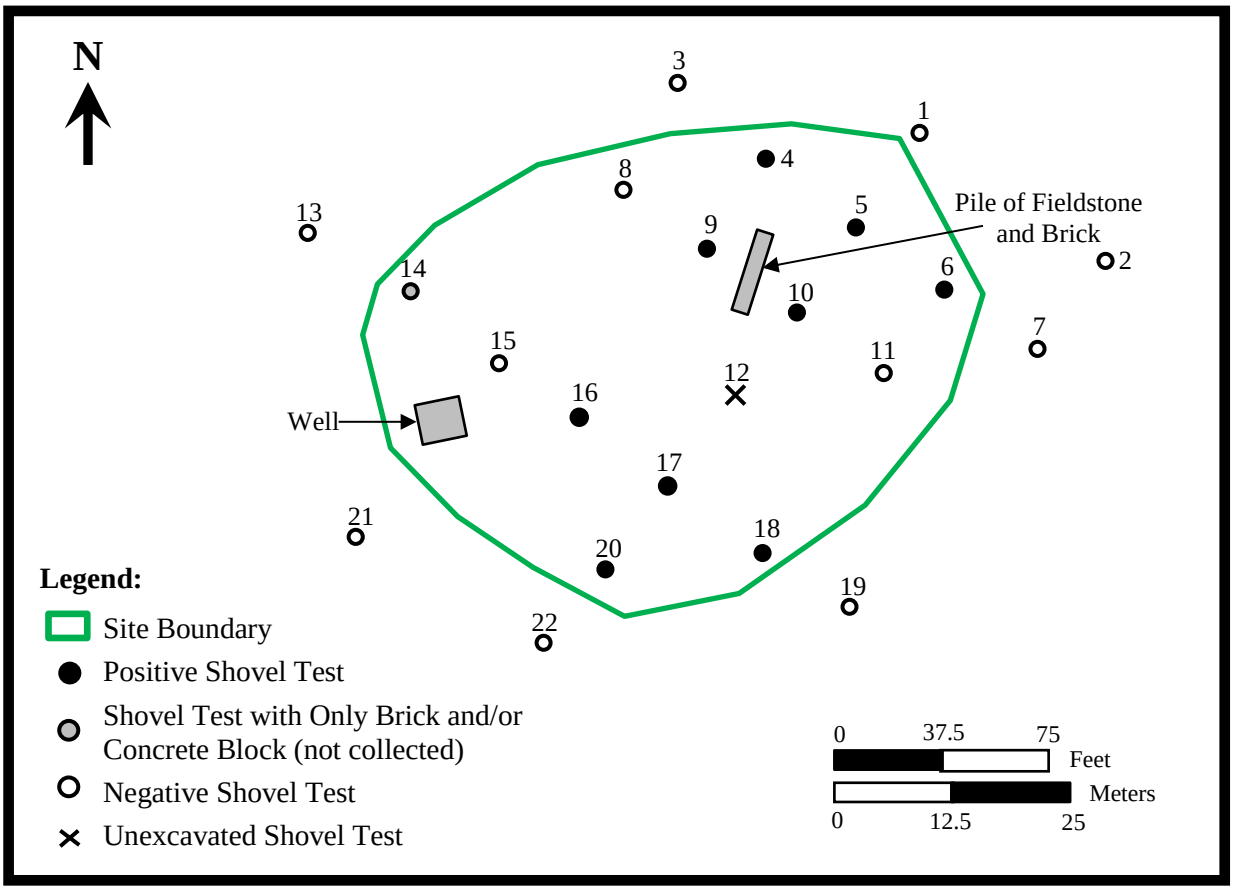

Figure 5.4.1-4: Site 44LD1634, Sketch Map Showing Site Boundary and Shovel Test Locations.

Figure 5.4.1-5: Site 44LD1634, General View, Looking North-Northeast.

SITE NUMBER: 44LD1635
SITE TYPE: Nineteenth- to mid-twentieth-century farmstead
SOIL TYPE: Readington silt loam, undulating phases; Udorthents
SITE SIZE: 33 x 46 m (100 x 150 ft)
SELECTED ARTIFACTS: pale/light-colored creamware, window glass, cut nail, aqua container glass, lead-glazed red-bodied coarseware, porcelain bathroom tile, pig rib bone
SITE DESCRIPTION: Site 44LD1635 is located on an upland flat along the west side of an old gravel road approximately 100 m (330 ft) north of Old Ox Road (Route 606) and 525 m east of the intersection of Old Ox Road and Arcola Road. The site was defined by six positive shovel tests and some destruction debris on the surface (Figures 5.4.1-6 and 5.4.1-7). All of the shovel tests had two soil zones. Typically there was a reddish brown (5YR 4/3) silty loam topsoil, measuring between four and 23 cm thick, atop a dark yellowish brown (10YR 4/4) silty clay subsoil. None of the shovel tests, negative or positive had more than the topsoil/subsoil profile. Pale, light-colored creamware and the lead-glazed redware both likely date to the nineteenth century, while the rest of the material is from later into the twentieth century. The diagnostic architectural debris includes molded bricks and concrete blocks and was all twentieth-century refuse likely associated with a ca. 1840 farmstead that was removed after the acquisition of the property by the Civil Aeronautics Administration (CAA) for the construction of Dulles Airport (Dulles Area Historical Database 2011). This farmhouse was moved to an alternate location further east on Old Ox Road during this period. All seven artifacts recovered from the shovel testing came from Zone 1. There was a single sherd of creamware and whiteware, a wire nail, a cut nail, a single sherd of lead-glazed redware, and with only Shovel Test 2 having more than a single artifact (n=2), a sherd of undecorated porcelain and a partial pig rib bone.
RECOMMENDATIONS: The significant disturbance evident at the site is likely from the relocation of the ca. 1840 dwelling and razing of the associated outbuildings from the site. The lack of evidence for buried strata, extensive deposits or intact features, would make it very difficult to isolate the different periods of occupation at the site, so it is unlikely to yield important information on rural life ways in the northern Piedmont of Virginia in the nineteenth and twentieth centuries. Therefore 44LD1635 is recommended as not eligible for the NRHP.

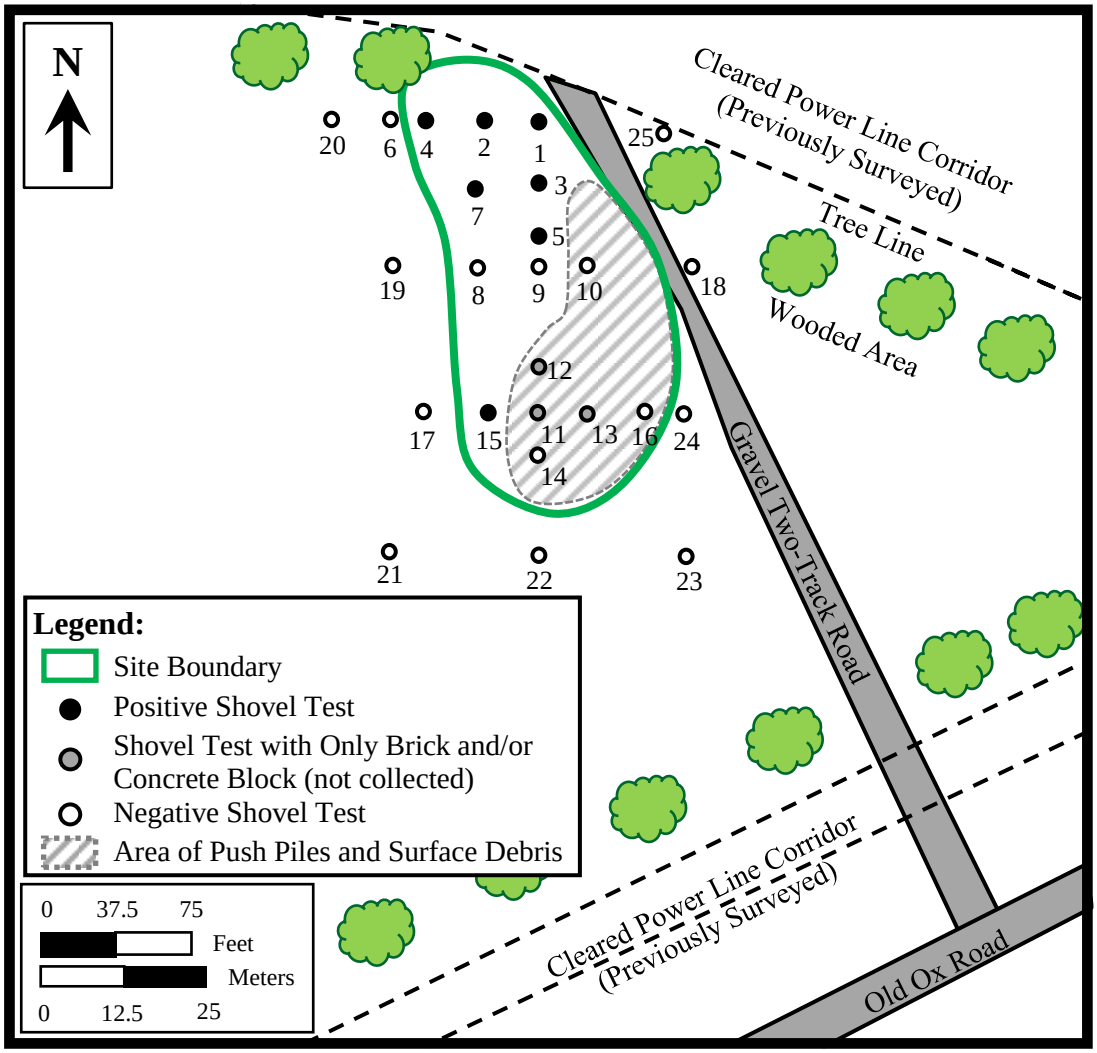

Figure 5.4.1-6: Site 44LD1635, Sketch Map Showing Site Boundary and Shovel Test Locations.

Figure 5.4.1-7: Site 44LD1635, View of Area with Push Piles, Looking South.

***SITE NUMBER**:* 44LD1636
SITE TYPE: Mid-twentieth-century trash dump
SOIL TYPE: Catlett stony silt loam, undulating phase
SITE SIZE: 25 x 25 m (82 x82 ft)
SELECTED ARTIFACTS: Ball canning jar, Seven-Up bottle, Coca-Cola bottle, medicine bottles, Albany-slipped stoneware.
***SITE DESCRIPTION**:* Site 44LD1636 is located in a low lying wooded area approximately 350 m northeast of the intersection of John Mosby Highway and Loudoun County Parkway within the secure area of Washington Dulles International Airport (Figures 5.4.1-8 and 5.4.1-9). The site is comprised of a surface scatter of mid-twentieth-century material in a low swampy area. The material includes household refuse such as cans, bottles, and jars. The concentration of the trash dump measured roughly 3 m (10 ft) in diameter with a lighter scatter in a diameter of 25 m (82 ft) around it. In addition to the surface scatter there were two positive shovel tests. Shovel Test 1 had 18 cm of a dark grayish (10YR4/2) brown silty clay loam above a very dark brown clay loam subsoil. Many of the surrounding shovel tests recorded hydric soils. There were two small shards of machine made colorless container glass recovered from Zone 1 of Shovel Test 1. The second positive shovel test contained soil profiles similar to Shovel Test 1. It produced a piece of iron fence hardware that was almost certainly from a nearby fence line rather than having any association with the trash scatter. None of the radial shovel tests around the two positives contained cultural material. Given the wet conditions of the soil it is unlikely that there was ever an occupation at this location.
RECOMMENDATIONS: Site 44LD1636 represents a deposit of mid-twentieth-century material from an unknown household likely in the vicinity but outside of the current APE. Without a cultural context for the analysis of post-industrial material, the assemblage would be unlikely to yield important information about the past. This site is recommended as not eligible for the NRHP.

5.5 NEWLY RECORDED ARTIFACT LOCATIONS

***ARTIFACT LOCATION*:** 184-E1
ARTIFACT(S): Union military button
DESCRIPTION: This location (see Figure 5.2-1) included one copper alloy coat button manufactured by the Scoville Manufacturing Company of Waterbury, Connecticut. The button was in an advanced stage of decay when found but was complete enough to identify as a general

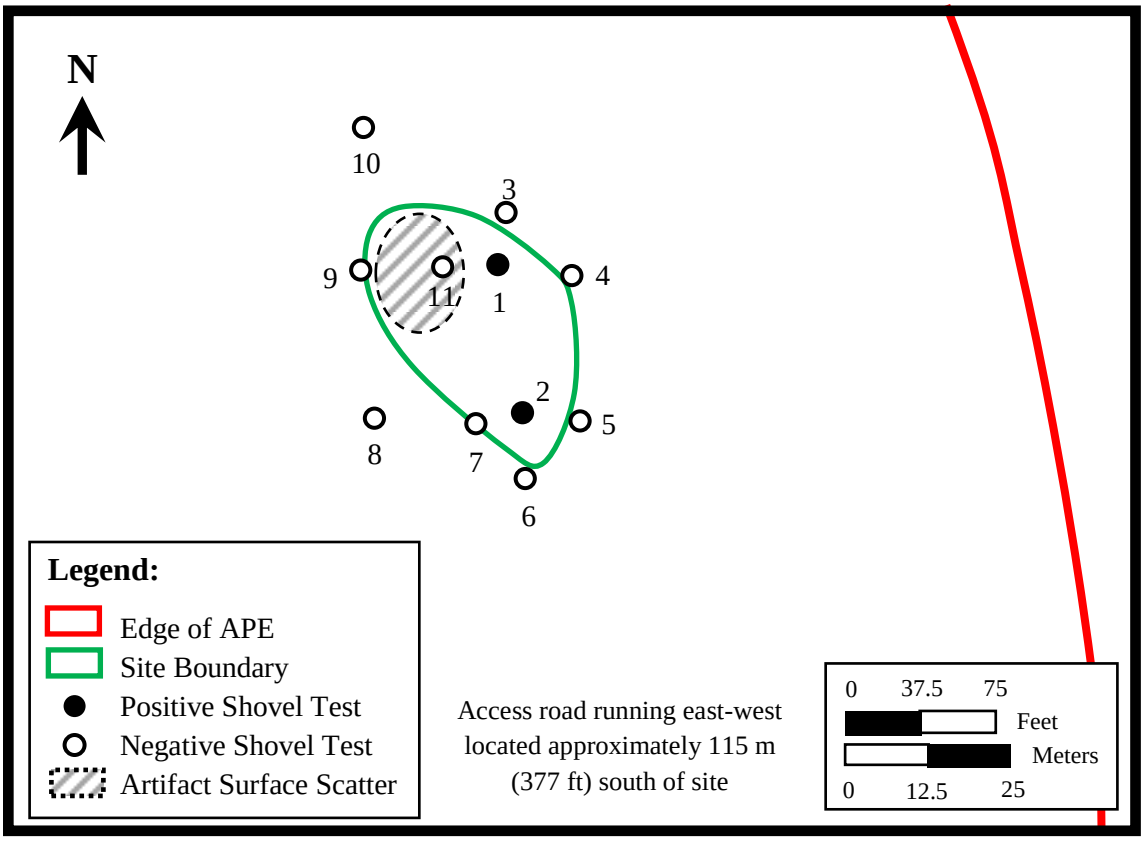

Figure 5.4.1-8: Site 44LD1636, Sketch Map Showing Site Boundary and Shovel Test Locations.

Figure 5.4.1-9: Site 44LD1636, View of Site, Looking North.

service button type GEN215 A.20 (Tice 1997:143) manufactured between the 1840s and 1865. All the surrounding radial shovel tests were all negative, and there is no reason to believe this button represents anything more than incidental loss.

RECOMMENDATIONS: This artifact location lacks sufficient context for further interpretation and is unlikely to yield additional significant information on historic occupation of the region; it is recommended as not eligible for the NRHP.

ARTIFACT LOCATION: 184-I1
ARTIFACT(S): Stone adze
DESCRIPTION: This location (see Figure 5.2-1) includes a surface find of a adze roughly shaped out of dense sandstone with a combination of flaking and grinding. Its maximum dimensions are 105 x 7 cm. It was recovered in a low wet area, and none of the shovel tests in the vicinity were positive.

RECOMMENDATIONS: This artifact location lacks sufficient context for further interpretation and is unlikely to yield additional significant information on historic occupation of the region; it is recommended as not eligible for the NRHP.

Table 5.1-1: Previously Recorded Sites and Newly Recorded Sites (Sites in Boldface) in the Current Archaeological APE.

Site #	Study Corridor	Site Type	NRHP Status or Previous Recommendation	Current Conditions Affecting Site NRHP Status	CCR Recommendation	Best Available Source(s) of Information
44LD0168	2 & 3	Unattributed Native American Lithic Surface Scatter With Stemmed Points	VDHR Potentially Eligible 2006, Based on 1980s Surface Scatter	Present site condition is heavily eroded and portion of site has fill. No cultural material recovered in shovel tests during current survey.	Not Eligible	1981 VDHR Site Form; Butler et al. (2006)
44LD0171	2 & 3	Woodland Period Native American Surface Scatter	Unevaluated	No cultural material recovered during shovel testing within current APE; portion of the site has fill. Large portion of site is outside APE, portion within APE would not contribute to any eligibility.	Portion of site in APE would not contribute to eligibility	1981 VDHR Site Form
44LD0172	2 & 3	Late Archaic Native American Surface Scatter; 19th/20th Century Surface Trash Scatter	VDHR Potentially Eligible 2006, Based on 1981 Surface Scatters	Present site condition is heavily eroded. No cultural material recovered in shovel tests during current survey.	Not Eligible	1981 VDHR Site Form; Goode et al. 2003); Butler et al. (2006)
44LD0173	2	Unattributed Native American Lithic Surface Scatter/20th Century Outbuilding Footings	VDHR Potentially Eligible 2006, Based on 1981 Surface Scatter	Present site condition is heavily eroded. No cultural material recovered in shovel tests during current survey.	Not Eligible	1981 VDHR Site Form; Goode et al. 2003); Butler et al. (2006)
44LD0174	2	Unattributed Native American Lithic Surface Scatter	VDHR Potentially Eligible 2006, Based on 1981 Surface Scatter	Present site condition is heavily eroded. No cultural material recovered in shovel tests during current survey.	Not Eligible	1981 VDHR Site Form; Butler et al. (2006)
44LD0722	3	20th Century Dwelling	VDHR Not Eligible 2002	Site has been built on.	n/a	Gardner and Hurst (2000)
44LD0968	2 & 3	Unattributed Native American, 19th to 20th Century Trash Scatter	Unevaluated	Previously considered not eligible during non-Section 106 survey due to low artifact density and disturbance (Goode et al. 2003); portions of site currently disturbed and no cultural material recovered in shovel tests during current survey. Western portion of site is outside APE, portion within APE would not contribute to any eligibility.	Portion of site in APE would not contribute to eligibility	Goode et al. (2003); Goode and Traum (2012)

44LD0969	2 & 3	Unattributed Native American Lithic Surface Scatter	VDHR Potentially Eligible 2006	Previously considered not eligible during non-Section 106 survey due to lack of artifacts in shovel tests (Goode et al. 2003). Present site condition is heavily eroded and no cultural material recovered in shovel tests during current survey.	Not Eligible	Goode et al. (2003); Goode and Traum (2012)
44LD0970	2 & 3	Late Archaic Native American Lithic Scatter	VDHR Potentially Eligible 2006	Previously considered not eligible during non-Section 106 survey due to heavy deflation and plowing (Goode et al. 2003). Present site condition is heavily eroded and no cultural material recovered in shovel tests during current survey.	Not Eligible	Goode et al. (2003)
44LD1003	2	Middle Archaic Native American; 18th to 19th Century Dwelling	Unevaluated	Underwent a professional Phase II evaluation for non-Section 106 in 2010 and was recommended not eligible with concurrence from Loudoun County archaeologist. CCR concurs with the previous recommendation based on review of report.	Not Eligible	Sipe and Smith (2010)
44LD1049	3	Late 19th/20th Century Trash Surface Scatter	Unevaluated	Previously considered not eligible during non-Section 106 survey due to lack of material in shovel tests (Outlaw et al. 2003), with which CCR concurs. Site is adjacent to project area but does not appear to extend within the current APE based on previous survey by (Goode et al. 2012)	Not Eligible	VDHR Site Form; Outlaw et al. (2003); Goode and Traum (2012)
44LD1122	2	18th /19th Century Farmstead	Unevaluated	VDHR site form suggests low potential; shovel testing and documentation of disturbance indicates during the current survey indicate it does not survive within the current APE. Northern portion of site is outside APE, portion within APE would not contribute to any eligibility	Portion of site in APE would not contribute to eligibility	VDHR Site Form

44LD1123	2	Late 18th/19th Century Farmstead	Unevaluated	Present site condition is heavily eroded. No intact strata or artifact patterning found during shovel testing.	Not Eligible	VDHR Site Form
44LD1159	3	Early 19th Century Trash Scatter	VDHR Not Eligible 2006		n/a	VDHR Site Form; Jirikowic et al. (2004)
44LD1270	3	Late 18th/19th Century Dwelling	Unevaluated	Previously considered not eligible during non-Section 106 survey due to lack of integrity (CRI. 2005), current shovel testing indicates that site is disturbed with no evidence of intact subsurface deposits	Not Eligible	VDHR Site Form; CRI (2005)
44LD1280	2	Unfinished 19th Century Branch of Manassas Gap Rail Line	Unevaluated	Derelict rail bed previously considered not eligible during non-Section 106 survey (Cuddy 2006). Ca. 2,300-ft portion is within current APE	Portion of site in current APE would not contribute to eligibility	VDHR Site Form; Cuddy (2006)
44LD1355	3	Early 20th Century Dwelling	Unevaluated	Portion of site in current APE is disturbed by utilities. Site extends north of current APE; portion within APE would not contribute to any eligibility.	Portion of site in APE would not contribute to eligibility	VDHR Site Form
44LD1357	2 & 3	20th Century Domestic Scatter	Unevaluated	Located in active turf farm. No cultural material recovered in shovel tests during current survey. Interview with turf farmer suggests that previous material for 2006 site recordation could be from manuring fields with Washington, D.C., restaurant waste. Site extends well out of current APE; portion within APE would not contribute to any eligibility.	Portion of site in APE would not contribute to eligibility	VDHR Site Form

44LD1453	3	Mid-20th Century Dwelling	Unevaluated	No cultural material recovered from current APE during shovel testing; site appears disturbed and has been subject to refuse dumping. Site extends well out of current APE to southeast; portion within APE would not contribute to any eligibility.	Portion of site in APE would not contribute to eligibility	VDHR Site Form
44LD1464	3	19th Century Trash Scatter	Unevaluated	Previous 2005 survey by URS Corporation suggests low density site with low potential due to disturbance (non-Section 106 report that was unavailable); site is currently in a construction zone and it appears likely disturbed or no longer extant.	Not Eligible	VDHR Site Form
44LD1545	3	Late Archaic/Early Woodland; 19th/20th-Century Domestic	Unevaluated	Previous survey by Dovetail, Inc, suggested low site potential due to sod farm disturbance, but report not completed due to project changes; portion of the site within the current APE is disturbed by gas and water pipelines. Site extends well out of current APE to north; portion within APE would not contribute to any eligibility.	Portion of site in APE would not contribute to eligibility	VDHR Site Form
44LD1633	**2 & 3**	**20th Century Dwelling**	**Newly Recorded**	**Site has no subsurface integrity and has been used as a modern dump site.**	**Not Eligible**	**-**
44LD1634	**2 & 3**	**19th/20th Century Farmstead**	**Newly Recorded**	**No intact strata of features recorded. Site appears disturbed.**	**Not Eligible**	**-**
44LD1635	**2 & 3**	**19th/20th Century Farmstead**	**Newly Recorded**	**Site has been heavily disturbed, likely based on removal of house structure.**	**Not Eligible**	**-**
44LD1636	**3**	**20th Century Refuse Pile**	**Newly Recorded**	**No subsurface material in undisturbed contexts; appears likely to be secondary deposit rather than part of a domestic occupation.**	**Not Eligible**	**-**

6.0 SUMMARY OF RECOMMENDATIONS

VDOT is proposing to construct the Dulles Air Cargo, Passenger, and Metro Access Highway in Loudoun County, Virginia. CCR has completed cultural resources surveys addressing above-ground historic architectural resources and archaeological resources for the project. The surveys, conducted for WRA and VDOT, were conducted according to the Secretary of the Interior's *Standards and Guidelines for Historic Preservation Projects* (Federal Register, Vol. 48, No. 190, September 1983, P. 44716-44742, et seq.), the VDHR *Guidelines for Conducting Historic Resources Survey in Virginia* (2011), VDOT's *Expectations and Standard Products for Cultural Resources Surveys* (2010), and the *Programmatic Agreement Between the Virginia Departments of Transportation and Historic Resources Concerning Interagency Project Coordination* (1999). The purpose of the surveys was to determine if architectural or archaeological resources on, eligible for, or potentially eligible for the NRHP are located within the project's APE including direct and indirect effects. The APE is based upon the locations of two location study corridors (Study Corridors 2 and 3) incorporating four potential Build Alternatives (2, 3A, 3B, and 3C). The APE for architectural resources including indirect effects involves approximately three miles for Study Corridor 2 and approximately four miles for Study Corridor 3, and it is based upon 1,000-foot corridors and larger intersection areas. The APE for archaeological resources involves the same interchange study areas but considers a reduced corridor footprint of 350 ft. The archaeological APE covered a total of approximately 870 acres.

Forty-seven previously recorded architectural resources and twenty-four newly recorded architectural resources were documented in the APE for above-ground historic resources as part of the current study (Table 6.0-1). Of the previously recorded resources, 15 are no longer extant, which is largely reflective of developmental pressures in the project vicinity, and the remaining are previously determined or currently recommended not eligible for the NRHP. The previously recorded Palmer Family Cemetery (VDHR# 053-6146), while recommended not eligible for the NRHP, is subject to state statutes regarding cemeteries and may require delineation for unmarked graves as part of compliance with those relevant statutes. None of the newly recorded resources, which include twentieth-century dwellings, office buildings, outbuildings, and a workshop, are recommended eligible for the NRHP based on the current survey (see Table 6.0-1).

Table 6.0-1: Summary of All Recorded Architectural Resources Within the Current APE.

VDHR #	Resource Description	Sty. Corridor	Recommended or Previously Determined Eligibility
053-0981	Bessie S. Wilson House, 42100 John Mosby Hwy, ca. 1800	3	Recommended Not Eligible/Ruin
053-5662	House, 42469 John Mosby Hwy, ca. 1890	3	No Longer Extant
053-5663	Auto Repair Shop, John Mosby Hwy, ca. 1920	3	No Longer Extant
053-5664	House, 42679 John Mosby Hwy, ca. 1920	3	No Longer Extant
053-5667	House, 24905 Shady Grove Ln, ca. 1955	3	Recommended Not Eligible
053-5668	House, 25039 Elk Lick Rd, ca. 1945	3	No Longer Extant
053-5669	House, 25047 Elk Lick Rd, ca. 1946	3	No Longer Extant
053-5670	House, 25055 Elk Lick Rd, ca. 1949	3	No Longer Extant
053-5671	House, 25061 Elk Lick Rd, ca. 1948	3	No Longer Extant
053-5672	House, 25072 Elk Lick Rd, ca. 1952	3	No Longer Extant
053-5683	Farmstead, 23723 Belmont Ridge Rd, ca. 1950	2	VDHR Determined Not Eligible 2006
053-5690	House, 24510 Evergreen Mills Rd, ca. 1948	2	Determined Not Eligible/No Longer Extant
053-5691	House, 42954 Arcola Rd, ca. 1930	2	VDHR Determined Not Eligible 2006
053-5693	Houses, 43220-43228 Old Ox Rd, ca. 1840 & ca. 1945	2/3	VDHR Determined Not Eligible 2006
053-5886	House, 42539 John Mosby Hwy, ca. 1954	3	No Longer Extant
053-5887	Garage, 42503 & 42495 John Mosby Hwy, ca. 1958	3	No Longer Extant
053-5894	House, 43091 John Mosby Hwy, ca. 1950	3	Recommended Not Eligible
053-5895	House, 43107 John Mosby Hwy, ca. 1910	3	Recommended Not Eligible
053-5896	Restaurant (House), 43137 John Mosby Hwy, ca. 1950	3	Recommended Not Eligible
053-6018	House, 25077 Elk Lick Rd, ca. 1950	3	No Longer Extant
053-6028	House, 43073 John Mosby Hwy, ca. 1935	3	Recommended Not Eligible
053-6042	House, 42953 John Mosby Hwy, ca. 1950	3	Determined Not Eligible/No Longer Extant
053-6043	House, 24927 Shady Grove Ln, ca. 1950	3	VDHR Determined Not Eligible 2004
053-6044	House, 24932 Shady Grove Ln, ca. 1870	3	VDHR Determined Not Eligible 2004
053-6046	Shockley House, 24267 Quail Ridge Ln, ca. 1935	2/3	VDHR Determined Not Eligible 2004
053-6047	Pearson House, 41737 John Mosby Hwy, ca. 1947	2/3	VDHR Determined Not Eligible 2004
053-6057	Shockley House, 24282 Quail Ridge Ln, ca. 1944	2/3	VDHR Determined Not Eligible 2005
053-6090	Glascock Airfield, Gum Springs Rd, 1941	3	Recommended Not Eligible
053-6100	House, 24315 Evergreen Mills Rd, ca. 1954	2	VDHR Determined Not Eligible 2006
053-6101	House, 24351 Evergreen Mills Rd, ca. 1956	2	VDHR Determined Not Eligible 2006
053-6102	House, 24363 Evergreen Mills Rd, ca. 1957	2	VDHR Determined Not Eligible 2006
053-6103	House, 24367 Evergreen Mills Rd, ca. 1955	2	VDHR Determined Not Eligible 2006
053-6104	House, 24389 Evergreen Mills Rd, ca. 1957	2	VDHR Determined Not Eligible

			2006
053-6105	House, 42296 Briarfield Ln, ca. 1953	2	VDHR Determined Not Eligible 2006
053-6106	House, 24493 Evergreen Mills Rd, ca. 1954	2	VDHR Determined Not Eligible 2006
053-6107	House, 24505 Evergreen Mills Rd, ca. 1954	2	VDHR Determined Not Eligible 2006
053-6108	House, 24531 Evergreen Mills Rd, ca. 1954	2	VDHR Determined Not Eligible 2006
053-6118	House, 42954 Arcola Rd, ca. 1950	2/3	VDHR Determined Not Eligible 2006
053-6146	Palmer Family Cemetery, John Mosby Hwy, post-1882	3	Recommended Not Eligible; Follow Relevant State Statutes for Treatment of Burials; Delineation May be Necessary
053-6239	Shed, Gum Springs Road, ca. 1800	3	No Longer Extant
053-6240	Service Station, John Mosby Hwy, ca. 1968	3	No Longer Extant
053-6302	House, 25289 Evergreen Mills Rd, ca. 1953	3	VDHR Determined Not Eligible 2012
053-6303	House, 25285 Evergreen Mills Rd, ca. 1955	3	VDHR Determined Not Eligible 2012
053-6304	House, 25269 Evergreen Mills Rd, ca. 1956	3	VDHR Determined Not Eligible 2012
053-6305	House, 25247 Evergreen Mills Rd, ca. 1962	3	VDHR Determined Not Eligible 2012
053-6306	House, 42911 Arcola Rd, ca. 1860	3	VDHR Determined Not Eligible 2012
053-6311	House, 23896 Belmont Ridge Rd, ca. 1957	2	Recommended Not Eligible
053-6316	House, 43149 John Mosby Hwy, ca. 1915	3	Recommended Not Eligible
053-6317	House, 25557 Vance Rd, ca. 1955	3	Recommended Not Eligible
053-6318	House, Vance Rd, ca. 1957	3	Recommended Not Eligible
053-6319	House, 25471 Vance Rd, ca. 1957	3	Recommended Not Eligible
053-6320	House, 25445 Vance Rd, 1955	3	Recommended Not Eligible
053-6321	Office Building, 43045 John Mosby Hwy, ca. 1950	3	Recommended Not Eligible
053-6322	Workshop, 24900 Riding Plz, ca. 1955	3	Recommended Not Eligible
053-6323	House, 25227 Evergreen Mills Rd, ca. 1961	3	Recommended Not Eligible
053-6324	House, 25213 Evergreen Mills Rd, ca. 1955	3	Recommended Not Eligible
053-6325	House, 25195 Evergreen Mills Rd, ca. 1955	3	Recommended Not Eligible
053-6326	House, 25173 Evergreen Mills Rd, ca. 1959	3	Recommended Not Eligible
053-6327	House, 25137 Evergreen Mills Rd, ca. 1949	3	Recommended Not Eligible
053-6328	House, 25119 Evergreen Mills Rd, ca. 1950	3	Recommended Not Eligible
053-6329	House, 42660 John Mosby Hwy, ca. 1954	3	Recommended Not Eligible
053-6330	Office Building, 42630 John Mosby Hwy, ca. 1960	3	Recommended Not Eligible
053-6331	House, 42539 John Mosby Hwy, ca. 1954	3	Recommended Not Eligible
053-6332	House, 42382 John Mosby Hwy, ca. 1955	3	Recommended Not Eligible
053-6333	House, 42128 John Mosby Hwy, ca. 1960	3	Recommended Not Eligible
053-6334	House, 41859 John Mosby Hwy, ca. 1959	2/3	Recommended Not Eligible
053-6335	House, 41753 John Mosby Hwy, ca. 1944	2/3	Recommended Not Eligible
053-6336	Outbuildings, 42018 Briarfield Ln, ca. 1915	2	Recommended Not Eligible
053-6337	House, 41567 Briarfield Ln, ca. 1958	2	Recommended Not Eligible
053-6338	House, 42254 Briarfield Ln, ca. 1960	2	Recommended Not Eligible
053-6339	House, 24335 Evergreen Mills Rd, ca. 1961	2	Recommended Not Eligible

For archaeology, as a result of previous systematic surveys covering nearly 200 acres, or other types of archaeological investigations resulting in site recordation, a total of 21 previously recorded sites are located within or extend up to the current APE. These sites range from Archaic lithic scatters to twentieth-century trash scatters. All but two were not previously evaluated by VDHR in terms of final eligibility in conjunction with a compliance project, although a number had been recommended not eligible for the NRHP during the course of non-Section 106 compliance surveys for Loudoun County. Primarily due to loss of integrity, but also because many of the sites represent low density scatters or common site types, none of the previously recorded site areas investigated during the current project appear to contain significant information that would contribute to NRHP eligibility. As noted in Table 6.0-2, some of the sites extend outside the APE and were not fully evaluated.

Four new archaeological sites were recorded within the APE as a result of the current survey. These include two nineteenth- to twentieth-century farmsteads (44LD1634 and 44LD1635), a twentieth-century domestic site (44LD1633), and a mid-twentieth century trash dump or refuse pile (44LD1636). All four are recommended as not eligible for NRHP, with loss of integrity again figuring prominently in the recommendations (see Table 6.0-2).

Table 6.0-2: Summary of All Recorded Archaeological Resources Within the Current APE.

VDHR #	Resource Description	Sty. Corridor	Recommended or Previously Determined Eligibility
44LD0168	Unattributed Native American Lithic Surface Scatter With Stemmed Points	2/3	Not Eligible
44LD0171	Woodland Period Native American Surface Scatter	2/3	Portion of site in APE would not contribute to eligibility
44LD0172	Late Archaic Native American Surface Scatter; 19th/20th Century Surface Trash Scatter	2/3	Not Eligible
44LD0173	Unattributed Native American Lithic Surface Scatter/20th Century Outbuilding footings	2	Not Eligible
44LD0174	Unattributed Native American Lithic Surface Scatter	2	Not Eligible
44LD0722	20th Century Dwelling	3	VDHR Not Eligible 2002
44LD0968	Unattributed Native American, 19th to 20th Century Trash Scatter	2/3	Portion of site in APE would not contribute to eligibility
44LD0969	Unattributed Native American Lithic Surface Scatter	2/3	Not Eligible
44LD0970	Late Archaic Native American Lithic Scatter	2/3	Not Eligible
44LD1003	Middle Archaic Native American; 18th to 19th Century Dwelling	2	Not Eligible
44LD1049	Late 19th/20th Century Trash Surface Scatter	3	Not Eligible
44LD1122	18th /19th Century Farmstead	2	Portion of site in APE would not contribute to eligibility
44LD1123	Late 18th/19th Century Farmstead	2	Not Eligible
44LD1159	Early 19th Century Trash Scatter	3	VDHR Not Eligible 2006
44LD1270	Late 18th/19th Century Dwelling	3	Not Eligible
44LD1280	Unfinished 19th Century Branch of Manassas Gap Rail Line	2	Portion of site in current APE would not contribute to eligibility
44LD1355	Early 20th Century Dwelling	3	Portion of site in APE would not contribute to eligibility
44LD1357	20th Century Domestic Scatter	2/3	Portion of site in APE would not contribute to eligibility
44LD1453	Mid-20th Century Dwelling	2/3	Portion of site in APE would not contribute to eligibility
44LD1464	19th Century Trash Scatter	2/3	Not Eligible
44LD1545	Late Archaic/Early Woodland; 19th/20th-Century Domestic	2/3	Portion of site in APE would not contribute to eligibility
44LD1633	20th Century Dwelling	2	Not Eligible
44LD1634	19th/20th Century Farmstead	2	Not Eligible
44LD1635	19th/20th Century Farmstead	3	Not Eligible
44LD1636	20th Century Refuse Pile	2/3	Not Eligible

7.0 REFERENCES CITED

Anderson, David G., David S. Brose, Dena F. Dincauze, Michael J. Shott, Robert S. Grumet, and Richard C. Waldbauer

2007 *The Earliest Americans Theme Study.* Archaeology Program, National Park Service, United States Department of the Interior, Washington, D.C. Electronic document, http://www.nps.gov/history/archeology/PUBS/NHLEAM/ index.htm, accessed August 21, 2007.

Anderson, D. G., L. D. O'Steen, and K. E. Sassaman

1996 Environmental and Chronological Considerations. In *The Paleoindian and Early Archaic Southeast*, edited by D. G. Anderson and K. E. Sassaman, pp. 3-15. University of Alabama Press, Tuscaloosa.

Anderson, David G., and Kenneth E. Sassaman

2012 *Recent Developments in Southeastern Archaeology*. The SAA Press, Washington, D.C.

Bamann, Susan E., Bill Hall, and Loretta Lautzenheiser

2005 *Tri-County Parkway Location Study, Archaeological Assessment.* Ms. on file, Coastal Carolina Research, Tarboro, North Carolina.

Barber, M. B., and E. B. Barfield

1989 Paleoindian Chronology for Virginia. In *Paleoindian Research in Virginia: A Synthesis*, edited by J. M. Wittkofski and T. R. Reinhart, pp. 53-70. Special Publication No. 19 of the Archeological Society of Virginia. Dietz Press, Richmond.

Black History Committee

2001 The Essence of a People: Portraits of African Americans Who Made a Difference in Loudoun County, Virginia. The Black History Committee of the Friends of the Thomas Balch Library, Leesburg, Virginia.

Blanton, Dennis B.

2003 Late Archaic in Virginia: An Updated Overview. *Quarterly Bulletin of the Archaeological Society of Virginia* 58(4):177-206.

Braun, L.

1964 *Deciduous Forests of Eastern North America*. Hafner, New York.

Butler, Todd L., Edward Moore, and Megan Rupnik

2006 *Cultural Resource Survey of the Proposed 230 kV Brambleton-Greenway Transmission Line, Loudoun County, Virginia.* Ms. on file, Virginia Department of Historic Resources, Richmond.

Carr, K. C.
1975 *The Analysis of a Paleoindian Site in the Shenandoah Valley with an Emphasis on Chronology and Function.* Unpublished Master's thesis, Department of Anthropology, Catholic University of America, Washington, D.C.

Clark, A. B., and C. S. Arrington
1933 *History of Prince William County*. Prince William County School Board, Prince William County, Virginia.

Cleland, Teri A.
1984 *Historic Artifact Dating Guide.* Northern Arizona University Archaeology Laboratory, Flagstaff.

Coe, J. L.
1964 The Formative Cultures of the Carolina Piedmont. *Transactions of the American Philosophical Society* 54, No. 5 Philadelphia.

CRI (Cultural Resources, Inc.)
2005 *A Phase I Archaeological Survey of the Bryant Property, Loudoun County, Virginia.* Ms. on file, Loudoun County Department of Planning, Leesburg, Virginia.

Cuddy, Thomas W.
2006 *Phase I Archeological Survey of the Arcola Assemblage, Loudoun County, Virginia.* Ms. on file, Virginia Department of Historic Resources, Richmond.

Custer, J. F.
1990 Chronology of Virginia's Early and Middle Archaic Periods. In *Early and Middle Archaic Research in Virginia: A Synthesis*, edited by T. R. Reinhart and M. E. N. Hodges, pp. 1-60. Special Publication No. 22 of the Archeological Society of Virginia. Dietz Press, Richmond.

Doug & Linda's Dairy Antique Site
2013 Cream Separating Milk Bottles. Electronic document, http://www.dairyantiques.com/Cream_Separating_Bottles.html, accessed April 4, 2013.

Deiss, Ronald W.
1981 *The Development and Application of a Chronology for American Glass.* Midwestern Archaeological Research Center, Illinois State University, Bloomington-Normal.

Delcourt, H., and P. Delcourt
1985 Quaternary Palynology and Vegetational History of the Southeastern United States. In *Pollen Records of Late Quaternary North American Sediments*, edited by V. M. Bryant, Jr., and R. G. Holloway, pp. 1-37. American Association of Stratigraphic Palynologists Foundation.

Dent, Richard J.
1995 *Chesapeake Prehistory*. Plenum Press, New York.

Divine, J.W. C., Hall, M. Andrews, and P.M. Osbourne
1998 *Loudoun County and the Civil War*, 2nd ed. Willow Bend Books, Leesburg, Virginia.

Douglass, N., Jr.
1974 The Aldie Mill. Ms. on file, Virginia Department of Historic Resources, Richmond.

Dulles Area Historical Database
2011 Map. Electronic document, http://dullesareahd.50webs.org/map.html, accessed April 12, 2013.

Egloff, Keith T.
1991 Development and Impact of Ceramics in Virginia. In *Late Archaic and Early Woodland Research in Virginia: A Synthesis*, edited by T. R. Reinhart and M. E. N. Hodges, pp. 243-252. Special Publication No. 23 of the Archeological Society of Virginia. Dietz Press, Richmond.

Egloff, K., and J. M. McAvoy
1990 Chronology of Virginia's Early and Middle Archaic Periods. In *Early and Middle Archaic Research in Virginia: A Synthesis*, edited by T. R. Reinhart and M. E. N. Hodges, pp. 61-80. Special Publication No. 22 of the Archeological Society of Virginia. Dietz Press, Richmond.

Evans, D.
1989 *Prince William County: A Pictorial History*. Donning Company, Norfolk, Virginia.

Fenneman, N.
1938 *Physiography of Eastern United States*. McGraw-Hill, New York.

Fisher, H. G.
1983 The Virginia Piedmont--A Definition: A Review of the Physiographic Attributes and Historic Use of This Region. In *Piedmont Archaeology*, edited by J. M. Wittkofski and L. E. Browning, pp. 2-8. Special Publication No. 10 of the Archeological Society of Virginia. Dietz Press, Richmond.

Freeman, Paul
2013 Glascock Airport (98VA), Arcola, VA. Electronic document, http://www.airfields-freeman.com/VA/Airfields_VA_Loudoun.htm#glascock, accessed April 9, 2013.

Fry, Joshua, and Jefferson, Peter
1776 A Map of the most Inhabited part of Virginia containing the whole province of Maryland with Part of Pensilvania, New Jersey and North Carolina. David Rumsey Historical Map Collection. Electronic document, http://www.davidrumsey.com, accessed April 12, 2013.

Gallivan, Martin
2003 *Early Horticultural Settlement in the James River Piedmont: Excavatoins at the Partridge Creek Site (44AH193), Stapleton, Virginia.* Research Report Series 12, Virginia Department of Historic Resources, Richmond.

Gardner, W. M.
1974 The Flint Run Paleo-Indian Complex: Pattern and Process During the Paleo-Indian to Early Archaic. In *The Flint Run Paleo-Indian Complex: A Preliminary Report, 1971-1973 Seasons*, edited by W. M. Gardner, pp. 5-47. Catholic University of America, Department of Anthropology, Archaeology Laboratory, Occasional Publication 1, Washington, D.C.

1989 An Examination of Cultural Change in the Late Pleistocene and Early Holocene (circa 9200 to 6800 B.C.). In *Paleoindian Research in Virginia: A Synthesis*, edited by J. M. Wittkofski and T. R. Reinhart, pp. 5-52. Special Publication No. 19 of the Archeological Society of Virginia. Dietz Press, Richmond.

Gardner, William M., Michael Clem and Gwen Hurst
1999 *A Phase I Archeological Study of Circa 565 Acres to be Developed as Phase One of the Proposed Brambleton Planned Community, Loudoun County, Virginia.* Ms. on file, Virginia Department of Historic Resources, Richmond.

Gardner, William M., and Gwen Hurst
2000 *A Phase I Investigation of Circa 800 Acre Parcel To Be Developed as Stone Ridge, Loudoun County, Virginia.* Ms. on file, Virginia Department of Historic Resources, Richmond.

Goebel, Ted, Michael E. Waters, and Dennis H. O'Rourke
2008 The Late Pleistocene Dispersal of Modern Humans in America. *Science* 319:1497-1502.

Goode, Charles E., Kimberly A. Snyder, and Gwen J. Hurst
2003 *Phase I Archaeological Investigation of the Circa 346 Acre Dulles Trade Center III, Loudoun County, Virginia.* Ms. on file, Loudoun County Department of Planning, Leesburg, Virginia.

Goode, Charles E., and Sarah Traum
2012 *Cultural Resources Survey for the Dulles Loop-Route 606 Project, Loudoun County, Virginia.* Ms. on file, Virginia Department of Historic Resources, Richmond.

Gottmann, J.
1969 *Virginia in Our Century*. University Press of Virginia, Charlottesville.

Hantman, J., and M. Klein
1992 Middle and Late Woodland Archaeology in Piedmont Virginia. In *Middle and Late Woodland Research in Virginia: A Synthesis*, edited by T. R. Reinhart and M. E. N. Hodges, pp. 137-164. Special Publication No. 29 of the Archeological Society of Virginia. Dietz Press, Richmond.

Head, J. W.
1998 [1908] *History and Comprehensive Description of Loudoun County, Virginia*. 1998 reprint. Genealogical Publishing, Baltimore, Maryland.

Hesselbach, W., and Young, J. J.
1862 Surveys for military defenses. Map of northeastern Virginia and vicinity of Washington. David Rumsey Historical Map Collection. Electronic document, http://www.davidrumsey.com/luna/servlet/detail/RUMSEY~8~1~26842~1100135#, accessed April 12, 2013.

Hickin, P
1992 Fairfax County:1840-1870. In *Fairfax County, A History*, edited by N. Netherton, pp. 251-391. Originally published 1978. 250th Anniversary Commemorative Edition. Fairfax County Board of Supervisors, Fairfax, Virginia.

HistoricAerials
2011 Historic Aerials for Loudoun County, 1957 and 1963. Electronic document, http://historicaerials.com/, accessed April 12, 2013.

History of Loudoun County, Virginia
n.d. "Mountains Full of Moonshiners." Electronic document, http://www.loudounhistory.org/history/moonshiners.htm, accessed April 12, 2013.

Hodges, Mary Ellen Norrisey
2004 Late Woodland Period Research in Virginia: Recent Trends and Contributions. *Quarterly Bulletin of the Archaeological Society of Virginia*: 59(1):1-13.

Janney, A. M.
1998 "A Short History of the Society of Friends in Loudoun County." In *The Bulletin of the Historical Society of Loudoun County, Virginia, 1957-1976*, edited by J. Phillips, pp. 15-28. Goose Creek Productions, Leesburg, Virginia.

Jirikowic, Christine, Michael Owens, and Gwen Hurst
2004 *Phase I Archaeological Investigation of a Circa 80 Acre Property Along John Mosby Highway, Loudoun County, Virginia.* Ms. on file, Virginia Department of Historic Resources, Richmond.

Johnson, M. F.
1996 Paleoindian Near the Edge: A Virginia Perspective. In *The Paleoindian and Early Archaic Southeast*, edited by D. G. Anderson and K. E. Sassaman, pp. 187-212. University of Alabama Press, Tuscaloosa.

Klein, Michael J.
2003 The Past Decade of Research on the Early Woodland Period in Virginia. *Quarterly Bulletin of the Archaeological Society of Virginia*: 58(4):207-231.

Lautzenheiser, L. E., and J. M. Eastman
1993 *Archaeological Test Excavations, Sites 31LE83 and 31LE86, Proposed Sanford-Lee County Airport.* Ms. on file, Coastal Carolina Research, Inc., Tarboro, North Carolina.

Lindsey, Bill
2013 Historic Glass Bottle Identification and Information Website. Electronic document, http://www.sha.org/bottle/, accessed February 13, 2013.

Lockhart, Bill
2005 The Other Side of the Story: A look at the back of Seven-Up Bottles. In *The Soda Fizz*, January February 2005. Electronic document, http://www.sha.org/bottle/pdffiles/BLockhart_7UpBottlers.pdf accessed April 4, 2013.

Lockhart, Bill, and Bill Porter
2010 The Dating Game: Tracking the Hobble-Skirt Coca-Cola Bottle. In *Bottles and Extras*, September 2010. Electronic document, http://www.sha.org/bottle/pdffiles/coca-cola.pdf, accessed April 4, 2013.

Luchsinger, Heidi, Loretta Lautzenheiser, and Bill Hall
2006 *Tri-County Parkway Location Study, Archaeological Survey.* Ms. on file, Coastal Carolina Research, Tarboro, North Carolina.

Mansberger, Floyd
1986 Changing Patterns in Nineteenth Century Ceramics. In Nineteenth-Century Historic Archaeology in Illinois. Edited by Thomas E. Emerson and Charles L. Rohrbaugh, *Illinois Cultural Resource Study N0.2.* Illinois Historic Preservation Society.

Martin-Perdue, Nancy J., and Charles L Perdue Jr., editors
1996 *Talk About Trouble: A New Deal Portrait of Virginians in the Great Depression.* University of North Carolina Press, Chapel Hill.

Maryland Archaeological Conservation Lab (MAC Lab)
2013 *Diagnostic Artifacts in Maryland: Post-Colonial Ceramics.* Electronic document, http://www.jefpat.org/diagnostic-old/Post-Colonial%20Ceramics/index-Post ColonialCeramics.htm, accessed April 6 2013.

McAvoy, J. M., and L. D. McAvoy
1997 *Archaeological Investigations of Site 44SX202, Cactus Hill, Sussex County, Virginia*. Virginia Department of Historic Resources Research Report Series No. 8. Virginia Department of Historic Resources, Richmond.

2003 *The Williamson Clovis Site, 44DW1, Dinwiddie County, Virginia: An Analysis of Research Potential in Threatened Areas*. Virginia Department of Historic Resources Research Report Series No. 13, Richmond.

McLearen, D. C.
1991 Late Archaic and Early Woodland Material Culture in Virginia. In *Late Archaic and Early Woodland Research in Virginia: A Synthesis*, edited by T. R. Reinhart and M. E. N. Hodges, pp. 89-138. Special Publication No. 23 of the Archeological Society of Virginia. Dietz Press, Richmond.

1992 Virginia's Middle Woodland Period: A Regional Perspective. In *Middle and Late Woodland Research in Virginia: A Synthesis*, edited by T. R. Reinhart and M. E. N. Hodges, pp. 39-64. Special Publication No. 29 of the Archaeological Society of Virginia. Dietz Press, Richmond.

Miller, George L., Patricia Samford, Ellen Shlasko, and Andrew Madsen
2000 Telling Time for Archaeologists. *Northeast Historical Archaeology* 29:1-22.

Mouer, L. D.
1991 The Formative Transition in Virginia. In *Late Archaic and Early Woodland Research in Virginia: A Synthesis*, edited by T. R. Reinhart and M. E. N. Hodges, pp. 1-88. Special Publication No. 23 of the Archeological Society of Virginia. Dietz Press, Richmond.

National Park Service
2013 National Register of Historic Places Criteria for Evaluation. United States Department of the Interior, National Park Service. Electronic document, http://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_2.htm, accessed January 7, 2013.

Noel Hume, Ivor
1970 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York.

Osbourn, P. M.
1998 Establishing the Towns in Loudoun County. In *The Bulletin of the Historical Society of Loudoun County, Virginia, 1957-1976*, edited by J. Phillips, pp. 71-75. Goose Creek Productions, Leesburg, Virginia.

Outlaw, Alain, Timothy E. Morgan, and Mary B. Clemons
2003 *Phase I Cultural Resources Survey of the 100+ Acre Tract for the Loudoun Chantilly Center, Loudoun County, Virginia.* Ms. on file, Loudoun County Department of Planning, Leesburg, Virginia.

Palmer, Arlene
1993 *Glass In Early America.* Henry Francis DuPont Winterthur Museum, Winterthur.

Peterson, Cynthia L.
1994 *Historic Artifact Identification Guide*. Office of the State Archaeologist, University of Iowa, Iowa City.

Porter, H. C.
1960 *Soil Survey of Loudon County, Virginia*. USDA/SCS, Washington, D.C.

Rader, E. K., and N. H. Evans, editors
1993 *Geological Map of Virginia – Expanded Explanation*. Virginia Division of Mineral Resources, Charlottesville.

Scheel, E.
1978 Lovettsville Germans Fled. *Loudoun Times-Mirror* 20 April:1, 2.

1987 *The History of Middleburg and Vicinity*. Middleburg Bicentennial Committee, Middleburg, Virginia.

Sipe, Boyd and Jeremy Smith
2010 *Phase II Archaeological Evaluation of Site 44LD1003, Loudoun County, Virginia*. Ms. on file, Virginia Department of Historic Resources, Richmond.

Stelle, Lenville J.
2001 *An Archaeological Guide to Historic Artifacts of the Upper Sangamon Basin.* Center for Social Research, Parkland College, Chapaign, Illinois. Electronic document, http://virtual.parkland.edu/lstelle1/len/archguide/documents/arcguide.htm, accessed April 12, 2013.

Stewart, Jennifer, and Loretta Lautzenheiser
2004 *Tri-County Parkway Location Study, Architectural Survey, Alternative D*. Ms. on file, Coastal Carolina Research, Tarboro, North Carolina.

Sweig, D.
1992 Fairfax County: 1649-1800. In *Fairfax County, Virginia: A History*, edited by N. Netherton, pp. 5-151. Originally published 1978. 250th Anniversary Commemorative Edition. Fairfax County Board of Supervisors, Fairfax, Virginia.

Taylor, Yardley
1853 *Map of Loudoun County, Virginia / from actual surveys by Yardley Taylor*.Library of Congress Geography and Map Division Washington, D.C. Electronic document, http://hdl.loc.gov/loc.gmd/g3883l.la001287, accessed April 12, 2013.

Thornbury, W.
1965 *Regional Geomorphology of the United States*. John Wiley, New York.

Tice, Warren K.
1997 *Uniform Buttons of the United States 1776-1865.* Thomas Publications, Gettysburg.

United States. Post Office Department
1920 Rural delivery routes, Loudoun County, Virginia / Post Office Department, Division of Topography. Library of Congress Geography and Map Division Washington, D.C. Electronic document, http://hdl.loc.gov/loc.gmd/g3883l. ct001423, accessed April 12, 2013.

USGS EarthExplorer
2013a 1949 Aerial Image of Portion of Loudoun County (Aerial Single Frame Photo ID 1FX0000030072). Electronic document, http://earthexplorer.usgs.gov, accessed April 4, 2013.

2013b 1949 Aerial Image of Portion of Loudoun County (Aerial Single Frame Photo ID 1FX0000030073). Electronic document, http://earthexplorer.usgs.gov, accessed April 4, 2013.

Virginia Department of Historic Resources (VDHR)
2011 *Guidelines for Conducting Historic Resource Survey in Virginia.* Ms. on file, Virginia Department of Historic Resources, Richmond.

Virginia Department of Transportation (VDOT)
1999 *Programmatic Agreement Between the Virginia Departments of Transportation and Historic Resources Concerning Interagency Project Coordination.* Ms. on file, VDOT Central Office, Richmond, Virginia.

2010 *The Virginia Department of Transportation's Expectations and Standard Products for Cultural Resource Surveys.* Ms. on file, VDOT Central Office, Richmond, Virginia.

Virginia Historic Landmarks Commission Staff
1970 *Ben Lomond.* National Register of Historic Places Nomination Form. Ms. on file, Virginia Department of Historic Resources, Richmond.

Voigt, E. E.
2001 Preliminary Results of Excavations at the Brook Run Jasper Quarry, Culpeper County, Virginia. Paper presented at the Richmond Chapter, Archaeological Society of Virginia. July 2001.

Walker, Joan M., Kimberly A. Snyder and Gwen Hurst
2003 *A Phase I Archeological Investigation of the Shockey Suburban and Marshall Properties, Loudoun County, Virginia*. Ms. on file, Loudoun County Department of Planning, Leesburg, Virginia.

Waters, Michael R., Steven L. Forman, Thomas A. Jennings, Lee C. Nordt, Steven G. Driese. Joshua M. Feinberg, Joshua L. Keene, Jessi Halligan, Anna Lindquist, James Pierson, Charles T. Hallmark, Michael B. Collins, and James E. Wiederhold
2011 The Buttermilk Creek Complex and the Origins of Clovis at the Debra L. Friedkin Site, Texas. *Science* 331:1599-1603.

Watts, W. A.
1983 Vegetational History of the Eastern United States 25,000 to 10,000 Years Ago. In *Late Quaternary Environments of the United States*, edited by H. E. Wright, pp. 294-310. University of Minnesota Press, Minneapolis.

Weiland, Jonathan
2013 A Comparison and Review of Window Glass Analysis Approaches in Historical Archaeology. Electronic document, http://www.sha.org/documents/Technical_briefs_articles/vol4article_04.pdf, accessed April 3, 2013.

Wert, J. D.
1990 *Mosby's Rangers*. Touchstone Books, New York.