REPORT >

Phase I Cultural Resource Survey of the Fort Eustis Tap/Line 34 Rebuild Project

LOCATION > City of Newport News, Virginia

DATE > October 2020

PREPARED FOR >
Dominion Energy

PREPARED BY >
Dutton + Associates, LLC

VHDR FILE NO. >

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

PHASE I CULTURAL RESOURCES SURVEY OF THE FORT EUSTIS TAP/LINE 34 REBUILD PROJECT

CITY OF NEWPORT NEWS, VIRGINIA

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ABSTRACT

In August 2020, Dutton +Associates, LLC (D+A) conducted a Phase I cultural resource survey (Phase I) of the Fort Eustis Tap/ Line 34 Rebuild Project in Newport News, Virginia. The project entails the rebuild of a roughly 2.5-mile 115kV transmission line that serves the United States Department of Defense (DoD) Joint Base Langley-Eustis. As the project also involves disturbance to statutory wetlands, a permit will be required from the United States Army Corps of Engineers (USACE).

As such, this Phase I survey was designed and implemented to comply with Section 106 of the NHPA of 1966 (Public Law 89-655, as amended), as implemented by 36 CFR 800; as well as VDHR guidance for transmission line projects. It adheres to VDHR's Guidelines for Conducting Historic Resources Surveys in Virginia (2017) and Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia (2008), and to professional guidelines set forth in the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716, as amended and annotated).

Architectural investigations included properties located within one half-mile of the project centerline not located within the boundaries of Fort Eustis which did not require survey as it has been subject to recent survey and evaluation that revealed no NRHP-listed or eligible resources located within the project APE for this effort. This survey resulted in the identification and evaluation of seventeen (17) architectural resources greater than 50 years of age (constructed in 1970 or earlier) located within the survey area. Of these, twelve (12) were previously recorded, although four (4) of these have been determined not eligible for listing in the NRHP by the VDHR within the last five years, and were therefore not subject to resurvey or evaluation as part of this effort. Five (5) resources were newly recorded as part of this effort. The resources surveyed and evaluated as part of this effort included several earthworks and archaeological sites, two Civil War battlefields, a railroad corridor, single dwelling, and commercial buildings. Of these, five were found to be listed in or considered eligible for listing in the NRHP including the two battlefields, two sets of earthworks, and the railroad. The rest of the resources are twentieth century roadside development in the region that reflect national trends in architecture with no known significant historical associations and are therefore considered not eligible for the NRHP.

Each of the five NRHP-listed or eligible resources were assessed for potential visual effects brought about by the project in accordance with the VDHR and NPS guidance. This assessment found that the project will pose ***no adverse effect*** *to any of these NRHP-listed or eligible resources. Therefore,* ***it is D+A's opinion that no further consideration of architectural resources is required for this project.***

Table of NRHP-Listed or eligible architectural resources identified in the project APE with distance to the project alignment and recommendation of effects.

VDHR #	*Resource Name*	*Date*	*NRHP Status*	*Distance to Project Alignment*	*Potential Effect*
099-5282	*Williamsburg Battlefield*	*1862*	*Potentially NRHP-Eligible*	*Directly Crossed*	*No Adverse Effect*
099-5383	*Yorktown Battlefield*	*1862*	*Potentially NRHP-Eligible*	*Directly Crossed*	*No Adverse Effect*
121-0041	*Oakland Farm Industrial Park Multiple Resource Area*	*c1862*	*NRHP-Listed/ VDHR Easement*	*0.14/0.45 Miles*	*No Adverse Effect*
121-0050	*Lee's Mill Earthworks*	*1862*	*NRHP-Listed*	*0.50 Miles*	*No Effect*
121-5134	*C&O Railroad*	*c1881*	*NRHP-Eligible*	*Directly Crossed*	*No Adverse Effect*

Archaeological investigations for the Fort Eustis Tap/Line 34 Rebuild Project resulted in the identification two isolated finds (IF-1 at Structure 34/178 and IF-2 at Structure 34/166) and one archaeological location (LF-1 at Structure 34/171). Neither the isolated finds, nor the archaeological location, meet the definition of an archaeological site as outlined in the VDHR survey guidelines. Therefore, ***it is D+A's opinion that no further archaeological work is required for IF-1, IF-2, and L-2****.*

Site 44NN0156, a Civil War earthwork, was re-identified within and adjacent to the ROW at Structure 34/166. Movement of construction equipment and vehicles across the earthwork will result in an impact to the resource resulting in further erosion and degradation of the feature. ***D+A recommends that surface debris be hand cleared from the earthwork and that geotextile fabric be placed over the earthwork followed by a sufficient amount of crush and run gravel and clean fill soil to create a suitable surface on which to place timber mats and drive vehicles across the earthwork. D+A also recommends that the fill material remain in place over the earthwork, be seeded to prevent erosion, and have project plans note the area for future actions as environmentally sensitive with timber matting required.***

Following an infield assessment of existing conditions, ***it is D+A's recommendation that no further work or consideration of impacts to Site 44NN0176 is warranted due to existing intervening transportation and underground utility impacts.***

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1. INTRODUCTION

In August 2020, Dutton +Associates, LLC (D+A) conducted a Phase I cultural resource survey (Phase I) of the Fort Eustis Tap/ Line 34 Rebuild Project in Newport News, Virginia. The project entails the rebuild of a roughly 2.5-mile 115kV transmission line that serves the United States Department of Defense (DoD) Joint Base Langley-Eustis. As the project also involves disturbance to statutory wetlands, a permit will be required from the United States Army Corps of Engineers (USACE).

As such, this Phase I survey was designed and implemented to comply with Section 106 of the *NHPA of 1966* (Public Law 89-655, as amended), as implemented by 36 CFR 800; as well as VDHR guidance for transmission line projects. It adheres to VDHR's *Guidelines for Conducting Historic Resources Surveys in Virginia* (2017) and *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (2008), and to professional guidelines set forth in the Secretary of Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716, as amended and annotated).

The D+A effort was designed and conducted to identify and evaluate the National Register of Historic Places (NRHP) eligibility for archaeological and architectural resources located within the project area of potential effects (APE) and assess those resources that are considered eligible for potential effects brought about by the project.

Principal Investigators meet the Secretary of the Interior's *Professional Qualification Standards* (48 FR 44716) for archaeology, history, architecture, architectural history, or historic architecture. Senior Architectural Historian Robert J. Taylor, Jr., M.A. served as the principal investigator and coordinated all project tasks. Archaeological investigations were conducted under the direction of David H. Dutton, M.A.

PROJECT DESCRIPTION

This project entails the rebuild of a tap line that provides energy to Fort Eustis. The current tap line to Fort Eustis is a roughly 2.5-mile radial line tapped off of the line #34 mainline. It extends in a generally northeast-southwest orientation through Newport News Park, across Interstate-64 and the Lee Hall Reservoir, into Fort Eustis within the City of Newport News (Figure 1-1 and 1-2). The first 1.6 miles from the tap point is of similar vintage as parts of the main line #34, and was built on wood H-frames in the 1940's and 1950's. The remaining 0.9 miles of the tap line was built on wood poles in late 1960s. This tap line is at or approaching its end of life and as such, the tap line and structures need to be replaced to ensure reliable service.

Based on Dominion's FIR requirement for a tap line longer than 1 mile, the tap line to Fort Eustis will be rebuilt as Double Circuit line to loop line #34 in and out of Fort Eustis station to current standard with a summer emergency rating of 393 MVA at 115kV and a 115kV breaker in line #34 at the Fort Eustis station.

Figure 1-1: General location of the project alignment.

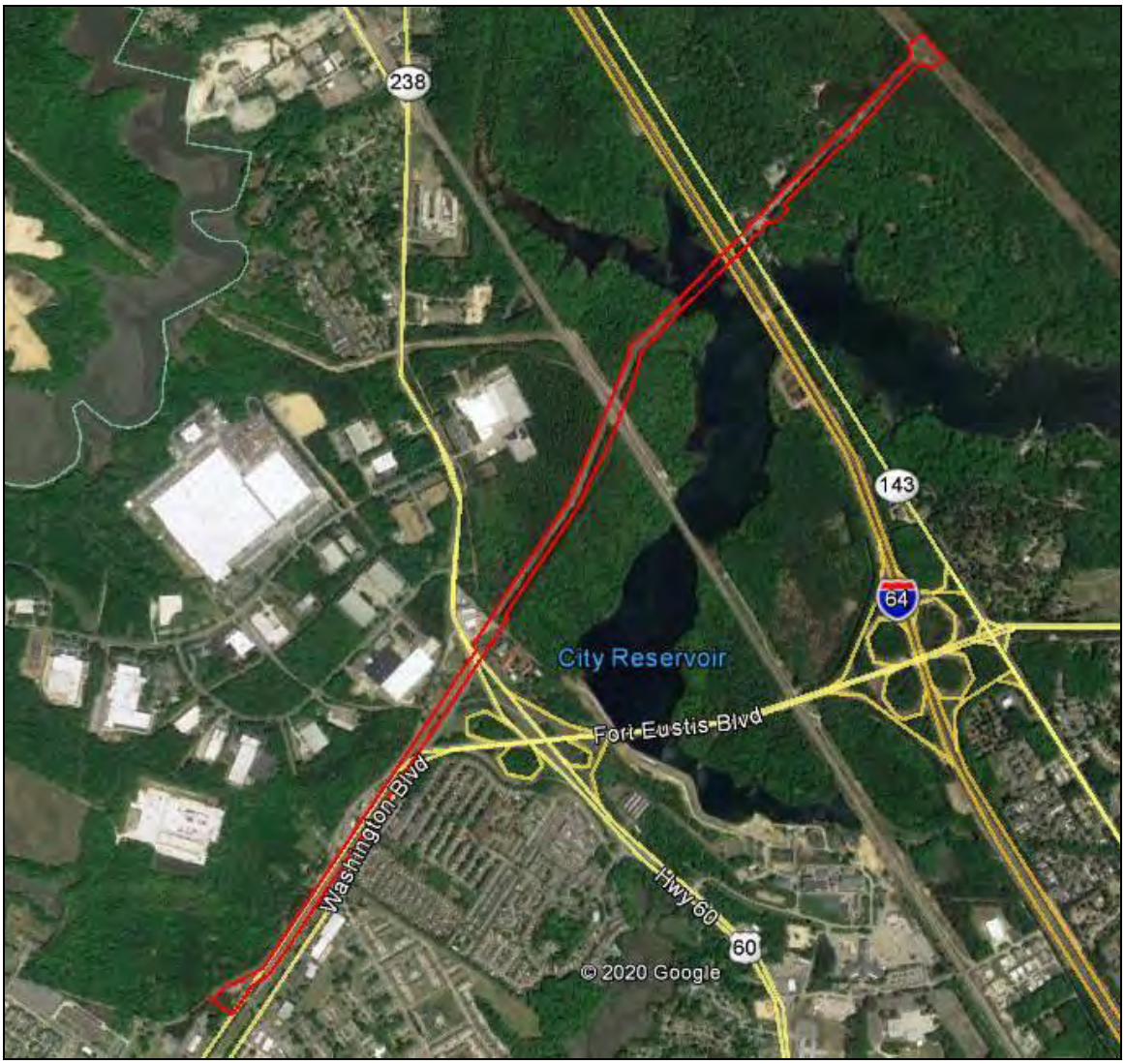

Figure 1-2: Aerial view of the Fort Eustis Tap/ Line 34 Rebuild Project limits (red). Source: Google Earth 2020

To accomplish the rebuild, a set of temporary structures and line will be built paralleling the existing line which will then be rebuilt and returned to service. The temporary line will require approximately 20 feet of temporary ROW expansion bordering the eastern edge of the existing ROW. Vegetation within the temporary ROW expansion will be trimmed to ground level, although no stumping, grinding, or ground disturbance will take place. Upon removal of the temporary line and structures, the temporary ROW easement will be released. One small section of permanent ROW acquisition will be required to allow for the crossing of the CSX Railroad line. The permanent ROW expansion is roughly 60 feet wide at it widest point, and includes approximately one-acre of total acquisition.

As part of the rebuild, the existing wood pole and H-frame structures will be replaced with steel monopole structures and a small number of steel H-frame structures at the reservoir crossing. Because of a change in configuration of structures and overall engineering, the structures will not necessarily be replaced on a one-to-one basis. Existing structures range from 27-feet to 79-feet in

height and average 57-feet tall. The new structures will range in height from 53-feet to 115-feet, and average approximately 87-foot tall.

A table of transmission line structures included in this effort, detailing existing and proposed heights may be found in Table 1-1. Maps of structure locations along with areas of temporary and permanent ROW expansion may be found in Figures 1-3 and 1-4. Schematics of representative proposed structures are provided in Figures 1-5 through 1-7 (Note: Proposed average heights depicted in graphics and the table are approximate and will vary slightly based upon final engineering).

Table 1-1: Table of structures to be rebuilt or replaced as part of this project.
Source: Dominion Energy

Existing Structure Details		Proposed Structure Details	
Existing Structure Number	**Existing Structure Height (ft)**	**New Structure Number**	**New Structure Height (ft)**
34/601	26.7	1038/179, 34/179	85
34/602	29.2	1038/180, 34/178	95
34/603	51.5	1038/181, 34/177	90
34/604	46.8	1038/182, 34/176	90
34/605	47.4	1038/183, 34/175	100
34/606	48.2	1038/184, 34/174	100
34/607	47.5	1038/185, 34/173	130
34/608	51.9	1038/186, 34/172	130
34/609	78.4	1038/187, 34/171	100
34/610	78.8	1038/188L	53
34/611	46.2	1038/188R	53
34/612	50.4	34/170L	53
34/613	61	34/170R	53
34/614	62.2	1038/189L	34
34/615	47.8	1038/189R	34
34/616	46.6	34/169L	34
34/617	47.8	34/169R	34
34/618	52.6	1038/190, 34/168	100
34/619	66.8	1038/191, 34/167	110
34/620	60.9	1038/192, 34/166	100
34/621	65.5	1038/193, 34/165	100
34/622	65.5	1038/194, 34/164	115
34/622B	65.9	1038/195, 34/163	110
34/623	66	1038/196, 34/162	110
34/624	66.1	1038/197, 34/161	110
34/625	66.3	1038/198, 34/160	110
34/626	62.9	1038/199, 34/159	110
34/627	59.9	1038/200, 34/134	110

Existing Structure Details		Proposed Structure Details	
Existing Structure Number	**Existing Structure Height (ft)**	**New Structure Number**	**New Structure Height (ft)**
34/628	62	1038/201, 34/157	100
34/629	65.6	1038/202, 34/156	100
34/630	66.7	1038/203, 34/155	100
34/631	64.9	1038/204, 34/154	95
34/632	65	1038/205, 34/153	70
34/633	36	1038/206	30
34/634	51.9	1038/206B	75
		1038/206A	75
		1038/178	60
		34/180	60

Figure 1-3: Detail of proposed permanent and temporary structure locations with ROW expansion (north half of alignment). Source: Dominion

Figure 1-4: Detail of proposed permanent and temporary structure locations with ROW expansion (south half of alignment). Source: Dominion

STRS.
1038/179, 34/179
1038/180, 34/178
1038/187, 34/171
1038/190, 34/168
1038/192, 34/166
1038/193, 34/165
1038/202, 34/156
1038/203, 34/155

Figure 1-5: Schematic of representative proposed structures (type 1). Source: Dominion Energy

STRS.
1038/181, 34/177
1038/182, 34/176
1038/183, 34/175
1038/184, 34/174
1038/185, 34/173
1038/186, 34/172
1038/191, 34/167
1038/194, 34/164
1038/195, 34/163
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1038/199, 34/159
1038/200, 34/158
1038/201, 34/157

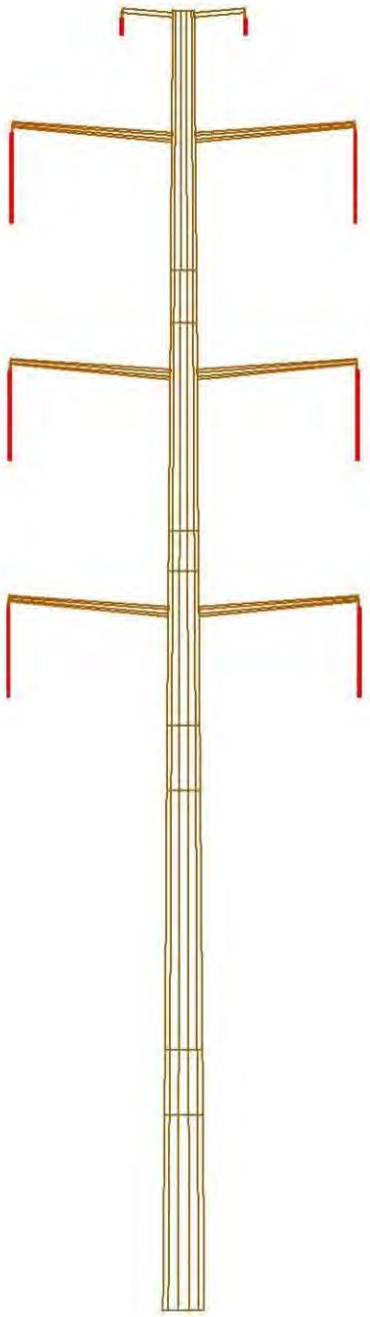

Figure 1-6: Schematic of representative proposed structures (type 2). Source: Dominion Energy

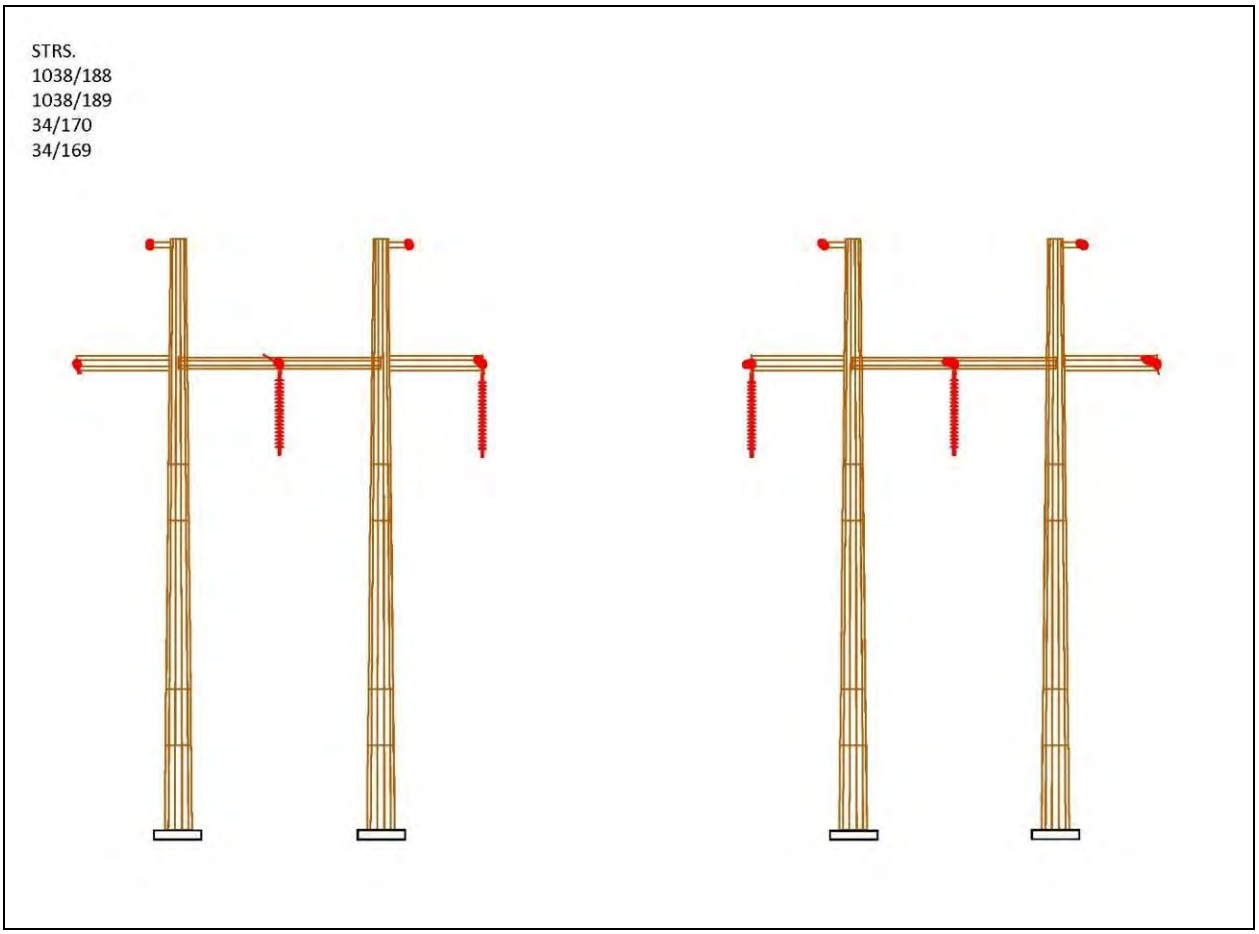

Figure 1-7: Schematic of representative proposed structures at reservoir crossing. Source: Dominion Energy

2. AREA OF POTENTIAL EFFECTS

The area of potential effect (APE) for the Fort Eustis Tap/ Line 34 Rebuild Project was established through coordination with permitting agencies and includes the entire 2.5-mile length of the transmission tap line to be rebuilt from the main Line #34 tap to the Fort Eustis substation.

For the purposes of this effort, the architectural survey area included properties located within one-half mile of the centerline of the alignment. However, architectural field survey was not conducted within the limits of Fort Eustis as the installation has completed recent survey coverage and all architectural resources built prior to 1974 within the project APE have been determined not eligible for listing in the NRHP.

The archaeological survey area includes a 100-foot buffer around proposed temporary and permanent transmission line structures, workspaces, access roads, and any other areas where ground-disturbing activities directly related to the project may take place; with survey limited to within the existing ROW or area or permanent ROW expansion. Previously recorded sites located within or adjacent to the ROW were also subject to study, regardless of proximity to transmission line structures. However, archaeological field survey was not conducted within the limits of Fort Eustis as the installation has complete prior cultural resource survey coverage and no archaeological sites are located within the ROW.

This survey methodology was outlined in *Research Design and Proposed Workplan to provide Phase I Cultural Resource Survey related to the Fort Eustis Tap/ Line 34 Rebuild Project in Newport News* (D+A May 2020) and was agreed upon by the Fort Eustis Cultural Resource Manager, as well as the VDHR.

The project APE and survey area is illustrated in Figure 2-1.

Figure 2-1: Project APE and survey area.

3. RESEARCH DESIGN

The Phase I cultural resource survey of the Fort Eustis Tap/ Line 34 Rebuild Project was undertaken in order to identify, evaluate, and make recommendations regarding NRHP eligibility and potential effects of and to those historic properties located within the project APE. The background research, field survey, and assessment methodologies are summarized below.

ARCHIVAL RESEARCH

D+A conducted pertinent literature review and background research to gain an understanding of existing data pertaining to the project area. The focus of the background search was to identify if any portions of the project APE have been previously surveyed and what level of documentation exists. To this end, the VDHR archives and VCRIS database were searched to identify all cultural resource studies and Phase I surveys previously conducted in the vicinity.

The search built upon the results of the background search to identify all properties greater than 50 years of age located within the project APE. To complete this review, D+A conducted additional review of the following documents and sources for information relative to unrecorded historic property locations in the survey area:

- City/County Tax Assessors records;
- USDA Historic Aerial Imagery;
- U.S. Geological Survey Topographic Maps;
- Previous historic resource survey documents
- Local historical society archives;
- Consultation with local informants and other professionals with intimate knowledge of the region; and
- Coordination with the Fort Eustis Cultural Resources Program

Per review of VCRIS records and coordination with Fort Eustis CRM, a base-wide survey of buildings and structures located at Fort Eustis built prior to 1975 was recently conducted and accepted by VDHR. As such, no further survey of buildings and structures within the base was necessary or performed as part of this effort. Additionally, those portions of the project area within the base have also been subject to prior archaeological survey, and therefore did not require additional archaeological field testing as part of this effort.

CONTEXT DEVELOPMENT

D+A conducted pertinent background research with the goal of establishing the appropriate historic contexts for the project area as defined by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* and the VDHR's *How to use Historic Contexts in Virginia: A Guide for Survey, Registration, Protection, and Treatment Projects* (VDHR 1992). Background investigations took place in local archival facilities, as well as the traditional state archival repositories. Research was undertaken at the VDHR, the Library of Virginia, the Virginia Historical Society, the City of Newport News, the Fort Eustis Cultural

Resources Program, and other repositories of archival materials deemed appropriate during the course of the project.

FIELD INVESTIGATIONS

Architectural Survey

Using information derived from the archives search and additional background research, a reconnaissance field survey was undertaken to identify and document all buildings, objects, structures, sites, and districts within the APE that are 50 years of age or older. Resources that have been surveyed and formally evaluated as not eligible for the NRHP by VDHR within the last 5 years, including those at Fort Eustis, will be noted, but not be re-surveyed or evaluated. Architectural resources outside of the base boundaries and within the half-mile APE were subject to survey and evaluation. Construction dates for resources were confirmed through a combination of archival research, property records search, map analysis, and field inspection.

For each identified resource, field forms were completed with information from site observations including a physical description with information such as relationship to adjacent buildings and structures, general condition, surrounding setting, description of exterior materials, identifiable architectural or structural treatments, and retention of historic physical integrity. Site plans depicting the built environment around each property were sketched. Each identified resource was marked on both USGS 7.5-Minute Quadrangle maps and current aerials photographs. Representative digital photographs were taken to document each property's existing conditions, setting, and secondary resources.

All field survey identification and documentation was conducted from public right-of-way and included exterior features only. In cases where a resource was not visible or accessible from the public ROW, the property was noted as such, and treated as potentially NRHP-eligible for the purposes of this effort. All field documentation was organized and labeled with a unique identification number. Previously recorded resources subject to survey were numbered using their existing VDHR ID# while newly recorded resources were assigned a field recorder number and assigned a unique ID# through coordination with the VDHR Architectural Survey Manager.

Archaeological Survey

Archaeological survey entailed a combination of pedestrian and systematic subsurface testing. Those portions of the project area ROW within the APE that have not been previously surveyed were subjected to a pedestrian survey, in order to document existing conditions and to note surface evidence of cultural activity or material and identify areas with the potential for intact subsurface archaeological resources. For any newly encountered archaeological resources identified during the reconnaissance, photographs were taken of the general vicinity and of any visible features. A field map was prepared showing feature locations, permanent landmarks, topographic and vegetation variation, as well as sources of disturbance. Sufficient information was included on the map to permit easy re-identification of the resources.

Systematic shovel testing was then conducted at the location of each proposed permanent and temporary structure within the APE, with shovel test placement avoided in areas with slopes in excess of 15 percent, and areas in statutory wetlands as delineated by United States Geological

Survey (USGS) soil survey maps, or water saturated soils at the time of the survey. Where terrain allowed, a total of six (6) shovel tests were excavated around each structure location in a cruciform pattern. These shovel tests included: a shovel test 15 meters (50 feet) up the ROW from the structure (labeled N1); a shovel test 30 meters (100 feet) up the ROW from the structure (N2); a shovel test 15 meters (50 feet) down the ROW from the structure (S1); a shovel test 30 meters (100 feet) down the ROW from the structure (S2), a shovel test 15 meters (50 feet) to the side of the structure (W1); and a shovel test 15 meters (50 feet) to the opposite side of the structure (E1). In instances where a proposed structure will be substantially moved from the existing structure location, a seventh shovel test was excavated at the center point of the proposed structure. In instances where the temporary structure and the permanent structure stand adjacent to each other, the shovel test pattern was amended to place the two northern and two southern shovel tests in the center of the ROW. Shovel tests on the east (E1) and west (W1) side of the ROW were excavated wherever possible. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented, or until the edge of the project area or ROW was met.

Systematic metal detection was conducted in all areas where subsurface disturbance is planned that is located within the core area of a Civil War battlefield as defined by the American Battlefield Protection Program (ABPP), as well as around any Civil War landscape features. Metal detection occured along transects spaced no farther apart than 7.5 meters (25 feet) with sweeps of 1 meter (3 feet) to either side of the transect. All positive metal detector hits were recorded and excavated; however, only cultural material greater than 50 years of age was retained.

For any archaeological resources identified during the survey, photographs were taken of the general vicinity and of any visible features. A field map was prepared showing site limits, feature locations, permanent landmarks, topographic and vegetational variation, sources of disturbance, and all surface and subsurface investigations. GPS coordinates for all identified site locations was recorded and sufficient information included on maps to permit easy relocation of sites. Notes were taken on surface and vegetational conditions, soil characteristics, dimensions and construction of features evident, and the amount and distribution of cultural materials present. All subsurface archaeological excavations were backfilled and returned to pre-survey conditions.

LABORATORY ANALYSIS

All artifacts generated in the course of the survey were provenienced in the field and recorded. Following fieldwork, the artifacts were transported to the D+A laboratory facilities where they were cleaned, sorted, and identified. After processing, all artifacts were inventoried using Microsoft Excel. A computer-printed artifact inventory of prehistoric and historic artifacts is included as an appendix to the report.

Identification of diagnostic artifacts was made by consulting existing comparative collections and available regional literature regarding artifact types. Artifacts were assigned dates through

the comparison of identified artifacts with other material culture classes having documented use-popularity patterns. Ceramics and glass provided primary chronological information. All artifacts were placed in polyethylene re-sealable storage bags and placed in acid free boxes suitable for permanent curation. At the conclusion of the study, arrangements will be made with the client regarding final deposition of the artifacts.

INVENTORY RECORD PREPARATION

All archaeological and architectural resources evaluated in the course of surveys were recorded on standard VDHR survey forms, entered into the VCRIS, and be accompanied by a topographic map showing the property location, a site map showing the location of all subsurface tests and/or surface resources, photographs, and an artifact inventory. Archaeological VCRIS site forms for any newly recorded sites are included as an appendix to this report.

ASSESSMENT OF EFFECTS

From each resource found to be eligible or potentially eligible for listing in the NRHP, an assessment was conducted to make recommendations regarding potential effects. Potential effects are based upon the resource's current integrity and the potential for the project to alter or diminish those qualities or characteristics which may qualify the property for listing in the NRHP. The assessment included a visual inspection and photograph of the intervening landscape, topography, and vegetation to make a recommendation as to the likelihood that any improvements related to the project may introduce effects to the resource. If deemed necessary, photo simulation modeling of proposed views from the resource was also conducted.

REPORT AND RECORD PREPARATION

Information from field survey was used in conjunction with background research and context development to assess each surveyed cultural resource for potential NRHP-eligibility. A results section was prepared that summarizes the field findings, assessment of significance and NRHP-eligibility. A separate chapter outlining the assessment of effects with relevant photographs and simulations was also prepared. The results of the study are accompanied by maps and photographs as appropriate and were synthesized and summarized in this report along with the research design, archives search, and cultural context. All research material and documentation generated by this project are on file at D+A's office in Midlothian, Virginia. VDHR site forms (Virginia Cultural Resources Information System (VCRIS)) were prepared or updated for each surveyed resource.

4. ENVIRONMENTAL CONTEXT

PHYSICAL DESCRIPTION AND LOCATION

The Fort Eustis Tap/ Line 34 Rebuild project consists of approximately 2.5 miles of existing transmission line ROW situated in Newport News, Virginia. The project area is located in the Tidewater physiographic region in Virginia on the lower neck between the York and James rivers. The alignment extends in a generally northeast-southwest orientation from the Line 34 mainline to the Fort Eustis substation. North of the Lee Hall Reservoir and I-64, the line traverses through and is bordered by undeveloped woodland within the Newport News Park. South of the interstate and reservoir, it crosses through a developed commercial area along Highway 60 and Fort Eustis. The ROW is currently cleared and grassy.

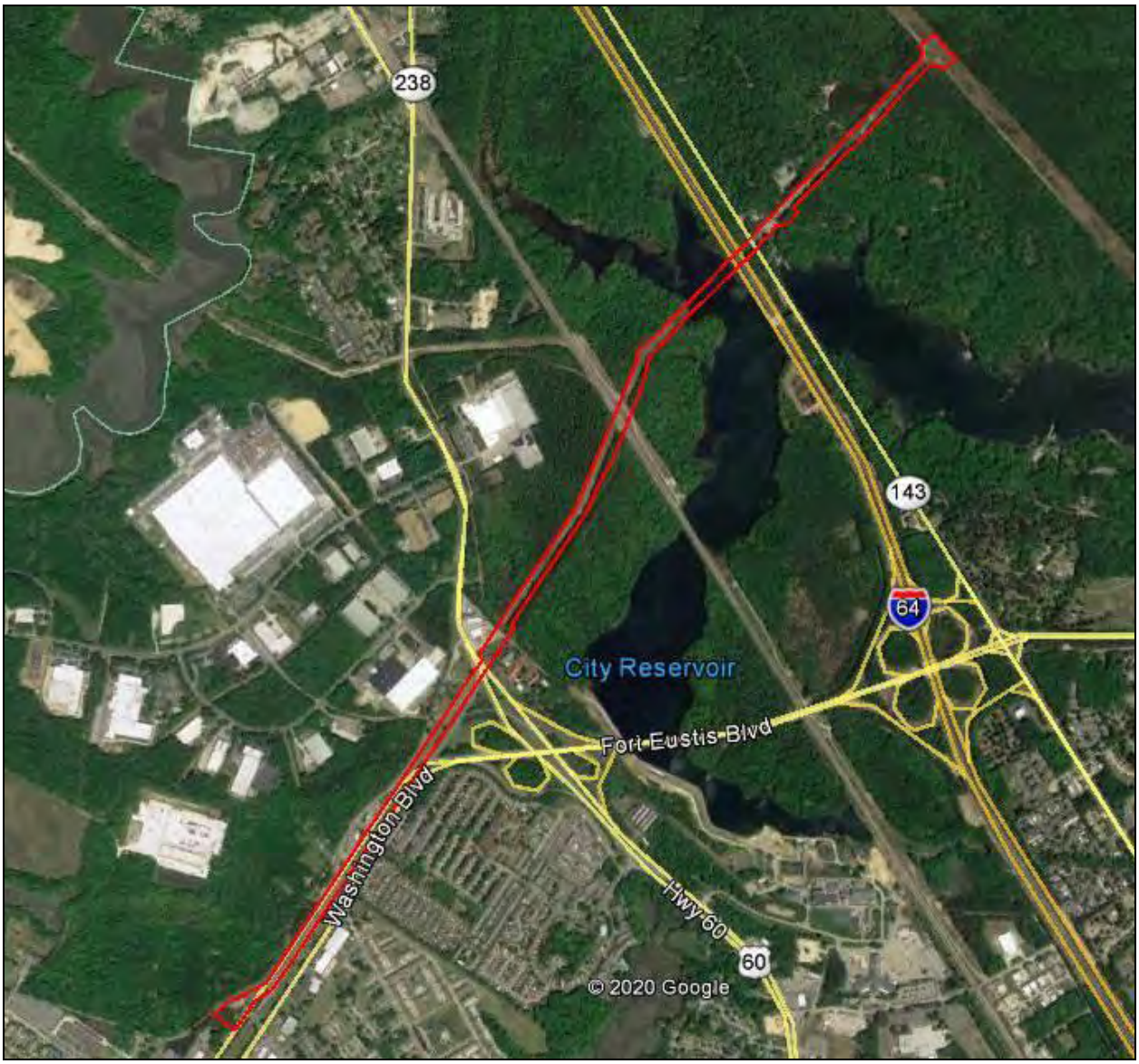

Figure 4-1: Aerial view of project area (shown in red).

GEOLOGY AND TOPOGRAPHY

The project area topography is mainly characterized by the gentle slopes and relatively flat terraces associated with the Coastal Plain physiographic region. One-hundred percent of the project area has between 0% and 6% slope. The elevation of the project area ranges from approximately 24 to 51 feet (7.3 to 15.5 meters) above mean sea level.

HYDROLOGY

The project area drains into Warwick River, Bailey Creek and Skiffes Creek, all which flow in to James River, which empties into the Chesapeake Bay before draining into the Atlantic Ocean.

PEDOLOGY

The project area is characterized by soils of the Coastal Plain region. Approximately 11.7% of the project area is considered poorly drained, ±4.1% is water, and ±51.9% urban land (Figure 4-2 and Table 4-1).

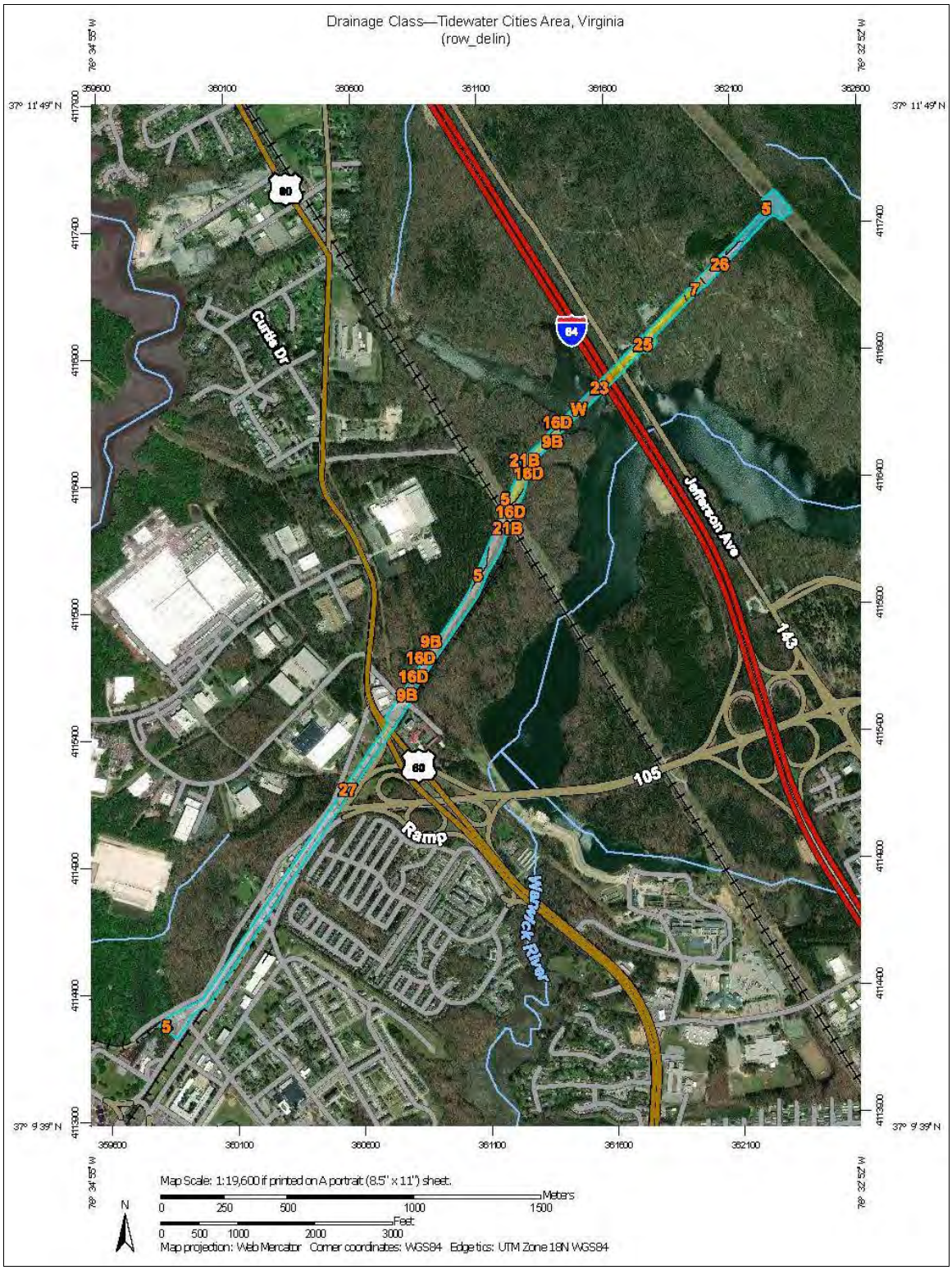

Figure 4-2: Soils map of project area showing soil types and representative slope. Source: NRCS 2020

Table 4-1: Soil types and percentages within the project area.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5	Bethera-Urban land complex, 0 to 2 percent slopes	Poorly drained	4.6	11.7%
7	Bojac-Urban land complex, 0 to 3 percent slopes	Well drained	0.9	2.2%
9B	Craven-Urban land complex, 2 to 6 percent slopes	Moderately well drained	0.1	0.3%
12	Johnston silt loam, 0 to 2 percent slopes, frequently flooded	Very poorly drained	0.0	0.0%
16D	Nevarc-Uchee complex, 15 to 50 percent slopes	Moderately well drained	1.8	4.6%
21B	Slagle-Urban land complex, 2 to 6 percent slopes	Moderately well drained	3.2	8.1%
23	Suffolk fine sandy loam, 2 to 6 percent slopes	Well drained	0.3	0.7%
25	Uchee loamy fine sand, 2 to 6 percent slopes	Well drained	4.7	11.8%
26	Udorthents-Dumps complex		1.8	4.5%
27	Urban land		20.6	51.9%
W	Water		1.6	4.1%
Totals for Area of Interest			**39.6**	**100.0%**

5. PREVIOUS INVESTIGATIONS

This section includes a summary of all the cultural resource management events that have taken place within the project area registered at VDHR through August 2020. It also lists all previously identified architectural resources and archaeological sites located within the project APE, as well as within one mile.

PREVIOUS SURVEYS RELEVANT TO THE PROJECT AREA

Research at the VDHR reveals that 51 surveys have been conducted within one mile of the project alignment. Of these, nine have crossed or included portions of the project ROW. These surveys include Phase I archaeological survey at a minimum, but many include architectural resources as well. Of particular note is the *Phase I Archeological Survey for Fort Eustis and Fort Story, Cities of Newport News and Virginia Beach, Virginia* (MAAR 1989). This comprehensive survey included the entire length of the project ROW within the fenced boundaries of Fort Eustis. Although not mapped in VCRIS or included in this query, a number of additional surveys have been conducted by Fort Eustis CRM staff within the installation boundaries, including a comprehensive, base-wide survey of all architectural resources built prior to 1974. Accordingly, the Fort Eustis CRM has stated that survey and evaluation of historic properties within the installation is considered complete at this time. A table of all previously conducted surveys that include portion of the ROW may be found in table 5-1 and a map with the locations of all surveys conducted within one mile may be found in Figure 5-1.

Table 5-1: Previously conducted Phase I surveys that included portions of the project ROW. Source: VCRIS

Report No.	Report Title	Author	Date
JC-083	Phase I Investigations of the Harwood's Mill Raw Water Pipeline Project in James City County, York County and the City of Newport News, Virginia	R. Christopher Goodwin and Associates, Inc.	1992
NK-032	A Phase I Archaeological Survey of Selected Areas within the Interstate 64 Peninsula Study from Interstate 664 in Hampton to Interstate 95 in Richmond, Virginia	Dovetail Cultural Resource Group, LLC	2012
NN-005	A Phase I Cultural Resource Evaluation of the Oakland Dairy Property, Newport News, Virginia	James Madison University (Archaeological Research Center/Laboratory)	1980
NN-020	Phase I Cultural Resources Survey of A Proposed Water Transmission Main For The City of Newport News, Virginia	Virginia Commonwealth University Archaeology Research Center	1991
NN-025	Phase I Archeological Survey for Fort Eustis and Fort Story, Cities of Newport News and Virginia Beach, Virginia	Mid-Atlantic Archaeological Research (MAAR) Associates, Inc.	1989
NN-085	Archaeological Surveys of the Proposed Building 2409 and Fort Eustis Entrance Connector Road and Lane Shift Project Areas, Fort Eustis, Virginia	Fort Eustis Cultural Resources (Joint Base Langley Eustis)	2010
NN-120	An Archaeological Survey of Approximately 7.0 Miles Associated with the Widening of Interstate 64 Between Jefferson Avenue and Mile Marker 248, Newport News, Virginia	Stantec Consulting Services	2014

Report No.	Report Title	Author	Date
NN-121	Supplemental Archaeological Survey of the Proposed Route 60 Relocation Project, James City County and the City of Newport News, Virginia	(College of) William and Mary Center for Archaeological Research	2013
YO-266	A Phase I Cultural Resources Survey of the Proposed Approximately 20.2-Mile Dominion Virginia Power Skiffes Creek to Whealton 230 kV Transmission Line, in James City and York Counties, and the Cities of Newport News and Hampton, Virginia	Cultural Resources, Inc.	2012
JC-083	Phase I Investigations of the Harwood's Mill Raw Water Pipeline Project in James City County, York County and the City of Newport News, Virginia	R. Christopher Goodwin and Associates, Inc.	1992
NK-032	A Phase I Archaeological Survey of Selected Areas within the Interstate 64 Peninsula Study from Interstate 664 in Hampton to Interstate 95 in Richmond, Virginia	Dovetail Cultural Resource Group, LLC	2012

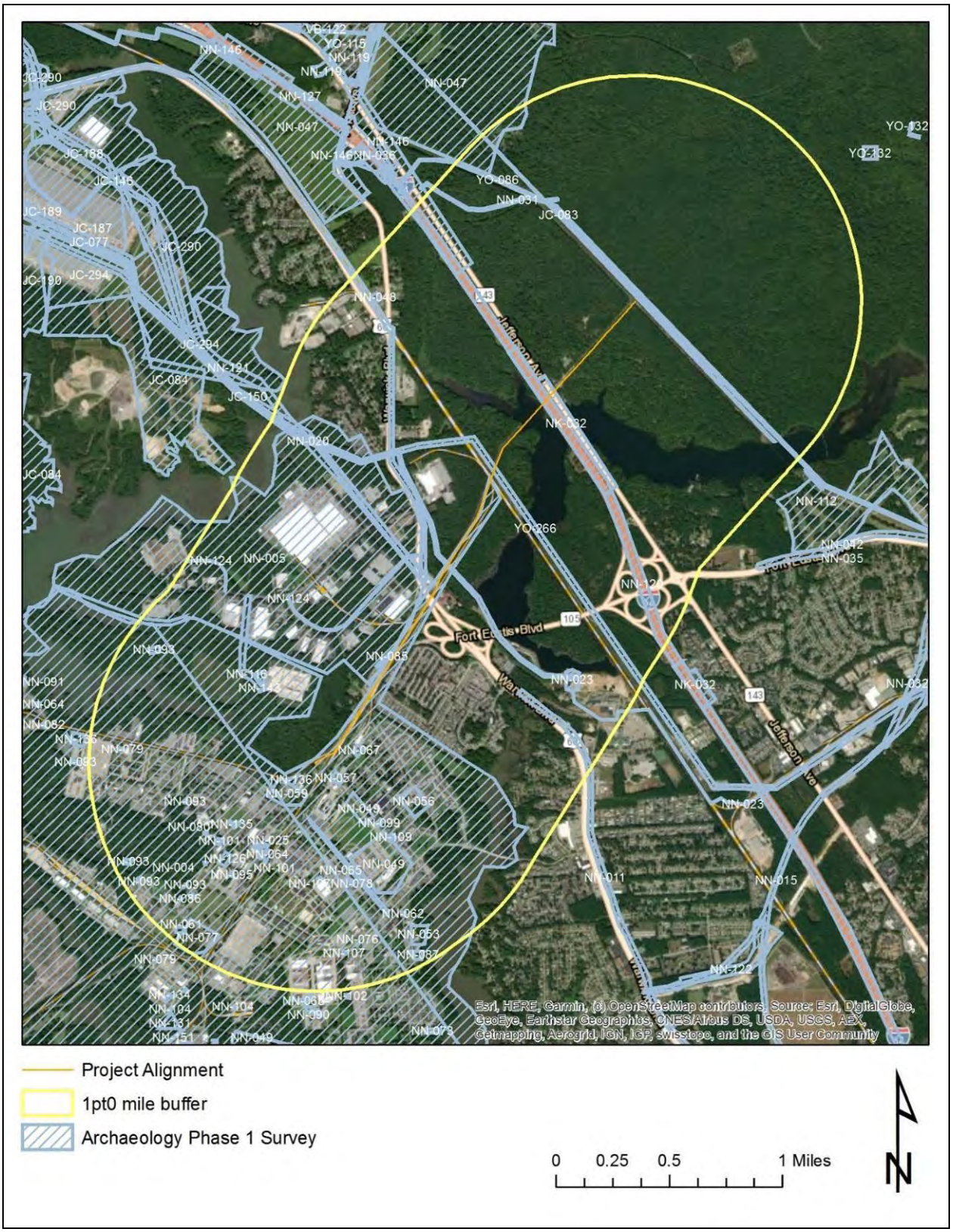

Figure 5-1: Location of previously conducted Phase I surveys within one mile of the project alignment. Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES WITHIN ONE MILE

There are 52 previously recorded archaeological sites located within one mile of the project alignment; of which one is located directly within the project ROW. The sites include prehistoric period camps and artifact scatters, as well as historic period domestic sites, a church and cemetery, military-related sites including earthworks, and refuse scatters. Three of these sites have been formally listed in the NRHP and VDHR has determined an additional four to be eligible for listing. VDHR has also determined five of the sites are not eligible for listing in the NRHP. The remaining sites have not been formally evaluated for eligibility.

Table 5-2 provides a list of all previously recorded archaeological sites located within one mile of the project alignment. A map illustrating the location of previously recorded sites within one mile is found in Figure 5-2.

Table 5-2: Previously identified archaeological sites located within 1.0 mile of the project area. Resources in bold have been determined to be potentially eligible or eligible for listing in the NRHP. Resources highlighted orange are located within the project ROW

VDHR ID#	Site Types	Temporal Association	NRHP Status
44NN0007	**Camp, Other, Wharf**	**Paleo-Indian (15000 - 8501 B.C.), Middle Archaic (6500 - 3001 B.C.), Late Archaic (3000 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.)**	**NRHP Listing, VLR Listing**
44NN0008	**Camp, Dwelling, multiple, Other**	**Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 17th Century (1600 - 1699), 18th Century (1700 - 1799), 19th Century (1800 - 1899)**	**NRHP Listing, VLR Listing**
44NN0009	Other	20th Century (1900 - 1999)	Not Evaluated
44NN0009	Other	20th Century (1900 - 1999)	Not Evaluated
44NN0009	Other	20th Century (1900 - 1999)	Not Evaluated
44NN0009	Other	20th Century (1900 - 1999)	Not Evaluated
44NN0010	**Earthworks, Other**	**19th Century: 3rd quarter (1850 - 1874)**	**NRHP Listing, VLR Listing**
44NN0045	Dwelling, single	No Data	Not Evaluated
44NN0052	Camp, temporary	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44NN0053	No Data	No Data	Not Evaluated
44NN0058	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44NN0059	Camp	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44NN0060	**Trash scatter**	**Woodland (1200 B.C. - 1606 A.D.), 20th Century (1900 - 1999)**	**DHR Staff: Potentially Eligible**
44NN0061	Camp, Earthworks	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44NN0062	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44NN0063	Camp, temporary, Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 18th Century (1700 - 1799)	Not Evaluated
44NN0064	Earthworks	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44NN0064	Earthworks	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44NN0064	Earthworks	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44NN0091	**Camp, temporary**	**Early Woodland (1200 B.C.E - 299 C.E)**	**DHR Evaluation Committee: Eligible**
44NN0096	Camp	Pre-Contact	Not Evaluated
44NN0098	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated

VDHR ID#	Site Types	Temporal Association	NRHP Status
44NN0099	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44NN0115	Earthworks	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44NN0155	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44NN0156	Earthworks, Fort	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44NN0161	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44NN0164	Camp	Late Archaic (3000 - 1201 B.C.), 18th Century (1700 - 1799)	Not Evaluated
44NN0171	Trash pit	No Data	Not Evaluated
44NN0172	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44NN0173	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44NN0174	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 19th Century (1800 - 1899)	Not Evaluated
44NN0175	Camp	Pre-Contact	Not Evaluated
44NN0176	Cemetery, Church	17th Century: 2nd/3rd quarter (1625 - 1674), 19th Century: 2nd quarter (1825 - 1849)	Not Evaluated
44NN0177	Camp	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44NN0178	Dwelling, single	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829)	Not Evaluated
44NN0179	Artifact scatter, Camp	Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606), Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)	Not Evaluated
44NN0180	No Data	19th Century: 2nd half (1850 - 1899), 20th Century: 1st quarter (1900 - 1924)	Not Evaluated
44NN0279	Camp, temporary, Cemetery	20th Century: 1st half (1900 - 1949)	Not Evaluated
44NN0285	Other	20th Century (1900 - 1999)	DHR Staff: Not Eligible
44NN0286	Trash scatter	20th Century (1900 - 1999)	DHR Staff: Not Eligible
44NN0287	**Earthworks**	**19th Century: 3rd quarter (1850 - 1874)**	**DHR Staff: Eligible**
44NN0316	Municipal building, Well	20th Century: 1st quarter (1900 - 1924)	Not Evaluated
44NN0317	Camp, temporary	Early Woodland (1200 B.C. - 299 A.D.)	Not Evaluated
44NN0343	Military camp	19th Century: 2nd/3rd quarter (1825 - 1874)	DHR Staff: Not Eligible
44NN0344	Camp, temporary, Other	Archaic (8500 - 1201 B.C.), 19th Century (1800 - 1899), 20th Century (1900 - 1999)	DHR Staff: Not Eligible
44NN0345	Camp, temporary, Ice house	Archaic (8500 - 1201 B.C.), 19th Century (1800 - 1899)	Not Evaluated
44NN0346	Trash scatter	20th Century (1900 - 1999)	DHR Staff: Not Eligible
44YO0115	Other	18th Century (1700 - 1799)	Not Evaluated
44YO0116	Earthworks	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44YO0163	**No Data**	**No Data**	**DHR Staff: Eligible**
44YO0287	No Data	18th Century (1700 - 1799)	Not Evaluated

Figure 5-2: Map detailing all previously identified archaeological resources within 1.0 mile of the project alignment. Source: VCRIS

PREVIOUSLY IDENTIFIED ARCHITECTURAL RESOURCES WITHIN ONE MILE

There are 115 previously recorded architectural resources located within one mile of the project area; of which five are located within the project ROW. These resources range in age from the seventeenth through twentieth century and include single dwellings, farms, commercial buildings, churches and cemeteries, railroads, bridges, a reservoir, and Civil War battlefields. Of these, five have been formally listed in the NRHP and an additional three have been determined eligible or potentially eligible for listing by the VDHR. An additional ten have been determined not eligible listing in the NRHP by the VDHR and the remaining resources have not been formally evaluated (Note that although the individual buildings and structures within Fort Eustis are listed as "Not Evaluated", they were noted as not eligible as part of the base-wide *Architectural Survey at Joint Base Langley-Eustis of Fort Eustis Buildings and Structures Built 1946-1975 (ERDC-CERL Report Number SR-15-37), December 2015*.

A list of all previously recorded architectural resources within one mile of the project alignment is included in Table 5-3. A map illustrating the location of previously recorded resources in relation to the project area is included in Figure 5-3.

Table 5-3: Previously identified architectural resources located within 1.0 mile of the project area. Resources in bold are listed in the NRHP or have been determined eligible or potentially eligible for listing in the NRHP. Resources highlighted orange are located directly within the project ROW.

VDHR ID#	Resource Name	Type	Year	NRHP Status
099-5282	**Battle of Fort Magruder (Historic), Battle of Williamsburg (Historic/Current)**	**Battlefield**	**1862**	**DHR Staff: Potentially Eligible**
099-5283	**Battle of Yorktown (Historic/Location)**	**Battlefield**	**1862**	**DHR Staff: Potentially Eligible**
121-0010	Mulberry Island Church Site (Historic)	Archaeological Site	1660Ca	Not Evaluated
121-0014	**Lee Hall Depot (Historic/Current), Lee Hall Railroad Station (Historic/Current), Lee Hall Train Depot (Current), 9 Elmhurst Street**	**Rail Depot**	**1881Ca**	**NRHP Listing, VLR Listing**
121-0024	Reservoir Railroad Stop (Historic/Current)	Rail Depot	1900Ca	DHR Staff: Not Eligible
121-0025	Lee's Mill Site (Current)	Archaeological Site	1892Ca	Not Evaluated
121-0041	**Oakland Farm Industrial Park Multiple Resource Area (NRHP Listing)**	**Archaeological Site**	**1600Ca**	**NRHP Listing, VLR Listing; Easement**
121-0050	**Lee's Mill Earthworks (Historic/Current), Mill Tract (Historic), 280 Rivers Ridge Circle**	**Earthworks**	**1862Ca**	**NRHP Listing, VLR Listing**
121-0060	**Dam No. One Battlefield Site (NRHP Listing), Lee's Mill Battlefield (Historic/Current), Newport News Park (Historic), 13560 Jefferson Avenue**	**Battlefield**	**1862**	**NRHP Listing, VLR Listing**

VDHR ID#	Resource Name	Type	Year	NRHP Status
121-0105	Fort Eustis Historic District (Current)	Historic District	No Data	DHR Staff: Not Eligible
121-5029	Lee Hall Furniture Store (Current), 17445 Warrick Boulevard	Commercial Building	1940Ca	Not Evaluated
121-5030	Flemmings Store (Historic), 17432 Warrick Boulevard	Commercial Building	1920	Not Evaluated
121-5031	**Boxwood Inn (Current), Simon Read Curtis House (Historic/Current), Simon Reid Curtis House (Historic/Current), 10 Elmhurst Street**	**Single Dwelling**	**1896**	**NRHP Listing, VLR Listing**
121-5032	Ronald E. Goff House (Current), 16 Yorktown Road	Single Dwelling	1930Ca	Not Evaluated
121-5033	Terry Lee Scott Property (Current), 18 Yorktown Road	Single Dwelling	1920Ca	Not Evaluated
121-5034	Lawrence J. Hanbury House (Current), 17385 Warrick Boulevard	Single Dwelling	1896	Not Evaluated
121-5035	Ruby R. Hogge House (Current), 17377 Warwick Boulevard	Single Dwelling	1941	Not Evaluated
121-5036	Ruby R. Hogge House #2 (Current), 17373 Warwick Boulevard	Single Dwelling	1932	Not Evaluated
121-5037	Everett L Davis House (Current), 17363 Warwick Boulevard	Single Dwelling	1950Ca	Not Evaluated
121-5038	Charles T. Hall House (Current), 17355 Warwick Boulevard	Single Dwelling	1916	Not Evaluated
121-5039	Terrance K. Martin House (Current), 17349 Warwick Boulevard	Single Dwelling	1914	Not Evaluated
121-5040	Guy C. Ellis House (Current), 17345 Warwick Boulevard	Single Dwelling	1950Ca	Not Evaluated
121-5041	Nancy B. Kelly House (Current), 17343 Warwick Boulevard	Single Dwelling	1950Ca	Not Evaluated
121-5042	Robert L. Janney House (Current), 17341 Warwick Boulevard	Single Dwelling	1950Ca	Not Evaluated
121-5043	Jeanett Parker House (Current), 17249 Warwick Boulevard	Single Dwelling	1950Ca	Not Evaluated
121-5044	Weldon M. Myers Building (Current), 22 Yorktown Road	Commercial Building	1919	Not Evaluated
121-5045	Rada J. Glenn Building (Current), 17440 Warwick Boulevard	Commercial Building	1945	Not Evaluated
121-5046	Stella Ripley Waltrip House (Current), 334 O'Hara Lane	Single Dwelling	1950Ca	Not Evaluated
121-5047	Kenneth Stevens House (Current), 324 O'Hara Lane	Single Dwelling	1950Ca	Not Evaluated
121-5048	Jose Ortiz House (Current), 318 O'Hara Lane	Single Dwelling	1950Ca	Not Evaluated
121-5049	Ripley's General Store (Current), 42 Yorktown Road	Commercial Building	1920Ca	Not Evaluated
121-5050	Dianne R. Burcher House (Current), 108 Elmhust Street	Single Dwelling	1925Ca	Not Evaluated

VDHR ID#	Resource Name	Type	Year	NRHP Status
121-5051	Barbara E. Patrick Property (Current), Old Bell Atlantic Telephone Building (Historic), 118 Elmhust Street	Commercial Building	1950Ca	Not Evaluated
121-5052	Marshall E. Davidson House (Current), 48 Yorktown Road	Single Dwelling	1950Ca	Not Evaluated
121-5053	Bear Hut Farm (Current Name), Thomas Huddleston House (Historic), 66 Yorktown Road	Single Dwelling	1913	Not Evaluated
121-5054	Myron W. Pulley House (Current), 63 Yorktown Road	Single Dwelling	1926	Not Evaluated
121-5055	E. M. and Thomas Hoover House (Current), 57 Yorktown Road	Single Dwelling	1916	Not Evaluated
121-5056	Phillip Glenn Sweat House (Current), 53 Yorktown Road	Single Dwelling	1920Ca	Not Evaluated
121-5057	Domestic Industries Building (Current), 17439 Warwick Boulevard	Commercial Building	1945	Not Evaluated
121-5058	Joseph Davenport House (Current), 14 Curtis Drive	Single Dwelling	1950Ca	Not Evaluated
121-5059	Gregory and Thomas Lewellen House (Current), 8 Curtis Drive	Single Dwelling	1940Ca	Not Evaluated
121-5068	**Lee Hall (Village of) Historic District (Historic/Current), Village of Lee Hall Historic District (Current Name)**	**Historic District**	**1881Ca**	**DHR Staff: Potentially Eligible**
121-5088	Bridge #1814, Fort Eustis Blvd (Route 105), spanning CSX Railroad (Function/Location), Fort Eustis Boulevard	Bridge	1959	DHR Staff: Not Eligible
121-5089	Anderson Field House (Historic/Current), Building 643 (Current), 643 Dickman Street	Military Related	1958	Not Evaluated
121-5102	Industrial Building, Reservoir Circle (Function/Location)	Industrial Building	1950Ca	DHR Staff: Not Eligible
121-5107	Boiler House, 801 Lee Avenue (Function/Location), Building #801 Fort Eustis (Current)	Military Related	1953	DHR Staff: Not Eligible
121-5110	Spillway, north of Fort Eustis Boulevard (Function/Location), Upper spillway of Lee Hall Reservoir (Descriptive)	Spillway	1965Ca	DHR Staff: Not Eligible
121-5111	Lee Hall Reservoir (Historic/Current)	Reservoir	1892Ca	DHR Staff: Not Eligible
121-5112	CSX Railroad bridge, spanning Lee Hall Reservoir (Function/Location)	Bridge	1955Ca	DHR Staff: Not Eligible
121-5113	Bridge, spanning Fort Eustis Boulevard (Function/Location)	Bridge	1960Ca	DHR Staff: Not Eligible
121-5114	Newport News Waterworks Complex (Current)	Industrial Facility	2000Ca	DHR Staff: Not Eligible
121-5134	**Chesapeake and Ohio Railroad (Historic), CSX Railroad (Current Name)**	**Railroad Corridor**	**1881Ca**	**DHR Staff: Eligible**

VDHR ID#	Resource Name	Type	Year	NRHP Status
121-5330	Building 1, Flagpole (Current Name), Washington Boulevard	Military Related	1962	Not Evaluated
121-5331	Building 5, Water Support Facility (Current Name), Washington Boulevard	Military Related	1951	Not Evaluated
121-5332	Building 210, Heilman Hall, Post Headquarters Building (Current Name), Washington Boulevard and Dillon Circle	Military Related	1962	Not Evaluated
121-5333	Building 215, Miscellaneous Recreation Building (Wives Club) (Current Name), Calhoun Street	Military Related	1953	Not Evaluated
121-5334	Building 233, Installations Operations Center, Headquarters Wing (Current Name), Washington Boulevard and Dillon Circle	Military Related	1959	Not Evaluated
121-5335	Building 250, Electric Power Building (Current Name), Washington Boulevard	Military Related	1975	Not Evaluated
121-5336	Building 300, U.S. Army Transportation Museum (Current Name), Washington Boulevard	Military Related	1975	Not Evaluated
121-5347	Building 515, Clinic/Social Service (Current Name), O-Dwyer Barracks/Enlisted Women's Barracks without Mess (Historic), Sternberg Avenue	Military Related	1962	Not Evaluated
121-5348	Building 576, McDonald Army Health (Current Name), Hospital (Historic), Jefferson Avenue and Heiner Place	Military Related	1962	Not Evaluated
121-5349	Building 586, A/C Central Plant (Current Name), Jefferson Avenue and Heiner Place	Military Related	1962	Not Evaluated
121-5350	Building 601, Consolidated Support Center/Headquarters Group (Current Name), Open Mess, Non-Commissioned Officers (Historic), Washington Boulevard and Hines Circle	Military Related	1958	Not Evaluated
121-5351	Building 605, Bus Shelter (Current Name), Washington Boulevard	Military Related	1969	Not Evaluated
121-5352	Auditorium General Purpose (Historic), Building 647, Jacobs Theater (Current Name), Monroe Avenue	Military Related	1968	Not Evaluated
121-5353	Building 652, Warehouse Supply & Equipment Base (Current Name), Jackson Avenue	Military Related	1946	Not Evaluated
121-5354	Building 653, Warehouse Supply & Equipment Base (Current Name), Jackson Avenue	Military Related	1946	Not Evaluated

VDHR ID#	Resource Name	Type	Year	NRHP Status
121-5355	Building 655, Plant Printing (Current Name), Washington Boulevard	Military Related	1949	Not Evaluated
121-5356	Building 656, Warehouse Supply & Equipment Base (Current Name), Washington Boulevard	Military Related	1949	Not Evaluated
121-5357	Building 657, Warehouse Supply & Equipment Base (Current Name), Washington Boulevard	Military Related	1949	Not Evaluated
121-5358	Building 660, H/Shop Automotive (Current Name), Jackson Avenue and Monroe Avenue	Military Related	1974	Not Evaluated
121-5359	Building 667, Communications Facility (Current Name), Monroe Avenue and Darcy Place	Military Related	1962	Not Evaluated
121-5360	Buidling 669, Tignor Dental Clinic (Current Name), Monroe Avenue and Jackson Avenue	Military Related	1964	Not Evaluated
121-5361	Building 670, Civilian Advisory Center (CPAC) (Current Name), Communication Facility (Historic), Calhoun Street and Lee Boulevard	Military Related	1967	Not Evaluated
121-5362	Building 675, Bowling Center (Current Name), Dickman Street and Jackson Ave	Military Related	1962	Not Evaluated
121-5363	Building 806, 10th Battalion Motor Pool (Current Name), Vehicle Maintenance Shop (Historic), Lee Boulevard and Lucas Place	Military Related	1952	Not Evaluated
121-5364	Building 816, 7th Group Motor Pool (Current Name), Vehicle Maintenance Shop (Historic), Monroe Avenue and Lucas Place	Military Related	1952	Not Evaluated
121-5365	Building 821, Company Headquarters Building/7th Group Administration Group (Current Name), Monroe Avenue and Lucas Place	Military Related	1964	Not Evaluated
121-5366	Building 823, Company Headquarters/6th Transportation Battalion Headquarters (Current Name), Monroe Avenue	Military Related	1957	Not Evaluated
121-5367	Building 824, Exchange Service Outlet (Current Name), Monroe Avenue and Cameron Place	Military Related	1956	Not Evaluated
121-5368	Building 825, 7th Sustainment Headquarters/Brigade Headquarters (Current Name), Monroe Avenue and Kells Drive	Military Related	1953	Not Evaluated

VDHR ID#	Resource Name	Type	Year	NRHP Status
121-5369	Building 826, 10th Transportation Battalion Headquarters (Current Name), Company Headquarters (Historic), Monroe Avenue and Lucas Place	Military Related	1957	Not Evaluated
121-5370	Building 829, Base Engineering Administration (Current Name), Classroom (Historic), Monroe Avenue and Ballou Place	Military Related	1958	Not Evaluated
121-5371	Battalion Classroom Building (Historic), Building 830, Air Education Training Command (AETC) Technical Training Support (Current Name), Monroe Avenue and Lucas Place	Military Related	1958	Not Evaluated
121-5372	Battalion Classroom (Historic), Building 831, Air Education Training Command (AETC) Technical Training Support (Current Name), Monroe Avenue and Lucas Place	Military Related	1958	Not Evaluated
121-5373	Building 832, General Storage (Current Name), Monroe Avenue and Lucas Place	Military Related	1969	Not Evaluated
121-5374	Battalion Classroom (Historic), Building 833, Cadet Social Center (Current Name), Monroe Avenue and Anderson Place	Military Related	1958	Not Evaluated
121-5375	Building 923, Chapel (Current Name), Madison Avenue, Lee Boulevard and Donnelson Place	Military Related	1962	Not Evaluated
121-5376	Building 925, Child Development Center (Current Name), Madison Avenue and Pershing Avenue	Military Related	1967	Not Evaluated
121-5377	Battalion Classroom (Historic), Building 1005, Chapel Base (Current Name), Monroe Avenue and Schultz Place	Military Related	1969	Not Evaluated
121-5378	Battalion Headquarters (Historic), Building 1006, 71st Transportation Battalion (Current Name), Monroe Avenue and Schultz Place	Military Related	1962	Not Evaluated
121-5379	Building 1012, Company Headquarters/597th Transport Administration (Current Name), Regiment Headquarters Building (Historic), Monroe Avenue and Schultz Place	Military Related	1969	Not Evaluated
121-5380	Battalion Headquarters Building (Historic), Building 1013, Company Headquarters/597th Transport Administration (Current Name), Monroe Avenue and Schultz Place	Military Related	1969	Not Evaluated

VDHR ID#	Resource Name	Type	Year	NRHP Status
121-5381	Building 1028, Applied Instruction Building/Emergency Operations Center (Current Name), Monroe Avenue and Schultz Place	Military Related	1954	Not Evaluated
121-5382	Building 1031, Training Mock-Ups (Current Name), Monroe Avenue and Schultz Place	Military Related	1957	Not Evaluated
121-5385	Building 1313, Groninger Library (Current Name), Library/1300 Block (Historic), Hines Circle	Military Related	1968	Not Evaluated
121-5386	Building 1377, Exchange Service Outlet/Washeteria (Current Name), Post Exchange (PX) Washeteria (Historic), Jackson Ave and 13th ST	Military Related	1970	Not Evaluated
121-5387	Building 1380, Post Exchange (PX) Service Station (Current Name), Gas Station (Historic), Washington Boulevard and Jackson Avenue	Military Related	1970	Not Evaluated
121-5388	Building 1387, Communications Facility (Current Name), Telephone Exchange Building (Historic), Jackson Avenue and 13th ST	Military Related	1959	Not Evaluated
121-5398	Building 1527, Post Exchange (PX) Service Outlet (Current Name), Jackson Avenue and 12th ST	Military Related	1960Ca	Not Evaluated
121-5421	Building 2504, Vehicle Service Rack (Current Name), Madison Avenue and Jackson Avenue	Military Related	1953	Not Evaluated
121-5422	Building 2701, Heating Plant/2700 Block (Current Name), Marshall Street and Washington Boulevard	Military Related	1956	Not Evaluated
121-5423	Building 2702, Vehicle Maintenance Shop (Current Name), Marshall Street and Washington Boulevard	Military Related	1954	Not Evaluated
121-5424	Building 2703, Inflammable Materials Storehouse (Current Name), Hazard Storage Base (Historic), Marshall Street and Washington Boulevard	Military Related	1954	Not Evaluated
121-5425	Building 2713, Sewage Building/2700 Block (Current Name), Madison Avenue and McMahon Street	Military Related	1952	Not Evaluated
121-5426	Building 2714, Shed Supply & Equipment Base (Current Name), Storage Facility/2700 Block (Historic), Madison Avenue and Bullard Street	Military Related	1952	Not Evaluated

VDHR ID#	Resource Name	Type	Year	NRHP Status
121-5427	Building 2730, Technical Training Classroom (Current Name), General Instruction Building/2700 Block (Historic), Madison Avenue and Harrison Loop	Military Related	1967	Not Evaluated
121-5429	Building 2734, Hazardous Material Storage (Current Name), Washington Boulevard	Military Related	1954	Not Evaluated
121-5430	Building 2735, Dispatch Building (Current Name), Washington Boulevard	Military Related	1953	Not Evaluated
121-5431	Building 2739, Company Headquarters Building (Current Name), Harrison Loop and Madison Avenue	Military Related	1967	Not Evaluated
121-5432	Building 2741, General Storage Building (Current Name), Filling Station Building (Historic), Washington Boulevard	Military Related	1953	Not Evaluated
121-5435	Building 2746, Northern Region Contract Center (Current Name), Harrison Loop	Military Related	1967	Not Evaluated
121-5439	Building 2751, Multipurpose Recreation Building (Current Name), Marshall Street and Madison Avenue	Military Related	1967	Not Evaluated
121-5440	Building 2783, Administration General Purpose 2700 Block (Current Name), Harrison Loop and Madison Avenue	Military Related	1967	Not Evaluated
121-5441	Building 2788, Vet Facility 2700 Block (Current Name), Harrison Loop and Madison Avenue	Military Related	1967	Not Evaluated

Figure 5-3: Map detailing all previously recorded architectural resources within 1.0 mile (navy) of the project alignment. Source: VCRIS

NPS AMERICAN BATTLEFIELD PROTECTION PROGRAM (ABPP)

Because portions of two battlefields extend within one mile of the project area, the NPS ABPP records and maps prepared by the Civil War Sites Advisory Commission (CWSAC) were reviewed to note the existing conditions and integrity, as well as recommendation of NRHP-eligibility.

As defined by the ABPP in 2009, battlefields may be divided into three tiers that correlate to both the historic association and the current level of integrity and preservation. The battlefield ***study area*** represents the historic extent of the battle as it unfolded upon the landscape; the battlefield ***core area*** represents the areas of fighting on the battlefield and typically includes the areas of greatest importance to understanding the events of the battle; and the ***potential National Register boundaries*** encompass the area that remains reasonably intact and warrant preservation.

This review revealed that the portions of the study area, core area, and potential National Register areas of the Yorktown Battlefield and portions of the study area of the Williamsburg Battlefield are within one mile of the project area (Figure 5-4).

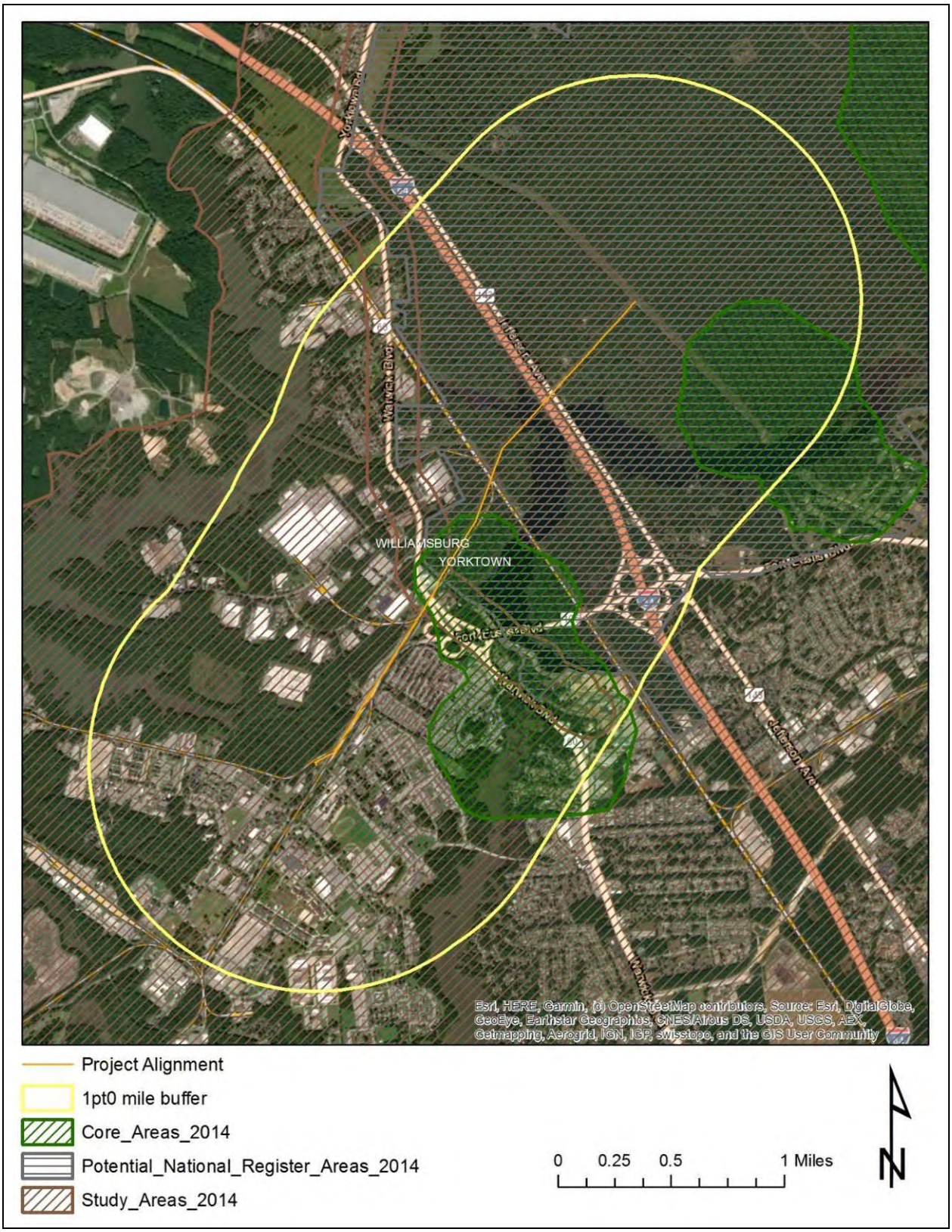

Figure 5-4: Battlefields within 1-mile of the project area. Source: VCRIS/ American Battlefield Protection Program (ABPP)

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6. CULTURAL CONTEXT

The following section provides a brief summary of the general overarching regional prehistoric and historic themes relevant to Virginia, Warwick County, and the City of Newport News. The primary emphasis of this context focuses on the anthropological and material culture trends in prehistory and history, and describes how people throughout time could have left their archaeological mark on the landscape of the project area specifically. Prehistoric and historic occupation statistics and trends were analyzed, as were historic maps and available first-hand accounts which aided in establishing the appropriate cultural context for the project area as defined by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* and the Virginia Department of Historic Resources' *How to use Historic Contexts in Virginia: A Guide for Survey, Registration, Protection, and Treatment Projects* (VDHR 2017).

PALEOINDIAN PERIOD (PRIOR TO 8000 B.C.)

Though still controversial, recent archaeological findings at sites such as Cactus Hill (VDHR #44SX0202) located along the Nottoway River in Sussex County, Virginia, have challenged the traditional "Clovis first" explanation of the people of North America and pushed back the likely arrival of humans in the region. At these sites, archaeologists have recovered cultural contexts underlying Clovis-era strata, and have conducted C-14 tests indicating that the first paleoindians arrived in the southeast of North America between 15,000 and 11,000 years ago (McAvoy and McAvoy 1997).

These pre-Clovis arrivals and later paleoindian populations encountered an ice-age environment when sea levels were approximately 230 feet below their present-day level (Anderson el al. 1996: 3). The Laurentide Ice Sheet covered much of northern North America, lowering temperatures in the region and creating an ideal environment for a boreal forest (Delcourt and Delcourt 1981). Paleoindians apparently survived in this environment through opportunistic hunting and gathering of smaller mammals, fish, and wild plants (Anderson 2001). Seasonably mobile, these Paleoindians utilized different food sources at different times of the year, an extensive subsistence pattern that required a large territory.

Accordingly, the Paleoindians may have maintained a central base camp located either in a diverse ecozone where flora and fauna were easily procured or near lithic sources that contained cryptocrystalline stone. Wider ranging satellite camps would then have been seasonally occupied to exploit other natural resources, be they lithic material, flora, or fauna (Anderson et al 1996; Daniel 1996; Binford 1980). Most Paleoindian sites are small and scattered, suggesting that the groups lived in small familial bands distributed across the landscape. The lack of status items among their archaeological remains suggests that these groups recognized little differentiation in status, and probably employed an egalitarian social structure. Ethnographic analogies suggest that Paleoindians might have maintained this rough equality by shunning aspiring leaders, and methods of property redistribution.

The Paleoindians relied upon durable and easily-shaped cryptocrystalline materials such as chert and jasper for their tools. They fashioned these rocks into a variety of instruments, among which

were scrapers, gravers, and adzes. Paleoindian projectile points tended to be fluted and bifacially sharpened. Due to time and rising sea levels, many Paleoindian material culture finds are limited to isolated projectile points. Researchers differentiate the Paleoindian Period into three smaller periods reflecting changes in the morphology of projectile points. These periods include the Early Paleoindian (9500-9000 B.C.), the Middle Paleoindian (9000-8500 B.C.), and the Late Paleoindian (8500-8000 B.C.).

During the Early Paleoindian, Paleoindians produced large fluted Clovis points, a style widespread throughout North America, which could be affixed to a spear shaft. Sites from this period are found throughout the eastern seaboard in very low densities. Regions depicting greater concentrations of these sites are in Tennessee, the Cumberland and Ohio River Valley, western South Carolina, the northern Piedmont of North Carolina, and southern Virginia (Anderson 1990:164-71; Daniel 1996; Ward and Davis 1999).

The Middle Paleoindian saw a modification of Clovis points, such as the disappearance of the fluting in some cases and the addition of "ears" at the base of the point. The appearance of these new types, such as the Cumberland, Simpson, Clovis variants, and Suwanee points, might reflect changes in subsistence patterns as the result of rising global temperatures. During this time, it is theorized that American Indians began to radiate out from their previous range of occupation to exploit resources from more distant environments (Anderson 1990; Anderson et al. 1996; Ward and Davis 1999:31).

Changes to the projectile points intensified during the final centuries of the Paleoindian Period resulting in an increased number of changes in projectile point morphology. The Dalton and Hardaway types and other variants allowed late Paleoindian peoples to hunt new species.

The Paleoindian's scattered settlement pattern and simple culture contribute to the limited number of associated sites in the region, fewer than 75 sites have been identified in present-day Virginia and only 25 have been positively identified in the entire Chesapeake (Turner 1989; Dent 1995). Those Paleoindian sites that have been located tend to be quarry sites, which groups frequently visited and areas where several bands gathered (Meltzer 1988; McAvoy 1992). Many sites were likely destroyed when warming global temperatures melted the glaciers and inundated the low-lying Paleoindian settlements.

ARCHAIC PERIOD (8000 TO 1200 B.C.)

Dramatic climatic changes beginning about 10,000 years ago prompted a reconfiguration of prehistoric people's subsistence strategies and social organization. Specifically, global temperatures began rising with the dawn of the Holocene geological period, simultaneously shrinking the glaciers and raising sea levels. In North America, the Laurentide Ice Sheet gradually receded northward, making the southeastern portion of the modern-day United States warmer and drier. The boreal forest of the Pleistocene era slowly gave way to a mixed conifer and northern hardwood forest. The area began to assume its modern-day climate and floral and faunal species. This warming also resulted in dramatic hydrological changes for coastal Virginia. As the sea level gradually climbed, the land was flooded; as a result, the lower reaches of the Susquehanna River flooded to form the Chesapeake Bay.

These climatic changes created new food sources for prehistoric people. The warmer, drier climate led to a greater biodiversity, especially floral, as spruce and fir forests gave way to nut- and fruit-bearing trees (Aaron 2009:17). This allowed humans to rely more heavily on gathering wild plants, nuts, and berries. Indeed, archaeologists have discovered tools, such as nutting stones and pestles, for processing vegetable materials. The creation of the Chesapeake Bay, furthermore allowed Archaic people to exploit seafood, such as anadromous fish and shellfish. The appearance of shell middens during the period testifies to the importance of mollusks to the Archaic diet (Dent 1995).

To exploit these new resources, Archaic people likely intensified their seasonal movement, splitting their time between a semi-permanent base camp and smaller, dispersed hunting and gathering camps. Bands of as many as 30 people may have gathered in the base camp for part of the year, and then dispersed into "microbands," composed of a single family or two, in other seasons (Griffin 1952; Anderson and Hanson 1998; Ward and Davis 1999). The range of band movement would have occurred over relatively large regions. These larger base camps are theorized to have been located along rich environmental areas near the Fall Line or along main rivers.

New subsistence patterns also required new technologies and the adaption of existing technologies to be suitable to existing game. "The spear thrower [called an atlatl] added range and power to the hunter's arm. The axe enabled people to fell trees. The mortar and pestle made it easy to pound and grind nuts, seeds, and roots" (quoted in Aaron 2009:18). With new technologies, smaller game could be more easily hunted and plants could be processed more effectively. The resulting products of these technologies differentiate the Archaic Period into three smaller periods. The period also saw innovations in project point manufacturing. In a further divergence with the paleoindians who relied heavily on cryptocrystalline lithics, Archaic people utilized more materials, such as quartzite and quartz.

The Early Archaic (8000-6500 B.C.) is characterized by projectile points with corner and side-notches, rather than hafting the points to a wood shaft by fluting as the Paleoindians did. The resulting points, such as the Kirk Stemmed and Notched, Palmer Corner-Notched, Fort Nottoway, Kessell, Charleston, and Amos, are thus readily distinguishable from Paleoindian points (Custer 1990). Early Archaic people hunted caribous, elk, moose, deer, and bear (Egloff and Woodward 1992:12). Additionally, there appears to be an increase in population at this time. American Indians begin to appear in the vicinity of Mulberry Island during the Early Archaic Period, possibly being drawn to the abundant resources provided by the mashes (Regan n.d.:1).

The Middle Archaic (6500-3000 B.C.) is defined primarily by the appearance of stemmed projectile points which were fitted into a hold in the spear shaft. Therefore, points such as the LeCroy, Stanly, Morrow Mountain, and Guilford are diagnostic of middle Archaic assemblages. Some evidence also points to the use of grinding technology to make atlatls, or spear throwers, in this period. Mortar and pestles also began to appear during the Middle Archaic, as did axes. The ability to more easily clear forests, resulted in a change in hunting as deer, bear, turkey, and other animals came to the cleared land to eat the new, low-lying growth (Egloff and Woodward 1992:14-15).

Researchers have also pointed out that contexts from this period contain a larger amount of "expedient" stone tools, owing in part to the rapid environmental changes of the Climatic Optimum, which dates from 6000 to 2000 B.C. (Wendland and Bryson 1974; Claggett and Cable 1982; Ward and Davis 1999). These tools were makeshift and less formal, allowing their owners to use them for a wider variety of activities than tools designed for specific uses. The greater density and disbursement of archaeological sites from this period indicates a consistent rise in American Indian populations.

By the Late Archaic (3000-1200 B.C.), a more congenial climate and more abundant food sources led to dramatic population increases, there are estimates of tens of thousands of Virginia Indians during this time (Egloff and Woodward 1992:20). To be certain, this apparent increase might be exaggerated because late Archaic people had a richer material culture than previous peoples and hence left more archaeological evidence of their existence (Klein and Klatka 1991). Nonetheless, the greater number of late Archaic sites relative to earlier periods suggests that the human population did in fact expand over the course of the Archaic Period. According to Barber et al. (1992), late Archaic sites were more than twice as numerous as middle Archaic sites. As humans occupied the land more densely, they also became more sedentary and less mobile, perhaps owing to the greater reliance on plant-based food resources compared to hunting and fishing. Late Archaic people settled along fertile flood plains (Egloff and Woodward 1992:20).

American Indians from this region may also have begun to domesticate plants such as goosefoot, squash, and gourds (Yarnell 1976:268; Chapman and Shea 1981:70). They also used squash and gourds for food storage, in addition to earthen pits (Egloff and Woodward 1992:22). The projectile point technology of the Late Archaic Period is dominated by stemmed and notched point forms, many with broad blades, likely used as projectiles or knives. These points diminish in size towards the latter portion of this period (Dent 1995; Justice 1995).

It should also be noted that prehistoric sites that consist of lithic debitage, no diagnostic artifacts, and an absence of ceramic artifacts likely date to the Archaic Period. These sites are described in the records as "Prehistoric/Unknown," however they are most likely to date to this period despite not having a specific temporal designation. According to VDHR, there are 15 previously recorded archaeological sites within one mile of the project area dating to the Archaic Period or identified as "Prehistory/Unknown."

WOODLAND PERIOD (1200 B.C. TO 1600 A.D.)

The American Indians of the Woodland Period began to maintain a greater reliance on horticulture and agriculture based on the cultivation of maize, imported from Mesoamerica via the Mississippi Valley, as well as squash, beans, and other crops. This increased sedentism and the nucleating of societies (Klein and Klatka 1991; Mouer 1991). Populations during this time began to consolidate into villages near rivers and floodplains with fertile soil, favorable terrain, and access to fauna. Satellite procurement camps are far less frequent than in the Archaic Period.

The Woodland Period is defined foremost by the development of a ceramic technology for storing and cooking food. Although Archaic people had carved out vessels from soft soapstone, prehistoric Americans did not begin shaping ceramic vessels until around 1200 B.C. The earliest pottery produced on the coastal plain, the Marcey Creek Plain, and other types, in fact resembled those soapstone vessels, suggesting that they were used for similar purposes. Woodland peoples, however, modified the square- or oval-shape soapstone inspired vessels. They began decorating the pieces with cord and tempering them with soapstone and other types of grit to make them stronger. Examples include Selden Island ceramics (tempered with soapstone) and Accokeek pieces (which used sand and grit for tempering). Anthropologists divide the period up into smaller periods based on changing projectile points and ceramics, as well as settlement patterns.

The beginning of the Early Woodland (1200 B.C.-A.D. 300) is defined by the appearance of ceramics from prehistoric archaeological context. Early Woodland settlements in the Coastal region of Virginia are located along rivers as American Indians developed a more sedentary lifestyle during this time (Klein and Klatka 1991; Mouer 1991). They began to rely more and more on horticulture and in the Coastal Region preferred floodplains and low-lying neckland with rich sandy soil (VDHR n.d.).

During the Middle Woodland (A.D. 300-1000), there is an increase in sites along major trunk streams and estuaries as people move away from smaller tributary areas and begin to organize into larger groups (Hantman and Klein 1992). The Middle Woodland diet becomes more complex as people begin to exploit nuts, amaranth, and chenopod seeds in addition to fish, deer, waterfowl, and turkey. Corn by this time had transformed into the large ears familiar today. The bow and arrow replaced spears for hunting (Egloff and Woodward 1992:25). With more specialized crafts and increased trade came status. Evidence of rank societies emerges more clearly with the spreading of religious and ritual behavior including symbols and regional styles apparent in ceramic styles and other sociotechnic and ideotechnic artifacts.

Variance in ceramic manufacture is a hallmark of the Middle Woodland Period. Pope's Creek ceramics are associated with the beginning of this period, and Mockely ceramics with the later. Pope's Creek ceramics are tempered with medium to coarse sand, with occasional quartz inclusions, and interior scoring has also been recorded (Stephenson 1963:94; McLearen and Mouer 1989). The majority of Pope's Creek ceramics have net-impressed surfaces (Egloff and Potter 1982:99; McLearen and Mouer 1989:5). Shell-tempered Mockley ceramics first appeared around 200 A.D. in Virginia to southern Delaware. There was a variation in surface treatments for Mockley that included plain, cord-marked, and net-impressed (Egloff and Potter 1982:103; Potter 1993:62).

By the Late Woodland Period (A.D. 1000-1606), the use of domesticated plants had assumed a role of major importance in the prehistoric subsistence system. The arrival and cultivation of beans joined corn and squash as the three major crops (Egloff and Woodward 1992:26). The adoption of agriculture represented a major change in the prehistoric subsistence economy and settlement patterns. Expanses of arable land became a dominant settlement factor, and sites were located on fertile floodplain soils or, in many cases, on higher terraces or ridges adjacent to them.

Previously recorded archaeological sites dating to the Woodland Period are abundant on Mulberry Island and there are nine previously recorded sites within one mile of the project area that date to this period (Regan n.d.:3, 5). By the time Europeans began arriving to the continent, Virginia tribes had formed sedentary villages and developed strong identities to their local settings. They began to organize into villages and small hamlets with more substantial housing that may have been placed in rows around a plaza (Egloff and Woodward 1992:26). These villages were highly nucleated and occasionally fortified with palisades. The fortifications demonstrate inter-group conflict.

SETTLEMENT TO SOCIETY (1607 – 1750)

At the time of European arrival, Virginia Indians belonged to three distinct languages groups. This included Algonquian-speaking tribes on the coastal plain which was centered around the Powhatan confederacy; Iroquoian-speaking tribes like the Nottoway and Meherrin south of the James River and the Cherokees in southwestern Virginia; and the Sioux or Siouan-speaking people of the Piedmont (Aaron 2009:19-20). The area of Virginia in which the project lies was first explored by Europeans as early as the 1520s when the area was described by Giovanni de Verrazano, a Florentine explorer working for France (McCartney 2001:4). Spanish Jesuit missionaries attempted to establish a foothold in North America during the second half of the sixteenth century.

The first permanent English settlement in America was established in 1607 with the creation of Jamestown on the James River, approximately 12 miles west of the project area, and a part of present day James City County. This land was the territory of the well-organized Powhatan Confederacy who held more than 8,000 acres of land (Mooney 1907:129). The map developed by early English explorers identified no significant villages in the vicinity of the project area (Figure 6-1). One documented village was that of the Chiskiacks near Yorktown (Lawrence et al. 2006:10).

Figure 6-1: Detail of *Virginia Discovered and Discribed* [sic], by John Smith, depicting the vicinity of the project area. Source: Library of Congress

At Jamestown, the English settlers struggled to the extent that nearly 90 percent of their original population died within the first three years. The remainder were led by despair to leave the venture and they set sail once more. At the waters off of Mulberry Island, they were met by three ships with more men and supplies thereby rejuvenating the colonists (Anderson 1953:1).

Following the initial goal of surviving, early English colonists in Virginia struggled to make the colony an economically viable asset for the stockholders back in England. This changed when, around 1612, John Rolfe was able to cultivate a strain of tobacco that sold in the English Market. The introduction of this 'cash crop' was the impetus for European expansion throughout the colony. During this early time the economy of Virginia as a whole was centered primarily on the labor intensive cultivation of tobacco. It was tobacco that determined the pattern of nearly every aspect of life, encompassing the economy, the cultural landscape, and social relations (Kulikoff 1986; Moore 1976). As the popularity of the crop increased in Europe so too did the population of Virginia as did planters' reliance on slave labor in lieu of indentured servants with the first Africans arriving in 1619 (Salmon 1983:11-12, 15, 20). As the population and demand for tobacco increased, wealthy white men began seizing as much land as possible. By 1621, nearly all of the land that would become Warwick County was patented (Anderson 1953:2).

By 1622, English settlements stretched along both shores of the James River though they were far from peace with Virginia Indians. In 1622, Opechancanough, the new paramount chief of the Powhatan Confederacy, orchestrated an attack and nearly one-third of English settlers were

killed. In response, King James I revoked the charter of the Virginia Company and Virginia became a royal colony in 1624 (Grymes n.d.a). The Chiskiack Indians deserted their territory and the English took steps to settle the area between the James and York rivers (Notes 1913). As population slowly grew in the colony, eight shires were formed in 1634, including Warwick River County. The county was named for Sir Robert Rich, Second Earl of Warwick and a prominent member of the Virginia Company (Anderson 1953:2). Additionally in that year, a palisade was constructed across the peninsula between the James and York rivers as a psychological and physical barrier against American Indians remaining in the area and to cordon off the lower end of the peninsula which was intended for English settlement (McCartney and Kiddle 2001:3). The palisades extended for six miles between Archer's Hope Creek and Queen's Creek (Yorktown 1905:64). At this time, Warwick County had approximately 811 residents and was outranked only by James city and Elizabeth City (Anderson 1953:2).

Opechancanough organized another uprising in 1644. However, because of the palisade, the attack was limited to outlying plantations and though more settlers were killed the number of English in the colony had greatly increased beforehand so the result was not as severe (Grymes n.d.b). After the uprising, Opechancanough was captured and murdered thereby fragmenting the Powhatan political organization. In the wake of a second native uprising in 1644, the English effectively pushed the Virginia Indian population out of the area, allowing for the expansion of settlement further into the interior of the peninsula.

The scattered large farms and plantations lined navigable waterways and inland roads were slowly established (Figure 6-2). Like today, residents had to contend with hurricanes and other devastating weather events. A church that had been constructed on Mulberry Island before 1627 was likely destroyed by the hurricane of 1667 at which point a new, brick, church was constructed farther north, near the southern end of the project area (VDHR 121-#0010, 44NN0176).

The land within Warwick County largely remained in the wealthy families, being handed down from generation to generation. In 1713, Warwick had only 124 landowners, a number that would simply decrease over time so that by 1782 there were 113 landowners (Regan n.d.:17). For example the Curtis and Harwood families were among the largest land holders in the county (Swartz and Taylor 2009:8/5). The Harwood family built the Queen Hith Plantation Complex west of the project area c.1632 (Geier et al. 1982). Because these plantations tended to be self-sufficient, colonists had little need for towns. However, requirements for tobacco inspection led to the establishment of villages along the rivers. In Warwick County, an inspection warehouse was placed at Warwick Town at the confluence of the James and Warwick rivers (Lawlor 2010). The county's courthouse would also be at this location. However, the town would never flourish and the courthouse would be moved in 1809 (Erickson 2018).

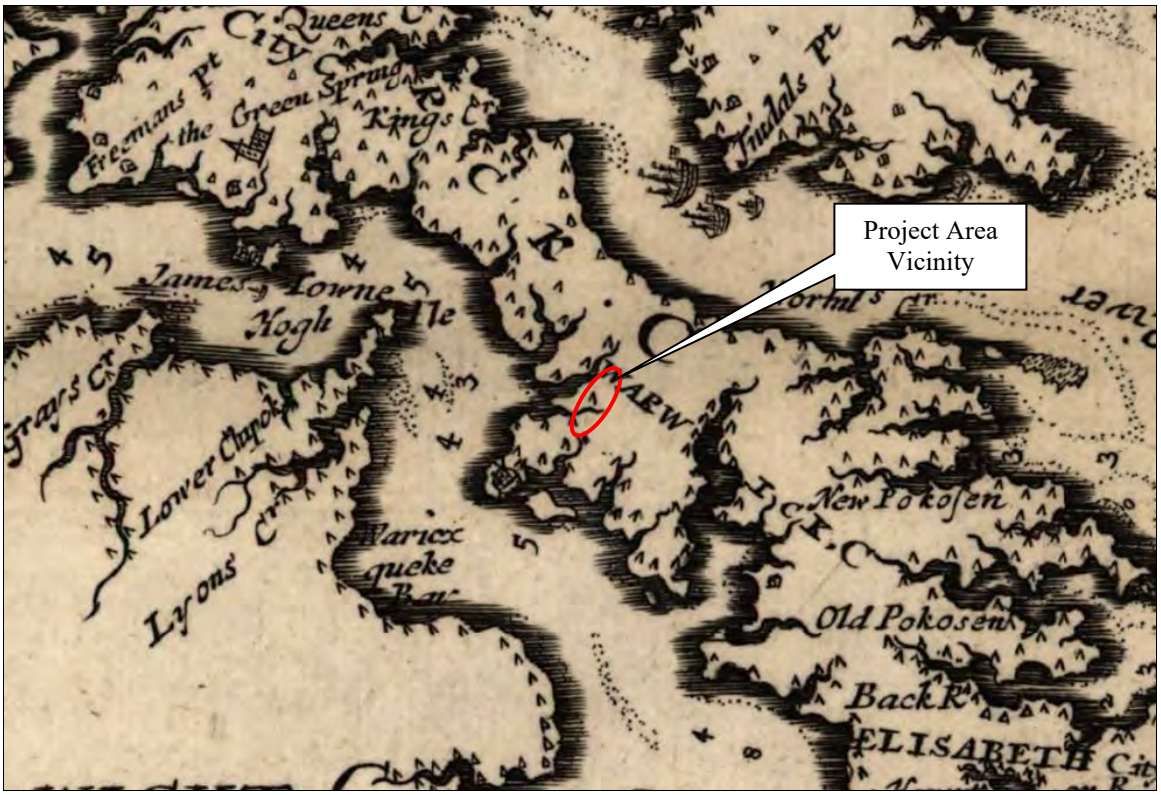

Figure 6-2: Detail of *Virginia and Maryland as it is planted and inhabited this present year*, by Herrman in 1673, depicting the vicinity of the project area. Source: Library of Congress

COLONY TO NATION (1750 – 1789)

The extensive early cultivation of tobacco throughout the Tidewater Region of Virginia resulted in depleted soils and poor crops by the middle of the eighteenth century. Tidewater planters found it difficult to compete with the higher-quality tobacco being produced on the newly opened lands of the Piedmont, and found themselves forced to seek alternatives such as corn and wheat. While increasing attempts at agricultural diversification caused the closure of tobacco inspection stations throughout much of eastern Virginia, it also caused an increase in the expense and level of difficulty required get the tobacco to market, further reducing the amount of the substance being exported from the area. Despite these difficulties, Yorktown, on the York River, continued to serve as a primary inspection station in the region (Slaughter 1985:114).

While the market for crops grown in Virginia and throughout America was in high demand in European markets, tensions between the colonies and England began to put a strain on trade. At the end of the Seven Years' War (or the French and Indian War in North America) in 1763, the British government had an immense amount of debt. To pay it, Parliament imposed heavy taxes on its subjects and tightened the administration of trade and navigation acts (Salmon 1983:22). These actions sparked a strong response from the colonies. In 1774, the Virginia Convention adopted resolves against the importation of British goods and the importation of slaves. It also required each county to form a volunteer company of cavalry or infantry to prepare for an armed conflict.

During the American Revolution, Virginia was not attacked by the enemy until late in 1780 and in the following summer British raiders had gone as far inland as Charlottesville burning military stores in the colony. With the British in the colony, Warwick County was repeatedly invaded and plundered by small landing parties (Regan n.d.:20). In the summer of 1781, Lord Cornwallis invaded the Peninsula and established his base in Yorktown (Figure 6-3). Even as British reinforcements were prevented from entering the Chesapeake Bay, French and American militia moved across the land, including Warwick County, to Yorktown. Troops in the county paused at plantations for rest and water. They found abundant springs in the vicinity of today's Lee Hall reservoir (Anderson 1953:3). The American Revolution ended at Yorktown in 1781.

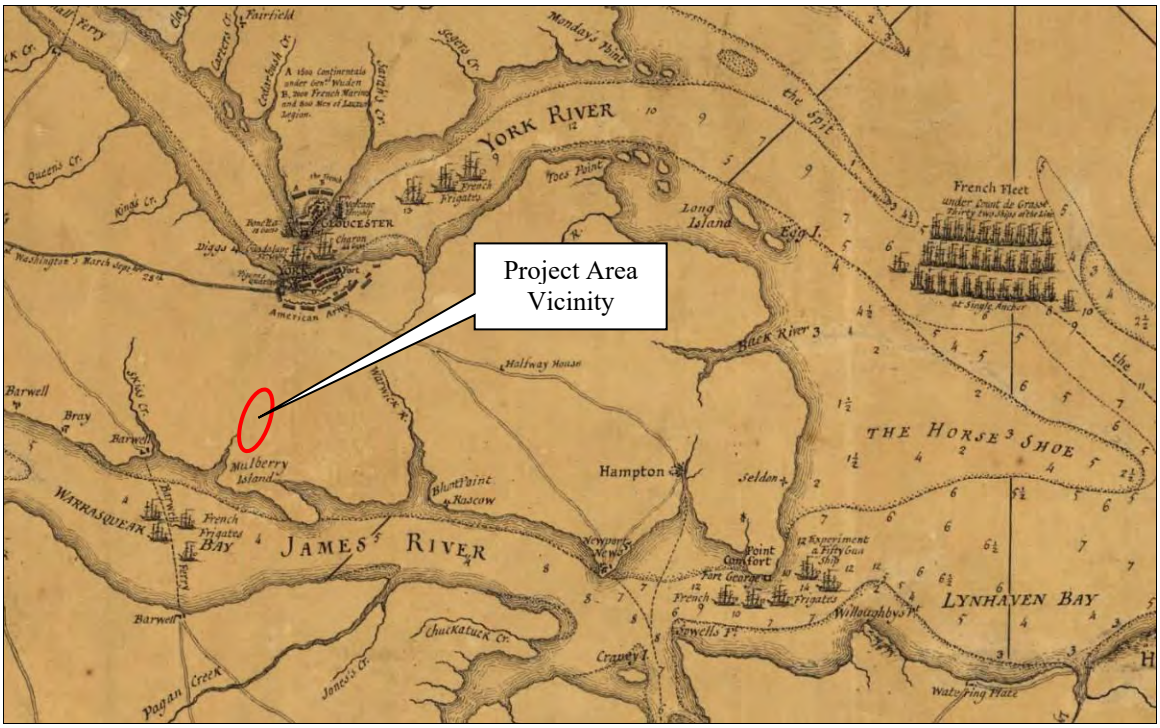

Figure 6-3: Detail of *A Plan of the entrance of Chesapeak [sic] Bay,* in 1781, depicting the vicinity of the project area. Source: Library of Congress

EARLY NATIONAL PERIOD (1789 – 1830)

Even with the war's end, prosperity remained elusive in Warwick County as water traffic was diverted to Norfolk and Baltimore. Ship related industries that had grown along the Warwick River came to an end (Anderson 1953:3). Furthermore, the relocation of the colony, now state's, capital from Williamsburg to Richmond pushed the Mulberry Island and its surroundings to the fringe (Regan n.d.:22).

Between 1790 and 1820 as many as 250,000 Virginians continued the migration westward and moved from the older settled parts of the state to the recently opened southwest frontier, taking approximately 150,000 slaves with them. The virtual collapse of the tobacco economy and the concomitant out-migration of significant numbers of people had a revolutionary effect on the social and economic character of the Tidewater. Large plantations that had relied on slave labor were increasingly subdivided into smaller-scale farmsteads that grew corn and wheat rather than

tobacco (Tyler 1984). By the first federal census in 1790, Warwick County had only 1,690 residents, making it the third smallest county in Virginia. This is a rank the county would hold until the mid-twentieth century (Anderson 1953:3).

The combination of severe soil depletion and continuous cultivation of tobacco and the temporary loss of markets for tobacco caused by the war promoted new farming techniques to improve the soil and further the diversification into corn, wheat and other grains and additional crops. In addition to diversification, a more scientific method of farming was adopted to help restore the soil's nutritive qualities. In his 1817 series of essays entitled *Arator*, Caroline County's John Taylor demonstrated the benefits of four-field crop rotation, in which soils could be improved significantly by rotating corn, wheat, fertilizer, and clover. Similarly, in the early 1820s, Edmund Ruffin publicized the effectiveness of marl in reducing soil acidity, a technique that could triple the productivity of Tidewater soils. Loudoun County's John Binns promoted the "Loudoun System" which included deep plowing, the use of gypsum as a fertilizer, and the addition of a year of clover to the crop rotation schedule. Plantations began to be replaced by smaller-scale farmsteads that were increasingly situated along the system of interior roads in the county. These changes would strengthen Virginia's economy (McCartney 2009).

Farmers continued the trend of agricultural diversification, which included the cultivation of grains, shellfish and animal husbandry. This shift in agriculture would continue throughout the nineteenth and into early twentieth century. Given the county's small size and location on the water, few major roads crossed its borders in the early nineteenth century (Figure 6-4).

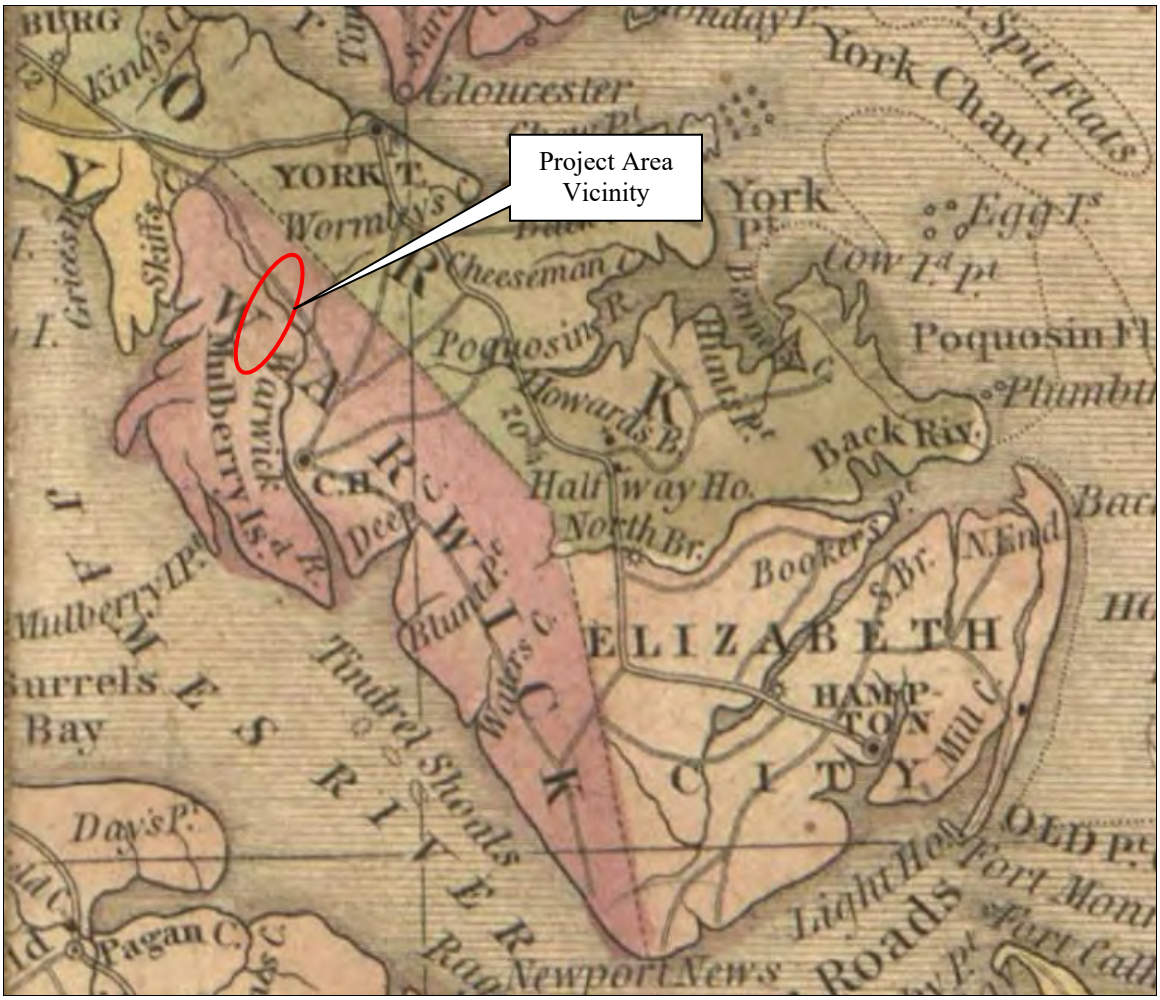

Figure 6-4: Detail of *A map of the state of Virginia,* in 1827 by Böÿe, depicting the vicinity of the project area. Source: Library of Congress

ANTEBELLUM PERIOD (1830 – 1860)

The westward emigration of the population continued into this time period until the 1830's by which time population of the region had reached its nadir and began to stabilize and recover. The expansion westward left a vacuum in the housing market that would not be filled until the middle of the century (CWF 1986:187, 191). By the Antebellum Period, previously adopted agricultural techniques and crop diversification led to a revitalization of the region's agricultural economy. Additionally, throughout the period a range of new employment opportunities were opening up and by the 1860 census there were an increasing number of craftsmen in addition to agricultural related jobs (Regan n.d.:24).

Even as some residents left the county, houses and businesses were built. One such example was Lee Hall which constructed for Richard Decatur Lee between 1848 and 1859 west of the project area. The new dwelling was built on the site of Oak Grove, a frame colonial house that had burned. The successful planter's farm was 2,100 acres which was worked by 38 enslaved African Americans. Lee also had a gristmill, known as Lee's Mill (VDHR #121-0025), on the Warwick River (VHLCS 1972).

CIVIL WAR (1861 – 1865)

On April 17, 1861, Virginia voted 88 to 55 to secede from the Union. Those who supported secession were from the state's Tidewater, Piedmont, and Shenandoah Valley regions where slave labor was heavily relied on; delegates from the far western counties opposed the action and eventually formed the state of West Virginia. With its high enslaved and free black population, Warwick County would have voted for secession, particularly after the firing on Fort Sumter.

In the war, more men fought and died in Virginia than in any other state and the majority of battles took place in northern and central Virginia (Salmon 1983:38-39). The peninsula proved to be of strategic importance to both sides of the conflict and as a result was the site of numerous battles. The York, Rappahannock, and James Rivers acted as both lines of communication, transportation and as natural barriers against incursions by Federal troops.

It quickly became apparent that the Union military presence at Fort Monroe, at the easternmost tip of the peninsula, posed a serious threat and the region proved to be of strategic importance to both sides of the conflict and as a result was the site of numerous battles. In response to their presence, Confederates fortified the Lower Peninsula by building three parallel lines of earthworks along the region's steep ravines and water courses. The second line of defense was constructed, likely by free and enslaved African Americans, from Mulberry Island, along the Warwick River, to older fortifications around Yorktown. The flanks of the line were protected by batteries at Gloucester Point and Yorktown on the York River and Fort Crafford and Ford Boykins on the James River. The line was strengthened when the Warwick River was dammed to make an impassable barrier. Between the summer of 1861 and spring of 1862, fortifications were erected around Lee's Mill drastically altering the landscape (Moore 2002:7/4). Civil War era maps depict this line of defense (Figures 6-5 and 6-6). With the oncoming threat of invasion, Confederates generally destroyed the peninsula's countryside to prevent Union forces from "living off the land" and residents fled (Anderson 1953:4).

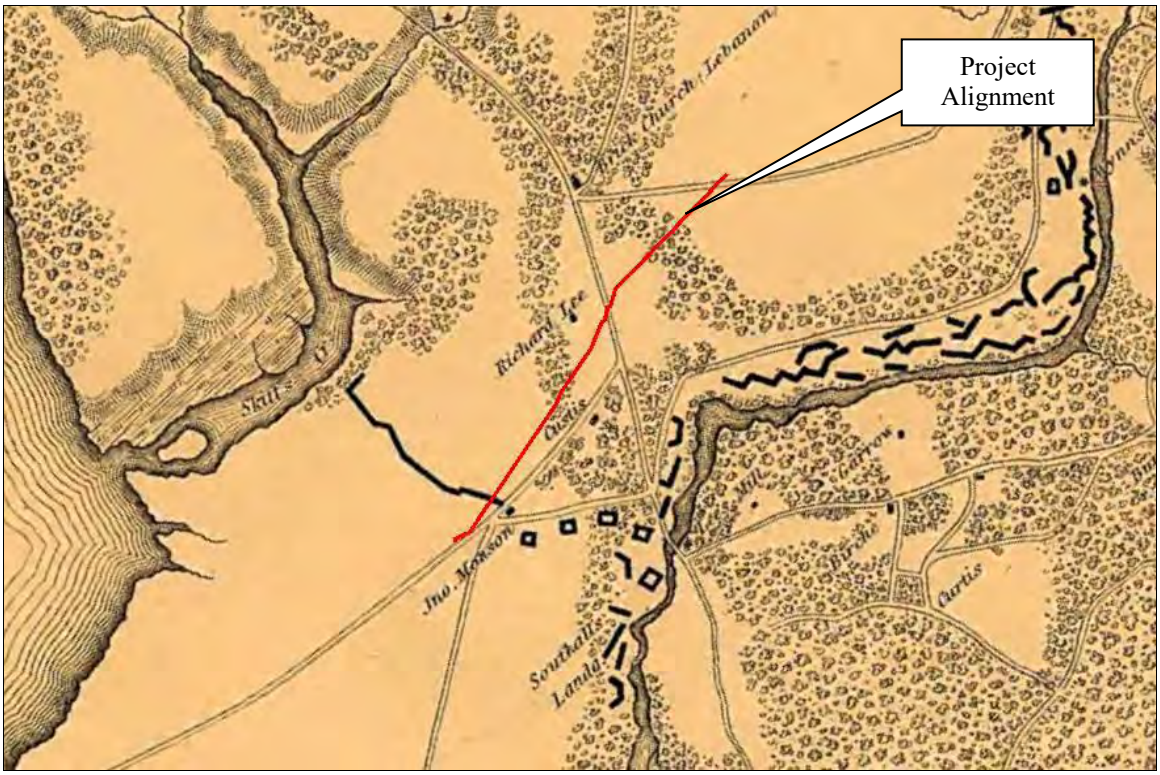

Figure 6-5: Detail of *Yorktown to Williamsburg*, in 1862 by Abbot, depicting the project area. Source: Library of Congress

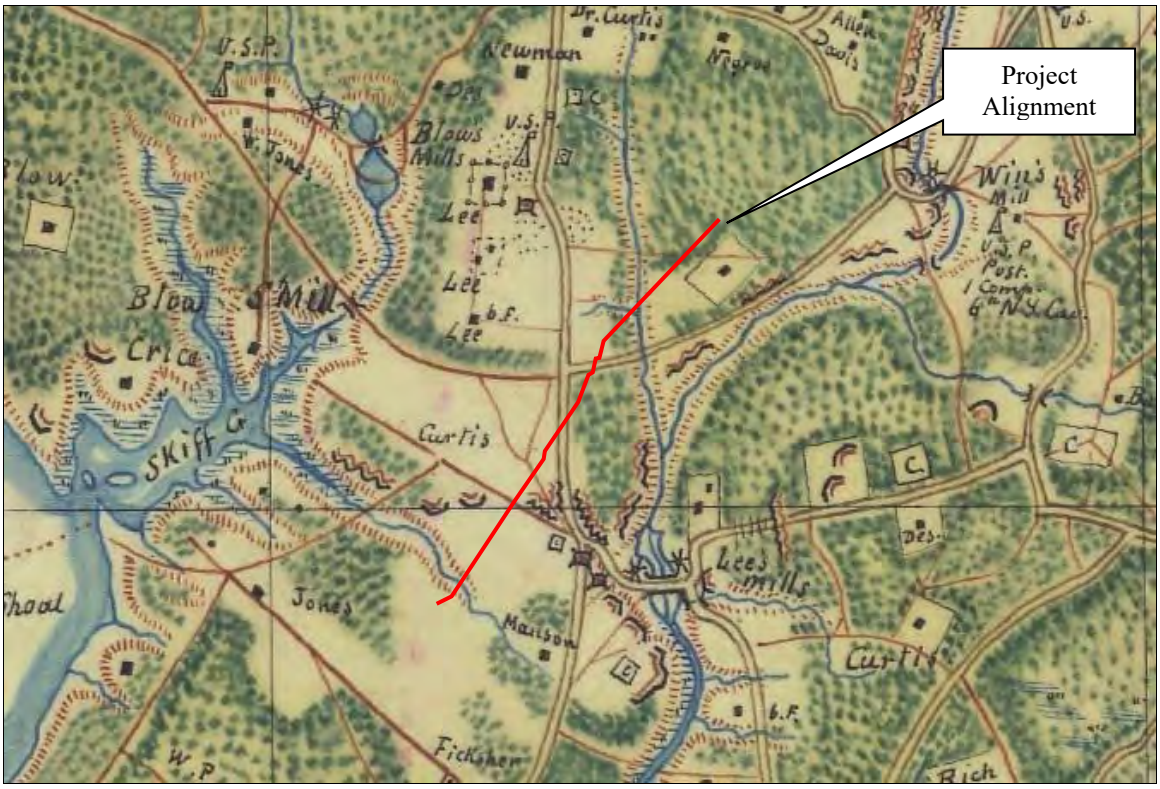

Figure 6-6: Detail of *Military Map of a part of the Peninsula*, in 1863 by Worret, depicting the vicinity of the project area. Source: NOAA

In the spring of 1862, the Union Army of the Potomac, under Maj. Gen. George B. McClellan, landed on the peninsula with the goal of marching up the landform and taking Richmond before Confederate reinforcements could reach the city. In April, the march from Fort Monroe began and Confederates withdrew from the first line of defense to the second (Moore 2002:7/5). Upon Union troops reaching the Warwick-Yorktown line, Gen. McClellan estimated enemy strength at the line to be at 40,000 with the imminent arrival of 60,000 reinforcements. These numbers were drastically inflated as, even with the reinforcement of Gen. Joseph Johnston's troops, there were only some 35,000 protecting the line (Salmon 2001:76). Hesitant to move forward, McClellan dug in, constructing 15 separate batteries for their heavy guns (Moore 2002:7/6).

Between April 5 and May 3, 1862, McClellan besieged the Warwick-Yorktown line during the Battle of Yorktown, of which the Battle of Lee's Mill was part (Moore 2002:7/6). Given that they were outnumbered, Confederate forces began to slowly withdraw. The last troops were evacuated in early May and when Federal forces were prepared for a massive artillery bombardment and full assault on the line on May 5, McClellan found no opposition (Salmon 2001:78). The resulting delay of the battle allowed for Gen. Robert E. Lee to reinforce the defenses around Richmond. The project area crosses a portion of the core of the Battle of Yorktown at Lee's Mill as defined by the American Battlefield Protection Program (ABPP) (Figure 6-7). The northern half of the project area lies within the area defined as potentially eligible for the NRHP by ABPP.

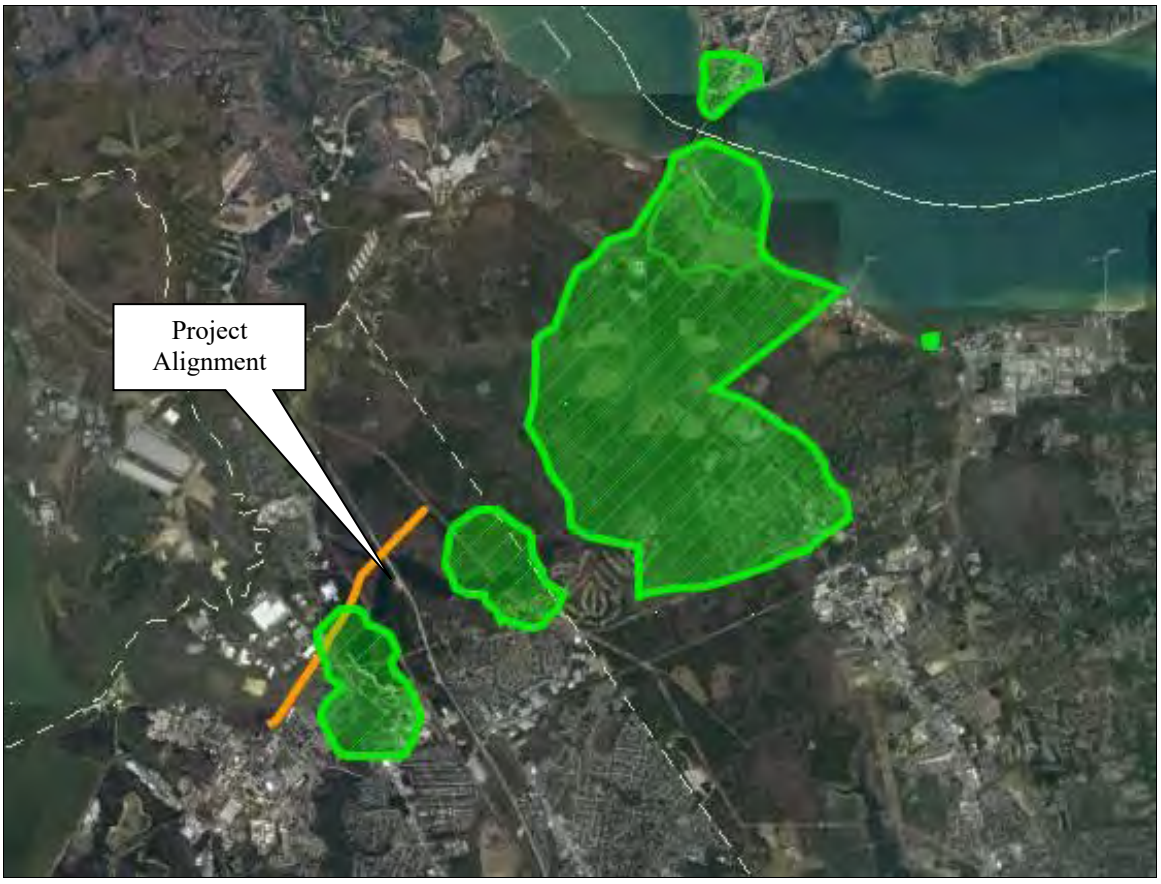

Figure 6-7: Core of the Battle of Yorktown (green) in relation to the project area (orange). Source: V-CRIS

RECONSTRUCTION AND GROWTH (1865 – 1917)

The Civil War affected the entire peninsula severely. The region faced an economic downturn after the end of the war. Real estate values plummeted and emancipation eliminated slave labor that many farmers relied upon in order to turn profit. Freedpeople left the plantations for various reasons. Some of these reasons included the attempt to reconnect familial ties that had been severed by slavery and the acceptance of higher wages that were found in urban areas that also offered the protection of Freedmen's Bureaus, many of which were located in cities (Mcpherson 1992:491, 503) The political climate of the period empowered African-Americans to participate in local government, organize their own churches, attend school, and own land thus achieving a modicum of independence (Mullin 2007:15). Following the war, use of Mulberry Island Church transitioned to African Americans (V-CRIS #121-0010). However these freedoms were short lived as government-endorsed race-based discrimination became the law of the land by the end of the century.

The only major industries in the county were fishing and farming (Anderson 1953:4). With a lack of funds and labor, much of the good farmland remained undeveloped and was allowed to revert to timber (Anderson 1953:4). For land that was cultivated, farmers transitioned to less labor intensive products including fruit, vegetables, and livestock (Regan n.d.:30). In several regions on the state, northern farmers began to relocate to the south's cheap land. In Warwick County, Mennonites from Ohio settled on the east side of Warwick River near the end of the century (Rollings 1995). There they would form a prosperous agricultural community (Anderson 1953:5).

Recovery on the peninsula would also be aided by transportation in the form of the Chesapeake & Ohio Railroad (C&O RR) (VDHR #121-5134). The new line extended through the middle of Warwick County, crossing the project area. The village of Lee Hall (VDHR #121-5068) developed along the C&O RR in the late nineteenth century. The line ended at the fishing village of Newport News. This railroad would lead to the transformation of the Lower Peninsula through its industrialization. In 1886, Collis P. Huntington began the Chesapeake Dry-Dock and Construction, which would become the Newport News Shipbuilding and Dry Dock Company (Anderson 1953:5).

With increased opportunities, population swelled. In 1880, Warwick County had 2,258 residents and by 1890 there were 6,650 (Regan n.d.:30). As nearby Newport News grew, Warwick County seat was relocated there in 1891. This would be short-lived however because in 1896 the City of Newport News was chartered and the county seat was moved back to Warwick (Anderson 1953:5).

A 1907 topographic map of the region depicts the C&O RR as well as remnants of Civil War earthworks (Figure 6-8). The Lee Hall Dam (Lower Dam) had been constructed in 1892 (V-CRIS #121-5111).

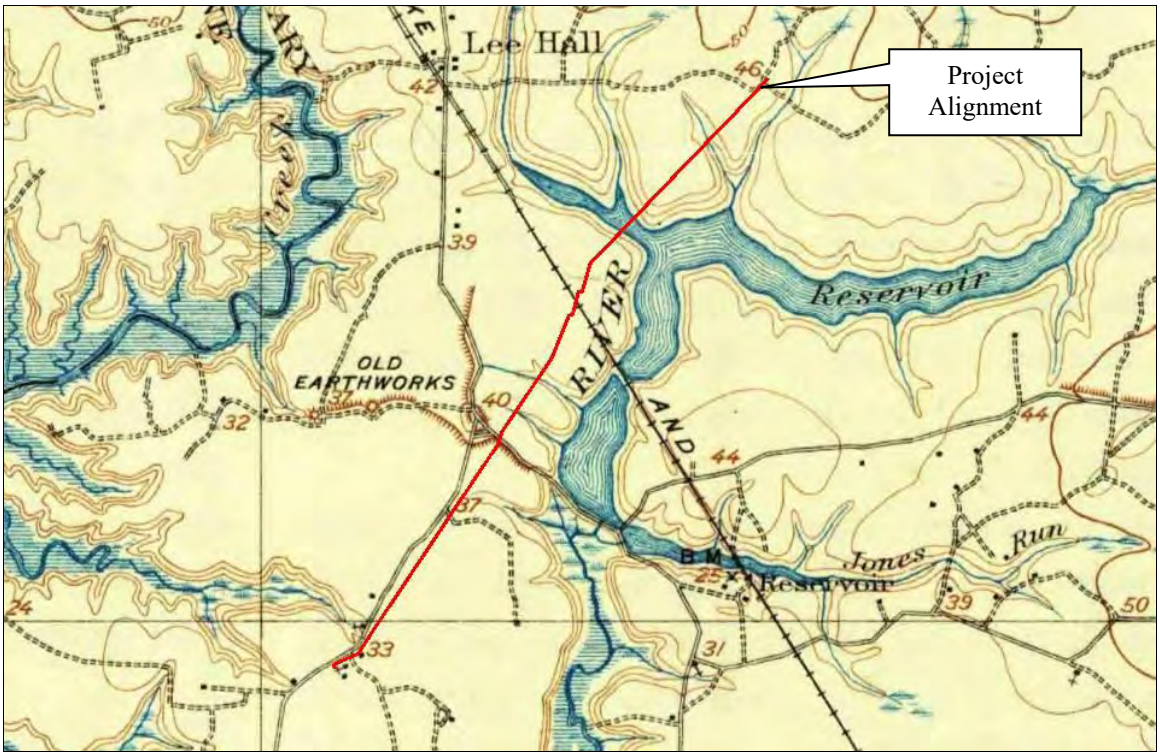

Figure 6-8: Detail of the 1907 topographic map, *Yorktown,* depicting the project area. Source: USGS

WORLD WAR I TO WORLD WAR II (1917 – 1945)

With the outbreak of World War I, the Lower Peninsula began its drastic transformation. Within Warwick County, camps Eustis, Morrison, Hill, and Alexander were established (Anderson 1953:5). Mulberry Island was taken by the government for a training facility for aircraft and railway artillery; it was named after U.S. Army officer and artillerist, Abraham Eustis, for his role as Fort Monroe's first commander (Regan n.d.:33). The shipyard to the east committed to a large naval shipbuilding program, Newport News became a port of embarkation, and highways were constructed to connect the camps with the port (Anderson 1953:6; History of Consolidation n.d.). With the onslaught of military personnel and civilian employees, the county struggled to provide enough housing and residential subdivisions began to pop up. In 1926, the Newport News Waterworks commission was formed and managed Dam Number One at the reservoir that had been created on Warwick River (Balis 1995:8/17).

Unlike the other camps, which were abandoned following the end of the war, Camp Eustis was deactivated in 1931 at which point it became a prison camp. During the Great Depression, the Federal Emergency Relief Administration (FERA) established a transient camp on Mulberry Island to provide people with marketable skills. It would then became Works Progress Administration (WPA) housing before it was abandoned in 1936 (Regan n.d.:36-38).

Following World War I, Warwick County lost population as the City of Newport News grew and annexed land from the county. By 1940, Warwick had a population of 9,248 residents. Changes that the county witnessed during the First World War would only increase with the coming of the Second as it became a boomtown (Anderson 1953:6). Camp Eustis was reactivated and became

Fort Eustis. It became a Coast Artillery Replacement Center on January 24, 1941. However, with the need for anti-aircraft artillery declining as the war continued, the post largely became a prisoner of war camp with nearly 6,000 POWs by May 1945 (Regan n.d.:38). Newport News again served as a major embarkation depot. Once more, housing became imperative as 1.5 million military personnel passed through Newport News and neighboring camps (History of Consolidation n.d.).

In four years of war, the population of Warwick County jumped to 33,950. As the county changed, the number of farms dropped from 303 to 146 and occupations of county residents changed from agriculture to business, professionals, or defense and military personnel and workers (Anderson 1953:6-7). Topographic maps illustrate the changing landscape in Warwick County as more houses and roads were constructed and Fort Eustis began to creep north from Mulberry Island (Figures 6-9 and 6-10).

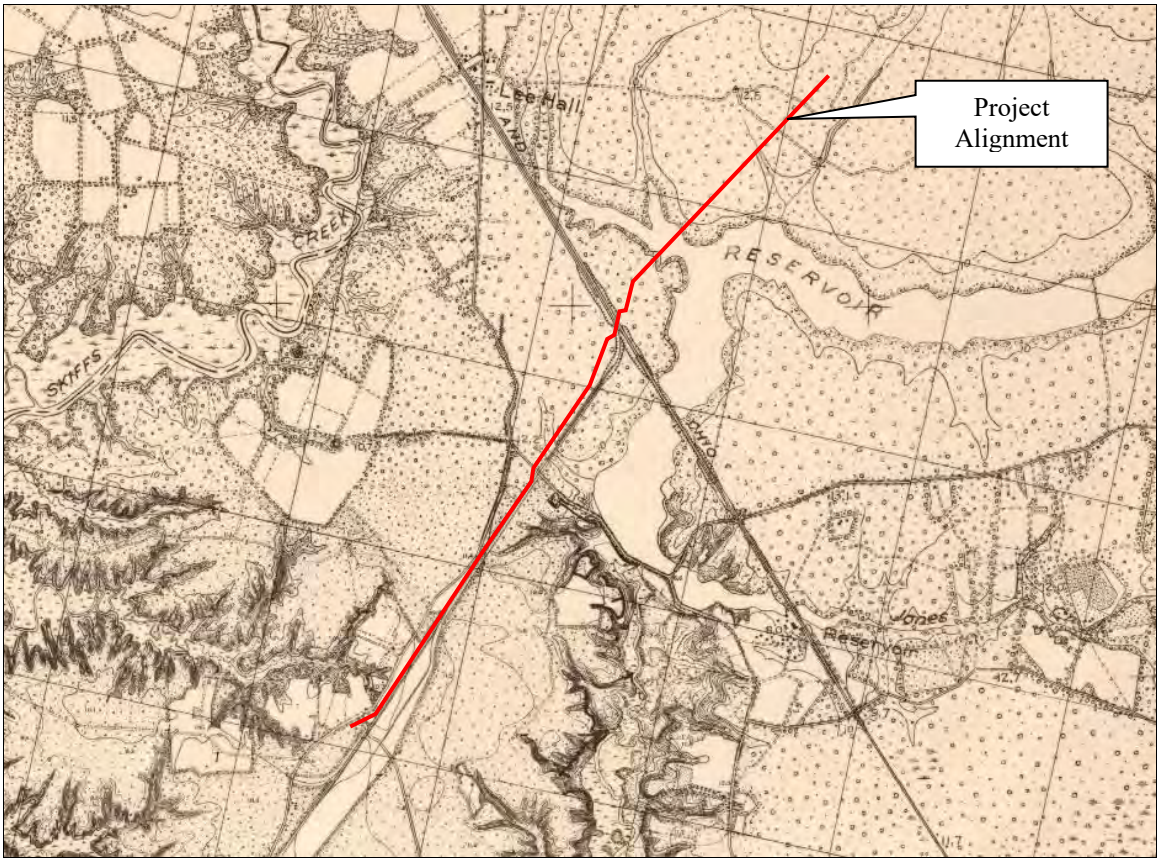

Figure 6-9: Detail of *Virginia, Camp Abraham Eustis: special military map,* 1918, depicting the project area. Source: Library of Congress

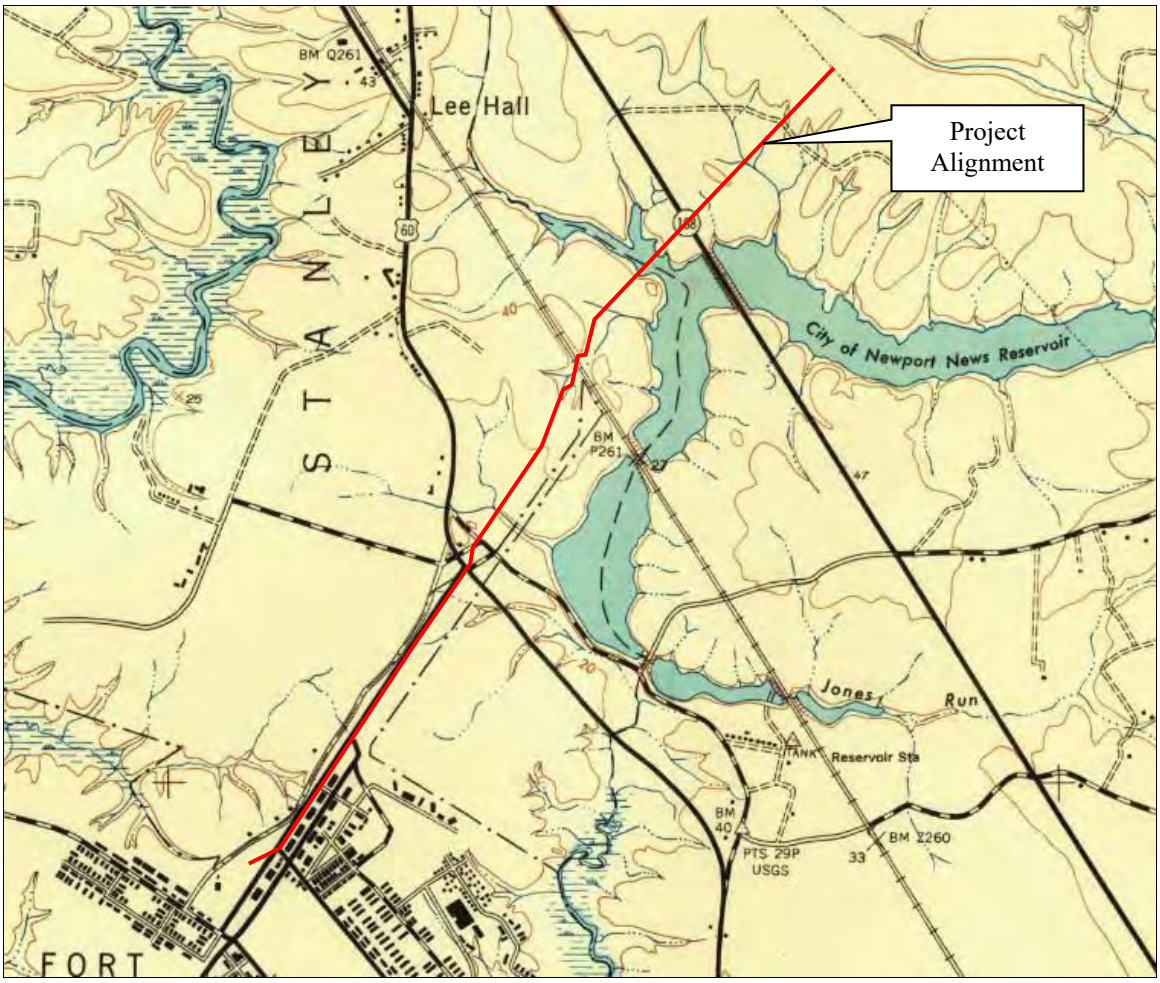

Figure 6-10: Detail of the 1944 topographic map, *Yorktown*, depicting the project area. Source: USGS

NEW DOMINION (1945 – PRESENT)

By 1960 America's population as a whole had increased by almost 40 million, thanks to the "baby boom" that occurred right after World War II. This population explosion created an unprecedented demand for family housing and spurred the proliferation of suburbs throughout the country, including the peninsula. By 1950, the population of Warwick County had grown more than 300 percent (Anderson 1953:7). Residential development produced an increased need for public services and fueled business and commercial interests. By the early 1960s, 20-percent of Americans were living between Boston, Massachusetts and Norfolk, Virginia (McCartney and Kiddle 2001:26). With the strong, and growing, industrial and military presence in southeast Virginia, in the second half of the twentieth century Warwick County experienced rapid development and it was incorporated into the City of Newport News.

Following the end of World War II, Fort Eustis became home to the Transportation Corps which evolved as a military body responsible for troop and equipment transportation, and played a critical role in opening and maintaining ports of embarkation and debarkation. Fort Eustis remained the Army Transportation Center's headquarters and is now part of Joint Base Langley-Eustis (Regan n.d.:39).

With pressure to once more give land to the City of Newport News, in the 1950s community leaders worked on consolidating with the city. Despite opposition from resistant residents, Warwick County and the City of Newport News voted to consolidate in 1957 (History of Consolidation n.d.).

Topographic maps and aerials depict the growth occurring in western Warwick County, now Newport News (Figures 6-11 through 6-13). The existing transmission line and Interstate 64 were constructed. To the west of the project area, in the 1980s Queen Hith Plantation Complex site was scheduled for development by the Regional Redevelopment and Housing Authority of Hampton and Newport News as the Oakland Industrial Park (Geier et al. 1982). Even with development that was occurring around the project area, efforts were made to retain the region's history and educate visitors with trails and interpretive signs.

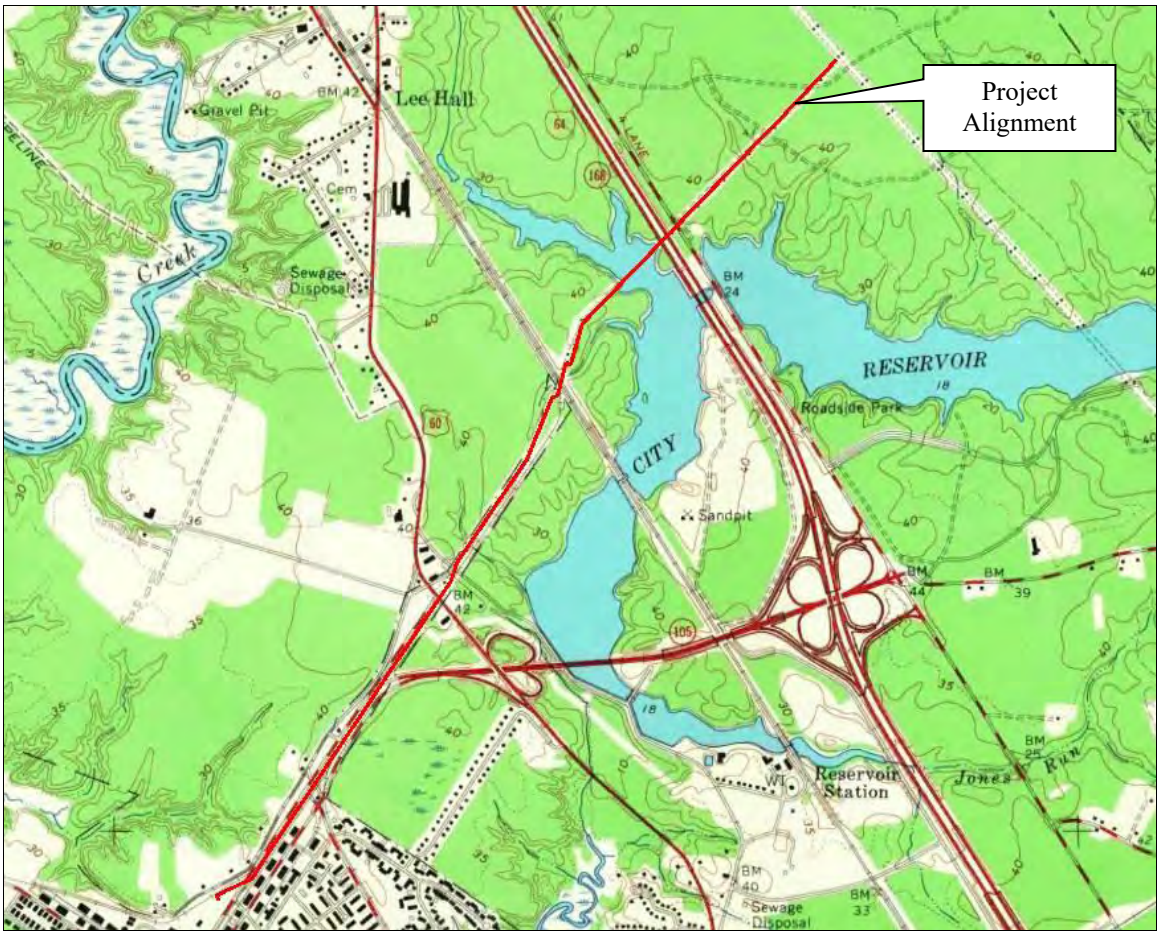

Figure 6-11: Detail of the 1965 topographic map, *Yorktown*, depicting the project area. Source: USGS

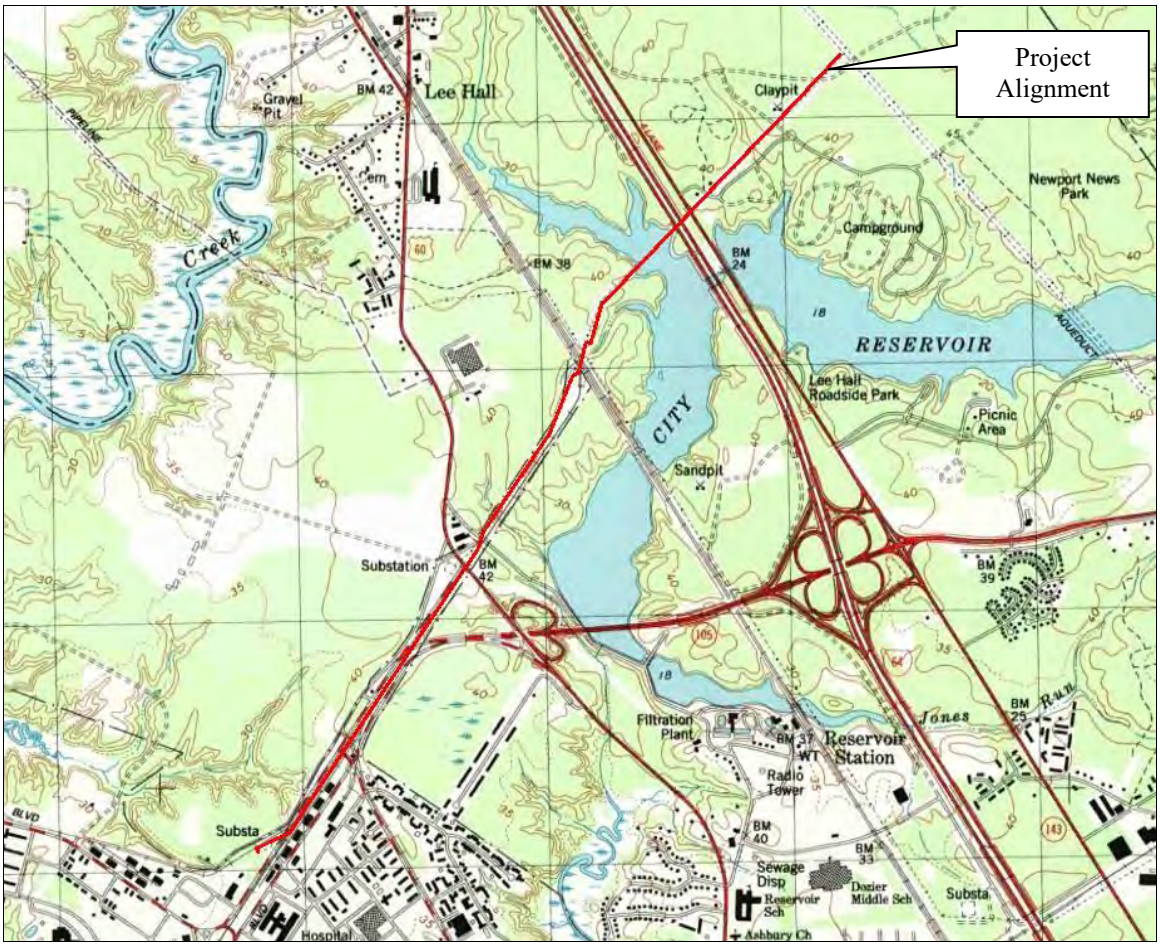

Figure 6-12: Detail of the 1984 topographic map, *Yorktown*, depicting the project area. Source: USGS

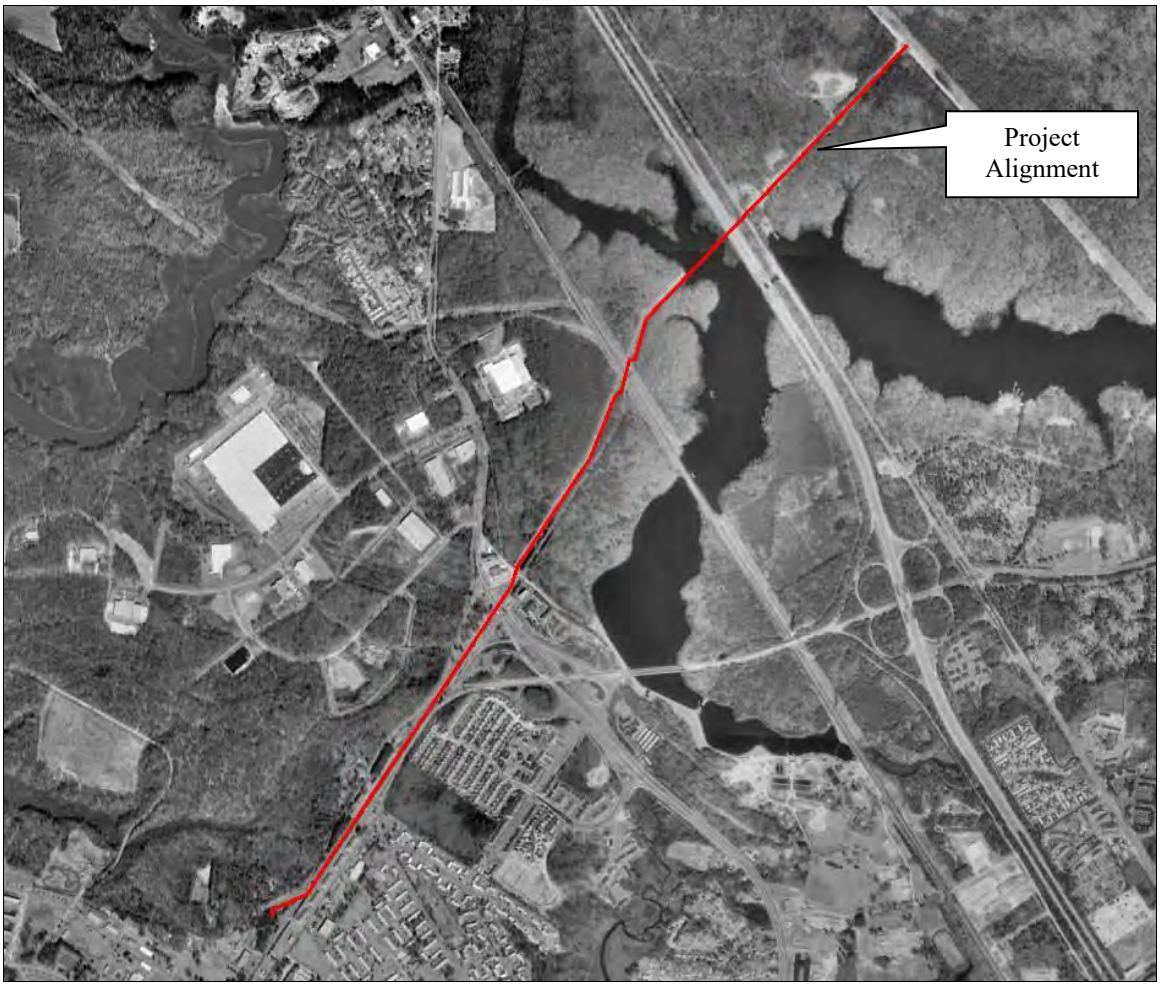

Figure 6-13: Detail of a 1994 aerial depicting the project area. Source: Google Earth

7. EXPECTED RESULTS

A number of factors must be considered in determining the types of sites that can reasonably be expected to be found in the course of an archaeological testing program. Environmental data such as geology and hydrology along with historic data including transportation routes and proximity to settled areas can provide indications about general use and settlement. In addition to background research, data on previously identified sites can shed light on the types of resources one might expect to find. The following section summarizes the types of cultural resources expected to be present within the project area following a review of these factors.

ENVIRONMENTAL CONSIDERATIONS

Prior to modern disturbances the character and type of soil would have had a direct effect on the kind of vegetation and hydrology of the area and on the potential for human habitation and usage. There is a strong correlation between settlement density and soil fertility. A well-known study of settlement patterns in relation to soil types (Lukezic 1990) indicates that historic settlement is closely correlated with the location of prime farmland, and Native Americans during the late prehistoric period also appear to have had preferences for specific site locations and soil types (Rountree and Turner 2002:69).

A majority of the project area (67.7%) is either poorly drained, water, or urban land and would not be considered high potential for cultural resources. In addition, the presence of modern transportation, military, and park infrastructure crossing the project area in several locations has dramatically changed the natural environmental characteristics of the project area.

MAP PROJECTED SITES

Historic documents, maps, and literature provided some evidence on the likelihood for the project area to contain prehistoric or historic archaeological sites. While historic maps do not specify any development in the project area, the project area is located in close proximity to mapped Civil War earthworks. Although no large settlements or landholdings are recorded in the vicinity of the project area, the possibility of small historic sites associated with non-elites cannot be ruled out.

PREVIOUSLY RECORDED SITES

While documentary sources have bias and often are limited in their attention to detail, information on previous survey and recorded resources in the vicinity of the project area, as well as regional settlement models offer additional information and perspective on the project area's potential to contain intact significant archaeological deposits.

Review of VDHR V-CRIS records revealed that one previously recorded archaeological site (44NN0156) a Civil War earthwork, crosses the project area. The earthwork has not been formally evaluated for listing in the NRHP. In addition, Site 44NN0176, a seventeenth-century church and cemetery site, is located near the project area; however it is separated from the

project area by two roads and an underground utility corridor. The project area also lines within the mapped limits of the Battle of Williamsburg Civil War battlefield (DHR #099-5282) and Battle of Yorktown Civil War battlefield (DHR #099-5283). In addition, a portion of the project area lies within the core area of the battlefield.

PREHISTORIC SITE POTENTIAL

Most of the soils in the project area are not considered high potential soils for the presence of prehistoric settlement and use. Areas farther downstream with higher, larger landforms were likely more attractive sites for settlement. Any prehistoric sites located in the project area are likely to be small, ephemeral hunting camps. Therefore, the prehistoric site potential for this project area is low.

HISTORIC SITE POTENTIAL

The project area it is located within a region of Civil War activity. Although historic maps do not indicate the presence of structures or landowners in the project area, the presence of historic sites associated with non-elites cannot be ruled out. In addition, mapped evidence for Civil War earthworks and a previously recorded site consisting of a segment of the earthworks indicates that the potential for Civil War period sites to be present within the project area is high.

8. FIELD SURVEY RESULTS

Field survey for the Fort Eustis Tap/Line 34 Rebuild project took place in August 2020 and involved both architectural and archaeological resource survey. In coordination with permitting agencies and the *Research Design and Proposed Workplan to provide Phase I Cultural Resource Survey related to the Fort Eustis Tap/ Line 34 Rebuild Project in Newport News* (D+A May 2020), architectural survey was conducted on properties within one half-mile of the project alignment that are not within Fort Eustis boundaries, and archaeological survey was conducted within a 100-foot radius around each proposed temporary and permanent structure location not within Fort Eustis boundaries. Archaeological investigation was also conducted around previously recorded sites within or adjacent to the ROW. The results of the field survey are summarized in this chapter, complete with tables of resources, maps, narratives, and representative photographs. For any resources found to be listed in or eligible for listing in the NRHP, an assessment of potential project effects was conducted; the results of which are summarized in the following chapter, "Assessment of Project Effects."

ARCHITECTURAL SURVEY

The architectural resources survey for the Fort Eustis Tap/Line 34 Rebuild project resulted in the identification of a total of forty-three (43) architectural resources greater than 50 years of age (constructed in 1970 or earlier) located within the project APE including thirty-eight (38) that have been previously recorded and five (5) that were newly recorded as part of this effort. Of the 38 previously recorded resources, twenty-six (26) are located within the boundaries of Fort Eustis and have been recently been determined not eligible as part of an installation-wide survey and were therefore not subject to resurvey or evaluation as part of this effort. Of the twelve (12) previously recorded resources located within the architectural survey area outside of Fort Eustis boundaries, an additional four (4) have been determined not eligible for listing in the NRHP by the VDHR within the last five years, and were therefore also not subject to resurvey or evaluation as part of this effort. Five (5) resources within the survey area were newly recorded during this Phase I Survey (VDHR# 121-5457/5461). VCRIS site file forms were prepared for each newly recorded resource and updated for those previously recorded resources within the survey area that have not been determined not-eligible for listing in the NRHP within the last five years.

The project APE is situated within a mixed-development area of western Newport News. The northern half of the APE, north of Route-60, is sparsely developed. This portion of the project alignment extends through Newport News Park, a large recreational area set around the Lee Hall Reservoir. It is crossed by Jefferson Avenue (Route 143), I-64, and the Chesapeake & Ohio Railroad, although all three corridors traverse undeveloped woodland. A light scattering of commercial and industrial development borders Route 60 within the central portion of the project APE. South of Route 60, the alignment crosses through and is bordered by a much denser developed area associated with Fort Eustis. Immediately south of Route 60 the APE includes a densely developed suburban residential area and the main gate and administration area of Fort Eustis.

The APE has experienced a variety of development and transition to achieve its current conditions. The southern portion of the APE is in the vicinity of the early Mulberry Island settlement, named by English colonists in 1610. Above-ground vestiges of this early occupation are no longer extant within the project APE, however, the Mulberry Island Church site and cemetery, believed to date to circa 1660, is set within the southern end of the APE. During the Civil War, the area was actively traversed and occupied, particularly during the 1861 Peninsula Campaign. Portions of two delineated Civil War battlefields are located within the APE, including the Battle of Williamsburg/Fort Magruder and the Battle of Yorktown.

The earliest extant architecture within the APE is all within the boundaries of Fort Eustis, which was established during World War I as an Army training camp. Camp Eustis eventually became Fort Eustis and in 2010 was merged with the Air Force base at Langley to become Joint Base Langley-Eustis. As the installation has grown and evolved over the years, many of its early buildings have been demolished or replaced by modern structures. At this time, only a handful of buildings constructed prior to 1974 remain within the installation, and in 2015, the Fort Eustis Historic District and all buildings constructed prior to 1974 within the project APE were determined not eligible for listing in the NRHP.

Outside of Fort Eustis, the earliest resources surveyed in the APE are earthworks associated with the Civil War battles in the area. In 1881, the Chesapeake & Ohio Railroad was constructed from Newport News to Richmond, with a short length traversing through the APE. However, outside of Fort Eustis, development was limited through the late-nineteenth century. During that period, a large project was undertaken to dam the Warwick River and create the Lee Hall Reservoir, named for the depot and associated community set along the C&O line roughly a mile to the west. The project APE itself remained largely rural and undeveloped well into the twentieth century when I-64 was built and commercial, industrial, and residential buildings were developed along Route 60. To allow for public recreation while protecting the water quality of the Lee Hall Reservoir, a large tract of land bordering the reservoir became the Newport News Park in 1966.

Since then, the northern portion of the project APE has remained undeveloped land within the Newport News Park. Additional development has occurred along Route 60 including commercial and industrial activity, as well as a large residential development between it and Fort Eustis.

The resources surveyed as part of this effort reflect the diverse development history in the area and include a seventeenth century church site and cemetery, Civil War-era earthworks, a railroad corridor, reservoir and bridges, and individual commercial and residential buildings. Of the surveyed resources, five (5) have been previously listed in or determined eligible for listing in the NRHP. These include Civil War battlefields and earthworks, and the C&O Railroad. The Lee Hall Reservoir, spillway, and several bridges crossing it have all been previously determined not eligible for listing in the NRHP. Of the newly recorded resources, four are modest roadside commercial buildings dating from the second-half of the twentieth century that reflect typical developmental trends employed throughout the region and nation as a whole at that time, and do not represent a physically or historically unique or significant resource; and as such, are recommended not eligible. The fifth newly recorded resource is the Newport News Park Campground, which was a part of the 1966 creation of the park, and represents a typical locally-

administered camping facility with no unique or noteworthy characteristics, and as such, is also recommended not eligible.

A table of all architectural resources within the project APE, with their current status and eligibility is provided in Table 8-1. A map with the location of each resource subject to survey and evaluation as part of this effort is provided in Figures 8-1 and 8-2. Descriptive narratives and photographs of each of the newly surveyed or updated resources are provided on the following pages. Resource narratives include a physical description, discussion of history, integrity, and NRHP-eligibility. An assessment of potential project effects to those resources listed in- or eligible for the NRHP is provided in the following chapter.

Table 8-1: Architectural resources within the project APE (orange background denotes resource is within or crossed by portion of the project alignment, bold font denotes resource is NRHP Listed or Eligible)

VDHR ID#	Property Name / Address	Date of Construction	NRHP Status
Resources surveyed as part of this effort			
099-5282	**Williamsburg Battlefield**	**1862**	**VDHR: Eligible**
099-5283	**Battle of Yorktown**	**1862**	**VDHR: Eligible**
121-0010	Mulberry Island Church Site, Dozier Road	c.1660	D+A: Not Eligible
121-0041	**Oakland Farm Industrial Park Multiple Resource Area**	**1862**	**VDHR: NRHP-Listed and VDHR Easement**
121-0050	**Lee Mill Earthworks, 280 Rivers Ridge Circle**	**1862**	**VDHR: NRHP-Listed**
121-5043	Jeanett Parker House, 17249 Warwick Boulevard	c.1950	D+A: Not Eligible
121-5134	**Chesapeake and Ohio Railroad**	**c.1881**	**VDHR: Eligible**
121-5457	Commercial Building, 16906 Warwick Boulevard	1970	D+A: Not Eligible
121-5458	Commercial Building, 16914 Warwick Boulevard	1968	D+A: Not Eligible
121-5459	Commercial Building, 16922 Warwick Boulevard	1964	D+A: Not Eligible
121-5460	Motel, 16924 Warwick Boulevard	c.1960	D+A: Not Eligible
121-5461	Newport News Park Campground, Campsite Drive	c.1966	D+A: Not Eligible
Resources within the survey area, and determined not eligible by VDHR within the last five years (Not re-surveyed at this time)			
121-5110	Upper spillway of Lee Hall Reservoir	c.1965	VDHR: Not Eligible (2015)
121-5111	Lee Hall Reservoir	c.1892	VDHR: Not Eligible (2015)
121-5112	CSX Railroad bridge, spanning Lee Hall Reservoir	c.1955	VDHR: Not Eligible (2015)
121-5113	Bridge, spanning Fort Eustis Boulevard	c.1960	VDHR: Not Eligible (2015)
Resources within Fort Eustis (Not re-surveyed at this time)			
121-0105	Fort Eustis Historic District (Current)	1914	VDHR: Not Eligible (2015)
121-5089	Anderson Field House/ Building 643, 643 Dickman Street	<null>	Noncontributing to Fort Eustis Historic District
121-5330	Building 1/ Flagpole, Washington Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-5331	Building 5/ Water Support Facility, Washington Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-5332	Building 210, Heilman Hall/ Post Headquarters	<null>	Noncontributing to Fort

VDHR ID#	Property Name / Address	Date of Construction	NRHP Status
	Building, Washington Boulevard and Dillon Circle		Eustis Historic District
121-5333	Building 215/ Miscellaneous Recreation Building (Wives Club), Calhoun Street	<null>	Noncontributing to Fort Eustis Historic District
121-5334	Building 233/ Installations Operations Center, Headquarters Wing, Washington Boulevard and Dillon Circle	<null>	Noncontributing to Fort Eustis Historic District
121-5335	Building 250/ Electric Power Building, Washington Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-5336	Building 300/ U.S. Army Transportation Museum, Washington Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-5347	Building 515, Clinic/Social Service/ O-Dwyer Barracks/Enlisted Women's Barracks without Mess, Sternberg Avenue	<null>	Noncontributing to Fort Eustis Historic District
121-5348	Building 576/ McDonald Army Health Hospital, Jefferson Avenue and Heiner Place	<null>	Noncontributing to Fort Eustis Historic District
121-5349	Building 586/ A/C Central Plant, Jefferson Avenue and Heiner Place	<null>	Noncontributing to Fort Eustis Historic District
121-5350	Building 601/ Consolidated Support Center/Headquarters/ Open Mess/ Non-Commissioned Officers, Washington Boulevard and Hines Circle	<null>	Noncontributing to Fort Eustis Historic District
121-5351	Building 605/ Bus Shelter, Washington Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-5361	Building 670/ Civilian Advisory Center (CPAC)/ Communication Facility, Calhoun Street and Lee Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-5362	Building 675/ Bowling Center, Dickman Street and Jackson Ave	<null>	Noncontributing to Fort Eustis Historic District
121-5385	Building 1313/ Groninger Library/ Library/1300 Block, Hines Circle	<null>	Noncontributing to Fort Eustis Historic District
121-5387	Building 1380/ Post Exchange (PX) Service Station/ Gas Station, Washington Boulevard and Jackson Avenue	<null>	Noncontributing to Fort Eustis Historic District
121-0105-0003	Buildings #201, 202, 203, 204, Warehouse, 201-204 Washington Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-0105-0004	Building #205/ Warehouse, 205 Washington Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-0105-0005	Building #207, Washington Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-0105-0006	Building #215/ Fort Eustis and Civilian Counseling Services / Offices, 215 Lee Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-0105-0007	Buildings #218, 219, 220, 229/ Warehouse, 218-220 & 229 Lee Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-0105-0008	Building #314/ Club, 314 28th Street	<null>	Noncontributing to Fort Eustis Historic District
121-0105-0009	Building #343 / Warehouse, 343 Washington Boulevard	<null>	Noncontributing to Fort Eustis Historic District
121-0105-0019	Building #191/ Laundry, 191 Madison Ave	<null>	Noncontributing to Fort Eustis Historic District
121-0105-0030	Building 705/ Transportation School, 705 Washington Boulevard	<null>	Noncontributing to Fort Eustis Historic District

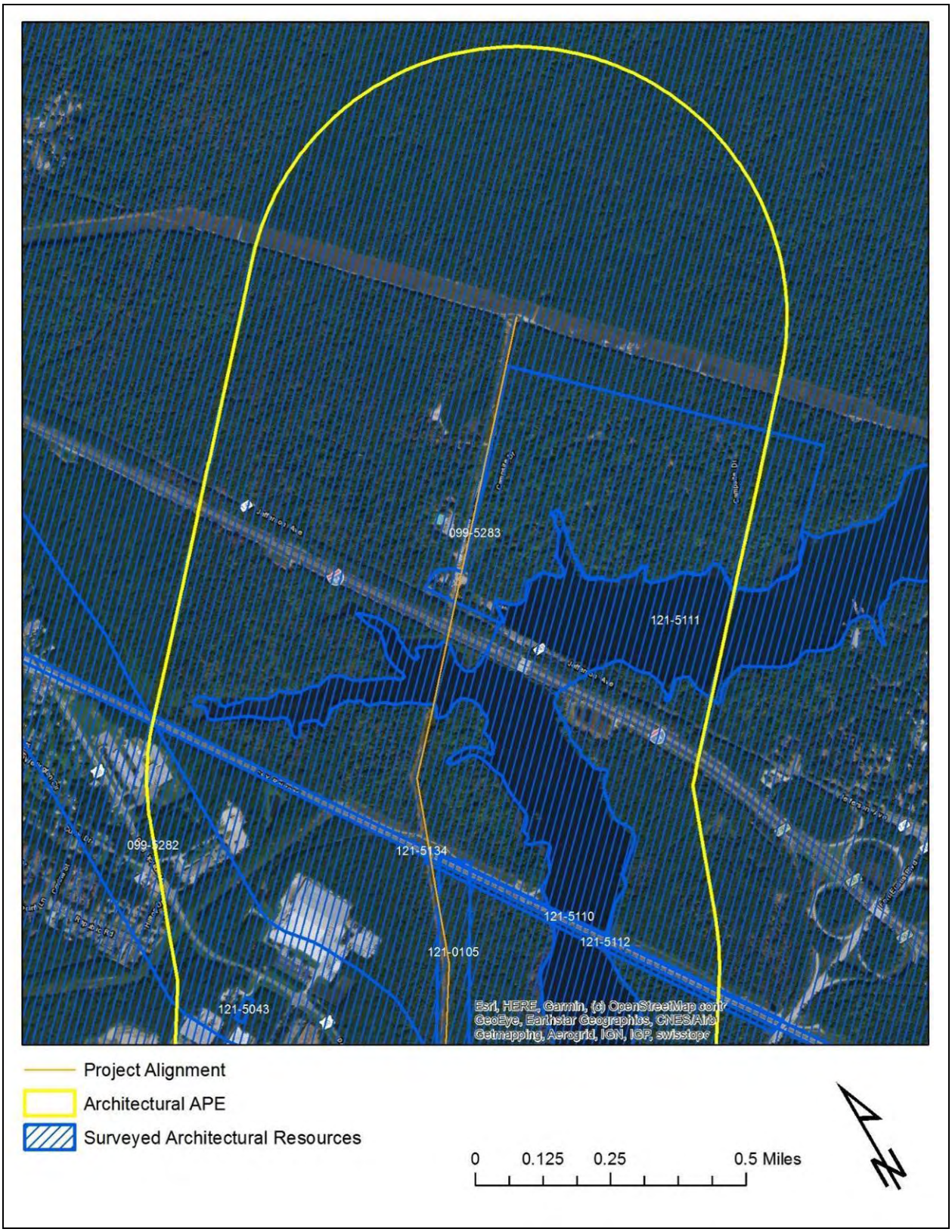

Figure 8-1: Surveyed architectural resources (north half of APE)

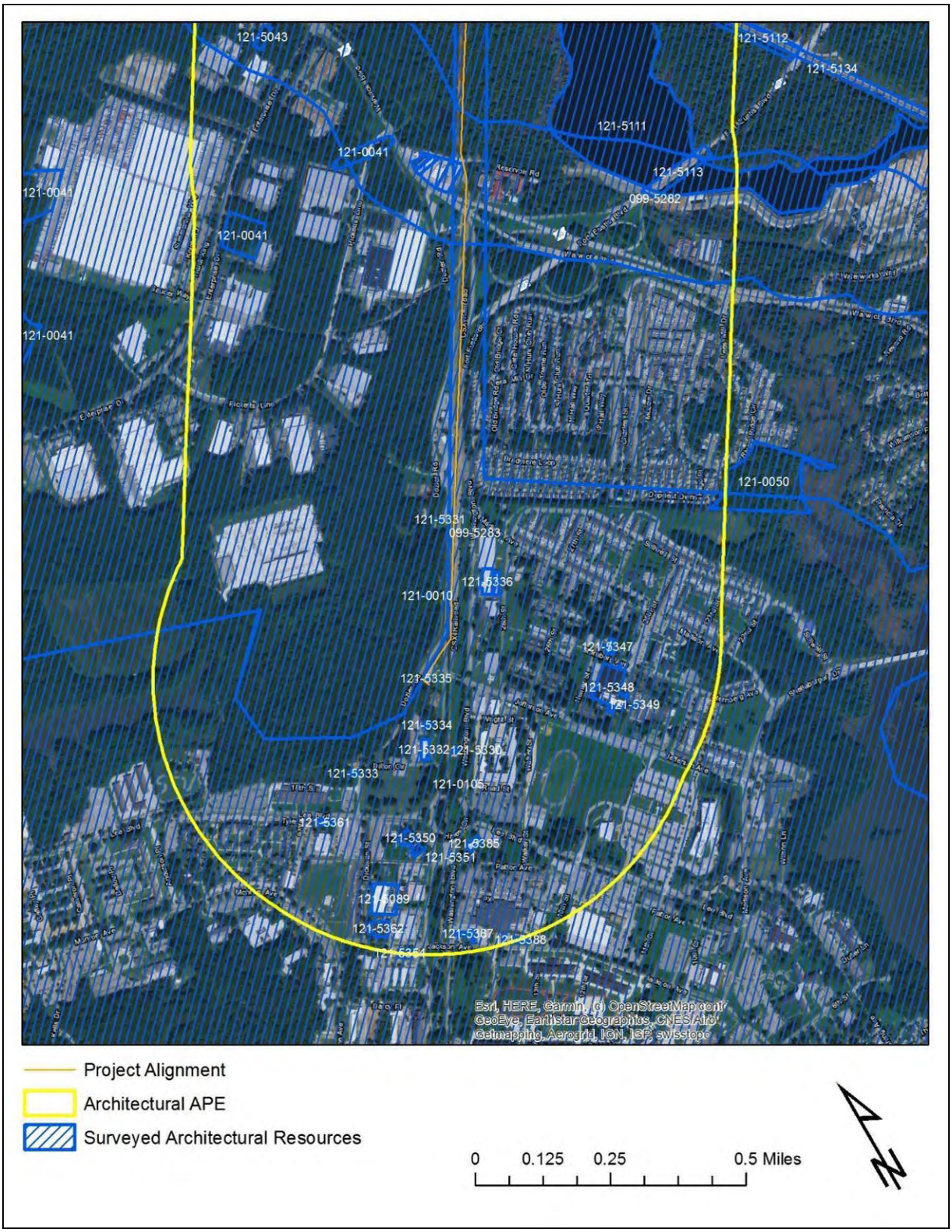

Figure 8-2: Surveyed architectural resources (south half of APE)

RESOURCE NARRATIVES

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VDHR# 099-5282
Williamsburg Battlefield

The Battle of Williamsburg occurred on May 5, 1862 and was the first pitched battle of the Peninsula Campaign. Nearly 41,000 Federals and 32,000 Confederates were engaged. Following up the Confederate retreat from Yorktown, Hooker's division encountered the Confederate rearguard near Williamsburg. Hooker assaulted Fort Magruder, an earthen fortification alongside the Williamsburg Road, but was repulsed. Confederate counterattacks, directed by Maj. Gen. James Longstreet, threatened to overwhelm the Union left flank, until Kearny's division arrived to stabilize the Federal position. Hancock's brigade then moved to threaten the Confederate left flank, occupying two abandoned redoubts. The Confederates counterattacked unsuccessfully. Hancock's localized success was not exploited. The Confederate army continued its withdrawal during the night.

The Williamsburg Battlefield study area forms a complex shape relating to troops movements and areas of fighting in the vicinity of Williamsburg, Virginia. As delineated by the NPS ABPP, the study area for this battlefield encompasses approximately 10,369.37 acres, of which much is altered and fragmented by later development.

In 2007, VDHR recommended this battlefield potentially eligible for listing in the NRHP under Criterion A for its association with the Civil War in Virginia. In 2009, the NPS prepared an update to the CWSAC report to delineate core areas of battlefields as well as determined which, if any portions of the battlefields are potentially NRHP-eligible. The core area of the Williamsburg Battlefield is located just southeast of the Town of Williamsburg. Bordering a portion of that within relatively undeveloped land on the north side of I-64 is the potentially NRHP-eligible portion of the battlefield, which consists of just 1,075.23 acres of the 10,369.37 total acres within the battlefield.

At the time of this effort, only small and discrete section of the battlefield is within the project APE for this effort and was subject to inspection. This section consists of a narrow approach corridor along Route 60 (Williamsburg Road). This area was not included in the potentially NRHP-eligible area as defined by the NPS because of its fragmented character with extensive modern intrusion. However, because only a small portion of the battlefield was subject to inspection as part of this effort and it would need to be looked at within the larger context of the overall battlefield, D+A recommends the battlefield continue to be treated as ***potentially eligible for listing in the NRHP***; however, treatment and assessment of project effects should consider the physical integrity and setting of the portion in the APE.

VDHR# 099-5283
Yorktown Battlefield

The Battle of Yorktown took place from April 5 to May 4, 1862 as the beginning engagement of the Peninsula Campaign. Marching from Fort Monroe, Maj. Gen. George B. McClellan's army encountered Maj. Gen. John B. Magruder's small Confederate army at Yorktown behind the Warwick River. Magruder's theatrics convinced the Federals that his works were strongly held. McClellan suspended the march up the Peninsula toward Richmond, ordered the construction of siege fortifications, and brought his heavy siege guns to the front. In the meantime, Gen. Joseph E. Johnston brought reinforcements for Magruder. On 16 April, Union forces probed a weakness in the Confederate line at Lee's Mill or Dam No. 1, resulting in about 309 casualties. Failure to exploit the initial success of this attack, however, held up McClellan for two additional weeks, while he tried to convince his navy to maneuver the Confederates' big guns at Yorktown and Gloucester Point and ascend the York River to West Point thus outflanking the Warwick Line. McClellan planned for a massive bombardment to begin at dawn on May 4, but the Confederate army slipped away in the night toward Williamsburg.

The Yorktown Battlefield study area forms a complex shape relating to troops movements, staging, and fortifications across the Lower Peninsula in the vicinity of Yorktown, Virginia. As delineated by the NPS ABPP, the study area for this battlefield encompasses approximately 63,960.79 acres, of which much is considered relatively intact. Many of the battlefield's key elements still remain scattered throughout undeveloped and wooded areas, particularly along the edge of the existing Lee Hall reservoir and within Newport News Park. Extant features include rifle pits, earthworks, cannon emplacements, redoubts, communication trenches, and impoundments and wells for water.

In 2007, VDHR recommended this battlefield potentially eligible for listing in the NRHP under Criterion A for its association with the Civil War in Virginia. In 2009, the NPS prepared an update to the CWSAC report to delineate core areas of battlefields as well as determined which,

if any portions of the battlefields are potentially NRHP-eligible. Because of the nature of the engagement involving widespread fortifications and staging, there are multiple, discrete core areas of the Yorktown Battlefield scattered throughout the area. Because much of the battlefield remains relatively intact and undeveloped, particularly within and around Newport News Park, 17,734.22 acres of the 63,960.79 total acres within the battlefield are considered potentially NRHP-eligible.

At the time of this effort, only small and discrete section of the battlefield is within the project APE for this effort and was subject to inspection. This includes portions of the battlefield north of Route 60 (Williamsburg Road) and around the Lee Hall Reservoir and Newport News Park. Much of this area is included in the potentially NRHP-eligible area as defined by the NPS due to a multitude of extant features, including several well-preserved earthworks and fortifications. Despite only a small portion of the battlefield being subject to inspection as part of this effort, the surveyed portion retains high integrity, and D+A recommends the battlefield continue to be treated as ***potentially eligible for listing in the NRHP***.

VDHR# 121-0010
Mulberry Island Church Site, Dozier Road

The Mulberry Island Church Site, also recorded as 44NN0176, is an archaeological site that represents the remains of a church site and cemetery believed to have been in existence since 1660. All that remains presently are a series of brick posts roughly bordering an area of burials. The site is heavily overgrown and could not be inspected, however, previous inspection noted that the earliest marked tombstone dates to 1870. The building is believed to have been abandoned and the last known use of the cemetery is believed to have occurred circa 1920 after the establishment of Fort Eustis immediately to the east.

This site is located along the west side of Dozier Road, just west of the main gate to Fort Eustis. Dozier Road is a private, narrow road extending off Route 60 near the entrance to Fort Eustis. The church site is far back from Route 60, nearly 0.75 miles along Dozier Road. The site is currently wooded and heavily overgrown. It is set back from Dozier Road behind a narrow drainage ditch and a fiber-optic ROW. A series of brick posts along the treeline appears to mark former boundaries of the site, however, several have collapsed or are in poor condition. The site appears to have been used for dumping and has a variety of debris scattered throughout.

This property represents the site of a church and cemetery believed to have been in use from circa 1660 through 1920. According to previous study, the site was for many early years a Church of England or Episcopal Church for the community of Mulberry Island. The last known white burial in this cemetery was that of a member of the Southall family in 1820. Later, the church was turned over to African American residents of the area who used it for worship until about 1920. The earliest tombstones indicate burials in the 1870s. While the site has a long and interesting history, little above-ground evidence remains. Limited archaeological investigation has occurred; however further study would need to be conducted to evaluate its archaeological eligibility. As such, it considered ***not eligible*** for listing in the NRHP at this time.

VDHR# 121-0041
Oakland Farm Industrial Park Multiple Resource Area

The Oakland Farm Archaeological Sites Multiple Resource Area includes three significant, distinct and non-contiguous archaeological sites within the Oakland Farm Industrial Park. The sites include prehistoric occupation, the Queen Hith Plantation Complex, occupied by the Harwood family from ca 1632 until after the Revolutionary War; and one Confederate earthworks, the southerly terminus of the band of fortifications constructed by General J. B. Magruder in 1862 as part of the Peninsula Campaign. Besides the earthworks, the tracts do not include any other standing or above-ground features.

The three archaeological sites associated with the Oakland Farm Archaeological Sites Multiple Resource Area are spread throughout the Oakland Farm Industrial Park located on the south side of Route 60, just west of Fort Eustis. The park consists of a number of large industrial warehouses and complexes set on large parcels around a central loop road. The sites are located on and mostly within preserved wooded areas within the complex.

The Oakland Farm Industrial Park Multiple Resource Area consists of archaeological sites that represent three major periods of American history. The archaeological remains of prehistoric occupation dating to the Early-Middle Woodland Periods; the Queen Hith Plantation Complex, occupied by the Harwood family from ca 1632 until after the Revolutionary War; and one Confederate earthworks, the southerly terminus of the band of fortifications constructed by General J. B. Magruder in 1862 as part of the Peninsula Campaign, have survived intact at Oakland Farm and are preserved in situ. Previous archaeological investigation has found that the sites retain high integrity and offer the potential for additional research and investigation. Because of the high research potential they offer, the collection has been ***formally listed in the NRHP*** and is also held under a ***VDHR Preservation Easement***.

VDHR# 121-0050
Lee's Mill Earthworks, 280 Rivers Ridge Circle

The Lee's Mill earthworks, situated on a ten-acre parcel in a rapidly developing area of Newport News, are remnants of the Confederate Warwick-Yorktown defensive line from the 1862 Peninsula Campaign. The earthen fortifications were erected between the summer of 1861 and the spring of 1862. Although once cleared of trees for a better field of fire, the area is now in oak, beech, and pine timber overlooking the Warwick River. This historic area is bounded by Fort Eustis, the Warwick River, and the Mill's Ridge housing development; thereby, providing green space in a suburban area. A walking trail parallels the fortifications around the river and leads back toward the parking lot. At the entrance, a Virginia Civil War Trails interpretative sign details the April 5, 1862 Battle of Lee's Mill.

The Lee's Mill Earthworks are situated on a roughly 10-acre tract of land bordering the Warwick River. The property is now bordered to the north and west by a modern suburban residential development. Rivers Ridge Circle extends past the northern edge of earthwork tract and a small parking lot has been built for visitors. The tract and earthworks remain wooded, although gravel pedestrian trails lead from the parking lot into the site and around the fortifications. Interpretive signs are set along the trail throughout the park.

The Lee's Mill Earthworks represents a well-preserved fortification associated with the early Confederate defense of the Lower Peninsula. At the outset of the Civil War, the U.S. Army retained control of Fort Monroe at Old Point Comfort, which was an ideal staging area for an attack up the Peninsula toward the newly established Confederate capital in Richmond. The Confederate government recognized the Peninsula's strategic importance and sent Col. John Magruder to organize the region's defenses on May 24, 1861. Richard D. Lee's gristmill dam was the Great Warwick Road's crossing over the Warwick River, and thus later proved a strategic site. Magruder and his engineers, Capt. Alfred Rives and Capt. Isaac St. John, fortified the bluffs over the riverbank. Numerous skirmishes and engagements occurred here from April 5

until May 4, 1862 at which time the Confederates abandoned the earthworks and withdrew toward Richmond. Because of the well-preserved nature of the earthworks, and the interpretative potential they offer, the Lee's Mill Earthworks has been ***formally listed in the NRHP***.

VDHR# 121-5043
House, 17249 Warwick Boulevard

This single dwelling was built circa 1950 according to site survey and exhibits a Minimal Traditional style. The building has a one-story rectangular main block with an offset projecting front bay and a small one-story side wing. The wood frame structural system is clad with vinyl siding and rests on a continuous concrete block foundation. It is topped by a side-gable roof with offset front cross gable covered with asphalt shingles that is pierced on the rear slope by a central interior brick chimney flue. The main entrance is set adjacent to the forward bay on the front and sheltered by a partial-width integral roof porch with cast metal supports. Fenestration consists of four-over-four double-hung sash windows as well as a single pane picture window on the forward bay. The building is simple and unembellished.

This home is set on the south side of Route 60 on a small rural residential property bordered by larger industrial tracts. It is set back from the road on a grassy yard with a variety of trees and landscaping scattered throughout the yard. It is approached by a gravel driveway that crosses through an open field at the front of the property. Two nonhistoric prefabricated lawn sheds are set in the yard to the side of the house. To the opposite side of the property is cell tower complex set on a large gravel pad accessed by an extension of the driveway from this house.

This property is an example of a typical mid-twentieth century rural dwelling in the region. The home reflects the Minimal Traditional style and little architectural distinction. Overall, the property does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR# 121-5134
Chesapeake & Ohio Railroad

A roughly one-mile segment of the former Chesapeake & Ohio (present-day CSX Railroad) corridor, extends through the project APE, running generally northwest-southeast. In this area, it generally parallels the other major transportation corridors through the Lower Peninsula including Route 60, I-64, and Jefferson Avenue. The portion of the corridor within the survey area is triple-tracked as it enters the survey area from the west near Lee Hall Depot, but transitions to a double-tracked configuration prior to crossing the Lee Hall Reservoir and continuing east towards Newport News.

The tracks are set upon a built-up gravel berm that extends through a ROW mostly bordered by woodland. There are no road crossings within the project APE, however, the corridor crosses over the Lee Hall Reservoir on an earthen bridge.

The portion of the C&O Railroad that runs through the project APE for this project is part of the larger Peninsula Extension or Peninsula Subdivision of the Chesapeake and Ohio Railroad. The Peninsula Extension runs from Fulton Yards in the City of Richmond to the port of Newport News. The construction of the Peninsula Extension saw the completion of a railroad line that runs from the coal rich regions of West Virginia to the ice-free ports of Newport News. Completed by Collis P. Huntington in 1881, the Peninsula Extension facilitated the movement of coal to ships bond for the northeast.

The Peninsula Extension of the C&O Railroad was previously determined eligible for listing in the NRHP by the VDHR for its significant contributions to commerce, industry, and transportation in the region. Although only a short segment of the railroad was subject to survey as part of this effort, the rail corridor appears to retain its original configuration and alignment through the survey area. Although the line has been double- and triple-tracked and built-up on a modern gravel berm, the corridor continues to convey its association with transportation

development in Virginia during the late-nineteenth century. It is therefore D+A's opinion that the C&O Railroad still be considered ***potentially eligible*** for listing in the NRHP; however, treatment and assessment of project effects should consider the physical integrity and setting of the line in the APE.

VDHR# 121-5457
Commercial Building, 16906 Warwick Boulevard

This commercial building was built in 1970 according to local records and exhibits a Nuevo-Neoclassical Revival style. The building has a one-story mostly rectangular main block with two small side wings. The masonry structural system is clad with brick veneer laid in a stretcher bond and rests on a continuous foundation. It is topped by a front-gable roof with two small cross gables to the side covered with asphalt shingles. The main entrance is set on the front of the forward side wing and is sheltered within an inset bay. There is no other windows or fenestration on the building. The building has a variety of neoclassical revival influences including a pedimented front gable, exaggerated quoins, false window lintels with keystones, and fluted pilasters supporting the front pediment and entry architrave.

This building is set on the north side of Route 60 on a small commercial lot. It is set back from the road on a paved parking lot that extends along the front, side, and rear. The opposite side of the building is set near the adjacent commercial building with only a narrow gap between. The adjacent building shares the front parking lot which is accessed by multiple entries from Route 60. Set to the rear of the building is a prefabricated storage shed.

This property is an example of a typical mid-twentieth century roadside commercial building in the region. The building reflects a neoclassical-revival style that is a result of modern renovation. Overall, the property does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR# 121-5458
Commercial Building, 16914 Warwick Boulevard

This commercial building was built in 1968 according to local records and exhibits no discernible style. The building has a one-story mostly rectangular main block with a small offset rear ell. The concrete block structural system is exposed on the sides and rear and clad with brick veneer laid in a stretcher bond on the front. It rests on a continuous foundation. It is topped by a flat roof with a raised flat parapet extending along the front. There are two separate storefront entries set at opposite ends of the front, both of which are sheltered by a full-width flat roof canopy. There are no other windows or fenestration on the building. The building is simple and embellished only by a series of vertical reliefs in the brickwork of the parapet.

This building is set on the north side of Route 60 on a commercial lot. It is set back from the road on a paved parking lot that extends along the front, side, and rear. The opposite side of the building is set near the adjacent commercial building with only a narrow gap between. The adjacent building shares the front parking lot which is accessed by multiple entries from Route 60. No outbuildings were observed on the property.

This property is an example of a typical mid-twentieth century roadside commercial building in the region. The building reflects no discernible style with little architectural distinction. Overall, the property does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR# 121-5459
Commercial Building, 16922 Warwick Boulevard

This commercial building was built in 1964 according to local records and exhibits no discernible style. The building has a one-story trapezoidal-shaped main block created by the rear angle of the property. The concrete block structural system is exposed on the sides and rear and clad with brick veneer laid in a stretcher bond on the front. It rests on a continuous foundation. The building is topped by a flat roof covered with unknown materials. The main entrance is set centrally on the front and is unsheltered. It is flanked by nearly full-height storefront windows with aluminum frames on both sides. Additional fenestration on the sides of the building consist of multi-light industrial-style windows. The front of the building is embellished by heavy roof overhangs, metal panels beneath the windows on the front, and a series of posts supporting a full-width parapet-styled sign over the front.

This building is set on the north side of Route 60 on a commercial lot. It is set back from the road on a paved parking lot that extends along the front, side, and rear. The opposite side of the building is set near the adjacent motel with only a narrow gap between. No outbuildings were observed on the property.

This property is an example of a typical mid-twentieth century roadside commercial building in the region. The building reflects no discernible style with little architectural distinction. Overall, the property does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR# 121-5460
Motel, 16924 Warwick Boulevard

This commercial building was built circa 1960 according to site survey and exhibits no discernible style. The building has a two-story rectangular form created by a front office block and a rear guestroom block. The front block has a masonry structural system clad with brick laid in a stretcher bond that rests on a continuous foundation. It is topped by a pent roof with a flat top. The rear block has an exposed concrete block structural system that rests on a continuous foundation and is topped by a flat roof. The entrance to the front block is through an interior corridor within the first bay of the guestroom block. Guestroom entries are from the exterior and set along the side, sheltered by an integral roof overhang. Two stairwells provide access to the second floor balcony. Fenestration consists of six-over-six double-hung sash windows on the front block and single-pane fixed windows on the rear block. The building is simple and embellished only with a heavy pent roof on the front that is pierced by upper story window openings.

This building is set on the north side of Route 60 on a commercial lot. It is set back near the road with a small grassy yard in front. A driveway and parking lot extend along the side and rear of the building. The opposite side of the building is set near the adjacent commercial building with only a narrow gap between. No outbuildings were observed on the property.

This property is an example of a typical mid-twentieth century roadside motel in the region. The building reflects no discernible style with little architectural distinction. Overall, the property does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR# 121-5461
Newport News Park Campground, Campsite Drive

This campground was opened circa 1966 along with the creation of Newport News Park according to written data. It consists of several clusters of campsites for primitive and RV camping. The primary building is a modern visitor center located at the front of the complex. This building was constructed circa 2015 according to map review and exhibits a rustic revival style. The one-story building has a mostly square form. The wood frame structural system is clad with a combination of cedar siding and stone veneer and rests on a continuous foundation. It is topped by a hipped roof covered with standing seam metal. There are entries on all sides of the building, each sheltered within a gabled portico with stone columns supports. The building is embellished with a variety of "rustic" influences.

This campground is set on the north side of Jefferson Avenue along the north shore of the Lee Hall Reservoir. It is a large area comprised of a visitor center, boat ramp, recreational areas, and multiple campsites and areas. The driveway from Jefferson Avenue leads directly into the visitor center parking lot, off of which is a spur that leads to a boat ramp into the reservoir. The main driveway continues into the campground with spurs leading into the separate camping areas. Set along the road are bathhouses, trach collection, and other amenities. The bathhouses appear to date from the 1960s and reflect a contemporary style.

This property is an example of a typical mid-twentieth century locally-administered campground in the region and state. The extant historic buildings reflects a contemporary style with little architectural distinction, while the visitors' center/administration building was replaced in 2015 with a modern rustic-revival building. Overall, the property does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The property is therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

ARCHAEOLOGICAL SURVEY

Archaeological survey for the Fort Eustis Tap/Line 34 Rebuild project consisted of a combination of systematic pedestrian survey, systematic shovel testing, and systematic metal detection. Archaeological survey focused on the locations of existing structures and proposed temporary structures. Survey work commenced at the northern end of the transmission line at Structure 34/179 and proceeded south to Structure 34/157. Two additional structures – 34-180 and 34-178 – and their associated temporary structures – Tb1 and Tc1 – create a "T" shape with the northernmost portion of the powerline. These structures and temporary structures were also included in the survey. Survey work from Structure 34/156 to Structure 34/152 was not undertaken as this area is located within the limits of Joint Base Langley-Eustis and has been previously surveyed. A total of 138 shovel tests were laid out in a grid around existing structures and temporary structure locations, 39 of which were not excavated due to either wetlands or observed ground disturbances. Ninety-five (95) of the excavated shovel tests were negative for cultural material and four (4) were positive for cultural material. The results of the current survey are discussed for each structure location and temporary structure location below.

Structure 1038/178; Structures 34/180 through 34/172; and Temporary Structures Ta1 through T8

A total of ten (10) permanent structures and 11 temporary structures are planned for this segment of the rebuild, which is "T" shaped, with 34/179 to 34/172 running from TL34 south to Interstate 64, and 1038/178 and 34/180 creating the head of the "T" to the north of 34/179(Figure 8-3).

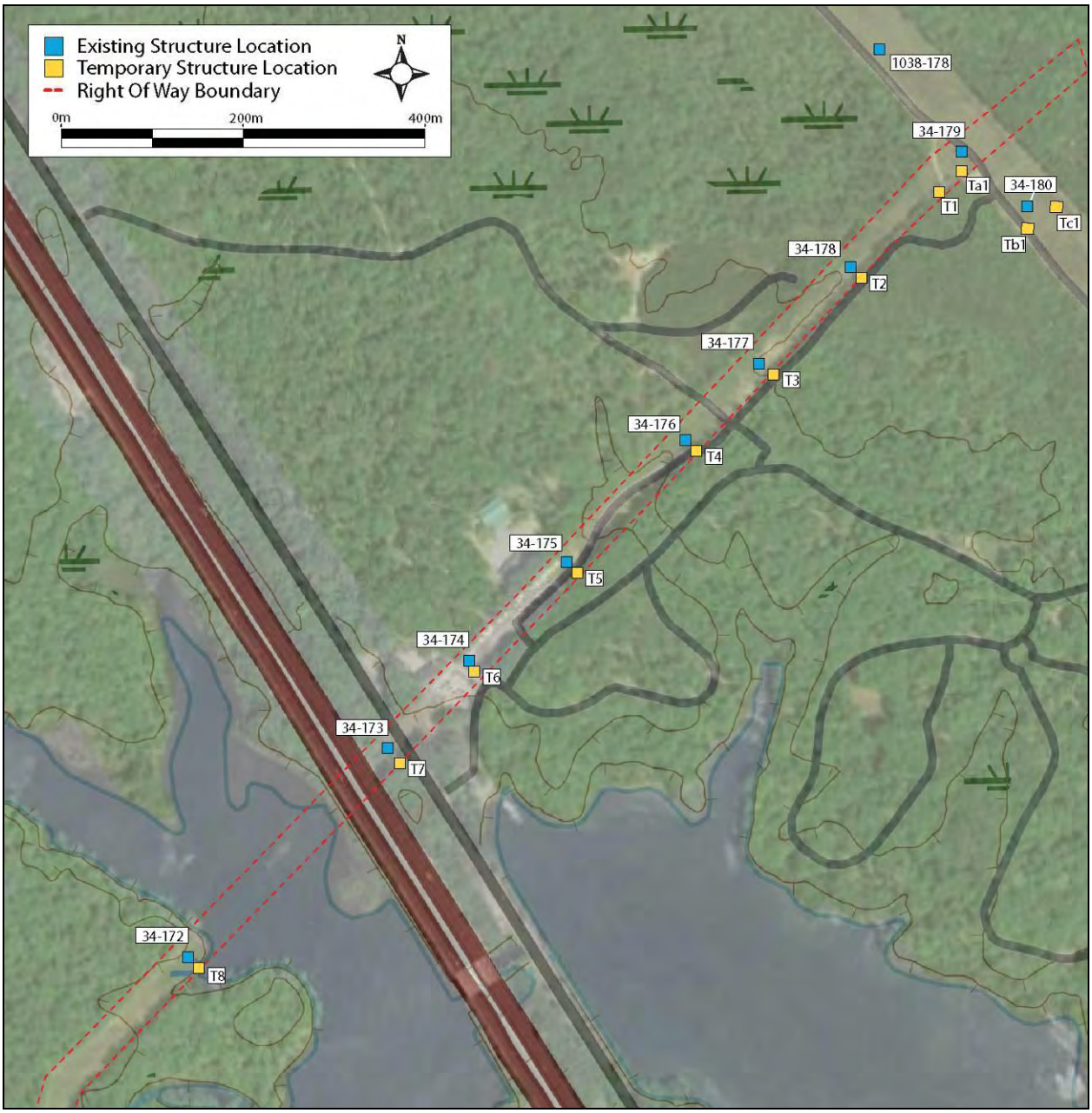


Figure 8-3: Location of Structures 1038-178; 34/180 through 34/172; and Temporary Structures Ta1 through T8.

Structure 34/180 and Temporary Structures Tb1 and Tc1

Structure 34/180 and temporary structures Tb1 and Tc1 are located in Newport News Park at the intersection of the Fort Eustis Tap and TL-34. The terrain in the area of the structure is slightly elevated fill with wetland vegetation and wetland soils surrounding the structure. Tb1 is located just southwest of shovel test pit S2. T1c is located northeast of shovel test pit S2. Standing water was present in the vicinity of Tb1 and Tc1 and at the locations of shovel test pits S1, S2, and E. Shovel test pit W landed in a gravel road. Due to the standing water and gravel road, only two shovel tests were excavated in this location, both of which were negative for cultural material

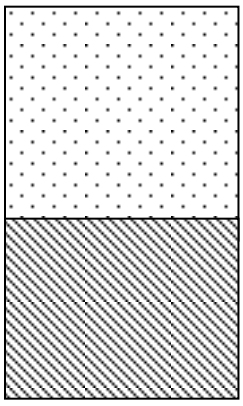
(Figures 8-4 through 8-6). No evidence of subsurface or surface features was observed during survey in this location.

Figure 8-4: Aerial view of Structures 34/180 Tb1 and Tc1.

Figure 8-5: View of 34/180, Tb1, and Tc1 setting and vegetation looking south, showing wetland.

Figure 8-6: Standing water at the projected location of Tc1 looking east.

Soils from the excavated shovel tests at Structure 34/180 consisted of about 27 cm of 10YR 4/4 brown sandy loam over a hydric subsoil consisting of 10YR 6/8 brownish yellow clay mottled with 2.5Y 6/1 gray clay (Figure 8-7).



10YR 4/4 sandy loam
0-27 cm

10YR 6/8 clay mottled with
2.5Y 6/1 clay
27-37 cm

Figure 8-7: Soil profile of shovel test N1 at 34/180.

Structure 1038/178

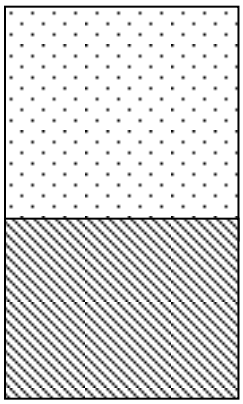
Structure 1038/178 is located in Newport News Park at the intersection of the Fort Eustis Tap and TL-34. The terrain in the area of the structure is slightly elevated fill with wetland vegetation and wetland soils surrounding the structure. Due to the fact that there was standing water surrounding the structure, only one shovel tests were excavated in this location, Judgmental shovel test pit 1 (J1), which was negative for cultural material (Figures 8-8 through 8-10). J1 was placed in the driest location within the proximity to the structure. No evidence of subsurface or surface features was observed during survey in this location.

Figure 8-8: Aerial view of Structure 1038/178.

Figure 8-9: View of 34/178 showing wetland vegetation looking north.

Figure 8-10: Standing water in the vicinity of the structure looking south.

Soils from the excavated shovel test at Structure 34/178 consisted of about 19 cm of 10YR 4/4 brown sandy loam mottled with 2.5Y 6/1 gray clay which came down to 2.5Y gray clay. The shovel test was hydric (Figure 8-11).



10YR 4/4 sandy loam
mottled with 2.5Y 6/1 clay
0-19 cm

2.5Y 6/1 clay
19-23 cm

Figure 8-11: Soil profile of shovel test J1 at Structure 1038/178.

Structure 34/179 and Temporary Structure Ta1

Structure 34/179 and temporary structure Ta1 are located in Newport News Park at the intersection of the Fort Eustis Tap and TL-34. The terrain in the area of the structure is slightly elevated fill with wetland vegetation and wetland soils surrounding the structure. Additional transmission structures are located in the immediate vicinity of the proposed replacement structure. Ta1 is located just south of Structure 34/179 and is immediately adjacent to existing transmission line infrastructure. Due to the location of existing transmission line infrastructure and wetland vegetation, only a single shovel test was excavated in this location, which was negative for cultural material (Figures 8-12 and 8-13). No evidence of subsurface or surface features was observed during survey in this location.

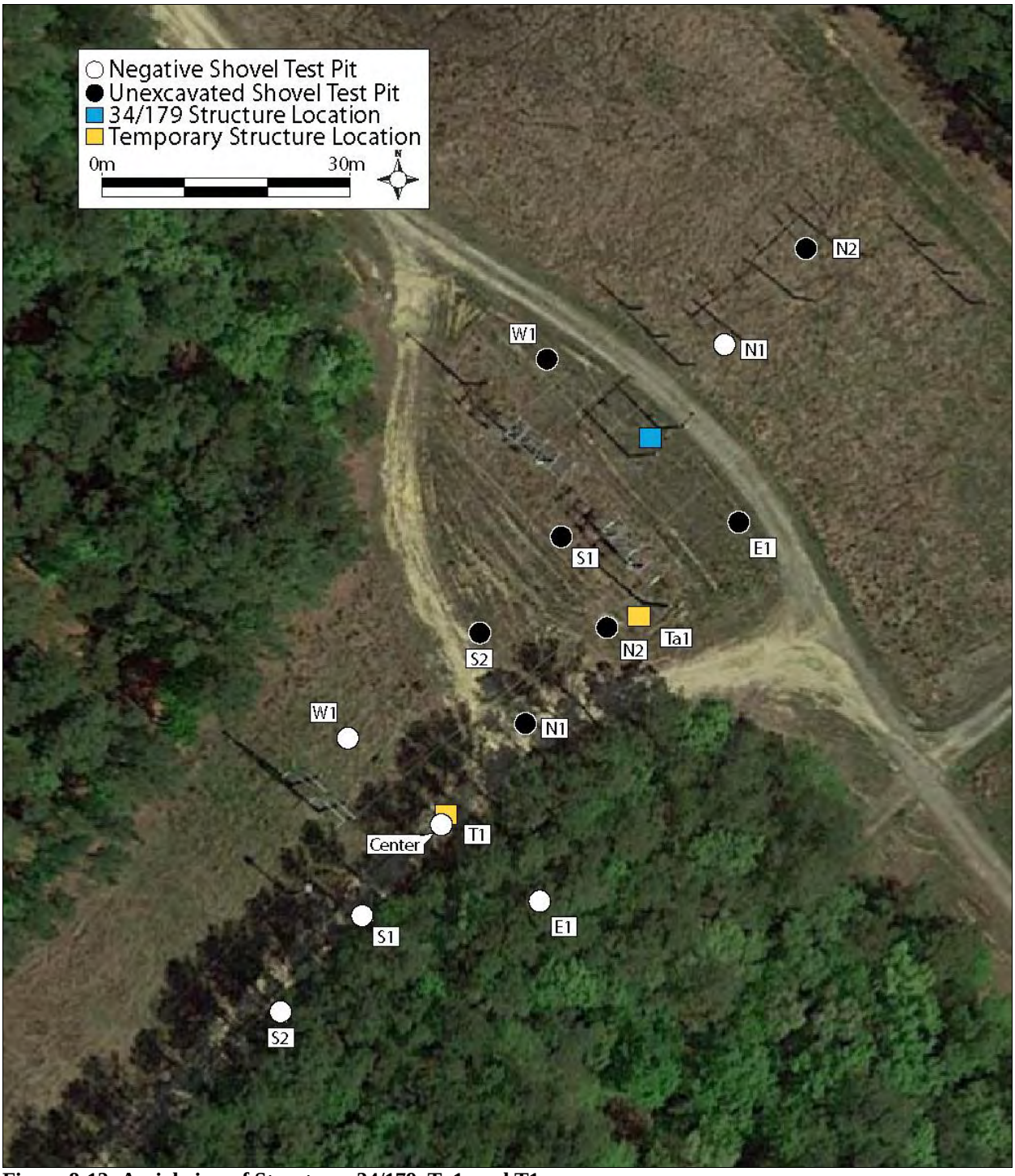


Figure 8-12: Aerial view of Structures 34/179, Ta1, and T1.

Figure 8-13: View of 34/179 and Ta1 setting and vegetation looking south.

Soils from the excavated shovel test at Structure 34/179 consisted of about 26 cm of 10YR 4/3 dark yellow brown silty loam over 7.5YR 5/8 strong brown silty clay subsoil (Figure 8-14).

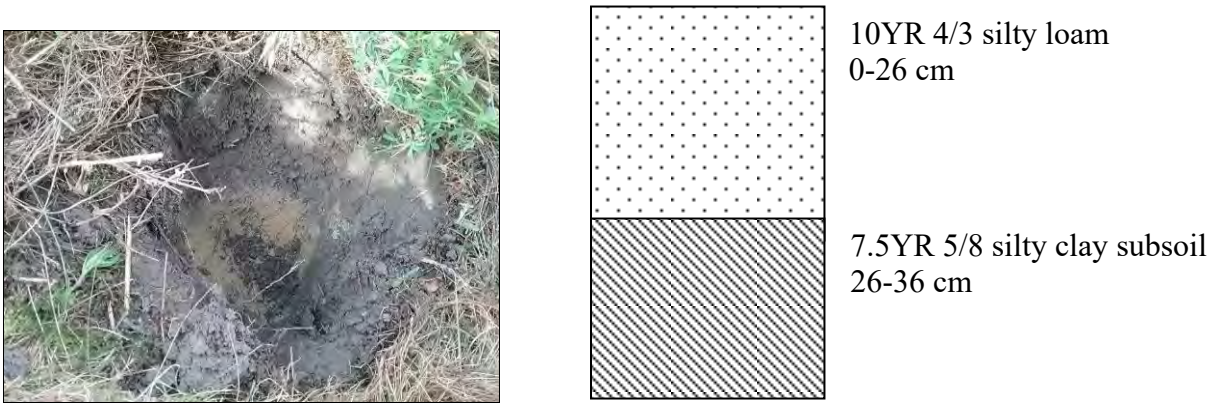


Figure 8-14: Soil profile of shovel test N1 at 34/179.

Temporary Structure T1

Temporary Structure T1 is located in Newport News Park along the southeastern edge of the ROW adjacent to wetlands and pine forest in the pathway of the gravel access road. Vegetation consisted of grasses and wetland vegetation. The terrain was level, and four (4) of the six (6) shovel tests were excavated around this temporary structure location (Figures 8-15 and 8-16). All four (4) excavated shovel tests were negative for cultural material. No evidence of subsurface or surface cultural features was observed.

Figure 8-15: Aerial view of Structure T1.

Figure 8-16: Looking east towards Temporary Structure T1

Soils consisted of about 15 cm of 10YR 4/6 dark yellow brown silty loam over 10YR 6/4 light yellow brown sandy clay subsoil (Figure 8-17).

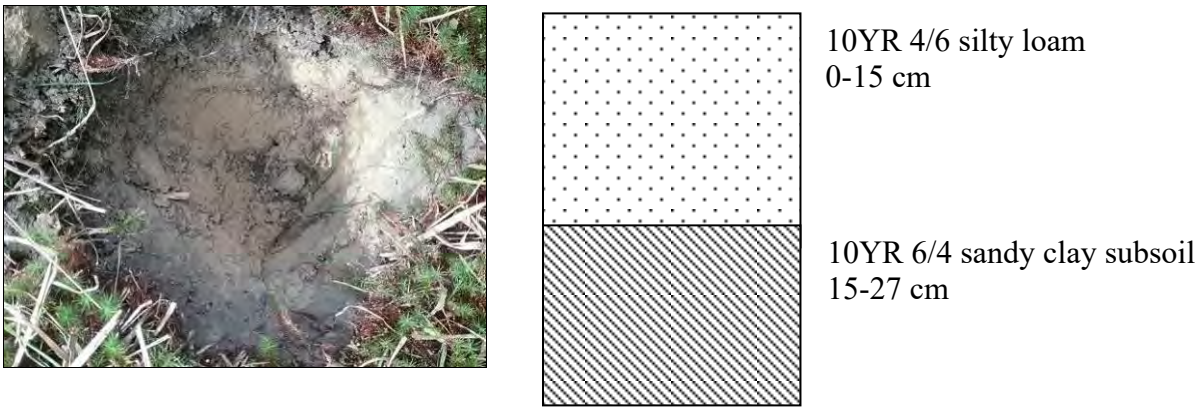


Figure 8-17: Soil profile of shovel test W1 at T1.

Structure 34/178 and Temporary Structure T2

Structures 34/178 and T2 are located in Newport News Park within the existing ROW. The area is covered with wild grasses and the existing graveled access road runs along the eastern edge of the ROW. A ditch runs along the western edge of the ROW. Six (6) shovel tests were excavated around these structure locations and one (1) shovel test was not excavated due to observed disturbance (Figures 8-18 and 8-19). One (1) shovel test, W1 was positive for cultural material, which consisted of a partially burned brick fragment and a single shard of colorless vessel glass. Due to the limited amount of material recovered and negative radial shovel tests, the find is classified as an isolated find (IF-1) with limited to no data potential. No evidence of subsurface or surface cultural features was observed.

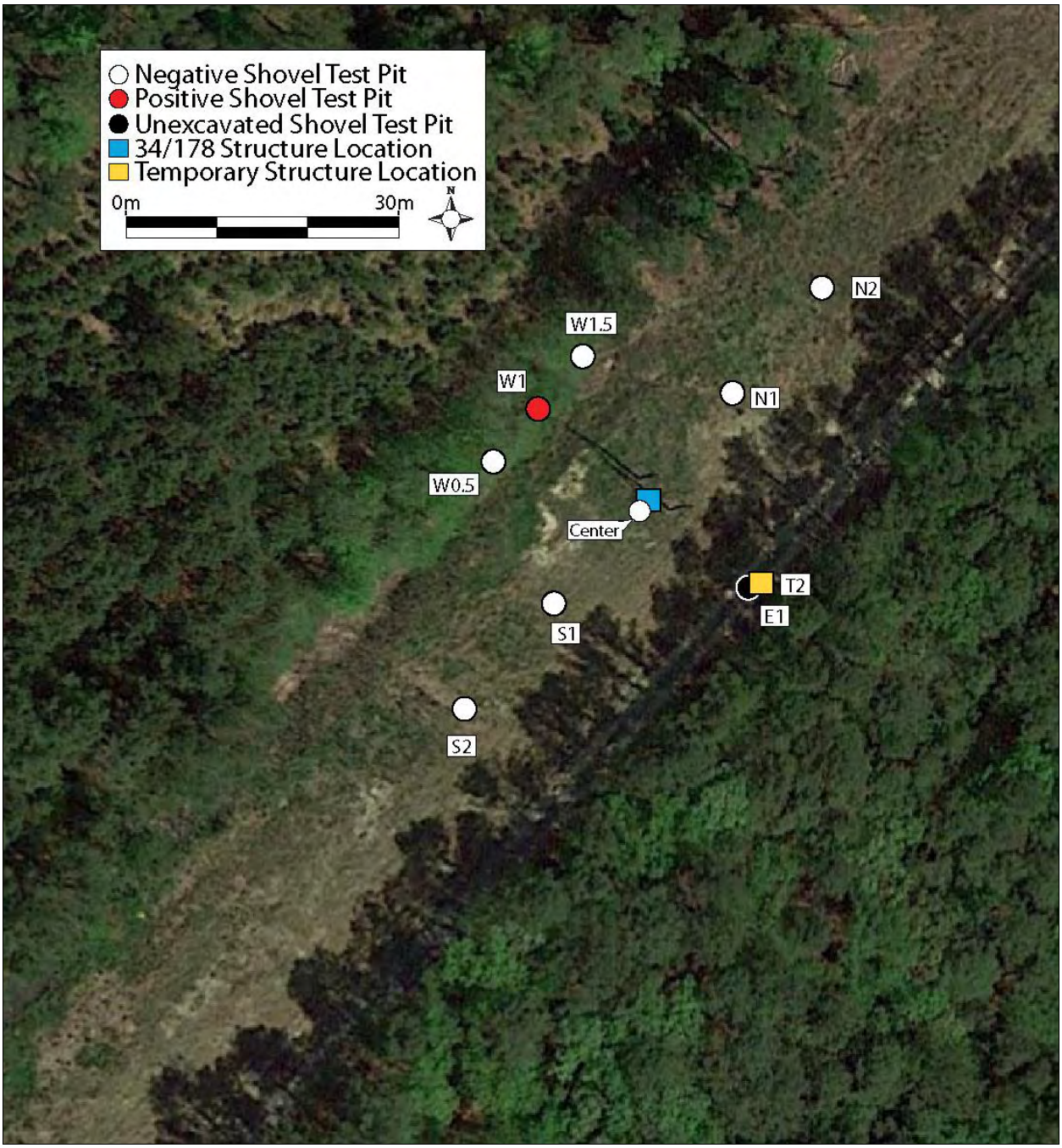


Figure 8-18: Aerial view of shovel tests at Structures 34/178 and T2.

Figure 8-19: Terrain and vegetation around Structures 34/178 and T2, facing south.

Soils around Structures 34/178 and T2 consisted of about 24 cm of 10YR 4/6 dark yellow brown sandy loam over 7.5YR 5/8 strong brown clay sand subsoil mottled with 7.5 YR 6/2 pale gray clay sand (Figure 8-20).

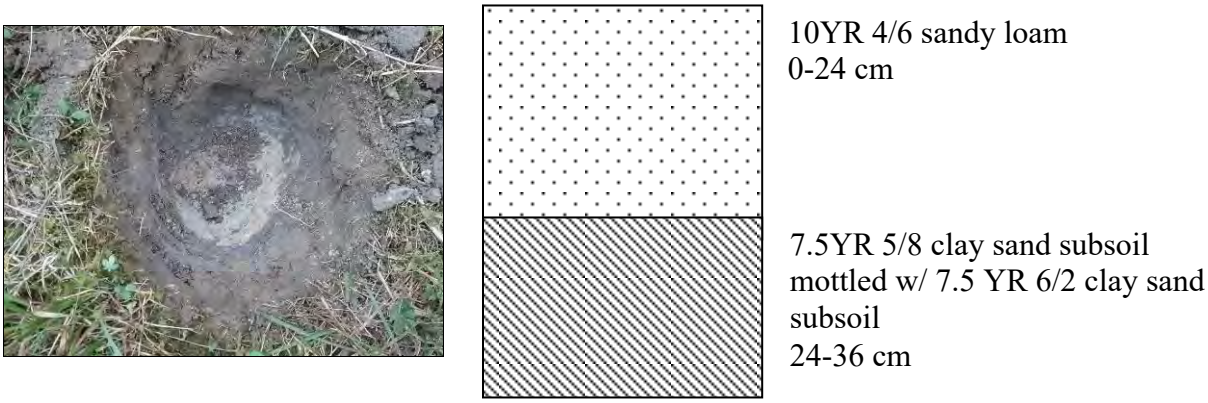


Figure 8-20: Soil profile for shovel test N1 at Structures 34/178 and T2.

Structure 34/177 and Temporary Structure T3

Structures 34/177 and T3 are located in Newport News Park within the existing ROW. The area is covered with wild grasses and briers and a gravel pad with spoil piles containing asphalt are present. Three (3) shovel tests were excavated around these structure locations none of which were positive for cultural material. All other shovel tests in this location were not excavated due to observed soil disturbances (Figures 8-21 and 8-22). No evidence of subsurface or surface cultural features was observed.

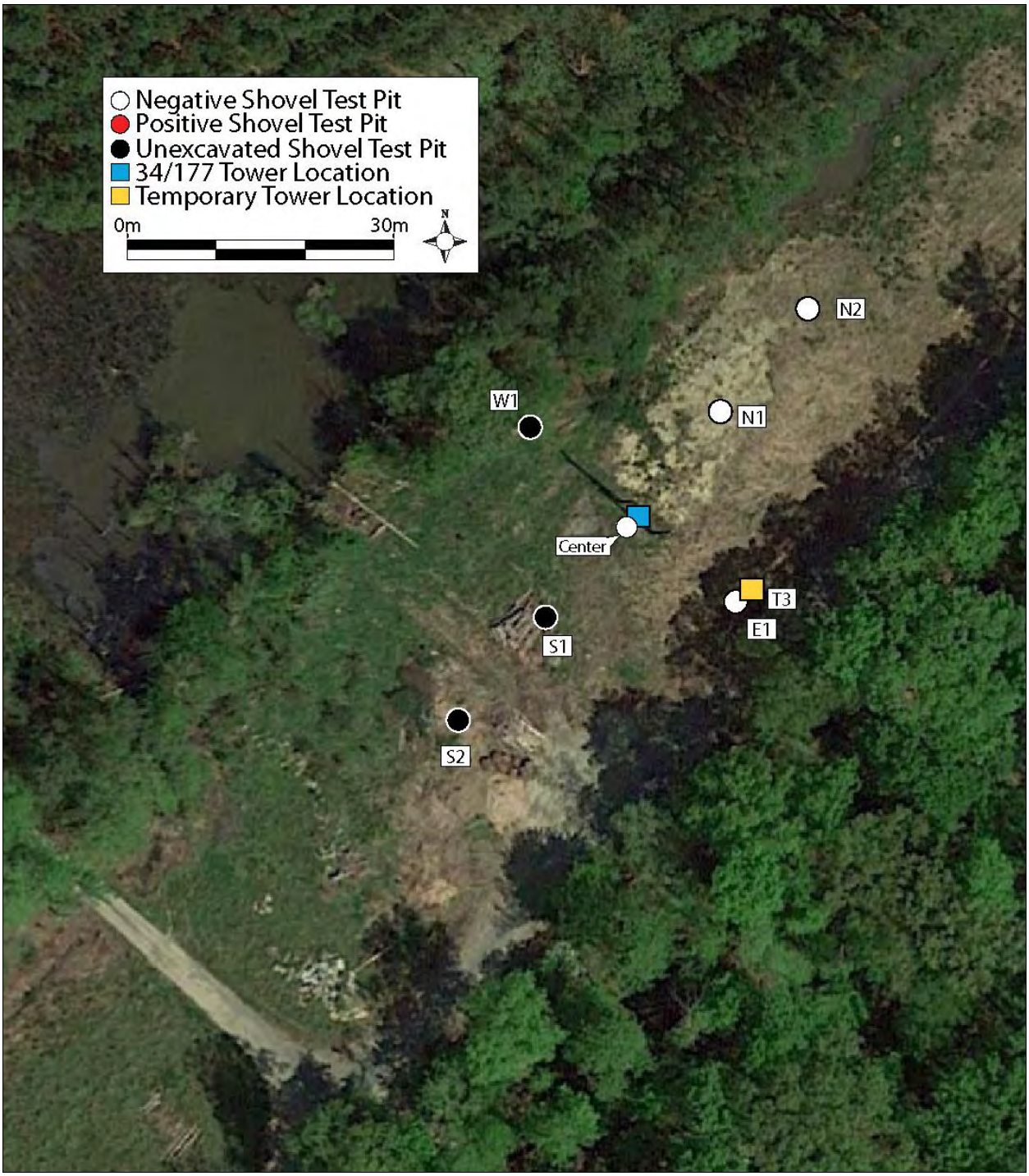


Figure 8-21: Aerial view of shovel tests at Structures 34/177 and T3.

Figure 8-22: Terrain and vegetation around Structures 34/177 and T3, facing south.

Soils around Structures 34/177 and T3 consisted of about 17 cm of 10YR 4/4 dark yellow brown sandy loam mottled with 7.5YR 5/8 sandy clay over 7.5YR 5/8 strong brown sandy clay subsoil (Figure 8-23).

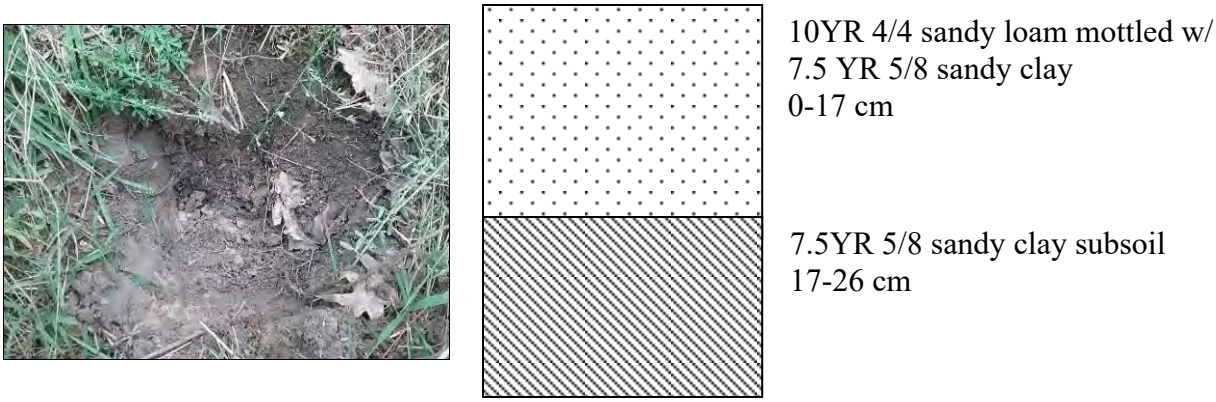


Figure 8-23: Soil profile for shovel test N1 at Structures 34/177 and T3.

Structure 34/176 and Temporary Structure T4

Structures 34/176 and T4 are located in Newport News Park within the existing ROW south of the Newport News Park Bikeway, which crosses the ROW. The area is covered with wild grasses and the existing structure is located in the edge of a slight bowl-shaped area, which leads down southward to a small drainage that runs between the next structure to the south. A drainage ditch runs along the western edge of the ROW. Five (5) shovel tests were excavated around these structure locations none of which were positive for cultural material. Two (2) shovel tests were not excavated due to slope (Figures 8-24 and 8-25). No evidence of subsurface or surface cultural features was observed.

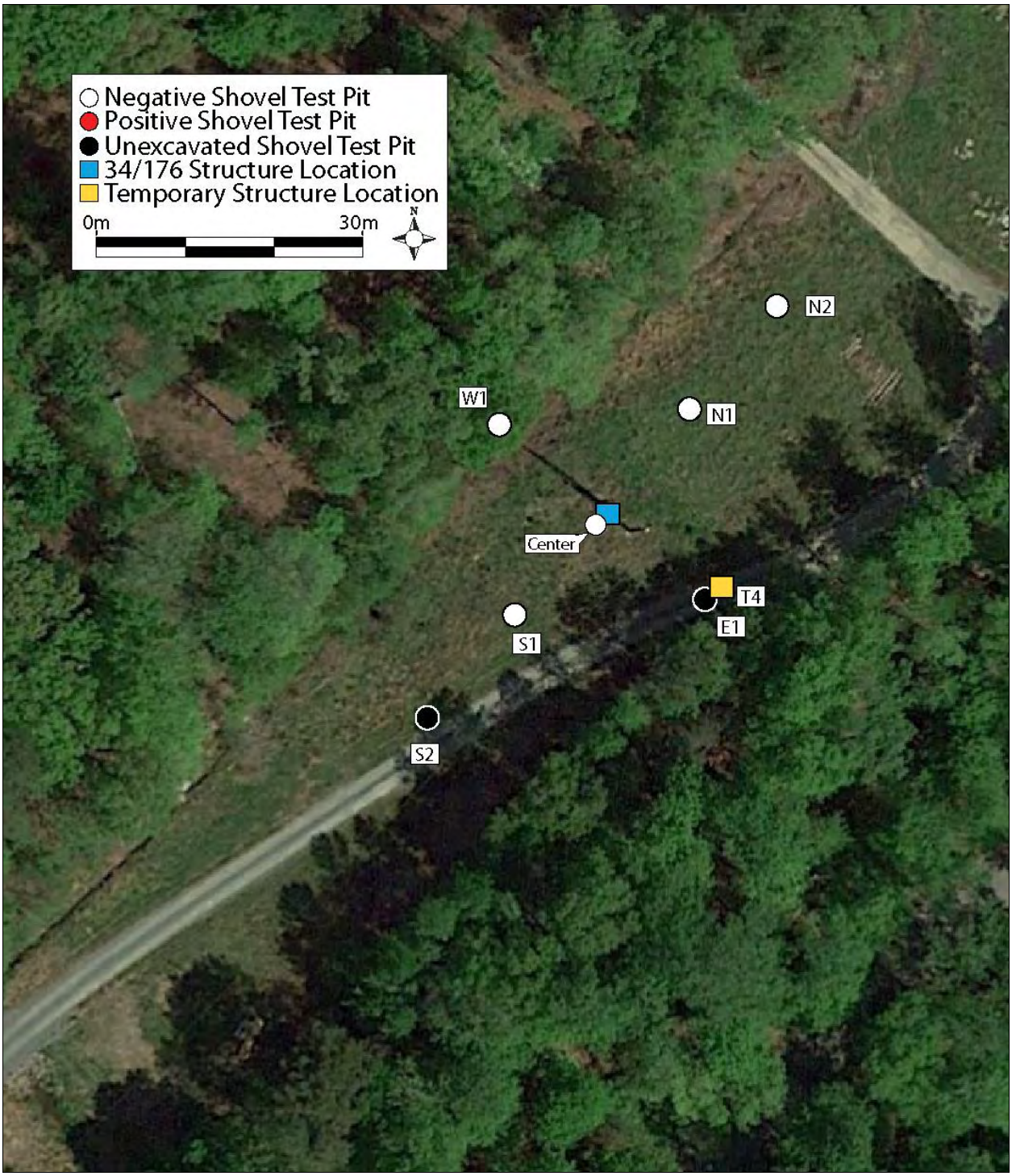


Figure 8-24: Aerial view of shovel tests at Structures 34/176 and T4.

Figure 8-25: Terrain and vegetation around Structures 34/176 and T4, facing south.

Soils around Structures 34/176 and T4 consisted of about 24 cm of 10YR 3/2 very dark grey brown sandy loam over 7.5YR 5/8 strong brown sandy clay subsoil (Figure 8-26).

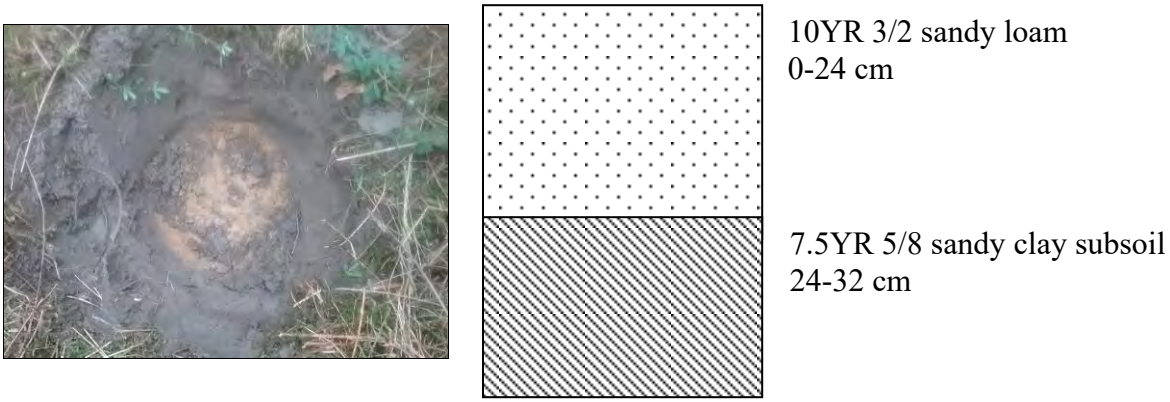


Figure 8-26: Soil profile for shovel test N1 at Structures 34/176 and T4.

Structures 34/175 and 34/174 and Temporary Structures T5 and T6

Structures 34/175 and 34/174 and Temporary Structures T5 and T6 are located in Newport News Park within the existing ROW at either end of an area that has been repurposed by the park for temporary parking and storage of recreational campers. The area is covered with mown grasses that are mixed with gravels. One shovel test was excavated at Structure 34/175 and was negative for cultural material. No additional shovel tests were excavated around these two sets of structures due to observed ground disturbances and existing uses (Figures 8-27 through 8-30). No evidence of subsurface or surface cultural features was observed.

Figure 8-27: Aerial view of shovel tests at Structures 34/175 and T5.

Figure 8-28: Aerial view of shovel tests at Structures 34/174 and T6.

Figure 8-29: Terrain and existing conditions from Structures 34/175 and T5, facing south.

Figure 8-30: Terrain and existing conditions from Structures 34/174 and T6, facing north.

Soils around Structure 34/175 and T5 consisted of about 22 cm of 10YR 4/6 dark yellow brown sandy loam over 10YR 5/6 yellow brown sandy clay subsoil (Figure 8-31).

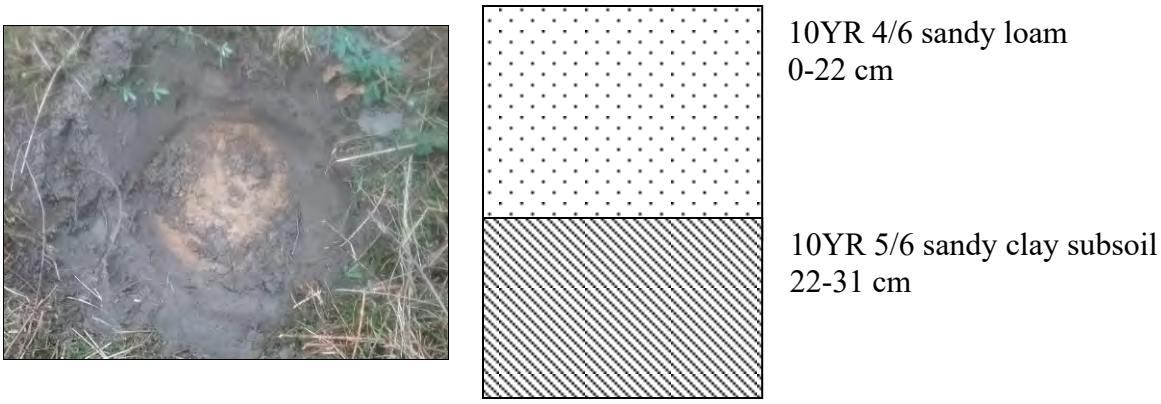


Figure 8-31: Soil profile for shovel test N1 at Structures 34/175 and T5.

Structure 34/173 and Temporary Structure T7

Structures 34/173 and T7 are located within the existing ROW in the median between Jefferson Avenue (Rt. 143) and Interstate 64. The area is covered with wild grasses and brambles and was previously surveyed at the Phase I level for cultural resources in 2012 as part of the Virginia Department of Transportation's Interstate 64 widening and improvement project. As such, no additional shovel testing was conducted in this area (Figures 8-32 and 8-33). No evidence of subsurface or surface cultural features was observed.

Figure 8-32: Aerial view of shovel tests at Structures 34/173 and T7.

Figure 8-33: Terrain and vegetation around Structures 34/173 and T7, facing south.

Structure 34/172 and Temporary Structure T8

Structures 34/172 and T8 are located in the existing ROW on fill soils just north of and adjacent to City Reservoir. Vegetation in the area consists of a mix of mowed grasses with gravel and tall grasses with saplings located immediately under the ROW. Four (4) shovel tests were excavated around these structure locations none of which were positive for cultural material. Three (3) shovel tests were not excavated due to wetlands (Figure 8-34 and 8-35). No evidence of subsurface or surface cultural features was observed.

Figure 8-34: Aerial view of shovel tests at Structures 34/172 and T8.

Figure 8-35: Terrain and vegetation around Structures 34/172 and T8, facing south.

Soils around Structures 34/172 and T8 consisted of about 5 cm of 10YR 3/2 very dark gray brown sandy loam over 13 cm of 7.5YR 5/8 strong brown clay loam over 20 cm of 10YR 3/2 very dark gray brown sandy clay loam mottled with 7.5YR 5/8 strong brown sandy clay loam over 7.5YR5/8 strong brown loamy clay subsoil (Figure 8-36).

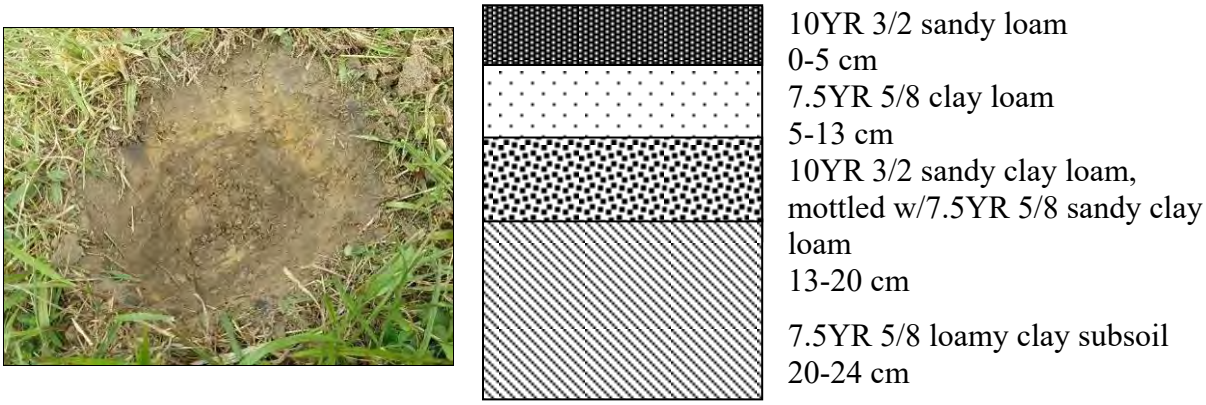


Figure 8-36: Soil profile for shovel test C at Structures 34/172 and T8.

Structures 34/171 through 34/165 and Temporary Structures T9 through T18

A total of seven (7) permanent structures and ten (10) temporary structures are planned for this segment of the rebuild, which runs from south of Interstate 64 to Route 60 (Figure 8-37).

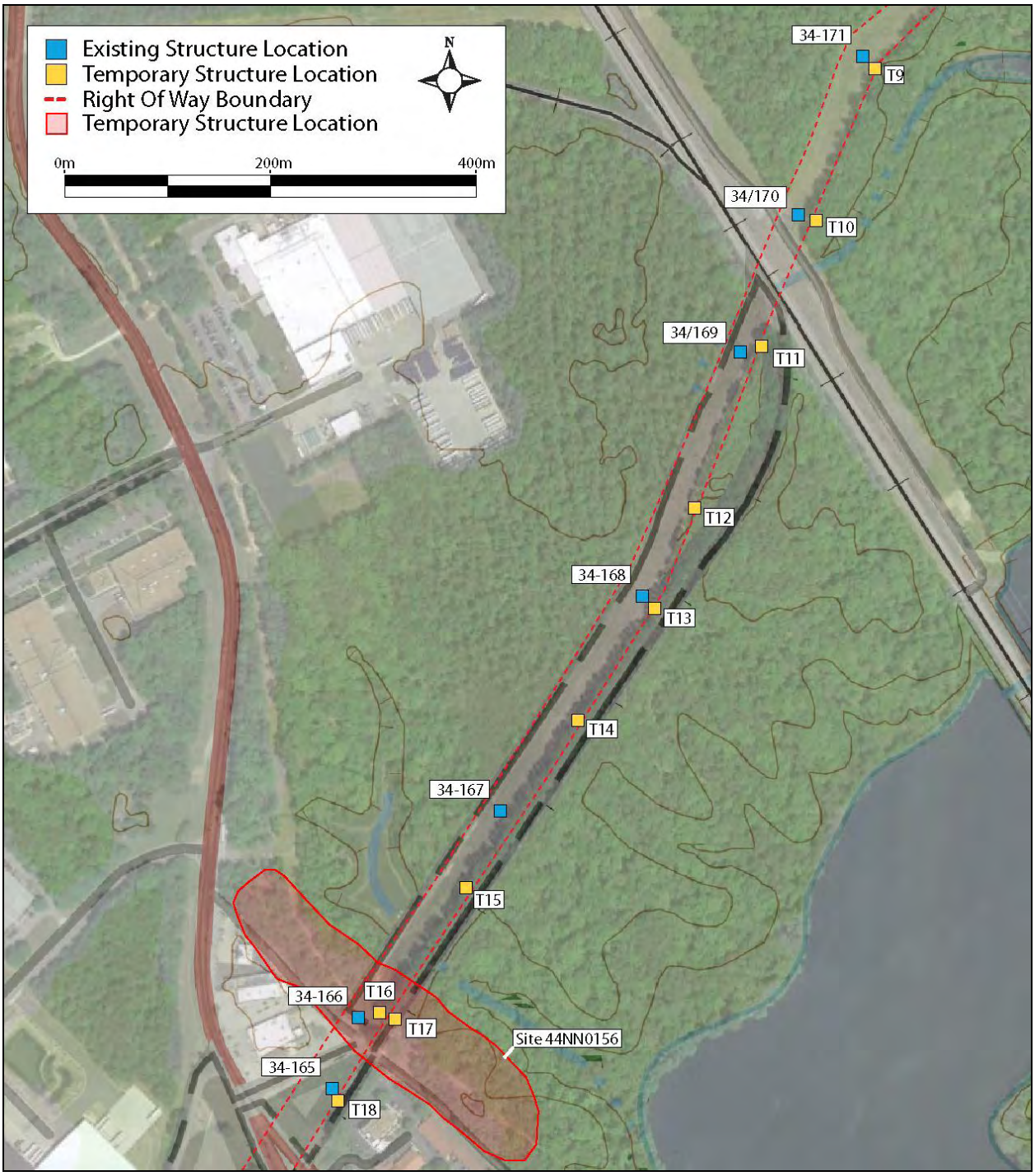


Figure 8-37: Location of Structures 34/171 through 34/165 and Temporary Structures T9 through T18.

Structure 34/171 and Temporary Structure T9

Structures 34/171 and T9 are located in the existing ROW at a slight angle in the line. The terrain is slightly sloped with a wetland located to the east and vegetation in the area consists of tall grasses. Five (5) shovel tests were excavated around these structure locations one of which was positive for cultural material; four (4) brick fragments and one (1) sherd of refined undecorated whiteware. Given the small amount of material recovered and their limited information potential, the positive shovel tests were not classified as an archaeological site and recorded as an archaeological location (L-1), which is likely the result of casual loss or discard. Three (3) shovel tests were not excavated due to wetlands (Figures 8-38 and 8-39). No evidence of subsurface or surface cultural features was observed.

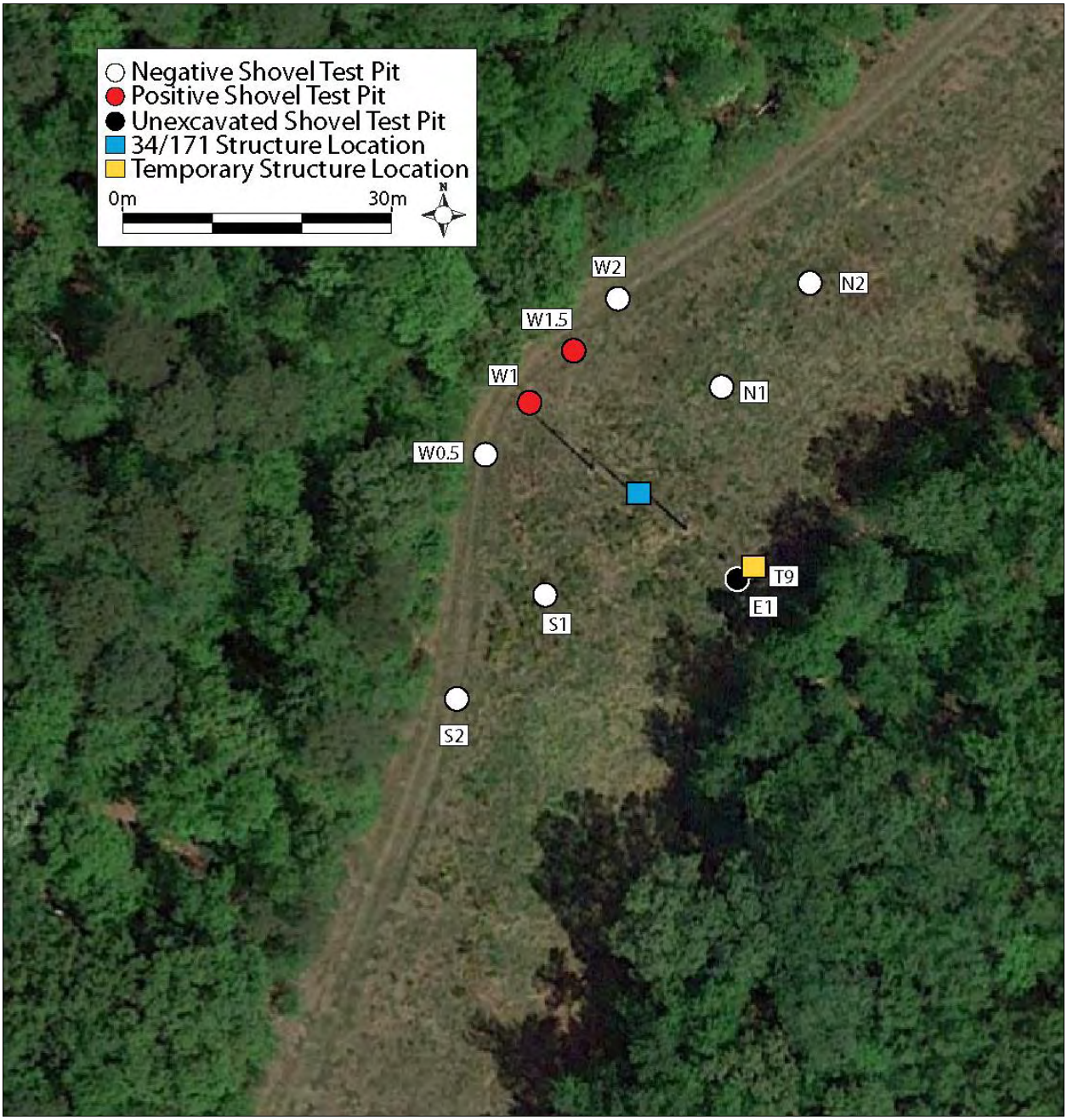


Figure 8-38: Aerial view of shovel tests at Structures 34/171 and T9.

Figure 8-39: Terrain and vegetation around Structures 34/171 and T9, facing south.

Soils around Structures 34/171 and T9 consisted of about 13 cm of 10YR 4/3 brown silty loam over 17 cm 10YR 5/4 yellow brown sandy loam over 7.5YR 5/8 strong brown sandy clay subsoil (Figure 8-40).

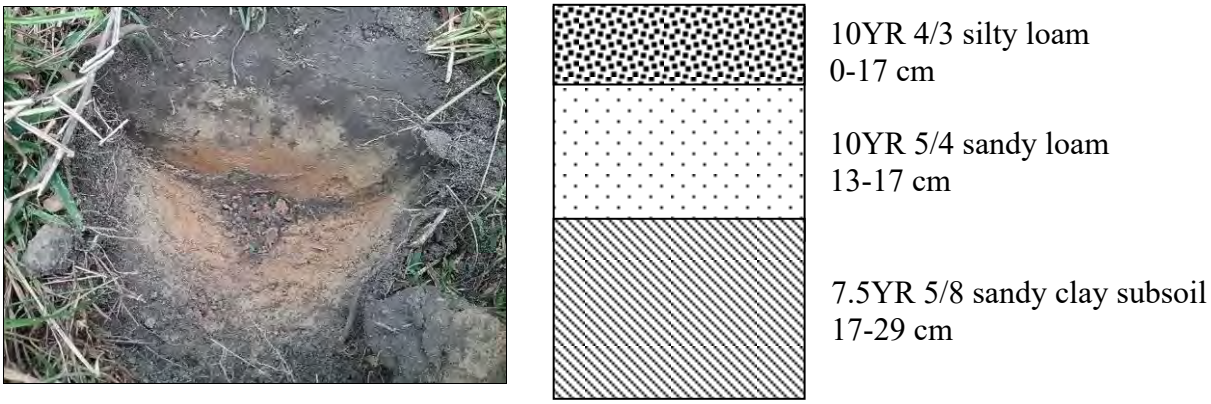


Figure 8-40: Soil profile for shovel test N1 at Structures 34/171 and T9.

Structure 34/170 and Temporary Structure T10

Structures 34/170 and T10 are located in the existing ROW just north of the existing rail line. A gravel access road, drainage ditch, and existing transmission line, which parallel the rail line cross the ROW. The terrain is generally flat and vegetation in the area consists of tall grasses. Seven (7) shovel tests were excavated around these structure locations none of which were positive for cultural material. Three (3) shovel tests were not excavated due to observed disturbances associated with the road and drainage ditch (Figures 8-41 and 8-42). No evidence of subsurface or surface cultural features was observed.

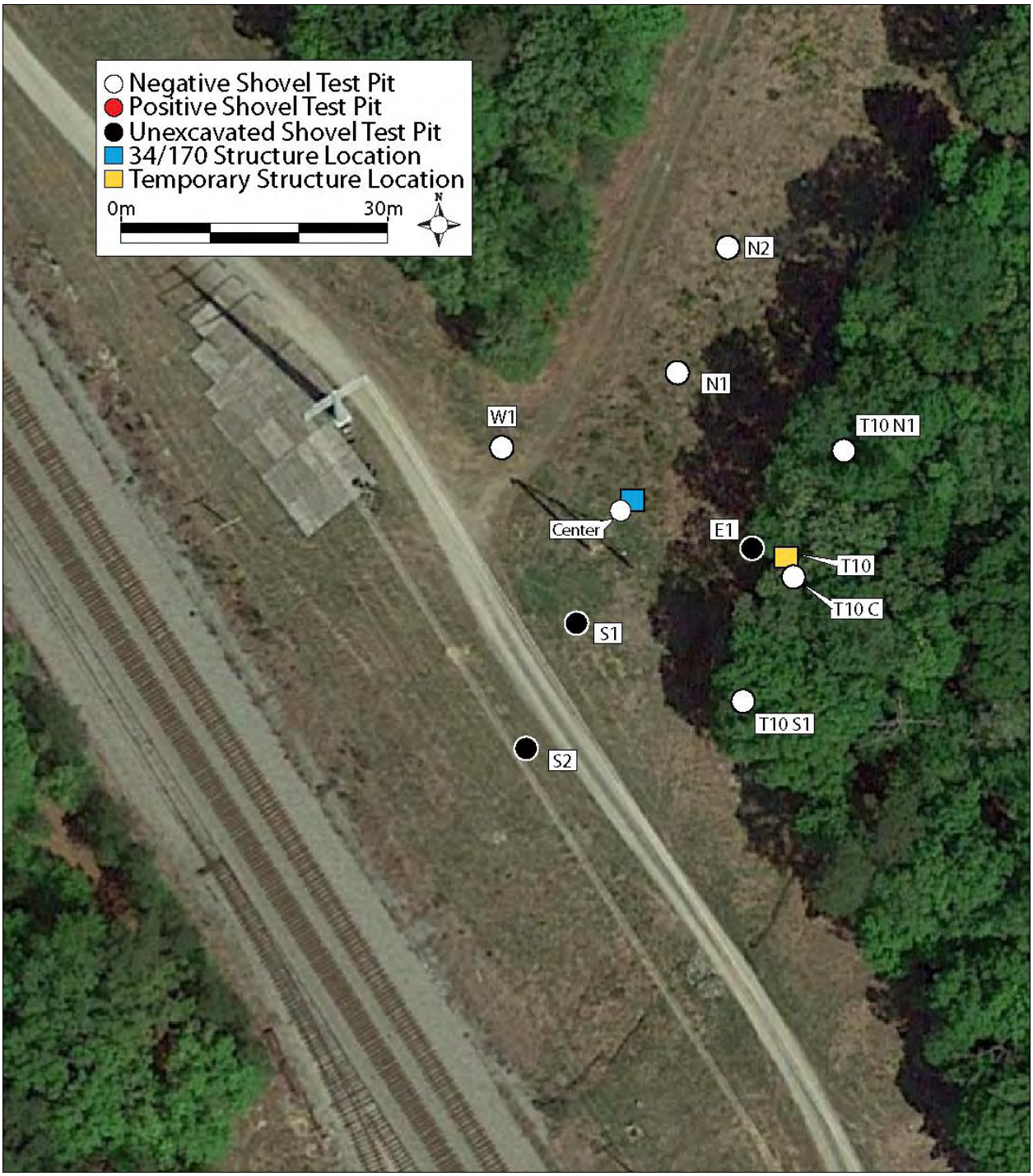


Figure 8-41: Aerial view of shovel tests at Structures 34/170 and T10.

Figure 8-42: Terrain and vegetation around Structures 34/170 and T10, facing south.

Soils around Structures 34/170 and T10 consisted of about 20 cm of 10YR 3/2 very dark gray brown sandy loam over 10YR 5/6 very brown clay loam subsoil (Figure 8-43).

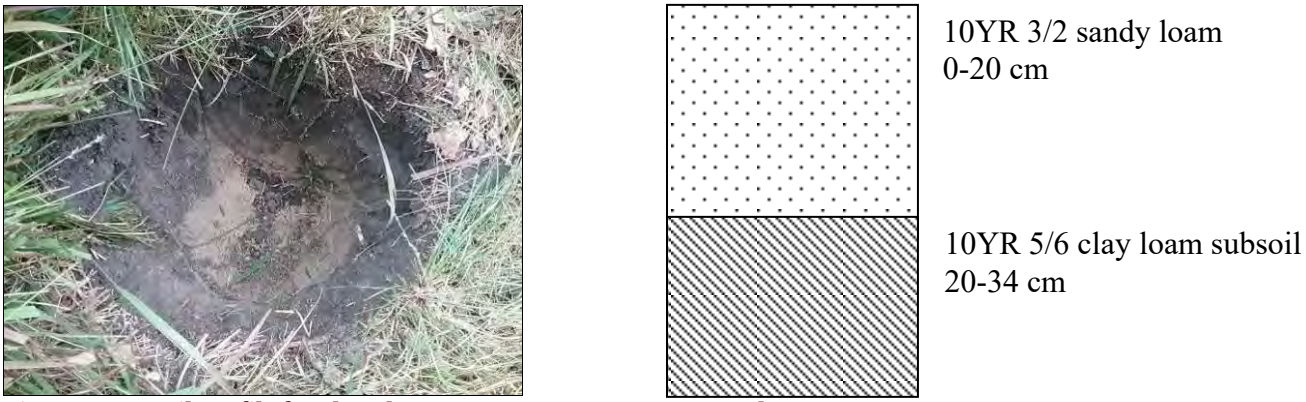


Figure 8-43: Soil profile for shovel test N2 at Structures 34/170 and T10.

Structure 34/169 and Temporary Structure T11

Structures 34/169 and T11 are located in the existing ROW, which runs west of and parallel to a spur of the rail line, which runs southwest to Joint Base Langley-Eustis. The terrain is generally flat and vegetation in the area consists of tall grasses with areas of seasonally wet soils visible. Nine (9) shovel tests were excavated around these structure locations none of which were positive for cultural material (Figures 8-44 and 8-45). No evidence of subsurface or surface cultural features was observed.

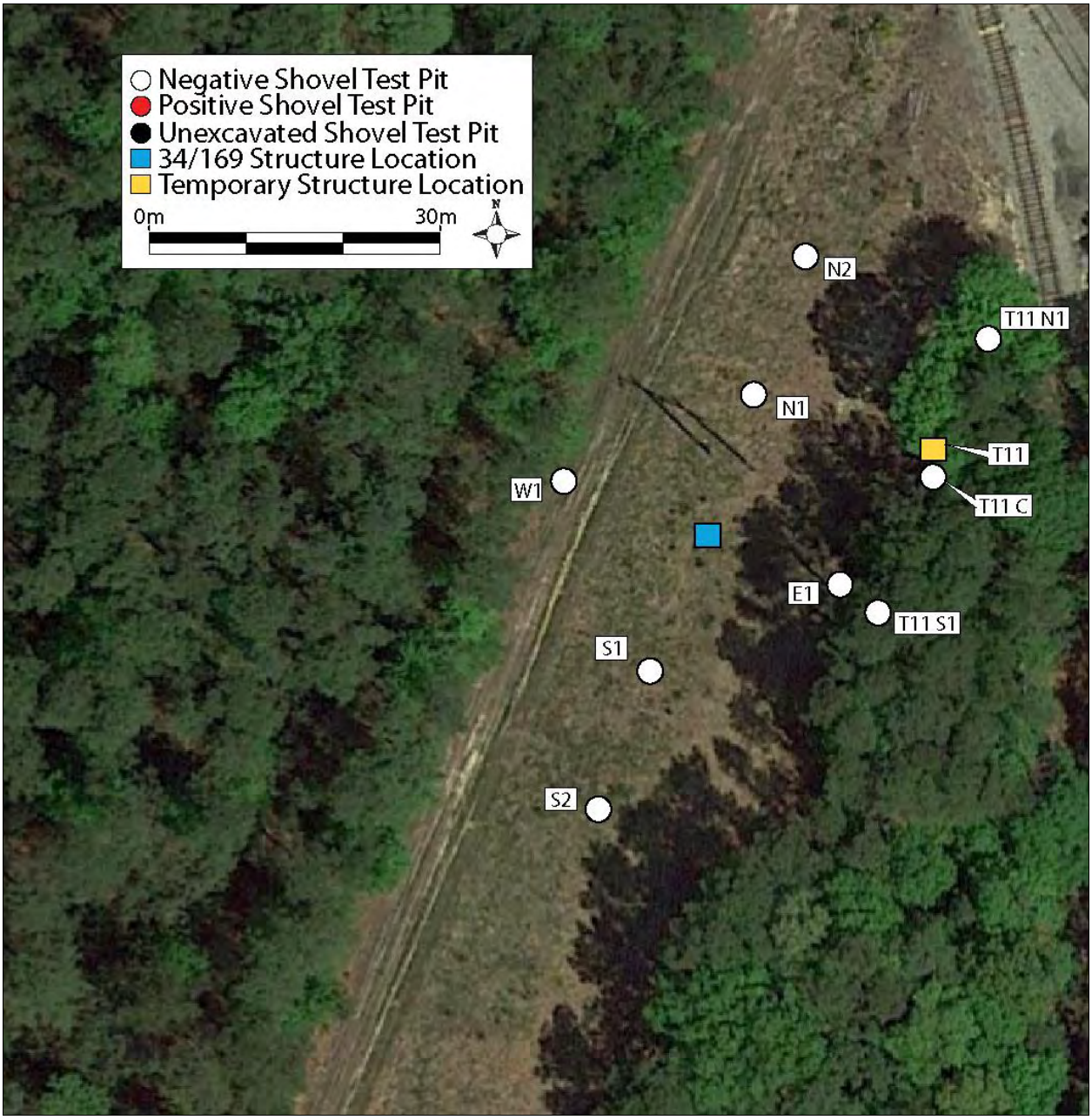


Figure 8-44: Aerial view of shovel tests at Structures 34/169 and T11.

Figure 8-45: Terrain and vegetation around Structures 34/169 and T11, facing south.

Soils around Structures 34/169 and T11 consisted of about 16 cm of 10YR 3/2 dark brown sandy loam over 5YR 5/8 yellow red sandy clay subsoil mottled with 7.5YR 6/2 pale gray sandy clay (Figure 8-46).

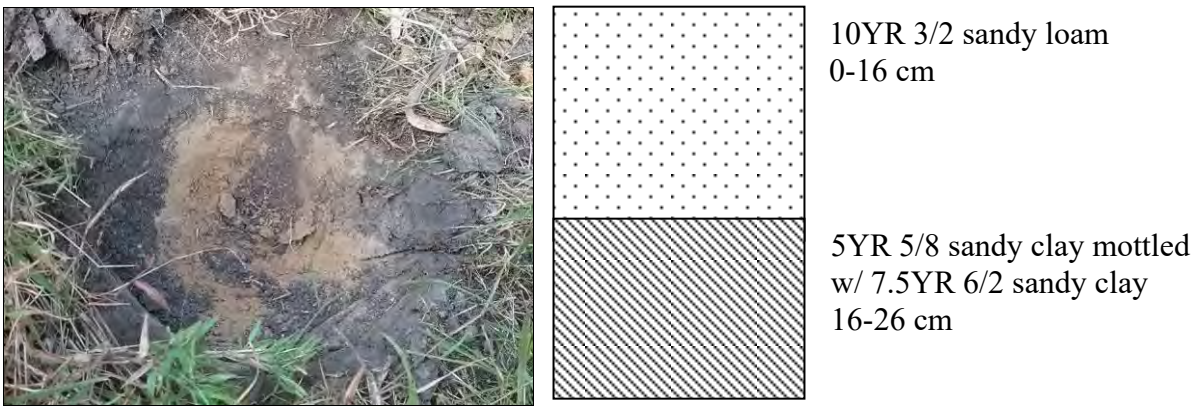


Figure 8-46: Soil profile for shovel test S2 at Structures 34/169 and T11.

Temporary Structure T12

Temporary structure T12 is located in the existing ROW, which runs west of and parallel to a spur of the rail line, which runs southwest to Joint Base Langley-Eustis. The terrain is generally flat and vegetation in the area consists of tall grasses with areas of seasonally wet soils visible. Seven (7) shovel tests were excavated around this structure location none of which were positive for cultural material. In addition, the area was systematically metal detected and no positive metal detector hits were encountered (Figures 8-47 and 8-48). No evidence of subsurface or surface cultural features was observed.

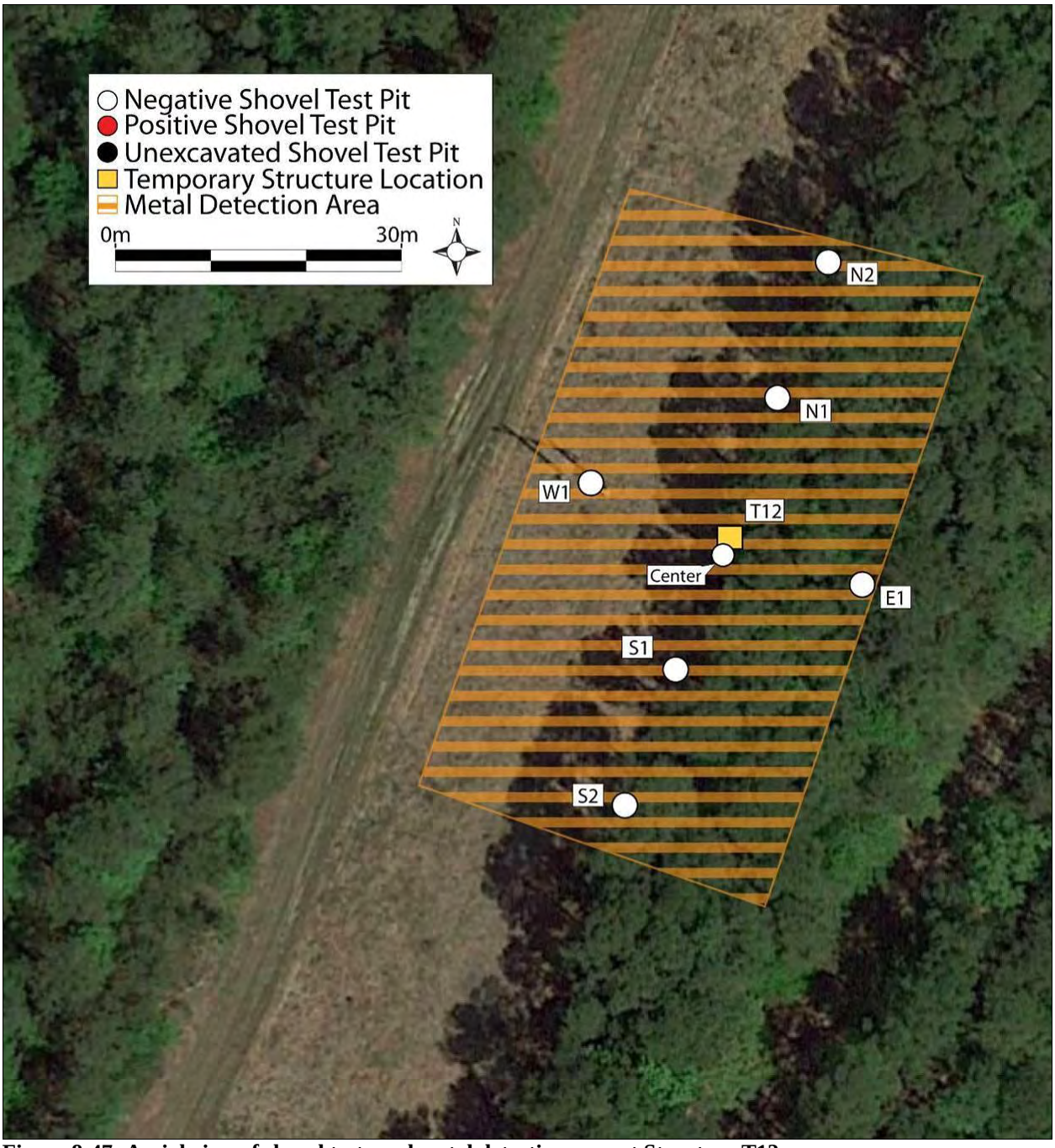


Figure 8-47: Aerial view of shovel tests and metal detection area at Structure T12.

Figure 8-48: Terrain and vegetation around Temporary Structure T12, facing south.

Soils around Temporary Structure T12 consisted of about 11 cm of 10YR 3/2 dark brown sandy loam over 5YR 5/8 yellow red sandy clay subsoil mottled with 7.5YR 6/2 pale gray sandy clay (Figure 8-49).

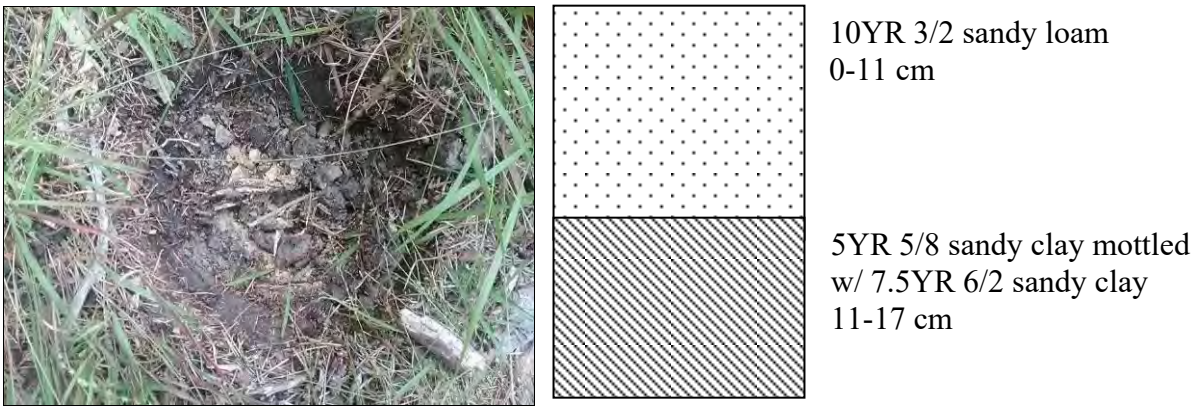


Figure 8-49: Soil profile for shovel test C at Temporary Structure T12.

Structure 34/168 and Temporary Structure T13

Structures 34/168 and T13 are located in the existing ROW, which runs west of and parallel to a spur of the rail line, which runs southwest to Joint Base Langley-Eustis. The terrain is generally flat and vegetation in the area consists of tall grasses with areas of seasonally wet soils visible. Six (6) shovel tests were excavated around these structure locations none of which were positive for cultural material. In addition, the area was systematically metal detected and no positive metal detector hits were encountered (Figures 8-50 and 8-51). No evidence of subsurface or surface cultural features was observed.

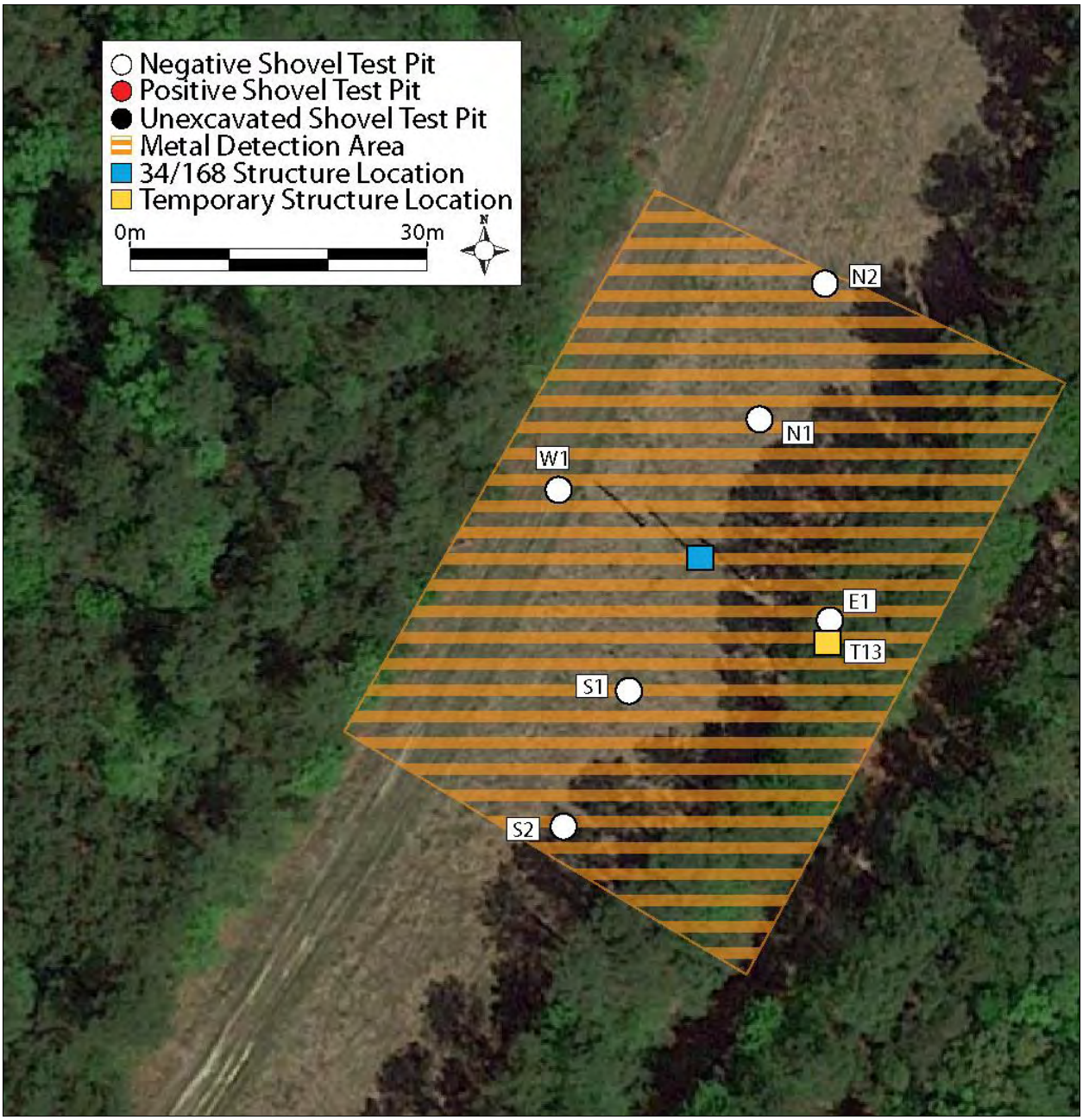


Figure 8-50: Aerial view of shovel tests and area of metal detection at Structures 34/168 and T13.

Figure 8-51: Terrain and vegetation around Structures 34/168 and T13, facing south.

Soils around Structures 34/168 and T13 consisted of about 13 cm of 10YR 3/2 dark brown sandy loam over 5YR 5/8 yellow red sandy clay subsoil mottled with 7.5YR 6/2 pale gray sandy clay (Figure 8-52).

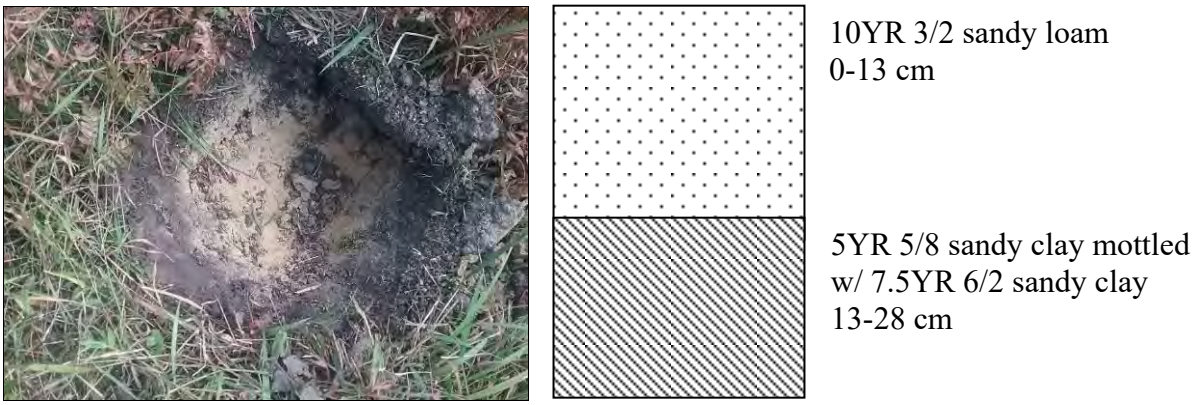


Figure 8-52: Soil profile for shovel test N2 at Structures 34/168 and T13.

Temporary Structure T14

Temporary structure T14 is located in the existing ROW, which runs west of and parallel to a spur of the rail line, which runs southwest to Joint Base Langley-Eustis. The terrain is generally flat and vegetation in the area consists of tall grasses with areas of seasonally wet soils visible. Seven (7) shovel tests were excavated around this structure location none of which were positive for cultural material. In addition, the area was systematically metal detected and no positive metal detector hits were encountered (Figure 8-53 and 8-54). No evidence of subsurface or surface cultural features was observed.

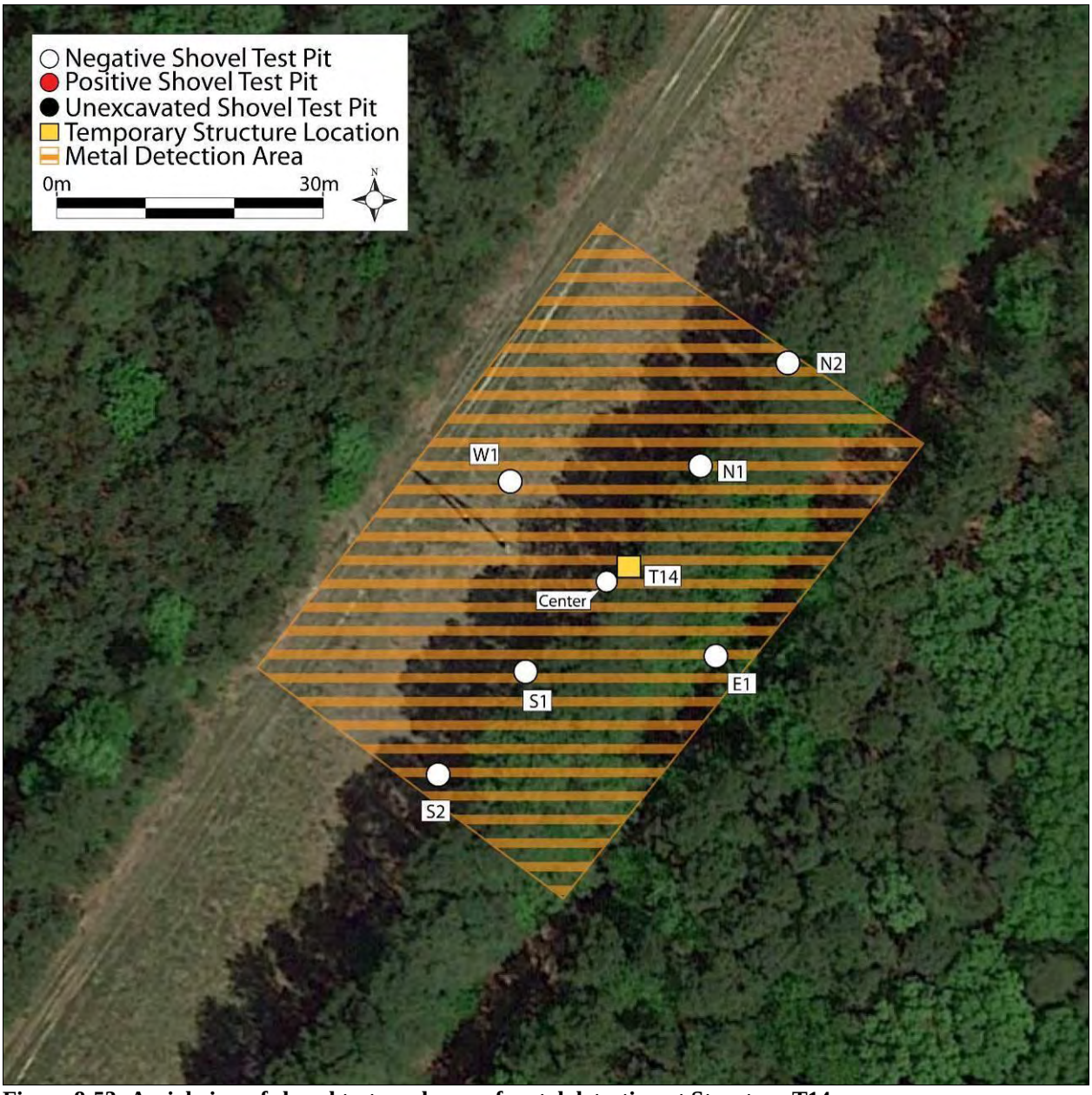


Figure 8-53: Aerial view of shovel tests and area of metal detection at Structure T14.

Figure 8-54: Terrain and vegetation around Temporary Structure T14, facing south.

Soils around Temporary Structure T14 consisted of about 22 cm of 10YR 3/2 dark brown sandy loam over 5YR 5/8 yellow red sandy clay subsoil mottled with 7.5YR 6/2 pale gray sandy clay (Figure 8-55).

Figure 8-55: Soil profile for shovel test C at Temporary Structure T14.

Structure 34/167

Structure 34/167 is located in the existing ROW, which runs west of and parallel to a spur of the rail line, which runs southwest to Joint Base Langley-Eustis. The terrain is generally flat and vegetation in the area consists of tall grasses with areas of seasonally wet soils visible. Six (6) shovel tests were excavated around this structure location none of which were positive for cultural material. In addition, the area was systematically metal detected and no positive metal detector hits were encountered (Figures 8-56 and 8-57). No evidence of subsurface or surface cultural features was observed.

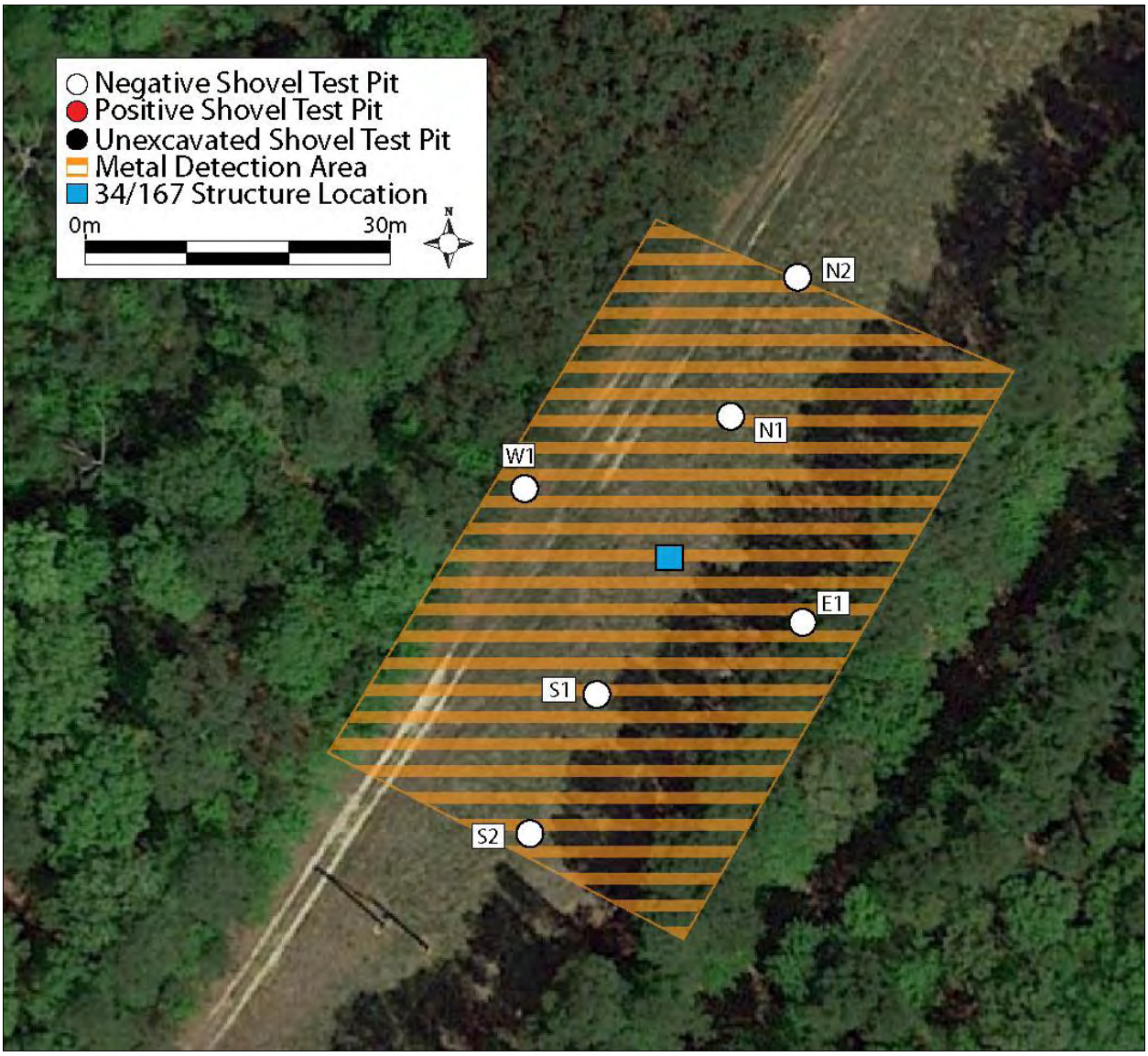
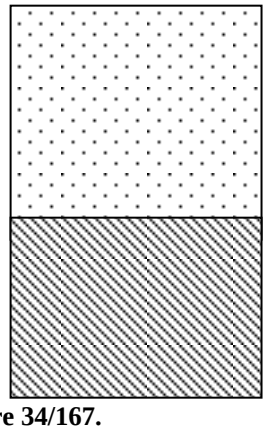


Figure 8-56: Aerial view of shovel tests and area of metal detection at Structure 34/167.

Figure 8-57: Terrain and vegetation around Structures 34/167, facing south.

Soils around Structure 34/167 consisted of about 11 cm of 10YR 3/2 dark brown sandy loam over 5YR 5/8 yellow red sandy clay subsoil mottled with 7.5YR 6/2 pale gray sandy clay (Figure 8-58).



10YR 3/2 sandy loam
0-11 cm

5YR 5/8 sandy clay mottled
w/ 7.5YR 6/2 sandy clay
11-20 cm

Figure 8-58: Soil profile for shovel test N2 at Structure 34/167.

Temporary Structure T15

Temporary structure T15 is located in the existing ROW, which runs west of and parallel to a spur of the rail line, which runs southwest to Joint Base Langley-Eustis. The terrain is generally flat and vegetation in the area consists of tall grasses with areas of seasonally wet soils visible. Seven (7) shovel tests were excavated around this structure location none of which were positive for cultural material. In addition, the area was systematically metal detected and no positive metal detector hits were encountered (Figures 8-59 and 8-60). No evidence of subsurface or surface cultural features was observed.

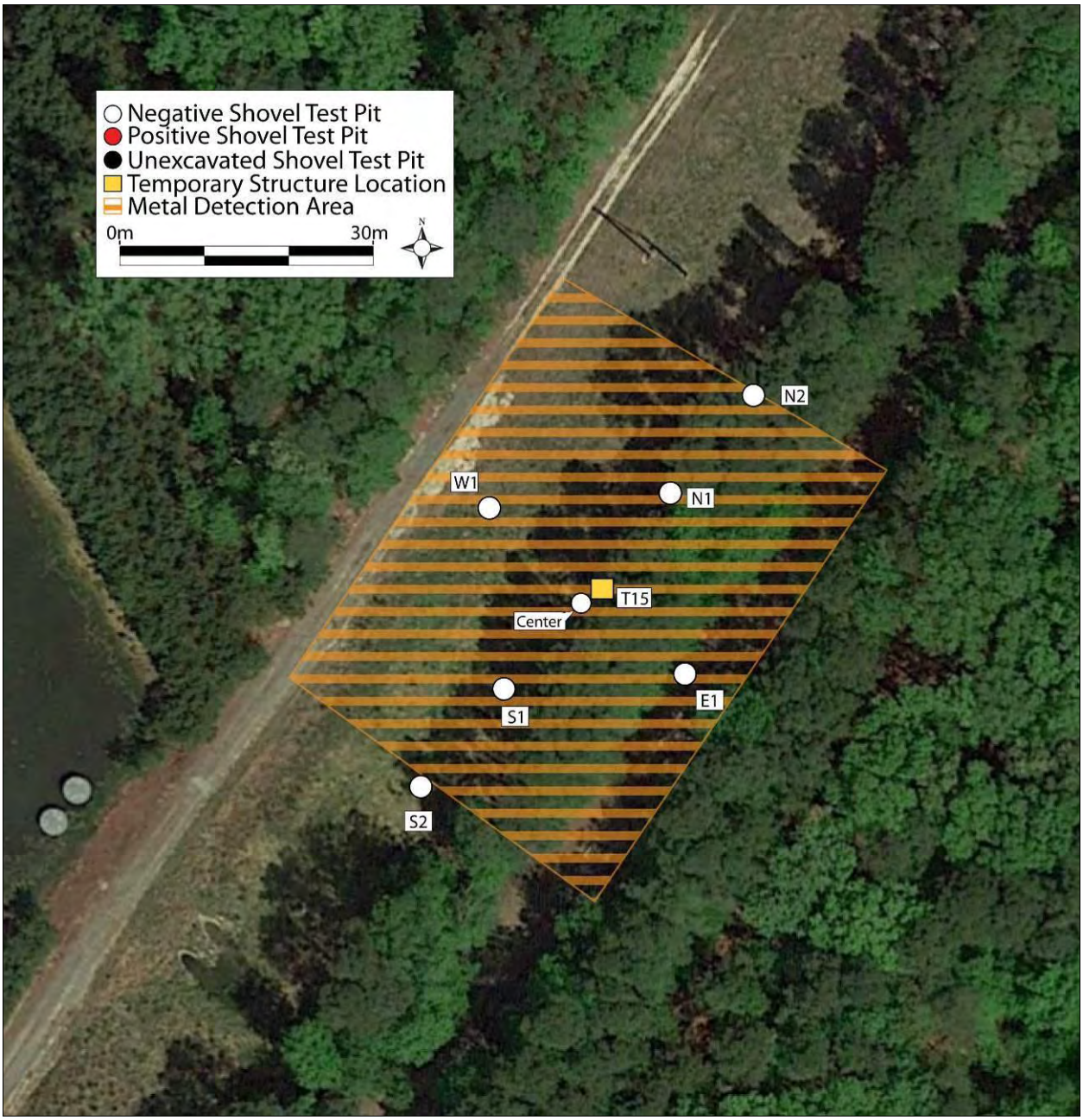


Figure 8-59: Aerial view of shovel tests and area of metal detection at Structure T15.

Figure 8-60: Terrain and vegetation around Temporary Structure T15, facing south.

Soils around Temporary Structure T15 consisted of about 25 cm. of 10YR 3/2 dark brown sandy loam over 5YR 5/8 yellow red sandy clay subsoil mottled with 7.5YR 6/2 pale gray sandy clay (Figure 8-61).

Figure 8-61: Soil profile for shovel test C at Temporary Structure T15.

Structure 34/166 and Temporary Structures T16 and T17

Structures 34/166, T16 and T17 are located in the existing ROW north of and adjacent to a gravel parking lot with several utilities located nearby. The terrain is generally flat with the exception of a small berm located along the edge of Reservoir Road, which cuts across the ROW. The berm is the remnants of a previously recorded Civil War earthwork (44NN0156). The vegetation in the area consists of mowed grasses with gravel and road side debris. Four (4) shovel tests were excavated around these structure locations one of which was positive for cultural material; a single shard of green bottle glass, which was classified as an isolated find (IF-2). Two shovel tests were not excavated due to observed parking lot disturbance. In addition, the area was systematically metal detected and no positive metal detector hits were encountered (Figures 8-62 and 8-63). Aside from the visible evidence of the earthwork (44NN0156) no additional subsurface or surface cultural features were observed (Figures 8-64 and 8-65).

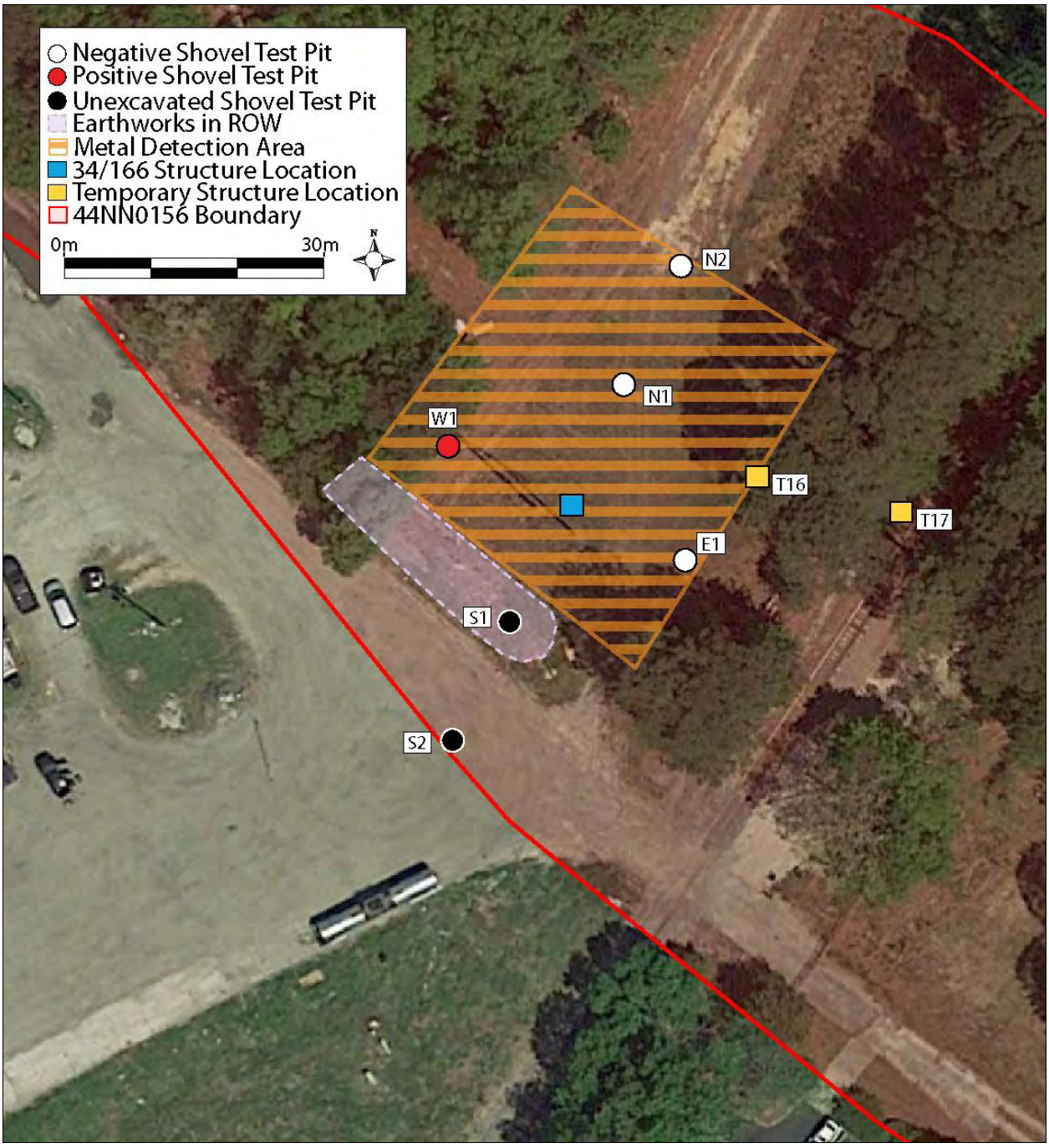


Figure 8-62: Aerial view of shovel tests, Site #44NN0156 and area of metal detection at Structures 34/166, T16, and T17.

Figure 8-63: Terrain and vegetation around Structures 34/166, T16 and T17, facing south.

Figure 8-64: View of earthworks (44NN0156) at Structures 34/166, T16 and T17 crossing ROW, facing southeast.

Figure 8-65: View of earthworks (44NN0156) at Structures 34/166, T16 and T17 outside of ROW, facing southwest.

Soils around Structures 34/166, T16, and T17 consisted of about 17 cm of 10YR 3/2 deep brown sandy clay loam over 10YR 5/3 brown sandy clay subsoil mottled with 7.5YR 6/2 pale gray sandy clay (Figure 8-66).

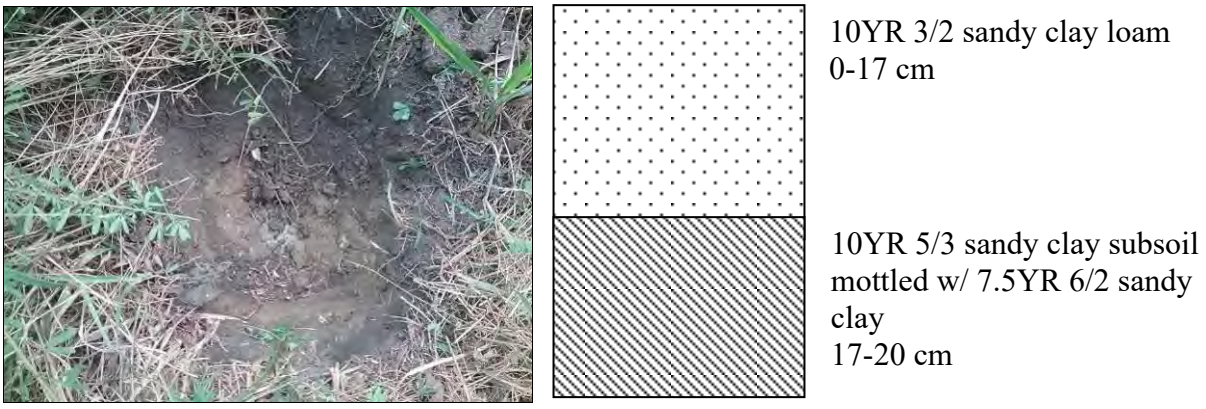


Figure 8-66: Soil profile for shovel test N2 at Structures 34/166, T16 and T17.

Structure 34/165 and Temporary Structure T18

Structures 34/165 and T18 are located in the existing ROW, which runs across a grassed area adjacent to a spur of the rail line. The structures are located between Reservoir Road to the northeast and Route 60 to the southwest. The terrain is flat and vegetation in the area consists of tall grasses with gravel mixed into the soil. In addition, other utilities both above and below ground were observed. No shovel tests were excavated around these structure locations and no evidence of subsurface or surface cultural features was observed. (Figures 8-67 and 8-68).

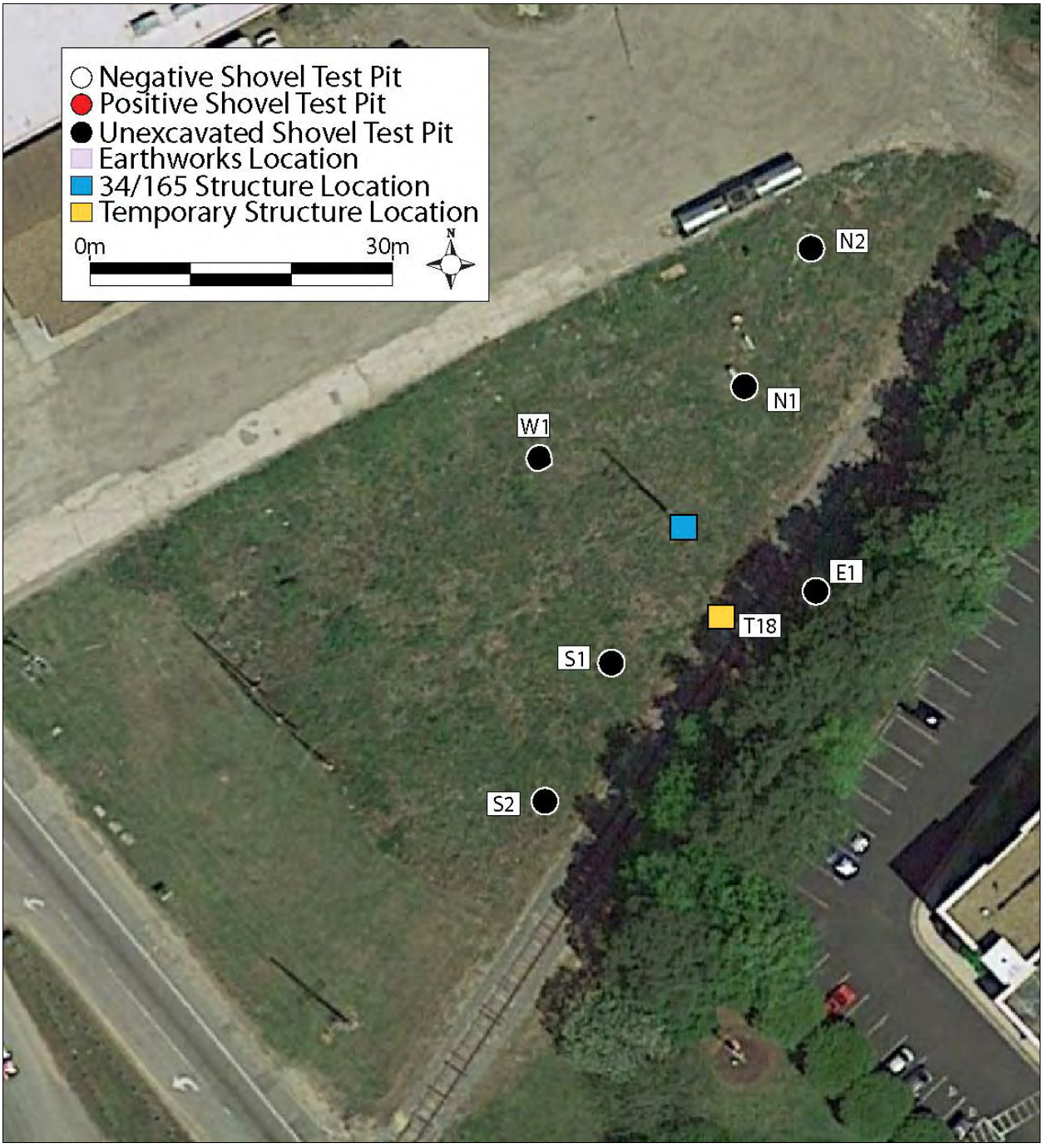


Figure 8-67: Aerial view of shovel tests at Structures 34/165 and T18.

Figure 8-68: Terrain and vegetation around Structures 34/165 and T18, facing south.

Structures 34/164 through 34/157 and Temporary Structures T19 through T25

A total of eight (7) permanent structures and seven (7) temporary structures are planned for this segment of the rebuild, which runs from Route 60 to the boundary of Joint Base Langley-Eustis (Figure 8-69).

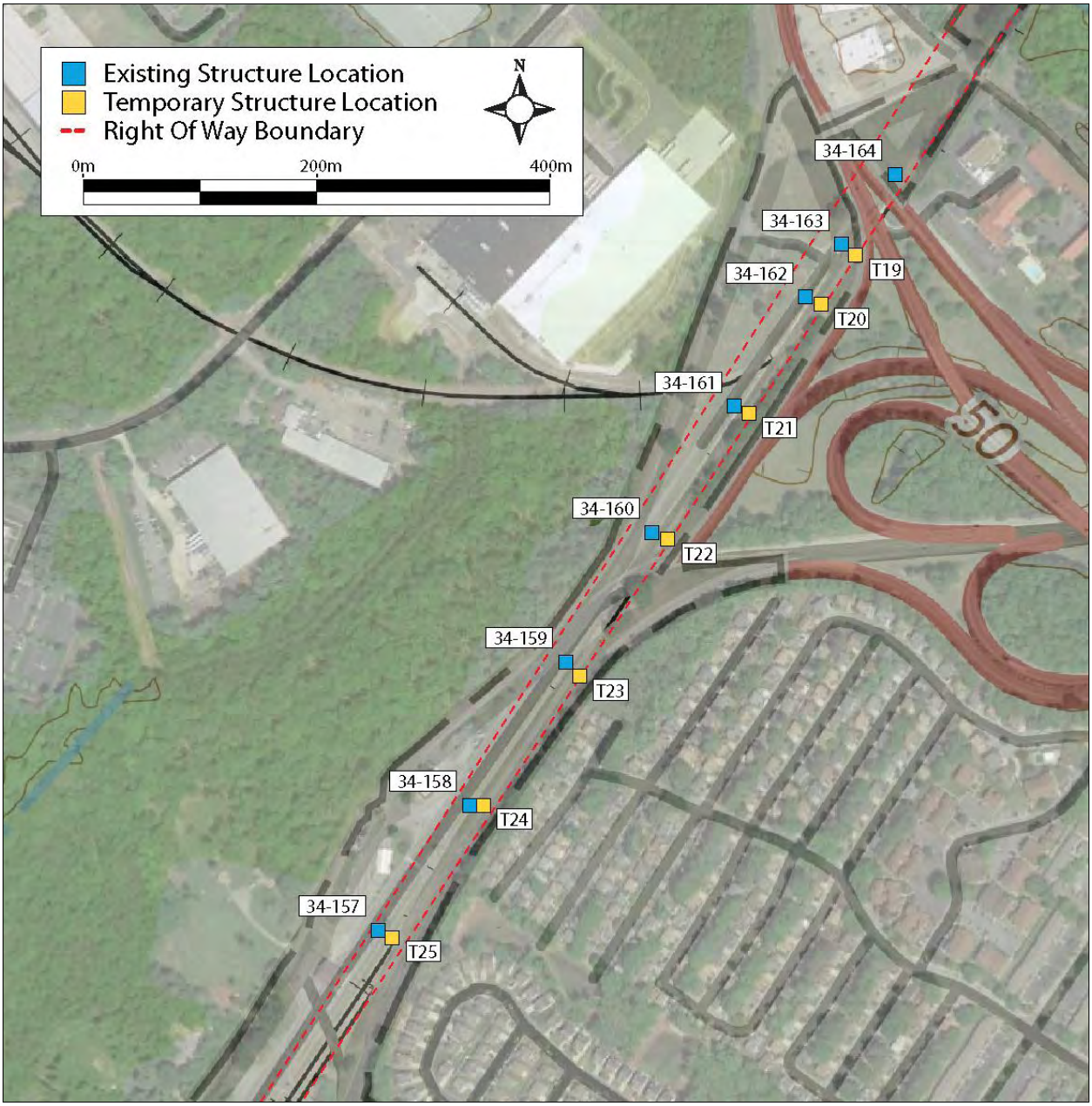


Figure 8-69: Location of Structures 34/164 through 34/157 and Temporary Structures T19 through T25.

Structure 34/164

Structure 34/164 is located in the existing ROW, which runs across a grassed area adjacent to a spur of the rail line. The structure is located immediately northeast of Route 60. The terrain is flat and vegetation in the area consists of tall grasses with gravel mixed into the soil. In addition, other utilities both above and below ground were observed. Three (3) shovel tests were excavated around this structure location and all were negative for cultural material (Figures 8-70 and 8-71). In addition, no evidence of subsurface or surface cultural features was observed.

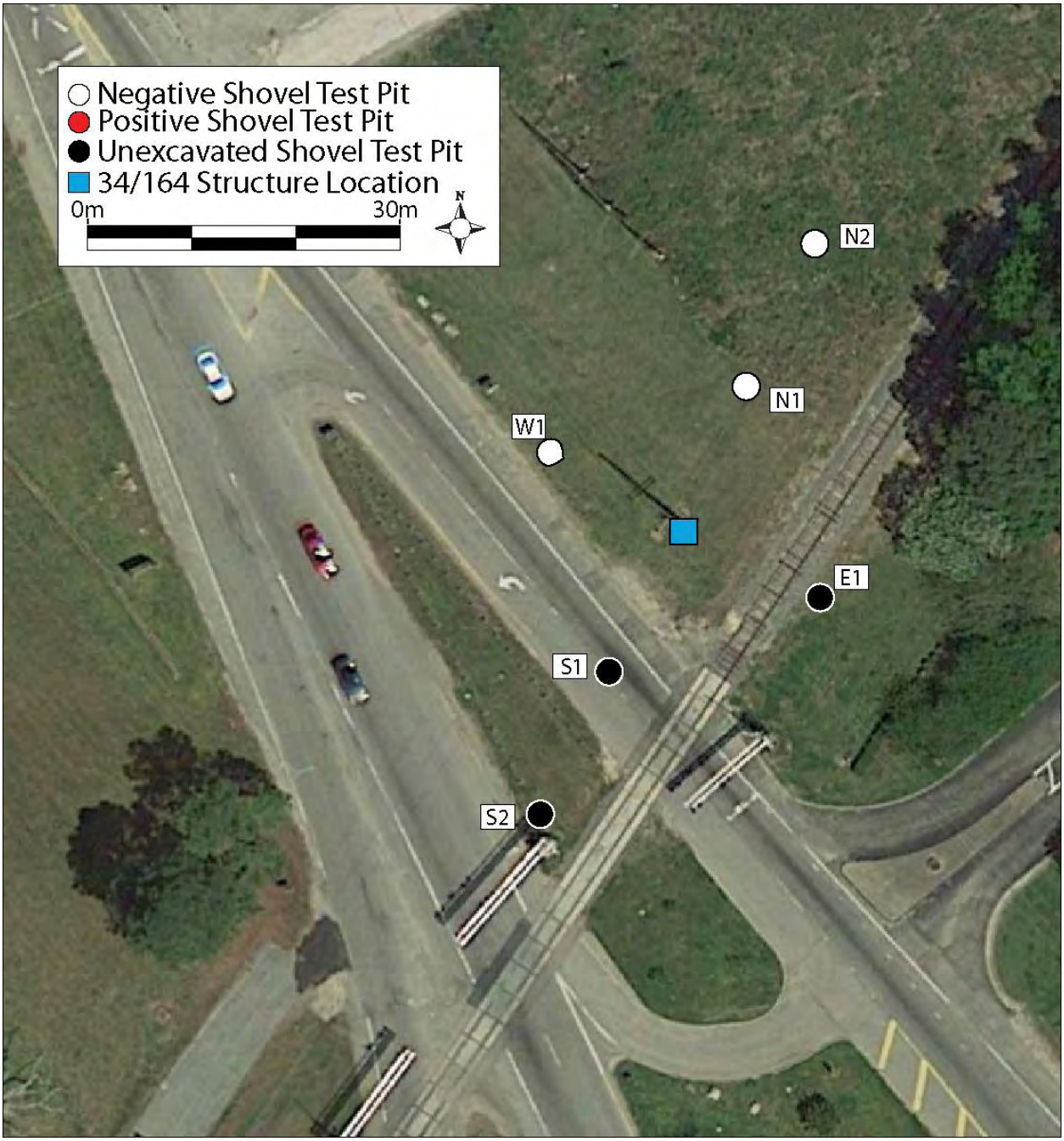


Figure 8-70: Aerial view of shovel tests at Structure 34/164.

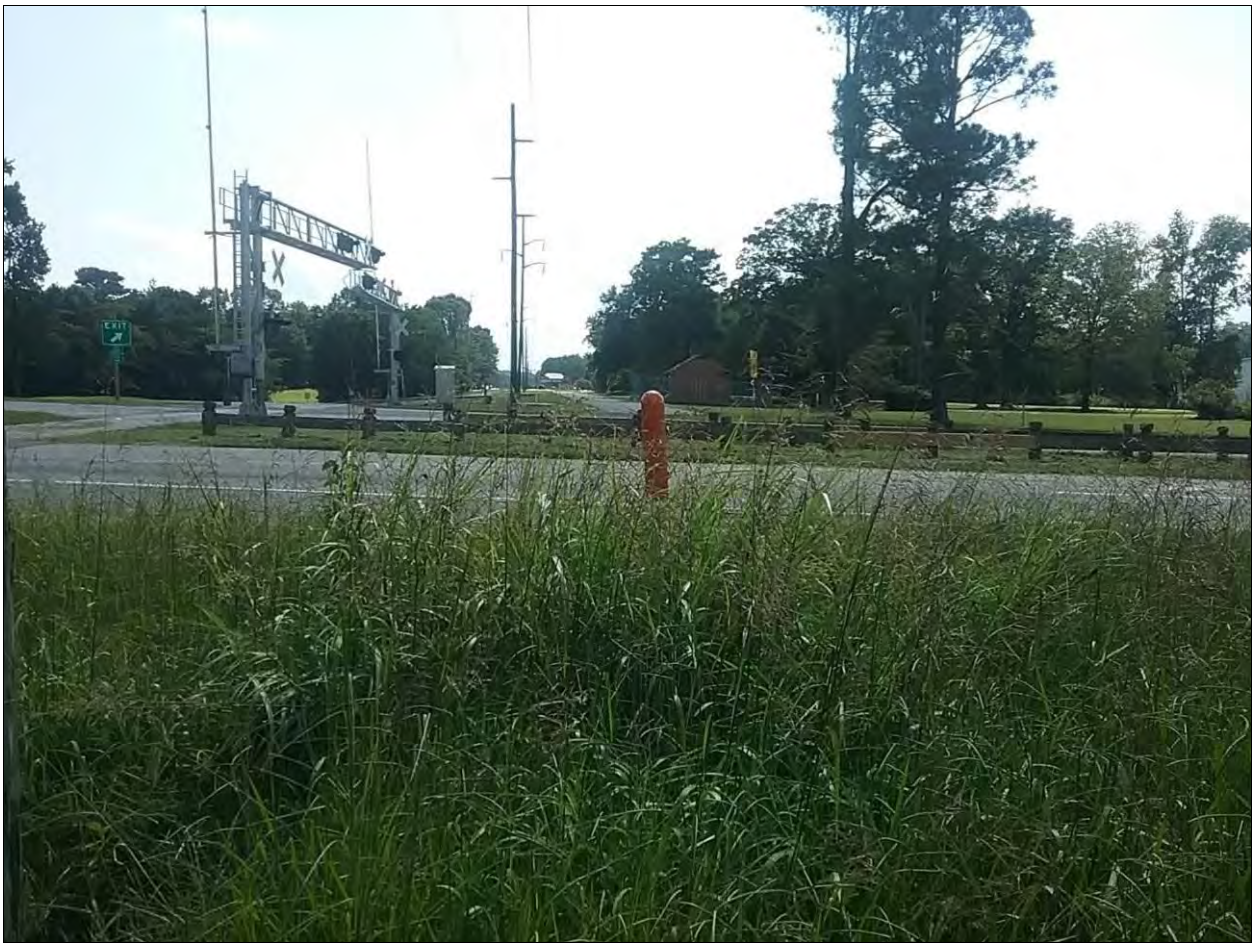
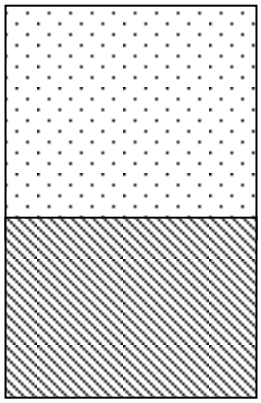


Figure 8-71: Terrain and vegetation around Structure 34/164 facing south.

Soils around Structure 34/164 consisted of about 20 cm of 10YR 2/1 black sandy clay loam over 10YR 2/1 black sandy clay loam with compact gravels mottled with 10YR 4/1 dark gray sandy clay loam (Figure 8-72).



10YR 2/1 sandy clay loam
0-20 cm

10YR 2/1 sandy clay loam mottled w/10YR 4/1 sandy clay loam w/ compact gravels
20-25 cm

Figure 8-72: Soil profile for shovel test W1 at Structure 34/164.

Structures 34/163 through 34/157 and Temporary Structures T19 through T25

Structures 34/163 through 34/157 and T19 through T25 are located in the existing ROW, which consists of a multi utility corridor with above and below ground utility infrastructure and modern transportation infrastructure running along both sides of the structure substantially limiting the amount of undisturbed testable area (Figures 8-73 through 8-81). Accordingly, a single judgmental shovel test was excavated at each structure location documenting disturbed soils. No cultural material was recovered from any of the judgmental shovel tests and no evidence of subsurface or surface cultural features was observed.

Figure 8-73: Aerial view of judgmental shovel tests at Structures 34/163, 34/162, 34/161, T19, T20, and T21.

Figure 8-74: Aerial view of judgmental shovel tests at Structures 34/160, 34/159, 34/158, 34/157, T22, T23, T24, and T25.

Figure 8-75: Terrain and vegetation around Structures 34/163 and T19 facing south.

Figure 8-76: Terrain and vegetation around Structures 34/162 and T20 facing south.

Figure 8-77: Terrain and vegetation around Structures 34/161 and T21 facing south.

Figure 8-78: Terrain and vegetation around Structures 34/160 and T22 facing south.

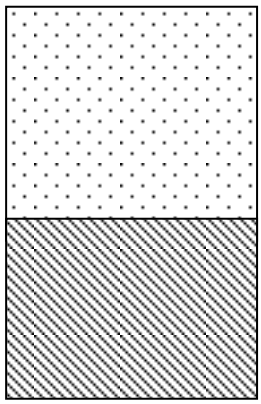
Figure 8-79: Terrain and vegetation around Structures 34/159 and T23 facing south.

Figure 8-80: Terrain and vegetation around Structures 34/158 and T24 facing south.

Figure 8-81: Terrain and vegetation around Structures 34/157 and T25 facing south.

Soils around Structures 34/163 through 34/157 and Temporary Structures T19 through T25 were all similar in composition and consisted of about 14 cm to 25 cm of 10YR 3/2 very dark gray brown silty loam over 5YR 5/8 yellow red loamy clay subsoil (Figures 8-82 through 8-85).

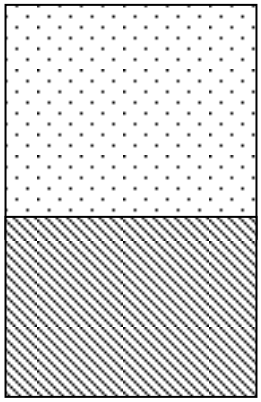
Figure 8-82: Soil profile for judgmental shovel test 1 at Structures 34/163 and T19.



10YR 3/2 silty loam
0-14 cm

5YR 5/8 loam clay subsoil
14-19 cm

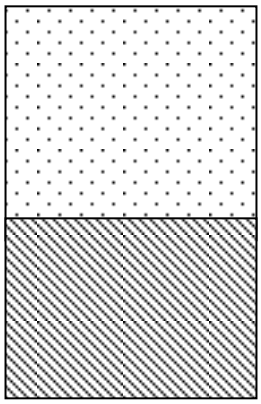
Figure 8-83: Soil profile for judgmental shovel test 3 at Structures 34/161 and T21.



10YR 3/2 silty loam
0-14 cm

5YR 5/8 loam clay subsoil
14-19 cm

Figure 8-84: Soil profile for judgmental shovel test 5 at Structures 34/159 and T23.



10YR 3/2 silty loam
0-14 cm

5YR 5/8 loam clay subsoil
14-19 cm

Figure 8-85: Soil profile for judgmental shovel test 7 at Structures 34/158 and T25.

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9. ASSESSMENT OF EFFECTS AND IMPACTS

In August 2020, D+A conducted a Phase I cultural resource survey for the Fort Eustis Tap/Line 34 Rebuild project. As part of the effort, those resources listed in, determined eligible, or considered potentially eligible for listing in the NRHP were assessed for potential effects brought about by the project. This includes direct effects or impacts as a result of construction activities for below ground archaeological resources and indirect visual effects or impacts for above ground architectural resources. The results of the assessment of effects are provided below.

ARCHITECTURAL RESOURCES

As part of the architectural survey, a total of five (5) resources were found to be either listed-in, previously determined eligible, or recommended potentially eligible for listing in the NRHP. Each of the NRHP-listed or eligible resources were assessed for potential visual effects brought about by the project in accordance with the VDHR and NPS guidelines. For the purposes of this analysis, an effect is one that alters, either directly or indirectly, those qualities or characteristics that qualify a particular property for listing in the NRHP and does so in a manner that diminishes the integrity of a property's materials, workmanship, design, location, setting, feeling, and/or association. With respect to transmission lines, direct impacts typically are associated with ground disturbance resulting from ROW clearing and structure construction. Indirect impacts typically are associated with the introduction of new visual elements or changes to the physical features of a property's setting or viewshed.

Assessment of potential visual effects conducted as part of this effort found that the project crosses through a diverse landscape composed of mostly undeveloped natural space through the northern half and heavily developed suburban and institutional areas associated with Fort Eustis along the southern half. In general, the existing transmission line is mostly to completely screened from most vantage points throughout the APE because of large, thickly wooded areas around it. It is also partially to mostly screened in those areas where it crosses through commercial, residential, and industrial development. Visibility of the existing line is primarily limited to vantage points immediately within or adjacent to the project alignment ROW where it crosses public roads and thoroughfares. Ground-based visual inspection and photo simulation found that despite the increase in structure height as part of the rebuild project, visibility of the transmission line will generally remain similar to current conditions due to screening provided by the thick vegetation in the area. Where it can be seen is generally limited to areas with other nonhistoric development and infrastructure, and is limited to fleeting views from roadways. As such, the project is recommended to pose ***no adverse effect*** to any NRHP-listed or eligible resources.

Included below is a table of all NRHP-listed and eligible architectural properties subject to viewshed assessment as part of this effort (Table 9-1). Following the table are narratives for each resource that outline the results of the viewshed assessment and provide photographs and simulations.

Table 9-1: Table of NRHP-Listed or eligible architectural resources identified in the project APE with distance to the project alignment and recommendation of effects.

VDHR #	Resource Name	Date	NRHP Status	Distance to Project Alignment	Potential Effect
099-5282	Williamsburg Battlefield	1862	Potentially NRHP-Eligible	Directly Crossed	No Adverse Effect
099-5383	Yorktown Battlefield	1862	Potentially NRHP-Eligible	Directly Crossed	No Adverse Effect
121-0041	Oakland Farm Industrial Park Multiple Resource Area	c1862	NRHP-Listed/ VDHR Easement	0.14/0.45 Miles	No Adverse Effect
121-0050	Lee's Mill Earthworks	1862	NRHP-Listed	0.50 Miles	No Effect
121-5134	C&O Railroad	c1881	NRHP-Eligible	Directly Crossed	No Adverse Effect

VDHR ID# 099-5282
Williamsburg Battlefield

Figure 9-1: Representative view of the Williamsburg Battlefield looking towards the project area on Route 60 (Williamsburg Road).

The Williamsburg Battlefield area forms a complex shape relating to troops movements and areas of fighting that took place in the 1862 battle. The regions of the battlefield vary in level of historic character and development, although much of it is considered heavily developed and fragmented. Just 1,075.23 acres of the 10,369.37 total acres within the battlefield are considered potentially National Register eligible, while the rest, including the portion of the battlefield within the APE for this project, is characterized by dense suburban development with residential, commercial, and industrial development along with modern roads, transmission lines, and other infrastructure.

Only a small portion of the Williamsburg Battlefield is located within the project APE (Figure 9-2). This is limited to roughly one mile of an approach route corridor situated along US-60/Williamsburg Road, where the transmission line ROW crosses the road. This portion of the battlefield is considered Study Area and is not considered by the NPS ABPP to be a part of the potential National Register area due to nonhistoric development (Figure 9-3).

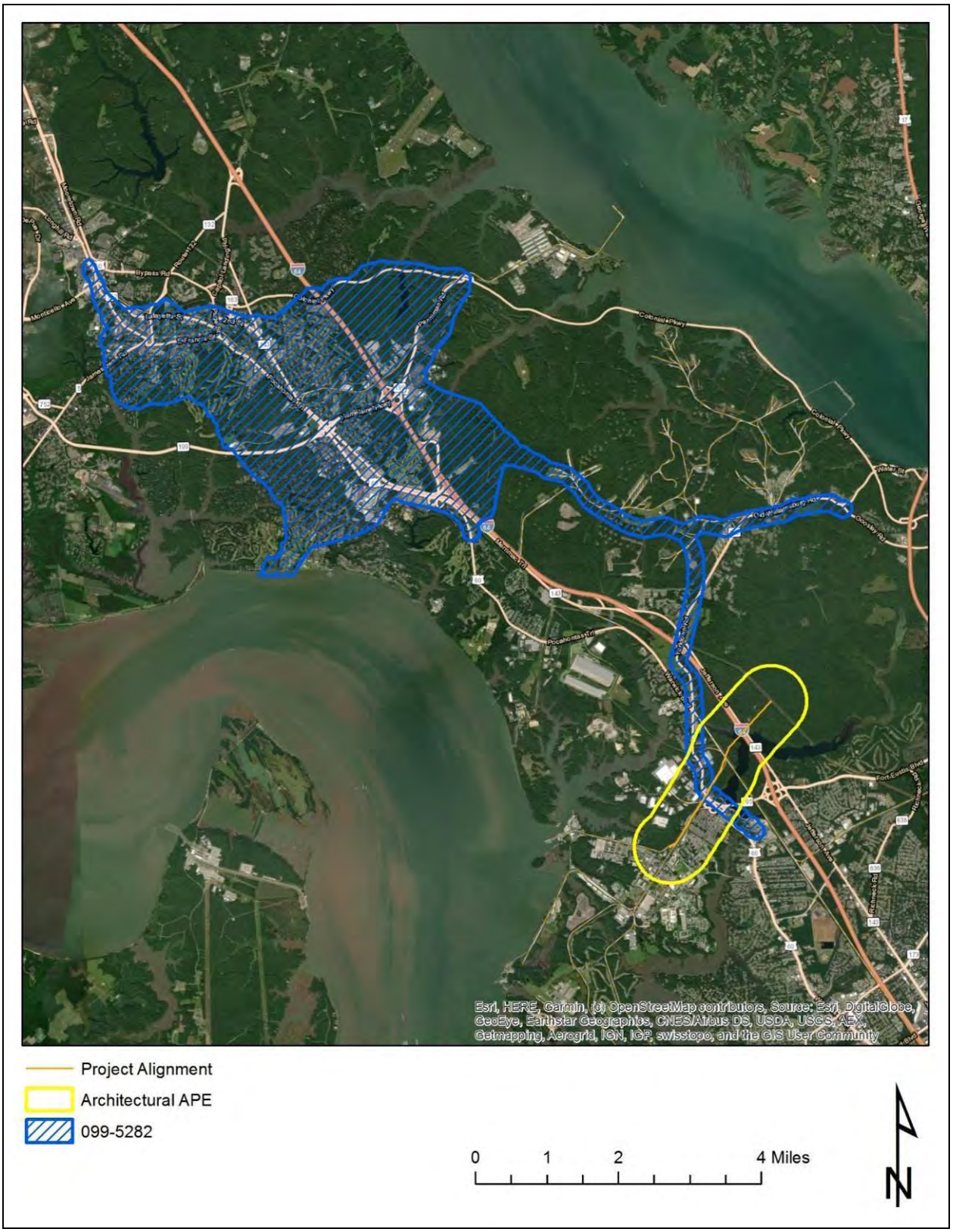

Figure 9-2: Williamsburg Battlefield in relation to the project alignment and APE. Source: VCRIS

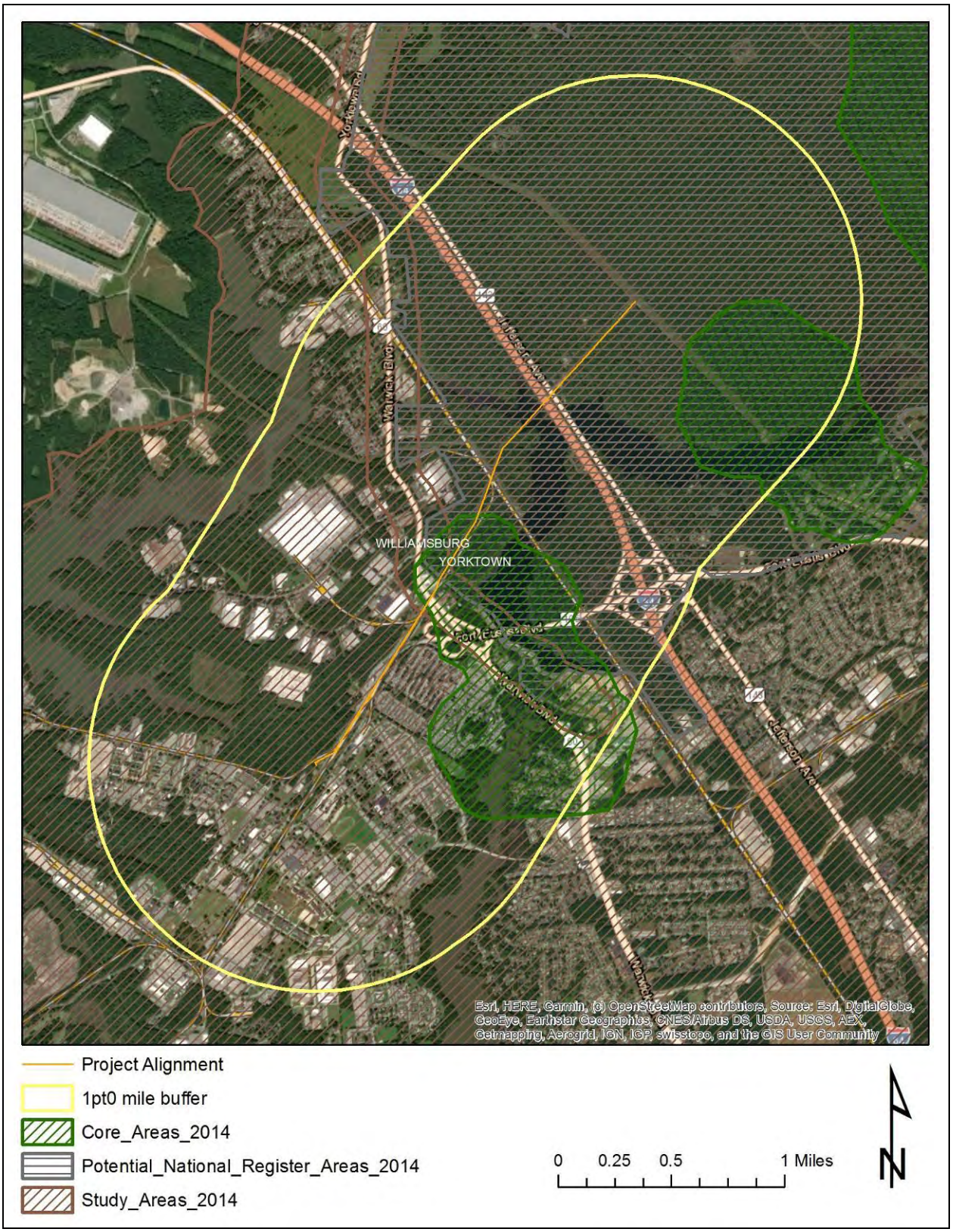

Figure 9-3: Williamsburg Battlefield (see key for ABPP areas) in relation to the project area and APE. Base map source: V-CRIS

To assess whether the project or any associated components may pose an effect to the battlefield, a viewshed assessment was conducted. Inspection was performed and photo simulations were prepared from public right-of-way and vantage points throughout the portion of battlefield in the vicinity of the project area to document existing setting, visibility, and lines of sight (Figure 9-4; Photos 1 through 9; Photo Sims 1 through 4).

Inspection and photo simulation from those portions of the battlefield within the APE at this time found that in general, the existing transmission line is visible from vantage points directly within the project area ROW and in the immediate vicinity, but quickly becomes screened by vegetation and development. Because the battlefield generally follows the alignment of Route 60 in this area, this public thoroughfare does allow visibility of the project area and the existing transmission line, however, the views are generally limited to narrow windows between buildings lining the road and the thick vegetation surrounding them. Where the existing transmission line can be seen, the views are intermittent set amongst or behind other existing transmission and utility lines, road infrastructure, and/or modern development. Inspection from vantage points further from the project area generally do not include the existing transmission line as the current structures are generally shorter than the average vegetation in the area.

As the proposed replacement structures will average roughly 30-feet taller than the existing structures, there is the potential for a change in visibility. Because of the landscape of the APE, it is anticipated that any change would be minimal and limited to vantage points where the existing line is already visible. Photo simulation confirmed the replacement structures will continue to be visible where the existing structures already are, although in a different configuration. Simulation also revealed that the existing structures that are currently screened by vegetation will likely remain as such. Despite the increase in height, the thick vegetation throughout the portion of the battlefield within the APE will continue to screen visibility of the transmission line except for from vantage points immediately within the project area where views up and down the ROW allow visibility of the structures.

As such, the project may introduce new components or features into the landscape of the battlefield within the project APE, however, visibility will be limited to discrete vantage points in close proximity to or within the existing ROW. There is not anticipated to be any substantial increase in visibility from vantage points where the existing transmission line and structures are not currently visible. Additionally, those portions of the battlefield where the project will be visible are within the Study Area as defined by the NPS ABPP. Neither the existing nor the proposed structures will be visible from any portion of the battlefield Core Area or Potential National Register Area. Therefore, the Fort Eustis Tap/Line 34 Rebuild Project is recommended to pose ***no adverse effect*** to the Williamsburg Battlefield.

Figure 9-4: Location of representative viewshed points and photo simulations from the Williamsburg Battlefield.

Photo 1: Representative view from Williamsburg Battlefield at the Lee Hall Depot, toward the project area depicting general location of the project alignment (not visible).

Photo 2: Representative view from Williamsburg Battlefield near Lee Hall Depot, toward the project area depicting general location of the project alignment (not visible).

Photo 3: Representative view from Williamsburg Battlefield along US-60 at Curtis Drive toward the project area depicting general location of the project alignment (not visible).

Photo 4: Representative view from Williamsburg Battlefield along US-60 near Enterprise Drive toward the project area depicting general location of the project alignment (not visible).

Photo 5: Representative view from Williamsburg Battlefield along US-60 at Enterprise Drive toward the project area depicting general location of the project alignment (not visible).

Photo 6: Representative view from Williamsburg Battlefield along US-60 at Pickets Line toward the project area depicting general location of the project alignment (visible).

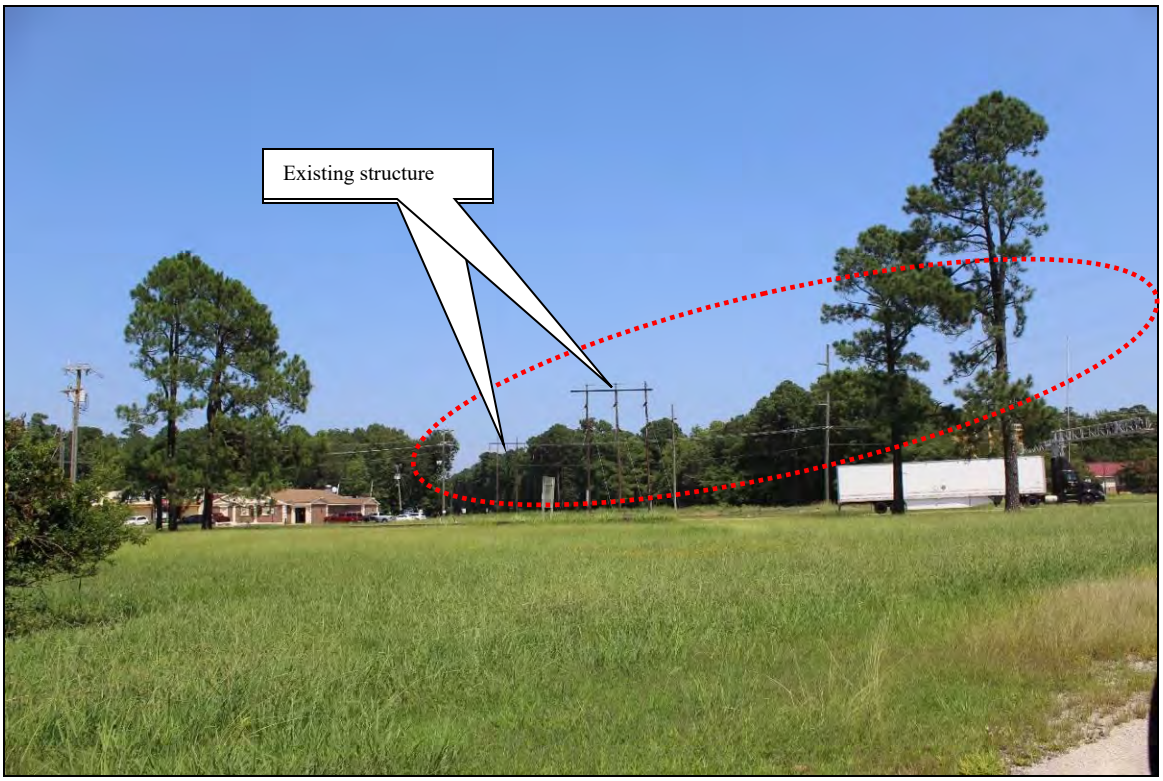

Photo 7: Representative view from Williamsburg Battlefield along US-60 at the project area (visible).

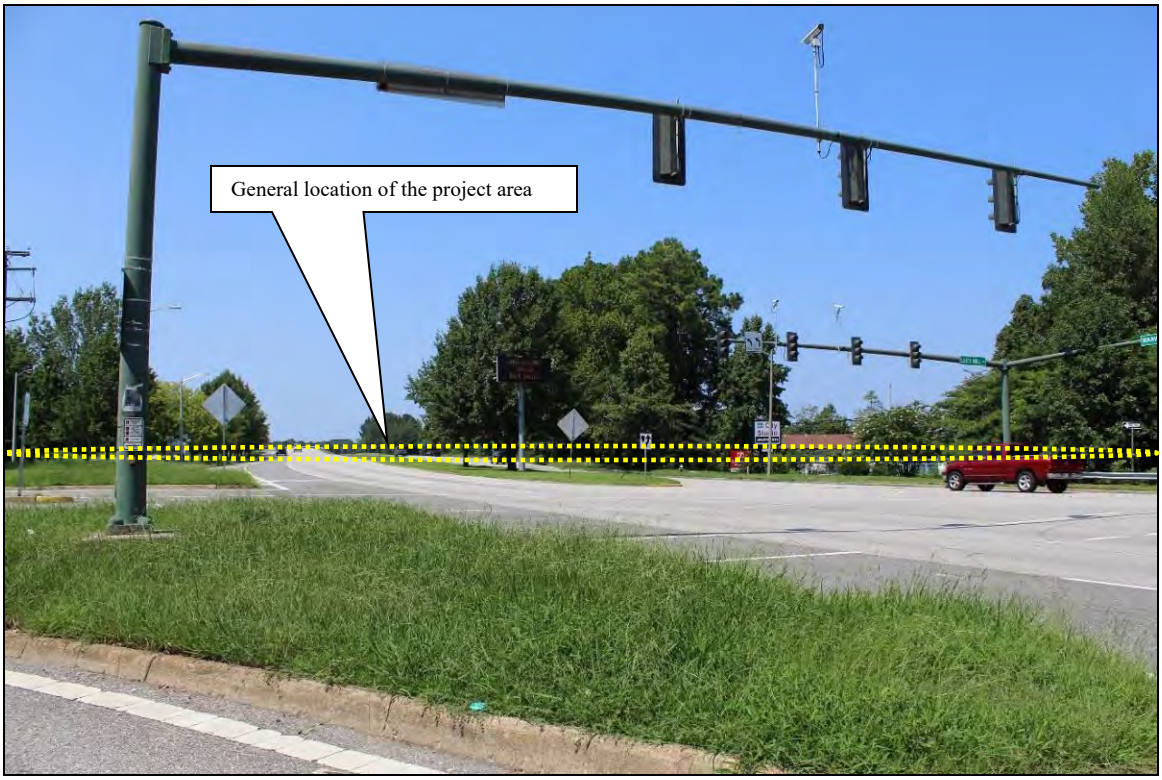

Photo 8: Representative view from Williamsburg Battlefield along US-60 at Lees Mill Drive toward the project area depicting general location of the project alignment (not visible).

Photo 9: Representative view from Williamsburg Battlefield along US-60 at Waterworks Way toward the project area depicting general location of the project alignment (not visible).

Photo location: Lee Hall Depot	Structure Name	Structure New Name	Height ft	Distance ft	Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com Project: Dominion Energy Fort Eustis Tap Rebuild	34/608	1038/186, 34/172	130.00	4493.00	34/611	1038/189L	65.00	5599.00
	34/609	1038/187, 34/171	100.00	4506.00	34/611A	34/169R	60.00	5092.00
	34/610	1038/188	65.00	4779.00	34/612	1038/190, 34/168	100.00	6063.00
	34/610A	34/170	60.00	4846.00	34/613	1038/191, 34/167	110.00	6585.00

Photo Sim 1: Location of photo sim 1 depicting field of view and modeled structures from Lee Hall Depot within the Williamsburg Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Lee Hall Depot** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 1: Photo sim 1 depicting existing view from Lee Hall Depot within the Williamsburg Battlefield. Source: GTTE LLC

Photo Sim 1: Photo sim 1 depicting proposed view from Lee Hall Depot within the Williamsburg Battlefield (Structures not visible are illustrated in yellow). Source: GTTE LLC

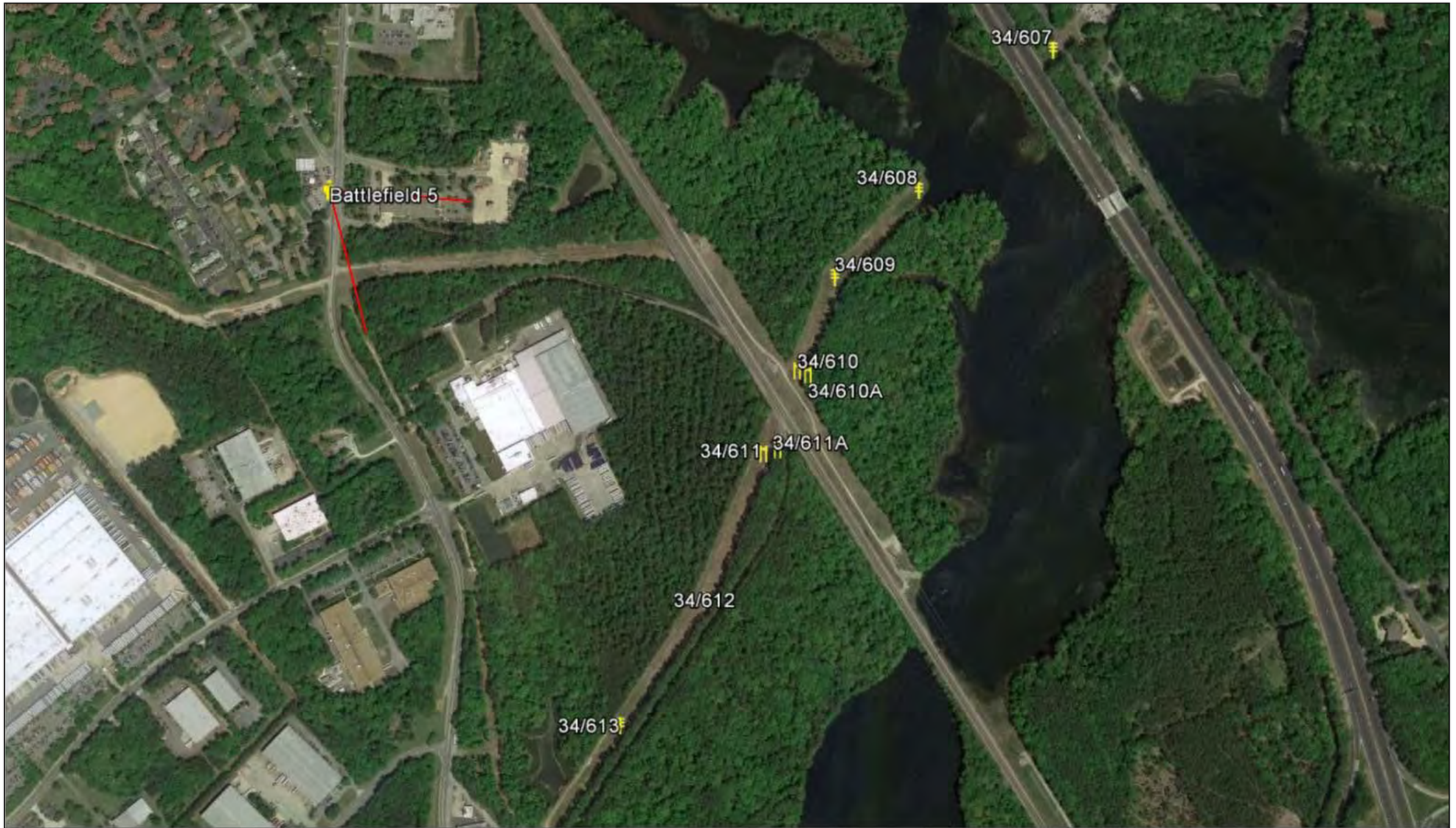

Photo location: Battle Field 5	Structure Name	Structure New Name	Height ft	Distance ft		Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	34/609	1038/187, 34/171	100.00	2714.00		34/611A	34/169R	60.00	2736.00
Project: Dominion Energy Fort Eustis Tap Rebuild	34/610	1038/188	65.00	2652.00		34/612	1038/190, 34/168	100.00	2933.00
	34/610A	34/170	60.00	2712.00		34/613	1038/191, 34/167	110.00	3213.00
	34/611	1038/189L	65.00	2685.00		34/614	1038/192, 34/166	100.00	3642.00

Photo Sim 2: Location of photo sim 2 depicting field of view and modeled structures from US-60 at Curtis Drive within the Williamsburg Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Battle Field 5** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 2: Photo sim 2 depicting existing view from US-60 at Curtis Drive within the Williamsburg Battlefield. Source: GTTE LLC

Photo Sim 2: Photo sim 2 depicting proposed view from US-60 at Curtis Drive within the Williamsburg Battlefield (Structures not visible are illustrated in yellow). Source: GTTE LLC

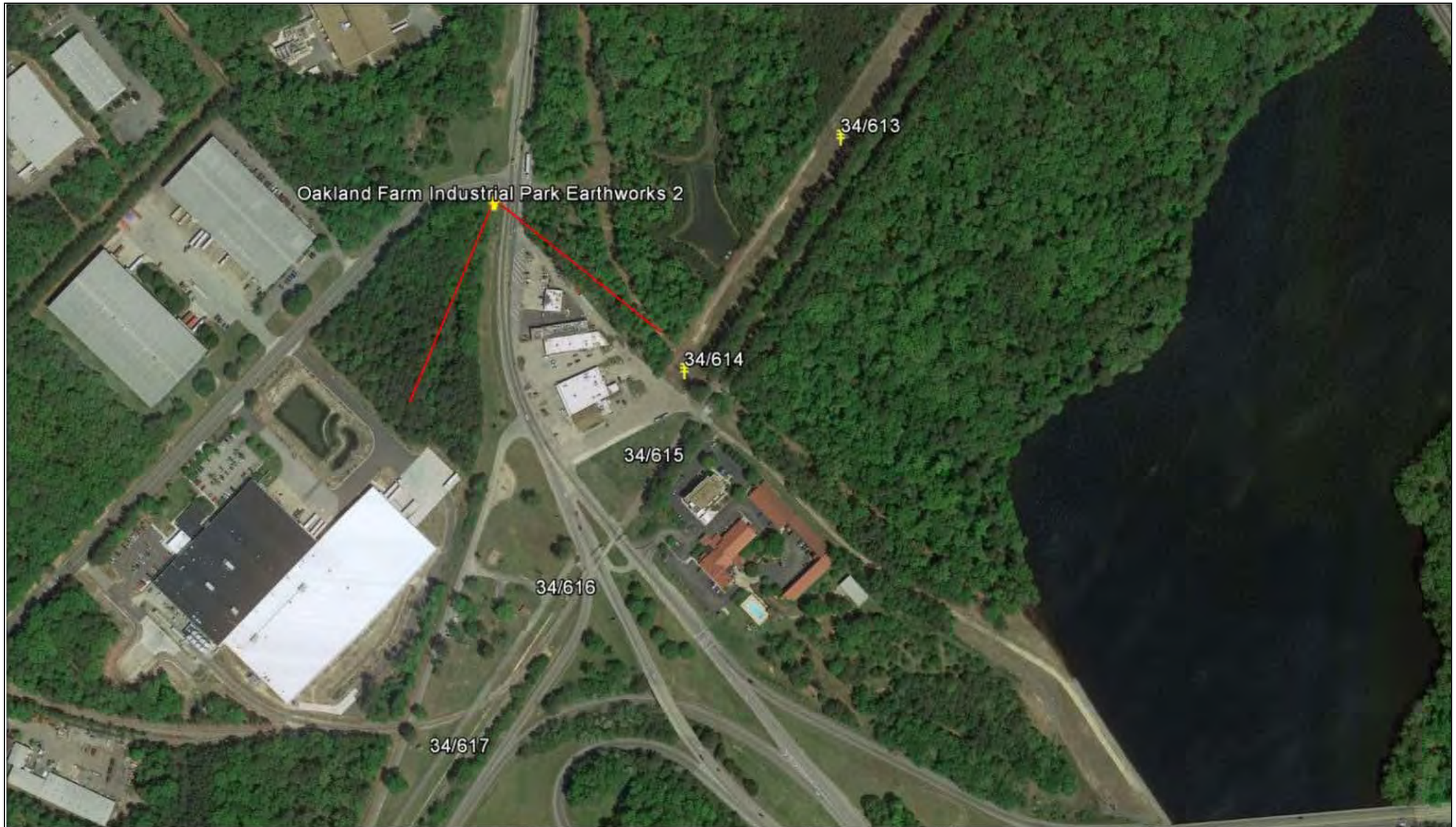

Photo location: Oakland Farm Earthworks 2	Structure Name	Structure New Name	Height ft	Distance ft		Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com Project: Dominion Energy Fort Eustis Tap Rebuild	34/614	1038/192, 34/166	100.00	714.00					
	34/615	1038/193, 34/165	100.00	841.00					
	34/616	1038/194, 34/164	115.00	1097.00					
	34/617	1038/195, 34/163	110.00	1524.00					

Photo Sim 3: Location of photo sim 3 depicting field of view and modeled structures from Oakland Park Earthworks within the Williamsburg Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Oakland Farm Earthworks 2** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 3: Photo sim 3 depicting existing view from Oakland Park Earthworks within the Williamsburg Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Oakland Farm Earthworks 2** **Proposed View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 3: Photo sim 3 depicting proposed view from Oakland Park Earthworks within the Williamsburg Battlefield (Visible structures shown in galvanized finish. Structures not visible are illustrated in yellow). Source: GTTE LLC

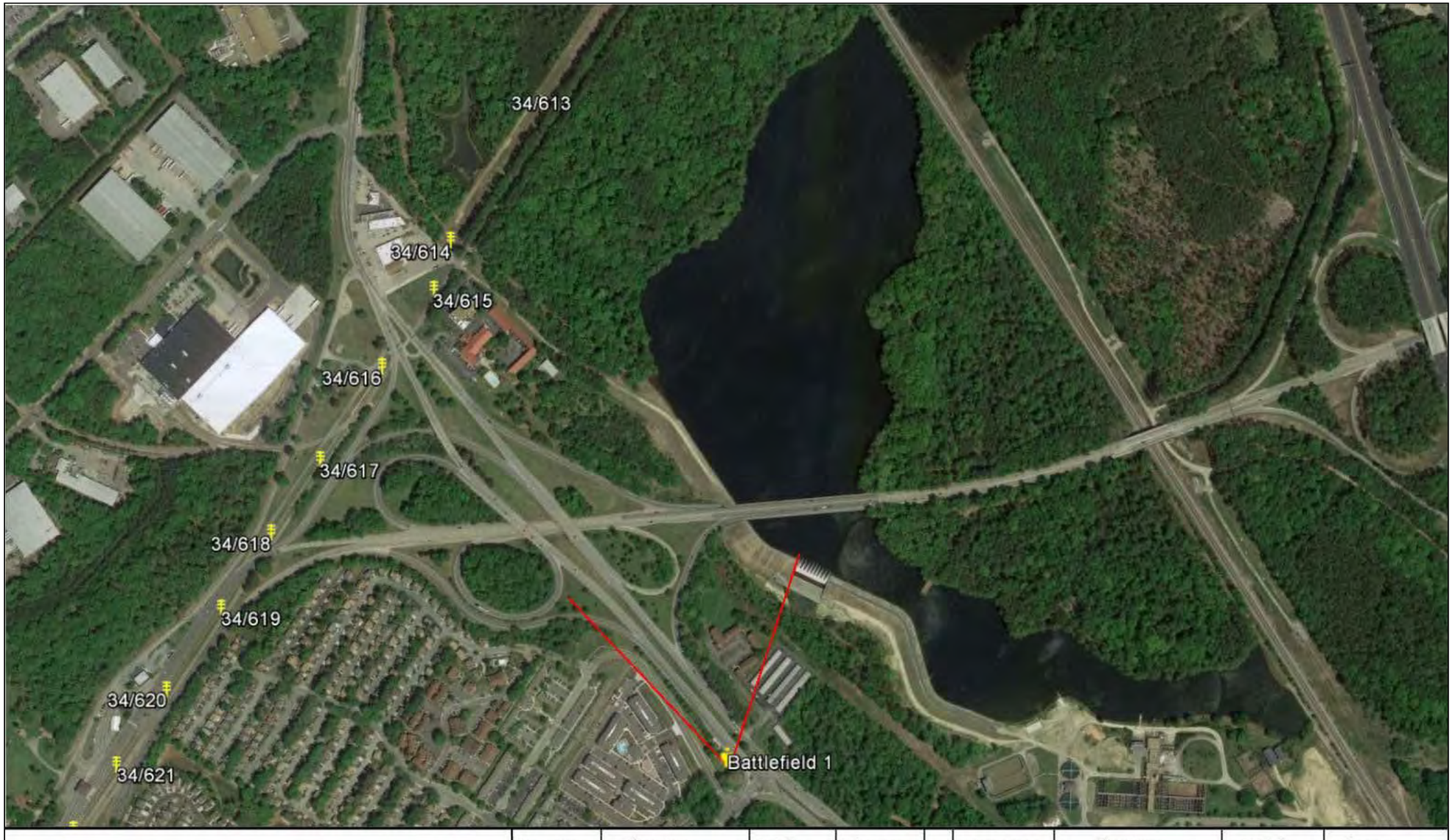

Photo location: Battle Field 1	Structure Name	Structure New Name	Height ft	Distance ft		Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	34/613	1038/191, 34/167	110.00	3244.00					
Project: Dominion Energy Fort Eustis Tap Rebuild	34/614	1038/192, 34/166	100.00	2802.00					
	34/615	1038/193, 34/165	100.00	2642.00					
	34/616	1038/194, 34/164	115.00	2496.00					

Photo Sim 4: Location of photo sim 4 depicting field of view and modeled structures from US-60 at Lees Mill Drive within the Williamsburg Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Battle Field 1** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 4: Photo sim 4 depicting existing view from US-60 at Lees Mill Drive within the Williamsburg Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	Battle Field 1 Proposed View
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.	0" 1" 2" 3" 4" This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Photo Sim 4: Photo sim 4 depicting proposed view from US-60 at Lees Mill Drive within the Williamsburg Battlefield (Structures not visible are illustrated in yellow). Source: GTTE LLC

VDHR ID# 099-5283
Yorktown Battlefield

Figure 9-5: Representative view of the Yorktown Battlefield looking towards the project area from the Newport News Waterworks property.

The Yorktown Battlefield area forms a complex shape relating to troops movements and areas of fighting that took place in the 1862 battle. The regions of the battlefield vary in level of historic character and development, although much of the 63,960.79 total acres are considered relatively intact. Other portions of the battlefield, including much of it within the vicinity of the project area, is characterized by a variety of nonhistoric residential, commercial, and industrial development along with modern roads, transmission lines, and other infrastructure.

Only a small portion of the Yorktown Battlefield is located within the project APE, although the entire APE is located within the bounds of the battlefield (Figure 9-6). This is limited to roughly one mile of an approach route corridor situated along US-60/Williamsburg Road, where the transmission line ROW crosses the road. This portion of the battlefield is considered Study Area and is not considered by the NPS ABPP to be a part of the potential National Register area due to nonhistoric development (Figure 9-7).

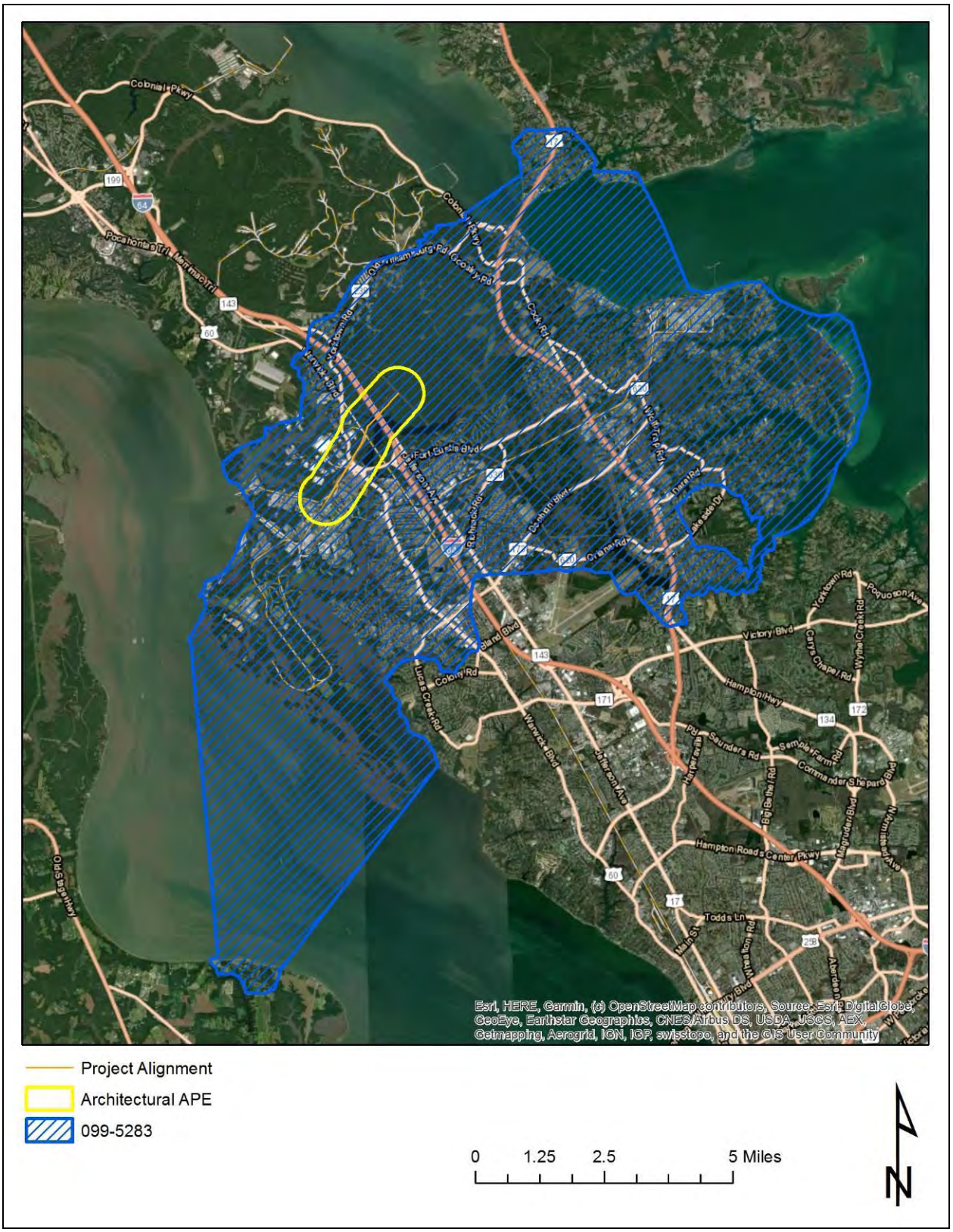

Figure 9-6: Yorktown Battlefield in relation to the project alignment and APE. Source: VCRIS

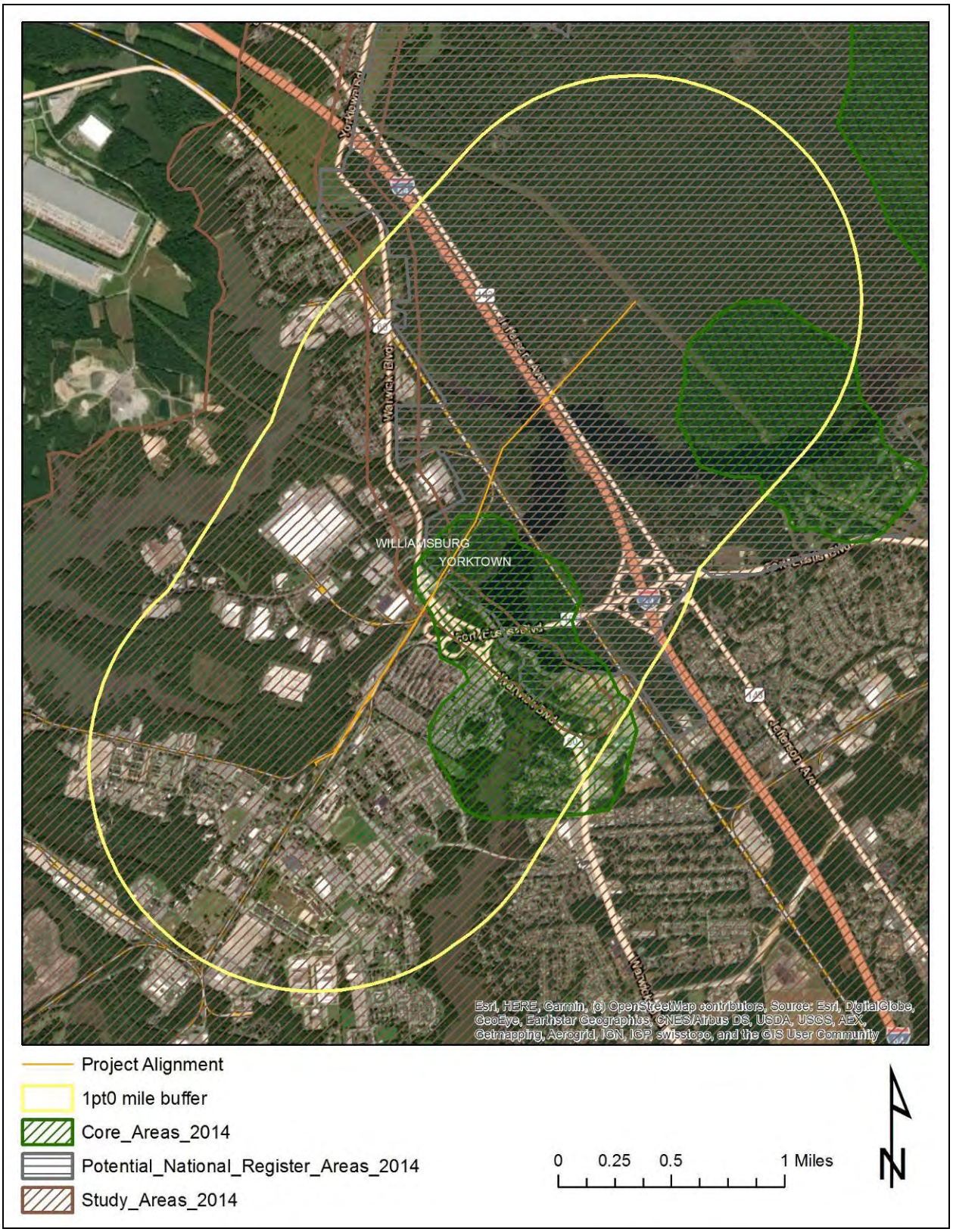

Figure 9-7: Yorktown Battlefield (see key for ABPP areas) in relation to the project area and APE. Base map source: V-CRIS

To assess whether the project or any associated components may pose an effect to the battlefield, a viewshed assessment was conducted. Inspection was performed and photo simulations were prepared from public right-of-way and vantage points throughout the portion of battlefield in the vicinity of the project area to document existing setting, visibility, and lines of sight (Figure 9-8; Photos 1 through 12; Photo Sims 1 through 7). Viewshed assessment was not performed from within the boundaries of Fort Eustis, as this portion of the battlefield is highly fragmented by dense modern development, likely already includes open views of the existing transmission line, and is considered battlefield Study Area only.

Inspection and photo simulation from those portions of the battlefield within the APE at this time found that in general, the existing transmission line is visible from vantage points directly within the project area ROW and in the immediate vicinity, but quickly becomes screened by vegetation and development. The existing transmission line crosses several public thoroughfares within the battlefield and as such, is visible from these vantage points, however, the views tend to be short, and set amongst or behind other existing transmission and utility lines, road infrastructure, and/or modern development. Inspection from vantage points further from the project area, including the more undeveloped portions of the APE within the Newport News Park, generally do not include views of the existing transmission line as the current structures are shorter than the average vegetation in the area.

As the proposed replacement structures will average roughly 30-feet taller than the existing structures, there is the potential for a change in visibility. Because of landscape of the APE, it is anticipated that any change would be minimal and limited to vantage points where the existing line is already visible. Photo simulation confirmed the replacement structures will continue to be visible where the existing structures already are, although in a different configuration. Simulation also revealed that the existing structures that are currently screened by vegetation will likely remain as such. Despite the increase in height, the thick vegetation throughout the portion of the battlefield within the APE will continue to screen visibility of the transmission line except for from vantage points immediately within the project area where views up and down the ROW allow visibility of the structures.

As such, the project may introduce new components or features into the landscape of the battlefield within the project APE, however, visibility will be limited to discrete vantage points in close proximity to or within the existing ROW. There is not anticipated to be any substantial increase in visibility from vantage points where the existing transmission line and structures are not currently visible. Additionally, those portions of the battlefield where the project will be visible are all within the Study Area as defined by the NPS ABPP. Neither the existing nor the proposed structures will be visible from any publicly accessible portion of the battlefield Core Area or Potential National Register Area. Therefore, the Fort Eustis Tap/Line 34 Rebuild Project is recommended to pose ***no adverse effect*** to the Yorktown Battlefield.

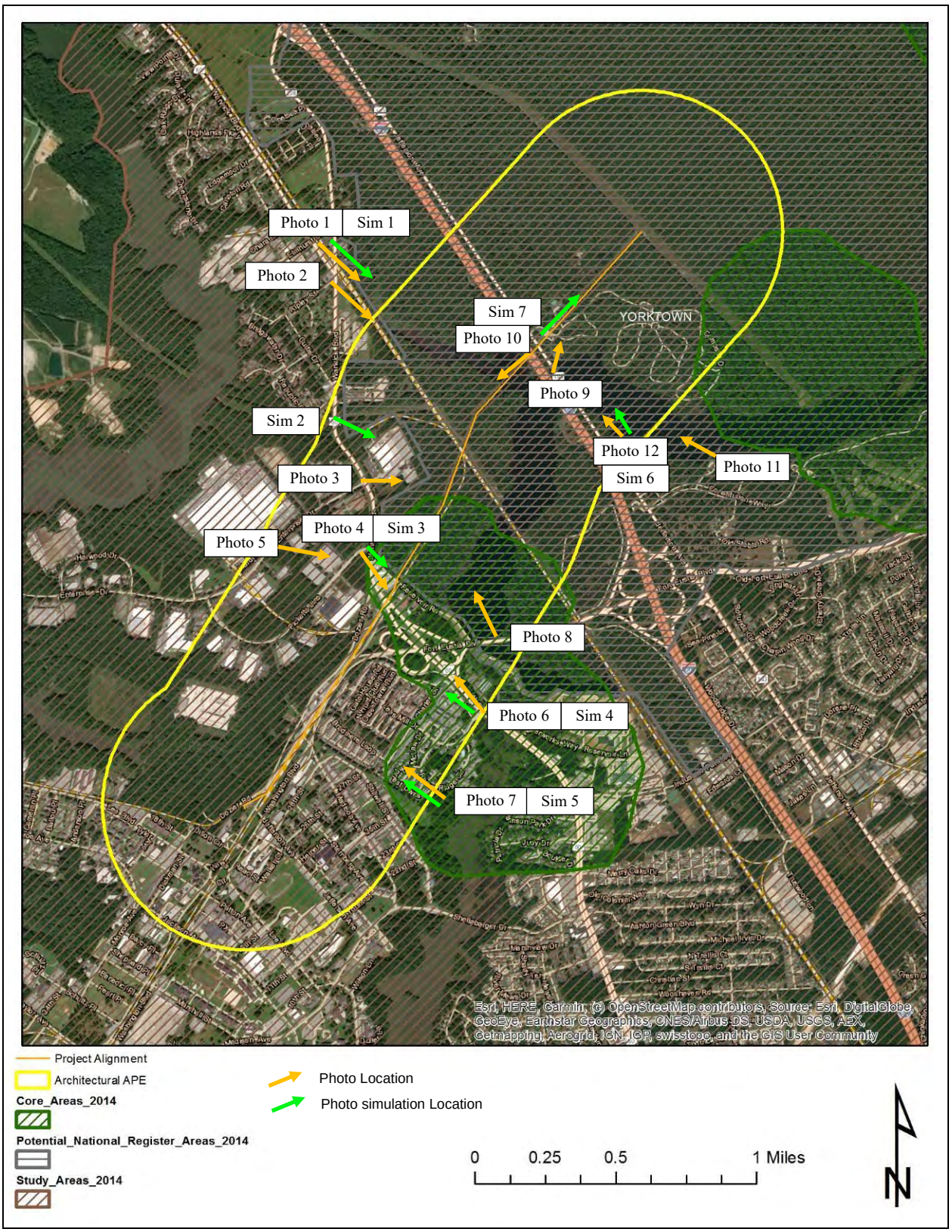

Figure 9-8: Location of representative viewshed points and photo simulations from the Yorktown Battlefield.

Photo 1: Representative view from Yorktown Battlefield at the Lee Hall Depot, toward the project area depicting general location of the project alignment (not visible).

Photo 2: Representative view from Yorktown Battlefield near Lee Hall Depot, toward the project area depicting general location of the project alignment (not visible).

Photo 3: Representative view from Yorktown Battlefield along US-60 at Enterprise Drive toward the project area depicting general location of the project alignment (not visible).

Photo 4: Representative view from Yorktown Battlefield along US-60 at Pickets Line toward the project area depicting general location of the project alignment (visible).

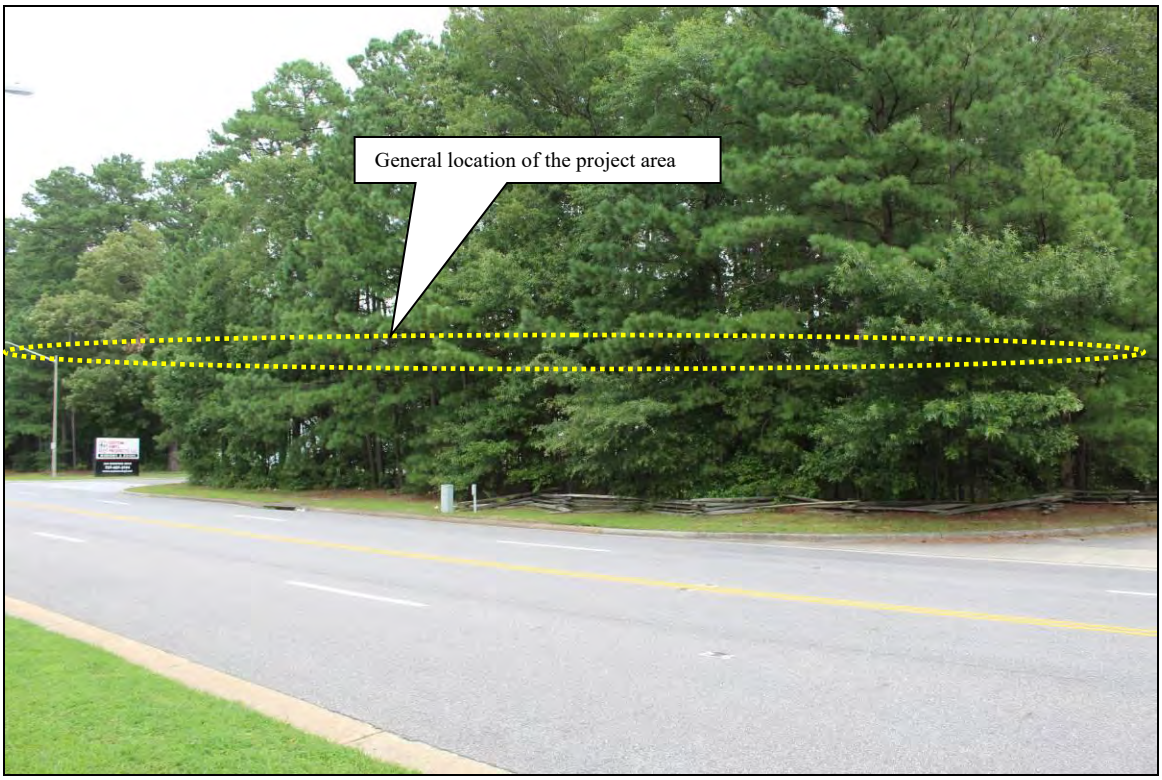

Photo 5: Representative view from Yorktown Battlefield at Oakland Farm Industrial Park Earthworks toward the project area depicting general location of the project alignment (not visible).

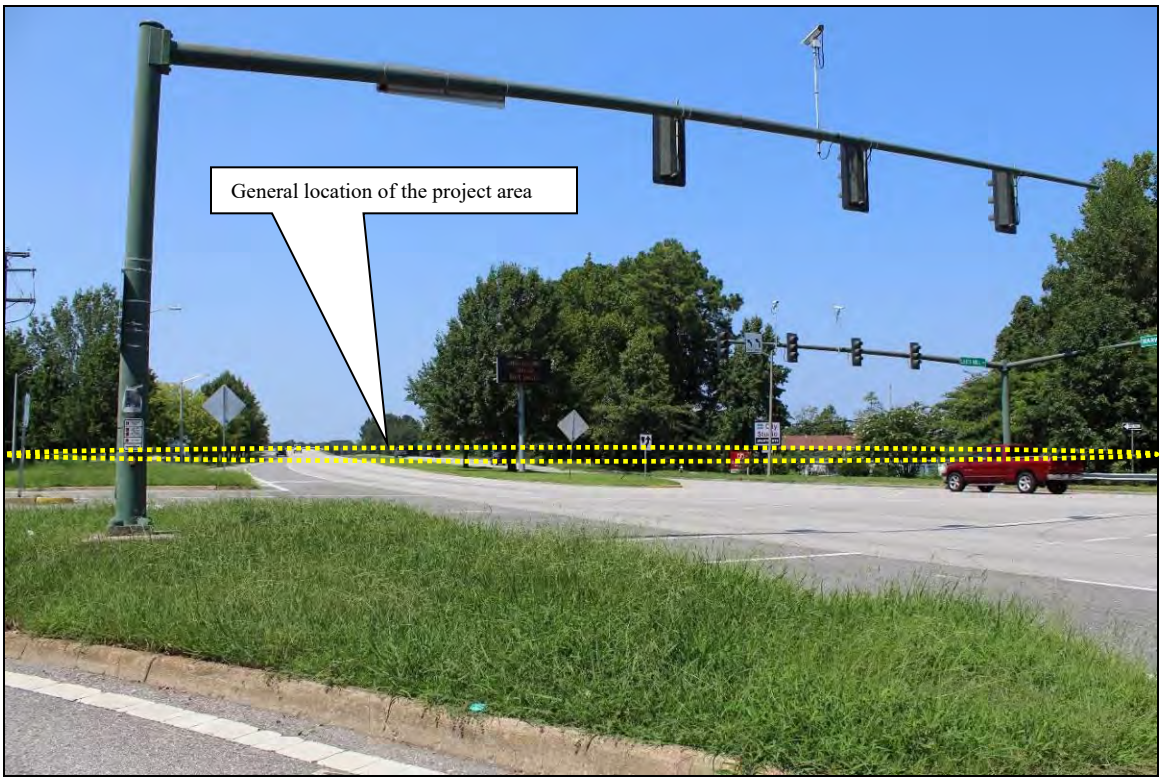

Photo 6: Representative view from Yorktown Battlefield along US-60 at Lees Mill Drive toward the project area depicting general location of the project alignment (not visible).

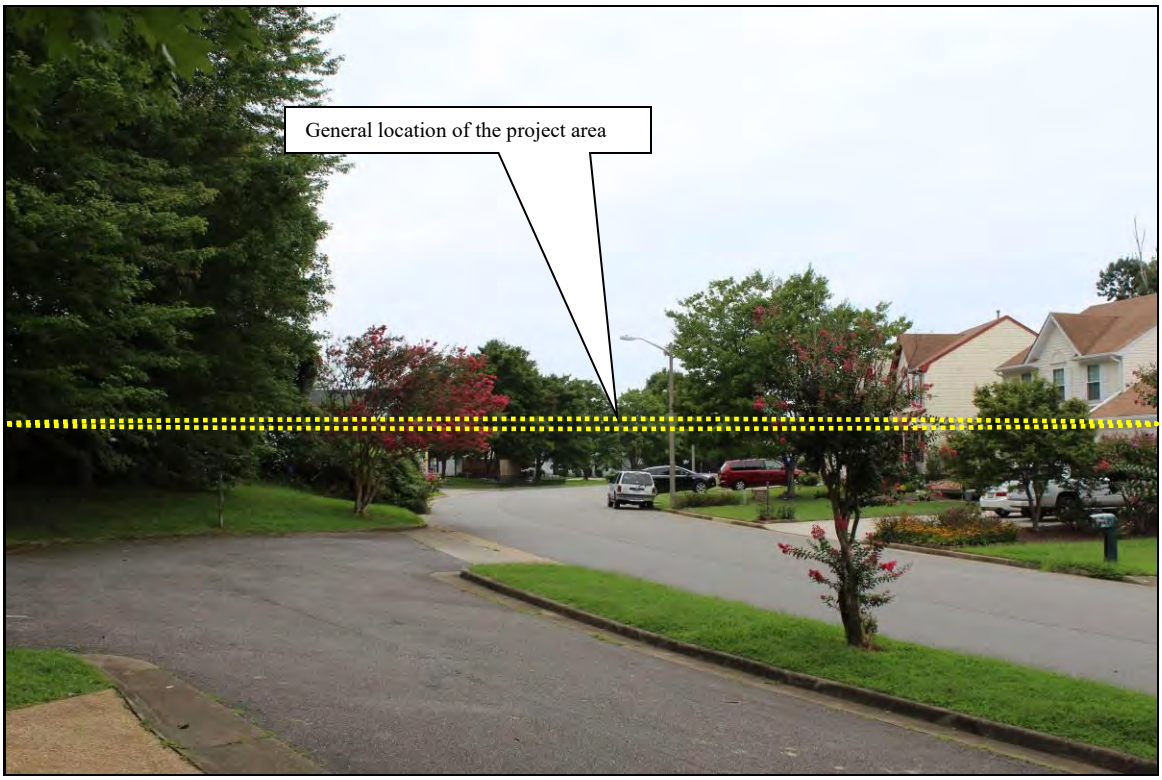

Photo 7: Representative view from Yorktown Battlefield at Lees Mill Earthworks parking toward the project area depicting general location of the project alignment (not visible).

Photo 8: Representative view from Yorktown Battlefield at Fort Eustis Boulevard Bridge over reservoir toward the project area depicting general location of the project alignment (partially visible).

Photo 9: Representative view from Yorktown Battlefield along Jefferson Avenue at reservoir toward the project area depicting general location of the project alignment (not visible).

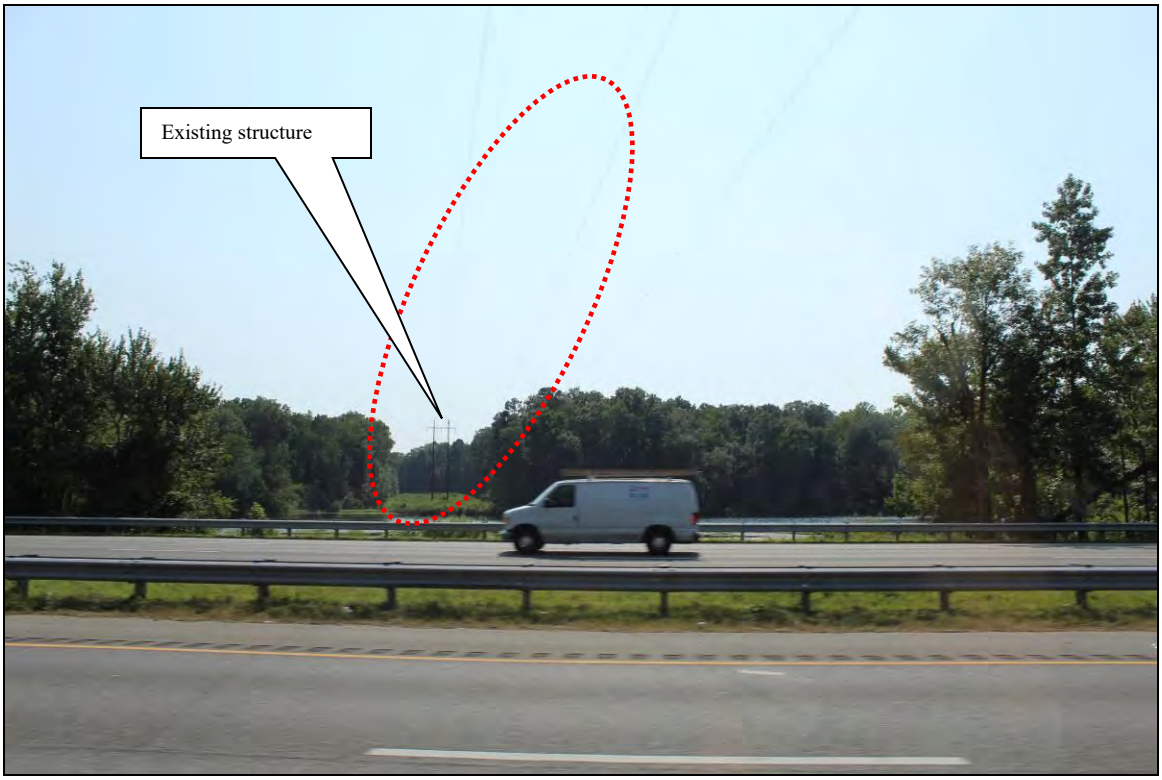

Photo 10: Representative view from Yorktown Battlefield along I-64 at the project area ROW (visible).

Photo 11: Representative view from Yorktown Battlefield within Newport News Park at boat launch toward the project area depicting general location of the project alignment (not visible).

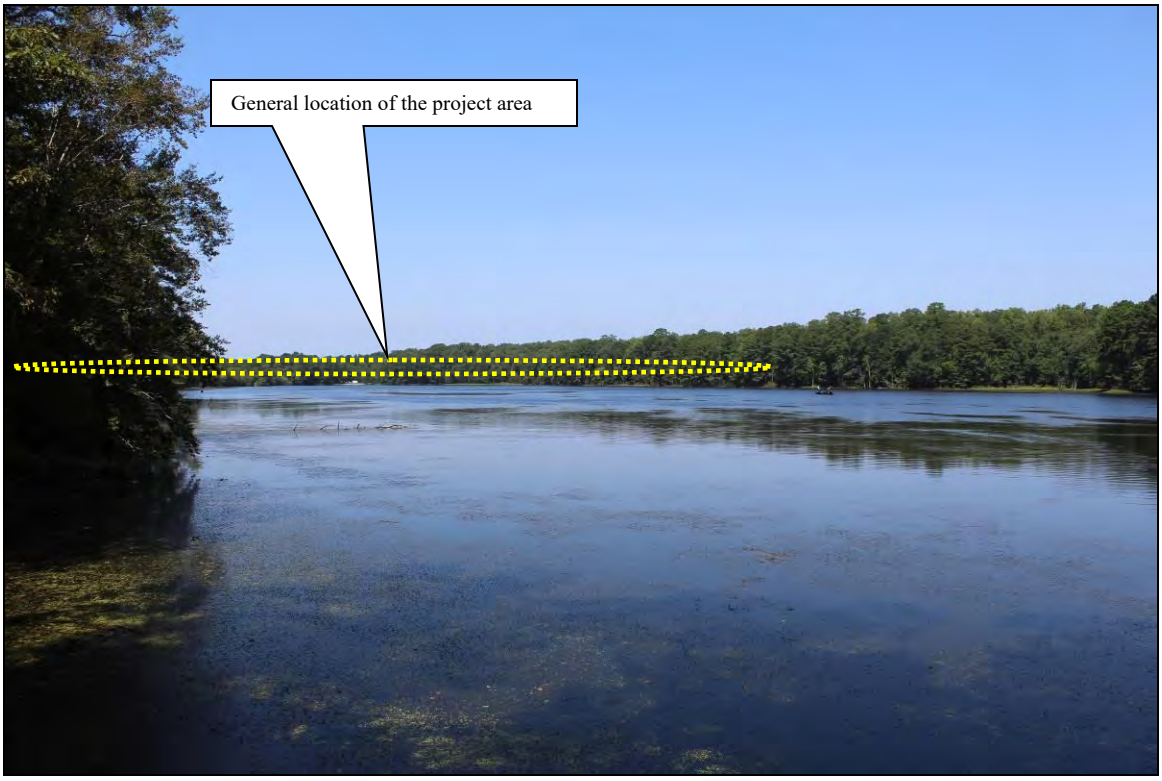

Photo 12: Representative view from Yorktown Battlefield within Newport News Park on lakeside hiking trail toward the project area depicting general location of the project alignment (not visible).

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Photo location: Lee Hall Depot	Structure Name	Structure New Name	Height ft	Distance ft	Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com Project: Dominion Energy Fort Eustis Tap Rebuild	34/608	1038/186, 34/172	130.00	4493.00	34/611	1038/189L	65.00	5599.00
	34/609	1038/187, 34/171	100.00	4506.00	34/611A	34/169R	60.00	5092.00
	34/610	1038/188	65.00	4779.00	34/612	1038/190, 34/168	100.00	6063.00
	34/610A	34/170	60.00	4846.00	34/613	1038/191, 34/167	110.00	6585.00

Photo Sim 1: Location of photo sim 1 depicting field of view and modeled structures from Lee Hall Depot within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Lee Hall Depot** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 1: Photo sim 1 depicting existing view from Lee Hall Depot within the Yorktown Battlefield. Source: GTTE LLC

Photo Sim 1: Photo sim 1 depicting proposed view from Lee Hall Depot within the Yorktown Battlefield (Structures not visible are illustrated in yellow). Source: GTTE LLC

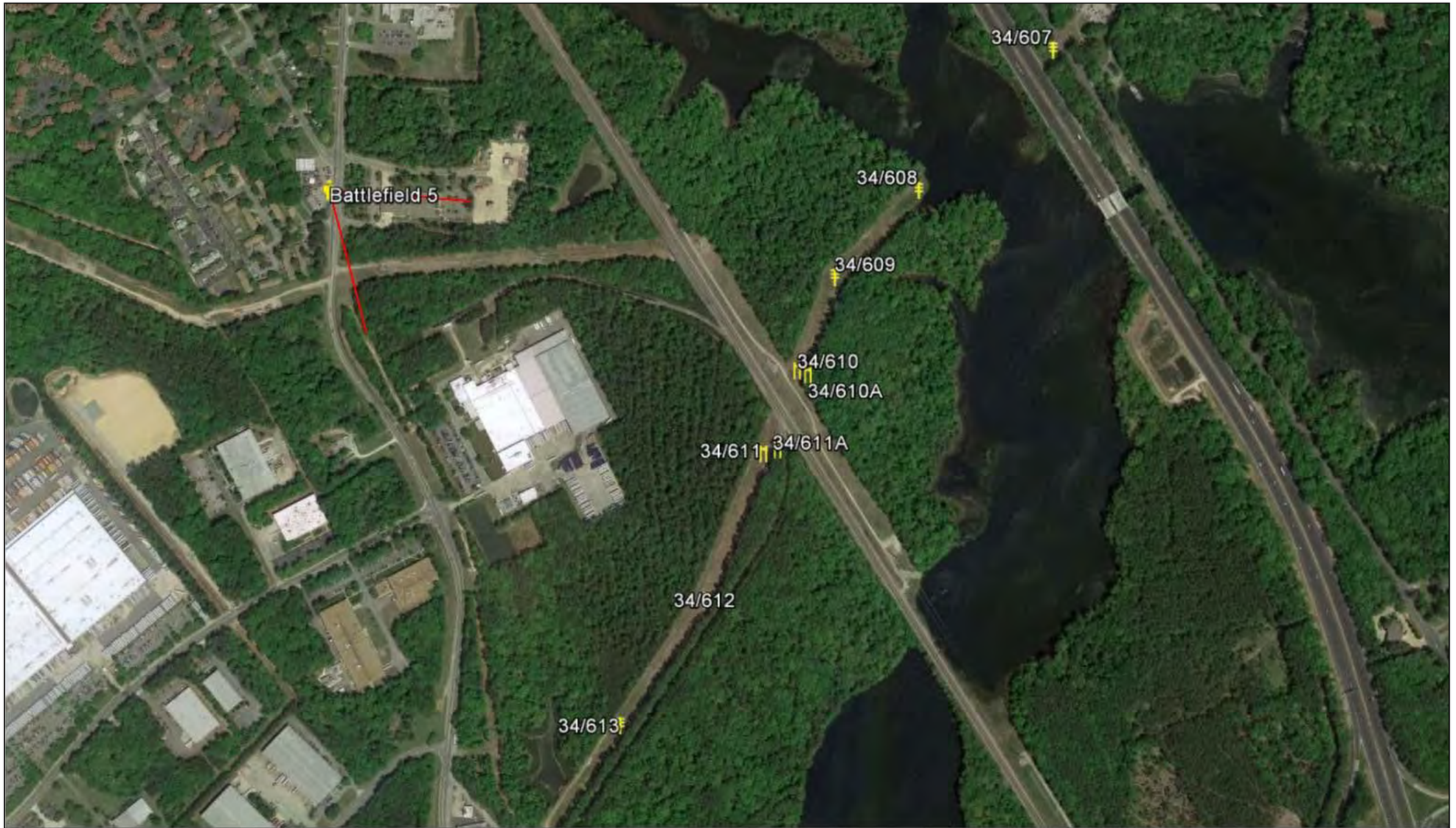

Photo location: Battle Field 5	Structure Name	Structure New Name	Height ft	Distance ft		Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	34/609	1038/187, 34/171	100.00	2714.00		34/611A	34/169R	60.00	2736.00
Project: Dominion Energy Fort Eustis Tap Rebuild	34/610	1038/188	65.00	2652.00		34/612	1038/190, 34/168	100.00	2933.00
	34/610A	34/170	60.00	2712.00		34/613	1038/191, 34/167	110.00	3213.00
	34/611	1038/189L	65.00	2685.00		34/614	1038/192, 34/166	100.00	3642.00

Photo Sim 2: Location of photo sim 2 depicting field of view and modeled structures from US-60 at Curtis Drive within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	Battle Field 5 Existing View
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.	0" 1" 2" 3" 4" This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Photo Sim 2: Photo sim 2 depicting existing view from US-60 at Curtis Drive within the Yorktown Battlefield. Source: GTTE LLC

Photo Sim 2: Photo sim 2 depicting proposed view from US-60 at Curtis Drive within the Yorktown Battlefield (Structures not visible are illustrated in yellow). Source: GTTE LLC

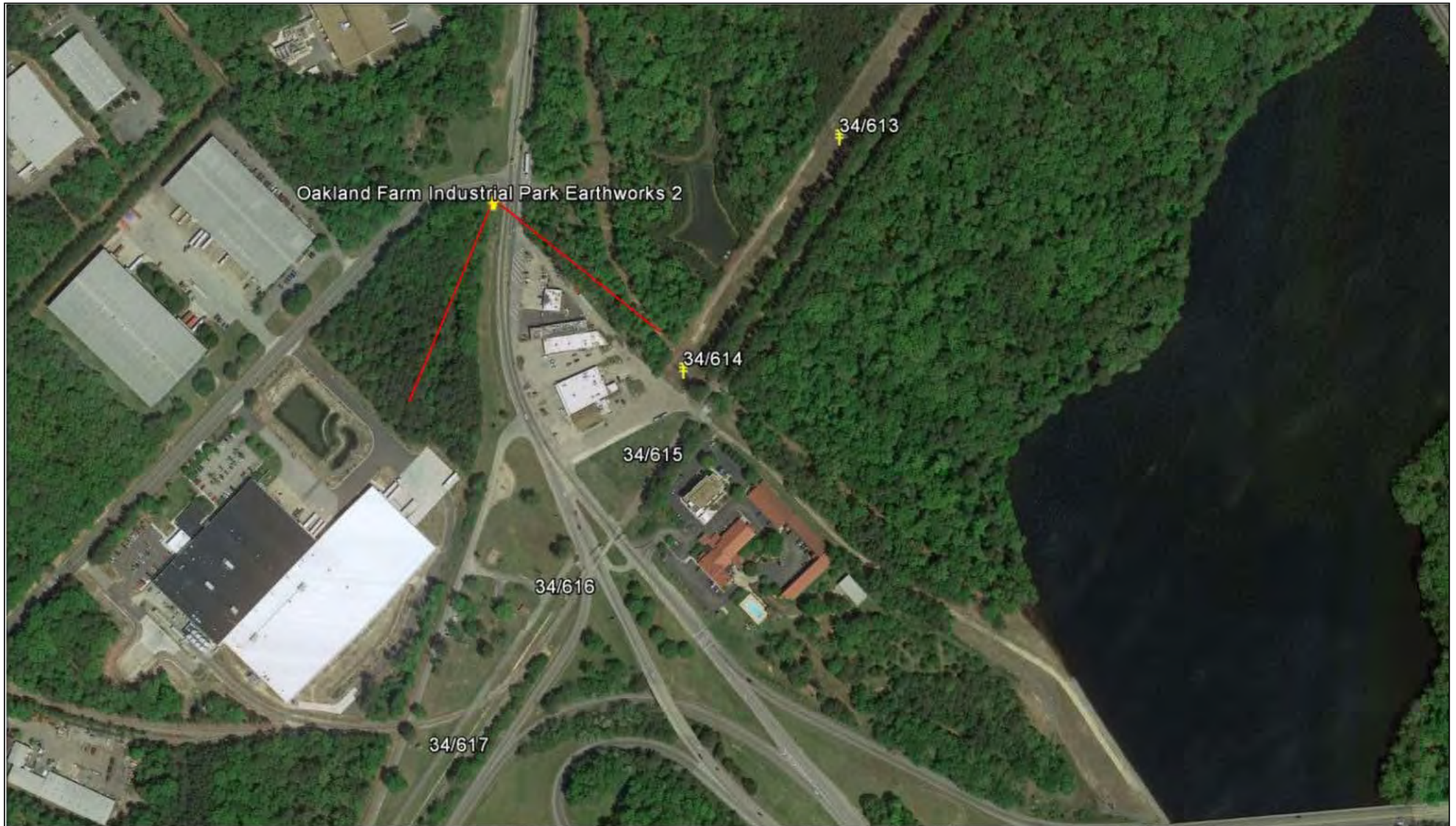

Photo location: Oakland Farm Earthworks 2	Structure Name	Structure New Name	Height ft	Distance ft		Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com Project: Dominion Energy Fort Eustis Tap Rebuild	34/614	1038/192, 34/166	100.00	714.00					
	34/615	1038/193, 34/165	100.00	841.00					
	34/616	1038/194, 34/164	115.00	1097.00					
	34/617	1038/195, 34/163	110.00	1524.00					

Photo Sim 3: Location of photo sim 3 depicting field of view and modeled structures from Oakland Park Earthworks within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Oakland Farm Earthworks 2** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 3: Photo sim 3 depicting existing view from Oakland Park Earthworks within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Oakland Farm Earthworks 2** **Proposed View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 3: Photo sim 3 depicting proposed view from Oakland Park Earthworks within the Yorktown Battlefield (Visible structures shown in galvanized finish. Structures not visible are illustrated in yellow). Source: GTTE LLC

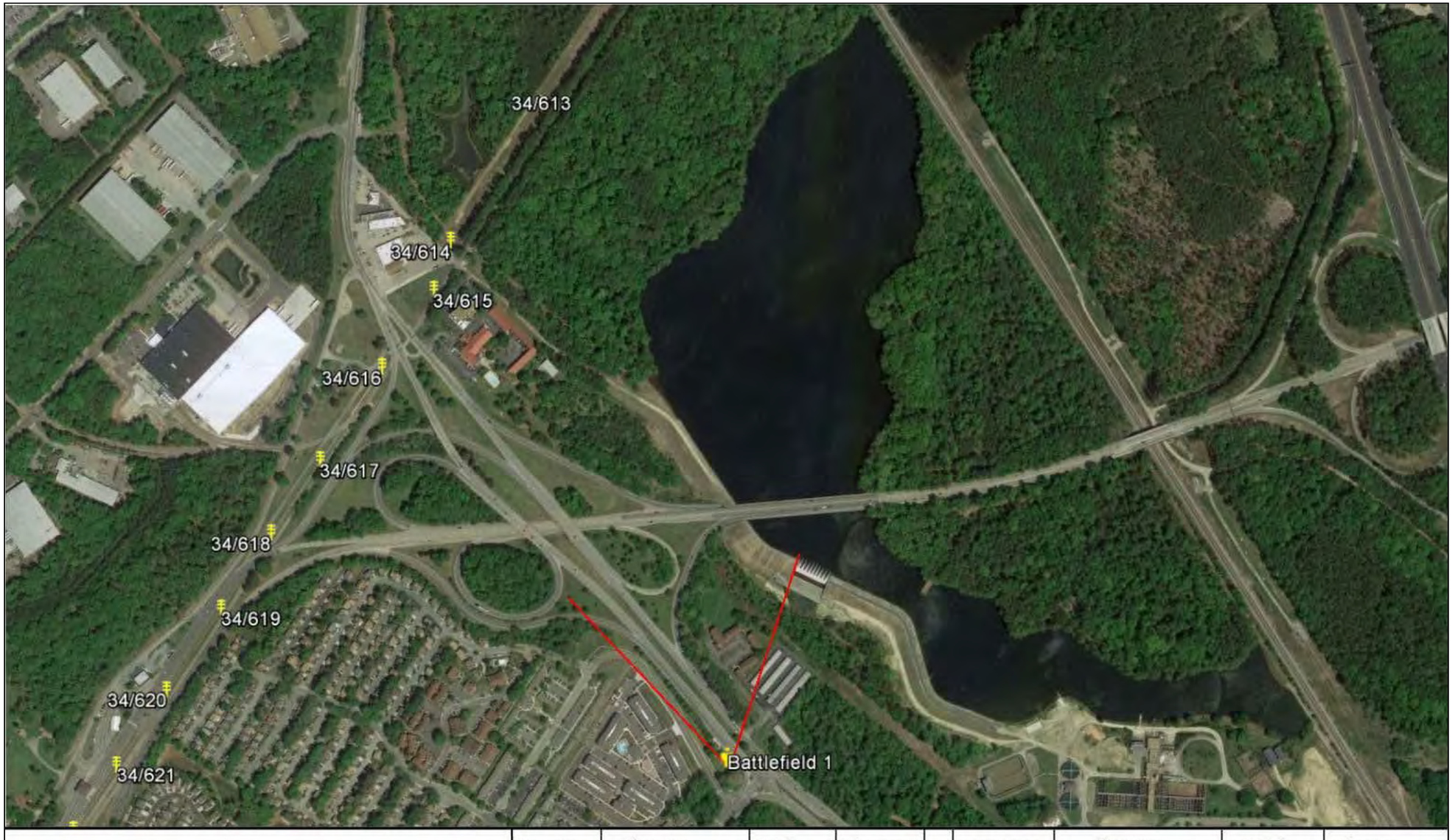

Photo location: Battle Field 1	Structure Name	Structure New Name	Height ft	Distance ft		Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	34/613	1038/191, 34/167	110.00	3244.00					
Project: Dominion Energy Fort Eustis Tap Rebuild	34/614	1038/192, 34/166	100.00	2802.00					
	34/615	1038/193, 34/165	100.00	2642.00					
	34/616	1038/194, 34/164	115.00	2496.00					

Photo Sim 4: Location of photo sim 4 depicting field of view and modeled structures from US-60 at Lees Mill Drive within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Battle Field 1** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 4: Photo sim 4 depicting existing view from US-60 at Lees Mill Drive within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Battle Field 1** **Proposed View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 4: Photo sim 4 depicting proposed view from US-60 at Lees Mill Drive within the Yorktown Battlefield (Structures not visible are illustrated in yellow). Source: GTTE LLC

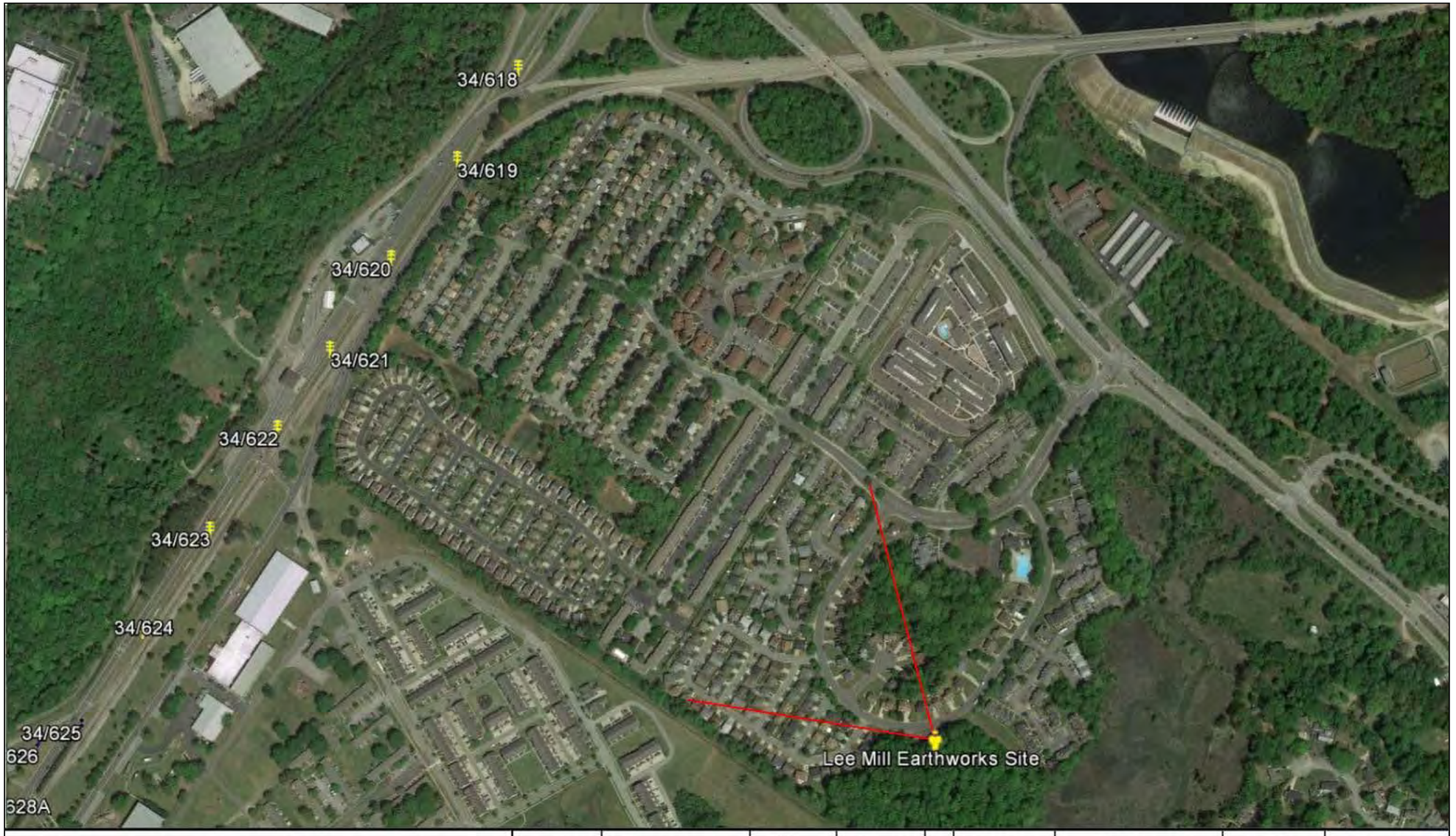

Photo location: Lee Mill Earthworks	Structure Name	Structure New Name	Height ft	Distance ft	Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com Project: Dominion Energy Fort Eustis Tap Rebuild	34/617	1038/195, 34/163	110.00	3306.00	34/621	1038/199, 34/159	110.00	2841.00
	34/618	1038/196, 34/162	110.00	3097.00	34/622	1038/200, 34/158	110.00	2873.00
	34/619	1038/197, 34/161	110.00	2960.00	34/623	1038/201, 34/157	110.00	2983.00
	34/620	1038/198, 34/160	110.00	2864.00				

Photo Sim 5: Location of photo sim 5 depicting field of view and modeled structures from Lees Mill Earthworks within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Lee Mill Earthworks** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 5: Photo sim 5 depicting existing view from Lees Mill Earthworks within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	Lee Mill Earthworks Proposed View
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.	0" 1" 2" 3" 4" This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Photo Sim 5: Photo sim 5 depicting proposed view from Lees Mill Earthworks within the Yorktown Battlefield (Structures not visible are illustrated in yellow). Source: GTTE, LLC

Photo location: Battle Field 2	Structure Name	Structure New Name	Height ft	Distance ft	Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com Project: Dominion Energy Fort Eustis Tap Rebuild	34/601	1038/179, 34/179	85	4052	34/605	1038/183, 34/175	100	2965
	34/602	1038/180, 34/178	95	3666	34/606	1038/184, 34/174	100	2858
	34/603	1038/181, 34/177	90	3386	34/607	1038/185, 34/173	130	2833
	34/604	1038/182, 34/176	90	3195				

Photo Sim 6: Location of photo sim 6 depicting field of view and modeled structures from Newport News Park within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Battle Field 2** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 6: Photo sim 6 depicting existing view from Newport News Park within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Battle Field 2** **Proposed View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 6: Photo sim 6 depicting proposed view from Newport News Park within the Yorktown Battlefield (Structures not visible are illustrated in yellow). Source: GTTE LLC

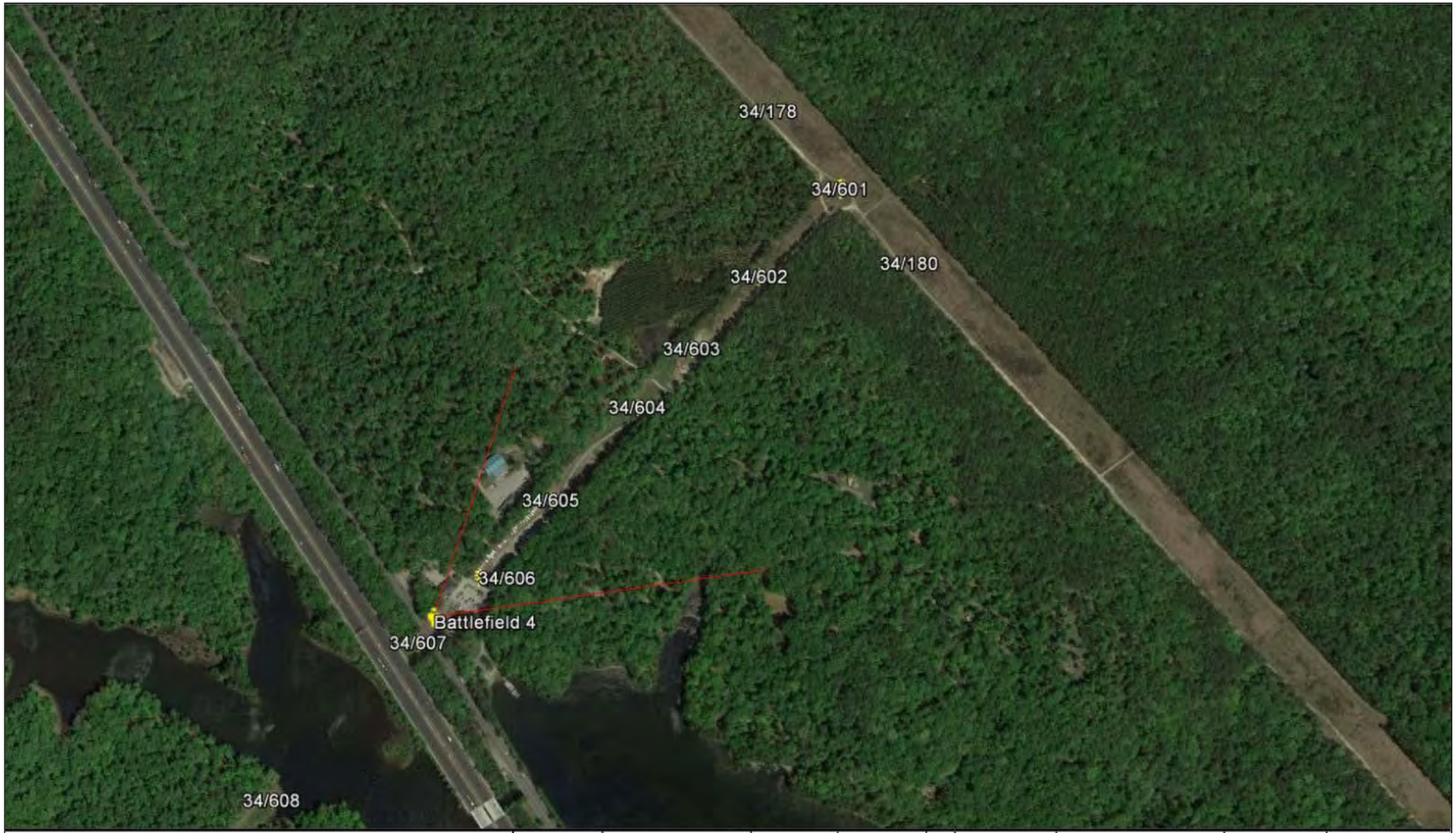

Photo location: Battle Field 4	Structure Name	Structure New Name	Height ft	Distance ft	Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	34/601	1038/179, 34/179	85	2786	34/604	1038/182, 34/176	90	1367
Project: Dominion Energy Fort Eustis Tap Rebuild	34/602	1038/180, 34/178	95	2217	34/605	1038/183, 34/175	100	762
	34/603	1038/181, 34/177	90	1747	34/606	1038/184, 34/174	100	257.6

Photo Sim 7: Location of photo sim 7 depicting field of view and modeled structures from Newport News Park Campground within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Battle Field 4** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 7: Photo sim 7 depicting existing view from Newport News Park Campground within the Yorktown Battlefield. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Battle Field 4** **Proposed View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 7: Photo sim 7 depicting proposed view from Newport News Park Campground within the Yorktown Battlefield (Visible Structures shown in galvanized finish). Source: GTTE LLC

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VDHR ID# 121-0041
Oakland Farm Industrial Park Multiple Resource Area

Figure 9-9: Representative view of the Oakland Farm Industrial Park Multiple Resource Area looking towards the project area.

The Oakland Farm Industrial Park Multiple Resource Area consists of three significant, distinct and non-contiguous archaeological sites that are now located within the Oakland Farm Industrial Park. The three archaeological sites associated with the Oakland Farm Archaeological Sites Multiple Resource Area are spread throughout the Oakland Farm Industrial Park located on the south side of Route 60, just west of Fort Eustis. They are set amongst and between a number of large industrial warehouses and complexes set on large parcels around a central loop road. The sites are located on and mostly within preserved wooded areas within the complex.

To assess whether the project or any associated components may pose an effect to the resource, a viewshed assessment was conducted. Inspection was performed and photographs taken from the resources and throughout the vicinity to document existing setting, visibility, and lines of sight (Figure 9-10; Photos 1 through 7; Photo Sims 1 through 2).

Of the three discontinguous elements of the Oakland Farm Industrial Park Multiple Resource Area, two are located within the project APE for this effort. These include the Skiffes Creek Sand Spit Prehistoric Site and the Southern Terminus Redoubt Earthworks site. They are set 0.14-miles and 0.45 miles from the project alignment respectively.

Assessment of both sites found that the historic setting in the vicinity has been compromised by the development of the Oakland Farm Industrial Park in which they are located, as well as nonhistoric development along US-60. Both sites are set within undeveloped wooded tracts, but

are immediately bordered by modern development including roads, sidewalks, and buildings. Inspection from the Sand Spit Prehistoric Site revealed that the existing transmission line is visible from the eastern edge of the site where it abuts US-60, however, the line becomes screened by vegetation from within the bounds of the site as well as the western edge along Picketts Line. Where it can be seen, the existing transmission line is set amongst a variety of nonhistoric infrastructure and development. Inspection from the Southern Terminus Redoubt revealed the existing transmission line is completely screened from view by intervening vegetation.

Although the proposed replacement structures will average roughly 30-feet taller than the existing structures, it is anticipated that any change in visibility from the Oakland Farm Industrial Park Multiple Resource Area would be minimal and inconsequential. Photo simulation confirmed the replacement structures will continue to be visible from the Sand Spit Prehistoric Site where the existing structures already are along US-60, although will continue to be screened from further distances. Simulation also revealed that the project will not be visible from the Southern Terminus Redoubt Earthworks. Further, these resources are considered significant for their archaeological potential, and already have a compromised setting from modern development that does not contribute to its eligibility. As such, the Fort Eustis Tap/Line 34 Rebuild project is recommended to pose ***no adverse effect*** on the Oakland Farm Industrial Park Multiple Resource Area sites.

Figure 9-10: Location of Oakland Farm Industrial Park Multiple Resource Area in relation to the project alignment and APE showing direction of representative and viewshed photos

Photo 1- View of Sand Spit Prehistoric Site setting from US-60.

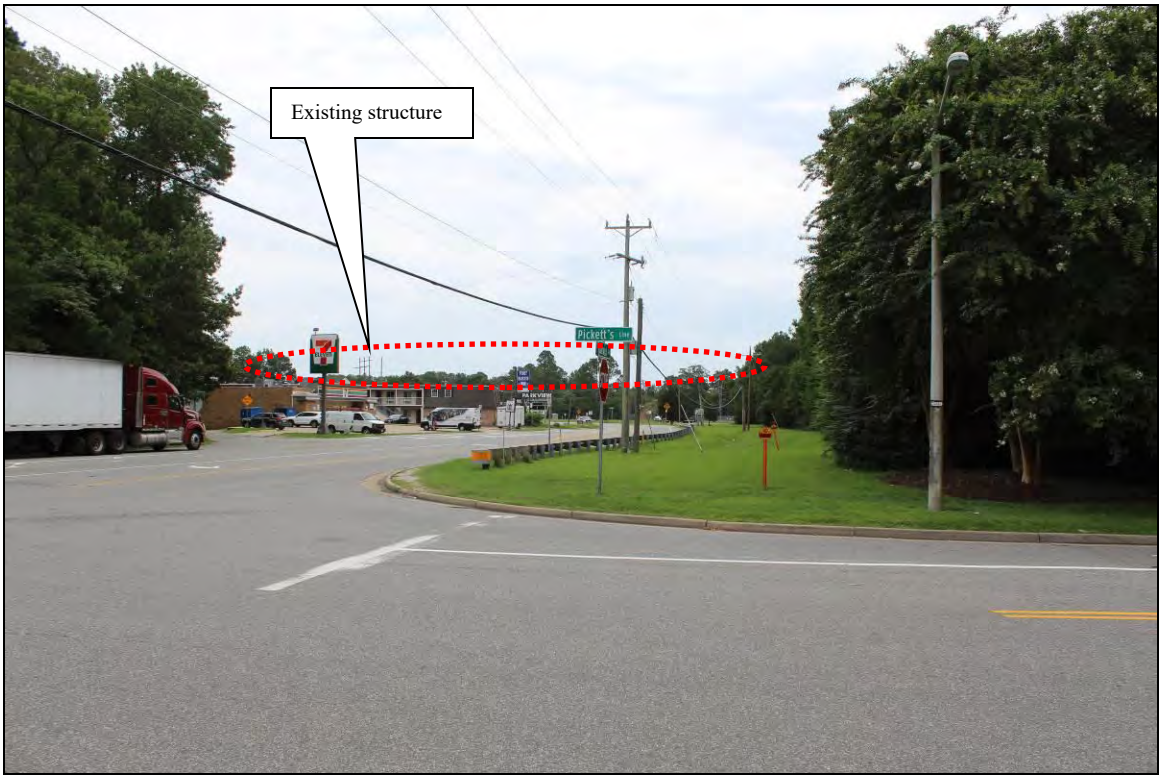

Photo 2- View from Sand Spit Prehistoric Site along US-60 towards the project area (visible).

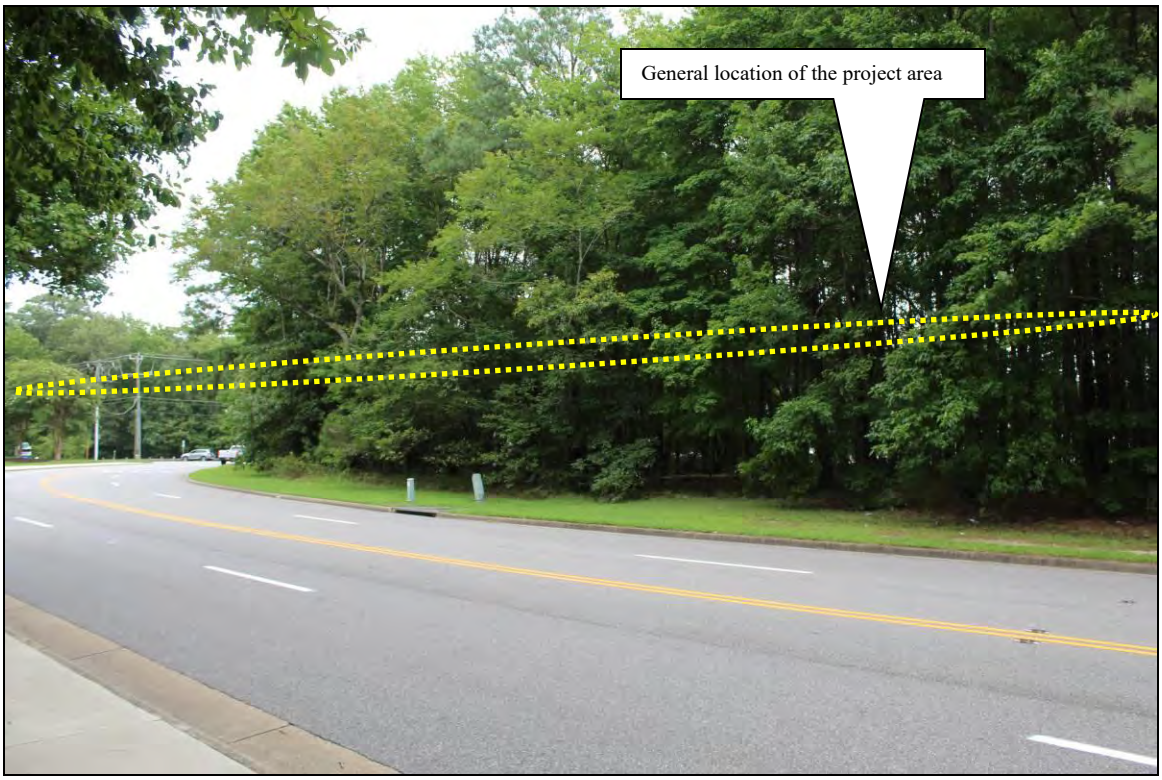

Photo 3- View from Sand Spit Prehistoric Site along Picketts Line towards the project area (not visible).

Photo 4- View of Southern Terminus Redoubt Setting.

Photo 5- Representative view of Southern Terminus Redoubt.

Photo 6- View from Southern Terminus Redoubt along Enterprise Way towards the project area (not visible).

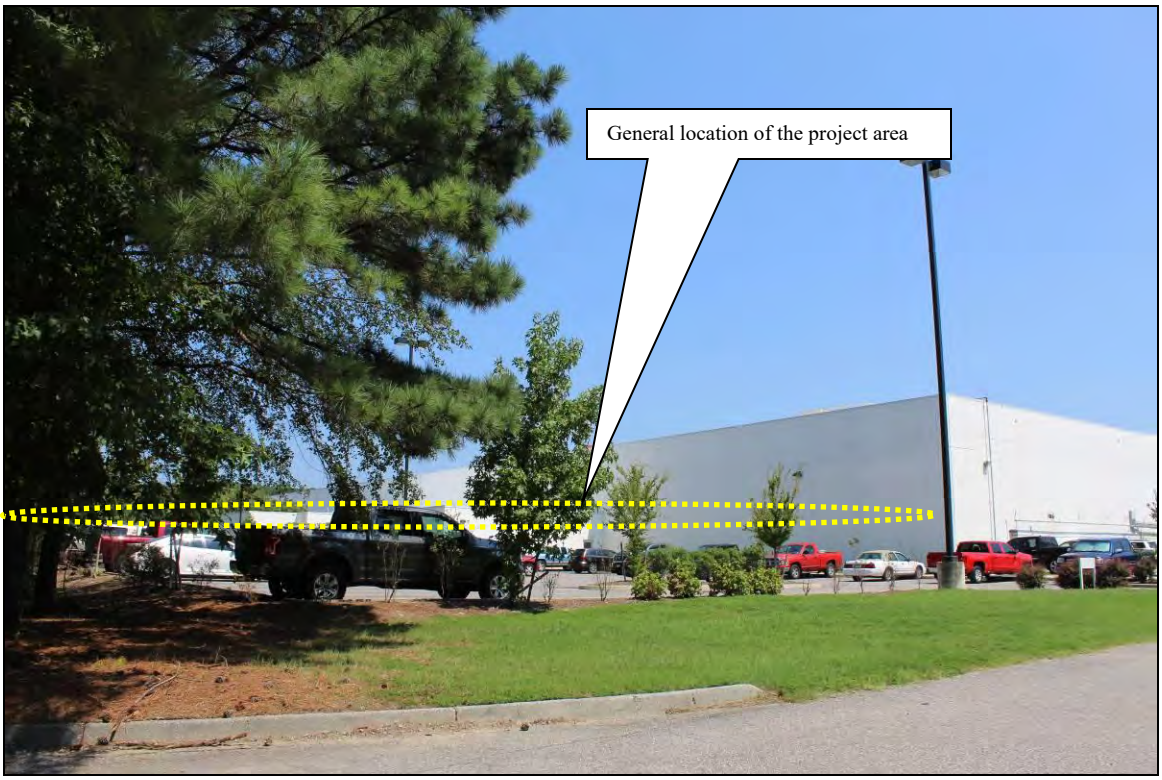

Photo 7- View from Southern Terminus Redoubt along Enterprise Way towards the project area (not visible).

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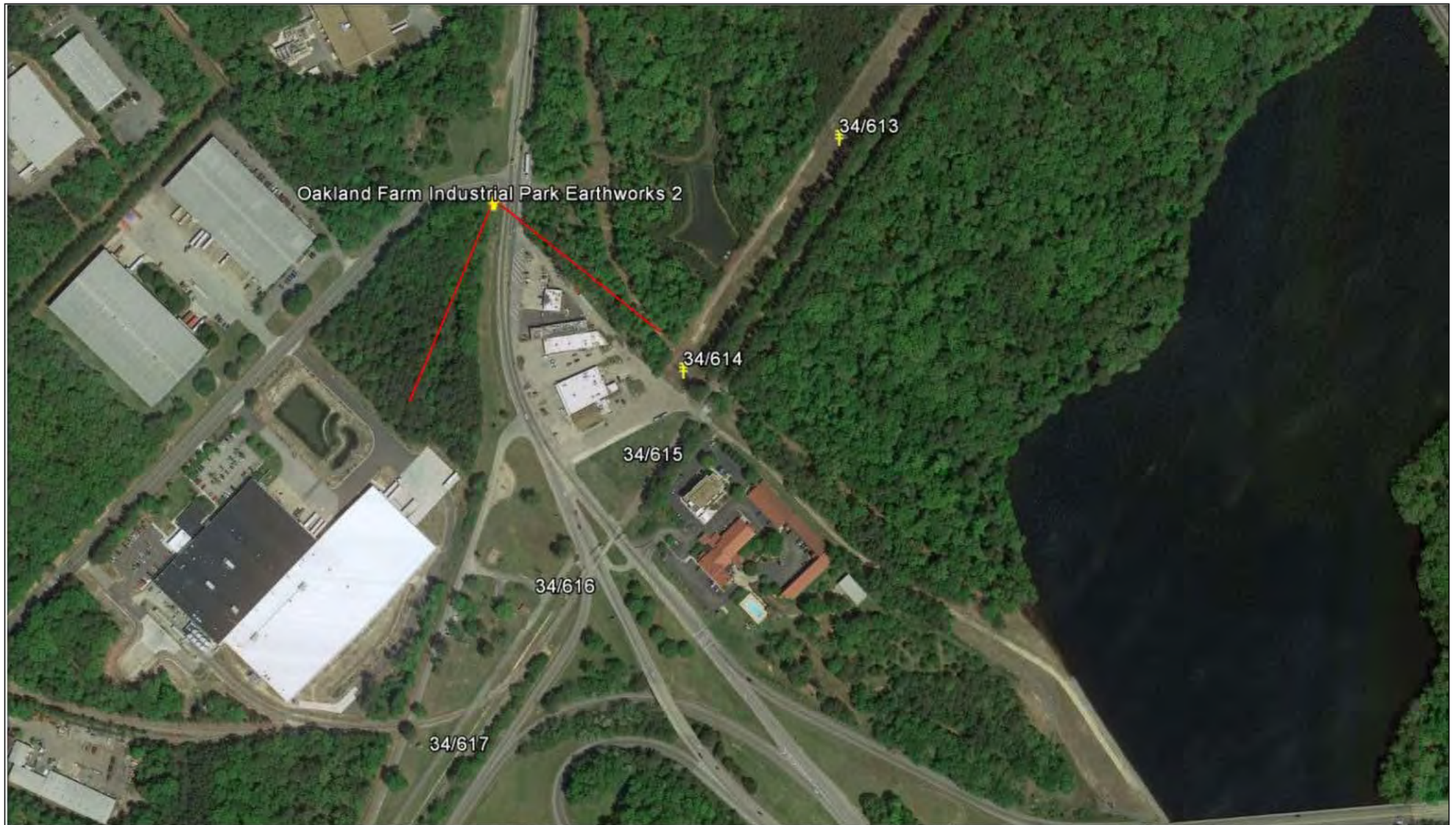


Photo location: Oakland Farm Earthworks 2	Structure Name	Structure New Name	Height ft	Distance ft		Structure Name	Structure New Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com Project: Dominion Energy Fort Eustis Tap Rebuild	34/614	1038/192, 34/166	100.00	714.00					
	34/615	1038/193, 34/165	100.00	841.00					
	34/616	1038/194, 34/164	115.00	1097.00					
	34/617	1038/195, 34/163	110.00	1524.00					

Photo Sim 1: Location of photo sim 1 depicting field of view and modeled structures from Sand Spit Prehistoric Site within Oakland Farm Industrial Park Multiple Resource Area. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Oakland Farm Earthworks 2** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 1: Photo sim 1 depicting existing view from Sand Spit Prehistoric Site within Oakland Farm Industrial Park Multiple Resource Area. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Oakland Farm Earthworks 2** **Proposed View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 1: Photo sim 1 depicting proposed view from Sand Spit Prehistoric Site within Oakland Farm Industrial Park Multiple Resource Area (Visible structures shown in galvanized, Structures not visible are illustrated in yellow). Source: GTTE LLC

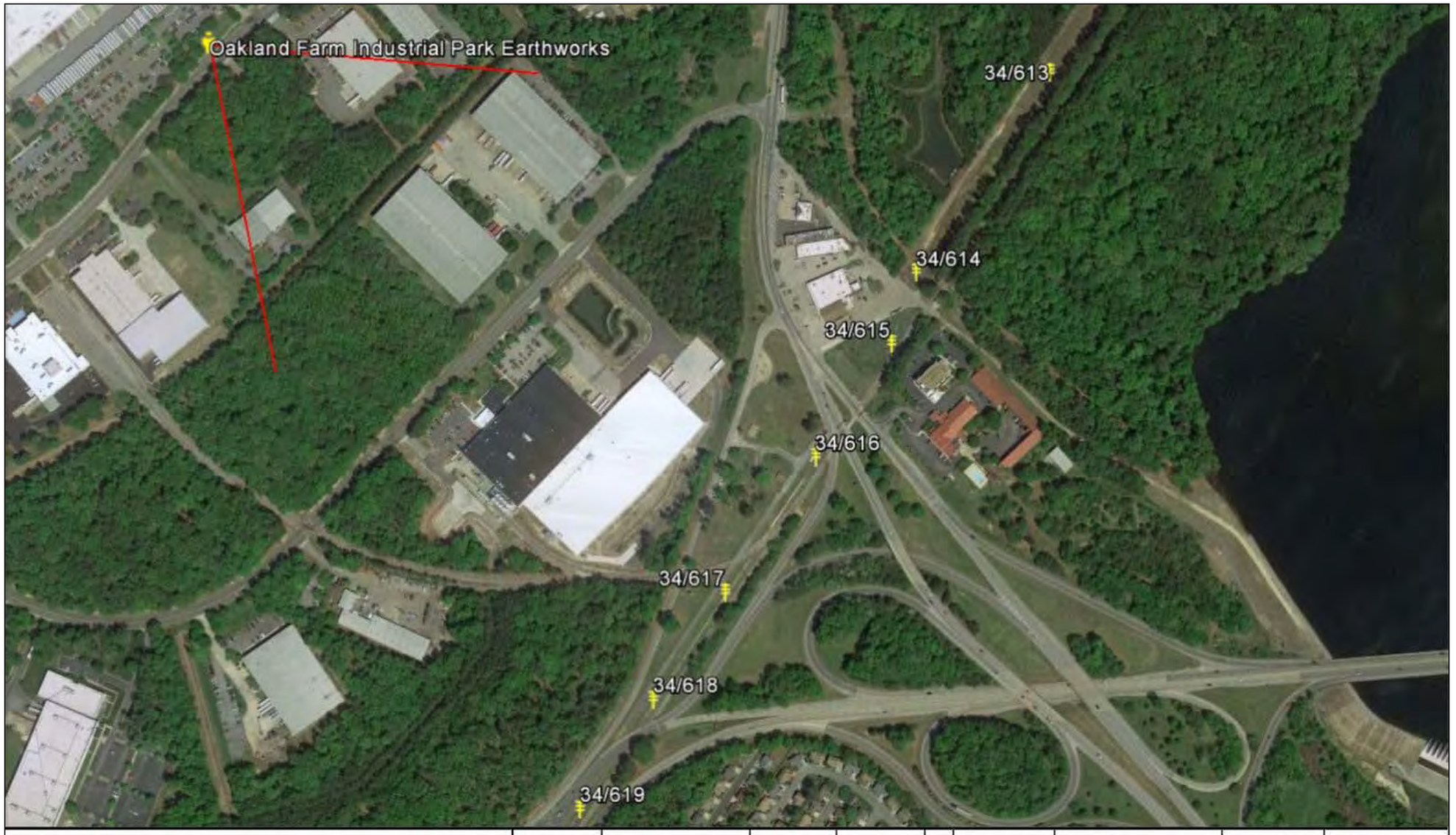


Photo location: Oakland Farm Earthworks 1

Photo simulations prepared by: GTTE LLC email: info@gttellc.com

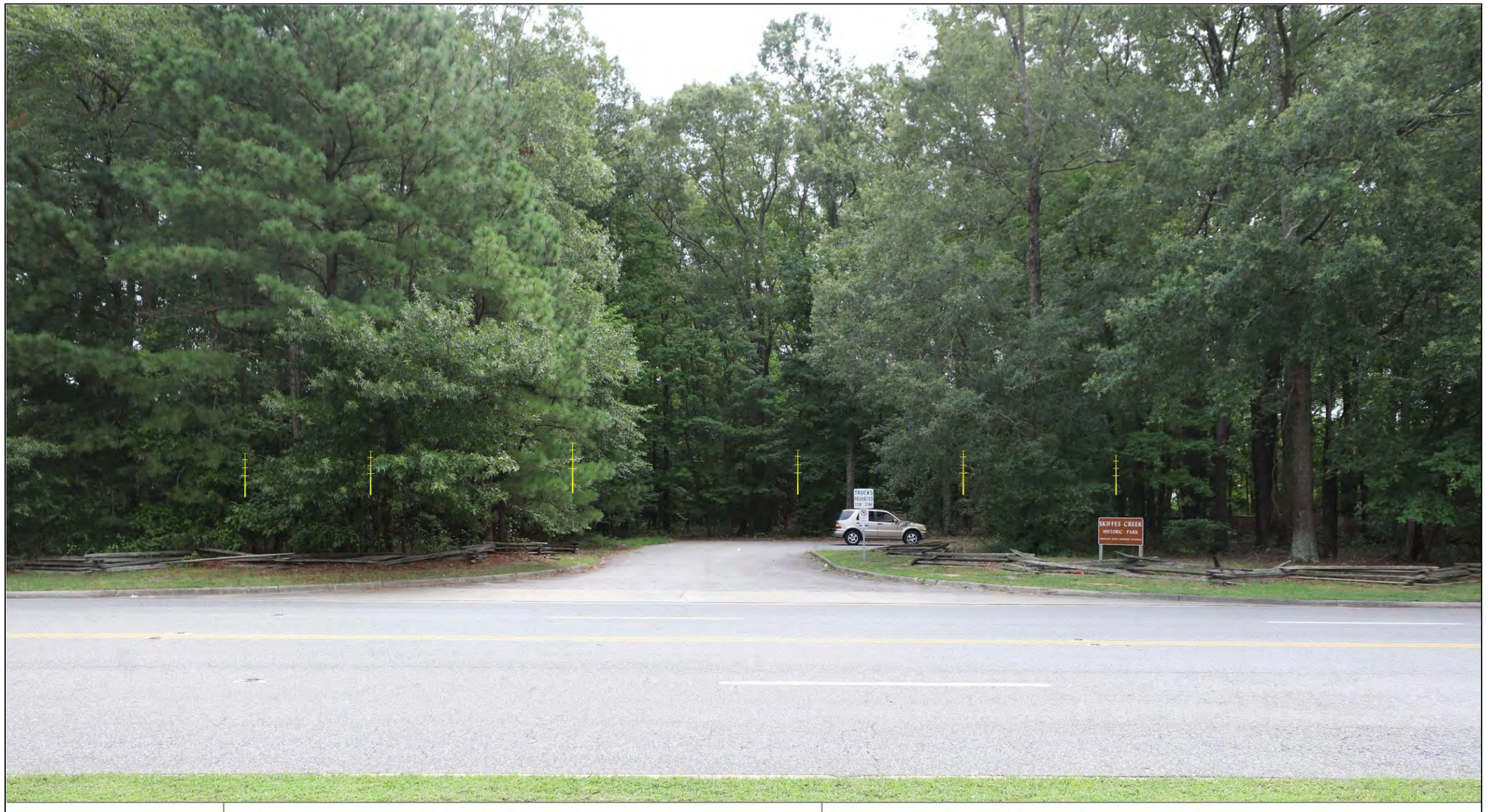
Project: Dominion Energy Fort Eustis Tap Rebuild

Structure Name	Structure New Name	Height ft	Distance ft
34/614	1038/192, 34/166	100.00	2435.00
34/615	1038/193, 34/165	100.00	2442.00
34/616	1038/194, 34/164	115.00	2404.00
34/617	1038/195, 34/163	110.00	2467.00
34/618	1038/196, 34/162	110.00	2594.00
34/619	1038/197, 34/161	110.00	2892.00

Photo Sim 2: Location of photo sim 2 depicting field of view and modeled structures from Southern Terminus Redoubt within Oakland Farm Industrial Park Multiple Resource Area. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Oakland Farm Earthworks 1** **Existing View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 2: Photo sim 2 depicting existing view from Southern Terminus Redoubt within Oakland Farm Industrial Park Multiple Resource Area. Source: GTTE LLC



	Dominion Energy: Fort Eustis Tap Rebuild	**Oakland Farm Earthworks 1** **Proposed View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 2: Photo sim 2 depicting proposed view from Southern Terminus Redoubt within Oakland Farm Industrial Park Multiple Resource Area (Structures not visible are illustrated in yellow). Source: GTTE LLC

VDHR ID# 121-0050
Lee's Mill Earthworks

Figure 9-11: Representative view of the Lee's Mill Earthworks looking towards the project area.

The Lee's Mill Earthworks are remnants of the Confederate Warwick-Yorktown defensive line from the 1862 Peninsula Campaign. The earthworks are sited on a ten-acre wooded parcel now set within a suburban residential neighborhood.

To assess whether the project or any associated components may pose an effect to the resource, a viewshed assessment was conducted. Inspection was performed and photographs taken from the earthworks and property to document existing setting, visibility, and lines of sight (Figure 9-12; Photos 1 through 4; Photo Sim 1).

The tract of land on which the earthworks is located is 0.50 miles away from the project alignment at its nearest point, although the earthworks and interpretive trail are set further within at the parcel and a greater distance from the project area.

Assessment of the tract found that the historic setting in the vicinity has been compromised by a large suburban residential development bordering it to the north and east. A parking lot for the interpretive trail is located off Lees Mill drive within the neighborhood. Inspection from the parking lot revealed the residential development and vegetation between it and the project area screen all visibility of the existing transmission line. Inspection from within the wooded tract and at the earthworks themselves also revealed screened views in the direction of the project alignment due to thick vegetation.

Although the proposed replacement structures will average roughly 30-feet taller than the existing structures, it is anticipated that there will be no change in visibility from the Lee's Mill Earthworks. Photo simulation confirmed the replacement structures will continue to be completely screened by intervening vegetation and development. Further, this resource is considered significant for its archaeological potential and construction, and already has a compromised setting from modern development that does not contribute to its eligibility. As such, the Fort Eustis Tap/Line 34 Rebuild project is recommended to pose ***no effect*** on the Lee's Mill Earthworks.

Figure 9-12: Location of Lee's Mill Earthworks in relation to the project alignment and APE showing direction of representative and viewshed photos

Photo 1- View of Lee's Mill Earthworks setting from Lees Mill Drive.

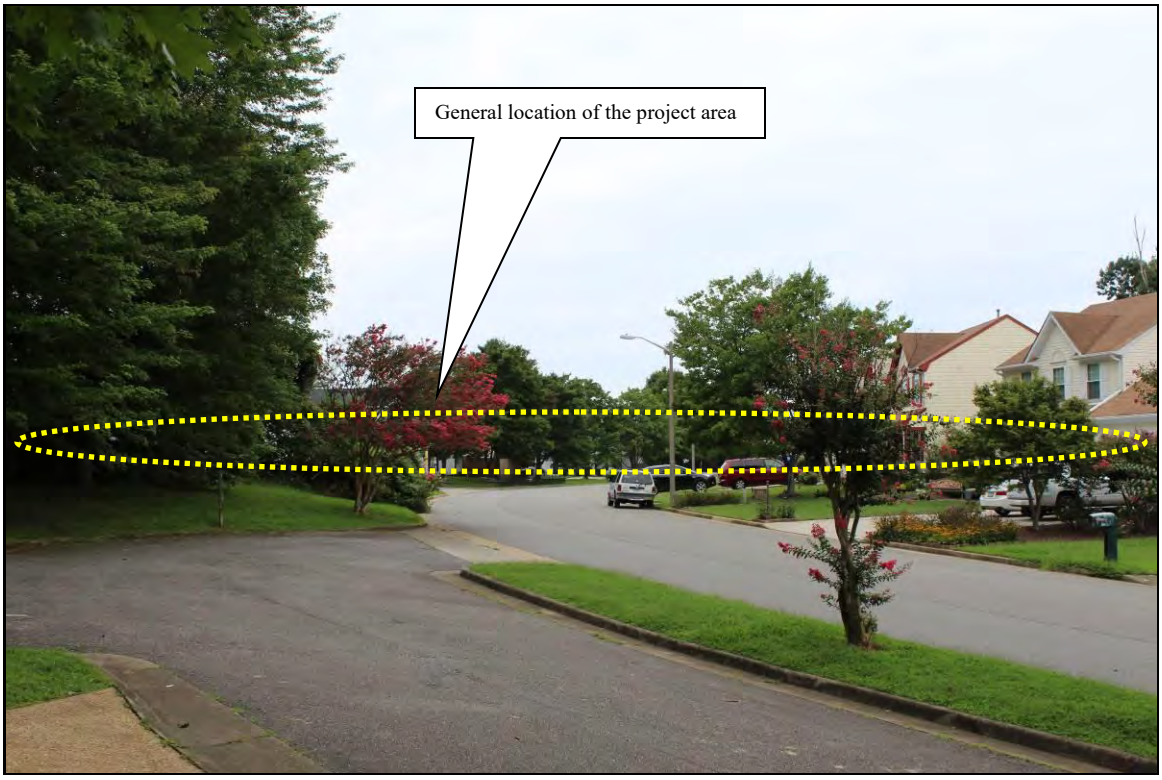


Photo 2- View from Lee's Mill Earthworks parking lot towards the project area (not visible).

Photo 3- View of Lee's Mill Earthworks setting from interpretive trail.

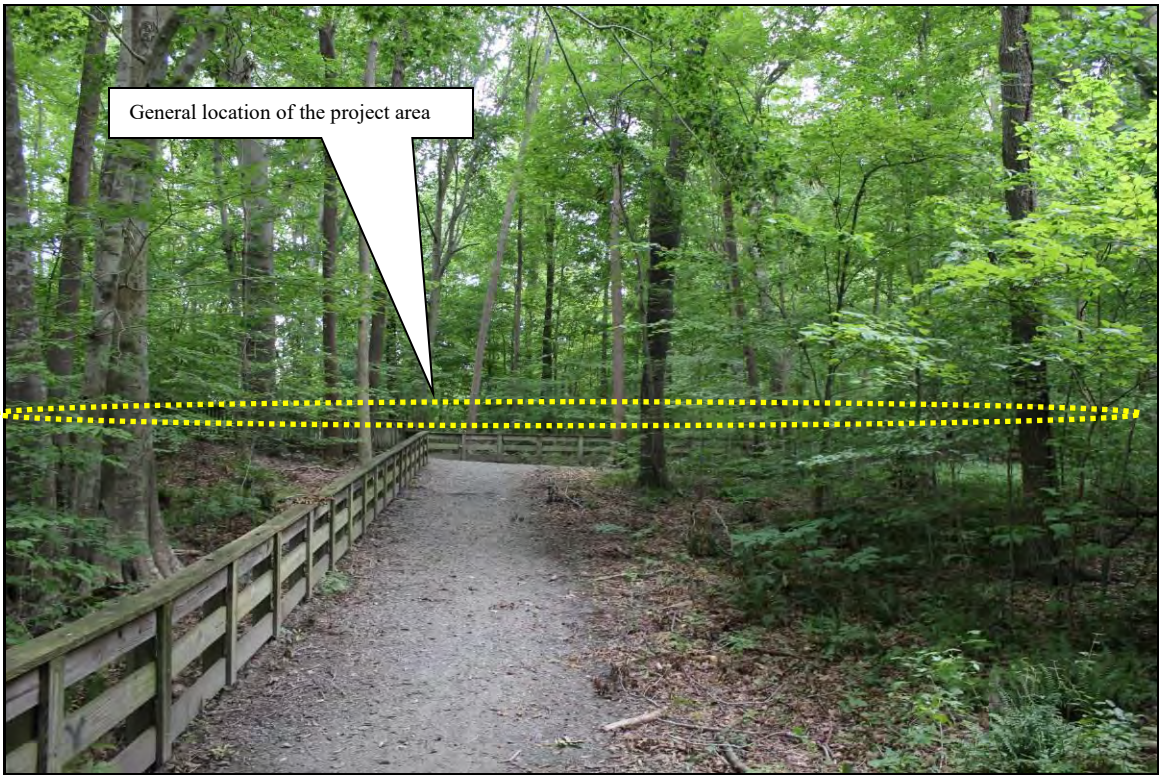


Photo 4- View from Lee's Mill Earthworks interpretive trail towards the project area (not visible).

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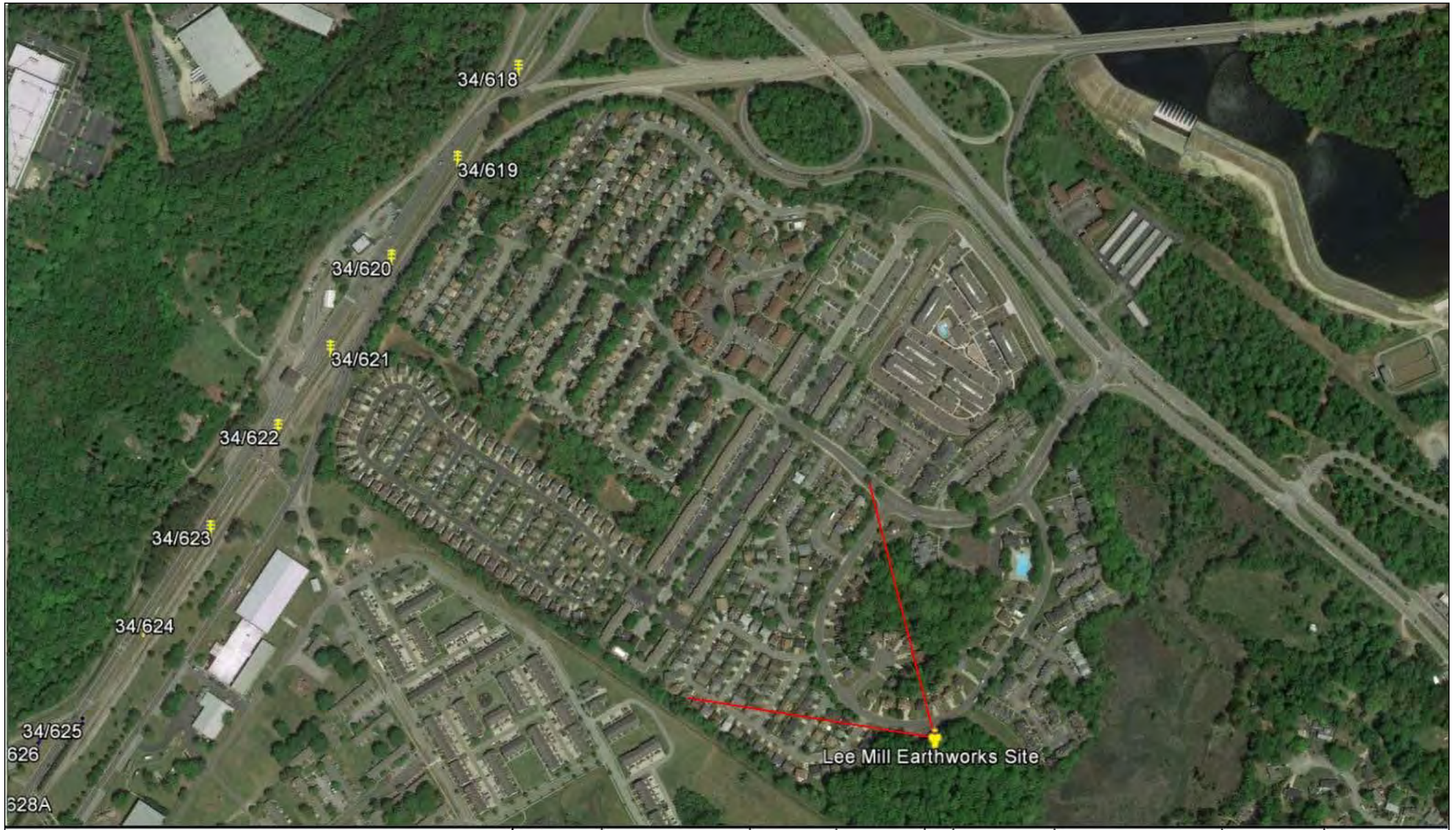

Photo location: Lee Mill Earthworks

Photo simulations prepared by: GTTE LLC email: info@gttellc.com

Project: Dominion Energy Fort Eustis Tap Rebuild

Structure Name	Structure New Name	Height ft	Distance ft
34/617	1038/195, 34/163	110.00	3306.00
34/618	1038/196, 34/162	110.00	3097.00
34/619	1038/197, 34/161	110.00	2960.00
34/620	1038/198, 34/160	110.00	2864.00
34/621	1038/199, 34/159	110.00	2841.00
34/622	1038/200, 34/158	110.00	2873.00
34/623	1038/201, 34/157	110.00	2983.00

Photo Sim 1: Location of photo sim 1 depicting field of view and modeled structures from Lee's Mill Earthworks. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	Lee Mill Earthworks Existing View
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.	0" 1" 2" 3" 4" This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Photo Sim 1: Photo sim 1 depicting existing view from Lee's Mill Earthworks. Source: GTTE LLC

	Dominion Energy: Fort Eustis Tap Rebuild	**Lee Mill Earthworks** **Proposed View**
Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location. The approximate heights include foundation reveal (minimum of 18 inches) and are also subject to change based on final design.**	0" 1" 2" 3" 4" **This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.**

Photo Sim 1: Photo sim 1 depicting proposed view from Lee's Mill Earthworks (Structures not visible are illustrated in yellow). Source: GTTE LLC

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VDHR ID# 121-5134
Chesapeake & Ohio Railroad

Figure 9-13: Representative view of the C&O Railroad looking towards the project area.

The portion of the C&O Railroad that runs through the project APE for this project is part of the larger Peninsula Extension or Peninsula Subdivision of the Chesapeake and Ohio Railroad. The Peninsula Extension runs from Fulton Yards in the City of Richmond to the port of Newport News.

To assess whether the project or any associated components may pose an effect to the resource, a viewshed assessment was conducted. Inspection was performed and photographs taken from publicly accessible vantage points along or near the railroad to document existing setting, visibility, and lines of sight (Figure 9-14; Photos 1 through 3).

The C&O Railroad crosses directly through and beneath the project alignment just west of the Newport News Reservoir. A roughly one-mile length of the railroad is situated within the project APE.

Assessment found that the historic setting of the railroad in the vicinity is relatively intact as it traverses through a mostly undeveloped and wooded area, however, the line is paralleled by another existing transmission line ROW at it crosses beneath the project alignment. Additionally, the railroad crosses over the large Newport News Reservoir within the APE which is a modern creation. Inspection could not be performed from any portion of the railroad within the project APE as there are no public crossings or accessible vantage points. Inspection was performed from the nearest points to the APE which included the Lee Hall Depot and Fort Eustis Boulevard

crossing. The existing transmission line could not be seen in conjunction with the railroad from either vantage point due to intervening distance and vegetation.

Although the proposed replacement structures will average roughly 30-feet taller than the existing structures, it is anticipated that there will be no change in visibility from any publicly accessible locations along the railroad corridor. The existing transmission line is likely visible only from directly where it crosses the railroad due to thick vegetation that borders the line and this is anticipated to remain similar. Further, as a linear resource, the railroad traverses a wide variety of landscapes with historic and nonhistoric development, and therefore its immediate setting does not contribute to its eligibility. As such, the Fort Eustis Tap/Line 34 Rebuild project is recommended to pose ***no adverse effect*** on the Chesapeake & Ohio Railroad.

Figure 9-14: Location of C&O Railroad in relation to the project alignment and APE showing direction of representative and viewshed photos

Photo 1- View of C&O Railroad setting at Lee Hall Depot

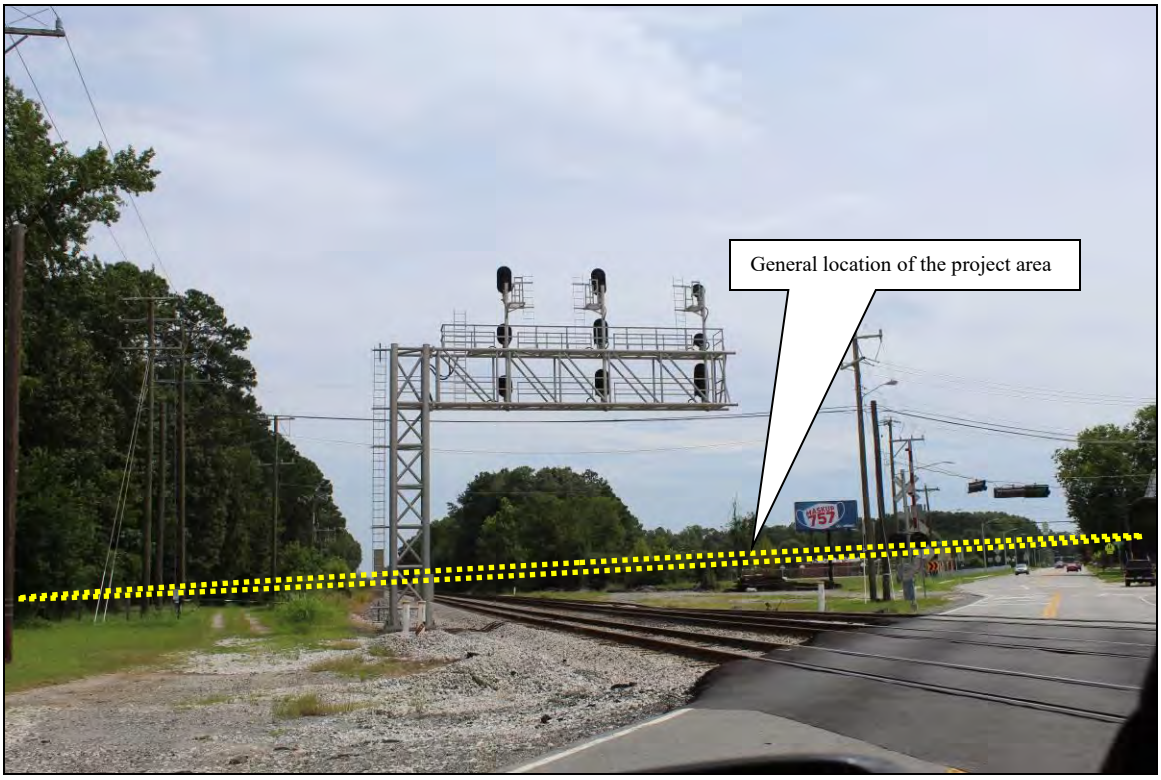

Photo 2- View from C&O Railroad at Lee Hall towards the project area (not visible)

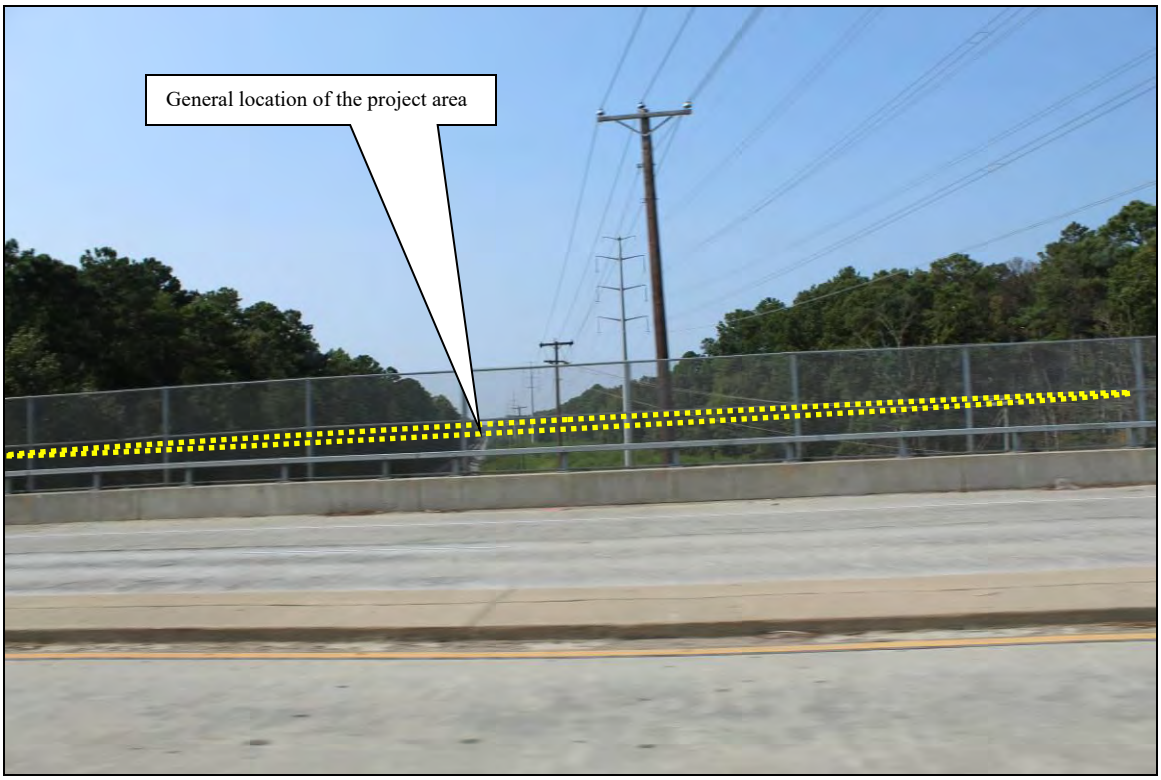

Photo 3- View from C&O Railroad at Fort Eustis Boulevard towards the project area (not visible)

ARCHAEOLOGICAL RESOURCES

The archaeological resources survey for the Fort Eustis Tap/Line 34 Rebuild Project did not result in the identification of any newly recorded sites within the project APE; however, two isolated finds (IF-1 at Structure 34/178 and IF-2 at Structure 34/166) and one archaeological location (LF-1 at Structure 34/171) were recorded. Neither the isolated finds nor the archaeological location meet the definition of an archaeological site as outlined in the VDHR survey guidelines.

One previously recorded site, a Civil War earthwork (44NN0156) was re-identified within and adjacent to the ROW at Structure 34/166. The feature appears as a low berm where it crosses the project ROW. Movement of construction equipment and vehicles across the earthwork will result in an effect to the resource resulting in further erosion and degradation of the feature.

Field assessment of existing ROW and APE conditions at Site 44NN0176 revealed that the site is separated from the ROW by two existing and active roads, an underground utility corridor, and is ±25.9 meters (85 feet) from the project APE. Based on the existing conditions, it was determined that there is no potential for the project to effect Site 44NN0176.

10. CONCLUSIONS AND RECOMMENDATIONS

In August 2020, Dutton +Associates, LLC (D+A) conducted a Phase I cultural resource survey (Phase I) of the Fort Eustis Tap/ Line 34 Rebuild Project in Newport News, Virginia. The project entails the rebuild of a roughly 2.5-mile 115kV transmission line within existing right-of-way (ROW) that serves Joint Base Langley-Eustis. The Phase I survey was conducted in order to identify, evaluate, and assess potential project effects to cultural resources located within the project APE.

Architectural investigations included properties located within one half-mile of the project centerline not located within the boundaries of Fort Eustis which did not require survey as it has been subject to recent survey and evaluation that revealed no NRHP-listed or eligible resources located within the project APE for this effort. This survey resulted in the identification and evaluation of seventeen (17) architectural resources greater than 50 years of age (constructed in 1970 or earlier) located within the survey area. Of these, twelve (12) were previously recorded, although four (4) of these have been determined not eligible for listing in the NRHP by the VDHR within the last five years, and were therefore not subject to resurvey or evaluation as part of this effort. Five (5) resources were newly recorded as part of this effort. The resources surveyed and evaluated as part of this effort included several earthworks and archaeological sites, two Civil War battlefields, a railroad corridor, single dwelling, and commercial buildings. Of these, five were found to be listed in or considered eligible for listing in the NRHP including the two battlefields, two sets of earthworks, and the railroad. The rest of the resources are twentieth century roadside development in the region that reflect national trends in architecture with no known significant historical associations and are therefore considered not eligible for the NRHP.

Each of the five NRHP-listed or eligible resources were assessed for potential visual effects brought about by the project in accordance with the VDHR and NPS guidance. This assessment found that the project will pose ***no adverse effect*** to any of these NRHP-listed or eligible resources. Therefore, ***it is D+A's opinion that no further consideration of architectural resources is required for this project.***

Archaeological investigations for the Fort Eustis Tap/Line 34 Rebuild Project resulted in the identification two isolated finds (IF-1 at Structure 34/178 and IF-2 at Structure 34/166) and one archaeological location (LF-1 at Structure 34/171). Neither the isolated finds, nor the archaeological location, meet the definition of an archaeological site as outlined in the VDHR survey guidelines. Therefore, ***it is D+A's opinion that no further archaeological work is required for IF-1, IF-2, and L-2***.

Site 44NN0156, a Civil War earthwork, was re-identified within and adjacent to the ROW at Structure 34/166. Movement of construction equipment and vehicles across the earthwork will result in an impact to the resource resulting in further erosion and degradation of the feature**.** ***D+A recommends that surface debris be hand cleared from the earthwork and that geotextile fabric be placed over the earthwork followed by a sufficient amount of crush and run gravel and clean fill soil to create a suitable surface on which to place timber mats and drive vehicles across the earthwork. D+A also recommends that the fill material remain in place over the***

earthwork, be seeded to prevent erosion, and have project plans note the area for future actions as environmentally sensitive with timber matting required.

Following an infield assessment of existing conditions, ***it is D+A's recommendation that no further work or consideration of impacts to Site 44NN0176 is warranted due to existing intervening transportation and underground utility impacts.***

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APPENDIX A: RESUMES

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ROBERT J. TAYLOR, JR
Senior Architectural Historian

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING AND MANAGEMENT

Education

Master of Arts, 2009
Historic Preservation
Savannah College of Art and Design
Savannah, Georgia

Bachelor of Arts, 2005
Historic Preservation
University of Mary Washington
Fredericksburg, Virginia

Awards

Eagle Scout, 2001

Mr. Taylor holds a B.A. in Historic Preservation from University of Mary Washington and a M.A. in Historic Preservation from Savannah College of Art and Design. He has over 10 years of Cultural Resource Management Experience and has taken part in projects in Virginia, North Carolina, Maryland, Delaware, New Jersey, Rhode Island, Pennsylvania, Ohio, Florida, and California.

His experience in Cultural Resource Management includes working on both Architectural and Archaeological projects while participating in all phases of compliance from project initiation and development to completion. His work includes conducting field surveys, researching and documenting historic resources, completing site file forms, writing reports, preparing *NRHP* evaluations and documentation for individual resources and historic districts, compiling HABS/HAER documentation packages, preparing Cell Tower compliance packages, and conducting archaeological testing. He has a thorough understanding of the laws and regulations that govern cultural resources and has assisted with a number of Cultural Resource Management Plans, Programmatic Agreements, and Memorandum of Agreements. Outside of CRM, he has worked for the Thomas Jefferson's Monticello Foundation where he was a field archaeologist and assisted with the long-term, Plantation Survey Project on Monticello Mountain. Mr. Taylor's primary interests lie in Architectural Forensics and the study of building evolution.

As Senior Architectural Historian for Dutton + Associates, Mr. Taylor manages and conducts all aspects of historic and architectural resource projects and studies.

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Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING AND MANAGEMENT

ROBERT J. TAYLOR, JR
Senior Architectural Historian

Professional Experience

Dutton + Associates, LLC, Architectural Historian, Richmond, Virginia, March 2009-present.
Manages architectural history studies, provides regulatory and compliance consultation, conducts Historic Resources Surveys, prepares NRHP nominations, HABS/HAER packages, site forms, and other documentation packages; performs research and context development, and authors project reports.

Thomas Jefferson Monticello Foundation, Field Archaeologist, Charlottesville, Virginia, Winter 2008- 2009. Conducted archaeological testing, assisted with site research, performed lab work

Janus Research, Inc, Architectural Historian, Tampa, Florida, August 2005- May 2008.
Conducted field surveys, Prepared NRHP and HABS/HAER documentation packages, authored Cultural Resource Assessment Survey Reports

Example Projects and Publications

Transmission Line Projects
Phase I Cultural Resources Survey of the Cunningham to Elmont 500 kV Transmission Line, Multiple Counties
Phase I Cultural Resources Survey of the TL47 230kV Transmission Line Rebuild, Multiple Counties
SCC Pre-Application Study for the Gainesville-Haymarket Substation and Transmission Line, Prince William Co
Cultural Resources Survey of the Bearwallow-Faraday Transmission Line Rebuild Project, Tazewell County
Phase I Cultural Resources Survey of the Dominion Line 567 Wilcox Wharf to Windmill Point Rebuild Project, Charles City and Prince George County
Phase I Survey of the Chase City-Kerr Dam, Line 137 and 138, Mecklenburg County
SCC Pre-Application Study of the Mount Storm-Valley Rebuild Project, Rockingham County
Phase I Survey of the Hayes-Yorktown 230kV Transmission Line, Gloucester County

Substation Projects
SCC Pre-Application Study of the Elklick Substation Expansion, Fairfax Co
SCC Pre-Application Study of the Roundtable Substation, Fairfax County
Phase I Survey of the Possum Point Project, Prince William County

Wind Power Projects
Phase I Cultural Resources Survey of the Rocky Forge Wind Project, Botetourt County

Solar Projects
Phase I Survey of the Briel Solar Farm, Henrico Co
Phase I Survey of the Puller Solar Project, Middlesex County
Phase I Survey of the Whitehouse Solar Project, Louisa County
Phase I Survey of the Hosier Road Solar Project, Suffolk County
Phase I Survey of the Twitty Creek Solar Project, Charlotte County

Other
Phase III Investigations of the Spring Hill Plantation Site for the Dominion Reymet Road Expansion Project, Chesterfield County
HALS Photography for the Skiffe's Creek 500kV Transmission Line Project, Charles City County

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David Dutton
Managing Partner

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING AND MANAGEMENT

Education

Master of Arts, 1990
Archaeological Studies
Boston University
Boston, Massachusetts

Bachelor of Science, 1986
Anthropology and Sociology
Virginia Commonwealth University
Richmond, Virginia

Appointments

Historic Advisory Committee, Woodrow Wilson Bridge Design Competition, 1998

Dept. of the Army Counterpart Regulations Task Force, NCSHPO, 1999

Virginia Department of Historic Resources Archaeology Advisory Group, 2000

Historic Preservation Committee Chesterfield County, Virginia 2011

Dominion Historic, Scenic, and Cultural Advisory Group, 2017

Mr. Dutton has over 28 years of professional historic preservation experience throughout the East Coast, with a focus on Section 106 coordination and review. He directed the Virginia Department of Historic Resources Division of Project Review where he managed all federal and state environmental reviews, rehabilitation tax credit project certification, historic preservation easements, covenants, and archaeological permits. Prior to his work at the state, Mr. Dutton served as a project review archaeologist for the President's Advisory Council on Historic Preservation. His geographic responsibility was the southeastern United States.

Mr. Dutton has managed the successful completion of multiple cultural resource projects for public and private clients including identification, evaluation, and data recovery efforts for archaeological and architectural properties, HABS documentation, Battlefield Cultural Heritage Plans, Interpretive Concept Plans, and Integrated Cultural Resource Management Plans (ICRMP). In addition, he has negotiated successful agreements under Section 106 for a wide variety of projects. Specific examples include a memorandum of agreement for the Dominion Surry-Skiffes-Whealton transmission line project and a programmatic agreement for the closure of Fort Monroe, a National Historic Landmark District.

Select Example Projects and Publications

- Regulatory assistance for the Surry-Skiffes-Whealton Transmission Line Project, Surry and James City Counties and the City of Newport News
- Reedy Creek Stream Restoration Phase I Cultural Resource Survey and Regulatory Support, City of Richmond
- Phase III Archaeological Data Recovery at the Spring Hill Plantation House Site, Chesterfield County, Virginia.
- Cultural Landscape Plan and Interpretive Concept Plan for the Totopotomoy Creek Battlefield, Richmond National Battlefield Park.
- Programmatic Agreement for the Closure of Fort Monroe and the Management of Historic Properties.
- Project Management of cultural resource team for King William Reservoir Archaeological Services Contract.

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Dutton + Associates

DAVID H. DUTTON
Managing Partner

Professional Experience

Dutton + Associates, LLC, Managing Partner, Richmond, Virginia, 2005 – Present. Directs the firm's technical services which include review of projects pursuant to federal and state historic preservation regulations, cultural resource plan development, field investigations, laboratory processing and analyses, and report preparation.

American Civil War Center *at Historic Tredegar*, Chief Operating Officer, Richmond, Virginia, 2002 – 2006. Managed the Tredegar Iron Works site, the financial performance of the Foundation and construction of the Foundation's new exhibition facility and exhibit *In the Cause of Liberty*.

Cultural Resources Inc., President and Principal Investigator, Williamsburg, Virginia, 1999 – 2002. Managed the firm's financial and technical performance. Directed and authored several cultural resource management studies including identification, evaluation, and data recovery efforts.

Virginia Department of Historic Resources, Director, Division of Project Review; Richmond, Virginia, 1994-1999. Managed all federal and state review and compliance programs; generated policies, specifications, and standards; directed the state historic preservation easement program; interfaced with federal and state executives, elected officials, developers, architects, and engineers on project development and implementation; managed the review and certification of plans for federal and state rehabilitation tax credits; and commented on proposed federal and state legislation and regulations as well as on national and regional historic preservation issues.

Virginia Department of Historic Resources, Archaeologist Planner; Richmond, Virginia, 1992-1994. Planned, coordinated, and supervised the statewide program in archaeological preservation planning; developed and implemented historic preservation plans; and managed, monitored, and evaluated grantee performance for departmental grants awarded in preservation planning.

Advisory Council on Historic Preservation, Historic Preservation Specialist, Staff Archaeologist; Washington, D.C. 1989 – 1992. Reviewed federal projects under Section 106 of the National Historic Preservation Act for the southeast United States; consulted with Congressional offices, federal and state agencies, local governments, and members of the general public; developed and reviewed historic property management plans; and assisted in development of federal policy for the identification and treatment of historic property.

Example Projects and Publications

2007 Project Management of cultural resource team for King William Reservoir Archaeological Services Contract.

2008 Programmatic Agreement for the Closure of Fort Monroe and the Management of Historic Properties.

2017 Regulatory assistance for the Surry-Skiffes-Whealton Transmission Line Project, Surry and James City Counties and the City of Newport News.

2017 Regulatory assistance for the Atlantic Coast Pipeline project, North Carolina, Virginia, West Virginia, and Penssylvania.

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APPENDIX B: ARTIFACT INVENTORY

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Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
Tower 34/178, T2					
West 1	**I**	Glass, colorless vessel	1	Body	
West 1	I	Brick, partially burned	1	Fragment	7g
Tower 34/171					
West 1	**I**	Brick	4	Fragment	7g
West 1.5	**I**	Refined Earthenware, Whiteware	1	Body	
Tower 34/166, T16, T17					
West 1	**I**	Glass, Green bottle	1	Body	

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