APPALACHIAN POWER COMPANY
BEFORE THE
VIRGINIA STATE CORPORATION COMMISSION
CASE NO. PUR-2021-00049

APPLICATION FOR APPROVAL AND CERTIFICATION OF ELECTRICAL TRANSMISSION LINE

Reusens to New London
138 kV Rebuild Project

VOLUME 2 OF 2

Siting Memo & VDEQ Supplement

April 2021

ATTACHMENT 2.I.1:
VDHR PRE-APPLICATION ANALYSIS

REPORT >

SCC Pre-Application Analysis of Cultural Resources
Reusens to New London
138-kV Rebuild Project

LOCATION > City of Lynchburg and Bedford County, Virginia

DATE> APRIL 2021

PREPARED FOR >

POWER Engineers, Inc.

PREPARED BY >

Dutton + Associates, LLC

PROJECT REVIEW # >

Dutton + Associates

CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

SCC Pre-Application Analysis of Cultural Resources
Reusens to New London 138-kV Rebuild Project

City of Lynchburg and Bedford County, Virginia

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April 2021

ABSTRACT

In March 2021, Dutton + Associates, LLC (D+A) conducted a Pre-Application Analysis (analysis) of cultural resources for the Reusens to New London 138-kV Rebuild Project (the Project) in the City of Lynchburg and Bedford County, Virginia. The analysis was performed for POWER Engineers, Inc. (POWER) on behalf of Appalachian Power Company (Appalachian Power or the Company) in support of a Virginia State Corporation Commission (SCC) application. The analysis was completed in accordance with Virginia Department of Historic Resources' (VDHR) guidance titled "Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia" (January 2008).

Appalachian Power Company is planning to rebuild an existing transmission line due to the combination of risk, condition and performance of the infrastructure and to ensure adequate and reliable electric service in Bedford County, the City of Lynchburg, and the surrounding area. The Reusens to New London 138 kilovolt (kV) Rebuild Project (the Project) involves rebuilding an 11.6-mile portion of the Company's existing Reusens – Altavista 138 kV Transmission Line between the Reusens, Boonsboro, Forest, and New London substations. The Project has a double-circuit section (approximately 5.5 miles) between the Reusens Substation, located off Old Trents Ferry Road in the City of Lynchburg, and existing structure 5-10, and a single-circuit section (approximately 6.1 miles) between existing structure 5-10 and the New London Substation, located off Thomas Jefferson Road in Bedford County. The Project will be constructed largely within the existing 100-foot-wide right-of-way (ROW); however, the Project includes minor deviations from the existing centerline to optimize the design or avoid constraints. As part of the Project, a portion of the Company's existing Reusens – South Lynchburg 138 kV transmission line will be relocated where it crosses the Reusens – Altavista 138 kV Transmission Line, and which is also where the Project transitions from double-circuit to single-circuit. Lastly, the Company's existing Brush Tavern Substation, located in Campbell County, will be upgraded in its current location to accommodate the future electrical upgrades. The analysis considers the portion of the Reusens – Altavista 138-kV transmission line to be rebuilt.

The background research conducted as part of this analysis was guided by VDHR guidance and designed to identify all previously recorded National Historic Landmarks (NHL) located within 1.5 miles of the Project, all historic properties listed in the National Register of Historic Places (NRHP) or battlefields located within 1.0 mile of the Project, all historic properties considered eligible for listing in the NRHP located within 0.5 mile of the Project, and all archaeological sites located directly within or adjacent to the Project ROW. Historic properties include architectural and archaeological (terrestrial and underwater) resources, historic and cultural landscapes, battlefields, and historic districts. For each historic property within the defined tiers, a review of existing documentation and a field reconnaissance was undertaken to assess each property's significant character-defining features, as well as the character of its current setting. Following identification of historic properties, D+A assessed the potential for impacts to any identified properties as a result of the proposed Project. Specific attention was given to determining whether or not construction related to the Project could introduce new visual elements into the

property's viewshed or directly impact the property through construction, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP.

Review of the VDHR's VCRIS inventory records revealed a total of 71 previously recorded architectural resources are located within 1.5 miles of the Project. Of these, there is one (1) NHL located within 1.5 miles, six (6) properties listed in the NRHP and no battlefields located within 1.0 mile, and one (1) property that has been determined eligible for listing in the NRHP within 0.5 mile of the Project.

The VCRIS records also reveal there are twelve (12) previously recorded archaeological sites within 1.0 mile of the Project. None of these sites are located within or immediately adjacent to the Project ROW.

Field inspection reveals that the existing transmission line to be rebuilt as part of this Project is partially visible from two of the NRHP-listed properties as it crosses through a relatively open landscape near the Town of Forest, and is not visible from the other historic properties along the length of the alignment due to the rolling topography of the region and thick wooded areas that border much of the alignment. Representative photographs and simulations prepared as part of this effort reveal that where the existing transmission line is visible from two of the historic properties, the structures to be rebuilt as part of this effort will remain visible, in a slightly taller and different configuration; however, there will not be any increased visibility of additional structures. Representative photographs and simulations further reveal that despite the increase in structure height as part of the rebuild, the Project will remain screened from view by topography and vegetation from those resources and locations where it is currently not visible. It is therefore D+A's opinion that the Project will have no more than a ***minimal impact*** *on any NHLs, NRHP-listed, or eligible historic properties.*

Table of Potential Impacts Summary for Architectural Resources.

VDHR ID #	Resource Name	NRHP Status	Distance to Project	Impact
009-0027	Poplar Forest Thomas Jefferson's Retreat, 1548 Bateman Bridge Road	NHL	1.12 mile	No Impact
009-0033	Woodbourne, Route 609	NRHP-Listed	0.14 mile	Minimal Impact
009-0065	Rothsay, 15660 Forest Road	NRHP-Listed	0.28 mile	Minimal Impact
009-5283	Bowling Eldridge House, 1651 Fox Hill	NRHP-Listed	0.92 mile	No Impact

VDHR ID #	Resource Name	NRHP Status	Distance to Project	Impact
	Road			
118-0218	*Reusens Dam, Hydro Road*	*NRHP-Eligible*	*Immediately Adjacent*	*Minimal Impact*
118-0219	*Locust Grove, 147 Marvin Place*	*NRHP-Listed*	*1.0 mile*	*No Impact*
118-0224	*Virginia Episcopal School, 400 Virginia Episcopal School Road*	*NRHP-Listed*	*0.45 mile*	*Minimal Impact*
118-5240	*Presbyterian Orphans Home, Linden Avenue*	*NRHP-Listed*	*0.33 mile*	*No Impact*

With regards to archaeology, there are no previously recorded sites within or immediately adjacent to the Project ROW. As such, the project will impose ***no impact*** *on any known archaeological sites.*

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1. INTRODUCTION

In March 2021, Dutton + Associates, LLC (D+A) conducted a Pre-Application Analysis (analysis) of cultural resources for the Reusens to New London 138-kV Rebuild Project (the Project) in the City of Lynchburg and Bedford County, Virginia. The Project will rebuild an approximately 11.6-mile portion of the Company's existing Reusens – Altavista 138-kV Transmission Line between the Reusens, Boonsboro, Forest and New London substations. The analysis was performed for POWER on behalf of Appalachian Power in support of a Virginia State Corporation Commission (SCC) application. The analysis was conducted in accordance with Virginia Department of Historic Resources' (VDHR) guidance titled *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008) and Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation *Guidelines for Transmission Line Applications Filed Under Title 56 of the Code of Virginia* (August 2017).

This analysis was performed at a level that meets the purpose and intent of VDHR and the SCC's guidance. It provides information on the presence of previously recorded National Historic Landmark (NHL) properties located within a 1.5 mile buffer area established around the Project, properties listed on the National Register of Historic Places (NRHP), battlefields, and historic landscapes located within a 1.0 mile buffer, properties previously determined eligible for listing in the NRHP located within a 0.5 mile buffer area, and previously identified archaeological resources directly within or adjacent to the project right-of-way (ROW). This analysis will not satisfy Section 106 identification and evaluation requirements in the event federal permits or licenses are needed; however, it can be used as a planning document to assist in making decisions under Section 106 as to whether further cultural resource identification efforts may be warranted.

This report contains a research design which describes the scope and methodology of the analysis, discussion of previously identified historic properties, and an assessment of potential impacts. D+A Senior Architectural Historian Robert J. Taylor, Jr. M.A. served as Principal Investigator and oversaw the general course of the Analysis and supervised all aspects of the work. Copies of all notes, maps, correspondence, and historical research materials are on file at the D+A main office in Midlothian, Virginia.

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2. PROJECT DESCRIPTION

Appalachian Power Company (Appalachian Power or the Company) is proposing the Reusens to New London 138 kV Rebuild Project, which involves rebuilding an 11.6-mile portion of an existing 138 kV transmission line between the existing Reusens, Boonsboro, Forest and New London substations due to the combination of risk, condition and performance of the infrastructure (**Figure 2-1**). The Project has a double-circuit section (approximately 5.5 miles) between the Reusens Substation, located off Old Trents Ferry Road in the City of Lynchburg, and existing Structure 5-10, and a single-circuit section (approximately 6.1 miles) between existing Structure 5-10 and the New London Substation, located off Thomas Jefferson Road in Bedford County (**Figure 2-2**). The Project will be constructed largely within existing right-of-way (ROW); however, the Project includes minor deviations from the existing centerline to optimize the design or avoid constraints.

The existing transmission structures are primarily single-circuit wooden H-frame structures and double-circuit steel lattice tower structures that were constructed in the 1940s. The Company plans to rebuild the 138 kV transmission line primarily using dulled galvanized steel double-circuit monopole structures and steel single-circuit monopole and H-frame structures. The structures on the double-circuit portion will range from 90 feet to 140 feet tall, with an average structure height of approximately 115 feet, and the structures on the single-circuit portion will range from 55 to 100 feet tall, with an average structure height of approximately 85 feet.

Details of existing and proposed structure information is provided in **Table 2-1**. Maps illustrating the Project alignment, with locations of existing and proposed structures may be found in **Figures 2-3 through 2-6**. Schematics of proposed structures are found in **Figures 2-7 through 2-9**, and images of representative structures are in **Figure 2-10**.

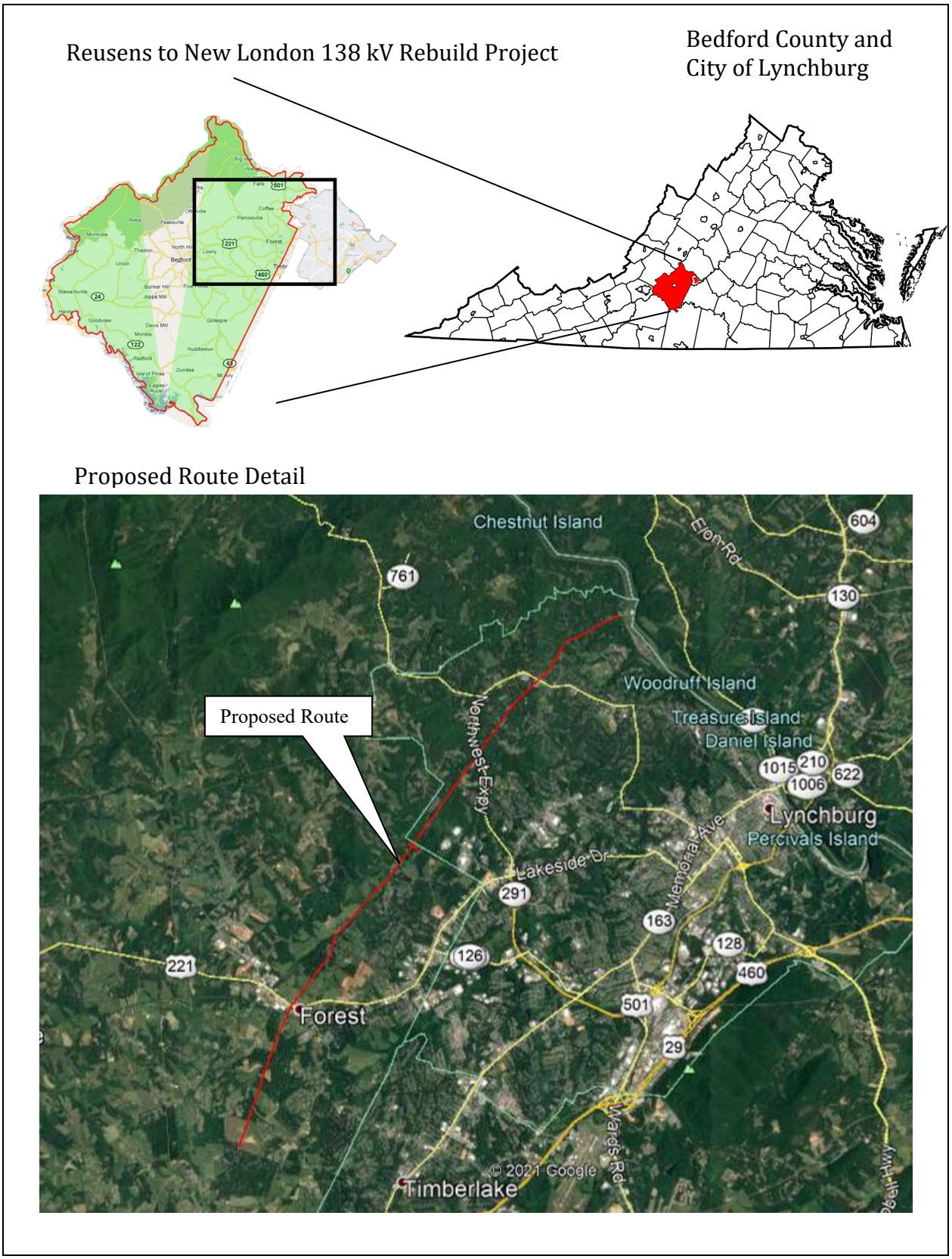

Figure 2-1: General Location of the Project.

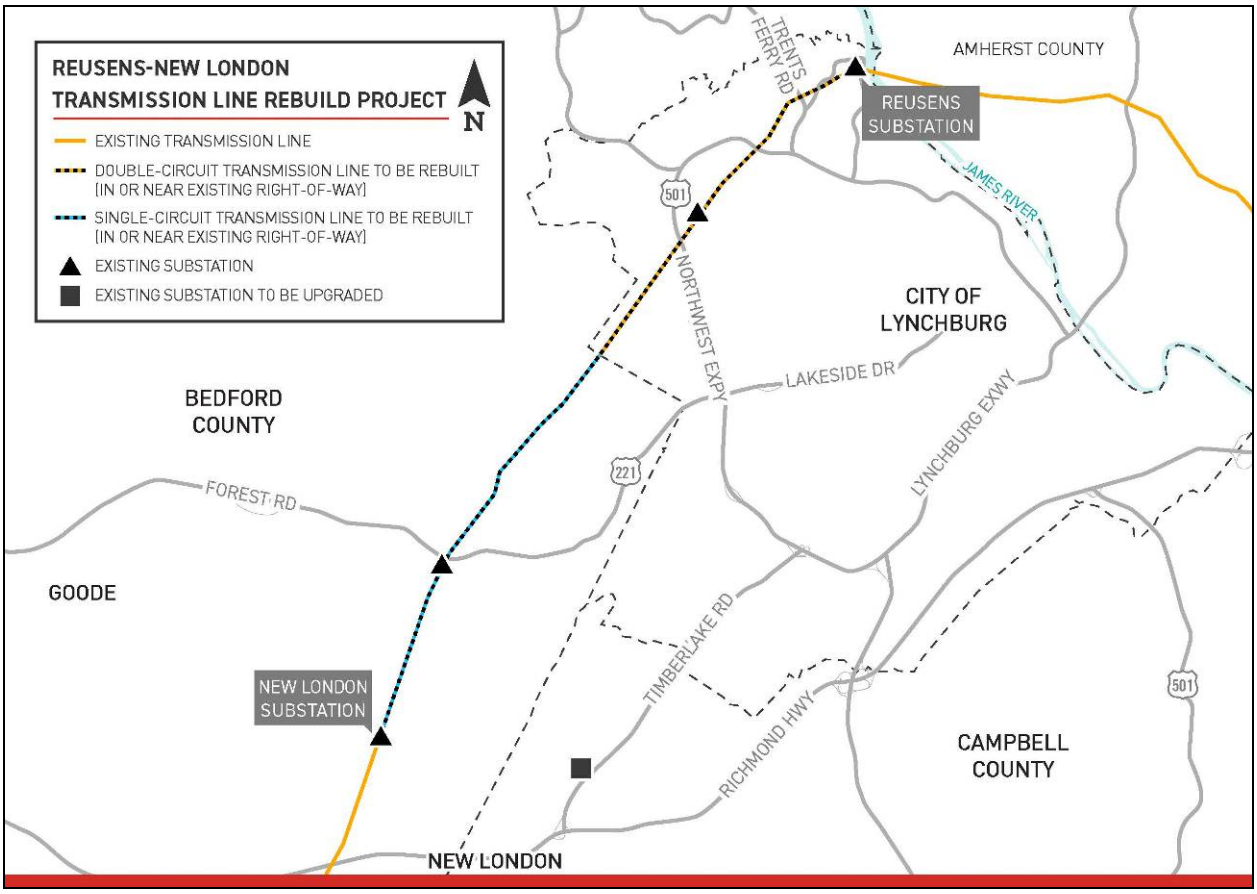

Figure 2-2: Overview map of the Project alignment. Source: Appalachian Power.

Table 2-1: Comparison of Existing and Proposed Structure Details. Source: POWER.

Existing Structure Number	Existing Structure Approximate Height (ft)	Proposed Structure Number	Proposed Structure Approximate Height (ft)
Reusens Substation Dead End Structure	88	Reusens Substation Dead End Structure	88
4-1	103	4-1A	110
4-2	102	4-2A	115
4-3	100	4-3A	95
4-4	102	4-4A	110
4-5	100	4-5A	100
4-6	140	4-6A	140
4-7	125	4-7A	130
4-8	100	4-8A	120
4-9	99	4-9A	110
4-10	104	4-10A	105
4-11	123	4-11A	120
4-12	130	4-12A	135
N/A	N/A	4-13A	130
4-13	130	4-14A	130

Existing Structure Number	Existing Structure Approximate Height (ft)	Proposed Structure Number	Proposed Structure Approximate Height (ft)
N/A	N/A	4-15A	115
4-14	132	4-16A	115
N/A	N/A	4-17A	135
4-15	130	4-18A	125
4-16	99	4-19A	105
4-17	100	4-20A	90
4-18A	116	4-21A	120
4-19	109	4-22A	125
4-20	100	4-23A	100
4-21	100	4-24A	110
4-22	105	4-25A	115
4-23	93	4-26A	100
4-24	108	4-27A	110
4-25	103	4-28A	120
4-26	136	4-29A	140
4-27	109	4-30A	115
5-10 (South Lynchburg Tap)	125	4-31A	110
4-31	47	4-32A	73
4-32	55	4-33A	86
4-33	61	4-34A	73
4-34	56	4-35A	73
4-35	61	4-36A	82
4-36	62	4-37A	80
4-37	61	4-38A	77
4-38	47	4-39A	73
4-39	65	4-40A	95
4-40	64	4-41A	82
4-41	64	4-42A	82
4-42A	70	4-43A	95
4-43A	80	4-44A	95
4-44	66	4-45A	86
4-45	70	4-46A	95
4-46	66	4-47A	96
4-47	66	4-48A	95
4-48	61	4-49A	77
4-49	66	4-50A	73
4-50	57	4-51A	73
4-51	70	4-52A	86
4-52	71	4-53A	86
4-53	47	4-54A	82

Existing Structure Number	Existing Structure Approximate Height (ft)	Proposed Structure Number	Proposed Structure Approximate Height (ft)
4-54	72	4-55A	82
4-55	54	4-56A	81
Forest Substation Dead End 1	39	Forest Substation DE 1	54
Forest Substation Dead End 2	40	Forest Substation Dead End 2	40
4-56	64	4-57A	103
4-57	67	4-58A	93
4-58	69	4-59A	100
4-59	65	4-60A	73
4-60	53	4-61A	73
4-61	57	4-62A	77
4-62	51	4-63A	68
4-63	48	4-64A	64
4-64	58	4-65A	68
4-65	56	4-66A	68
4-66	57	4-67A	68
4-67	51	4-68A	68
4-68A	63	4-69A	68
4-69	52	4-70A	64
4-70	56	4-71A	82
4-71A	77	4-72A	68
4-72	61	4-73A	86
4-73	47	4-74A	68
4-74	61	4-75A	84
New London Substation Dead End 1	64	New London Substation Dead End 1	64

Figure 2-3: Project Alignment and Proposed Structures Locations: Reusens Substation to 4-22A (Map 1 of 4)

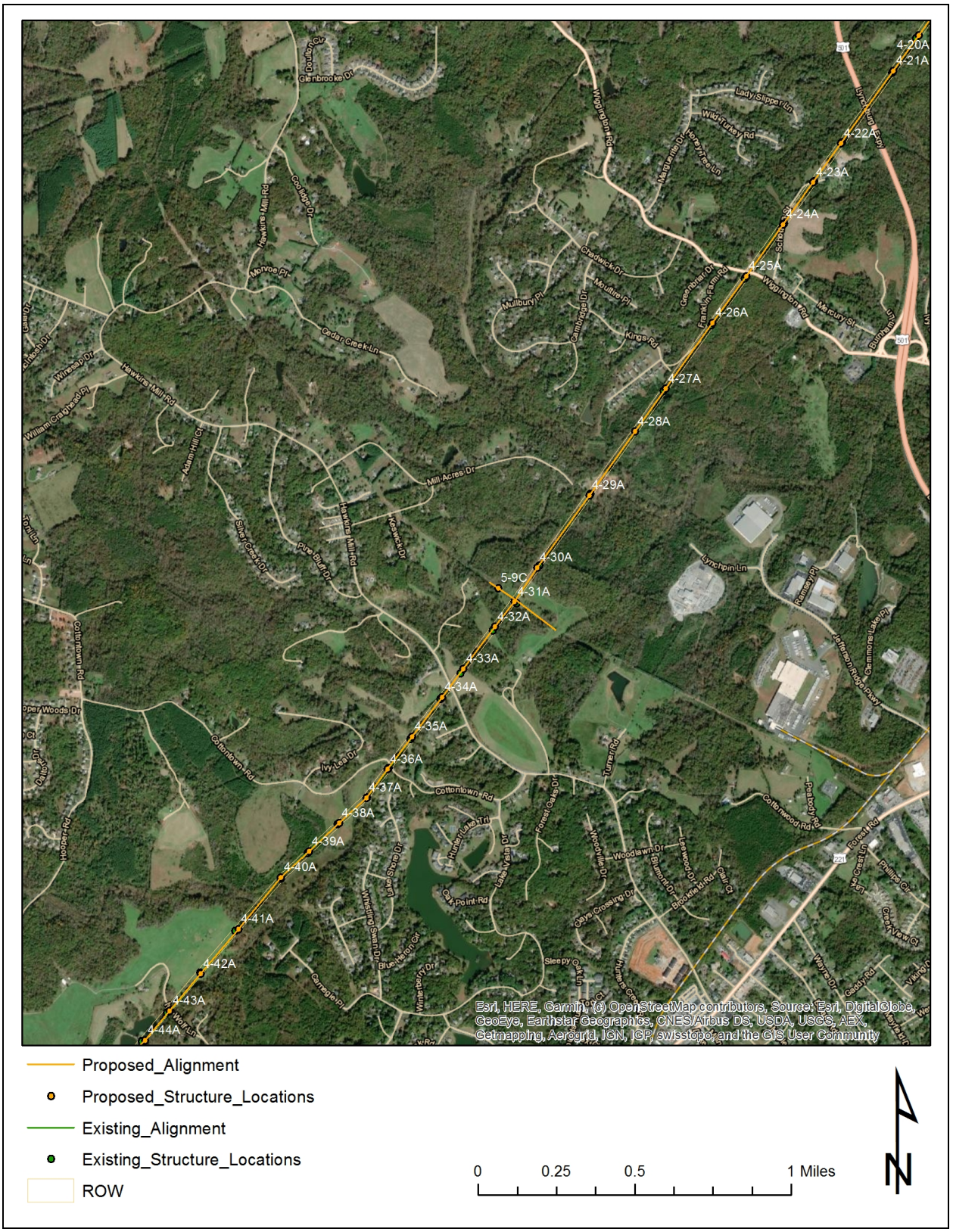

Figure 2-4: Project Alignment and Proposed Structure Locations: 4-22A to 4-44A (Map 2 of 4)

Figure 2-5: Project Alignment and Proposed Structure Locations: 4-41A to 4-68A (Map 3 of 4)

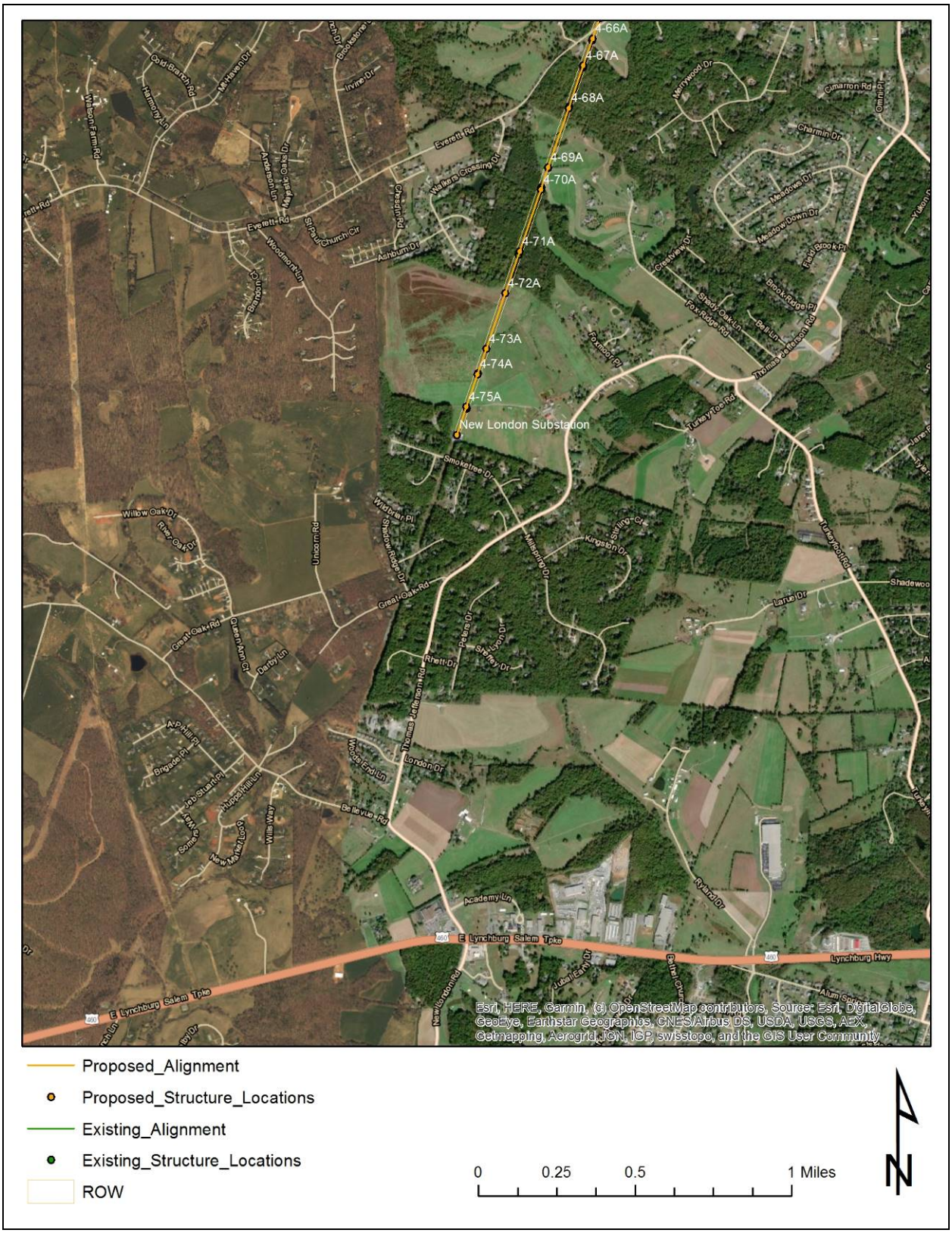

Figure 2-6: Project Alignment and Proposed Structure Locations: 4-66A to New London Substation (Map 4 of 4)

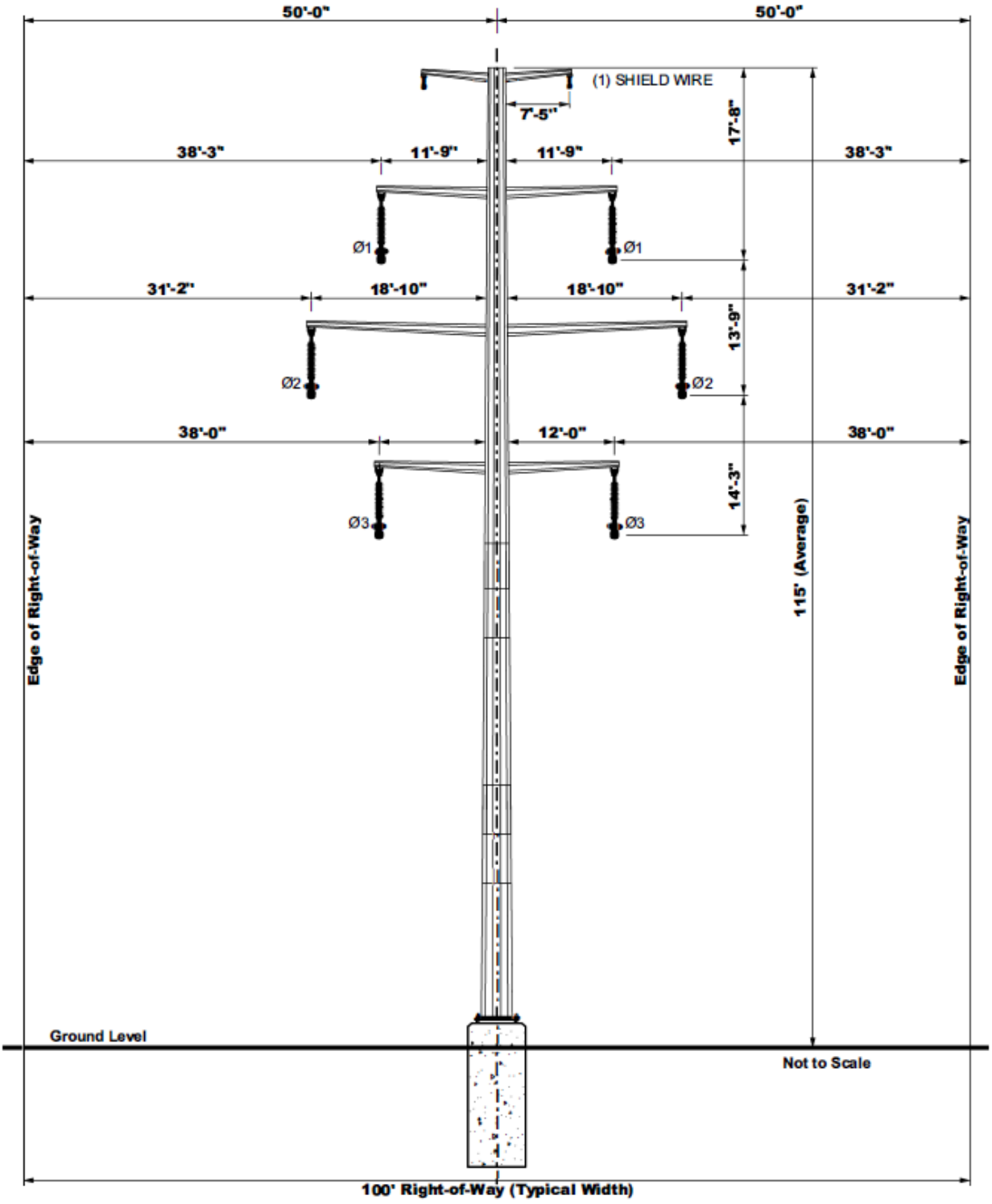

Figure 2-7: Representative Proposed 138 kV Double-Circuit Monopole Structures. Source: Appalachian Power

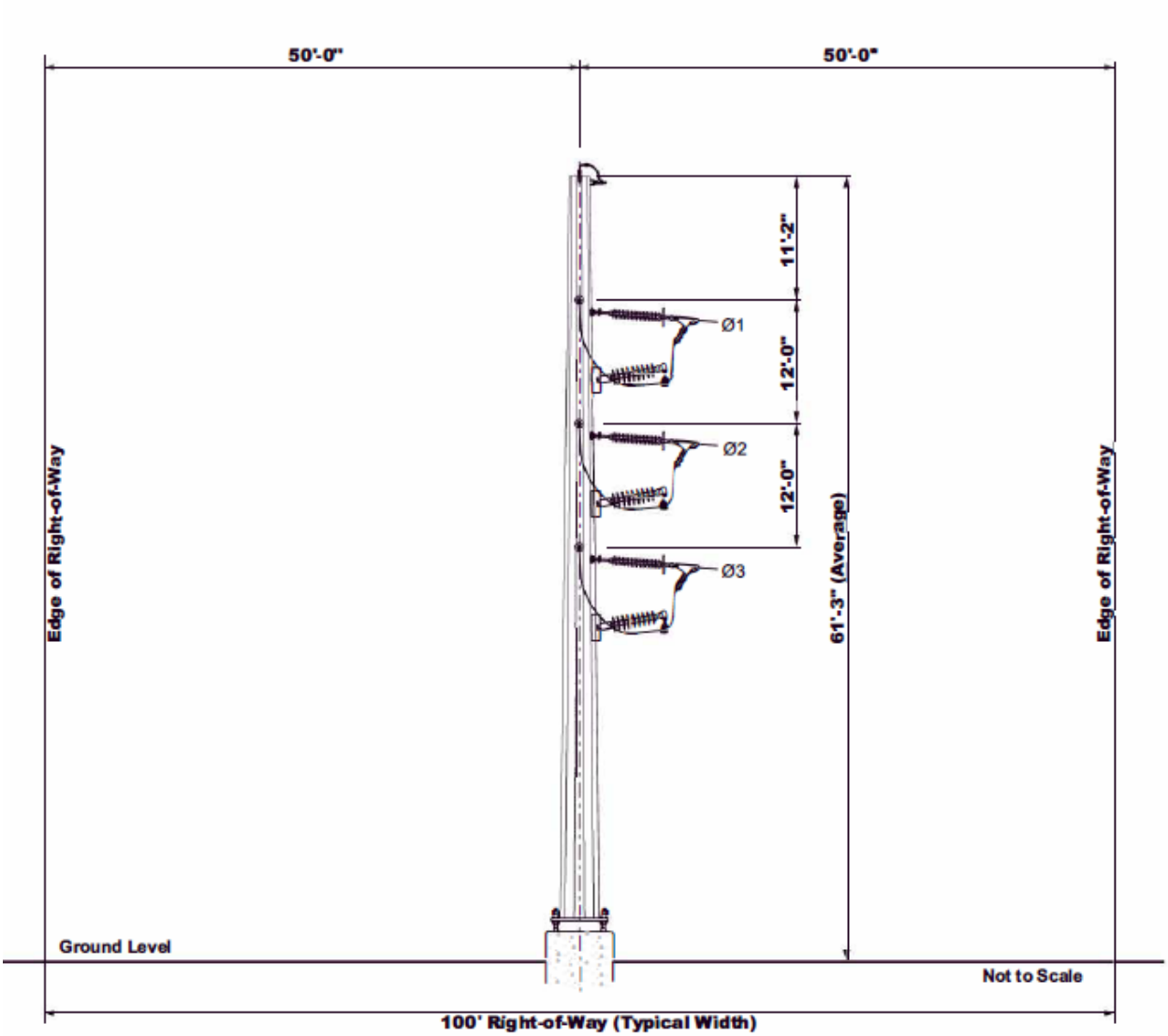

Figure 2-8: Representative Proposed 138 kV Single-Circuit Monopole Structures. Source: Appalachian Power

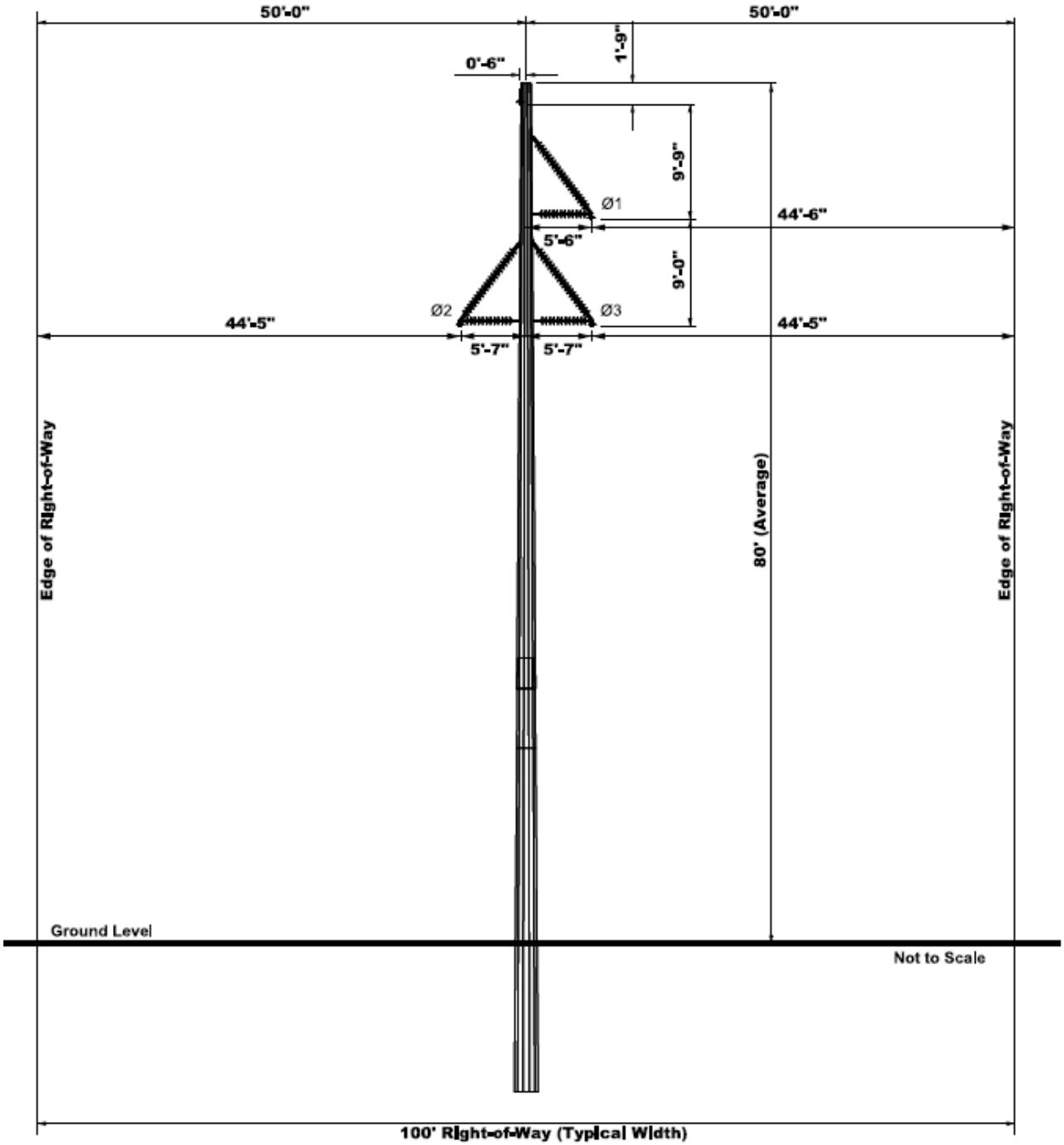

Figure 2-9: Representative Proposed 138 kV Single-Circuit Braced Monopole Structures. Source: Appalachian Power

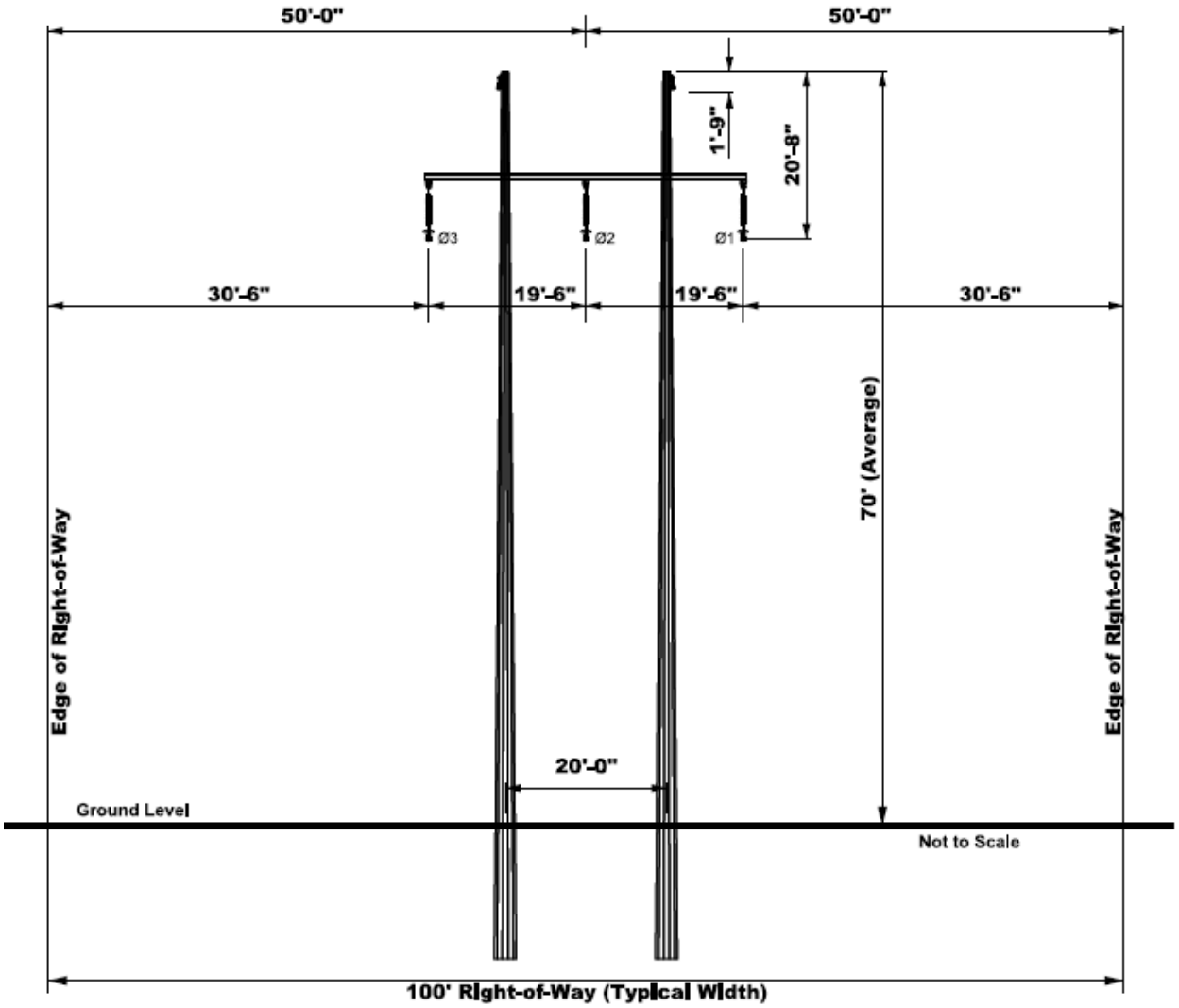

Figure 2-10: Representative Proposed 138 kV Single-Circuit H-Frame Structures. Source: Appalachian Power

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3. RESEARCH DESIGN

The intent of this analysis was to identify all known historic properties within the vicinity of the Project in order to assess them for potential impacts. Historic properties include architectural and archaeological (terrestrial and underwater) resources, historic and cultural landscapes, battlefields, and historic districts. For each previously recorded historic property, an examination of property documentation, current aerial photography, and a field reconnaissance was undertaken to assess each property's integrity of feeling, setting, and association, and to provide photo documentation of the property including views toward the proposed Project. The D+A personnel who directed and conducted this survey meet the professional qualification standards of the Department of the Interior (48 FR 44738-9).

ARCHIVAL RESEARCH

In February 2021, D+A conducted archival research with the goal of identifying all previously recorded historic properties and any additional historic property locations referred to in historic documents and other archives. Background research was conducted at the VDHR and on the internet and included the following sources:

- VDHR Virginia Cultural Resource Information System (VCRIS) site files; and
- National Park Service (NPS), American Battlefield Protection Program (ABPP), maps and related documentation.

Data collection was performed according to VDHR guidance in *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008) and was organized in a multi-tier approach. As such, the effort was designed to identify all previously recorded NHL's located within 1.5 miles of the Project, all historic properties listed in the NRHP, battlefields, and historic landscapes located within 1.0 mile of the Project, all historic properties previously determined eligible for listing in the NRHP located within 0.5 mile of the Project, and all properties located directly within or adjacent to the Project ROW.

FIELD RECONNAISSANCE

Field reconnaissance included visual inspection of previously recorded historic properties located within the defined buffer tiers. Visual inspection included digital photo documentation of each property's existing conditions including its setting and views toward the Project. Photographs were taken of primary resource elevations, general setting, and existing viewsheds. All photographs were taken from public right-of-way or where property access was granted. No subsurface archaeological testing was conducted as part of this effort.

ASSESSMENT OF POTENTIAL IMPACTS

Following identification and field inspection of historic properties, D+A assessed each resource for potential impacts brought about by the Project. Assessment of impacts was conducted through a combination of field inspection, digital photography, photo simulation, and review of topography and aerial photography. Photo simulation was conducted from public vantage points on or near each resource deemed the most likely to have visibility of the Project. The photo simulation entailed digital photography, towards the project, which was then loaded into a computer with location coordinates and ground-elevation. The transmission line structures to be rebuilt as part of the Project were then also computer modeled to represent the location, height, and configuration following construction. These models were then overlaid onto the digital photograph so that the existing (unaltered) view can be compared with the simulated view that illustrates the proposed structures, as they would appear on the landscape.

When assessing impacts, D+A considered those qualities and characteristics that qualify the property for listing and whether the Project has the potential to alter or diminish the integrity of the property and its associated significance. Specific attention was given to determining whether or not the Project would introduce new visual elements into a property's viewshed, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP. Identified impacts were characterized as severe (fully visible and incompatible with character-defining viewshed or setting), moderate (partially visible and incompatible with character-defining viewshed or setting), or minimal (not visible and/or not out of character with existing viewscape).

REPORT PREPARATION

The results of the archival research, field inspection, and analysis were synthesized and summarized in a summary report accompanied by maps, illustrations, and photographs as appropriate. All research material and documentation generated is on file at D+A's office in Midlothian, Virginia.

4. ARCHIVES SEARCH

This section includes a summary of efforts to identify previously known and recorded cultural resources within the tiered study area buffers as defined in the *Virginia Department of Historic Resources' (VDHR) guidance titled "Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia" (January 2008)*. This section of the Analysis includes lists, maps, and descriptive data on all previously conducted cultural resource surveys, and previously recorded architectural resources and archaeological sites according to the VDHR archives and VCRIS database.

PREVIOUSLY SURVEYED AREAS

VDHR and VCRIS records indicate that there have been fourteen (14) prior Phase I cultural resource surveys conducted within 1.0 mile of the Project, including five (5) that included portions of or overlapped with the Project ROW. These surveys are at minimum archaeological in nature, although some include architectural resources as well. The five surveys that include portions of the Project ROW include reconnaissance surveys for transportation and utility projects. A list of previously conducted surveys within the Project ROW are included in **Table 4-1** and illustrated in **Figure 4-1**.

Table 4-1: Previously Conducted Cultural Resource Surveys within the Project ROW. Source: VDHR.

VDHR Survey #	Title	Author	Date
AH-058	Archaeological Survey of the Proposed Colonial Pipeline Company Expansion Project, the James River Crossings, Amherst and Appomattox Counties, Virginia	Soil Systems, Inc.	1979
BE-009	The Forest Central Water System Survey	Washington and Lee University	1979
BE-016	Phase I Cultural Resource Survey Along Proposed Improvements to Route 221 in Bedford County, Virginia	Virginia Commonwealth University Archaeology Research Center	1992
BE-023	Historic Architectural and Archaeological Survey of Bedford County, Virginia	Mattson Alexander and Associates, Inc.	1998
BE-065	Phase I Archaeological Survey for the Route 621 Ivy Creek Bridge Replacement Project, Bedford County, Virginia	Commonwealth Heritage Group	2016

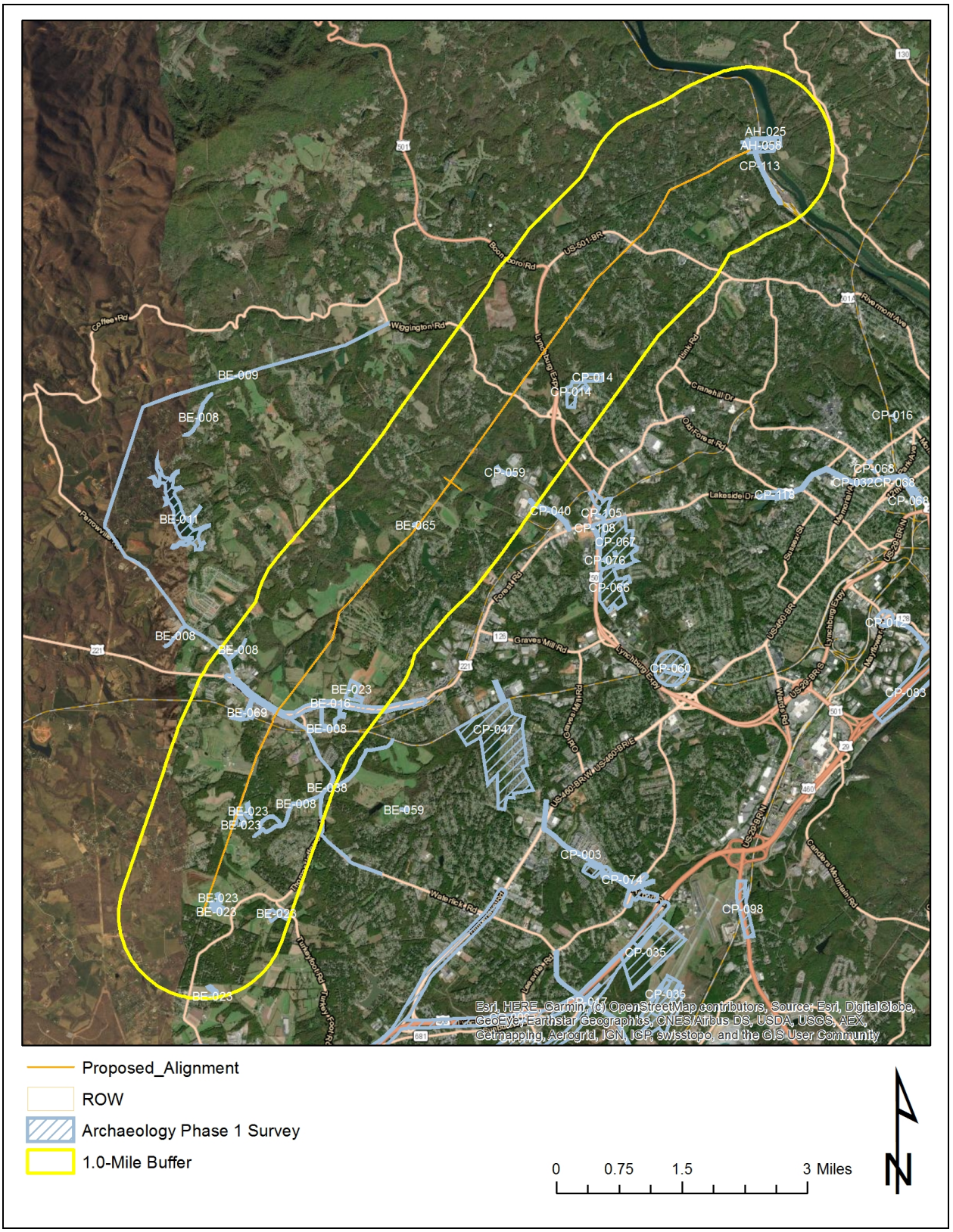

Figure 4-1: Previously Conducted Phase I Surveys within 1.0 mile of the Project. Source: VCRIS

ARCHITECTURAL RESOURCES

Review of the VDHR VCRIS inventory records revealed a total of 71 previously recorded architectural resources are located within 1.5 miles of the Project. Of these, there is one (1) NHL located within 1.5 miles, six (6) properties listed in the NRHP and no battlefields located within 1.0 mile, and one (1) property that has been determined eligible for listing in the NRHP within 0.5 mile of the Project.

Table 4-2 lists NRHP-listed and eligible resources within their respective buffered tiers. A map of all previously recorded architectural resources within 1.5 miles of the Project is included as **Figure 4-2** and a map of NHLs, NRHP-listed, and Eligible resources is included as **Figure 4-3**.

Table 4-2: Previously Recorded Architectural Resources within their respective tiered buffer zones for the Project

Buffer(miles)	Considered Resources	VDHR #	Description
1.5	National Historic Landmarks	009-0027	Poplar Forest Thomas Jefferson's Retreat, 1548 Bateman Bridge Road
1.0	National Register Properties (Listed)	009-0033	Woodbourne, Route 609
		009-0065	Rothsay, 15660 Forest Road
		009-5283	Bowling Eldridge House, 1651 Fox Hill Road
		118-0219	Locust Grove, 147 Marvin Place, Boonsboro Road
		118-0224	Virginia Episcopal School, 400 Virginia Episcopal School Road
		118-5240	Presbyterian Orphans Home, Linden Avenue
	Battlefields	None	N/A
	Historic Landscapes	None	N/A
0.5	National Register-Eligible	118-0218	Reusens Dam, Hydro Road

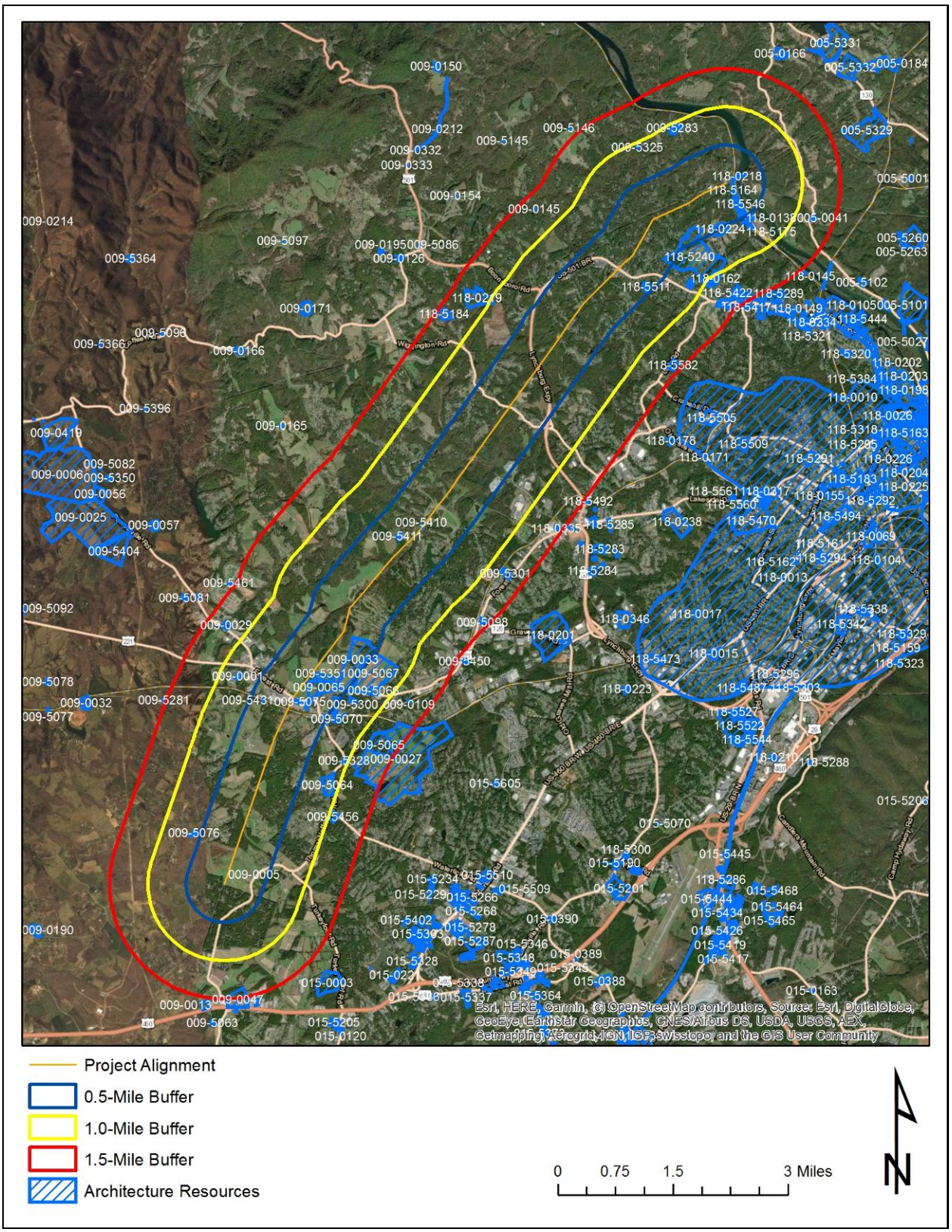

Figure 4-2: All Previously Recorded Architectural Resources within 1.5 mile of the Project. Source: VCRIS

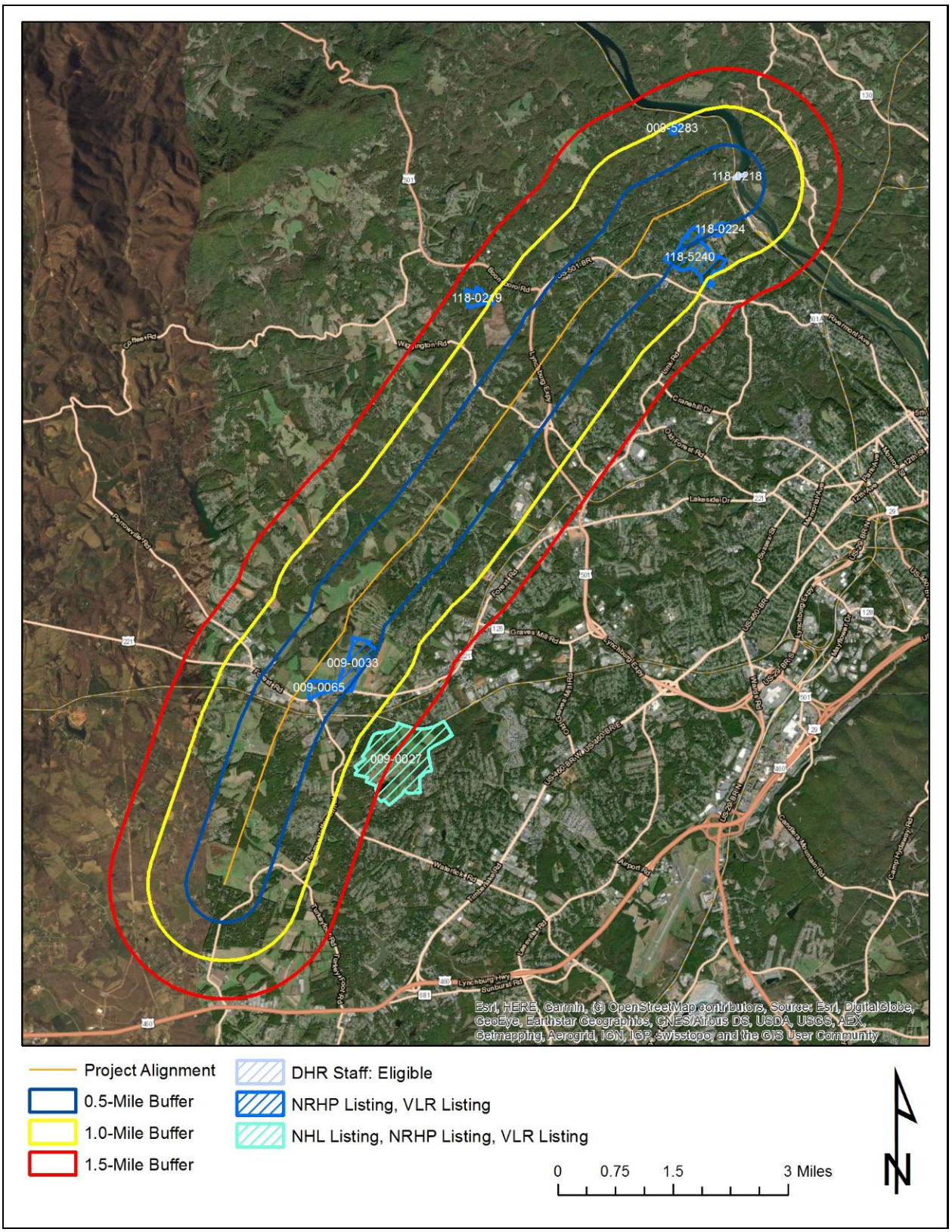

Figure 4-3: NHLs, NRHP-Listed, and Eligible Architectural Resources within 1.5 miles of the Project. Source: VCRIS

ARCHAEOLOGICAL SITES

Review of the VDHR VCRIS records reveals there are twelve (12) previously recorded archaeological sites within 1.0 mile of the Project. None of these sites are located within or immediately adjacent to the Project ROW. The previous sites include prehistoric camps and lithic scatters as well as historic domestic sites, a cemetery, and canal lock. Of the resources, one has been determined potentially eligible for listing in the NRHP by the VDHR, two have been determined not eligible, and the rest have not been formally evaluated for listing in the NRHP by the VDHR.

Table 4-3 lists all previously recorded archaeological resources located within 1.0 mile of the Project. **Figures 4-4** illustrates the locations of previously recorded sites in relation to the Project.

Table 4-3: Previously Recorded Archaeological Resources Located within 1.0 mile of the Project.

VDHR ID #	Site Type	Temporal Association	Cultural Affiliation	NRHP Status
44BE0009	Dwelling, single	19th Century: 1st half (1800 - 1849)	Indeterminate	Not Evaluated
44BE0018	Dwelling, single	Indeterminate	Indeterminate	Not Evaluated
44BE0058	<Null>	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Native American	Not Evaluated
44BE0243	<Null>	<Null>	Indeterminate	Not Evaluated
44BE0244	Camp	Late Archaic (3000 - 1201 B.C.), Early Woodland (1200 B.C. - 299 A.D.)	Native American	Not Evaluated
44BE0245	Cemetery	19th Century: 4th quarter (1875 - 1899), 20th Century (1900 - 1999)	Indeterminate	Not Evaluated
44BE0246	Camp, temporary, Dwelling, single	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 20th Century (1900 - 1999)	Native American	DHR Staff: Not Eligible
44BE0247	Dwelling, single	20th Century (1900 - 1999)	Indeterminate	DHR Staff: Not Eligible
44BE0298	Artifact scatter, Dwelling, single	Pre-Contact, Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829)	Indeterminate	Not Evaluated
44CP0035	<Null>	Woodland (1200 B.C. - 1606 A.D.)	Native American	Not Evaluated
44CP0066	**Canal lock**	**Antebellum Period (1830 - 1860)**	**Euro-American**	**DHR Staff: Potentially Eligible**
44CP0185	<Null>	<Null>	Indeterminate	Not Evaluated

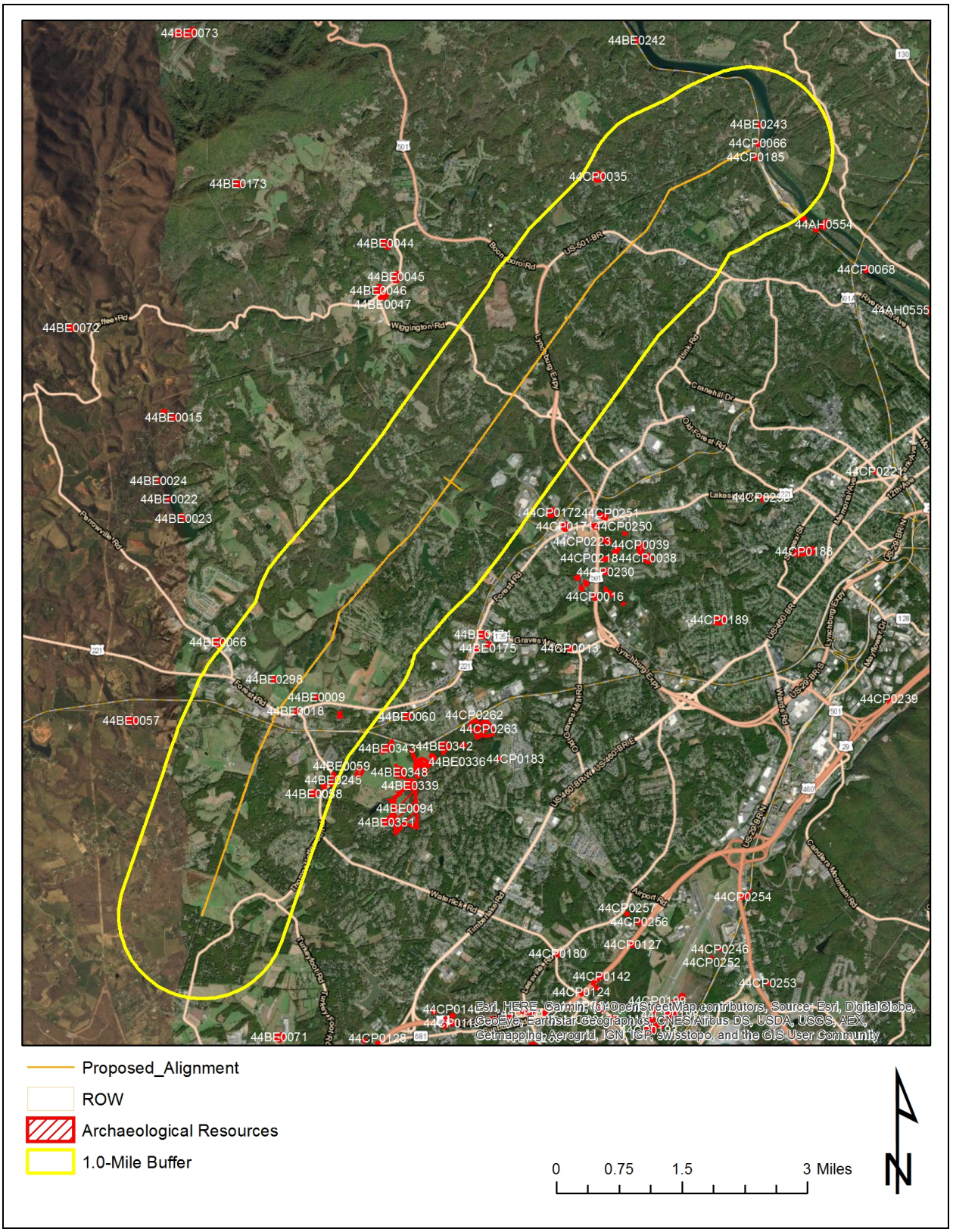

Figure 4-4: Previously Recorded Archaeological Resources Located within 1.0 mile of the Project. Source: VCRIS

NPS AMERICAN BATTLEFIELD PROTECTION PROGRAM (ABPP)

A review of the NPS ABPP records and maps prepared by the Civil War Sites Advisory Commission (CWSAC) revealed that no portions of any noted battlefield are located within 1.0 mile of the Project.

5. RESULTS OF FIELD RECONNAISSANCE

In accordance with the VDHR guidelines for assessing impacts of proposed electric transmission lines on historic resources, previously recorded historic architectural properties designated an NHL, or either listed or determined eligible for listing in the NRHP located within 1.5 mile, 1.0 mile, or 0.5 mile of the Project were field verified for existing conditions and photo documented (**Table 5-1**). Inspection and analysis of the setting around the resource and views towards the Project were also assessed. The results of the field reconnaissance for each resource are organized by tier and summarized in the following pages.

Table 5-1: Previously Recorded Architectural Resources within their Respective Tiered Buffer Zones for the Project.

Buffer(miles)	Considered Resources	VDHR #	Description
1.5	National Historic Landmarks	009-0027	Poplar Forest Thomas Jefferson's Retreat, 1548 Bateman Bridge Road
1.0	National Register Properties (Listed)	009-0033	Woodbourne, Route 609
		009-0065	Rothsay, 15660 Forest Road
		009-5283	Bowling Eldridge House, 1651 Fox Hill Road
		118-0219	Locust Grove, 147 Marvin Place, Boonsboro Road
		118-0224	Virginia Episcopal School, 400 Virginia Episcopal School Road
		118-5240	Presbyterian Orphans Home, Linden Avenue
	Battlefields	None	N/A
	Historic Landscapes	None	N/A
0.5	National Register-Eligible	118-0218	Reusens Dam, Hydro Road

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NATIONAL HISTORIC LANDMARKS

Located within 1.5 miles of the Project

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Poplar Forest, 1548 Bateman Bridge Road (VDHR # 009-0027)

Poplar Forest was designed and built by Thomas Jefferson on his Bedford County plantation as a "pleasant retreat" from the social pressures of Monticello. Construction on the house began in 1806 and continued as late as 1819. Jefferson visited Poplar Forest as much as four times a year, often remaining there as long as a month. Originally the house had been designed for Jefferson's daughter, Maria, to be built in Albemarle County, but she died in 1804. Although burned and substantially rebuilt, Poplar Forest ranks among the most important of Jefferson's architectural designs. In it he was able to indulge his fancy for compact forms and geometric shapes and stated that it was "inferior only to Monticello". Poplar Forest was both listed in the NRHP and designated a National Historic Landmark in 1971.

In order to assess the potential impact of the Project, visual inspection was conducted of the setting around the resource property with emphasis on views towards the Project. This assessment found that the boundary of the Poplar Forest property is located roughly 1.12 mile from the Project at its nearest point; however, the historic house is centrally located within the large 950-acre property, roughly 1.86 mile from the Project. The home is oriented to the north with the Project extending through the landscape to its west side. The landscape of the property is generally characterized by large open fields and a patchwork of treelines and wooded areas, including a 9-hole golf course occupying the northern portion of the property. The landscape between the Poplar Forest property and the Project is moderately to densely developed with a mix of suburban residential and commercial properties associated with the Forest area.

Inspection from throughout the Poplar Forest property revealed that the existing transmission line is not visible from any vantage point. From the front porch of the house, open fields associated with the property can be seen in the general direction of the Project, however, the rolling terrain and vegetation inhibit views of any development beyond the property boundaries. This inspection was conducted with no foliage on trees, so views during leaf-on will be substantially less. Inspection from other points throughout the property, including the primary parking lot and visitor center, similarly revealed screening provided by the terrain and vegetation, both on the property and beyond. The existing transmission line structures in the vicinity of the property range from approximately 48-feet to 68-feet tall and the proposed replacement structures will range from approximately 40-feet to 103-feet tall. As such, there will be an increase in height for most structures, however structures will be replaced on a one-to-one basis in generally the same location. Despite the increase in height, it is anticipated that the intervening distance, topography, and vegetation will continue to screen distant views in the direction of the Project, and there will continue to be no visibility of the Project following the rebuild. This was confirmed with photo simulation that shows the structures will remain well below the horizon and completely screened. As such, the Project will not introduce any change of viewshed or setting for the property and it is therefore D+A's opinion that the Project will have ***no impact*** on Poplar Forest.

Figure 5-1 depicts the location of Poplar Forest in relation to the Project with viewshed buffers, photographic views towards the Project alignment, and photo simulations. **Photographs 5-1 through 5-7** are representative photographs of the property, as well as those taken from the property towards the Project. **Figure 5-2** illustrates the location, direction, and structures included in the photo simulation from the property, **Figure 5-3** provides the existing view from the simulation location, and **Figure 5-4** provides a simulated view of the proposed structures.

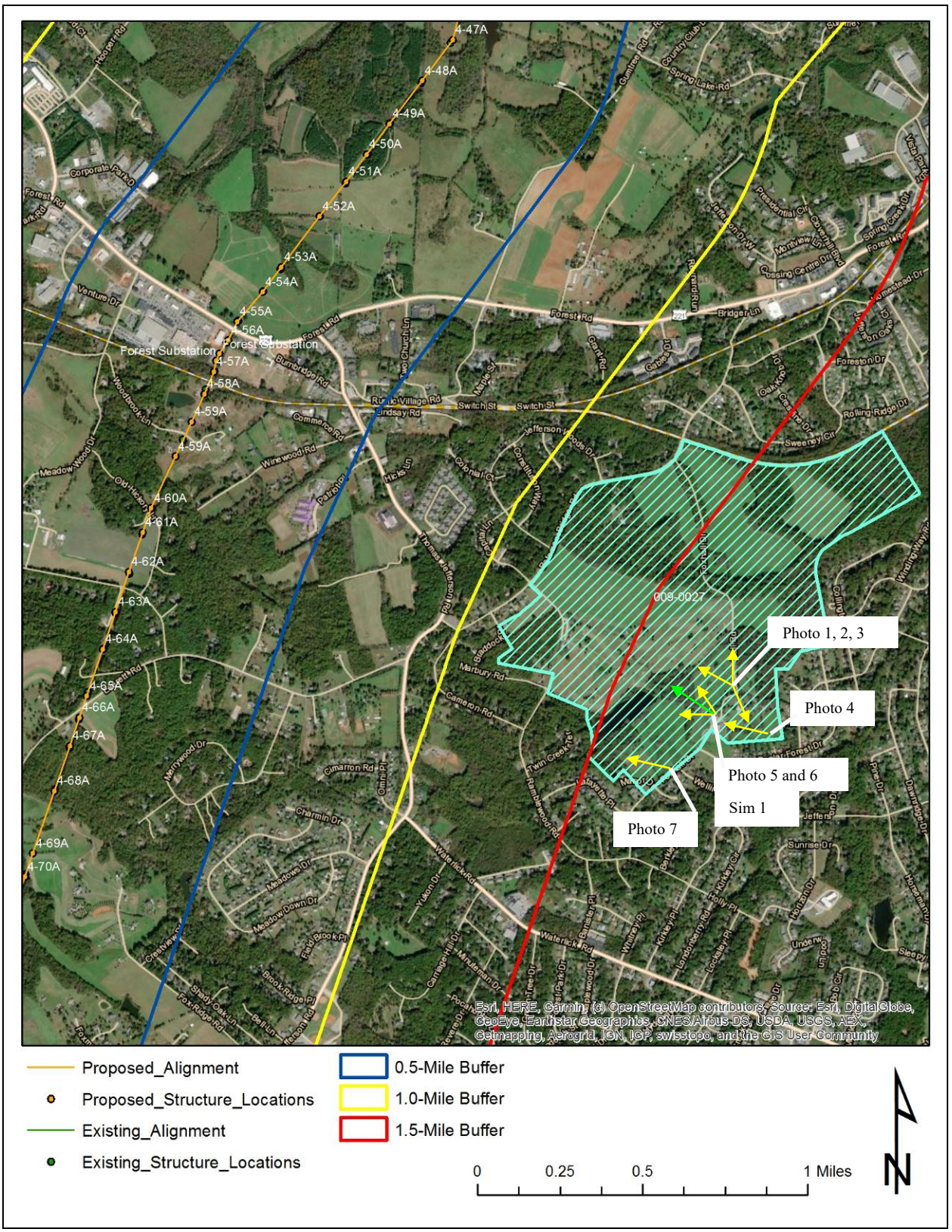

Figure 5-1: Location and Direction of Representative Photos and Simulations from Poplar Forest. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS

Photograph 5-1: Poplar Forest, front façade (Photo Location 1), facing southwest

Photograph 5-2: View from Poplar Forest front portico towards the Project alignment (not visible) (Photo Location 2), facing north

Photograph 5-3: View from Poplar Forest front portico towards the Project alignment (not visible) (Photo Location 3), facing northwest

Photograph 5-4: View from Poplar Forest south lawn towards the Project alignment (not visible) (Photo Location 4), facing northwest

Photograph 5-5: View from Poplar Forest parking lot towards the Project alignment (not visible) (Photo Location 5), facing northwest

Photograph 5-6: View from Poplar Forest parking lot towards the Project alignment (not visible) (Photo Location 6), facing north

Photograph 5-7: View from Poplar Forest driveway towards the Project alignment (not visible) (Photo Location 7), facing southwest

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Photo location: 009-0027	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	4-51A	72.5	10514	4-55A	81.5	10019	4-59A	99.5	9711	4-62A	77	9721
Project: Reusens -New London	4-52A	86	10313	4-56A	81.25	9942	4-59A	99.5	9678	4-63A	68	9797
	4-53A	86	10100	4-57A	102.5	9829	4-60A	72.5	9694	4-64A	63.5	9908
	4-54A	81.5	10034	4-58A	92.75	9765	4-61A	72.5	9692	4-65A	68	10103

Figure 5-2: Poplar Forest Simulation 1 – Location and direction of photograph with list of included structures. Source: GTTE, LLC

	Reusens - New London: Location 009-0027	**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.**	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.**

Figure 5-3: Poplar Forest Simulation 1 – Existing view from Poplar Forest towards the Project alignment. Source: GTTE, LLC

	Reusens - New London: Location 009-0027	**Proposed View** **(Locations of towers not visible are overlaid with yellow tower icon)**
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.**	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.**

Figure 5-4: Poplar Forest Simulation 1 – Proposed view from Poplar Forest towards the Project alignment with structures modeled (structures not visible shown in yellow). Source: GTTE, LLC

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NATIONAL REGISTER OF HISTORIC PLACES-LISTED PROPERTIES

Located within 1.0 mile of the Project

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Woodbourne, Route 609 (VDHR # 009-0033)

Woodbourne is an evolved frame house believed to have been built in three primary phases from circa 1780 through 1820. The first part of Woodbourne to be constructed was the frame east wing which is said to have been built between 1780 and 1790. The central stuccoed brick portion was then constructed around 1810-11 and the frame west wing added about 1815-20. Although built in three separate stages, the graceful plantation house is an architecturally unified composition of unusually pleasing proportions. The Woodbourne land was historically part of the Wayles Tract (also referred to as the Jefferson or Poplar Forest Tract) which came to Thomas Jefferson through his wife Martha Skelton Wayles. Woodbourne now stands as a handsome example of Piedmont Virginia's Federal-period architecture, and exhibits the high standards of craftsmanship for which early Bedford County buildings are noted. The home was listed in the NRHP in 1973 under Criteria C for its distinctive and noteworthy architecture. The property is also under a conservation easement held by the Virginia Outdoors Foundation (VOF).

In order to assess the potential impact of the Project, visual inspection was conducted of the setting around the resource property with emphasis on views towards the Project. This assessment found that the boundary of the Woodbourne property is located roughly 0.14 mile from the Project at its nearest point (proposed structures 4-49A to 4-52A) although the historical house sits centrally within the large rural property and located farther from the Project (roughly 0.39 mile). The home is oriented to the north with the Project set across the property to the west side. The landscape of the property and between it and the Project is generally characterized by a patchwork of open field and pasture with a series of treelines and breaks. The Project alignment extends through these open fields to the south of the house before extending through a thicker wooded area to the west and north.

Inspection from the road in front of the Woodbourne property found that the existing transmission line is not visible when facing the house. The home rests on a slight knoll with a variety of vegetation and landscaping, which coupled with the topography, screens views of the Project within the landscape beyond. One existing structure that is set within an open field at the edge of a wooded area can be seen through a narrow tree break from the end of the driveway. Inspection from the homesite revealed the same structure is visible across the landscape, as is one additional structure that can be seen through the treeline. The existing transmission line structures in the vicinity of the property range from approximately 57-feet to 72-feet tall and the proposed replacement structures will range from approximately 72-feet to 95-feet tall. As such, there will be an increase in structure height, however structures will be replaced on a one-to-one basis in generally the same location. It is anticipated that the existing structures that are currently visible will remain as such, albeit in a slightly taller and different configuration, and that the other structures that are currently screened by topography and vegetation will remain as such. This was confirmed with photo simulation from the homesite, that shows two structures may be visible seasonally, while the rest will remain behind the treeline and completely screened. As such, the Project will introduce a slight change in visibility of the transmission line from the property, however, it will not equate to a substantial change

of viewshed or setting for the property that already includes visibility of the alignment. It is therefore D+A's opinion that the Project will have no more than a ***minimal impact*** on Woodbourne.

Figure 5-5 depicts the location of Woodbourne in relation to the Project with viewshed buffers, photographic views towards the Project alignment, and photo simulations. **Photographs 5-8 through 5-12** are representative photographs of the property, as well as those taken from the property towards the Project. **Figure 5-6** illustrates the location, direction, and structures included in the photo simulation from the property, **Figure 5-7** provides the existing view from the simulation location, and **Figure 5-8** provides a simulated view of the proposed structures.

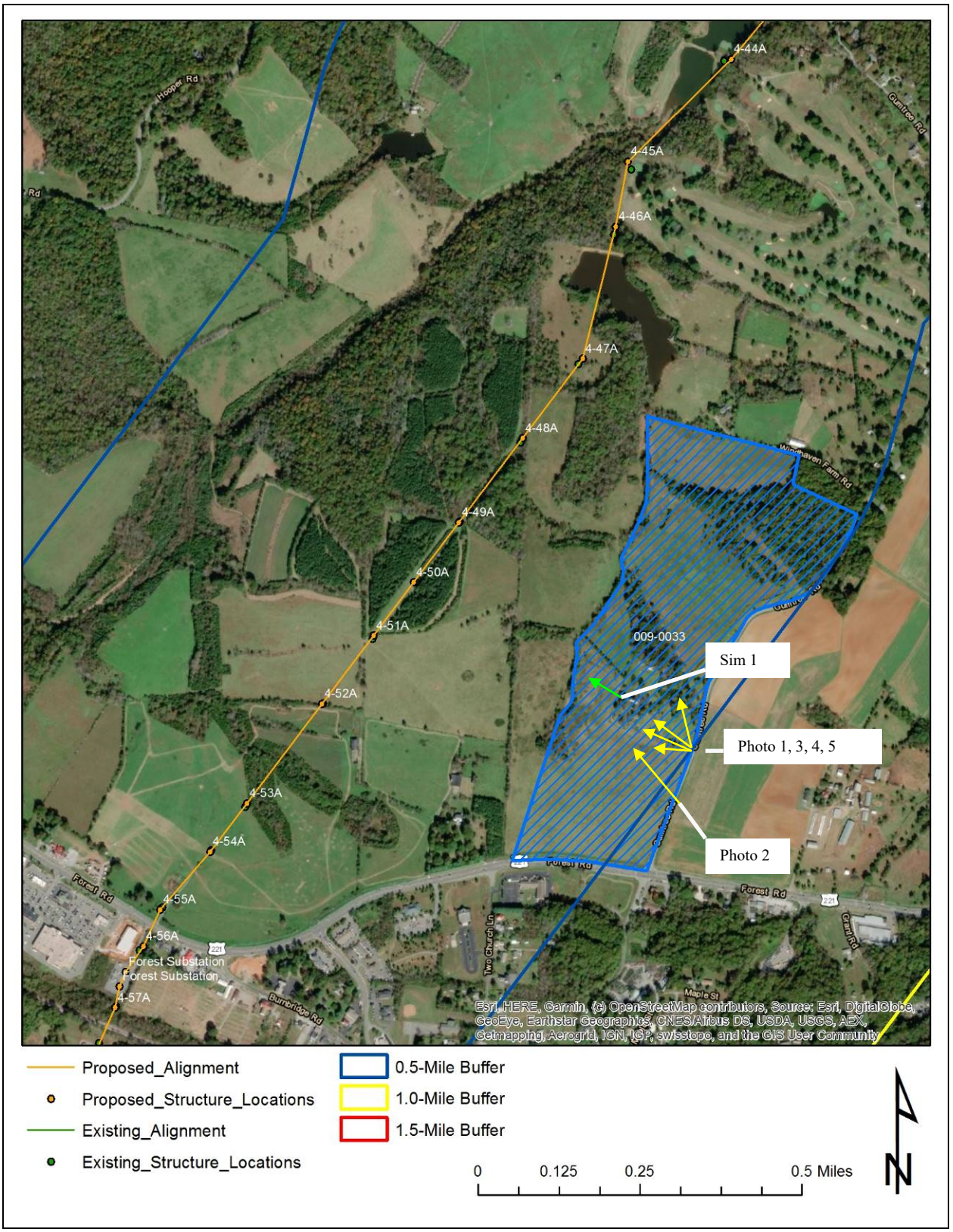

Figure 5-5: Location and Direction of Representative Photos and Simulations from Woodbourne. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS

Photograph 5-8: Woodbourne, front façade (Photo Location 1), facing northwest

Photograph 5-9: View from road along front of Woodbourne property towards the Project (not visible) (Photo Location 2), facing northwest

Photograph 5-10: View from Woodbourne driveway towards the Project (not visible) (Photo Location 3), facing northwest

Photograph 5-11: View from Woodbourne driveway towards the Project (not visible) (Photo Location 4), facing west

Photograph 5-12: View from Woodbourne driveway towards the Project (one structure visible through tree break) (Photo Location 5), facing west

Photo location: 009-0033	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	4-49A	81.5	2012	4-52A	99.5	2503			
Project: Reusens -New London	4-50A	72.5	2004	4-53A	99.5	3229			
	4-51A	72.5	2150						

Figure 5-6: Woodbourne Simulation 1 – Location and direction of photograph with list of included structures. Source: GTTE, LLC

	Reusens - New London: Location 009-0033	**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.**	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.**

Figure 5-7: Woodbourne Simulation 1 – Existing view from Woodbourne towards the Project. Source: GTTE, LLC

	Reusens - New London: Location 009-0033	**Proposed View** **(Locations of towers not visible are overlaid with yellow tower icon)**
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.**	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.**

Figure 5-8: Woodbourne Simulation 1 – Proposed view from Woodbourne towards the Project with structures modeled (structures not visible shown in yellow). Source: GTTE, LLC

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Rothsay, 15660 Forest Road (VDHR # 009-0065)

Rothsay was built by Octavius Loxely Clark Radford (1870-1935), a prominent Bedford County farmer and politician. Built in 1914 and expanded in 1918, the two-story brick and frame house represents an accomplished melding of two styles popular during the period: the Georgian Revival and Craftsman styles. The house was probably designed by the Lynchburg, Virginia architectural firm of Heard and Cardwell, which was responsible for the design of the 1918 addition. Also of note are the grounds at Rothsay, which include a garden terrace designed by Washington, D.C. landscape architect George E. Burnap in 1918, and gate posts designed by Lynchburg architect Stanhope Johnson in 1934. Rothsay ranks among the largest and most refined early-twentieth century country houses in Bedford County, Virginia and was listed in the NRHP in 1992 under Criterion C for architecture. The property is also designated a Virginia Century Farm and under a conservation easement held by the VOF.

In order to assess the potential impact of the Project, visual inspection was conducted of the setting around the resource property with emphasis on views towards the Project. This assessment found that the Rothsay property extends to within a few hundred feet from the Project at its nearest point although the house sits at the opposite edge of the property roughly 0.28 mile from the Project (proposed structures 4-51A to 4-53A). The home is oriented to the north with the Project extending across the landscape to its west side and rear. The landscape of the property and between it and the Project is characterized by a mix of open field and pasture, with treelines and small patches of woods.

Inspection from the road in front of the Rothsay property found that the existing transmission line is visible at various points as it crosses the landscape. From the end of the driveway near the house, two structures may be seen above and through treelines in the distance. An additional three structures may be seen closer to the road as the alignment extends through open field before crossing the road west of the property. Inspection from the homesite revealed two of the structures visible from the road are also visible from the house, across a field and between treelines, however, the other three structures visible from the road cannot be seen from the house due to intervening vegetation. The existing transmission line structures in the vicinity of the property range from approximately 48-feet to 72-feet tall and the proposed replacement structures will range from approximately 73-feet to 86-feet tall. As such, there will be an increase in structure height, however structures will be replaced on a one-to-one basis in generally the same location. It is anticipated that the structures that are currently visible will remain as such, albeit in a slightly taller and different configuration. It is not anticipated that any additional structures currently screened by vegetation will become visible following the rebuild. This was confirmed with photo simulation from the homesite that shows the two structures visible from the house will remain visible, and appear only slightly different. The structures in the field to the front of the house will remain screened by vegetation in the immediate vicinity of the homesite. As such, the Project will not introduce any substantially new or different qualities or features into the viewshed or setting of the property which already includes visibility of multiple structures on the alignment. It is therefore D+A's opinion that the Project will have no more than a ***minimal impact*** on Rothsay.

Figure 5-9 depicts the location of Rothsay in relation to the Project with viewshed buffers, photographic views towards the Project alignment, and photo simulations. **Photographs 5-13 through 5-19** are representative photographs of the property, as well as those taken from the property towards the Project. **Figure 5-10** illustrates the location, direction, and structures included in the photo simulation from the property, **Figure 5-11** provides the existing view from the simulation location, and **Figure 5-12** provides a simulated view of the proposed structures.

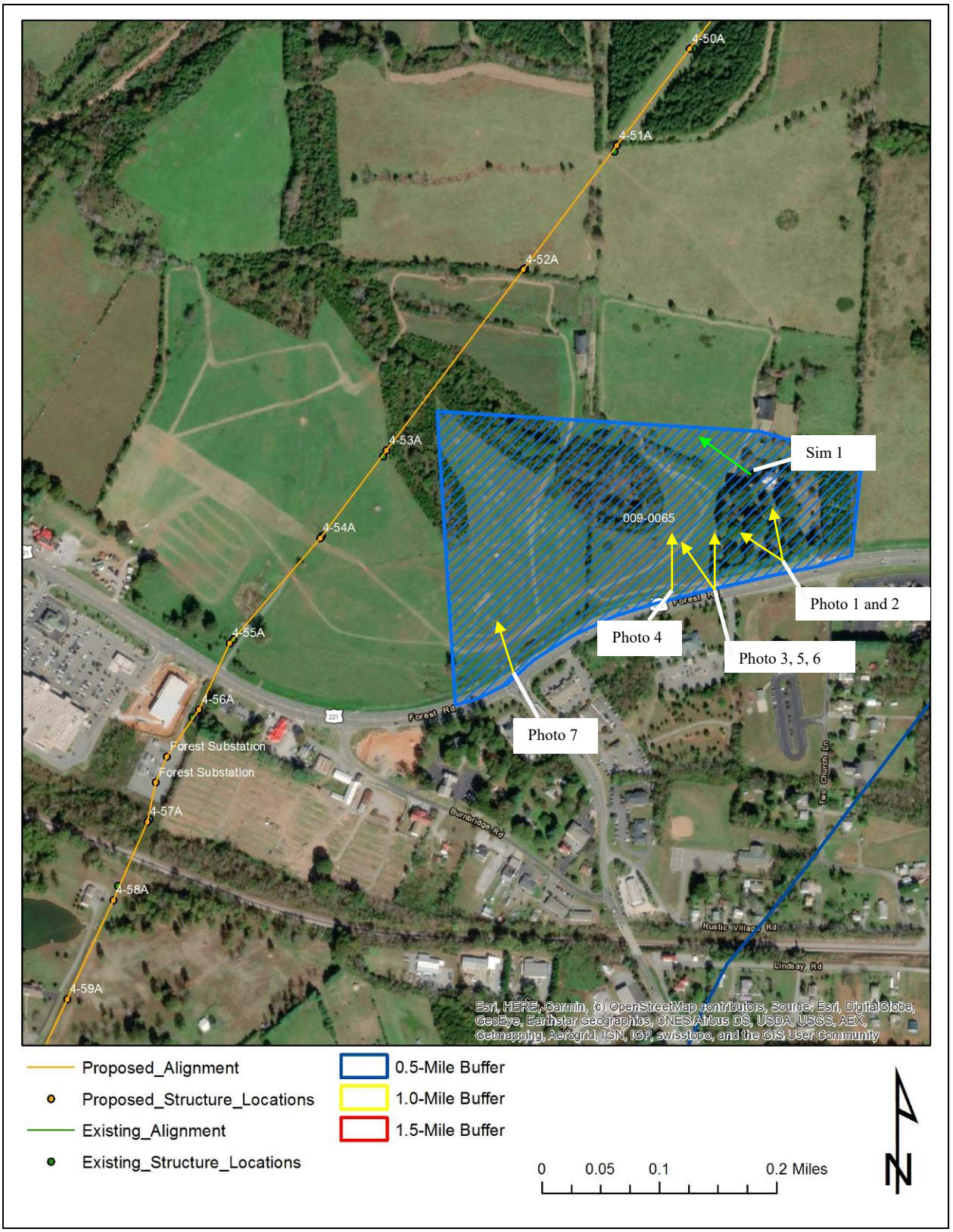


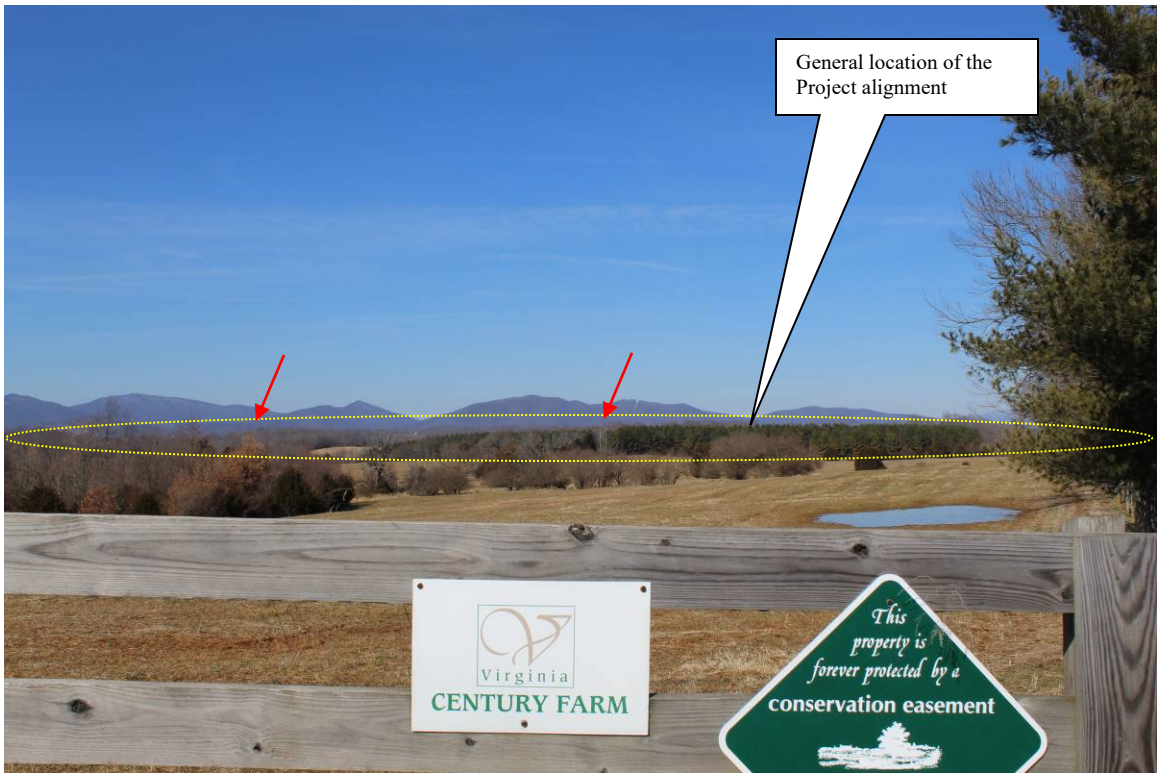
Figure 5-9: Location and Direction of Representative Photos and Simulations from Rothsay. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS

Photograph 5-13: Rothsay, front façade (Photo Location 1), facing north

Photograph 5-14: View from Rothsay driveway towards the Project alignment (not visible) (Photo Location 2), facing north

Photograph 5-15: View from road in front of Rothsay property towards the Project alignment (not visible) (Photo Location 3), facing north

Photograph 5-16: View from road in front of Rothsay property towards the Project (one structure visible) (Photo Location 4), facing north



Photograph 5-17: View from front of Rothsay property towards the Project (two structures visible) (Photo Location 5), facing northwest

Photograph 5-18: Detail of View from front of Rothsay property towards the Project showing visible structure (Photo Location 6), facing northwest

Photograph 5-19: View from western edge of Rothsay property towards the Project (one structure visible in open field) (Photo Location 7), facing north

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Photo location: 009-0065		Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	Project: Reusens -New London	4-49A	81.5	2012	4-52A	99.5	2503			
		4-50A	72.5	2004	4-53A	99.5	3229			
		4-51A	72.5	2150						

Figure 5-10: Rothsay Simulation 1 – Location and direction of photograph with list of included structures. Source: GTTE, LLC

	Reusens - New London: Location 009-0065	**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.**	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.**

Figure 5-11: Rothsay Simulation 1 – Existing view from Rothsay towards the Project. Source: GTTE, LLC

	Reusens - New London: Location 009-0065	**Proposed View** **(Locations of towers not visible are overlaid with yellow tower icon)**
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.**	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.**

Figure 5-12: Rothsay Simulation 1 – Proposed view from Rothsay towards the Project with structures modeled. Source: GTTE, LLC

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Bowling Eldridge House, 1651 Fox Hill Road (VDHR # 009-5283)

The Bowling Eldridge House is a well-preserved example of a Halifax County plantation seat dating to the early nineteenth century. Built circa 1822-23 by tobacco planter and mill owner Bowling Eldridge, the two-story frame house features sophisticated Federal styling such as a dentil cornice, remnants of a two pier pedimented portico, intricately carved mantels, trim, and stair detailing, and several six-panel doors with superb graining. The resource was listed in the NRHP in 1993 under Criterion C for distinctive architecture. In 2002, the home was moved from its original location in Halifax County to its present site in Bedford County, at which time it was determined to still be individually eligible for architecture.

As a moved property, eligible strictly for its architecture, the current setting of the property is not considered an aspect of its significance, and therefore a change in viewshed would not typically compromise or impact the resource's integrity. Still, a viewshed assessment was conducted in order to confirm there would be no substantial change in setting or viewshed.

In order to assess the potential impact of the proposed project, visual inspection was conducted of the setting around the resource property with emphasis on views towards the Project. This assessment found that the Bowling Eldridge House property is located roughly 0.92 mile from the Project. The home is oriented to the north with the Project alignment to the southeast rear. The existing Reusens substation, which is the northern terminus of the Project, is set roughly one mile to the southeast of the property. The landscape of the property and between it and the Project slopes moderately to steeply downhill and is mostly wooded with a scattering of homes set on small to medium-sized rural lots. An existing local distribution transmission line crosses the property with the cleared ROW extending downhill generally in the direction of the Project.

Inspection from the road in front of the Bowling Eldridge House property found that neither the existing transmission line nor Reusens substation are visible, however, a local distribution line not included in this project is highly visible as it crosses the road in front of the house. The landscape between the property and the Project slopes substantially down towards the river, placing the Project alignment generally beneath the horizon. This slope coupled with thick vegetation completely screens the Project from visibility. The existing transmission line structures range from approximately 100-feet to 140-feet tall and the proposed replacement structures will range from approximately 95-feet to 140-feet tall. As such, there will be no substantial increase in structure height, and structures will be replaced on a one-to-one basis in generally the same location. As the existing structures and substation are not visible due to intervening topography and vegetation, it is anticipated that there will continue to be no visibility of the transmission line following the rebuild. This was confirmed with photo simulation that shows the structures will remain completely screened. As such, the Project will not introduce any change of viewshed or setting for the property which is already compromised from relocation, and further compromised by an existing local distribution transmission line. It is therefore D+A's opinion that the proposed project will have ***no impact*** on Bowling Eldridge House.

Figure 5-13 depicts the location of Bowling Eldridge House in relation to the Project with viewshed buffers, photographic views towards the Project, and photo simulations. **Photographs 5-20 through 5-23** are representative photographs of the property, as well as those taken from the property towards the Project. **Figure 5-14** illustrates the location, direction, and structures included in the photo simulation from the property, **Figure 5-15** provides the existing view from the simulation location, and **Figure 5-16** provides a simulated view of the proposed structures.

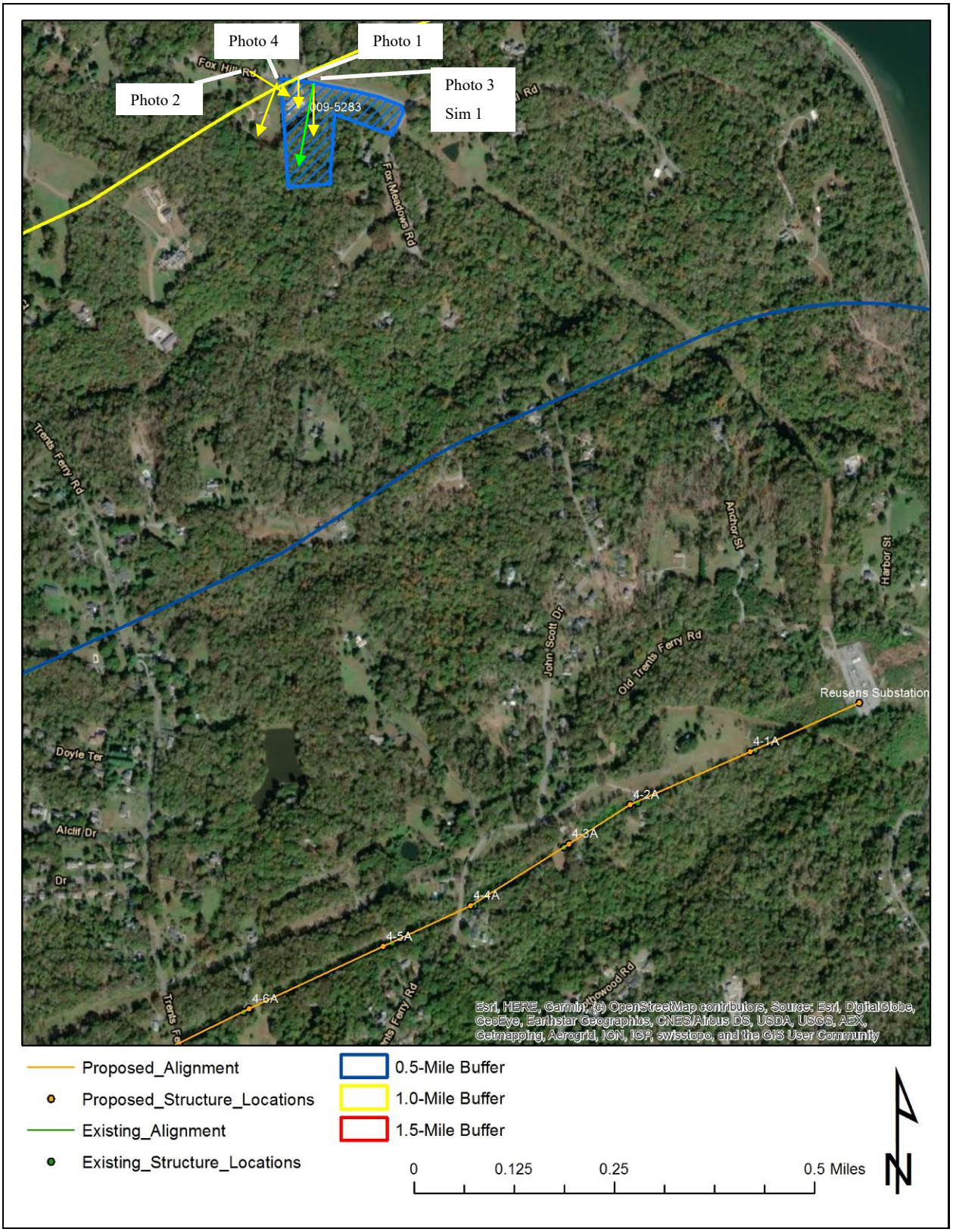

Figure 5-13: Location and direction of representative photos and simulations from the Bowling Eldridge House. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS

Photograph 5-20: Bowling Eldridge House, front façade (Photo Location 1), facing south

Photograph 5-21: Bowling Eldridge House view from the road in front towards the Project (not visible) (Photo Location 2), facing southeast

Photograph 5-22: View from Bowling Eldridge House towards the Project (not visible) (Photo Location 3), facing southwest

Photograph 5-23: View from Bowling Eldridge House side yard towards the Project (not visible) (Photo Location 4), facing southwest

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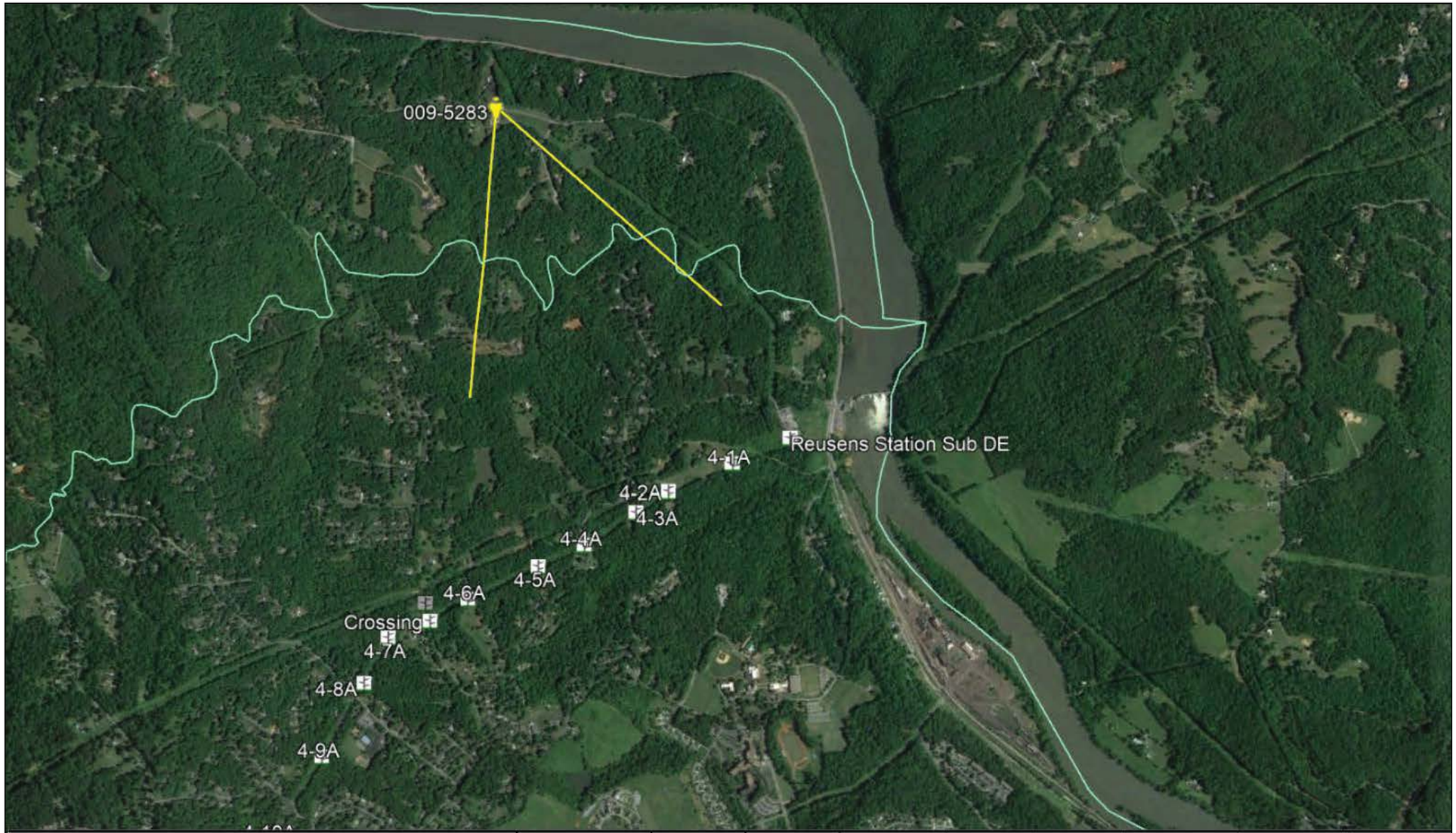

Photo location: 009-5283		Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	Project: Reusens -New London	4-1A	109.75	5385	4-5A	100	5790			
		4-2A	104.5	5303	4-6A	140	6182			
		4-3A	95	5391	4-7A	124.75	6793			
		4-4A	109.5	5611	4-8A	120	7416			

Figure 5-14: Bowling Eldridge House Simulation 1 – Location and direction of photograph with list of included structures. Source: GTTE, LLC

	Reusens - New London: Location 118-5283	**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.**	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.**

Figure 5-15: Bowling Eldridge House Simulation 1 – Existing view from Bowling Eldridge House towards the Project. Source: GTTE, LLC

	Reusens - New London: Location 118-5283	**Proposed View** **(Locations of towers not visible are overlaid with yellow tower icon)**
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.**	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.**

Figure 5-16: Bowling Eldridge House Simulation 1 – Proposed view from Bowling Eldridge House towards the Project with structures modeled (structures not visible shown in yellow). Source: GTTE, LLC

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Locust Grove, 147 Marvin Place (VDHR # 118-0219)

Locust Grove is a five-bay, double-pile, central passage plan, one and a half story, timber frame, four end chimney Federal style house begun about 1810 for Edmund Cobbs, Jr. Locus Grove was first a side passage plan dwelling but was enlarged significantly between 1825 and 1830 to its present central passage plan. The house was extensively renovated in 1932 and is completed by a collection of 20th century outbuildings. The home was listed in the NRHP in 1992 under Criteria C as a good representative example of an early 19th century planter's residence and possesses architectural significance both for its original plan and design. Renovated in the 1930s, it also illustrates the influence of renewed interest in "colonial" architecture that typified "restorations" of the period.

In order to assess the potential impact of the Project, visual inspection was conducted of the setting around the resource property with emphasis on views towards the Project. This assessment found that the Locust Grove property extends to just within one mile from the Project at its nearest point although the house sits at the opposite side of the property roughly 1.25 mile from the Project. The home is oriented to the northwest with the Project crossing through the landscape to its rear. The landscape between the property and Project is characterized by a mostly rolling wooded terrain with several pockets of modern suburban residential housing set along cul-de-sac streets. In this vicinity, the Project alignment extends through a thickly wooded area.

Inspection from the road in front of the Locust Grove property found that the existing transmission line is not visible behind the house due to thick vegetation. The home rests at the edge of ridge, which places the Project alignment below the horizon of the house, and therefore screens distant views in the direction of the Project. Inspection from the homesite similarly revealed that the thick woods within the rear portion of the property, and between it and the Project completely screen views of the existing transmission line, as well as intervening suburban development. The existing transmission line structures in the vicinity of the property range from 93-feet to 116-feet tall and the proposed replacement structures will range from 90-feet to 135-feet tall. As such, there may be a slight increase in structure height for some structures, however structures will be replaced on a one-to-one basis in generally the same location. It is anticipated that the intervening distance, topography, and vegetation will continue to screen all distant views in the direction of the Project. This was confirmed with photo simulation from the homesite that shows all structures will remain behind the treeline and completely screened. As such, the Project is not anticipated to introduce any change to the existing setting or viewshed from the property. It is therefore D+A's opinion that the Project will have ***no impact*** on Locust Grove.

Figure 5-17 depicts the location of Locust Grove in relation to the Project with viewshed buffers, photographic views towards the Project alignment, and photo simulations. **Photographs 5-24 through 5-27** are representative photographs of the property, as well as those taken from the property towards the Project. **Figure 5-18** illustrates the location, direction, and structures included in the photo simulation from the property, **Figure 5-19**

provides the existing view from the simulation location, and **Figure 5-20** provides a simulated view of the proposed structures.

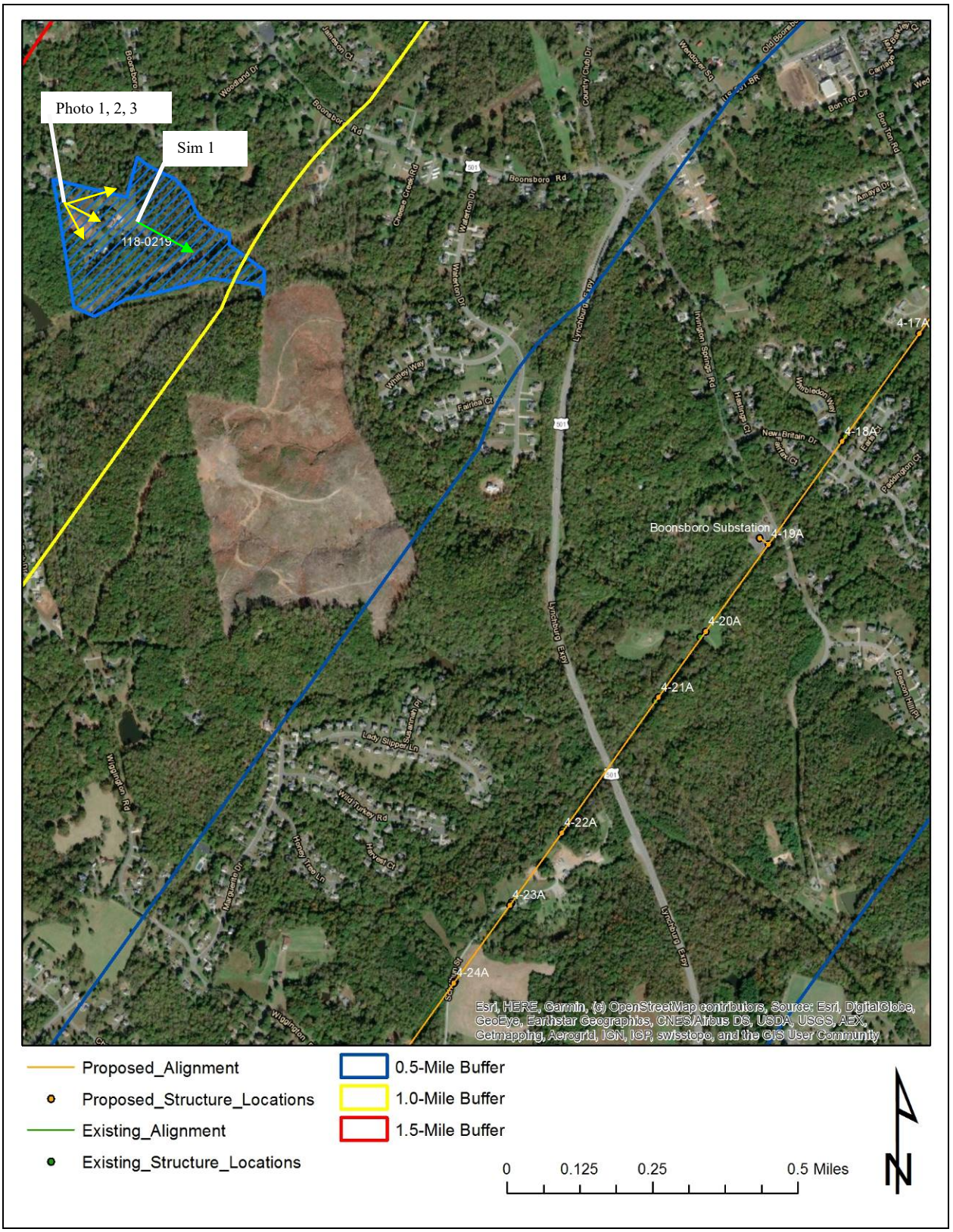

Figure 5-17: Location and Direction of Representative Photos and Simulations from Locust Grove. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS

Photograph 5-24: Locust Grove, front façade – Source: VDHR, facing northwest

Photograph 5-25: View from end of Locust Grove driveway towards the Project (not visible) (Photo Location 1), facing southeast

Photograph 5-26: View from end of Locust Grove driveway towards the Project (not visible) (Photo Location 2), facing southeast

Photograph 5-27: View from the road in front of Locust Grove towards the Project (not visible) (Photo Location 3), facing northeast

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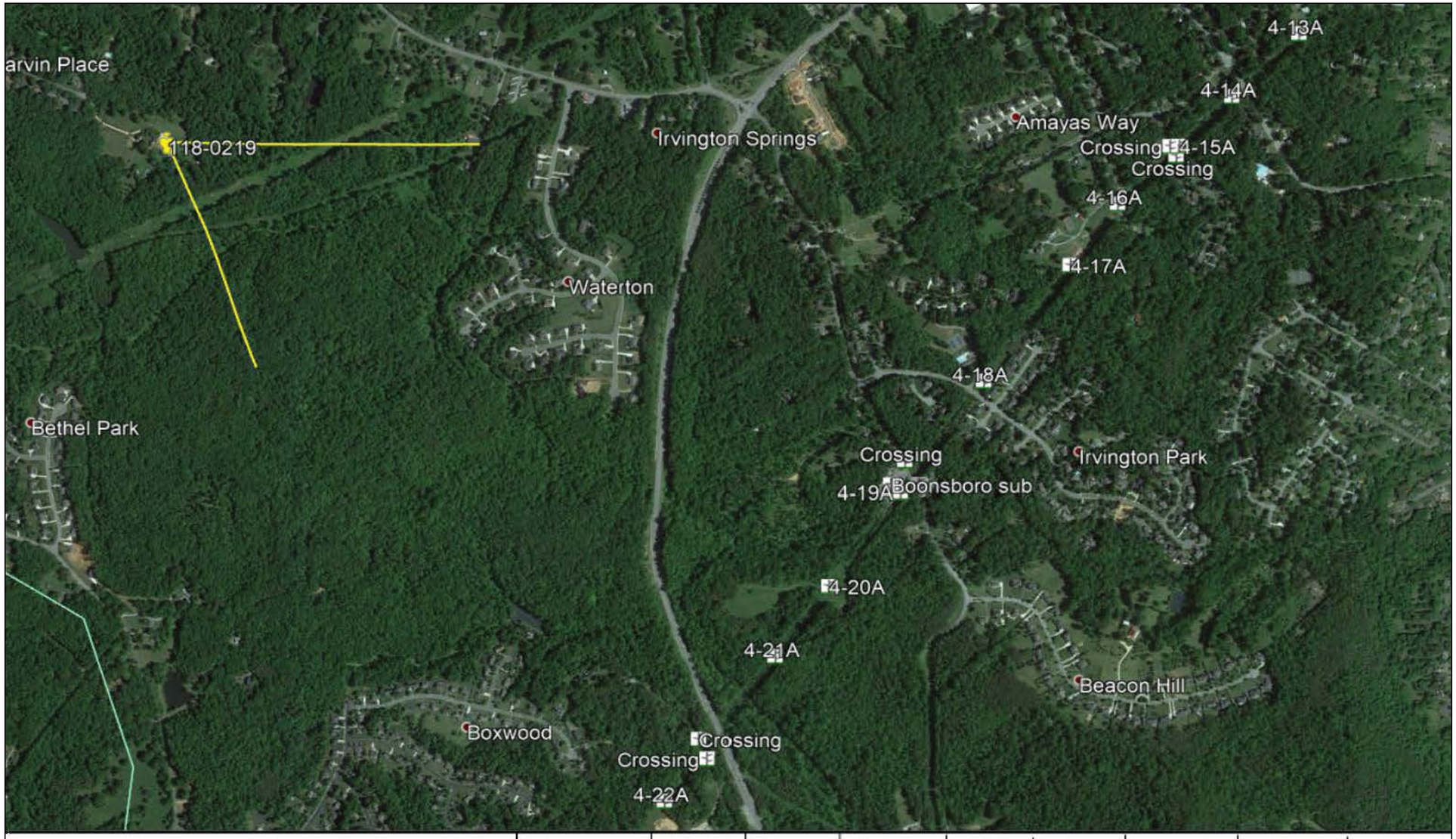

Photo location: 118-0219		Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	Project: Reusens -New London	4-17A	135.0	7305	4-20A	90.0	6471	4-23A	100.0	7125
		4-18A	125.0	6830	4-21A	120.0	6505	4-24A	110.0	7530
		4-19A	105.0	6554	4-22A	125.0	6828	4-25A	115.0	8134

Figure 5-18: Locust Grove Simulation 1 – Location and direction of photograph with list of included structures. Source: GTTE, LLC

	Reusens - New London: Location 118-0219	**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.**	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.**

Figure 5-19: Locust Grove Simulation 1 – Existing view from Locust Grove towards the Project. Source: GTTE, LLC

	Reusens - New London: Location 118-0219	**Proposed View** **(Locations of towers not visible are overlaid with yellow tower icon)**
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.**	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.**

Figure 5-20: Locust Grove Simulation 1 – Proposed view from Locust Grove towards the Project with structures modeled (structures not visible shown in yellow). Source: GTTE, LLC

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Virginia Episcopal School, 400 Virginia Episcopal School Road (VDHR # 118-0224)

The Virginia Episcopal School is symbolic of the many dedicated efforts undertaken by religious institutions at the turn of the century to improve the availability of quality secondary education and to foster allegiance to Christian principles among their youth. Through the late nineteenth century, Virginia and much of the South lacked consistent public-school systems, thus many private organizations had to seize the initiative. Among the more active Virginia institutions in this endeavor was the Episcopal Church, which committed to establishing a system of church schools. In the Diocese of Southern Virginia, the Reverend Robert Carter Jett (later Bishop Jett), envisioned a preparatory school offering educational excellence in a religious environment for boys of moderate means. With the optimism, energy, and commitment typical of the era, Jett secured the necessary funds and support to make his vision a reality. The school was formally opened in 1916 and has been an active, growing institution to the present. Jett had the foresight to realize that much of the success of such a school was dependent on superior facilities and thus engaged the prominent Washington architect, Frederick H. Brooke, to design an appropriately imposing complex. Brooke's dignified Georgian Revival scheme, including classroom and dormitory structures, a chapel, and gymnasium, was largely realized and remains the focal point of the school. The complex is architecturally significant as a cohesive and well-preserved example of a church-affiliated preparatory school of the early twentieth century.

In order to assess the potential impact of the proposed project, visual inspection was conducted of the setting around the resource property with emphasis on views towards the Project. This assessment found that the Virginia Episcopal School property is located roughly 0.45 mile from the Project at its nearest point, although the buildings are spread throughout a large campus that extends nearly 0.58 mile from the Project at the front gate. The Project is located to the north and opposite of the campus viewshed, which faces south. The Reusens substation, which is the northern terminus of the Project, is set roughly 0.53 mile to the northeast. The landscape between the property and the Project is mostly wooded with several clusters of modern suburban housing set along roads and cul-de-sacs.

Inspection from the road in front of the Virginia Episcopal School property found that the existing transmission line and substation are not visible due to improvements within the campus and thick wooded areas to the rear. The numerous buildings and development within the campus, coupled with landscaping throughout the property and wooded areas beyond completely screens all distant views in the direction of the Project. Inspection from within campus revealed slightly more open vistas in the direction of the Project, and from one location, an existing structure on a parallel transmission line behind the Project may be seen, however, the structures included in this Project are not visible. The existing transmission line structures in the vicinity of the property range from approximately 100-feet to 140-feet tall and the proposed replacement structures will range from approximately 95-feet to 140-feet tall. As such, there will be no substantial increase in height, and the structures will be replaced on a one-to-one basis in generally the same location. It is therefore anticipated that the Project will continue to be mostly to completely screened by intervening vegetation and development. This was confirmed with photo simulation that shows the structures will remain behind vegetation,

however, several structures may be seasonally visible through the woods. As such, the Project is not anticipated to introduce any substantial change to the existing setting or viewshed from the property and it is therefore D+A's opinion that the Project will have no more than a ***minimal impact*** on the Virginia Episcopal School.

Figure 5-21 depicts the location of Virginia Episcopal School in relation to the Project with viewshed buffers, photographic views towards the Project, and photo simulations. **Photographs 5-28 through 5-31** are representative photographs of the property, as well as those taken from the property towards the Project. **Figure 5-22** illustrates the location, direction, and structures included in the photo simulation from the property, **Figure 5-23** provides the existing view from the simulation location, and **Figure 5-24** provides a simulated view of the proposed structures.

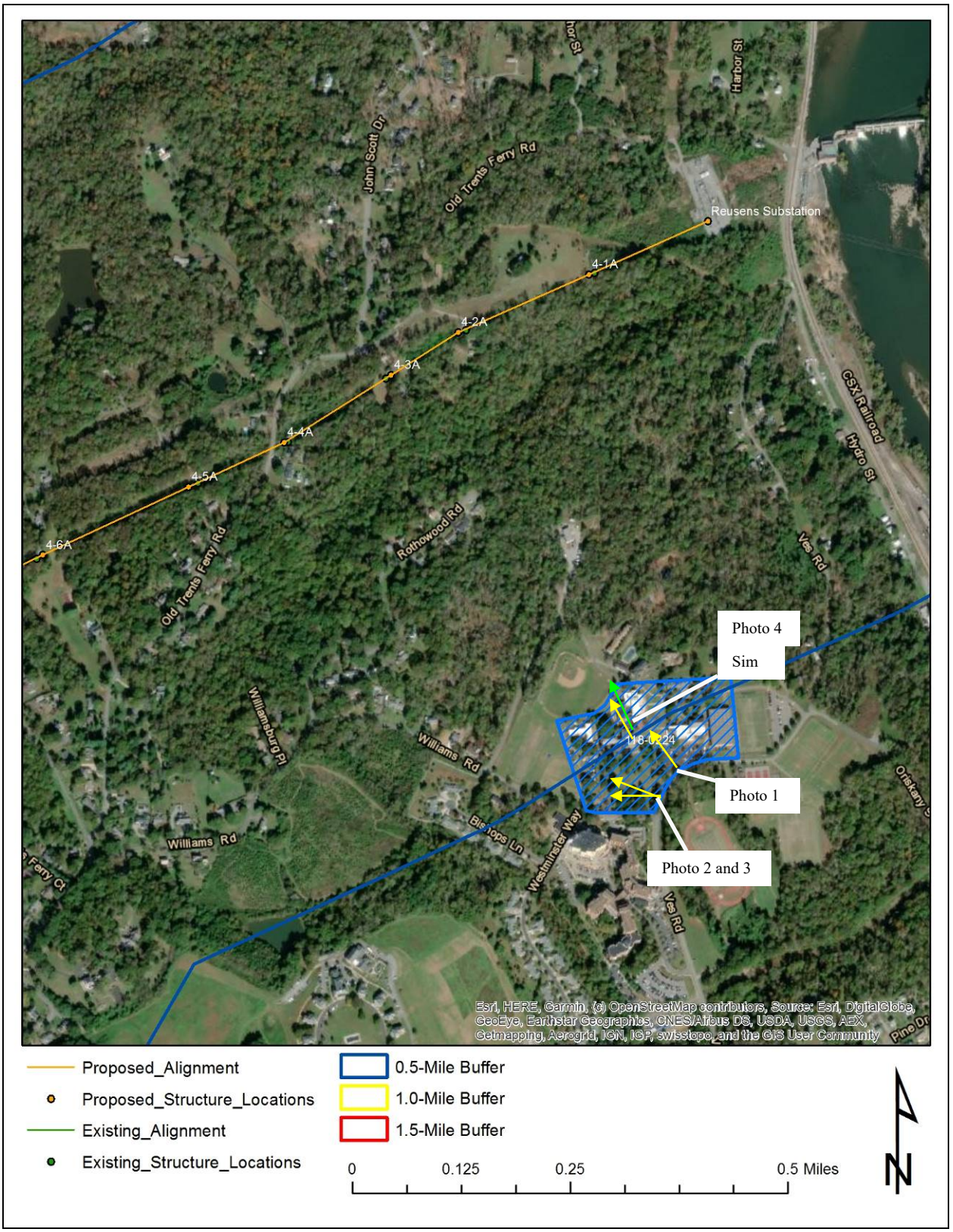

Figure 5-21: Location and direction of representative photos and simulations from Virginia Episcopal School. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS

Photograph 5-28: Virginia Episcopal School campus entrance (Photo Location 1), facing north

Photograph 5-29: View from Williams Road along the front of campus towards the Project (not visible) (Photo Location 2), facing northwest

Photograph 5-30: Virginia Episcopal School view from athletic field towards the Project (not visible) (Photo Location 3), facing northwest

Photograph 5-31: View from central campus towards the Project (not visible) (Photo Location 4), facing north

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Photo location: 118-0224		Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	Project: Reusens -New London	4-1A	109.75	2665	4-4A	109.5	2786			
		4-2A	104.5	2585	4-5A	100	3151			
		4-3A	95	2593						

Figure 5-22: Virginia Episcopal School Simulation 1 – Location and direction of photograph with list of included structures. Source: GTTE, LLC

	Reusens - New London: Location 009-0224	**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.**	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.**

Figure 5-23: Virginia Episcopal School Simulation 1 – Existing view from Virginia Episcopal School towards the Project. Source: GTTE, LLC

	Reusens - New London: Location 009-0224	**Proposed View** **Note: The prominent tower to left of center is not part of the Reausens-New London line and is located aproximately 230ft north of tower 4-3A** **(Locations of towers not visible are overlaid with yellow tower icon)**
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.**	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.**

Figure 5-24: Virginia Episcopal School Simulation 1 – Proposed view from Virginia Episcopal School towards the Project with structures modeled (shown in yellow). Source: GTTE, LLC

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Presbyterian Orphans Home, Linden Avenue (VDHR # 118-5240)

The Georgian Revival style campus of the original Presbyterian Orphans' Home is significant as the oldest Presbyterian orphanage in the state of Virginia. The school was established in 1903 by charter from the General Assembly. The Synod Committee initiated a state-wide search for an appropriate site. Multiple sites throughout the state were reviewed. Lynchburg's proposal was sponsored by local attorney George R. Caskie and local businessman John W. Craddock. The original site purchased was a 317-acre farm with an 1890 farmhouse belonging to Edwin Ivey. The original Board members and Home director were in close contact with Dr. William Plumer Jacobs of Thornwell Orphanage in Clinton SC. Dr. Jacobs was a keen proponent of the "cottage style" of orphanage as opposed to the institutional style. This cottage style was deemed more appropriate to the nurturing of young minds and bodies. The cottage plan is significant as contrast to the two orphanages already established in Lynchburg – the Miller Home, or Lynchburg Female Orphan Asylum, and the Oddfellows Home; both of which consisted of a single, institutional style building. The historic buildings associated with these organizations have been demolished. The Presbyterian Orphans Home was listed in the NRHP in 2007 under Criterion A and C.

In order to assess the potential impact of the proposed project, visual inspection was conducted of the setting around the resource property with emphasis on views towards the Project. This assessment found that the Presbyterian Orphans Home property is located roughly 0.33 mile from the Project at its nearest point although the buildings are scattered throughout a large campus that extends nearly 0.74 mile from the Project at the front gate. The core of the campus is set centrally within the campus, roughly 0.61 mile away. The campus is oriented to the south with the Project crossing the landscape to the rear. The landscape of the property is generally characterized by open, rolling fields with patches of woodland. The landscape between the property and the Project is occupied by a moderately dense development pattern of suburban residential neighborhoods.

Inspection from throughout the Presbyterian Orphans Home property found that the existing transmission line is not visible from any inspected vantage point. The core of the campus is set upon a knoll at the highest point on the property and thus views from the front gate and driveway towards the Project are inhibited by this knoll. The campus core set upon the knoll is relatively open with large expanses of cleared field that allows wide views of the landscape in the direction of the Project, however, the existing transmission line is not visible due to the intervening vegetation and development beyond the Presbyterian Orphans Home property. The existing transmission line structures in the vicinity of the property range from approximately 100-feet to 140-feet tall; and the proposed replacement structures leading out of the substation will range from approximately 95-feet to 140-feet tall. As such, there will be no substantial increase in height, and structures will be replaced on a one-to-one basis in generally the same location. It is therefore anticipated that the Project will continue to be screened by intervening vegetation and development. This was confirmed with photo simulation that shows the structures will remain behind vegetation and not visible. As such, the Project is not anticipated to introduce any change to the existing setting or viewshed from the property and it

is therefore D+A's opinion that the Project will have ***no impact*** on the Presbyterian Orphans Home.

Figure 5-25 depicts the location of Presbyterian Orphans Home in relation to the Project with viewshed buffers, photographic views towards the Project, and photo simulations. **Photographs 5-32 through 5-38** are representative photographs of the property, as well as those taken from the property towards the Project. **Figure 5-26** illustrates the location, direction, and structures included in the photo simulation from the property, **Figure 5-27** provides the existing view from the simulation location, and **Figure 5-28** provides a simulated view of the proposed structures.

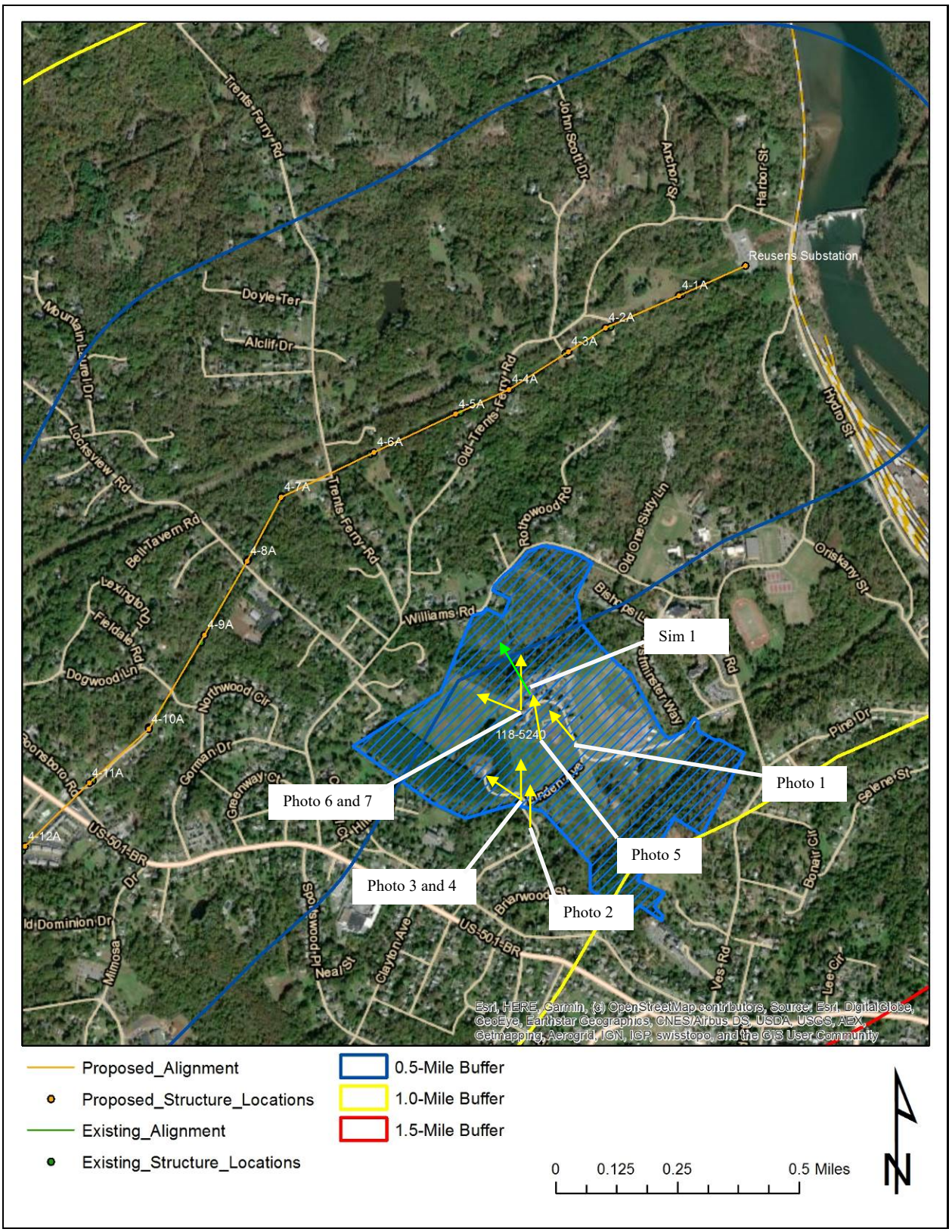

Figure 5-25: Location and direction of representative photos and simulations from Presbyterian Orphans Home. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS

Photograph 5-32: Presbyterian Orphans Home (Photo Location 1), facing north

Photograph 5-33: View from Presbyterian Orphans Home front gate towards the Project (not visible) (Photo Location 2), facing northeast

Photograph 5-34: View from Presbyterian Orphans lower driveway towards the Project (not visible) (Photo Location 3), facing north

Photograph 5-35: View from Presbyterian Orphans lower driveway towards the Project (not visible) (Photo Location 4), facing northwest

Photograph 5-36: View from driveway to Presbyterian Orphans Home towards the Project (not visible) (Photo Location 5), facing northwest

Photograph 5-37: View from Presbyterian Orphans Home main campus towards the Project (not visible) (Photo Location 6), facing north

Photograph 5-38: View from Presbyterian Orphans Home campus core towards the Project (not visible) (Photo Location 7), facing west

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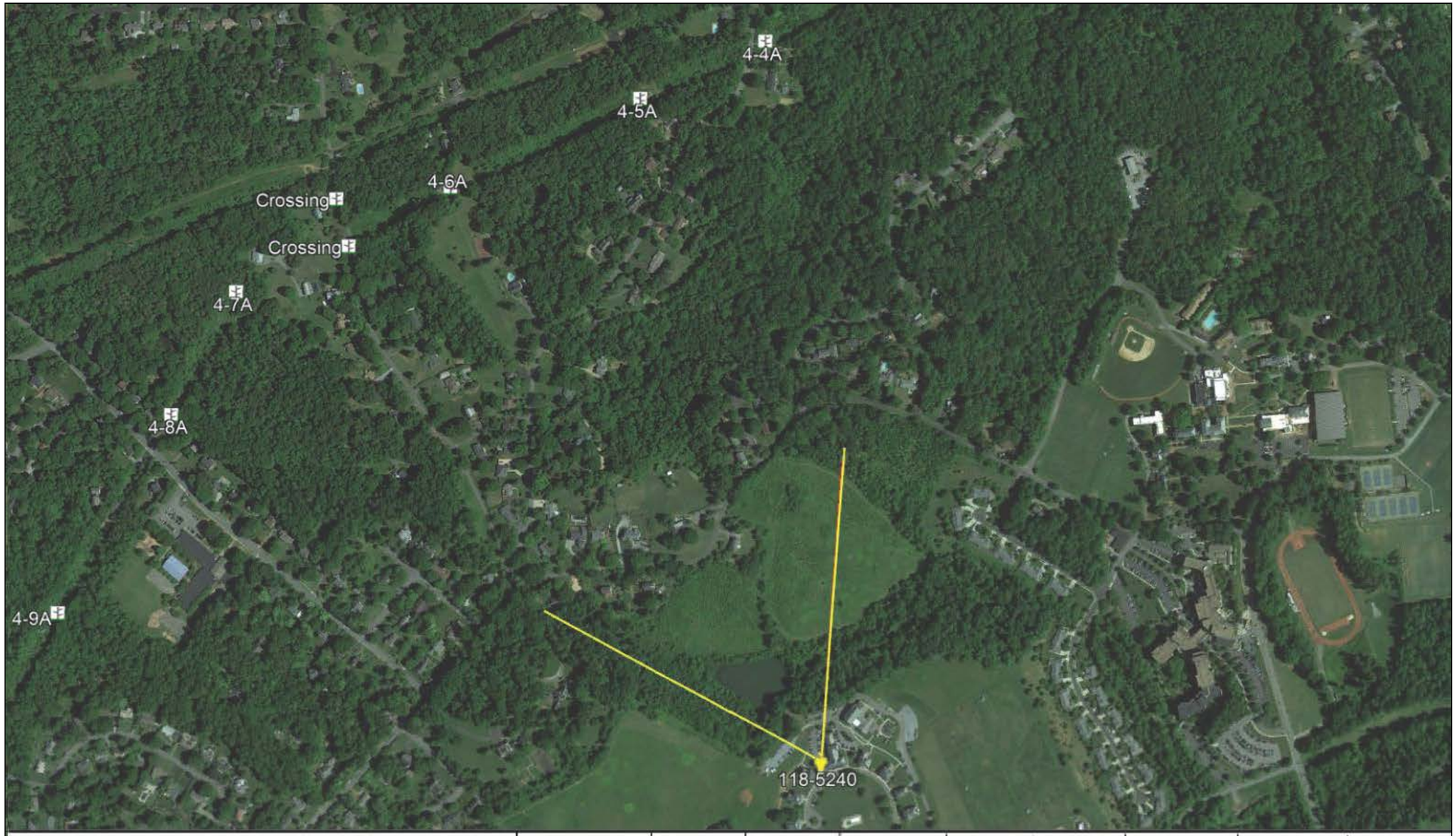

Photo location: 118-5240		Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	Project: Reusens -New London	4-4A	109.5	3362	4-7A	124.75	3501			
		4-5A	100	3197	4-8A	120	3443			
		4-6A	140	3184						

Figure 5-26: Presbyterian Orphans Home Simulation 1 – Location and direction of photograph with list of included structures. Source: GTTE, LLC

	Reusens - New London: Location 118-5240	**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.**	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.**

Figure 5-27: Presbyterian Orphans Home Simulation 1 – Existing view from Presbyterian Orphans Home towards the Project. Source: GTTE, LLC

	Reusens - New London: Location 118-5240	Proposed View (Locations of towers not visible are overlaid with yellow tower icon)
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.	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.

Figure 5-28: Presbyterian Orphans Home Simulation 1 – Proposed view from Presbyterian Orphans Home towards the Project with structures modeled (structures not visible shown in yellow). Source: GTTE, LLC

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NATIONAL REGISTER OF HISTORIC PLACES-ELIGIBLE PROPERTIES

Located within 0.5 mile of the Project

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Reusens Dam, Hydro Road (VDHR # 118-0218)

The Reusens Dam spans the James River at the north edge of the Lynchburg city limits and is a gravity structure of granite block and concrete. The resource was determined eligible for listing in the NRHP by the VDHR in 1977 as representative and emblematic of early twentieth-century construction methods.

In order to assess the potential impact of the proposed project, visual inspection was conducted of the setting around the resource property with emphasis on views towards the Project. This assessment found that the Reusens Dam property is located immediately adjacent to the Reusens substation which is the northern terminus of the Project. It also lies directly beneath another existing transmission line not included in this Project. The dam stretches across the James River and the adjacent landscape is moderately to steeply sloped and wooded on both sides. The main powerhouse and interconnect for the dam's hydroelectric system is located on the south bank of the river, nearest the Reusens substation and northern terminus of the Project.

Inspection from the resource on the south side of the river found that the existing transmission line not included in this Project is highly visible as it crosses the river directly above the dam. The existing Reusens substation is visible up the steep bluff from the dam, however, the Project alignment that extends from the substation is screened by topography and the angle of view. Inspection was not possible from the north side of the dam or river as it is all private property with no public access or vantage points. The existing transmission line structure within the Reusens substation is 88-feet tall and will remain so as part of the Project. The nearest structures leading out of the substation included in this Project range from 100-feet to 104-feet tall and the proposed replacement structures will range from 95-feet to 115-feet tall. As such, there will be a slight increase in structure height, however structures will be replaced on a one-to-one basis in generally the same location. It is therefore anticipated that visibility of the substation and structures will remain similar following the Project. This was confirmed with photo simulation that shows all structures included in this Project leading out of the Reusens substation will remain screened behind the slope of the landscape. As such, the Project will not introduce any change of viewshed or setting for the property. It is further noted that as a hydroelectric dam, transmission lines and structures are an integral component of the dam's operation and design. It is therefore D+A's opinion that the proposed project will have ***no impact*** on the Reusens Dam.

Figure 5-29 depicts the location of Reusens Dam in relation to the Project with viewshed buffers, photographic views towards the Project, and photo simulations. **Photographs 5-63 through 5-66** are representative photographs of the property, as well as those taken from the property towards the Project. **Figure 5-30** illustrates the location, direction, and structures included in the photo simulation from the property, **Figure 5-31** provides the existing view from the simulation location, and **Figure 5-32** provides a simulated view of the proposed structures.

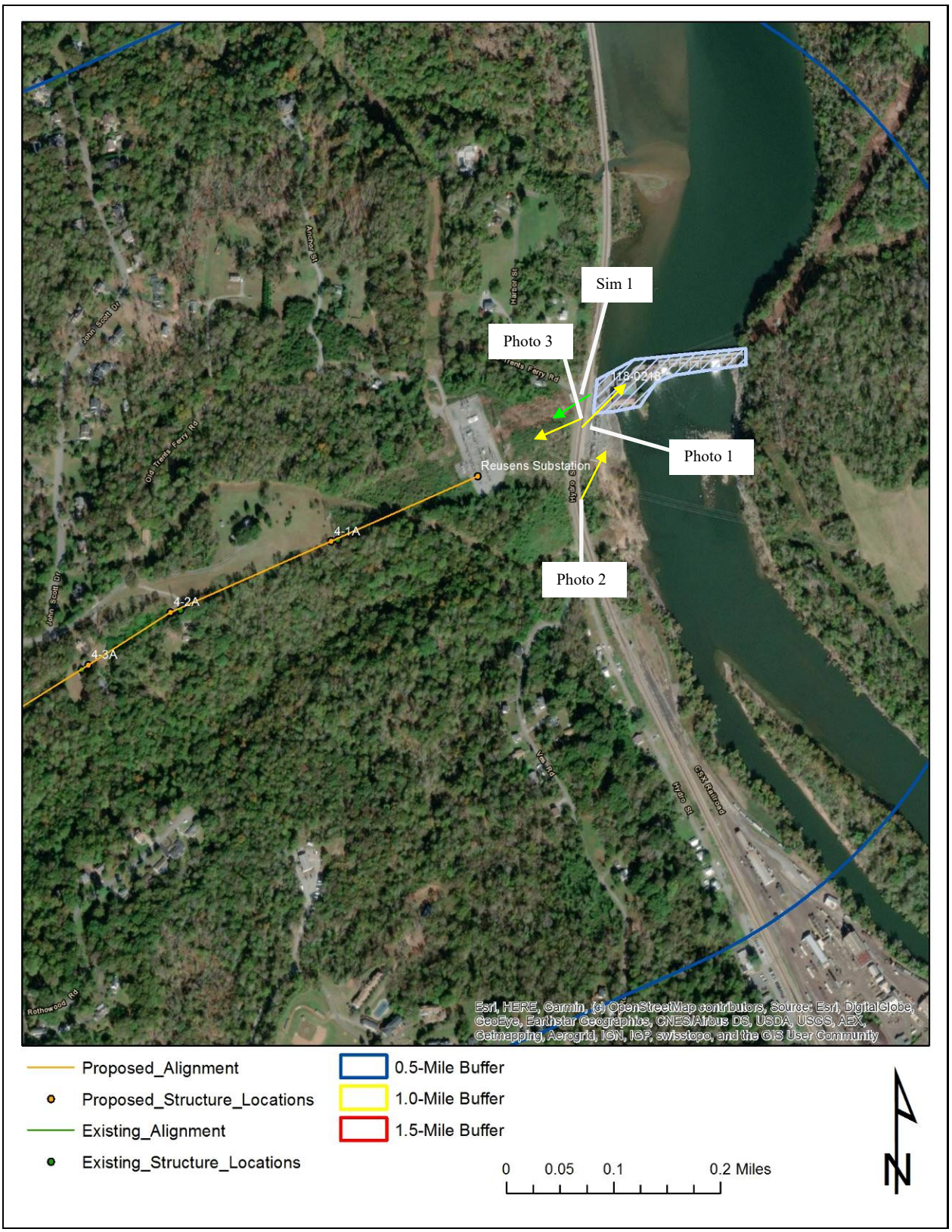
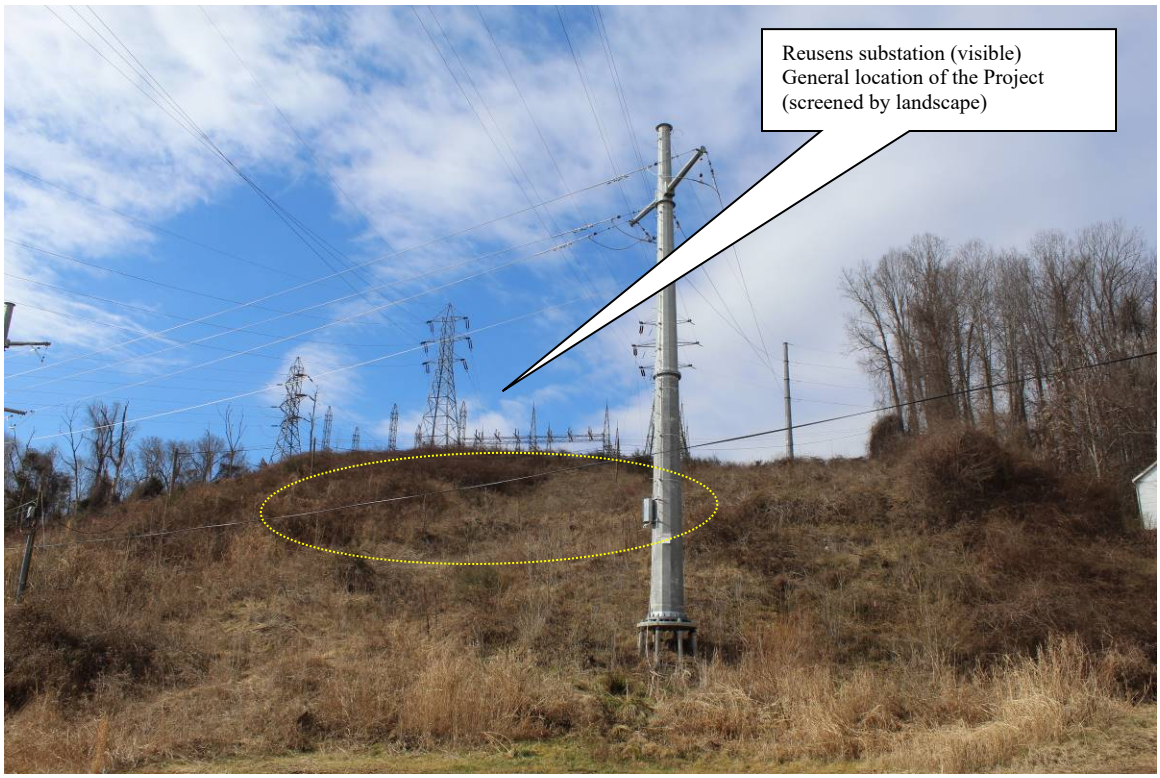


Figure 5-29: Location and direction of representative photos and simulations from Reusens Dam. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS

Photograph 5-39: Reusens Dam (Photo Location 1), facing northwest

Photograph 5-40: Reusens Dam setting showing existing transmission lines not associated with this Project leading to the Reusens substation (Photo Location 2), facing northwest



Photograph 5-41: Reusens Dam towards the Project (substation is visible, the rest of alignment and structures are set below horizon) (Photo Location 3), facing southwest

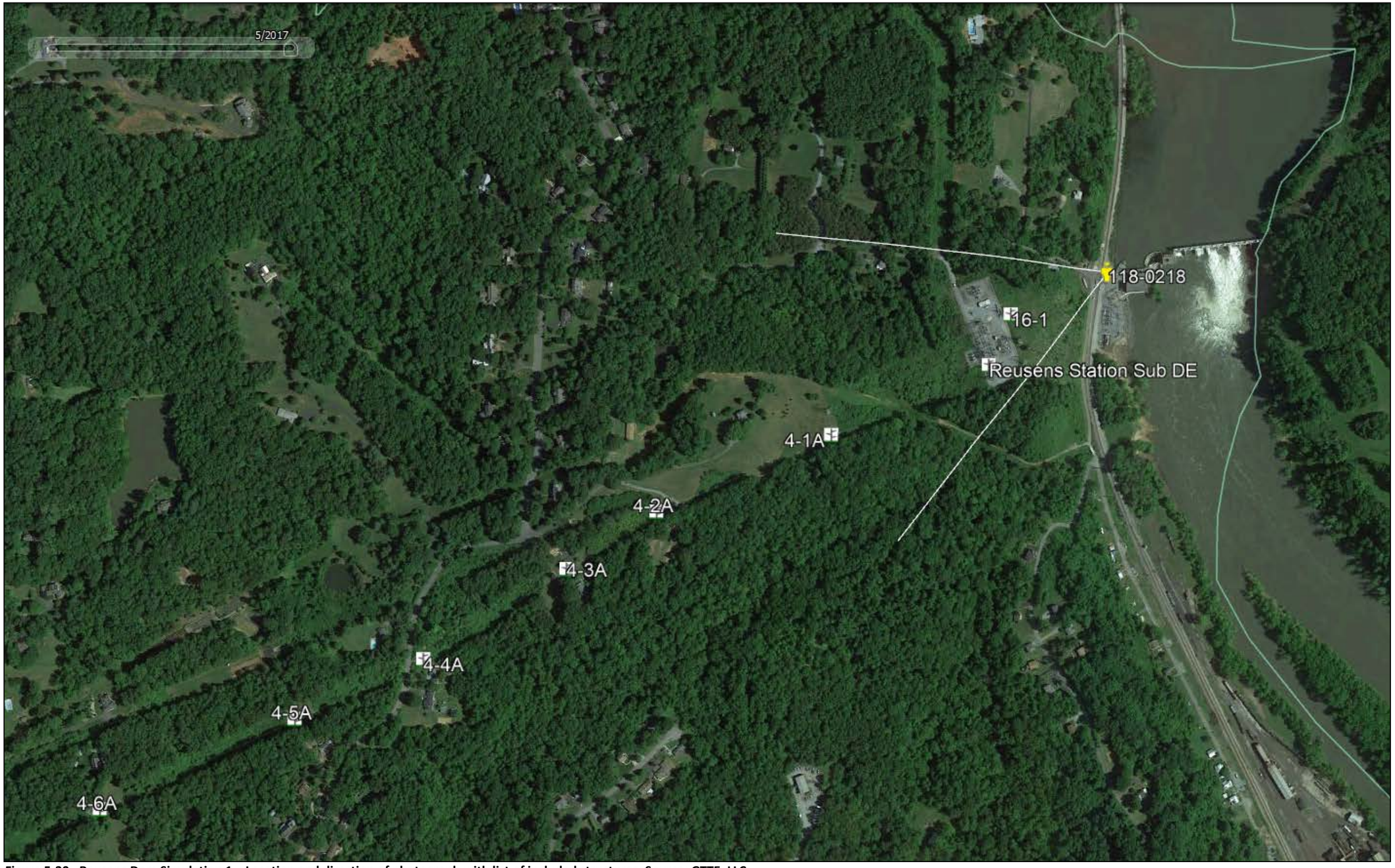


Figure 5-30: Reusens Dam Simulation 1 – Location and direction of photograph with list of included structures. Source: GTTE, LLC

	Reusens - New London: Location 118-0218	**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.**	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.**

Figure 5-31: Reusens Dam Simulation 1 – Existing view from Reusens Dam towards the Project. Source: GTTE, LLC

	Reusens - New London: Location 118-0218	**Proposed View Note: The prominent tower 16-1 is included center though the build is is part of Amherst-Reusens. (Locations of towers not visible are overlaid with yellow tower icon)**
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.**	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.**

Figure 5-32: Reusens Dam Simulation 1 – Proposed view from Reusens Dam towards the Project with structures modeled (structures not visible shown in yellow). Source: GTTE, LLC

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6. SUMMARY OF POTENTIAL IMPACTS

As part of this pre-application analysis of cultural resources for the approximately 11.6-mile portion of the Reusens – Altavista 138 kV transmission line to be rebuilt, potential impacts to previously recorded historic properties listed or considered eligible for listing in the NRHP within the VDHR-defined buffered tiers were assessed in accordance with the VDHR guidelines. For the purposes of this analysis, an impact 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. According to VDHR guidance, impacts are characterized as such:

- **None** – Project is not visible from the property.
- **Minimal** – Occur within viewsheds that have existing transmission lines, locations where there will only be a minor change in tower height, and/or views that have been partially obstructed by intervening topography and vegetation.
- **Moderate** – Include viewsheds with expansive views of the transmission line, more dramatic changes in the line and tower height, and/or an overall increase in the visibility of the route from the historic properties.
- **Severe** – Occur within viewsheds that do not have existing transmission lines and where the views are primarily unobstructed, locations where there will be a dramatic increase in tower visibility due to the close proximity of the route to historic properties, and viewsheds where the visual introduction of the transmission line is a significant change in the setting of the historic properties.

With regards to architectural resources, eight historic properties that are either designated an NHL, listed in, or determined eligible for listing in the NRHP are located within the defined study tiers. This includes one NHL located within 1.5 mile of the Project, six NRHP-listed properties located within 1.0 mile of the Project, and one NRHP-eligible property located within 0.5 mile of the Project.

Field inspection reveals that the existing transmission line to be rebuilt as part of this Project is partially visible from two of the NRHP-listed properties as it crosses through a relatively open landscape near the Town of Forest, and is not visible from the other historic properties along the length of the alignment due to the rolling topography of the region and thick wooded areas that border much of the alignment. Representative photographs and simulations prepared as part of this effort reveal that where the existing transmission line is visible from two of the historic properties, the structures to be rebuilt as part of this effort will remain visible, in a slightly taller and different configuration; however, there will not be any increased visibility of additional structures. Representative photographs and simulations

further reveal that despite the increase in structure height as part of the rebuild, the Project will remain screened from view by topography and vegetation from those resources and locations where it is currently not visible. It is therefore D+A's opinion that the Project will have no more than a ***minimal impact*** on any NHLs, NRHP-listed, or eligible historic properties (**Table 6-1**).

Table 6-1: Potential Impacts Summary for Architectural Resources.

VDHR ID #	Resource Name	NRHP Status	Distance to Project	Impact
009-0027	Poplar Forest Thomas Jefferson's Retreat, 1548 Bateman Bridge Road	NHL	1.12 mile	No Impact
009-0033	Woodbourne, Route 609	NRHP-Listed	0.14 mile	Minimal Impact
009-0065	Rothsay, 15660 Forest Road	NRHP-Listed	Adjacent	Minimal Impact
009-5283	Bowling Eldridge House, 1651 Fox Hill Road	NRHP-Listed	0.92 mile	No Impact
118-0218	Reusens Dam, Hydro Road	NRHP-Eligible	Immediately Adjacent	Minimal Impact
118-0219	Locust Grove, 147 Marvin Place	NRHP-Listed	1.0 mile	No Impact
118-0224	Virginia Episcopal School, 400 Virginia Episcopal School Road	NRHP-Listed	0.45 mile	Minimal Impact
118-5240	Presbyterian Orphans Home, Linden Avenue	NRHP-Listed	0.33 mile	No Impact

With regards to archaeology, there are no previously recorded sites within or immediately adjacent to the Project ROW. As such, the project will impose **no impact** on any known archaeological sites.

7. REFERENCES

National Park Service
2009 "Civil War Sites Advisory Commission Report Update and Resurvey," American Battlefield Protection Program

Virginia Department of Historic Resources
2008 *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia*

Virginia Department of Historic Resources
2021 Virginia Cultural Resource Information System (VCRIS) database and GIS server.

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