

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

REPORT >

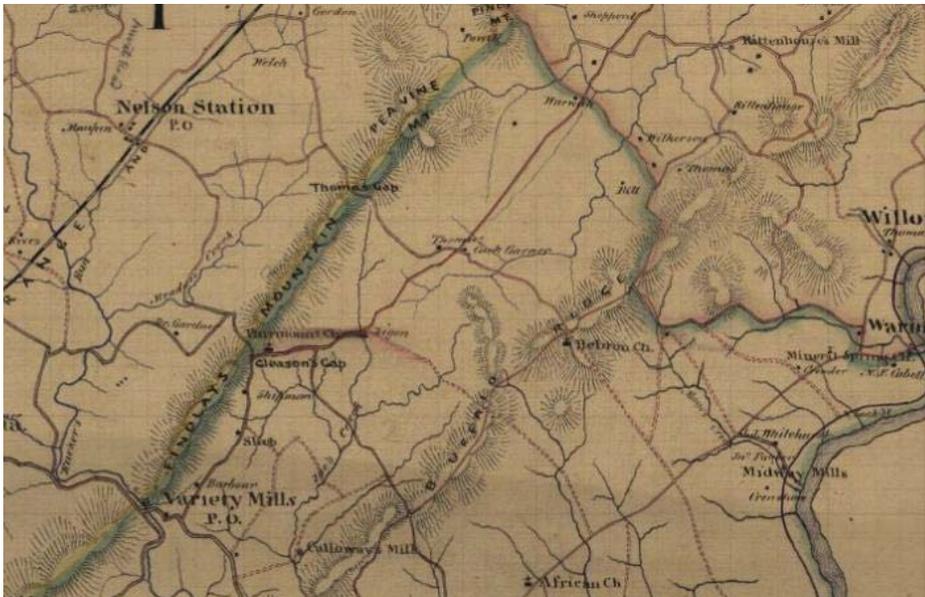
SCC Pre-Application Analysis Cultural Resources for Component 4 (Amherst – Reusens 69 kV Transmission Line Rebuild) Of the Central Virginia Transmission Reliability Project

LOCATION > Amherst County and the City of Lynchburg, Virginia

DATE > DECEMBER 2020

PREPARED FOR >

POWER Engineers, Inc.



PREPARED BY >

Dutton + Associates, LLC

Dutton + Associates

CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

PROJECT REVIEW # >

**SCC Pre-Application Analysis
Cultural Resources for Component 4 (Amherst – Reusens 69 kV
Transmission Line Rebuild) of the Central Virginia Transmission
Reliability Project**

Amherst County and the City of Lynchburg, Virginia

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December 2020

ABSTRACT

Dutton + Associates, LLC (D+A) conducted a Pre-Application Analysis (Analysis) of cultural resources for the Amherst-Reusens 69 kV Transmission Line Rebuild Component (Component 4) in Amherst County and the City of Lynchburg, Virginia as part of the Central Virginia Transmission Reliability Project (CVTRP). The Analysis was performed for POWER Engineers, Inc. on behalf of Appalachian Power Company (Appalachian Power) 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).

As part of the CVTRP, Appalachian Power proposes to rebuild the existing Amherst-Reusens 69 kV Transmission line. The Amherst – Reusens 69-kV Transmission Line is located primarily in Amherst County (12.1 miles) and includes a short span over the James River and into the City of Lynchburg (approximately 1,000 feet) to reach the Reusens Substation. Alignment shifts along the transmission line to be rebuilt are proposed in order to minimize impacts to residential areas and hydroelectric dam facilities.

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 Component 4, all historic properties listed in the National Register of Historic Places (NRHP) or battlefields located within 1.0 mile of Component 4, all historic properties considered eligible for listing in the NRHP located within 0.5 mile of Component 4, and all archaeological sites located directly within or adjacent to Component 4. 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 Component 4 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 Virginia Department of Historic Resources (VDHR) Virginia Cultural Resource Information System (VCRIS) inventory records revealed a total of 108 previously recorded architectural resources are located 1.5 miles of Component 4. Of these, there are no NHLs located within 1.5 miles of Component 4, five (5) properties listed in the NRHP and no battlefields located within 1.0 mile of Component 4, and three (3) properties that have been determined eligible for listing in the NRHP within 0.5-miles of Component 4.

The VCRIS also revealed there are eleven (11) previously recorded archaeological sites within 1.0 mile of Component 4, one (1) of which is located within or adjacent to Component 4 right-of-way (ROW). That site has been determined potentially eligible for listing in the NRHP by the VDHR.

Field inspection reveals that the existing Amherst-Reusens 69 kV Transmission Line is not visible from most of the NRHP-listed and eligible properties due to the rolling topography of the region and thick wooded areas that border the ROW for much of its alignment. The exceptions are the two resources located adjacent to the James River where the open landscape permits views of the existing line as it crosses the river. Representative photographs and simulations prepared as part of this effort reveal that despite the increase in structure height as part of the rebuild, Component 4 will remain screened from view by topography and vegetation from those resources and locations where it is currently not visible and will remain visible with a slight change in configuration from the two resources where it is already visible. It is therefore D+A's opinion that Component 4 will have no more than a **minimal impact** on any NRHP-listed or eligible historic properties.

Table of Potential Impacts Summary for Architectural Resources.

VDHR ID #	Resource Name	NRHP Status	Distance to Component 4	Impact
005-0223	Bibbie House, Rt. 604	NRHP-Eligible	0.33 mile	No Impact
005-5029	Oak Lawn, 155 Winridge Drive	NRHP-Listed	0.18 mile	No Impact
005-5329	Hanshill, 142 Leftwich Road	NRHP-Listed	0.15 mile	Minimal Impact
009-5283	Bowling Eldridge House, 1651 Fox Hill Road	NRHP-Listed	0.92 mile	No Impact
118-0138	Lavino Furnace, Virginia Episcopal School Road	NRHP-Eligible	0.48 mile	Minimal Impact
118-0218	Reusens Dam, Hydro Road	NRHP-Eligible	Immediately Adjacent	Minimal Impact
118-0224	Virginia Episcopal School, 400 Virginia Episcopal School Road	NRHP-Listed	0.57 mile	No Impact
118-5240	Presbyterian Orphans Home, Linden Avenue	NRHP-Listed	0.76 mile	No Impact

With regards to archaeology, there is one previously recorded site within or immediately adjacent to Component 4. This resource has been determined potentially eligible for listing in the NRHP by the VDHR. No archaeological field work was conducted as part of this effort and previously recorded sites within or adjacent to Component 4 were not visited or assessed at this time, but should be assessed for existing conditions and project impacts as additional project construction details become available.

Table of Potential Impacts Summary for Archaeological Resources.

VDHR ID #	NRHP Status	Proximity to Component 4	Impacts
44CP0066	DHR Staff: Potentially Eligible	Adjacent to ROW	TBD

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1. INTRODUCTION

In November 2020, Dutton + Associates, LLC (D+A) conducted a Pre-Application Analysis (Analysis) of cultural resources for the Amherst-Reusens 69 kV Transmission Line Rebuild Component (Component 4) in Amherst County and the City of Lynchburg, Virginia. Component 4 is part of the Central Virginia Transmission Reliability Project (CVTRP). The analysis was performed for POWER Engineers, Inc. on behalf of Appalachian Power Company (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 Component 4, properties listed on the National Register of Historic Places (NRHP), battlefields, and historic landscapes located within a 1.0 mile buffer around Component 4, properties previously determined eligible for listing in the NRHP located within a 0.5 mile buffer area around Component 4, and previously identified archaeological resources directly within Component 4. 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.

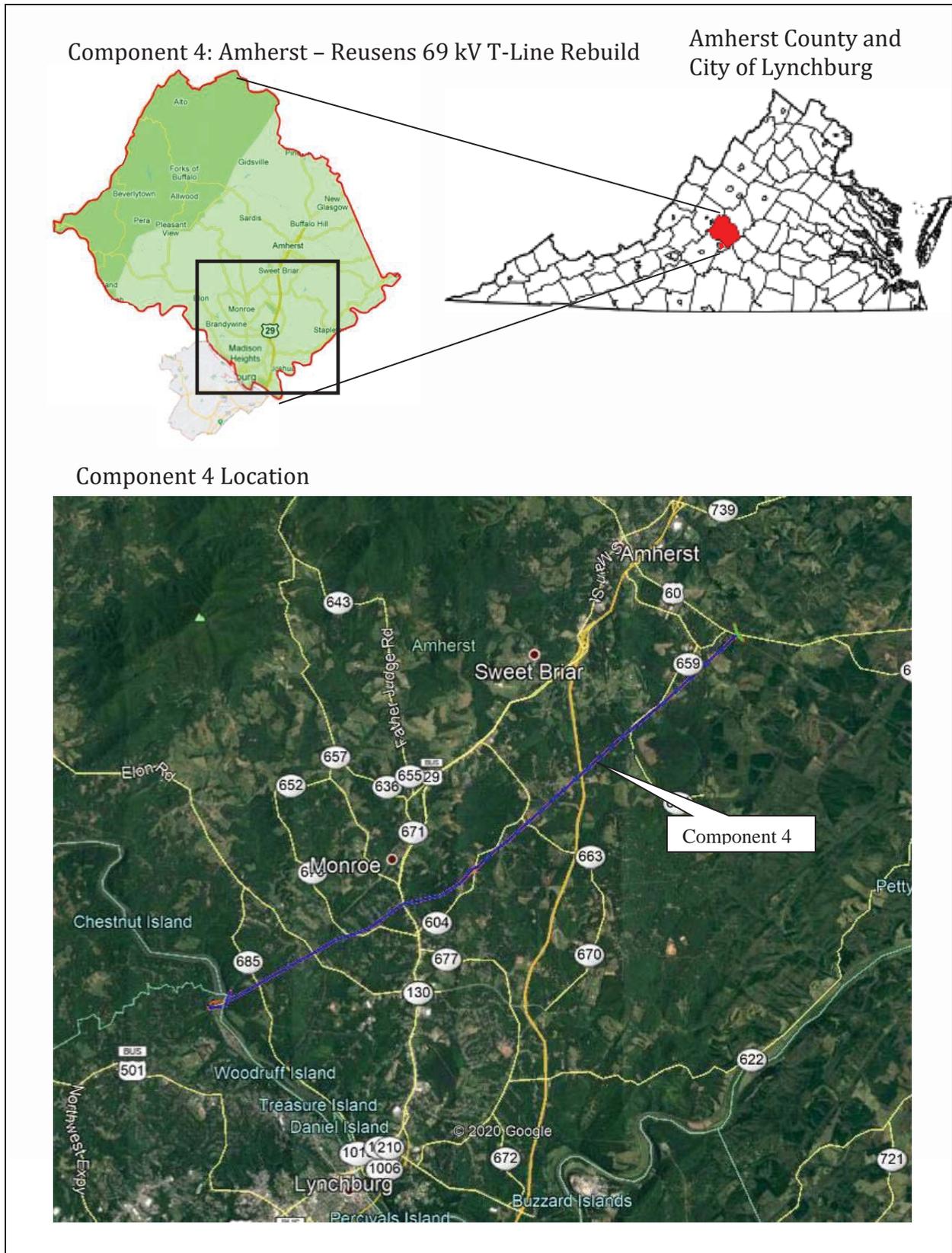
This report contains a research design which describes the scope and methodology of the analysis, discussion of previously identified historic properties, and an assessment of potential impacts. D+A Senior Architectural Historian Robert J. Taylor, Jr. M.A. served as Principal Investigator and oversaw 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) is planning to upgrade the local electric transmission grid in five central Virginia counties: Amherst, Appomattox, Albemarle, Campbell and Nelson (“the Central Virginia Transmission Reliability Project” or “CVTRP”). The CVTRP provides a new electrical source for the region, increases reliability to customers and supports the retirement of aging equipment. The Amherst-Reusens 69 kV Transmission Line Rebuild is a component (Component 4) of the CVTRP.

As part of the CVTRP, Appalachian Power proposes to rebuild Component 4. Component 4 is located primarily in Amherst County (12.1 miles) and includes a short span over the James River and into the City of Lynchburg (approximately 1,000 feet) to reach the Reusens Substation. The existing structures for Component 4 consist of primarily single-circuit wooden, H-frame structures and double-circuit lattice towers at the James River span. The Company plans to rebuild the existing transmission line using steel, H-frame or three-pole structures. Double-circuit lattice tower structures will likely be used to span across the James River. The existing transmission line structures are approximately 45 to 90 feet tall, with an average structure height of 50 feet tall. The anticipated structure heights of the proposed 69 kV transmission line range from 50 feet to 90 feet tall with an average height of approximately 65 feet, and will generally be replaced near or adjacent to existing structure locations. The existing transmission line between the Amherst, Monroe, and Reusens substations will be rebuilt in or near its existing ROW, which varies between 60 feet and 100 feet wide. Alignment shifts along the transmission line to be rebuilt are proposed in order to minimize impacts to residential areas and hydroelectric dam facilities. Maps illustrating the 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 and 2-8**, and images of representative structures are in **Figure 2-9**.



CENTRAL VIRGINIA TRANSMISSION RELIABILITY PROJECT

AMHERST - REUSENS

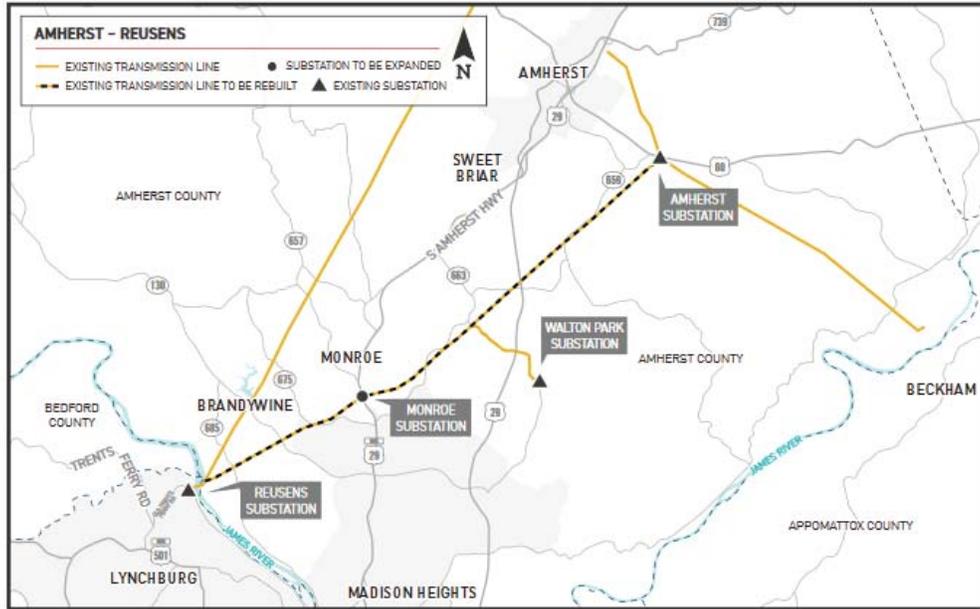


Figure 2-2: Overview Map of the Amherst-Reusens 69 kV Transmission Line Rebuild Component (Component 4). Source: Appalachian Power

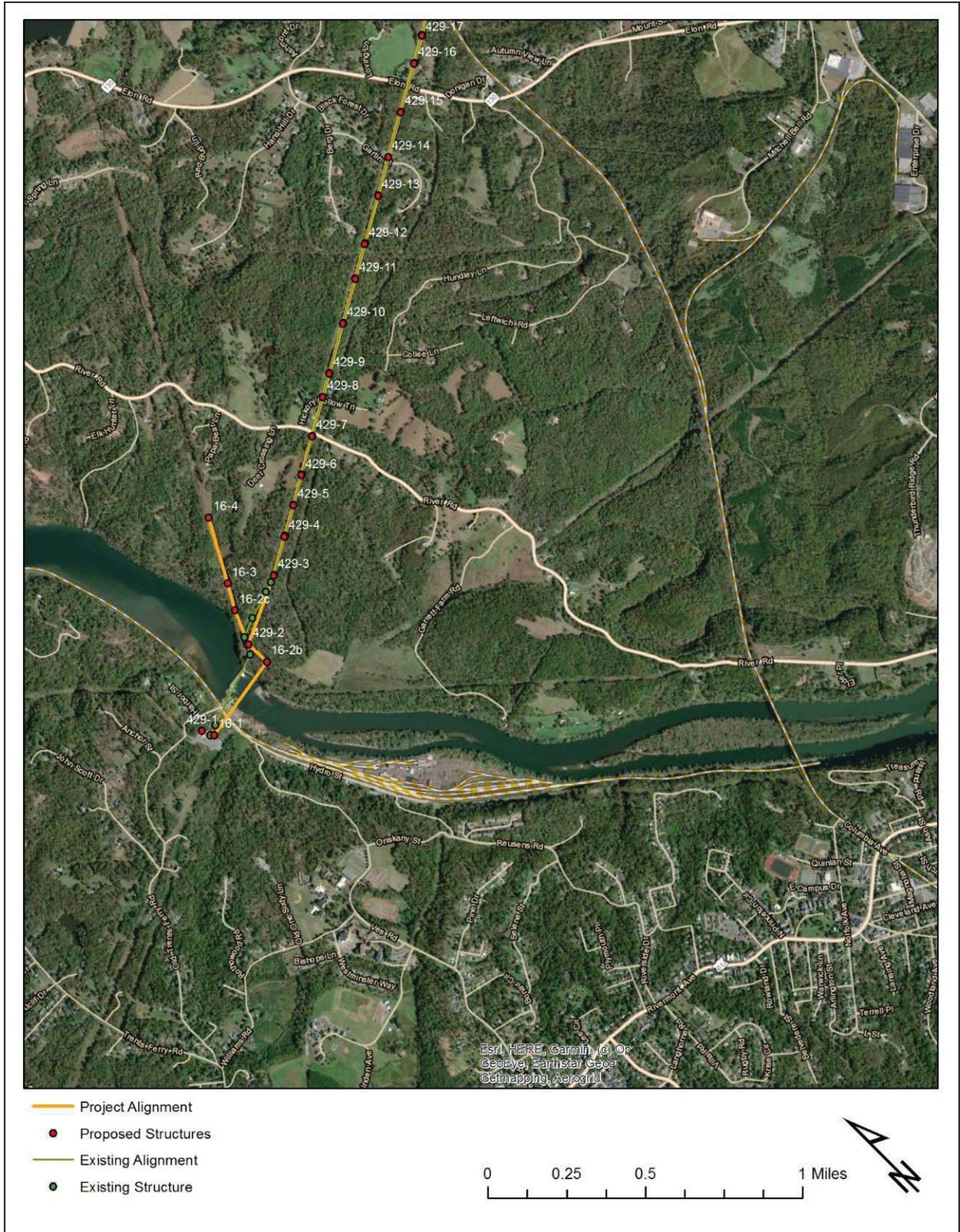


Figure 2-6: Component 4 Alignment and Structure Locations (Map 4 of 4)

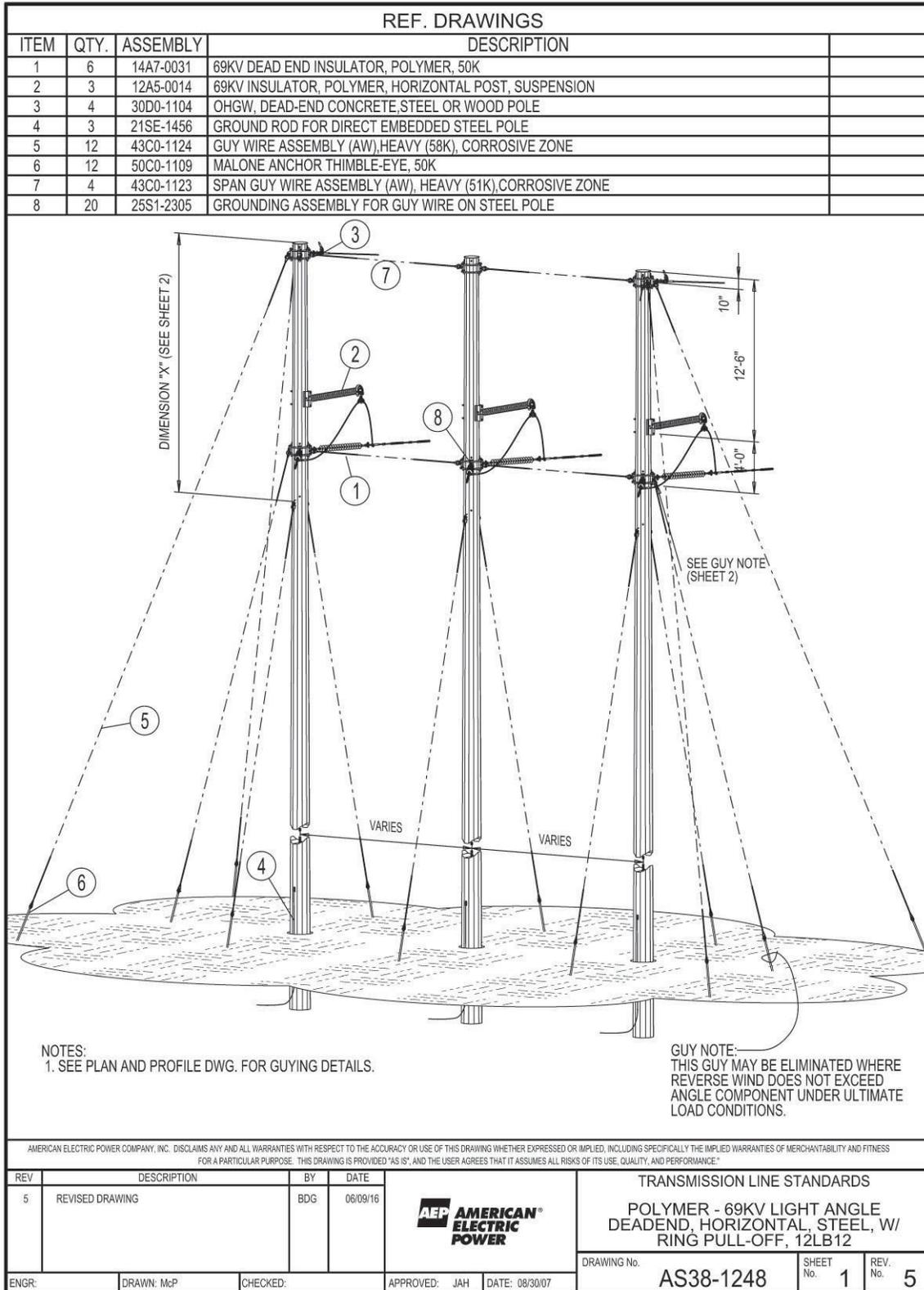


Figure 2-7: Representative Proposed Three-Pole Double-Circuit Structures

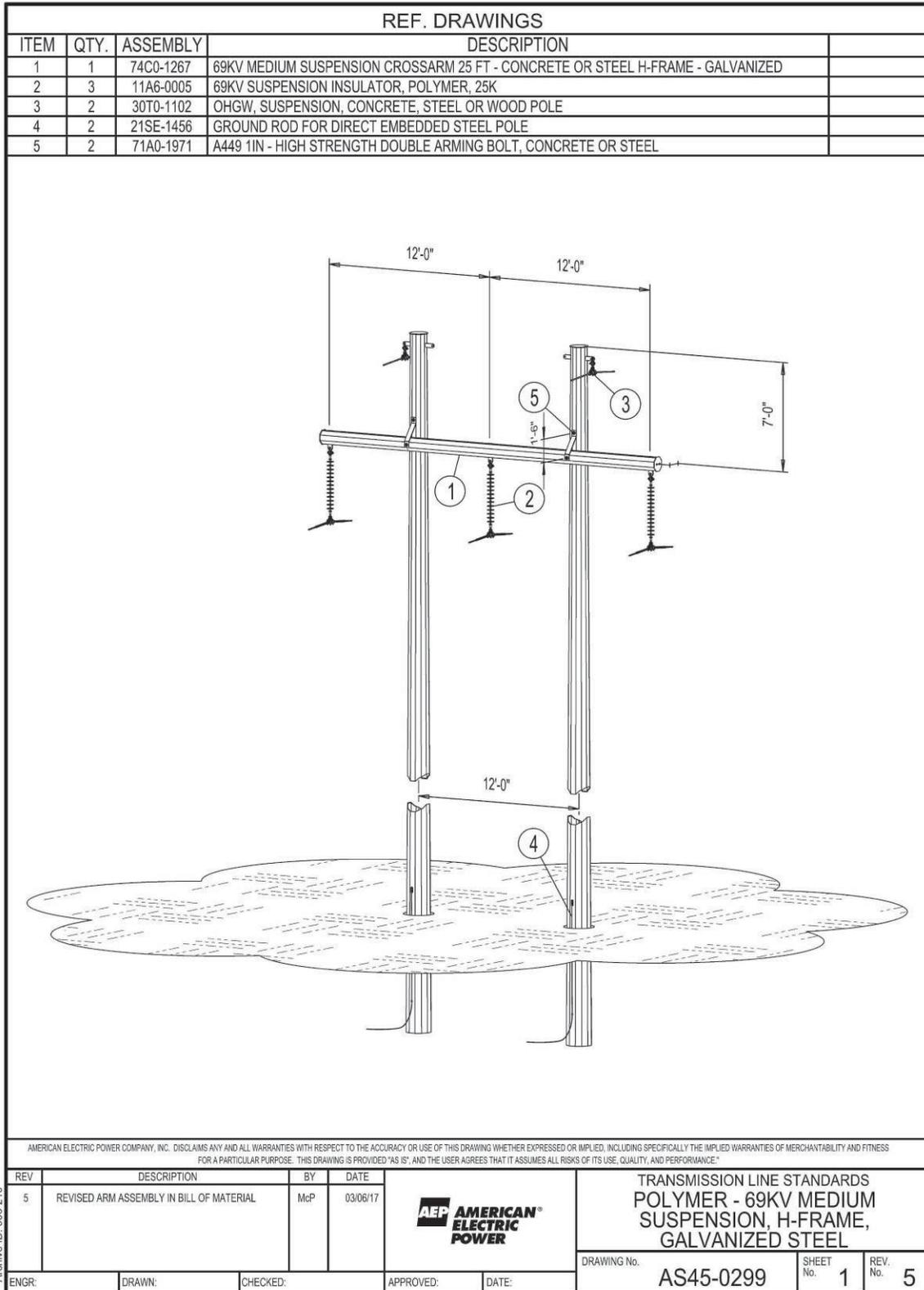


Figure 2-8: Representative Proposed H-Frame Structures

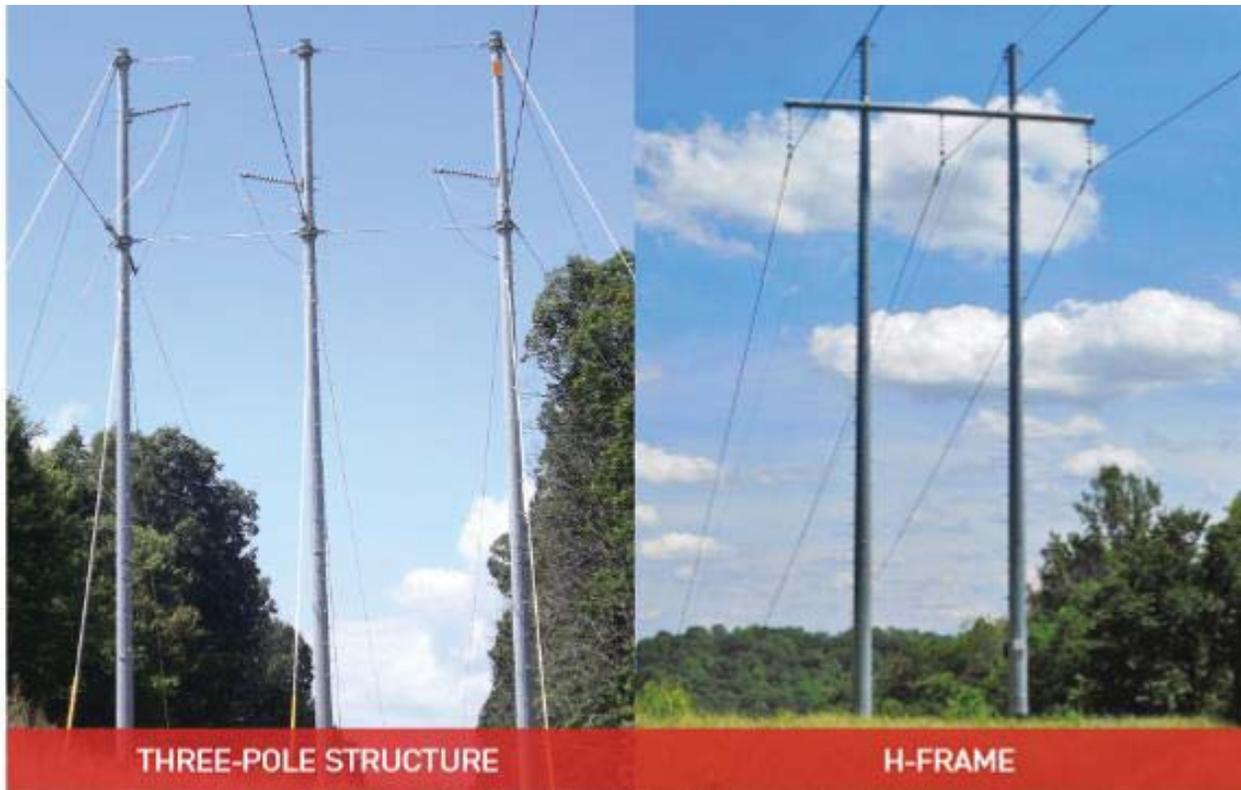


Figure 2-9: Representative Replacement Structures

3. RESEARCH DESIGN

The intent of this Analysis was to identify all known historic properties within the vicinity of Component 4 of the Project in order to assess them for potential impacts brought about by Component 4. 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 October 2020, 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 Component 4, all historic properties listed in the NRHP, battlefields, and historic landscapes located within 1.0 mile of Component 4, all historic properties previously determined eligible for listing in the NRHP located within 0.5 mile of Component 4, and all properties located directly within Component 4.

FIELD RECONNAISSANCE

Field reconnaissance included visual inspection of previously recorded historic properties listed in the NRHP located within 1.0 mile of Component 4, and all properties considered eligible for listing in the NRHP within 0.5 mile of Component 4. Visual inspection included digital photo documentation of each property's existing conditions including its setting and views toward Component 4. 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 Component 4 of 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 this 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 Component 4 of the Project had 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 proposed 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 viewshed).

REPORT PREPARATION

The results of the archival resource, 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 seven (7) prior Phase I cultural resource surveys conducted within 1.0 mile of Component 4, including five (5) that included portions of or overlapped with Component 4. These surveys are at minimum archaeological in nature, although some include architectural resources as well. The five surveys that include portions of Component 4 include reconnaissance surveys for transportation and utility projects. A list of previously conducted surveys within 1.0 mile of Component 4 are included in **Table 4-1** and illustrated in **Figure 4-1**.

Table 4-1: Previously Conducted Cultural Resource Surveys Within 1.0 mile of Component 4. Source: VDHR.

VDHR Survey #	Title	Author	Date
AH-015	A Phase I Cultural Resource Technical Report of a Section of Route 657, Amherst County, Virginia	James Madison University (Archaeological Research Center/Laboratory)	1987
AH-018*	A Cultural Resource Planning Overview of the Proposed Route 29 Project, Amherst and Campbell Counties, Virginia	William and Mary Center for Archaeological Research	1989
AH-025*	Phase IA Archaeological Investigation, Reusens Hydroelectric Project, No. 2376, Amherst, Bedford and Campbell Counties, Virginia	Louis Berger Group (Louis Berger and Associates)	1991
AH-029*	Phase 1 Cultural Resource Survey along a Proposed Alternate Section of the Route 29 Lynchburg Bypass in Amherst County, Virginia	Virginia Commonwealth University Archaeology Research Center	1994
AH-031	The Phase I Cultural Resource Survey of the Coolwell Recreation Park, Amherst County, Virginia	Jefferson National Forest	1993
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
CP-113*	Technical Report Phase I Archaeological Investigation Peakland Switch-Reusens 69kV Transmission Line Rebuild Project, City of Lynchburg, Virginia	GAI Consultants, Inc.	2020
*Indicates that the previously conducted survey area intersects Component 4			

ARCHITECTURAL RESOURCES

Review of the VDHR VCRIS inventory records revealed a total of 108 previously recorded architectural resources are located within 1.5 miles of Component 4. Of these, there are no NHLs located within 1.5 miles, five (5) properties listed in the NRHP and no battlefields located within 1.0 mile, and three (3) properties that have been determined eligible for listing in the NRHP within 0.5 mile of Component 4.

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 Component 4 is included as **Figure 4-2** and a map of 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 Component 4 of the Project

Buffer(miles)	Considered Resources	VDHR #	Description
1.5	National Historic Landmarks	None	N/A
1.0	National Register Properties (Listed)	005-5029	Oak Lawn, 155 Winridge Drive
		005-5329	Hanshill, 142 Leftwich Road
		009-5283	Bowling Eldridge House, 1651 Fox Hill 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	005-0223	Bibbie House, Rt. 604
		118-0138	Lavino Furnace, Virginia Episcopal School Road
		118-0218	Reusens Dam, Hydro Road

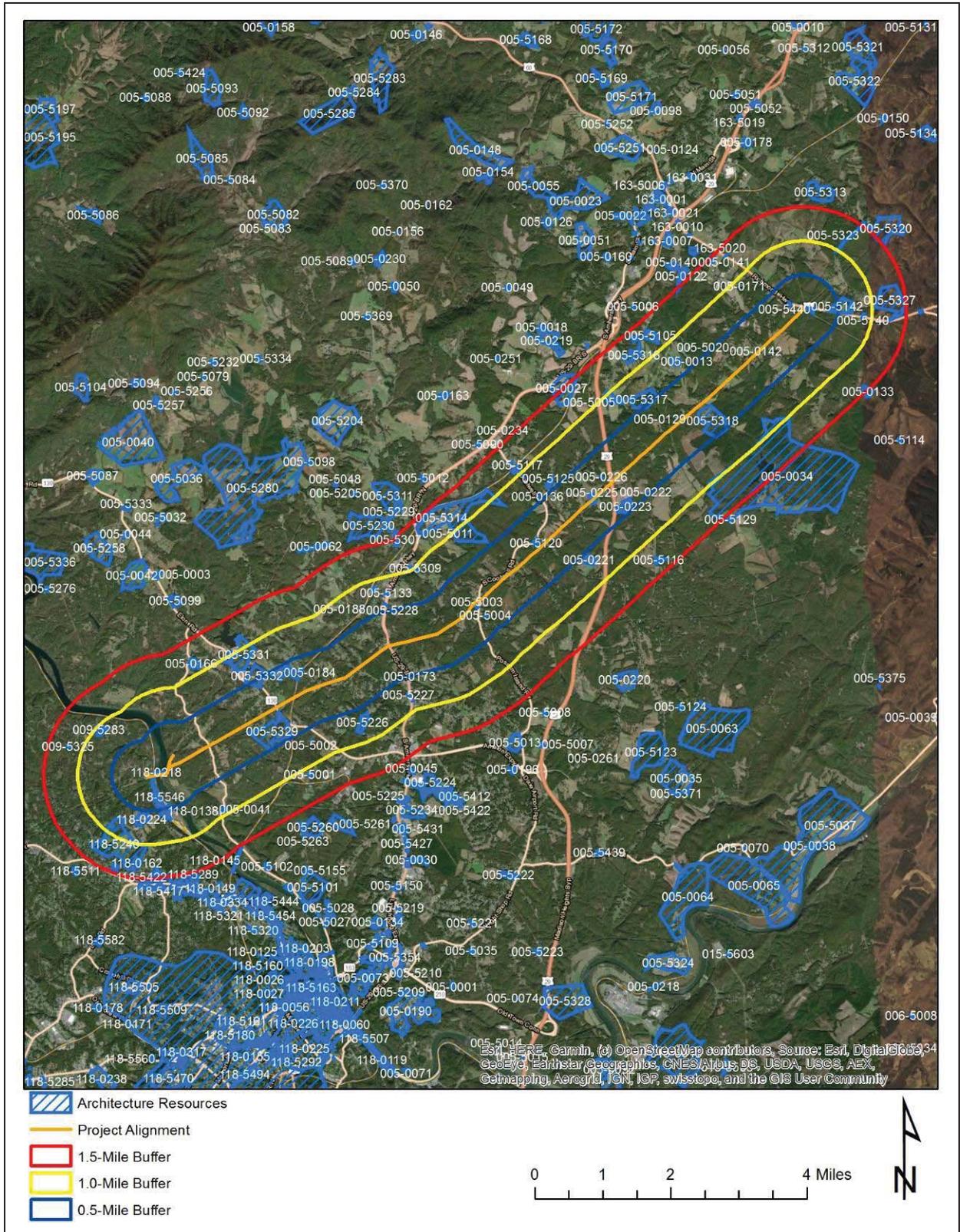


Figure 4-2: All Previously Recorded Architectural Resources Within 1.5 mile of Component 4. Source: VCRIS

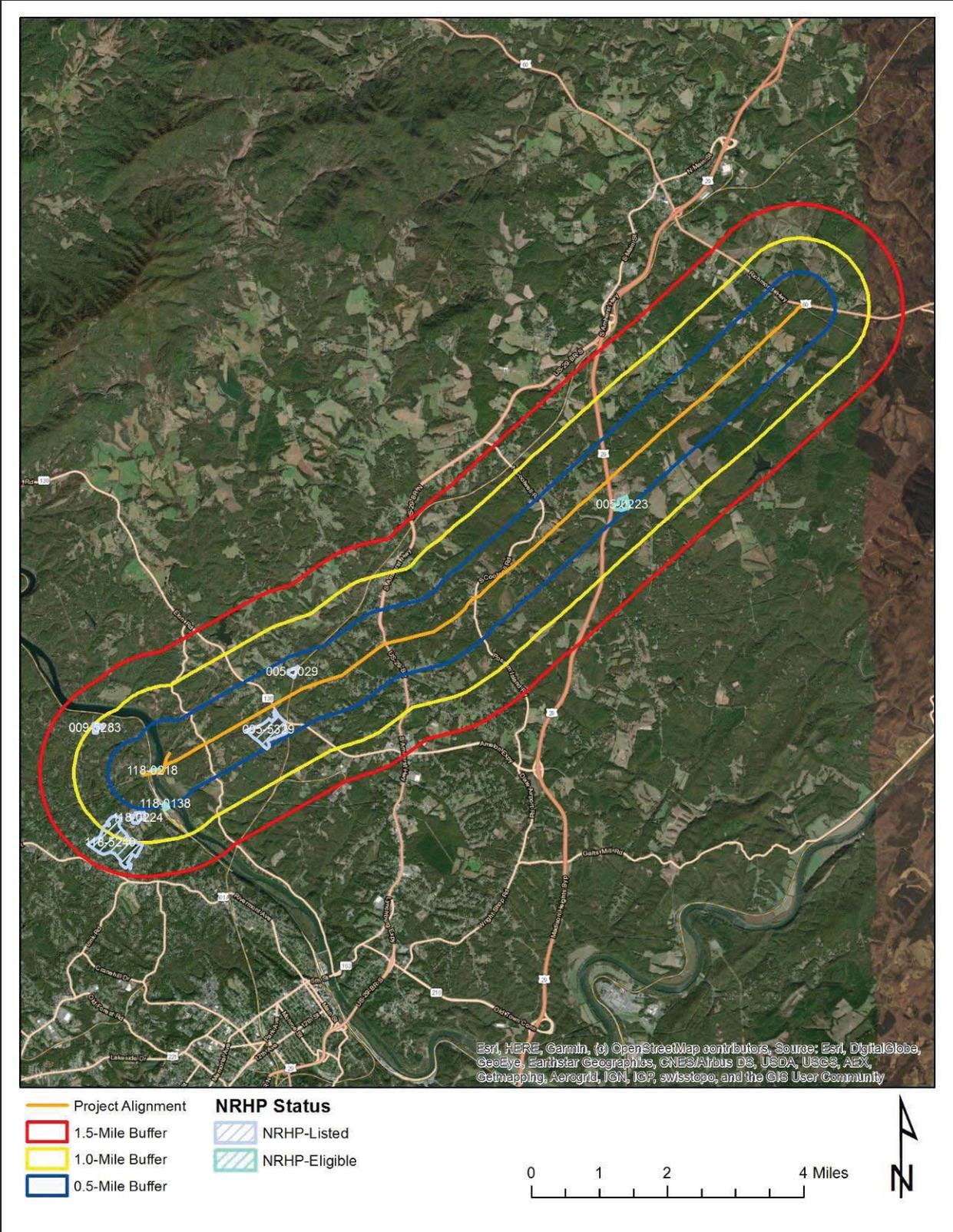


Figure 4-3: NRHP-Listed and Eligible Architectural Resources Within 1.5 miles of Component 4. Source: VCRIS

ARCHAEOLOGICAL SITES

Review of the VDHR VCRIS records reveals there are 11 previously recorded archaeological sites within 1.0 mile of Component 4. One (1) of these sites is located within or immediately adjacent to the ROW. The site within or adjacent to the ROW (Judith's Dam Guard Lock of James River & Kanawha Canal - 44CP0066) is located along the south bank of James River where the existing transmission line crosses it. This site as well as one other site within 1.0 mile are considered potentially eligible for listing in the NRHP. The other previously recorded sites have either been determined not eligible or 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 Component 4. **Figures 4-4** illustrates the locations of previously recorded sites in relation to Component 4 of the Project and **Figure 4-5** illustrates the location of Site 44CP0066 within or immediately adjacent to the ROW of Component 4.

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

VDHR ID #	Site Type	Temporal Association	Cultural Affiliation	NRHP Status
44AH0197	No Data	19th Century: 2nd half (1850 - 1899), 20th Century: 1st half (1900 - 1949)	Indeterminate	Not Evaluated
44AH0198	No Data	20th Century (1900 - 1999)	Indeterminate	Not Evaluated
44AH0199	No Data	20th Century (1900 - 1999)	Indeterminate	Not Evaluated
44AH0281	Quarry	Late Archaic (3000 - 1201 B.C.)	Native American	DHR Staff: Not Eligible
44AH0370	Dwelling, single	20th Century (1900 - 1999)	Indeterminate	DHR Staff: Not Eligible
44AH0371	Dwelling, single	19th Century (1800 - 1899), 20th Century (1900 - 1999)	Indeterminate	Not Evaluated
44AH0372	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Native American	DHR Staff: Not Eligible
44BE0243	No Data	No Data	Indeterminate	Not Evaluated
44CP0066*	Canal lock	Antebellum Period (1830 - 1860)	Euro-American	DHR Staff: Potentially Eligible
44CP0067	Canal lock	Historic/Unknown	Euro-American	DHR Staff: Potentially Eligible
44CP0185	No Data	No Data	Indeterminate	Not Evaluated
*Indicates that the site is adjacent to or within the ROW of Component 4				

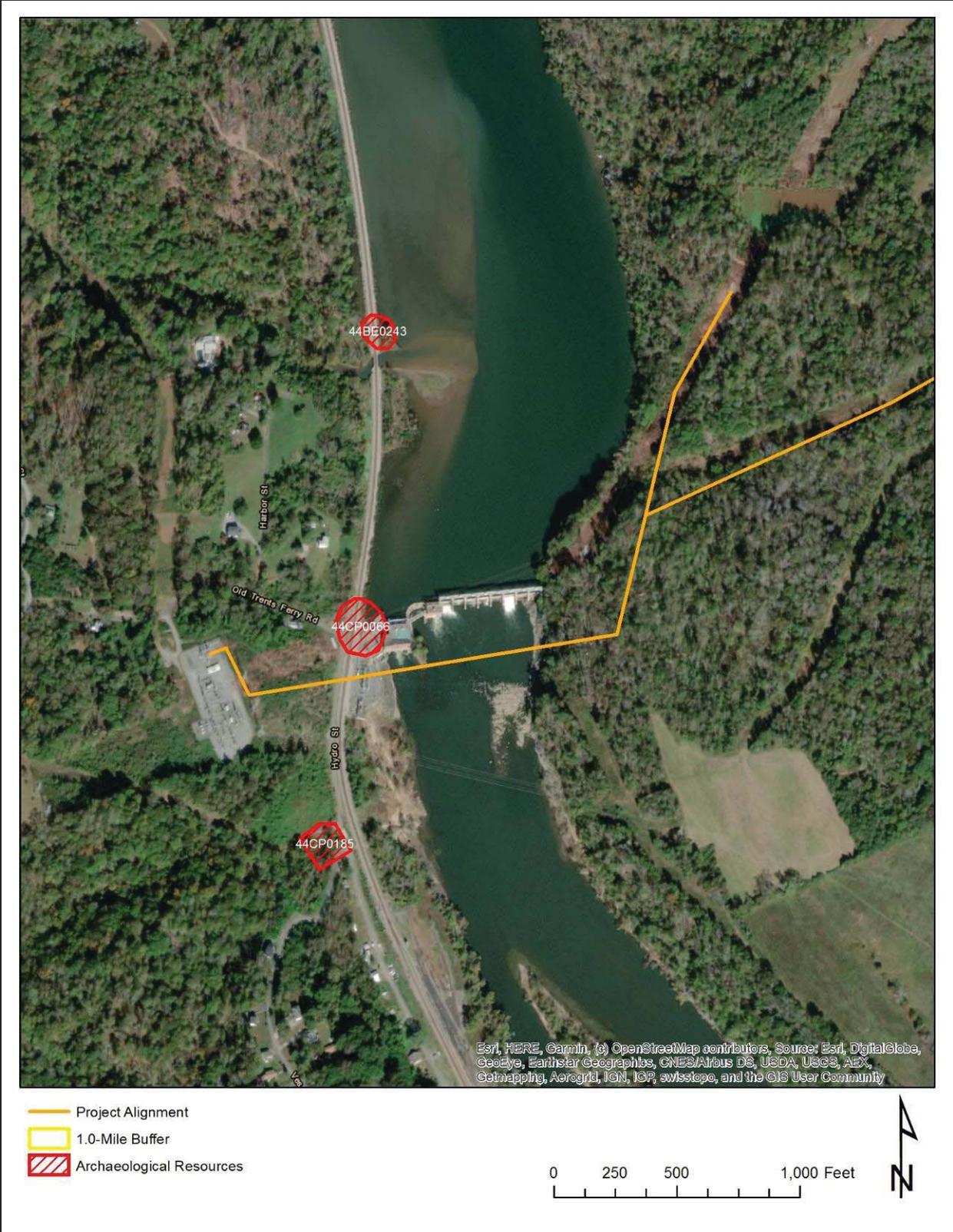


Figure 4-5: Location of Site 44CP0066 Located Within or Immediately Adjacent to Component 4. Source: VCRIS

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 Component 4.

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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 Component 4 of the CVTRP are to be field verified for existing conditions and photo documented (**Table 5-1**). Inspection and analysis of the setting around the resource and views towards Component 4 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 Amherst-Reusens Transmission Line Rebuild

Buffer(miles)	Considered Resources	VDHR #	Description
1.5	National Historic Landmarks	None	N/A
1.0	National Register Properties (Listed)	005-5029	Oak Lawn, 155 Winridge Drive
		005-5329	Hanshill, 142 Leftwich Road
		009-5283	Bowling Eldridge House, 1651 Fox Hill 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	005-0223	Bibbie House, Rt. 604
		118-0138	Lavino Furnace, Virginia Episcopal School Road
		118-0218	Reusens Dam, Hydro Road

NATIONAL REGISTER OF HISTORIC PLACES-LISTED PROPERTIES
Located within 1.0-Mile of Component 4

Oak Lawn, 155 Winridge Drive (VDHR # 005-5029)

Oak Lawn is an evolved frame house in the Georgian and Greek Revival styles. The original section was probably built by Ambrose Burford in the first two decades of the nineteenth century and was expanded by his son Sylvester L. Burford about 1857. The entrepreneurial Sylvester Burford was identified as a carriage maker in federal censuses, but he was also a mill and store owner, a coffin maker and undertaker, and an inventor. During the Civil War he patented a wooden shoe sole with the Confederate Patent Office. Burford's two-story house is distinguished by four gable-end chimneys, Georgian and Greek Revival mantels, and crosstetted Greek Revival door frames. The house remained in the intermarried Burford and Wortham families until the 1930s. Oak Lawn was listed in the NRHP in 2006 under Criteria B for its association with local industrialist and inventor Sylvester L. Burford; and C for its Georgian and Greek Revival stylistic characteristics.

In order to assess the potential impact of the Component 4 of the CVTRP, visual inspection was conducted of the setting around the resource property with emphasis on views towards Component 4. This assessment found that the Oak Lawn property is located roughly 0.18 mile from Component 4 at its nearest point although the house sits along the opposite edge of the property roughly 0.31 mile from Component 4. The home is oriented to the northwest with Component 4 to the rear. The landscape of the property and between it and Component 4 is mostly wooded with a scattering of homes set on small rural lots bordering a road to the east. The Norfolk Southern Railroad corridor also borders the rear (southeast) edge of property and extends south-southwest before it crosses beneath Component 4 roughly one-quarter mile to the south of the Oak Lawn property.

Inspection from the road in front of the Oak Lawn property found that the existing transmission line is not visible. Thick vegetation on the property and between it and Component 4 completely screens all distant views in the direction of Component 4 of the CVTRP. The existing transmission line structures in the vicinity of the property range from 45-feet to 55-feet tall and the proposed replacement structures will range from 59-feet to 63.5-feet tall. As such, there will be an increase in structure height, however structures will be replaced on a one-to-one basis. As the existing line and structures are not visible and vegetation screens views in the direction of Component 4, 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 behind the treeline and completely screened. As such, the Component 4 will not introduce any change of viewshed or setting for the property. It is therefore D+A's opinion that Component 4 of the Project will have ***no impact*** on Oak Lawn.

Figure 5-1 depicts the location of Oak Lawn in relation to Component 4 with viewshed buffers, photographic views towards Component 4, and photo simulations. **Photographs 5-1 through 5-6** are representative photographs of the property, as well as those taken from the property towards Component 4. **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.

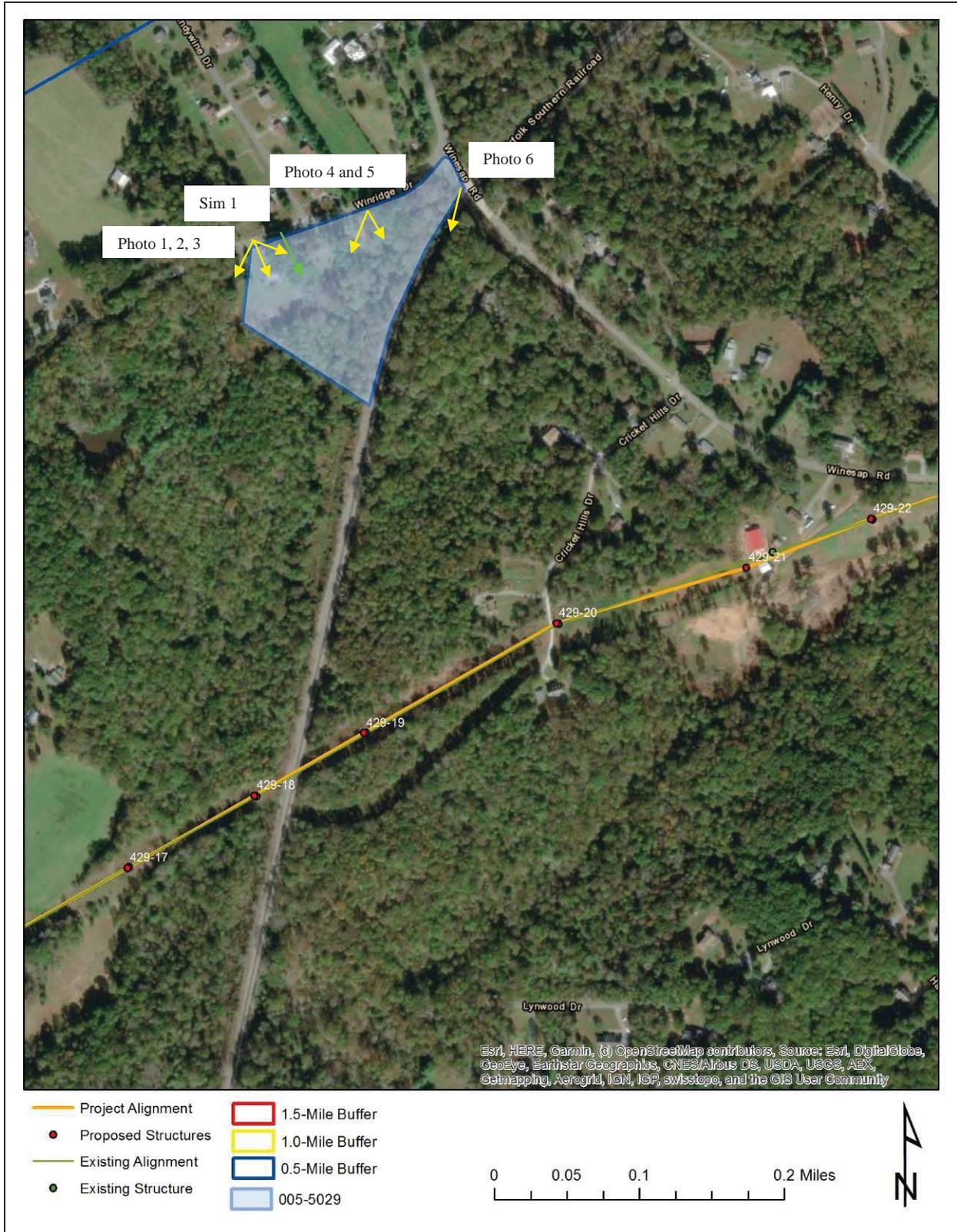
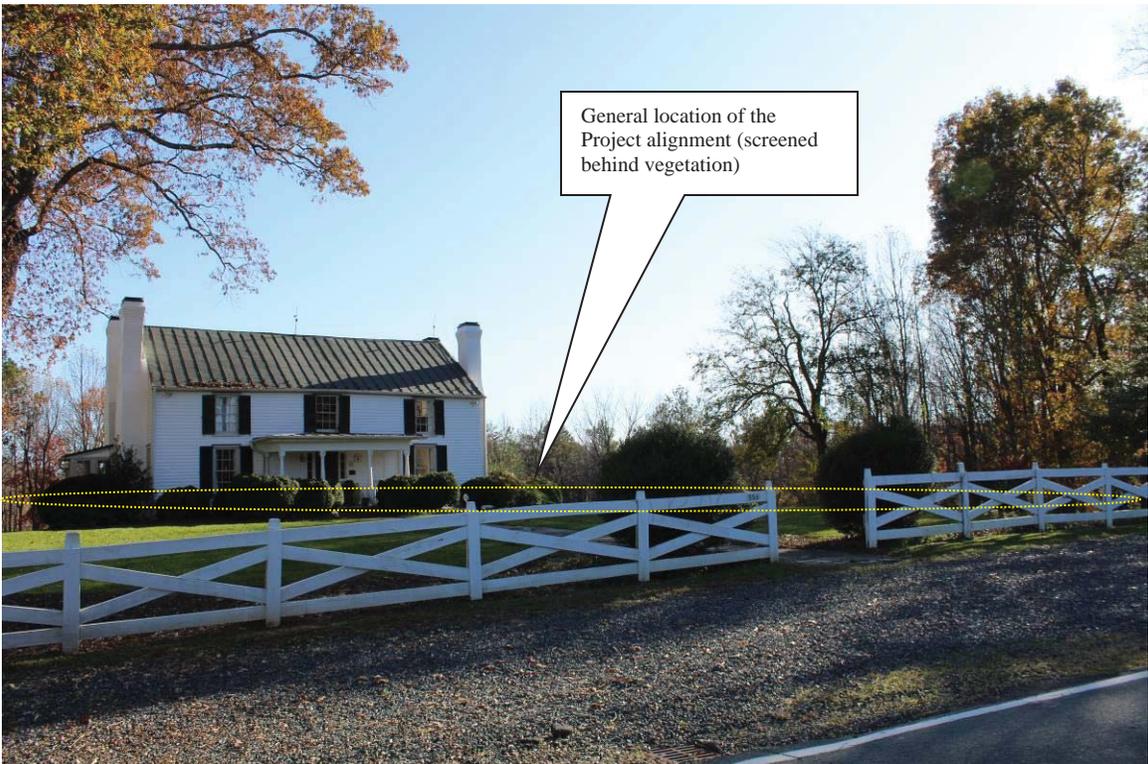


Figure 5-1: Location and Direction of Representative Photos and Simulations from Oak Lawn. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS



Photograph 5-1: Oak Lawn, front façade (Photo Location 1), facing southeast



General location of the
Project alignment (screened
behind vegetation)

Photograph 5-2: Oak Lawn view towards Component 4 alignment (not visible) (Photo Location 2), facing south



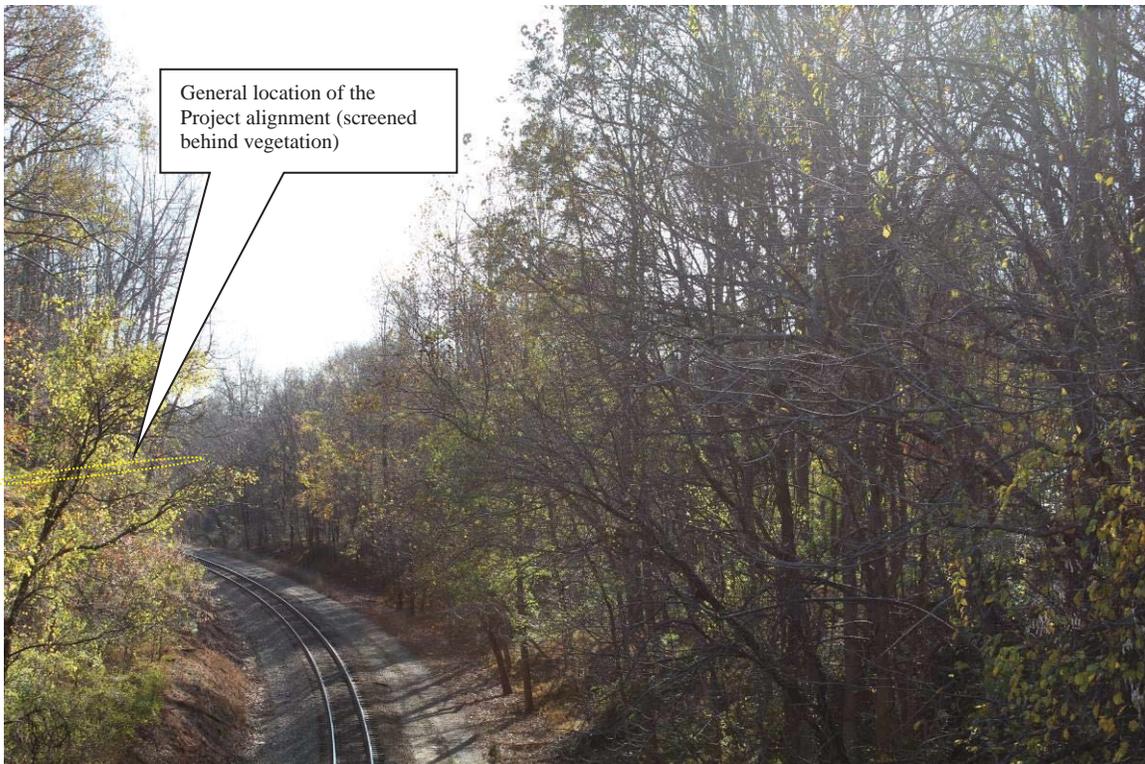
Photograph 5-3: Oak Lawn view towards Component 4 alignment (not visible) (Photo Location 3), facing east



Photograph 5-4: Oak Lawn towards Component 4 alignment (not visible) (Photo Location 4), facing southeast



Photograph 5-5: Oak Lawn view towards Component 4 alignment (not visible) (Photo Location 5), facing south



Photograph 5-6: Oak Lawn view towards Component 4 alignment (not visible) (Photo Location 6), facing south

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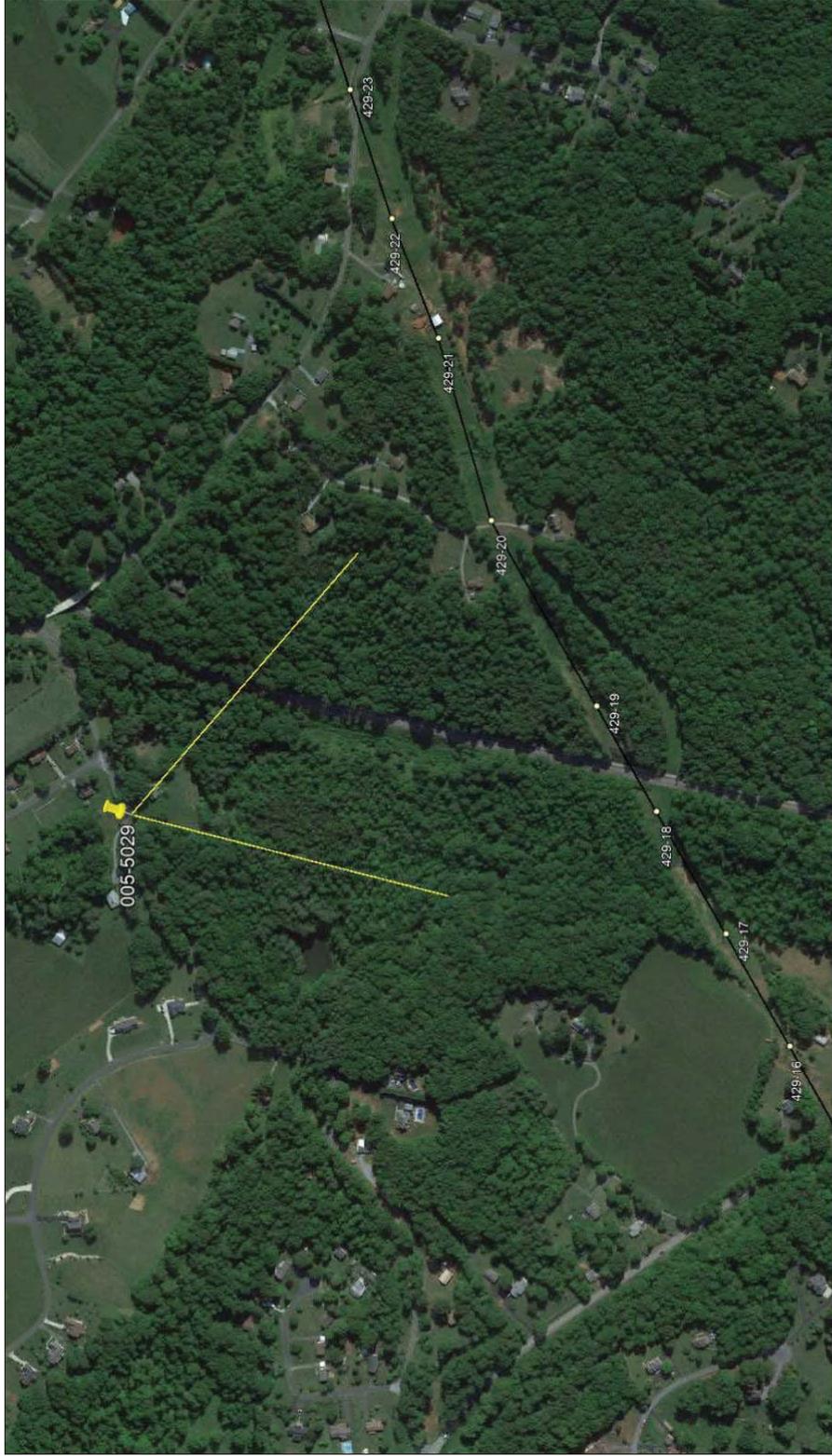


Photo Location: 005-5029

Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)
429-18	1919	63.5	429-21	2008	72.5			
429-19	1716	63.5						
429-20	1629	59.0						

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

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

	<p>005-5029</p>	<p>Existing View</p> <p>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.</p>
<p>Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703 447 1350</p>	<p>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.</p>	<p>005-5029</p>

Figure 5-3: Oak Lawn Simulation 1 – Existing view from Oak Lawn towards the Amherst-Reusens transmission line. Source: GTTE, LLC



<p>Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703.447.1350</p> 	<p>005-5029</p>	<p>Proposed View</p>  <p>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.</p>
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Figure 5-4: Oak Lawn Simulation 1 – Proposed view from Oak Lawn towards Component 4 with structures modeled (shown in yellow). Source: GTTE, LLC

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Hanshill, 142 Leftwich Road (VDHR # 005-5329)

Hanshill is a Rustic Revival summer residence designed by the noted Lynchburg architectural firm of Clark & Crowe and built circa 1925 by Mary Leigh Barth. It is a one and a half story frame building that rests on a low, continuous foundation of mortared random rubble stone. While the house is approached on the east side by its driveway, the main elevation is on the west side, which overlooks the Fawn Creek valley. The property was listed in the NRHP in 2011 under Criterion C as one of the few Rustic Revival residences in Amherst County, particularly as a design of the prominent Lynchburg architectural firm of Clark & Crowe.

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 Component 4. This assessment found that the Hanshill property is located roughly 0.15 mile from Component 4 at its nearest point although the house sits centrally within the property roughly 0.33 mile from Component 4. The home is oriented to the southeast with Component 4 to the rear. The landscape of the property and between it and Component 4 is mostly wooded with a cul-de sac of modern suburban homes.

Inspection from the road in front of the Hanshill property found that the existing transmission line is not visible. Thick vegetation on the property and between it and Component 4 completely screens all distant views in the direction of Component 4. The existing transmission line structures in the vicinity of the property range from 45-feet to 55-feet tall and the proposed replacement structures will range from 59-feet to 63.5-feet tall. As such, there will be an increase in structure height, however structures will be replaced on a one-to-one basis. As the existing line and structures are not visible and vegetation screens views in the direction of Component 4, 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 behind the treeline and completely screened. As such, the Component 4 will not introduce any change of viewshed or setting for the property. It is therefore D+A's opinion that the proposed project will have no more than a ***minimal impact*** on Hanshill.

Figure 5-5 depicts the location of Hanshill in relation to Component 4 with viewshed buffers, photographic views towards Component 4, and photo simulations. **Photographs 5-7 through 5-12** are representative photographs of the property, as well as those taken from the property towards Component 4. **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.

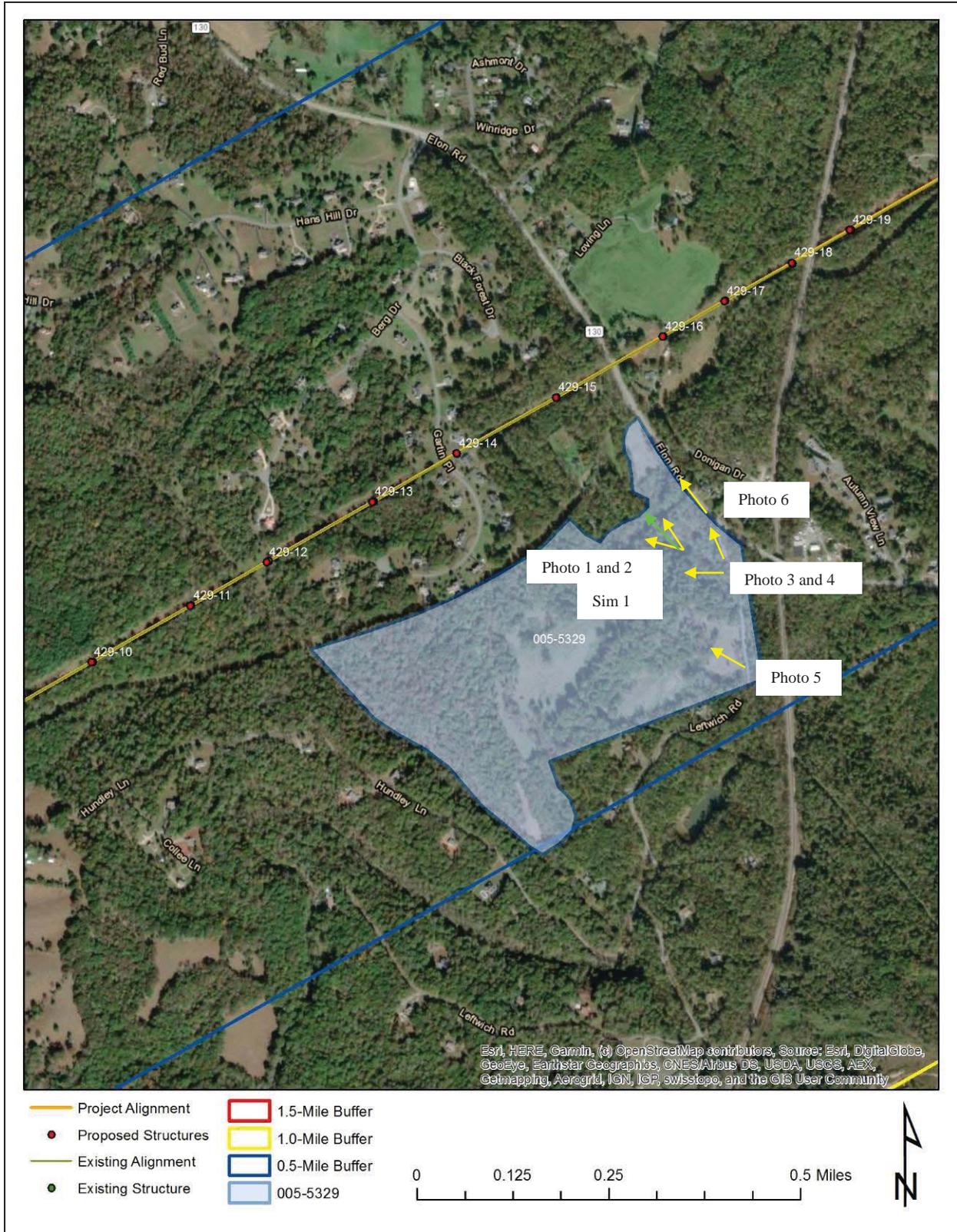
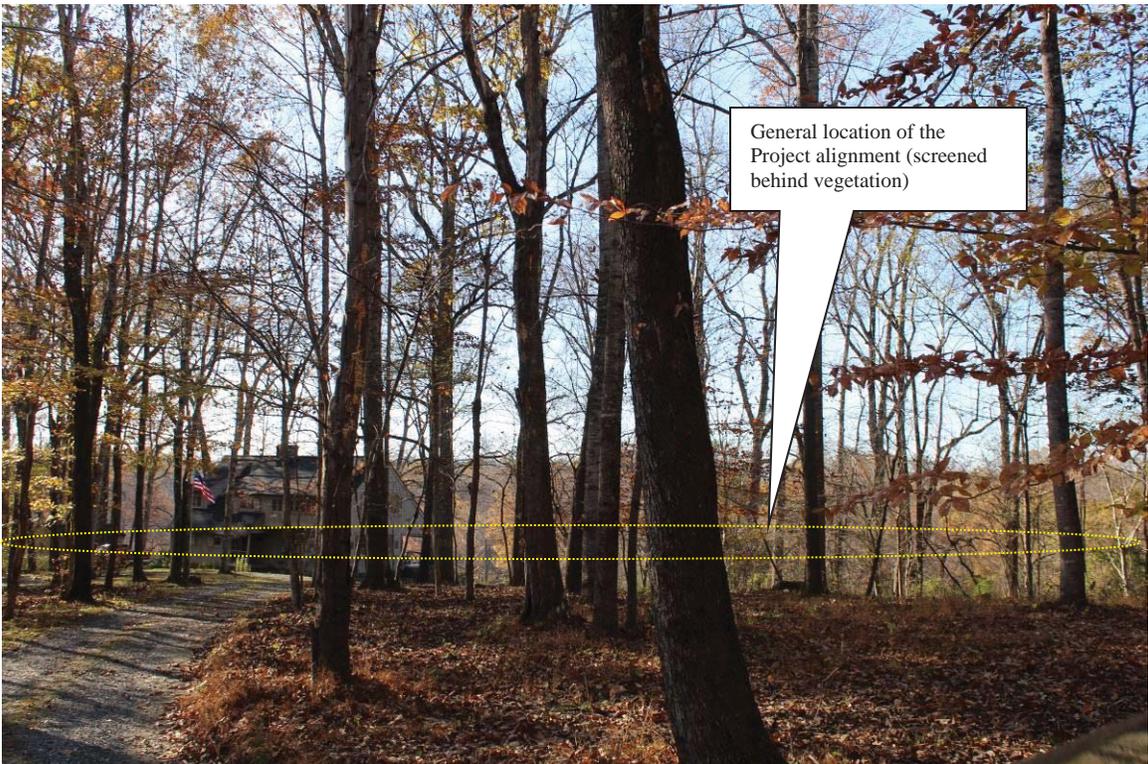


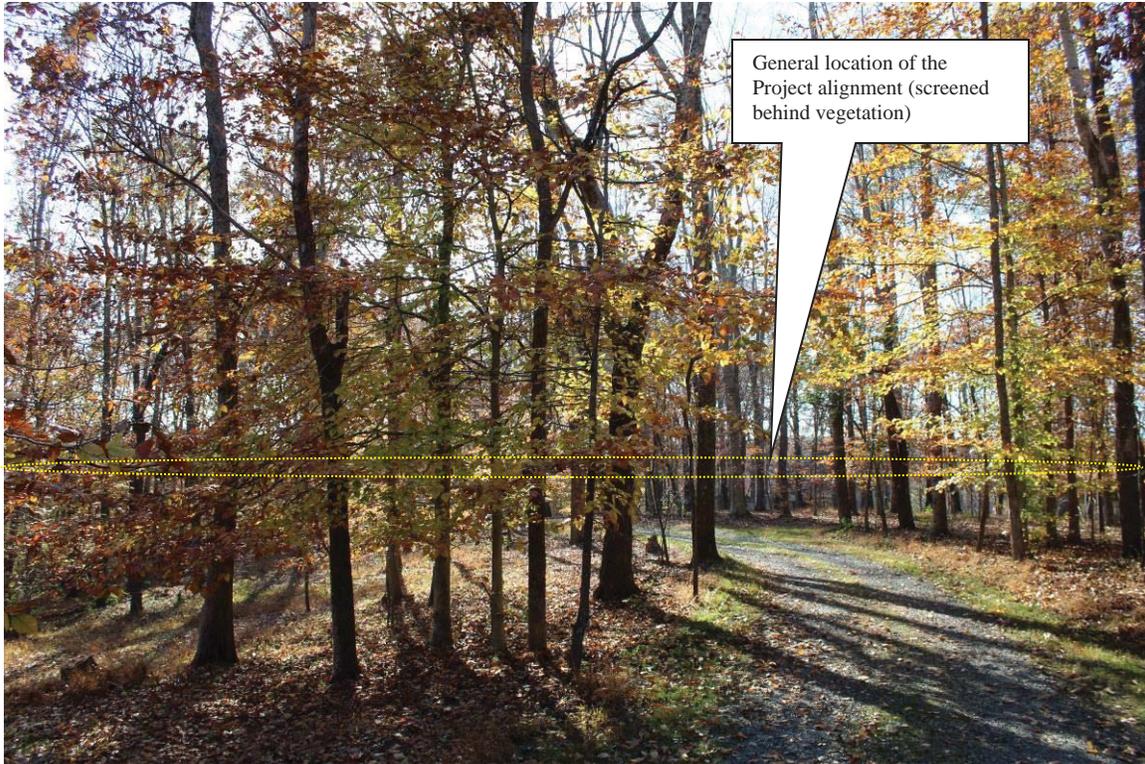
Figure 5-5: Location and direction of representative photos and simulations from Hanshill. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS



Photograph 5-7: Hanshill, front façade (Photo Location 1), facing northwest



Photograph 5-8: Hanshill view towards Component 4 alignment (not visible) (Photo Location 2), facing northwest



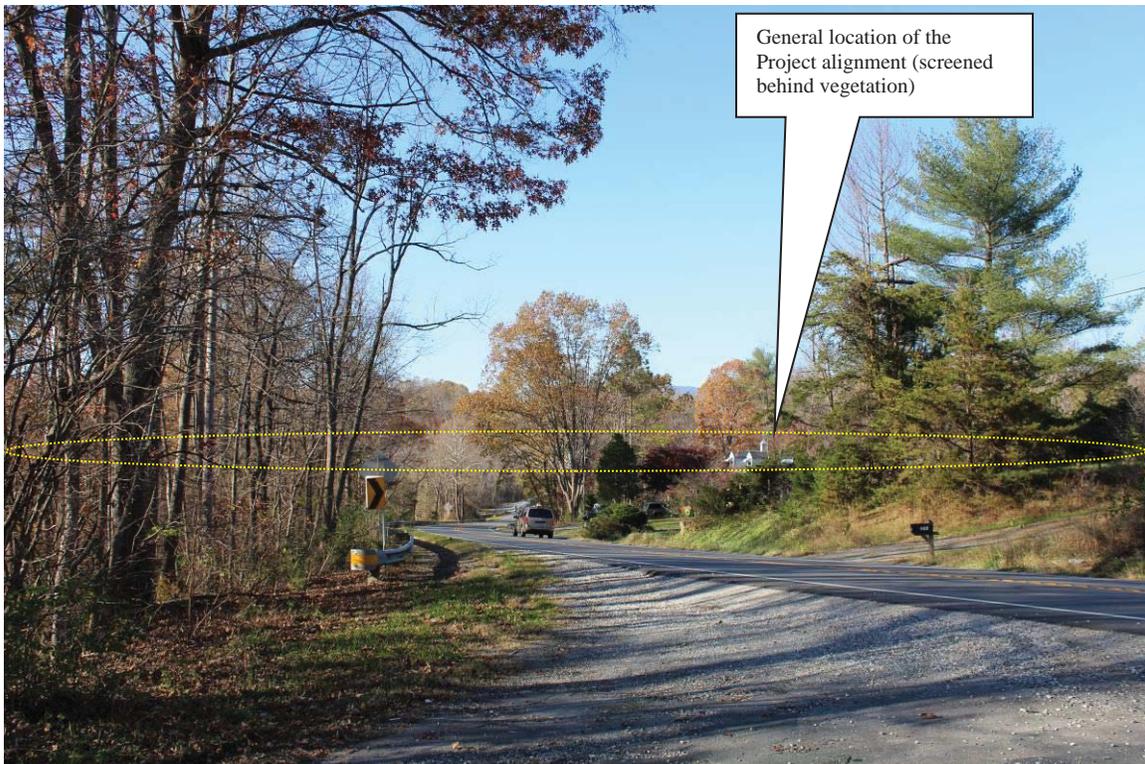
Photograph 5-9: Hanshill driveway view towards Component 4 alignment (not visible) (Photo Location 3), facing west



Photograph 5-10: Hanshill view from Leftwich Lane towards Component 4 alignment (not visible) (Photo Location 4), facing northwest



Photograph 5-11: Hanshill view from Leftwich Lane towards Component 4 alignment (not visible) (Photo Location 5), facing north



Photograph 5-12: Hanshill view from Elon Road towards Component 4 alignment (not visible) (Photo Location 6), facing west

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Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)
429-13	2032	59.00						
429-14	1791	68.00						
429-15	1802	63.50						

Photo Location: 005-5329

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



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

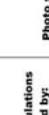
	<p style="text-align: center;">Existing View</p>
<p style="text-align: center;">005-5329</p>	<p>Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.</p>
<p>Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703.447.1350</p> 	<p>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.</p> 

Figure 5-7: Hanshill Simulation 1 – Existing view from Hanshill towards the Amherst-Reusens transmission line. Source: GTTE, LLC

	<p>005-5329</p>	<p>Proposed View</p>
<p>Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703.447.1350</p>	<p>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.</p>	<p>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.</p>

Figure 5-8: Hanshill Simulation 1 – Proposed view from Hanshill towards Component 4 with structures modeled (shown in yellow). 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 Component 4. This assessment found that the Bowling Eldridge House property is located roughly 0.92 mile from Component 4 at its nearest point although the house sits along the opposite edge of the property nearly one mile from Component 4. The home is oriented to the north with Component 4 to the southeast rear. The landscape of the property and between it and Component 4 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 Component 4 of the CVTRP.

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 Component 4 slopes substantially down towards the river, placing Component 4 beneath the horizon. This slope coupled with thick vegetation completely screens Component 4 from visibility. The existing transmission line structures leading out of the substation range from 107-feet to 108-feet tall and the proposed replacement structures will range from 138.5-feet to 158.5-feet tall. As such, there will be an increase in structure height, and a slight shift in structure 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 below the horizon and completely screened. As such, Component 4 will not introduce any change of viewshed or setting for the property. It is therefore D+A's opinion that the proposed project will have ***no impact*** on Bowling Eldridge House.

Figure 5-9 depicts the location of Bowling Eldridge House in relation to Component 4 with viewshed buffers, photographic views towards Component 4, and photo simulations. **Photographs 5-13 through 5-16** are representative photographs of the property, as well as those taken from the property towards Component 4. **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 the Bowling Eldridge House. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS



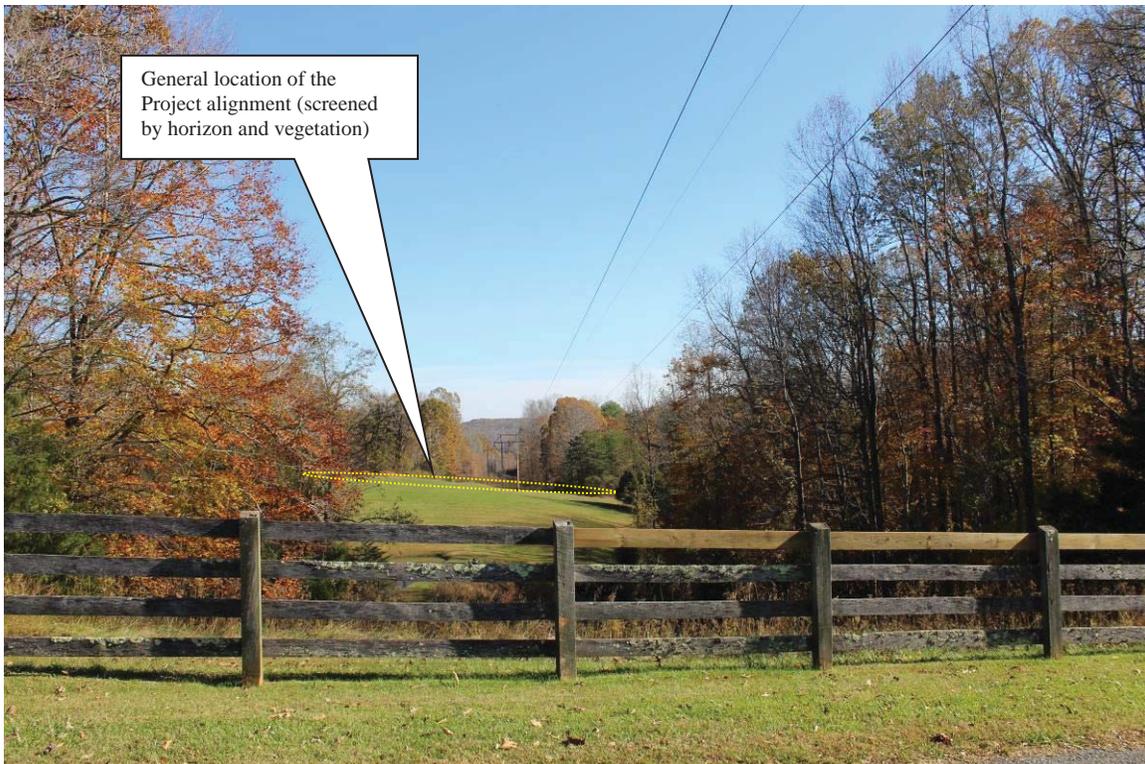
Photograph 5-13: Bowling Eldridge House, front façade (Photo Location 1), facing south



Photograph 5-14: Bowling Eldridge House view from the road in front towards Component 4 alignment (not visible) (Photo Location 2), facing southeast



Photograph 5-15: Bowling Eldridge House view from the road in front towards Component 4 alignment (not visible) (Photo Location 3), facing southeast



Photograph 5-16: Bowling Eldridge House view from the side of the property towards Component 4 alignment (not visible) (Photo Location 4), facing southeast

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Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)
429-1	5317	59.0	16-2c	6210	157.0	429-2	6263	68.0
16-1	5519	158.5	16-3	6256	100.5	429-3	7023	77.0
16-2b	6506	138.5	16-4	6505	60.0	429-4	7448	54.5
						429-5	7822	54.5
						429-6	8193	54.5

Photo Location: 009-5283

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



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



Figure 5-11: Bowling Eldridge House Simulation 1 – Existing view from Bowling Eldridge House towards the Amherst-Reusens transmission line. Source: GTTE, LLC



Photo simulations prepared by:
GTTE LLC
 email: info@gttelc.com
 703.447.1350

009-5283

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.

Figure 5-12: Bowling Eldridge House Simulation 1 – Proposed view from Bowling Eldridge House towards Component 4 with structures modeled (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 Component 4. This assessment found that the Virginia Episcopal School property is located roughly 0.57 mile from Component 4 at its nearest point, near the Reusens Substation, although the buildings are spread throughout a large campus that extends nearly 0.73 mile from Component 4 at the front gate. The campus is oriented to the south with Component 4 to the rear. The landscape of the property and between it and Component 4 is mostly wooded and slopes down dramatically towards the James River.

Inspection from the road in front of the Virginia Episcopal School property found that the existing transmission line is not visible. 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 Component 4. The most open vista in the vicinity of the property is from the edge of the campus looking across the open athletic fields towards Component 4 which revealed that the intervening distance and vegetation still screen all visibility of Component 4. The existing transmission line structures near the Reusens Substation in the vicinity of the property leading out of the substation range from 107-feet to 108-feet tall and those across the river range from 45-feet to 55-feet tall; and the proposed replacement structures leading out of the substation will range from 138.5-feet to 158.5-feet tall, and those across the river along the line will range from 54.5-feet to 77-feet tall. As such, there will be an increase in structure height, however structures will be replaced near or adjacent to existing structure locations with the exception of a slight shift at the river crossing. As the existing line and structures are not visible and the intervening distance, topography, and vegetation screen views in the direction of Component 4, 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 behind the treeline and completely screened. As such, Component 4 will not introduce any change of viewshed or setting for the property. It is therefore D+A's opinion that the proposed project will have ***no impact*** on the Virginia Episcopal School.

Figure 5-13 depicts the location of Virginia Episcopal School in relation to Component 4 with viewshed buffers, photographic views towards Component 4, and photo simulations. **Photographs 5-17 through 5-20** are representative photographs of the property, as well as those taken from the property towards Component 4. **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.

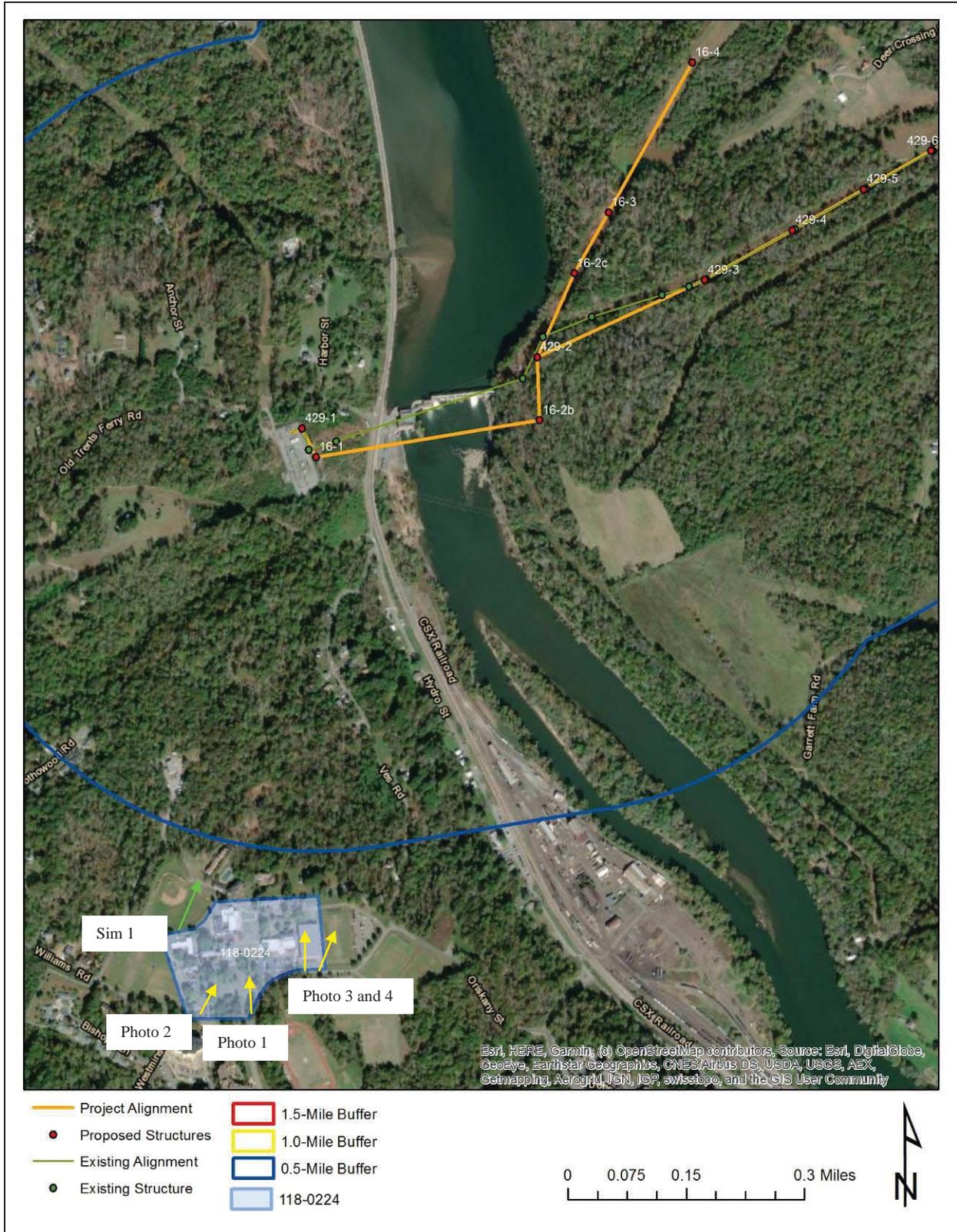


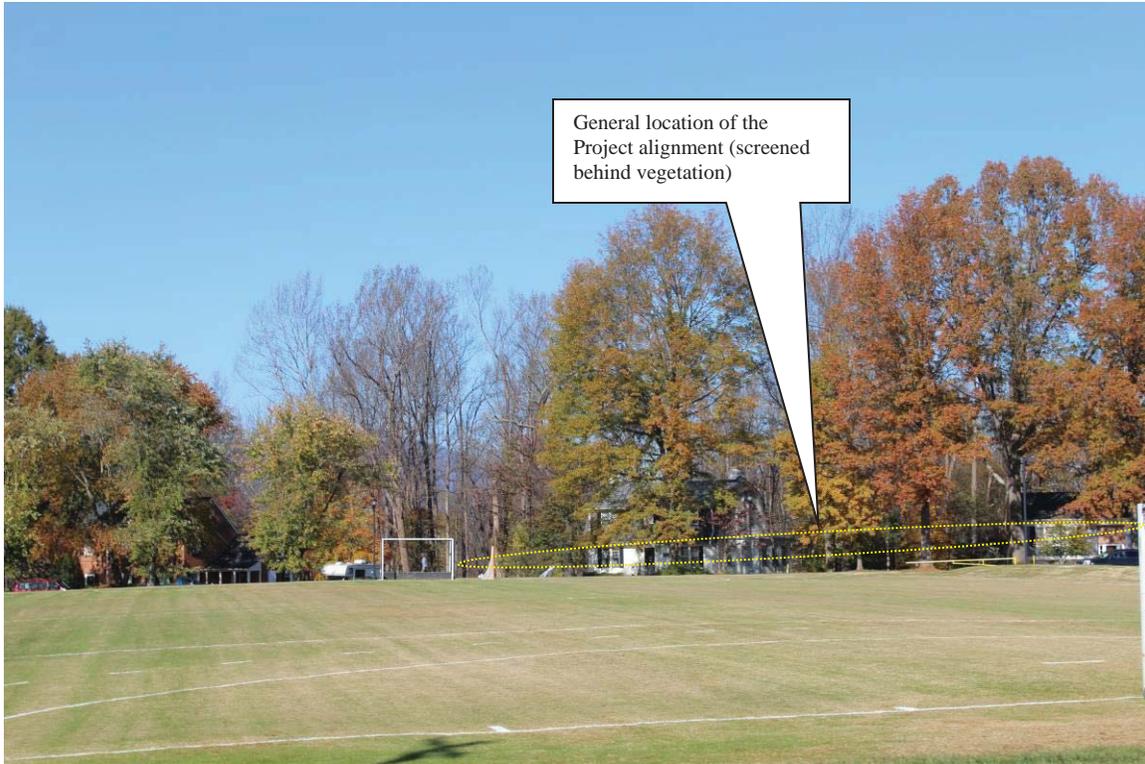
Figure 5-13: Location and direction of representative photos and simulations from Virginia Episcopal School. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS



Photograph 5-17: Virginia Episcopal School campus entrance (Photo Location 1), facing north



Photograph 5-18: Virginia Episcopal School view along Williams Road towards Component 4 alignment (not visible) (Photo Location 2), facing northeast



Photograph 5-19: Virginia Episcopal School view from athletic field towards Component 4 alignment (not visible) (Photo Location 3), facing north



Photograph 5-20: Virginia Episcopal School view from athletic field towards Component 4 alignment (not visible) (Photo Location 4), facing northeast

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Photo Location: 118-0224

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

Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)
429-1	3531	59.0	16-2c	5209	157.0			
16-1	3372	158.5	16-3	5678	100.5			
16-2b	4256	138.5	429-2	4602	68.0			

Figure 5-14: Virginia Episcopal School Simulation 1 – Location and direction of photograph with list of included structures. Source: GTTE, LLC

	<p style="text-align: center;">118-0224</p>	<p style="text-align: center;">Existing View</p> <div style="text-align: center;"> <p>0" 1" 2" 3" 4"</p> </div> <p>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.</p>
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Figure 5-15: Virginia Episcopal School Simulation 1 – Existing view from Virginia Episcopal School towards the Amherst-Reusens transmission line. Source: GTTE, LLC

	<p>118-0224</p>	<p>Proposed View</p> <p>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.</p>
<p>Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350</p>	<p>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.</p>	<p>Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350</p>

Figure 5-16: Virginia Episcopal School Simulation 1 – Proposed view from Virginia Episcopal School towards Component 4 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 proposals were 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 Component 4. This assessment found that the Presbyterian Orphans Home property is located roughly 0.76 mile from Component 4 at its nearest point although the buildings are spread throughout a large campus that extends nearly 1.22 mile from Component 4 at the front gate. The core of the campus is set centrally just over one mile away. The campus is oriented to the south with Component 4 to the rear. The landscape of the property between it and Component 4 is occupied by a variety of institutional and residential development.

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 towards Component 4 from the front gate and driveway leading into the complex are inhibited by the topography of the property. 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 Component 4, however, the existing transmission line is not visible due to the intervening topography as well as vegetation beyond the Presbyterian Orphans Home property. The nearest portion of Component 4 is its southern terminus at the Reusens substation which is set near the James River at the lowest elevation of the line overall. The existing transmission line structures in the vicinity of the property leading out of the substation range from 107-feet to 108-feet tall and those across the river range from 45-feet to 55-feet tall; and the proposed replacement structures leading out of the substation will range from 138.5-feet to 158.5-feet tall, and those across the river along the line will range from 54.5-feet to 77-feet tall. As such, there will be an increase in structure height, however structures will be replaced near or adjacent to existing structure locations with the exception of a slight shift at the river crossing. As the existing line and structures are not visible due to the intervening distance, 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 below the horizon and behind the treeline. As such, Component 4 will not introduce any change of viewshed or setting for the property. It is therefore D+A's opinion that the proposed project will have *no impact* on the Presbyterian Orphans Home.

Figure 5-17 depicts the location of Presbyterian Orphans Home in relation to Component 4 with viewshed buffers, photographic views towards Component 4, and photo simulations. **Photographs 5-21 through 5-26** are representative photographs of the property, as well as those taken from the property towards Component 4. **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.

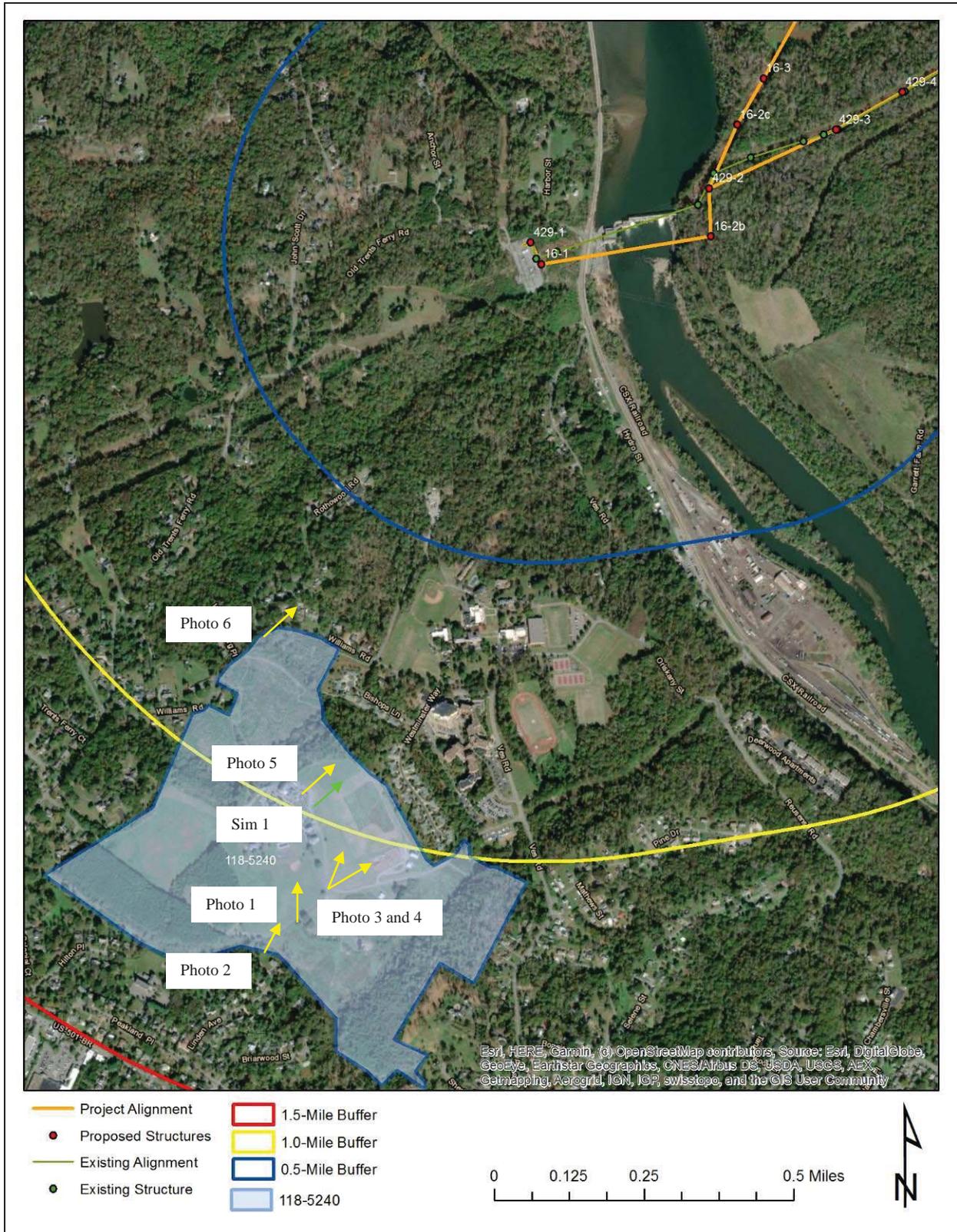


Figure 5-17: Location and direction of representative photos and simulations from Presbyterian Orphans Home. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS



Photograph 5-21: Presbyterian Orphans Home (Photo Location 1), facing north



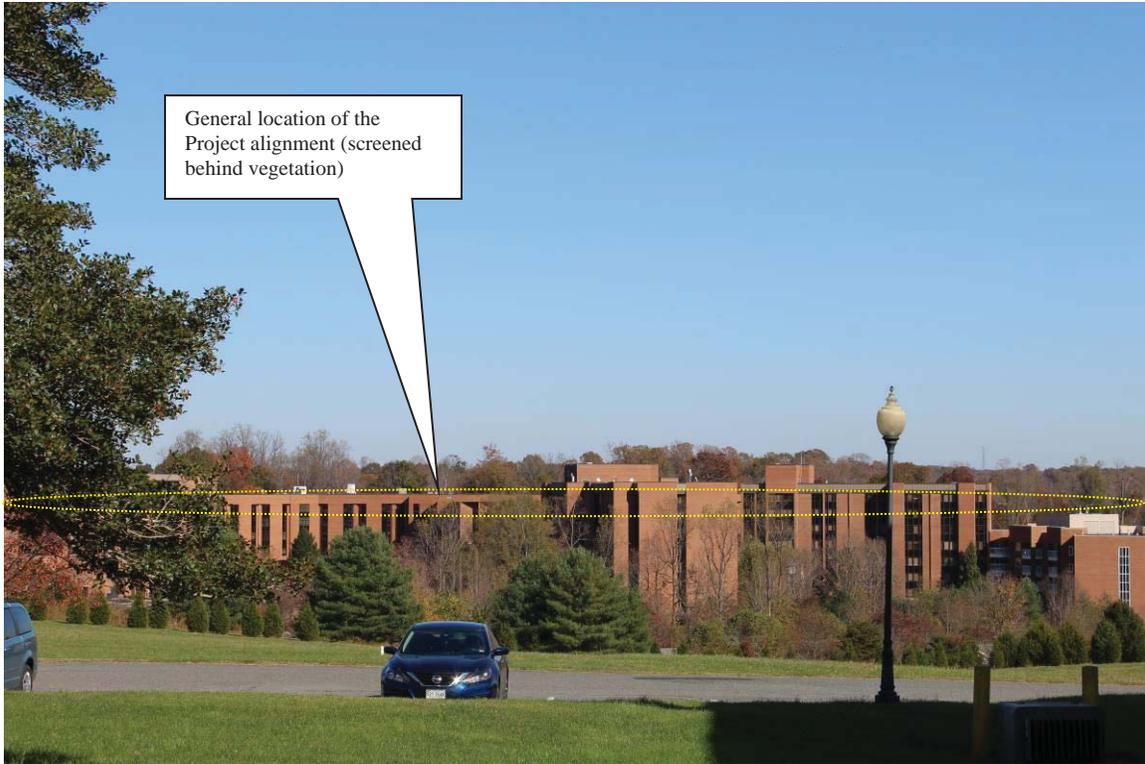
Photograph 5-22: Presbyterian Orphans Home view from front gate towards Component 4 alignment (not visible) (Photo Location 2), facing northeast



Photograph 5-23: Presbyterian Orphans Home view from campus drive towards Component 4 alignment (not visible) (Photo Location 3), facing north



Photograph 5-24: Presbyterian Orphans Home view from campus drive towards Component 4 alignment (not visible) (Photo Location 4), facing northeast



Photograph 5-25: Presbyterian Orphans Home view from core towards Component 4 alignment (not visible) (Photo Location 5), facing northeast



Photograph 5-26: Presbyterian Orphans Home property along Williams Road towards Component 4 alignment (not visible) (Photo Location 6), facing northeast



Photo Location: 118-5240

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

Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)
429-1	5372	59.0	16-2c	7116	157.0	429-3	7576	77.0
16-1	5230	158.5	16-3	7586	100.5			
16-2b	6165	138.5	429-2	6507	68.0			

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

	<p>118-5240</p>	<p style="text-align: center;">Existing View</p> <p style="text-align: center;">0" 1" 2" 3" 4"</p> <p style="text-align: center;">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.</p>
<p>Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703.447.1350</p>		<p>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.</p>

Figure 5-19: Presbyterian Orphans Home Simulation 1 – Existing view from Presbyterian Orphans Home towards the Amherst-Reusens transmission line. Source: GTTE, LLC

	<p>118-5240</p>	<p style="text-align: center;">Proposed View</p> <p style="text-align: center;">0" 1" 2" 3" 4"</p> <p style="text-align: center;">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.</p>
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Photo simulations prepared by:
 GTTE LLC
 email: info@gttellc.com
 703.447.1350

Figure 5-20: Presbyterian Orphans Home Simulation 1 – Proposed view from Presbyterian Orphans Home towards Component 4 with structures modeled (shown in yellow). Source: GTTE, LLC

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NATIONAL REGISTER OF HISTORIC PLACES-ELIGIBLE PROPERTIES
Located within 0.5-Mile of Component 4

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Bibbie House (VDHR # 005-0223)

The Bibbie House was previously recorded as a relatively scarce surviving example of log building in Amherst County area, but in poor condition. At that time, in 1994, a Phase 2 architectural and historical investigation were recommended, and VDHR determined that the site is potentially eligible for the National Register under Criterion D as it may contribute to the understanding of vernacular log construction in the area. At this time, the building was not observed and may no longer exist, however, the site is still considered eligible under Criterion D.

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 Component 4. This assessment found that the Bibbie House property is located roughly 0.33 mile from Component 4 at its nearest point although the site of the house sits centrally within the property roughly 0.42 mile from Component 4. The site is located within a cluster of trees in a partially wooded property. The landscape of the surrounding property, and between it and Component 4, is rolling with a mix of wooded and recently timbered area crossed by the US-29 corridor.

Inspection from the Bibbie House property found that the existing transmission line is not visible. Thick vegetation on the property and between it and Component 4 screens distant views in the direction of Component 4. Inspection from a recently timbered area just outside the property boundary revealed more open views in the direction of Component 4, however, the existing transmission line remains screened by the rolling topography and vegetation. The existing transmission line structures in the vicinity of the property range from 46-feet to 60-feet tall and the proposed replacement structures will range from 59-feet to 68-feet tall. As such, there will be an increase in structure height, however structures will be replaced on a one-to-one basis. As the existing line and structures are not visible and vegetation screens views in the direction of Component 4, it is anticipated that there will continue to be no visibility of the transmission line following the project. This was confirmed with photo simulation that shows the structures will remain behind the treeline and completely screened. Further, as a property eligible under Criterion D for archaeological potential, setting and viewshed are not considered primary aspects of significance or eligibility. It is therefore D+A's opinion that the proposed project will have *no impact* on the Bibbie House.

Figure 5-21 depicts the location of the Bibbie House in relation to Component 4 with viewshed buffers, photographic views towards Component 4, and photo simulations. **Photographs 5-27 through 5-29** are representative photographs of the property, as well as those taken from the property towards Component 4. **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 Bibbie House. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS



Photograph 5-27: Bibbie House site (Photo Location 1), facing southwest



Photograph 5-28: Bibbie House site towards Component 4 alignment (not visible) (Photo Location 2), facing northwest



Photograph 5-29: Bibbie House property towards Component 4 alignment (not visible) (Photo Location 3), facing west

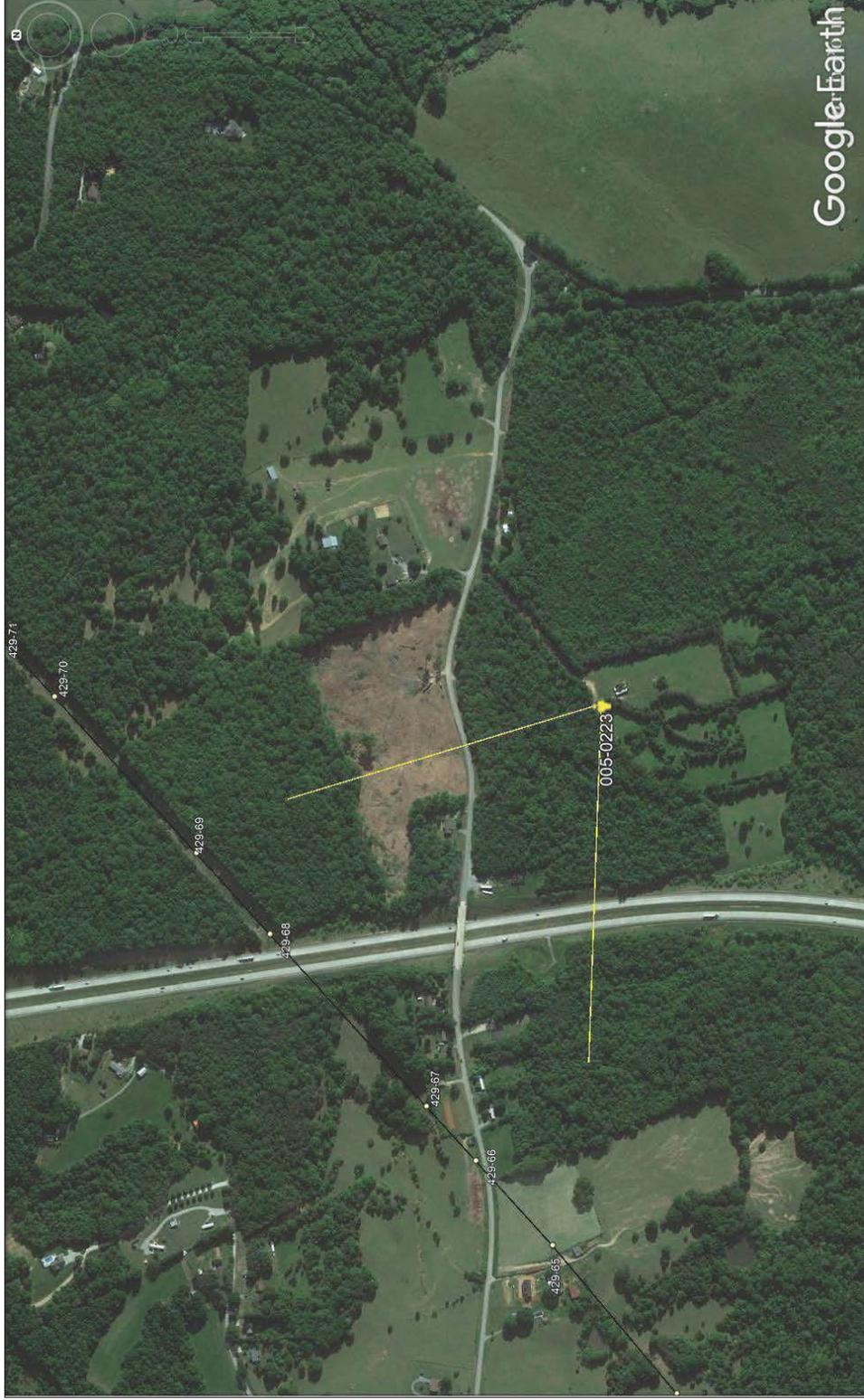


Figure 5-22: Bibble House Simulation 1 – Location and direction of photograph with list of included structures. Source: GTTE, LLC

	<p>005-223</p>	<p>Existing View</p> <p>0" 1" 2" 3" 4"</p>
<p>Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703.447.1350</p>	<p>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.</p>	<p>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.</p>

Figure 5-23: Bibbie House Simulation 1 – Existing view from Bibbie House towards the Amherst-Reusens transmission line. Source: GTTE, LLC

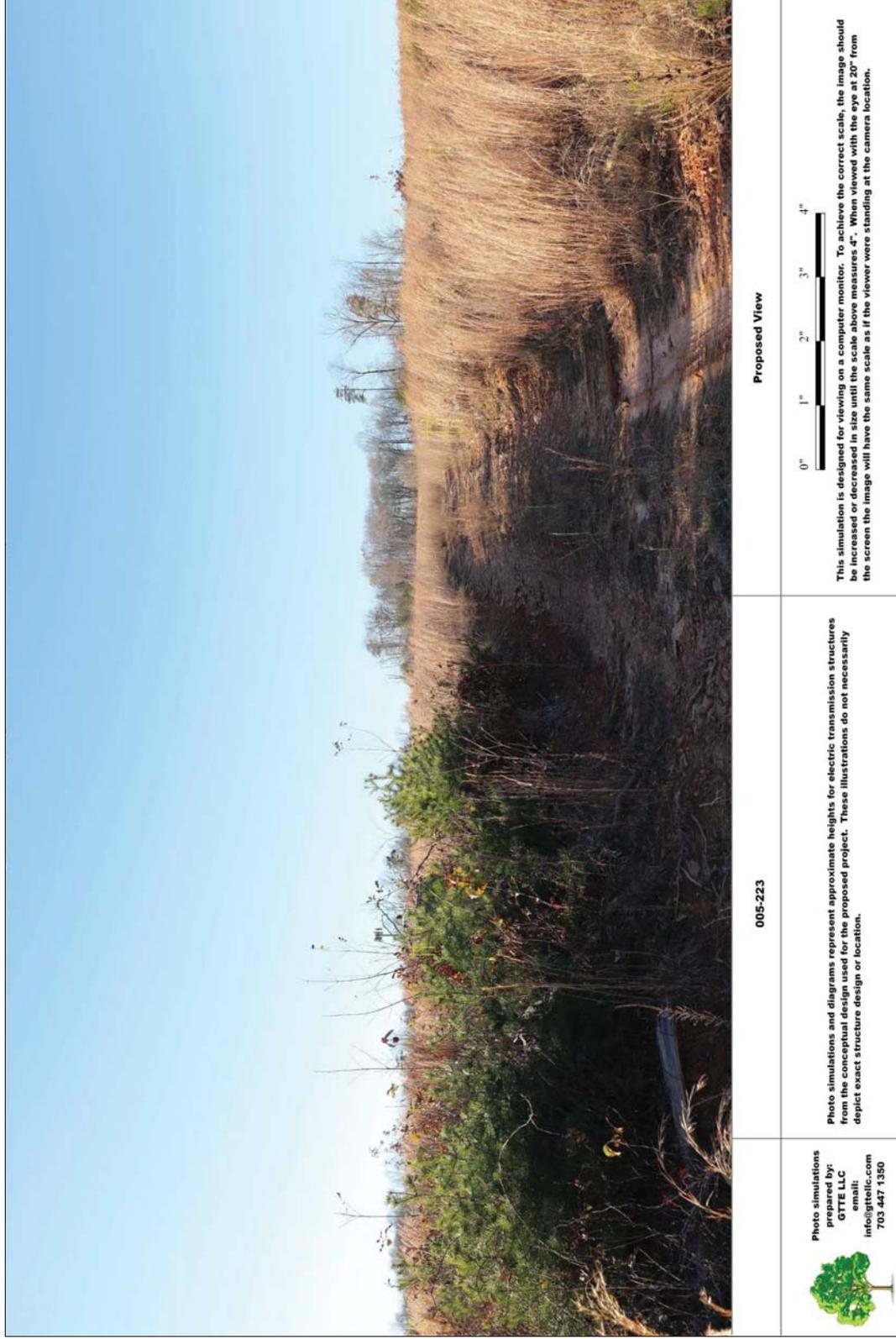


Photo simulations prepared by:
 GTTE LLC
 email: info@gttelc.com
 703.447.1350

005-223

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.

Proposed View



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: Bibbie House Simulation 1 – Proposed view from Bibbie House towards Component 4 with structures modeled (shown in yellow). Source: GTTE, LLC

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Lavino Furnace, Virginia Episcopal School Road (VDHR # 118-0138)

The Lavino Furnace, also known as Reusens Furnace No. 1, was built in Sharpsville, PA in 1882 and was moved from there to Reusens in 1949. In 1991, VDHR determined it eligible for listing in the NRHP for its association to the region's industrial development during the late-nineteen century through the mid-twentieth century. However, in 2019, the resource was inspected and found to have undergone several non-historic alterations since this consideration. The last remaining stove stacks were removed in 2009 and the formerly open-sided stock houses have been enclosed and the blower house has been resided. As such, the resource was recommended as no longer eligible due to the significant loss of the historic integrity associated with this theme, but VDHR did not record an opinion on the recommendation. As such, it will be treated as potentially eligible.

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 Component 4. This assessment found that the Lavino Furnace property is located roughly 0.48 mile from Component 4. The site is located within a large rail yard with a variety of other industrial development in the immediate vicinity. The landscape between it and Component 4 is comprised of a railroad corridor bordering the James River. Both sides of the river where Component 4 crosses are steep, thickly wooded slopes.

Inspection from the Lavino Furnace property found that the existing transmission line is visible as it crosses the river and one structure on each side, including one within the Reusens substation, is visible. The slope across the river from the property is steep and wooded which screens distant views in the direction that the Component 4 alignment extends; which screens visibility of existing structures beyond the one nearest the river. The existing transmission line structures in the vicinity of the property leading out of the substation range from 107-feet to 108-feet tall and those across the river range from 45-feet to 55-feet tall; and the proposed replacement structures leading out of the substation will range from 138.5-feet to 158.5-feet tall, and those across the river along the line will range from 54.5-feet to 77-feet tall. As such, there will be an increase in structure height, however structures will be replaced on a one-to-one basis with the exception of a slight shift at the river crossing. As the existing line and several structures are currently visible as the line crosses the river, it is anticipated that visibility of the transmission line following the rebuild will remain similar, although with different structure configurations. It is also anticipated that topography and vegetation will continue to screen additional structures further along the alignment. This was confirmed with photo simulation that shows structures beyond the river crossing will remain behind the treeline and completely screened. As such, Component 4 will not introduce any substantial change of viewshed or setting for the property. It is therefore D+A's opinion that the proposed project will have no more than a *minimal impact* on Lavino Furnace.

Figure 5-25 depicts the location of Lavino Furnace in relation to Component 4 with viewshed buffers, photographic views towards Component 4, and photo simulations. **Photographs 5-30 through 5-33** are representative photographs of the property, as well as those taken from the

property towards Component 4. **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.

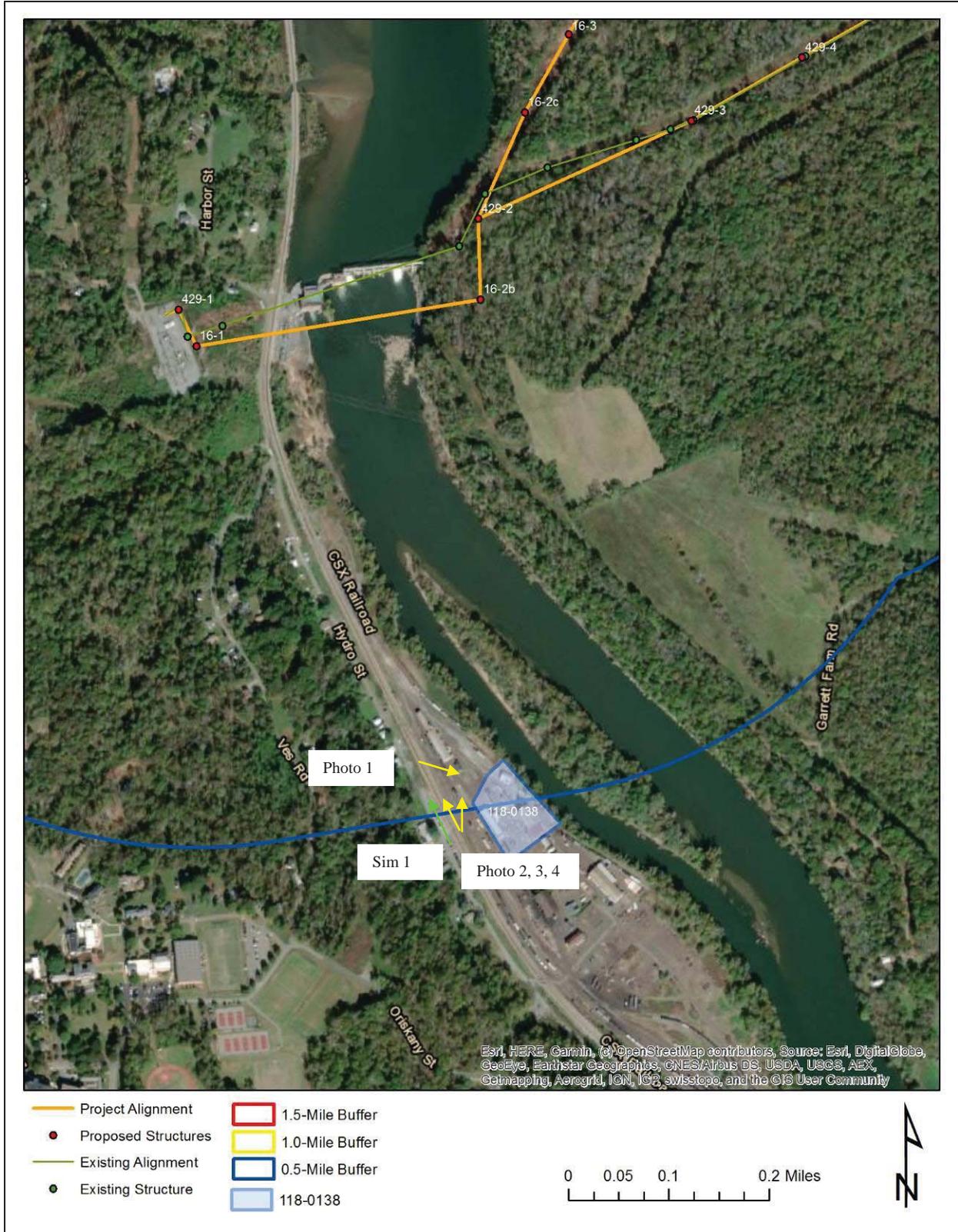
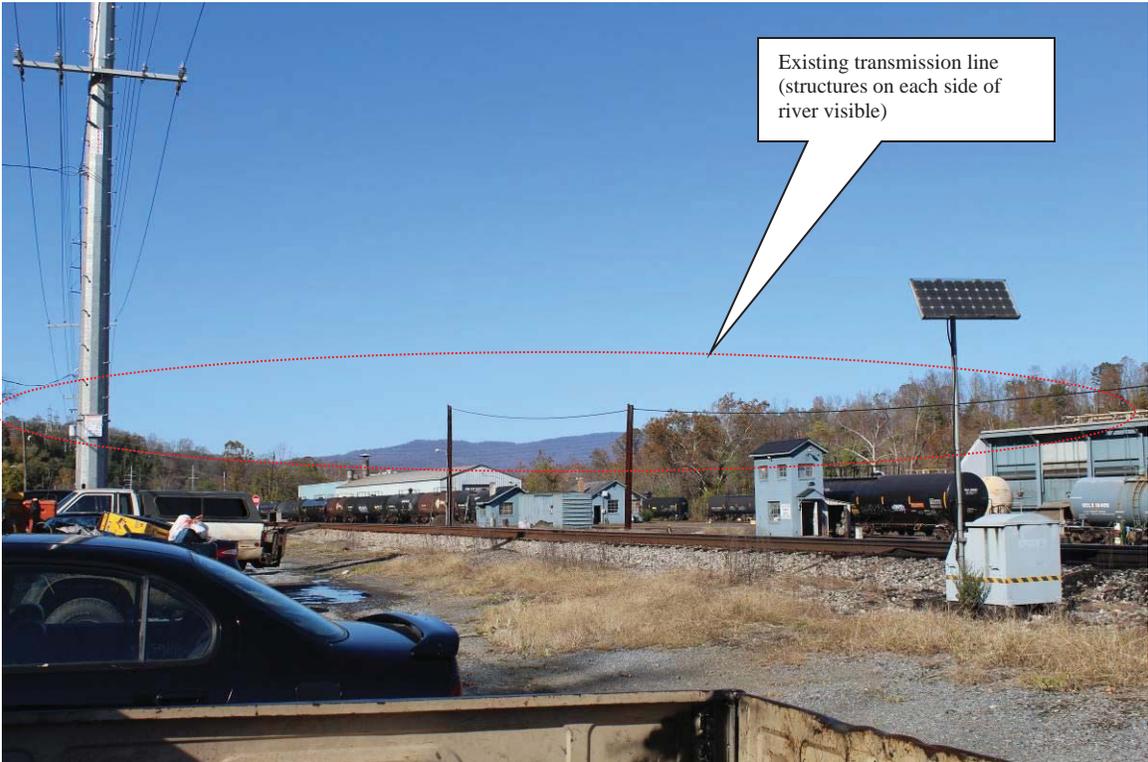


Figure 5-25: Location and direction of representative photos and simulations from Lavino Furnace. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS



Photograph 5-30: Lavino Furnace (Photo Location 1), facing southwest

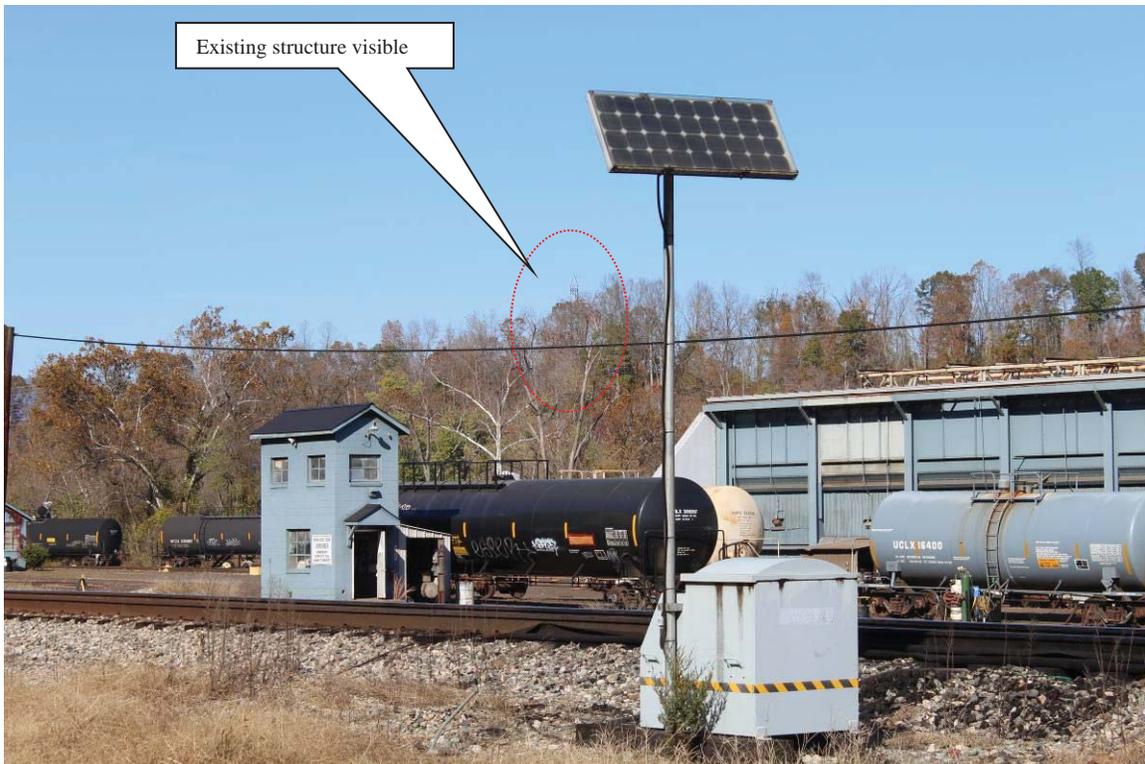


Existing transmission line
(structures on each side of
river visible)

Photograph 5-31: Lavino Furnace towards Component 4 alignment (visible) (Photo Location 2), facing northwest



Photograph 5-32: Lavino Furnace towards Component 4 alignment (visible) (Photo Location 3), facing northwest



Photograph 5-33: Lavino Furnace towards Component 4 alignment (visible) (Photo Location 4), facing north

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

	<p>118-0138</p>	<p>Existing View</p> <p>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.</p>
<p>Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703.447.1350</p>	<p>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.</p>	<p>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.</p>

Figure 5-27: Lavino Furnace Simulation 1 – Existing view from Lavino Furnace towards the Amherst-Reusens transmission line. Source: GTTE, LLC

	<p>118-0138</p>	<p>Proposed View</p> <p>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.</p>
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Figure 5-28: Lavino Furnace Simulation 1 – Proposed view from Lavino Furnace towards Component 4 with structures modeled (shown in yellow). Source: GTTE, LLC

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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 Component 4. This assessment found that the Reusens Dam property is located immediately adjacent to Component 4, and directly beneath the existing transmission line. The resource stretches across the James River and the adjacent landscape is moderately to steeply sloped and wooded on both sides/

Inspection from the resource on the south side of the river found that the existing transmission line is visible as it crosses the river directly above the dam. Two existing structures on both sides of the river are also visible, however the alignment becomes screened as it extends further north by topography and vegetation. The existing transmission line structures in the vicinity of the property leading out of the substation range from 107-feet to 108-feet tall and those across the river range from 45-feet to 55-feet tall; and the proposed replacement structures leading out of the substation will range from 138.5-feet to 158.5-feet tall, and those across the river along the line will range from 54.5-feet to 77-feet tall. As such, there will be an increase in structure height, however structures will be replaced on a one-to-one basis with the exception of a slight shift at the river crossing. As the existing line and several structures are currently visible as the line crosses the river, it is anticipated that visibility of the transmission line following the rebuild will remain similar, although with different structure configurations. It is also anticipated that topography and vegetation will continue to screen additional structures further along the alignment. This was confirmed with photo simulation that shows structures beyond the river crossing will remain behind the treeline and completely screened. As such, Component 4 will not introduce any substantial change of viewshed or setting for the property and the surrounding land use has been altered by residential development and a railroad corridor. 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 more than a *minimal impact* on the Reusens Dam.

Figure 5-29 depicts the location of Reusens Dam in relation to Component 4 with viewshed buffers, photographic views towards Component 4, and photo simulations. **Figures 5-63 through 5-66** are representative photographs of the property, as well as those taken from the property towards Component 4. **Figures 5-30 and 5-33** illustrate the location, direction, and structures included in the photo simulation from the property, **Figures 5-31 and 5-34** provide the existing views from the simulation locations, and **Figures 5-32 and 5-35** provide simulated views of the proposed structures.

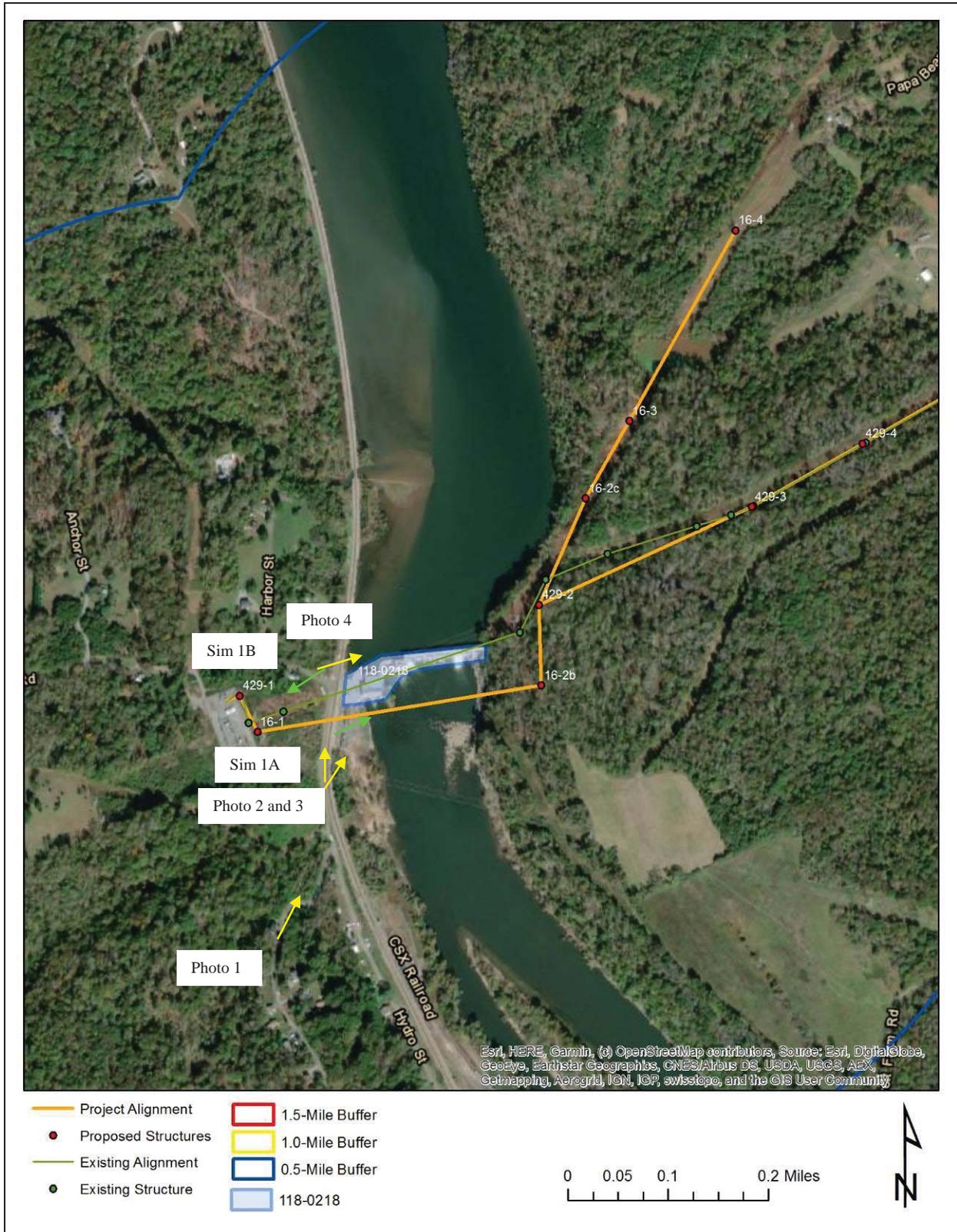
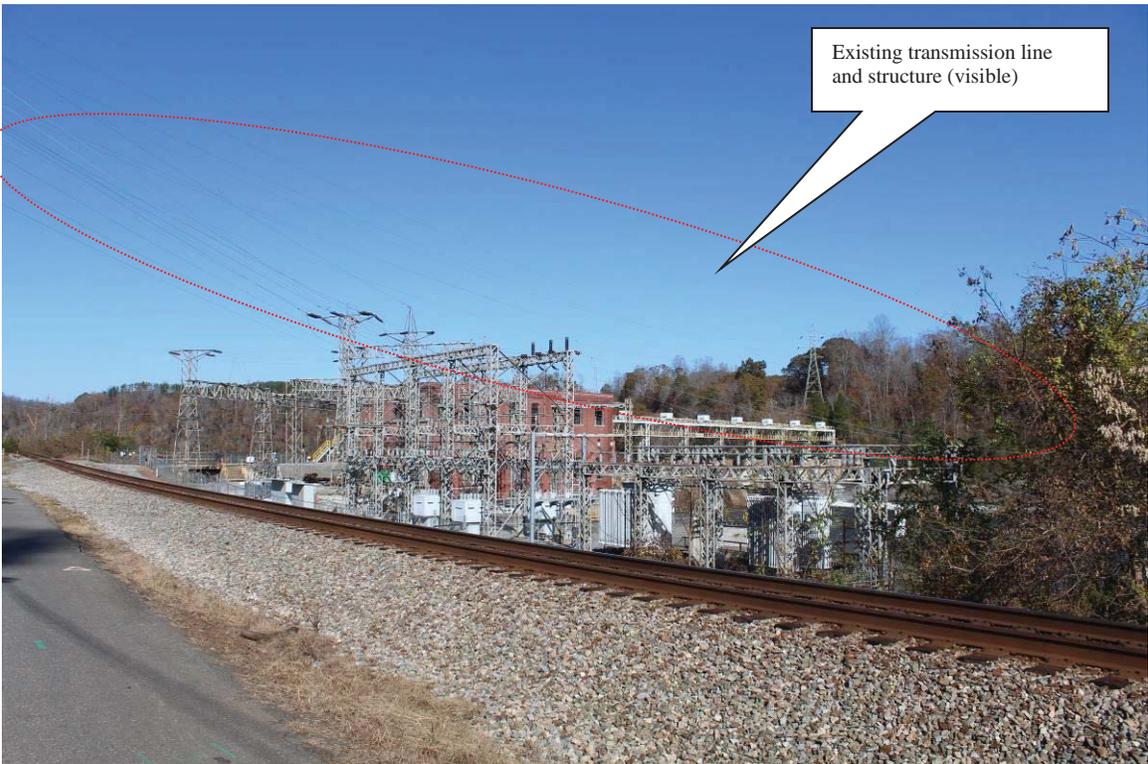


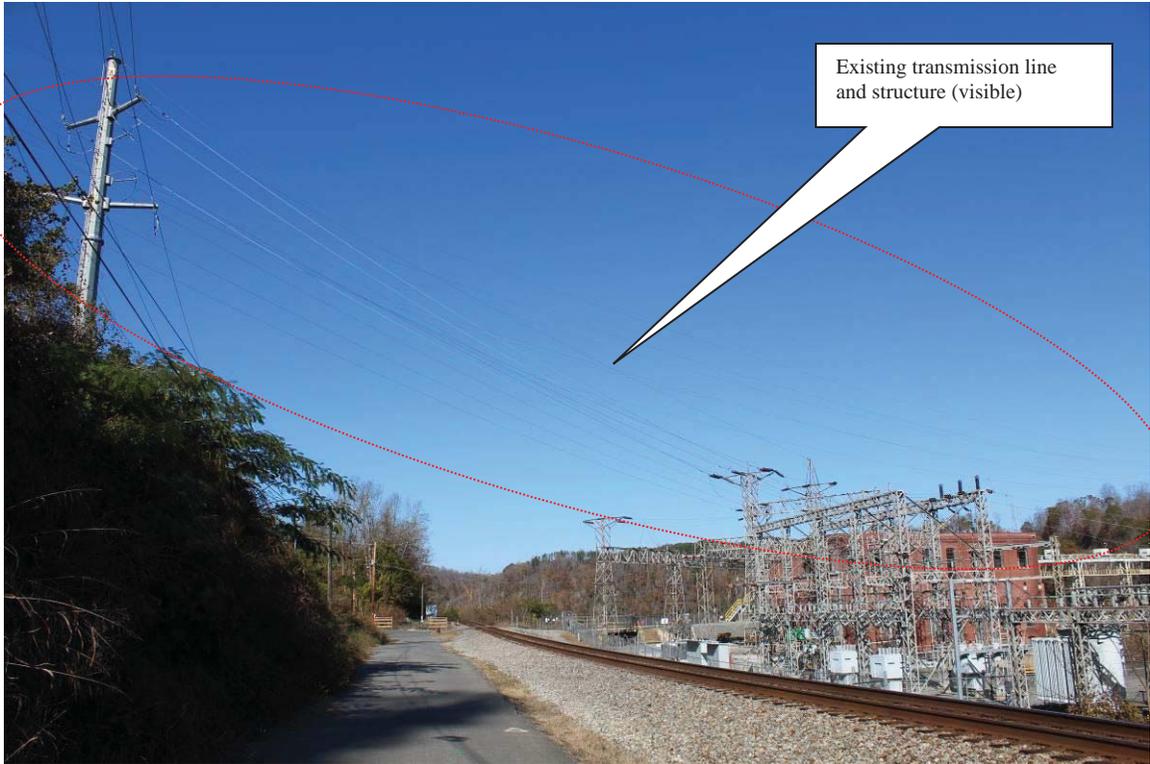
Figure 5-29: Location and direction of representative photos and simulations from Reusens Dam. Photo locations and directions shown in yellow. Simulation locations and directions shown in green. Base map source: VCRIS



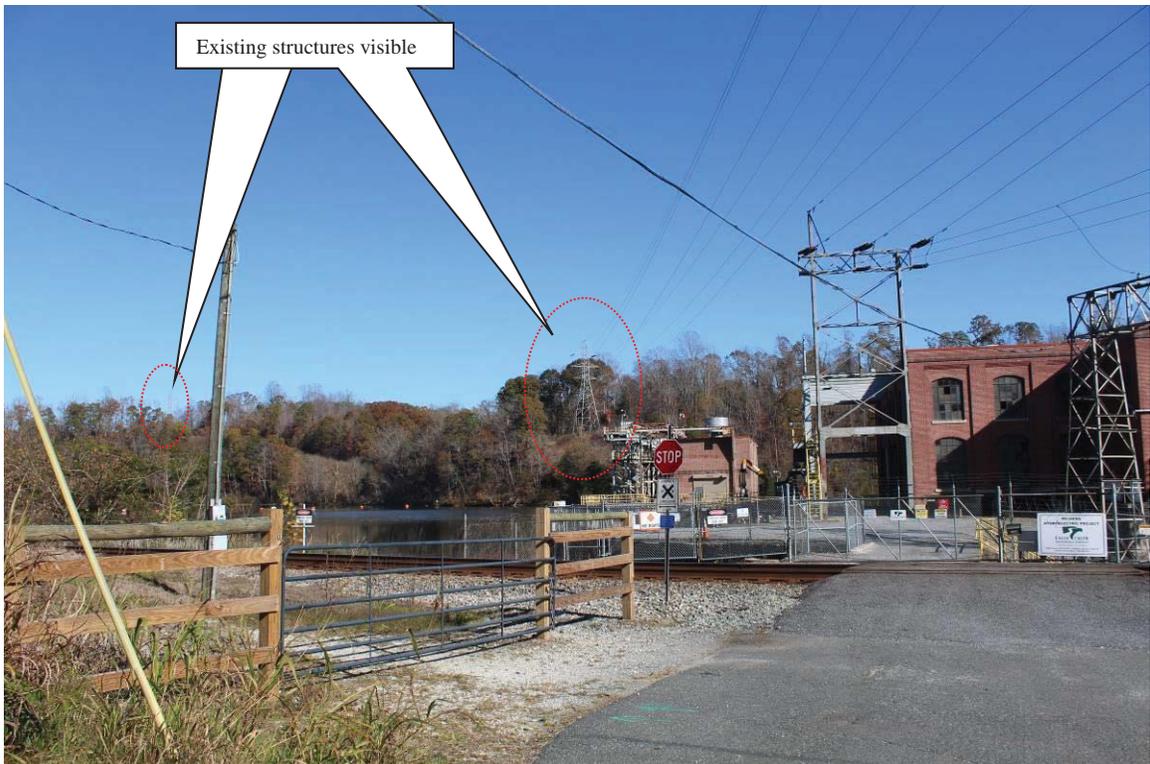
Photograph 5-34: Reusens Dam (Photo Location 1), facing northwest



Photograph 5-35: Reusens Dam towards Component 4 alignment (visible) (Photo Location 2), facing northwest



Photograph 5-36: Reusens Dam towards Component 4 alignment (visible) (Photo Location 3), facing northwest



Photograph 5-37: Reusens Dam towards Component 4 alignment (visible) (Photo Location 4), facing north

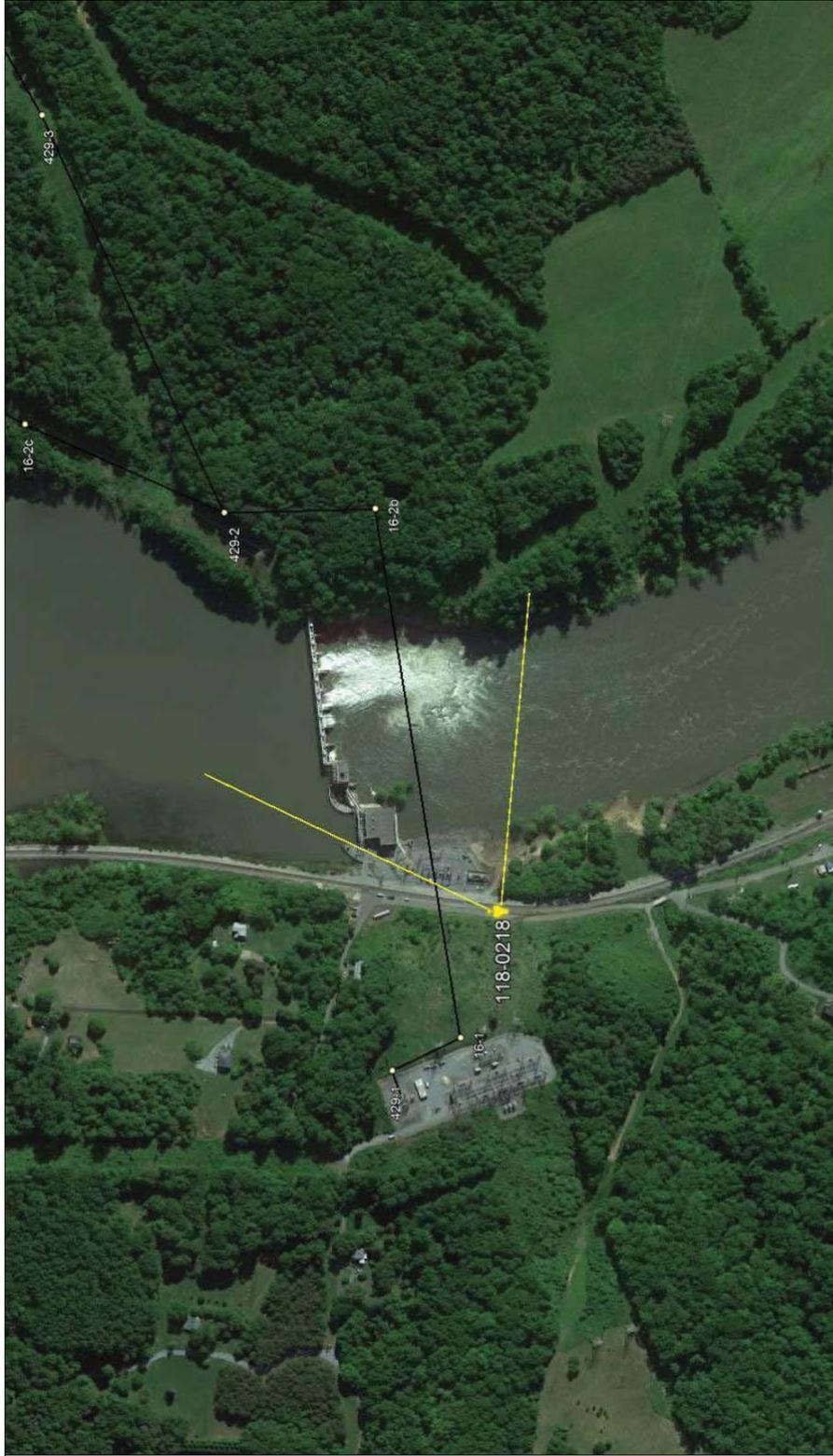


Photo Location: 118-0218



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

Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)
16-2b	1187	138.5	16-4	3474	60.0	429-4	3251	54.5
16-2c	1897	157.0	429-2	1353	68.0	429-5	3801	54.5
16-3	2349	100.5	429-3	2579	77.0	429-6	4321	54.5

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



<p>Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703.447.1350</p> 	<p>118-0218</p>	<p>Existing View</p> <p>0" 1" 2" 3" 4"</p> <p>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.</p>
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Figure 5-31: Reusens Dam Simulation 1A -- Existing view from Reusens Dam towards the Amherst-Reusens transmission line. Source: GTTE, LLC



<p>Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703.447.1350</p> 	<p>118-0218</p>	<p>Proposed View</p> <p>0" 1" 2" 3" 4"</p> <p>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.</p>
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Figure 5-32: Reusens Dam Simulation 1A -- Proposed view from Reusens Dam towards Component 4 with structures modeled (structures not visible shown in yellow; visible structures shown in brown). Source: GTTE, LLC



Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)	Structure	Distance (ft)	Ht (ft)
429-1	493	59						
16-1	485	159						

Photo Location: 11.8-0218

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



Figure 5-33: Reusens Dam Simulation 1B – Location and direction of photograph with list of included structures. Source: GTTE, LLC

	<p style="text-align: center;">118-0218</p>	<p style="text-align: center;">Existing View</p>
<p>Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703.447.1350</p>	<p>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.</p>	<p>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.</p>

Figure 5-34: Reusens Dam Simulation 1B -- Existing view from Reusens Dam towards the Amherst-Reusens transmission line. Source: GTTE, LLC

	<p style="text-align: center;">118-0218</p>	<p style="text-align: center;">Proposed View</p>
<p>Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703.447.1350</p>	<p>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.</p>	<p>0" 1" 2" 3" 4"</p> <p>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.</p>

Figure 5-35: Reusens Dam Simulation 1B -- Proposed view from Reusens Dam towards Component 4 with structures modeled (shown in brown). Source: GTTE, LLC

6. SUMMARY OF POTENTIAL IMPACTS

As part of this Analysis, 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** – Component 4 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 five NRHP-listed properties located within 1.0 mile of Component 4 and three NRHP-eligible properties located within 0.5 mile of Component 4.

Field inspection reveals that the existing Amherst-Reusens 69 kV Transmission Line is not visible from most of the NRHP-listed and eligible properties due to the rolling topography of the region and thick wooded areas that border the ROW for much of its alignment. The exceptions are the two resources located adjacent to the James River where the open landscape permits views of the existing line as it crosses the river. Representative photographs and simulations prepared as part of this effort reveal that despite the increase in structure height as part of the rebuild, Component 4 will remain screened from view by topography and vegetation from those resources and locations where it is currently not visible and will remain visible with a slight change in configuration from the two resources where it is already visible. It is therefore D+A's opinion that Component 4 of the CVTRP will

have no more than a *minimal impact* on any 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 Component 4	Impact
005-0223	Bibbie House, Rt. 604	NRHP-Eligible	0.33 mile	No Impact
005-5029	Oak Lawn, 155 Winridge Drive	NRHP-Listed	0.18 mile	No Impact
005-5329	Hanshill, 142 Leftwich Road	NRHP-Listed	0.15 mile	Minimal Impact
009-5283	Bowling Eldridge House, 1651 Fox Hill Road	NRHP-Listed	0.92 mile	No Impact
118-0138	Lavino Furnace, Virginia Episcopal School Road	NRHP-Eligible	0.48 mile	Minimal Impact
118-0218	Reusens Dam, Hydro Road	NRHP-Eligible	Immediately Adjacent	Minimal Impact
118-0224	Virginia Episcopal School, 400 Virginia Episcopal School Road	NRHP-Listed	0.57 mile	No Impact
118-5240	Presbyterian Orphans Home, Linden Avenue	NRHP-Listed	0.76 mile	No Impact

With regards to archaeology, there is one previously recorded site within or immediately adjacent to Component 4. This resource has been determined potentially eligible for listing in the NRHP by the VDHR. No archaeological field work was conducted as part of this effort and previously recorded sites within or adjacent to Component 4 were not visited or assessed at this time, but should be assessed for existing conditions and impacts as additional construction details become available.

Table 6-2 provides a summary of alignment options and possible impacts to archaeological sites within or adjacent to an alignment option ROW.

Table 6-2: Summary of potential impacts summary for archaeological resources.

VDHR ID #	NRHP Status	Proximity to Component 4	Impacts
44CP0066	DHR Staff: Potentially Eligible	Adjacent to ROW	TBD

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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

2016 Virginia Cultural Resource Information System (VCRIS) database and GIS server.

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