

APPALACHIAN POWER COMPANY
BEFORE THE
VIRGINIA STATE CORPORATION COMMISSION
CASE NO. PUR-2026-00132

APPLICATION FOR APPROVAL AND CERTIFICATION OF
ELECTRICAL TRANSMISSION LINE

Daleville Area Transmission Improvements Project

VOLUME 2 OF 3

Siting Study and VDEQ Supplement

September 2026

VOLUME 2 OF 3 CONTENTS

SITING STUDY AND VDEQ SUPPLEMENT

REBUILD SITING STUDY FOR THE DALEVILLE AREA TRANSMISSION
IMPROVEMENTS PROJECT

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY SUPPLEMENT

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Attachment 2.H.1: VDHR Pre-Application Analysis

Rebuild Siting Study

for

The Daleville Area Transmission Improvements Project

SCC Case No. PUR-2026-00132

Prepared for:



Prepared by:



August 2026

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Key Terminology

Alternative Routes	Assemblage of Study Segments that form routes for analysis and comparison.
Constraints	Specific areas that should be avoided to the extent reasonably practical during the route development and site selection process.
Deviations	Minor adjustments to the existing route where no other alternative is considered.
Endpoints	The project starting and ending location(s), which may include substations, switch stations, tap points, or other locations defined by the Company's planners and engineers.
Land Use	Describes the human use of the land and activities at a given location such as agricultural, residential, industrial, mining, commercial, and recreational uses. It differs from land cover, which only describes the physical characteristics (summarized from EPA.gov).
Project	The proposed transmission facilities studied in the siting report.
Proposed Route	The alignment on which the Siting Team proposes to construct a transmission line. The Proposed Route (1) reasonably minimizes adverse impacts on area land uses and the natural and cultural environment; (2) minimizes special design requirements and unreasonable costs; and (3) can be constructed and operated in a safe, timely, and reliable manner.
Rebuild Route	An alignment in or near the existing ROW identified by the Siting Team.
Siting Team	A multidisciplinary team of experts in transmission line routing, environmental impact assessment, impact mitigation, engineering, and construction management.
Study Area	The territory in which line route alternatives can be sited to feasibly meet the Project's functional requirements and, at the same time, minimize environmental impacts and Project costs.
Study Segments	Study Segments are partial alignments that, when combined, form a complete route.
Substation or Station	Substations or stations are facilities that transform bulk electric voltage down to distribution levels and/or provide protection and controls for the transmission electric grid. Typical equipment includes switches, circuit breakers, buses, and transformers.
Transmission Line	An electric line that operates at 69 kilovolts and/or above and has the purpose of moving power from a generation facility to a substation or between substations.

ACRONYMS

Appalachian	Appalachian Power Company
Company	Appalachian Power Company
EJ	Environmental Justice
IPaC	Information for Planning and Consultation
kV	Kilovolt
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
Project	Daleville Area Transmission Improvements Project
ROW	Right-of-way
U.S.	United States
USFWS	United States Fish and Wildlife Service
VOF	Virginia Outdoors Foundation

1.0 PROJECT DESCRIPTION

Appalachian Power Company (“Appalachian” or “Company”) is proposing the Daleville Area Transmissions Improvements Project to adequately and reliably operate and maintain a portion of the local transmission system to provide service for area customers and accommodate a new customer interconnection request located in Botetourt County, Virginia (“Project”). The Project will construct the new Windy Pass Substation and upgrade the existing Cloverdale, Botetourt, Trinity, and Mount Union Substations. In addition, the Project will rebuild approximately 5.3 miles of 138-kilovolt (“kV”) transmission line between the existing Cloverdale and proposed Windy Pass Substations (currently operated at 69 kV to be upgraded to 138 kV), rebuild approximately 4.0 miles of 138-kV transmission line between the existing Mount Union and proposed Trinity Substations (currently operated at 69 kV to be upgraded to 138 kV), reconductor approximately 7.4 miles of the Cloverdale – Mount Union 138-kV Transmission Line, construct two new 138-kV feeder lines approximately 1.3 miles in length to the data center campus (the “Daleville Area Customer 138-kV Feeder Lines”), construct a new approximately 0.1 mile long 138-kV tie line between the new Windy Pass 138-kV Substation and existing Trinity Substation, and extend the Trinity – Wheatland 69-kV Transmission Line approximately 0.2 miles to the new Windy Pass 138-kV Substation.

The existing single-circuit transmission lines to be rebuilt were originally constructed in the 1990s on wood monopole structures. Final structure types will be dependent on final engineering and additional studies; however, approximately 9.3 miles of 138-kV transmission line that was built on wood monopole structures is planned to be rebuilt using steel monopole structures. The transmission line will largely be rebuilt in or near the Company’s existing rights-of-way (“ROW”). The existing single-circuit transmission line to be reconducted was built in the 1990s primarily on steel H-Frames or steel lattice towers that will not be replaced for the most part. The new 138-kV transmission lines to be built are proposed to be built on steel monopole structures. The anticipated heights of the proposed structures for the Project range between 40 and 135 feet.

Appalachian plans to seek a Certificate of Public Convenience and Necessity from the Virginia State Corporation Commission (“SCC”). The Company will seek approval from the Virginia SCC to construct the Project largely in an existing 80- or 100-foot-wide ROW sited within a typical 150-foot-wide corridor. Where the Daleville Area Customer 138-kV Feeder Lines are proposed, the new 80-foot-wide ROW will be sited within a typical 230-foot-wide corridor. Final line routes and structure locations will be determined during final engineering and after additional studies including, but not limited to, ground surveys, geotechnical and environmental studies, and additional interviews with landowners are completed. The typical filing corridor for the Project includes the existing ROW limits and up to 35 feet on either side. If approved, the Company will complete the preliminary engineering and work with the affected landowners to update existing

easements, as necessary, and provide fair compensation for any new easements. After receiving input from landowners, the Company will finalize the proposed structure locations and ROW widths within the SCC-approved filing corridor. The Company will also work with the necessary local, federal, and state agencies during permitting and construction phases. The desired in-service date for the Project is November 15, 2029.

The Company initiated the siting process for the Project in early-2026 and formed a multidisciplinary team of routing, environmental, engineering, and construction management experts (the “**Siting Team**”), with a review of the existing transmission line to evaluate the feasibility of constructing the Project within the existing ROW. The Company met with Botetourt County staff in April 2026 to introduce the Project and gather feedback. In May 2026, Appalachian presented the rebuild route to the public at an in-person open house and on a Project-specific website. Pending issuance of all required federal, state and/or local permits, the Company estimates that it will take approximately two years to construct the Project.

This Siting Study describes the transmission line route development process and the rationale for the proposed route selection.

2.0 ROUTE DEVELOPMENT OVERVIEW

Appalachian’s electrical planners started the route development process by defining the Project **Endpoints** which include the existing Cloverdale, Botetourt, Trinity, and Mount Union Substations, as well as the proposed Windy Pass Substation.

Next, the Siting Team defined the **Study Area** to evaluate transmission line routes. The Study Area for the proposed rebuild includes the existing the Cloverdale – Trinity 138-kV Transmission Line, the Mount Union – Trinity 138-kV Transmission Line, and the Cloverdale – Mount Union 138-kV Transmission Line and a half-mile buffer to each side of the existing centerlines to analyze potential impacts associated with a rebuild and minor diversions, if needed (see Attachment B, Map 1).

Data Collection and Constraints and Opportunities mapping were completed for the Study Area. Readily available public data sources were used initially and supplemented with stakeholder input, non-public data, and field inspections (see Attachment C and D). Major constraints within the Study Area include the Appalachian National Scenic Trail, Carvins Cove Natural Reserve, Virginia Outdoors Foundation (“VOF”) conservation easements, scattered residential development. The primary siting opportunity for the Project within the Study Area are the existing transmission line ROWs.

The next step was assessing the suitability of using the existing ROW, identifying minor **Deviations**, and evaluating if it was practical to develop **Study Segments and Alternative Routes**

(described in Section 3.0). The Project was presented to stakeholders and the public to provide information and gather feedback (see Section 4.0).

Next, a review of the existing **Rebuild Route** (see Section 5.0) was completed to determine potential impacts associated with rebuilding in or near the existing ROW. Lastly, based on analysis and stakeholder input, the Siting Team identified a **Proposed Route** and the reasons for the Project's Proposed Route selection are summarized in Section 6.0.

3.0 STUDY SEGMENTS

Study Segments are partial alignments connecting the Project Endpoints within the Study Area. Study Segments are intended to meet the Project's functional requirements (engineering and construction) and, at the same time, minimize environmental and socioeconomic impacts and project costs.

Use of existing transmission line ROWs generally minimizes impacts on the natural and human environments and is consistent with Sections 56-46.1 and 56-259 of the Code of Virginia, which suggests that existing ROWs should be given priority when adding new transmission facilities and promotes the use of existing ROW for new transmission facilities. Prioritizing the use of existing corridors to the greatest extent feasible is also consistent with House Bill 889, which was approved by the Governor of Virginia in March 2026. In assessing the feasibility of rebuilding the Cloverdale – Trinity 138-kV Transmission Line and Mount Union – Trinity 138-kV Transmission Line within Appalachian's existing transmission line ROWs (the "Rebuild Segments"), the Company undertook the following activities:

- Company planners determined that an extended outage to rebuild the existing transmission lines within or near the existing ROWs is feasible. Furthermore, telecom and distribution lines are not co-located on the existing transmission lines.
- Company ROW agents reviewed the existing ROW easements and determined that they generally permit line rebuilds and upgrades.
- The Siting Team undertook desktop and field examinations and concluded that construction of the proposed Project generally in the existing ROW is reasonable. The existing transmission line routes are short and direct. The ROW is generally free of encroachments and/or constraints, though there are some minor encroachments.
- WSP USA Inc. was retained to evaluate the environmental impacts of the Project and coordinate with the appropriate environmental agencies. They concluded that using the

existing ROW minimizes impacts on the human, visual, and natural environments. Furthermore, new routes would result in greater impacts, given that new ROW clearing and associated access roads would be needed.

- Meetings with Botetourt County staff were conducted, and a public open house was held June 3, 2026. Landowners within 500 feet of an existing transmission line or 1,000 feet of a proposed substation or substation to be upgraded were notified about the Project. No opposition to using the existing ROW for the Project has been identified.

Based on findings from desktop and field reviews, the Siting Team determined that rebuilding within existing ROW was generally feasible and minimized impacts to human and natural environments. Given the feasibility of constructing the Project in existing ROWs, there are no economically or environmentally viable study segments or alternative routes. Abandoning the existing ROWs for a new greenfield route is neither practical nor necessary. Furthermore, using the existing ROWs for the Project is consistent with public preferences and general siting guidelines for paralleling or utilizing existing ROWs for new transmission facilities where feasible. Accordingly, Study Segment development and subsequent Alternative Route development was deemed unnecessary.

3.1 Cloverdale to Windy Pass

The existing Cloverdale – Trinity 138-kV Transmission Line connects the existing Cloverdale Substation, Botetourt Substation, and Trinity Substation. The Project proposes to rebuild the line as the Cloverdale – Windy Pass 138-kV Transmission Line to 138-kV to increase the capacity of the structures and accommodate the proposed conductor 138-kV while meeting current design and reliability standards. The existing ROW of the Cloverdale – Trinity 138-kV Transmission Line is typically 80 feet wide, and the transmission line is proposed to be rebuilt within the existing ROW or on Company property. Near the existing Botetourt Substation and the proposed Windy Pass Substation, the transmission line will be rerouted approximately 0.1 mile on Company property to connect to the proposed Windy Pass Substation.

3.2 Mount Union to Windy Pass

Between the existing Mount Union and Trinity Substations, the existing Mount Union – Trinity 138-kV Transmission Line will be rebuilt as the Mount Union – Windy Pass 138-kV Transmission Line to increase the capacity of the structures and accommodate the proposed conductor while meeting current design and reliability standards. The existing ROW of the Mount Union – Trinity 138-kV Transmission Line is typically 80 feet wide, and the transmission line is proposed to be rebuilt within or near the existing ROW. Near the existing Mount Union Substation and the

proposed Windy Pass Substation, the transmission line will be rerouted to accommodate the proposed substation upgrades. Approximately 0.1 mile of new ROW is anticipated to connect the rebuilt transmission line to the proposed Windy Pass Substation.

3.3 Cloverdale to Mount Union

Between the Cloverdale and Mount Union Substations, the existing Cloverdale – Mount Union 138-kV Transmission Line will be reconducted to increase the capacity of the circuit; however, the existing structures are not expected to be replaced. Some new structures will be installed for constructability; however, the Company does not plan to acquire new ROW for this section of the Project.

4.0 PUBLIC AND STAKEHOLDER INPUT

An in-person public open house was held on June 3, 2026, at Read Mountain Middle School (182 Orchard Hill Dr., Cloverdale, Virginia, 24077). The Project was publicly announced with a news release on May 15, 2026. The open house provided content related to engineering and design of the structures, Project need, ROW, and construction. In addition, the open house allowed landowners and the public to submit comments on the Project.

Aerial maps at a scale of 1-inch equals 200 feet were provided at the open house. Features on the maps included existing infrastructure and the proposed Project components. Participants were encouraged to identify the location of their houses, places of business, properties of concern, or other sensitive resources on the mapping and submit comments to the Project team. Comments received at the open house were entered into the Project GIS database.

A Project-specific website was published and included updates and news releases, an interactive map, fact sheet information, and Project timeline. In addition to the comments submitted at the open house, questions and comments were also collected through the contact page on the website, email address, and telephone hotline. A total of 29 comment cards were either returned to the Company or received through the Project website.

Landowners within a 500-foot corridor (250 feet on either side) of the transmission line to be rebuilt and within a 1,000-foot buffer around the proposed substation and substations to be upgraded were mailed Project information and invited to attend the June 3, 2026, open house. Landowner addresses were obtained from Botetourt County, Virginia. The Project was advertised and open house invitations were distributed through the following activities:

1. A news release was distributed by the Company on May 15, 2026, to announce the Project and open house. Company representatives requested input on the Project by June 17, 2026.

2. Direct mailings were sent to 292 landowner addresses on May 15, 2026. The outreach mailings included a letter and fact sheet about the Project.
3. Advertisements were circulated in the greater Daleville area to introduce the Project and announce the open house.
4. One automated telephone notification from the Company was made in May 2026 to notify landowners about the virtual open house. A total of 228 available contacts were attempted to be reached for notification.

The emails, phone calls, and comment cards returned to the Company or received through the Project website were entered into the Project GIS database and generally related to how the rebuild will differ from the existing line, whether it will affect landowner property in the vicinity, and general Project information. The Project will largely be rebuilt within the Company's existing ROWs, and input from stakeholders and landowners did not indicate major concerns to use the existing ROW. The Company will continue to coordinate with landowners and stakeholders throughout the duration of the Project.

5.0 REBUILD ROUTE REVIEW

By rebuilding the existing transmission lines generally within the existing ROWs, the Project avoids deviations, offsets, and expansion into adjacent properties typically associated with alternative routing approaches. This approach minimizes impacts on residential, commercial, and environmental resources while remaining consistent with generally accepted siting guidance and state regulations that prioritize the use of existing transmission corridors.

Potential impacts associated with construction within the existing ROW include temporary disturbances such as construction-related noise, traffic control measures, and localized tree clearing, as well as considerations related to proximity to nearby residences and structures. Substation expansions may also result in clearing and grading near existing facilities, but these impacts are limited in extent relative to greenfield alternatives.

Development of alternative routes or new ROW was unnecessary, as such alternatives would result in substantially greater impacts, including additional land acquisition, increased tree clearing, and more extensive effects on developed and undeveloped land uses. Based on engineering feasibility, environmental considerations, and stakeholder input, the Siting Team determined that rebuilding and reconductoring within the existing ROW, combined with targeted substation expansions, represents the most practical and least impactful approach for the Project.

5.1 Natural Environment

The natural environment within the Project area includes surface waters, wetlands, floodplains, forested habitats, and wildlife resources. Potential impacts have been identified based on publicly available datasets, desktop analyses, and preliminary environmental screening, including use of the United States Fish and Wildlife Service (“USFWS”) Information for Planning and Consultation (“IPaC”) tool.

The Project primarily follows existing transmission line ROWs and established centerlines, which reduces the need for new ground disturbance and limits encroachment into previously undisturbed areas. However, the Project also includes several new greenfield transmission lines associated with interconnection to the customer’s proposed substation and new connections to the Botetourt, Trinity, and proposed Windy Pass Substations. These new greenfield transmission lines introduce the potential for localized impacts where new ROW must be established.

Numerous water resources occur within the Study Area. These include major features such as Tinker Creek and Buffalo Creek, along with many smaller streams, ponds, and drainage features identified in the National Hydrography Dataset. The Cloverdale – Mount Union line alone crosses Tinker Creek and Buffalo Creek, including associated floodplain areas, in addition to numerous unnamed streams and water features. The Cloverdale – Mount Union 138-kV Transmission Line also crosses Buffalo Creek, several unnamed streams, and a pond, while the Mount Union – Trinity 138-kV Transmission Line intersects Rulman Branch and other smaller waterbodies. National Wetlands Inventory (“NWI”) wetlands are intermittently present throughout the Study Area. Portions of the transmission line alignments, including both existing ROW and proposed greenfield segments, intersect Federal Emergency Management Agency 100-year floodplains associated with these water resources. While use of existing ROW will limit incremental impacts, greenfield construction may result in new, but localized, disturbances to streams, wetlands, and floodplain areas.

The Study Area includes a mix of forested, agricultural, developed, and industrial land uses that provide habitat for a variety of terrestrial and aquatic species. Based on IPaC results, federally listed species with the potential to occur in the Project area include the endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*), as well as the proposed threatened monarch butterfly (*Danaus plexippus*) and proposed threatened green floater (*Lasmigona subviridis*). Vegetation clearing associated with both transmission line work and new greenfield construction represents the primary potential impact to bat species and other forest-dependent wildlife. No designated critical habitat has been identified within the Study Area based on available data.

Additional desktop review indicates the potential for other sensitive species within the broader region; however, no confirmed occurrences or designated habitats have been identified within the Project footprint. The Study Area does not contain known eagle nests, wildlife management areas, or other formally protected wildlife habitats based on available mapping.

Conservation lands and recreational resources are present within the Project area. The Cloverdale – Mount Union 138-kV Transmission Line intersects easements managed by the VOF at multiple locations. The transmission lines intersect the Appalachian National Scenic Trail corridor and the Appalachian Trail at multiple locations, including crossings by the Cloverdale – Trinity and Cloverdale – Mount Union 138-kV Transmission Lines. Additional recreational features include the Cherry Blossom Trail and the Roanoke Appalachian Trail Club Trail, which are also crossed or intersected. Although the majority of the Project is located within existing ROW, minimizing direct impacts, construction activities may result in temporary disruptions to trail access and user experience.

No United States Army Corps of Engineers civil works features or levees have been identified within the Study Area.

In addition to transmission line improvements and greenfield construction, the Project includes expansion and reconfiguration of the Cloverdale, Botetourt, Trinity, and Mount Union Substations, as well as the construction of the proposed Windy Pass Substation. These activities will require localized ground disturbance, grading, and vegetation clearing within and adjacent to existing substation footprints. Substation upgrades may permanently convert vegetated areas to developed use and could result in incremental habitat loss, fragmentation, and localized changes in drainage patterns. Similarly, new greenfield transmission lines may result in permanent conversion of forested or agricultural land within newly established ROW corridors. These impacts are expected to be limited in extent.

The Project minimizes impacts to the natural environment by using existing ROW to the extent practicable and co-locating new facilities where feasible. Anticipated impacts include temporary construction-related disturbances such as vegetation clearing, minor disturbance at stream and floodplain crossings, and short-term effects at recreational trail intersections, as well as permanent but localized impacts associated with substation expansions and new ROW establishment. These impacts can be minimized through implementation of standard construction best management practices and compliance with applicable environmental permitting requirements. Additional environmental review and coordination with resource agencies will occur during subsequent phases of Project development.

5.2 Human Environment

The human environment encompasses land use and associated activities within the Project area, including agricultural, forestry, residential, industrial, commercial, institutional, recreational uses, and scenic resources. Existing land uses within the Study Area consist of a mix of developed and undeveloped properties, including residential neighborhoods, agricultural lands, forested tracts, and commercial and industrial areas.

The Project has been designed to rebuild and reconductor transmission lines primarily within existing centerlines and ROWs, which reduces the need for additional land disturbance and minimizes potential conflicts with existing and planned land uses. However, the Project also includes several portions of new greenfield transmission line required to interconnect the customer's proposed substation and to provide connections to the Botetourt, Trinity, and proposed Windy Pass Substations. These new greenfield transmission lines introduce the potential for localized changes to land use patterns where new ROW must be established.

Transmission line activities within existing ROW are not expected to result in notable permanent impacts to land use, property ownership, or compatibility with surrounding uses. In contrast, new greenfield transmission lines will require the acquisition of new easements and the conversion of existing land uses, such as forested or agricultural areas, to maintained transmission corridors.

Impacts to the human environment are also associated with substation upgrades at the Cloverdale, Botetourt, Trinity, and Mount Union Substations and the proposed Windy Pass Substation. These improvements include reconfiguration, expansion, and installation of new equipment, and require acquisition of adjacent property in some locations. As a result, these activities will lead to localized and permanent land use changes. Construction-related impacts may include temporary increases in noise, traffic, and visual disturbance, as well as tree clearing and site grading, but these effects are expected to be limited to areas immediately surrounding the substations.

The Project is located in an area supported by a network of major transportation corridors, including United States Routes 11 and 220, Interstate 81, and several state and local roads. The Cloverdale – Trinity line crosses key roadways such as U.S. 220, US-11, Interstate 81, and multiple local roads, as well as two railways. The Mount Union – Trinity 138-kV Transmission Line crosses Catawba Road and other local roadways, while the Cloverdale – Mount Union 138-kV Transmission Line crosses Interstate 81, U.S.-11, and Tinker Mountain Road. Construction activities at these crossings may result in temporary traffic disruptions. The Company will coordinate with the Virginia Department of Transportation to obtain necessary permits and implement appropriate traffic control measures. Based on currently available information, no significant conflicts with planned transportation projects have been identified.

Agricultural and forestry resources are present throughout the Study Area, including active farmland such as the Cave Hill Dairy Farm, which is intersected by the Cloverdale–Mount Union 138-kV Transmission Line. Since much of the work will occur within existing ROW, impacts to agriculture are expected to be minor and temporary. Agricultural uses are generally compatible with transmission lines and can continue following construction. Greenfield transmission line segments and substation expansions may result in permanent conversion of small areas of farmland or forest to utility use. Forestry impacts will primarily consist of vegetation clearing within existing and new ROW corridors, as well as clearing associated with substation improvements.

Recreational resources within the Study Area include the Appalachian National Scenic Trail, the Appalachian Trail corridor, the Roanoke Appalachian Trail Club Trail, and the Cherry Blossom Trail. Existing transmission lines intersect the Appalachian Trail corridor and associated trails at multiple locations, including crossings by the Cloverdale–Trinity and Cloverdale–Mount Union 138-kV Transmission Lines. Construction within existing ROW minimizes direct impacts to these resources, although temporary disruptions may occur during construction. New greenfield transmission lines may introduce additional crossings, which could result in short-term effects on trail access and user experience.

Additional human environment features within the Study Area include residential access points, private driveways, rail crossings, and commercial or industrial properties, all of which may experience temporary construction-related effects. For example, portions of the existing ROW pass through or near residential properties and driveways, as well as commercial areas such as parking lots, where coordination will be required to maintain access.

The Project minimizes impacts to the human environment by prioritizing the use of existing transmission corridors and co-locating new infrastructure where practicable. Anticipated impacts include temporary construction-related disturbances along transmission line routes, minor disruptions at roadway and trail crossings, and localized, permanent land use changes associated with new greenfield transmission lines and substation expansions, as well as the proposed Windy Pass Substation. These impacts are expected to be limited in extent and can be managed through standard construction practices, coordination with local agencies, and adherence to applicable permitting requirements.

5.3 Environmental Justice

It is the Company's long-standing practice in its route development process to avoid or reasonably minimize impacts to the human environment, which includes Environmental Justice ("EJ") communities (community of low income or color) and fence line communities within the

meaning of the Virginia Environmental Justice Act (§ 2.2-234 et seq. of the Code of Virginia), or the “Act.”

The Siting Team reviewed data from the 2020 Decennial Census and 2023 American Community Survey from the United States Census Bureau. The Company reviewed the Project by examining census tract and census block group (“CBG”) data. Per the available United States Census Bureau data, there are 10 CBGs located in Virginia within one mile of the Project. The results of the dataset are provided in Table 1.

Two of the CBGs located within one mile of the Project meet the threshold of at least one “EJ community,” namely communities of color and low-income communities, as defined by the Act and exceed the state average. Of these 10 CBGs located within 1.0 mile of the Project, one CBG exceeded the state average of low-income communities as defined by the Act (the percentage of low-income communities exceeds the state average of low-income communities) and is crossed by the Mount Union – Windy Pass and Cloverdale – Mount Union 138-kV Transmission Lines. Overall, the Project will largely be rebuilt within the existing ROW. The Project is not anticipated to have a disproportionately high or adverse impact on EJ Communities as defined in the Act.

As discussed in Section 4.0, the Company engaged and provided notification to landowners within a 500-foot corridor (250 feet on either side) of the transmission line to be rebuilt and within a 1,000-foot buffer around the proposed substation and substations to be upgraded using multiple methods of contact and news releases for an open house on June 3, 2026. Input received during the virtual open house noted the use of existing ROW and general project information questions. The Company’s ROW agents attempted to reach landowners where building outside of the existing centerline or deviations were proposed, includes areas that meet the threshold of at least one “EJ community.” The Company will continue to engage all affected landowners, including EJ Communities as defined in the Act throughout the duration of the Project.

Table 1. Demographics Data Table								
Census Tract within one mile of centerline	CBG within one mile of Centerline	Crossed by Centerline (Yes/No)	Crossing Route	County	Population			
					Census Tract	CBG	% people of color	% low income ¹
<i>Virginia</i> ²					8715698		38%	30%
403.01	510230403012	No	NA	Botetourt County	2,813	988	12%	22%
403.03	510230403031	Yes	Cloverdale – Windy Pass	Botetourt County	4,424	1,227	10%	19%
	510230403032	Yes	Cloverdale - Mount Union Mount Union – Windy Pass	Botetourt County		1,073		20%
	510230403033	Yes	Cloverdale – Windy Pass Mount Union – Windy Pass	Botetourt County		2,124		20%
	510230403041	No	NA	Botetourt County		2,464		26%
403.04	510230403042	Yes	Cloverdale – Windy Pass Cloverdale – Windy Pass Mount Union – Windy Pass	Botetourt County	4,370	1,906	4%	10%
404.01	510230404011	No	NA	Botetourt County	2,340	1,422	6%	43%

Table 1. Demographics Data Table

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	Population							
Census Tract within one mile of centerline	CBG within one mile of Centerline	Crossed by Centerline (Yes/No)	Crossing Route	County	Census Tract	CBG	% people of color	% low income ¹
404.02	510230404021	Yes	Cloverdale – Windy Pass	Botetourt County	4,668	814	12%	27%
	510230404022	Yes	Cloverdale – Windy Pass Cloverdale - Mount Union	Botetourt County		447		41%
405.01	510230405011	No	NA	Botetourt County	6,069	2,476	8.70%	25%

1 Per the Virginia Environmental Justice Act, "Low-income community" means any census block group in which 30 percent or more of the population is composed of people with low income, and used in the comparative analysis.

2 Virginia Population (U.S. Census Bureau 12/18/2020) Note:

Bold text indicates populations, as defined in Virginia Environmental Justice Act, which exceed the state average, and are crossed by the Proposed Route. Gray shaded cells indicate reference populations.

Green shaded cells indicate identified minority populations as defined in Virginia Environmental Justice Act, which exceed the state average.

Yellow shaded cells indicate identified low-income populations as defined in Virginia Environmental Justice Act, which exceed the state average.

Orange shaded cells indicate identified other demographic populations as defined in EJSCEEN, which exceed the state average, but not defined in Virginia Environmental Justice Act.

5.4 Visual

Aesthetics are defined as a mix of landscape visual character, the context in which the landscape is viewed (view/user groups), and the scenic integrity of the landscape. The Project is located within a mixed-use landscape consisting of residential, commercial, industrial, recreational, and forested areas. Existing transmission facilities are already present throughout much of the Study Area and contribute to the established visual character of the corridor. The Project includes reconstruction of approximately 9.3 miles of transmission line and reconductoring of approximately 7.4 miles within the existing ROW, which will maintain the current visual setting in these areas. However, the Project also includes several new greenfield transmission lines required to connect the customer's proposed substation and provide new connections to the Botetourt, Trinity, Cloverdale, and proposed Windy Pass Substations. These new greenfield transmission lines will introduce transmission infrastructure into areas where it does not currently exist, resulting in new visual elements within portions of the landscape.

Proposed transmission structures are anticipated to range from approximately 40 to 135 feet in height, depending on final engineering and structure type. In areas to be rebuilt, modern single-circuit, steel monopole structures are expected to be used. While replacement structures within existing ROW may be incrementally taller than some existing facilities to meet modern design requirements, their placement within established corridors and their streamlined design will limit changes to the overall visual character. In contrast, new greenfield transmission lines will introduce new structures that may be visually prominent, particularly in areas that are currently forested, agricultural, or otherwise undeveloped. Vegetation clearing required to establish new ROW may further increase visibility of these facilities.

The transmission lines intersect a variety of transportation and recreational resources, including Interstate 81, U.S. Route 11, State Route 220, railways, and the Appalachian National Scenic Trail corridor and Appalachian Trail. Existing lines, such as the Cloverdale – Trinity and Cloverdale – Mount Union 138-kV Transmission Lines, already cross these features, and rebuilding within the existing ROW will generally maintain the current visual relationship. However, new greenfield crossings may introduce transmission infrastructure into previously unaffected viewsheds. While trail users and motorists may experience temporary visual disturbances during construction, long-term effects within existing corridors are expected to be minimal. In both existing and new corridor areas, forested landscapes will continue to provide varying degrees of visual buffering, although clearing associated with new ROW may reduce screening in some locations.

Visual impacts associated with the Project are expected to be most noticeable at substation locations and along new greenfield transmission lines. Upgrades at the Cloverdale, Botetourt, Trinity, and Mount Union Substations and the proposed Windy Pass Substation will introduce

additional electrical equipment, expanded footprints, and areas of vegetation clearing, resulting in localized increases in visual contrast. These changes will be concentrated in areas already characterized by utility infrastructure. In contrast, greenfield transmission lines may introduce new visual contrasts in previously undeveloped or lightly developed areas. However, these impacts are expected to be limited to the immediate vicinity of the new ROW and will diminish with distance and existing landscape screening.

5.5 Constructability

Constructability is the ability to efficiently and cost-effectively engineer, acquire ROW, construct, operate, and maintain the proposed transmission line. Major factors include outage requirements, safety, steep topography, condensed ROWs, heavy angles, access, ability to parallel or use existing ROWs, features, proximity to major highways, etc.

Given minimal system constraints and outage considerations, the Project has been designed to maximize the use of existing transmission line ROWs and centerlines where feasible, while incorporating new greenfield transmission line where necessary to support system improvements and customer interconnection. Approximately 9.3 miles of transmission line will be rebuilt and 7.4 miles will be reconducted within or adjacent to existing ROW, which reduces construction complexity by allowing the use of existing access, limiting disturbance, and minimizing the need for extensive clearing. However, several new greenfield transmission lines totaling approximately 1.6 miles are required to connect to the customer and provide new connections to the Botetourt, Trinity, and proposed Windy Pass Substations. These segments will require new access routes, additional clearing, and coordination in areas not currently constrained by existing utility corridors.

Across the Project area, transmission lines traverse a network of existing infrastructure, including roadways, rail corridors, recreational trails, and utility crossings. The Cloverdale – Windy Pass 138-kV Transmission Line crosses major transportation routes such as State Route 220, U.S. Route 11, and Interstate 81, along with numerous local roads and two rail corridors. Similarly, the Mount Union – Windy Pass 138-kV Transmission Line crosses Catawba Road and several local roadways, while the Cloverdale – Mount Union line spans Interstate 81, U.S. Route 11, and Tinker Mountain Road. These crossings generally occur at or near existing locations to take advantage of established access points, suitable terrain, and previously permitted crossing locations, thereby minimizing additional impacts and constructability challenges.

New greenfield transmission lines introduce additional considerations, as they traverse areas that may include undeveloped land, agricultural properties, or mixed-use landscapes. These new greenfield transmission lines will require establishment of new ROW, vegetation clearing, and coordination with property owners and local stakeholders.

In addition to transmission line work, the Project includes upgrades to the Botetourt, Trinity, Cloverdale, and Mount Union Substations and construction of the proposed Windy Pass Substation. These improvements involve reconfiguration, equipment installation, expansion of existing facilities, and construction of new facilities, which may require localized grading, clearing, and property acquisition. Coordination will be required to ensure constructability and minimize disruption to surrounding land uses.

Coordination with applicable agencies and stakeholders will be conducted throughout Project development and construction. This includes coordination with the Virginia Department of Transportation for roadway crossings and traffic control, as well as with utility owners where transmission lines intersect pipelines, railways, or other infrastructure. Based on currently available information, no conflicts with aviation facilities have been identified, and additional coordination with relevant agencies will occur as needed during permitting and construction.

6.0 PROPOSED ROUTE

Based on stakeholder input, field reconnaissance, and technical analysis, the Siting Team determined that rebuilding and upgrading the transmission system primarily within the existing ROWs represents the most practicable and least impactful solution to meet the Project's needs and is therefore identified as the Proposed Route (see Attachment B). This approach maximizes the use of existing transmission corridors, which are generally compatible with current land uses and supported by existing easements, and minimizes the need for new land disturbance.

The Proposed Route uses the Company's existing ROWs to the extent practicable for the Cloverdale – Windy Pass, Mount Union – Windy Pass, and Cloverdale – Mount Union transmission lines, thereby reducing potential impacts to residential, agricultural, and environmental resources. Limited new greenfield transmission lines are required to interconnect the customer's proposed substation and provide additional connections to the Botetourt, Trinity, and proposed Windy Pass Substations. However, these new greenfield transmission lines have been incorporated only where necessary to meet system requirements and have been routed to minimize impacts to the human and natural environment.

At a localized scale, minor deviations from the existing centerline may be required to avoid encroachments or sensitive features identified during the siting process, thereby further reducing potential impacts to nearby development and improving constructability. The Siting Team also considered the development of entirely new greenfield routes. However, such alternatives would require substantial new ROW acquisition, increase tree clearing, and introduce greater impacts to both developed and undeveloped lands and were therefore not considered practical or necessary.

Collectively, the Siting Team concluded that the Proposed Route best satisfies the Project objectives by minimizing impacts to land use, natural resources, and cultural features, while maintaining a direct and constructible alignment that avoids unnecessary complexity, excessive cost, and non-standard design requirements.

ATTACHMENT A: OUTREACH FACT SHEET

Daleville Area Transmission Improvements Project

Appalachian Power (APCo) representatives are investing in new transmission assets in Botetourt County to support a customer's facility and help meet the area's growing energy needs. Construction begins in fall 2027 and concludes in late 2029.

What

The project team is evaluating options for:

- Upgrading approximately 17 miles* of 138-kilovolt transmission line with a larger-capacity conductor wire. The line will be rebuilt in or near the existing right-of-way.
- Upgrading Cloverdale, Trinity, Mount Union, and Botetourt substations.
- Building a new substation.
- Building approximately 0.1 miles of 138-kV transmission line.
- Filing an application with the Virginia State Corporation Commission (SCC).

*For the ~7-mile portion from Mount Union Substation - Cloverdale Substation, the transmission line will primarily be reconducted (same structures, new wire). The remaining ~10 miles of line must be rebuilt due to structure capacity.

Why

The project:

- Provides power to a new customer.
- Supports increasing electricity demand.
- Enhances electric service reliability for customers.

How APCo Connects Large Energy Users

APCo crews connect large energy users in a way that supports growth while protecting current customers. The company plans projects carefully, sets clear rules so large customers pay their share and builds upgrades that can also make the local electric system more reliable.

APCo representatives support large energy users. Their growth can help spread costs and help keep rates steadier over time.

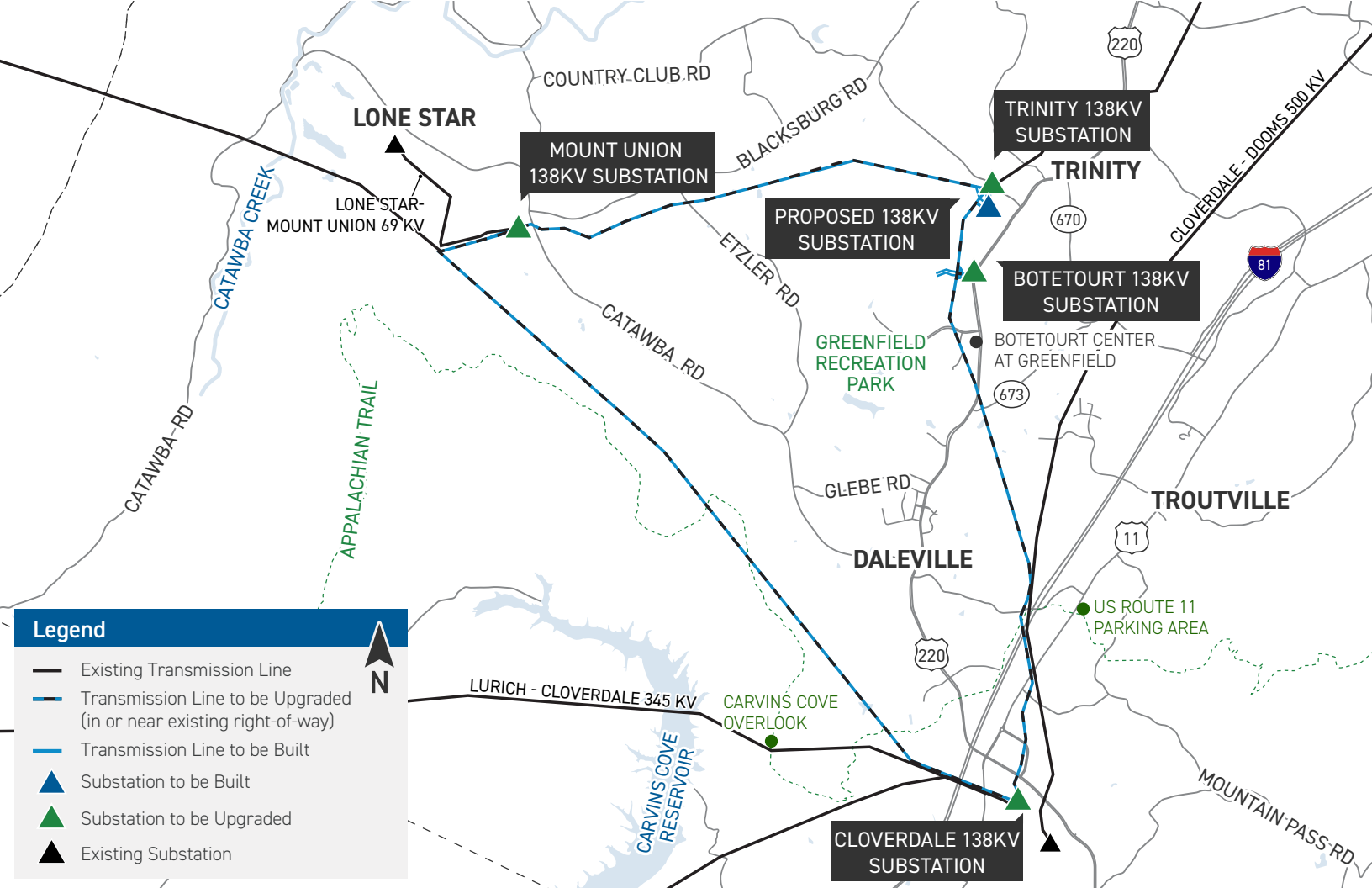
The project team works closely with these customers to keep added costs for current customers as low as possible. Company representatives are creating special rate plans, called tariffs, so large projects pay the costs they create and current customers are protected.

When APCo representatives build new lines or equipment for a large customer, those upgrades can also make service more reliable for nearby homes and businesses. Building new lines and equipment for large users can also help the region grow by supporting new jobs and new businesses. The Virginia State Corporation Commission (SCC) reviews these projects and approves the rules we follow and what large customers pay.

Project Schedule

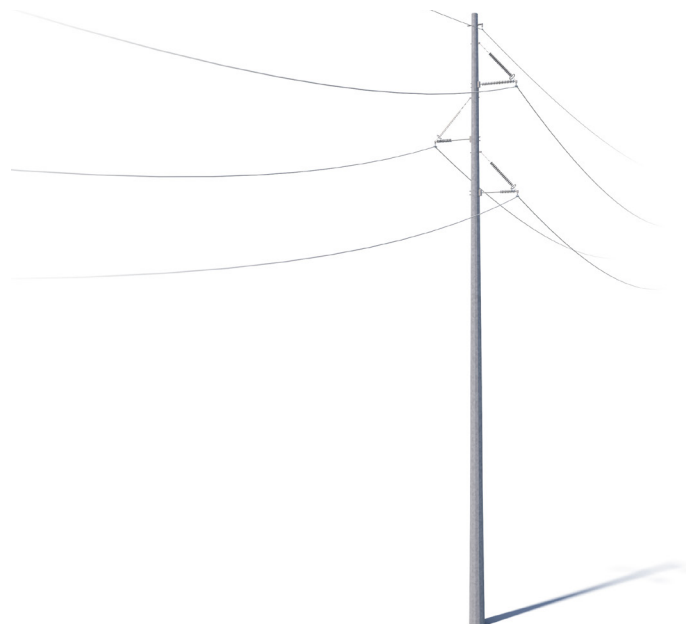
	2026	2027	2028	2029
Project Announcement May 2026	●			
In-Person Open House June 2026	●			
Right-of-Way Communications Begin June 2026	●			
File with the Virginia SCC** Summer 2026	●			
Anticipated SCC Approval Summer 2027		●		
Tree Clearing & Access Road Construction begins Fall 2027		●		
Substation Construction Begins Fall 2027		●		
Transmission Line Construction Begins Fall 2027		●		
Project In Service Late 2029				●

*Timeline subject to change. **Virginia State Corporation Commission



Typical Structures

Crews plan to use steel single-pole structures to rebuild the 10 miles of transmission line where the structures need replaced due to capacity.



Existing Structure Height: 55 - 110 Feet
 Proposed Structure Height: 50 - 130 Feet*
 Typical Right-of-Way Width: 80 - 100 Feet*

**Exact structure, height, and right-of-way requirements may vary.*



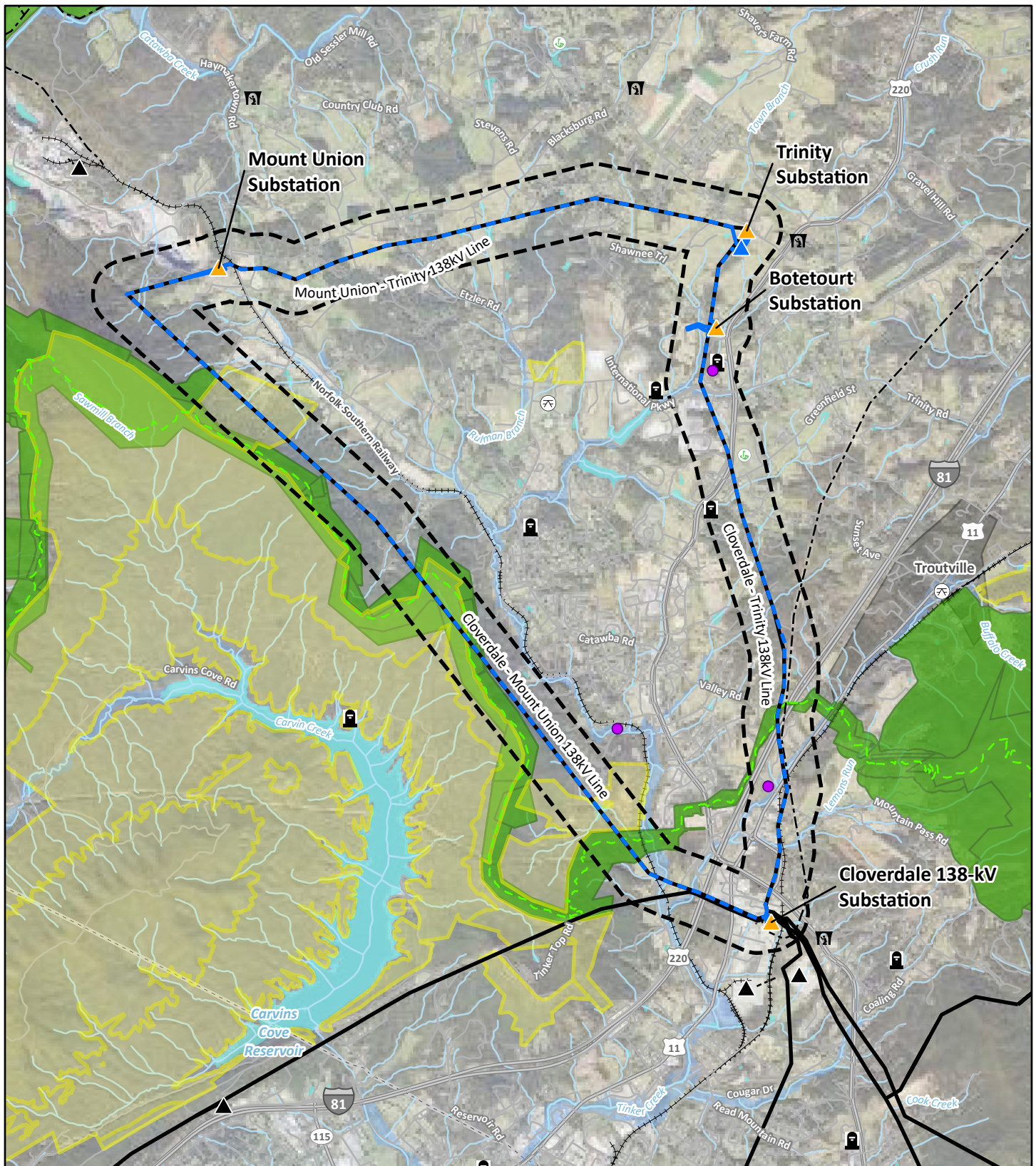
We value your input. Please send comments and questions to:

Ford Carson • Project Outreach Specialist Sr.
 APCO_Outreach@aep.com • 833-313-3743

AppalachianPower.com/DalevilleArea

5/12/2026

ATTACHMENT B: PROPOSED ROUTE



▲ Existing Substation (AEP) ▲ Existing Substation to be Upgraded (AEP) ▲ Substation to be Built (AEP) ⊙ Recreation Area ⊙ Cemetery ⊙ Place of Worship ⊙ Historic Site (NRHP) ⊙ Golf Course — Transmission Line to be Built (AEP) — Existing Alignment to be Upgraded (in or near existing right-of-way)(AEP) — Existing Transmission Line (AEP) --- Non-AEP Transmission Line — Local Road — Highway — Railroad — Appalachian Trail — Stream (3DHP) — Wetland (NWI) — Waterbody (3DHP) — Floodplain (FEMA) — VOF Easement — Federal Conservation Easement (PAD-US) — Study Area	Botetourt County, Virginia NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 June 15, 2026		Attachment B, Proposed Route APPALACHIAN POWER An AEP Company Daleville Area Transmission Improvements Project 0 1.5 Miles
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ATTACHMENT C: DATA COLLECTION SUMMARY

Attachment C. Data Collection Summary	
Data Source	Description
GIS Data	See Attachment D.
Field Inspections	Siting Team members conducted field inspections throughout the Study Area and along the Proposed Route (see Attachment A) in March 2026.
Federal Agencies	• USFWS using the IPaC tool [August 2026]. • United States Geological Survey (USGS) NHD and USFWS NWI databases. • Agency letters sent on May 15, 2026.
State Agencies	• VDHR's VCRIS database review [April 2026]. • USFWS online databases for sensitive species and habitats [August 2026]. • Agency letters sent on May 15, 2026.
Local Agencies/Officials	• Local Officials – in-person briefing to local officials from Botetourt County by the Siting Team in May 2026.
Outreach Efforts	• Mailings sent to 292 landowner addresses on May 15, 2026. The outreach mailings included: ○ Letter. ○ Project factsheet. ○ Comment card with prepaid postage return envelope. • Mailings sent to 288 landowner addresses on August 12, 2026. The outreach mailings included: ○ Letter ○ Project factsheet (Proposed Route announcement)
Open House(s)	An in-person public open house on June 3, 2026, to gather landowner and community feedback.
Website and Mailed-In Comments	A total of 29 comments returned to the Company via map book comments, comment cards, emails, or phone calls as of June 17, 2026.

ATTACHMENT D: GIS DATA SOURCES

Attachment D: GIS Data Sources		
SITING CRITERIA	SOURCE	DESCRIPTION
Land Use		
Number of parcels crossed by the ROW	Botetourt County (2026)	Count of the number of parcels crossed by the ROW.
Number of residences within 500 feet of the route centerline	Virginia Geographic Information Network (2024)	Count of the number of residences within the ROW and within 500 feet of potential routes.
Number of commercial buildings within 500 feet of the route centerline	Digitized from Virginia Geographic Information Network (VGIN) (2024)	Count of the number of commercial buildings within the ROW and within 500 feet of potential routes.
Land use acreage and distance crossed by the ROW and acreage within 50 feet of the route centerline	U.S. Geological Survey (USGS) National Land Cover Database (NLCD) 2023. MRLC. Retrieved from https://www.mrlc.gov/data	The NLCD (2023) compiled by the Multi-Resolution Land Characteristics (MRLC) Consortium includes 15 classes of land cover from Landsat satellite imagery.
Acres of conservation easements crossed	National Conservation Easement Database (NCED) (2024) Virginia Department of Conservation and Recreation (2024) Virginia Outdoor Foundation (2026) The Protected Areas Database of the United States (PAD-US) (2022)	Private conservation easements crossed by the routes from the NCED which is comprised of voluntarily reported conservation easement information from land trusts and public agencies.
Acres of agricultural district land crossed	The Protected Areas Database of the United States (PAD-US) (2022)	Protected land that is devoted exclusively to agricultural production or devoted to and qualified for compensation under a federal land retirement or conservation program that is at least 10 acres in size, or produces an average yearly gross income of at least \$2,500 during a 3-year period

Attachment D: GIS Data Sources		
SITING CRITERIA	SOURCE	DESCRIPTION
Number of archeological resources within the ROW and within 1.0 mile	Virginia Cultural Resources Information System (2026)	Previously identified archeological resources listed or eligible on the National Register of Historic Places (NRHP) acquired through Virginia Cultural Resources Information System (2026).
Number of historic architectural resources within the ROW, within 1.0 mile	Virginia Cultural Resources Information System (2026) NRHP (2022)	Previously identified historic architectural resource sites and districts listed or eligible on the NRHP acquired through Virginia Cultural Resources Information System (2026).
Institutional uses (schools, places of worship and cemeteries) within 1,000 feet of the route centerline	U.S. Geological Survey's GNIS (2024)	This dataset includes the locations of cemeteries, churches, hospitals, parks, and schools. Features within five miles of potential routes were field verified.
Natural Environment		
Forest clearing within the ROW	U.S. Geological Survey (USGS). 2024. National Land Cover Database (NLCD) 2023. MRLC. Retrieved from https://www.mrlc.gov/data	Acres of forest within the ROW.
Number of 3D Hydrography Program (3DHP) stream and waterbody crossings within the ROW	USGS (2024)	The NHD is a comprehensive set of digital spatial data prepared by the USGS that contains information about surface water features such as lakes, ponds, streams, rivers, springs and wells.
Acres of National Wetland Inventory (NWI) wetland crossings within the ROW	U.S. Fish and Wildlife Service (USFWS) 2024	The NWI produces information on the characteristics, extent, and status of the Nation's wetlands and deepwater habitats.
Acres of 100-year floodplain crossing within the ROW	U.S. Federal Emergency and Management Agency (FEMA) 2024	Acres of 100-year floodplain within the ROW.
Miles of public lands crossed by the route	The Protected Areas Database of the United States (PAD-US) (2022)	Miles of federal, state and local lands crossed by the ROW.

Attachment D: GIS Data Sources		
SITING CRITERIA	SOURCE	DESCRIPTION
Threatened, endangered, rare or sensitive species occurrence within the Project vicinity	Virginia Department of Wildlife Resources Wildlife Review Map Service (2023)	Known occurrences; locations of potential habitat based on land use.
Percent of prime farmland soils and soils of statewide importance within the ROW	USDA-NRCS SSURGO Database (2026)	Percent of soil associations crossed by the ROW characterized as prime farmland or farmland of statewide importance.
Technical		
Route length	Measured in GIS	Length of route in miles.
Number and severity of angled structures	Developed in GIS	Anticipated number of angled structures less than 3 degrees, 3 to 45 degrees and more than 45 degrees based on preliminary design.
Number of road crossings	USGS Transportation Dataset (2024)	Count of federal, state and local roadway crossings
Number of transmission line crossings	Appalachian Power (2024)	Number of high voltage (100 kV or greater) transmission lines crossed by the ROW.
Distance of steep slopes crossed	Derived from seamless Digital Elevation Models (DEMs) obtained from the U.S. Geologic Survey 2024	Miles of slope greater than 20 percent crossed by the routes.
Length of transmission line parallel	Appalachian Power (2024)	Miles of the route parallel to existing high voltage transmission lines.
Length of road parallel	USGS Transportation Dataset (2024)	Miles of the route parallel to existing roadways.

ATTACHMENT E: AGENCY CORRESPONDENCE

ATLAVISTA – LEESVILLE TRANSMISSION IMPROVEMENTS PROJECT					
JURISDICTION	FULL NAME	TITLE	ORGANIZATION	DATE NOTICE SENT	DATE RESPONSE RECEIVED
Local	Gary Larrowe	County Administrator	Botetourt County	5/15/2026	No response received
Local			Monacan Indian Nation	6/18/2026	No response received
State	Kara Canaday	Ombudsman for Tribal Consultation	Office of the Secretary of the Commonwealth	5/15/2026	5/15/2026
State	Amy Martin	Manager, Wildlife Information and Environmental Services	Virginia Department of Wildlife Resources	5/15/2026	8/4/2026
State	Will Omdorff	Karst Protection Coordinator	Virginia Department of Conservation and Recreation - Natural Heritage Program	5/15/2026	No response received
State	René Hypes	Environmental Review Coordinator	Virginia Department of Conservation and Recreation - Natural Heritage Program	5/15/2026	6/9/2026
State	Michelle Henichack	Senior Wetland Ecologist	Virginia Department of Environmental Quality – Central Office	5/15/2026	No response received
State	Bettina Rayfield	Manager	Virginia Department of Environmental Quality – Office of Environmental Impact Review	5/15/2026	5/18/2026
State	Robert Weld	Regional Director	Virginia Department of Environmental Quality – Blue Ridge Regional Office	5/15/2026	No response received
State	Timothy Fletcher	Manager	Virginia Department of Environmental Quality - Blue Ridge Regional Office	5/15/2026	5/18/2026
State	Randy Owen	Chief of Habitat Management	Virginia Marine Resources Commission - Habitat Management	5/15/2026	6/17/2026
State	Rachel Meyers	Manager	Virginia Department of Agriculture and Consumer Services - Office of Agriculture and Forestry Development	5/15/2026	No response received
State	Jenny Bellville-Marrion	Project Review Archaeologist	Virginia Department of Historic Resources - Division of Review and Compliance	5/15/2026	No response received

ATLAVISTA – LEESVILLE TRANSMISSION IMPROVEMENTS PROJECT					
JURISDICTION	FULL NAME	TITLE	ORGANIZATION	DATE NOTICE SENT	DATE RESPONSE RECEIVED
State	Patrick Sweatt	Conservation Specialist	Virginia Outdoors Foundation	5/15/2026	7/13/2025 7/27/2026 8/6/2026 8/20/2026
State	Dennis McCarthy	Area Forester	Virginia Department of Forestry	5/15/2026	No response received
State	Benjamin Wassum	Natural Resource Specialist	Virginia Department of Forestry	5/15/2026	No response received
State	Clint Folks	Forestland Conservation Coordinator	Virginia Department of Forestry	5/15/2026	No response received
State	Johnathan Vest	Natural Resource Specialist	Virginia Department of Forestry	5/15/2026	No response received
State	Rusty Harrington	Chief Planner	Virginia Department of Aviation	5/15/2026	No response received
State	Watson Felts	Deputy Director, Flight Operations	Virginia Department of Aviation	5/15/2026	No response received
State	Matt Heller	State Geologist	Virginia Department of Energy - Geology and Mineral Resources	5/15/2026	No response received
State	Steven Kvech, PE	Deputy Field Director	Virginia Department of Health - Office of Drinking Water	5/15/2026	No response received
State	Dwayne Roadcap	Office Director	Virginia Department of Health - Office of Drinking Water	5/15/2026	6/22/2026
State	Ken King	District Engineer	Virginia Department of Transportation - Salem District	5/15/2026	No response received
State	Brian Blevins, PE	Residency Administrator	Virginia Department of Transportation - Salem Residency	5/15/2026	5/18/2026
Federal	Jennifer Serafin	Chief, Western Section	U.S. Army Corps of Engineers - Norfolk District	5/15/2026	5/20/2026 5/26/2026
Federal	Marie Kennington-Gardiner	Eastern Regional Administrator	Federal Aviation Administration	5/15/2026	5/18/2026
Federal	Amy Van Blarcom-Lackey	Regional Administrator	U.S. Environmental Protection Agency - Region 3	5/15/2026	5/20/2206

ATLAVISTA – LEESVILLE TRANSMISSION IMPROVEMENTS PROJECT					
JURISDICTION	FULL NAME	TITLE	ORGANIZATION	DATE NOTICE SENT	DATE RESPONSE RECEIVED
Federal	Troy Anderson	Field Office Supervisor	U.S. Fish & Wildlife Service - Virginia Ecological Services	5/15/2026	6/23/2026
Federal	Edwin Martinez-Martinez	State Conservationist	U.S. Department of Agriculture - Natural Resources Conservation Service	5/15/2026	5/15/2026 5/18/2026
Federal	Milton Vega	State Soil Scientist	U.S. Department of Agriculture - Natural Resources Conservation Service	5/15/2026	No response received
Federal	Erise Vaughan	Team Lead, Planning and Environment	U.S. Department of Transportation - Federal Highway Administration, Virginia Division	5/15/2026	No response received
Federal	Daniel Suarez	Acting Division Administrator	U.S. Department of Transportation - Federal Highway Administration, Virginia Division	5/15/2026	No response received
Federal	Jennifer Flynn	Acting Regional Director	U.S. National Park Service, Region 1	5/15/2026	No response received
Federal	Ed Clark	Superintendent	National Park Service, Appalachian National Scenic Trail	5/15/2026	No response received



WSP
6641 W. Broad Street, Suite 405
Richmond, VA 23230
USA
wsp.com

2026-05-15

Subject: Appalachian Power Company: Daleville Area Transmission Improvements Project in Botetourt County

Dear:

Appalachian Power Company (Appalachian Power) is proposing the Daleville Area Transmission Improvements Project, which will upgrade approximately 17.0 miles of existing transmission line and four existing substations in Botetourt County, Virginia (Project). Appalachian Power contracted WSP USA, Inc. (WSP) to prepare the Certificate of Public Convenience and Necessity application to the Virginia State Corporation Commission for the Project. On behalf of Appalachian Power, WSP is requesting your input on the information provided.

The Project will:

1. Rebuild approximately 10.0 miles of existing 69-kilovolt (kV) transmission line to 138-kV standards between the existing Cloverdale, Botetourt, Trinity, and Mount Union Substations;
2. Install new conductor on approximately 7.0 miles of existing 138-kV transmission line between the existing Cloverdale and Mount Union Substations;
3. Upgrade the existing Cloverdale, Botetourt, Trinity, and Mount Union Substations; and
4. Build a new substation.

Appalachian Power plans to largely construct the Project in the existing right-of-way; however, some new right-of-way will be required near the upgraded substations. The Project study area is shown in Attachment 1.

Appalachian Power and WSP are requesting input from you on the Project so that any specific comments can be considered. We appreciate your input, and your feedback will be incorporated into the filing to the Virginia State Corporation Commission. WSP plans to file the Project with the State Corporation Commission in the summer of 2026. Please distribute this notification to staff members who may be involved with this Project for review and comment.

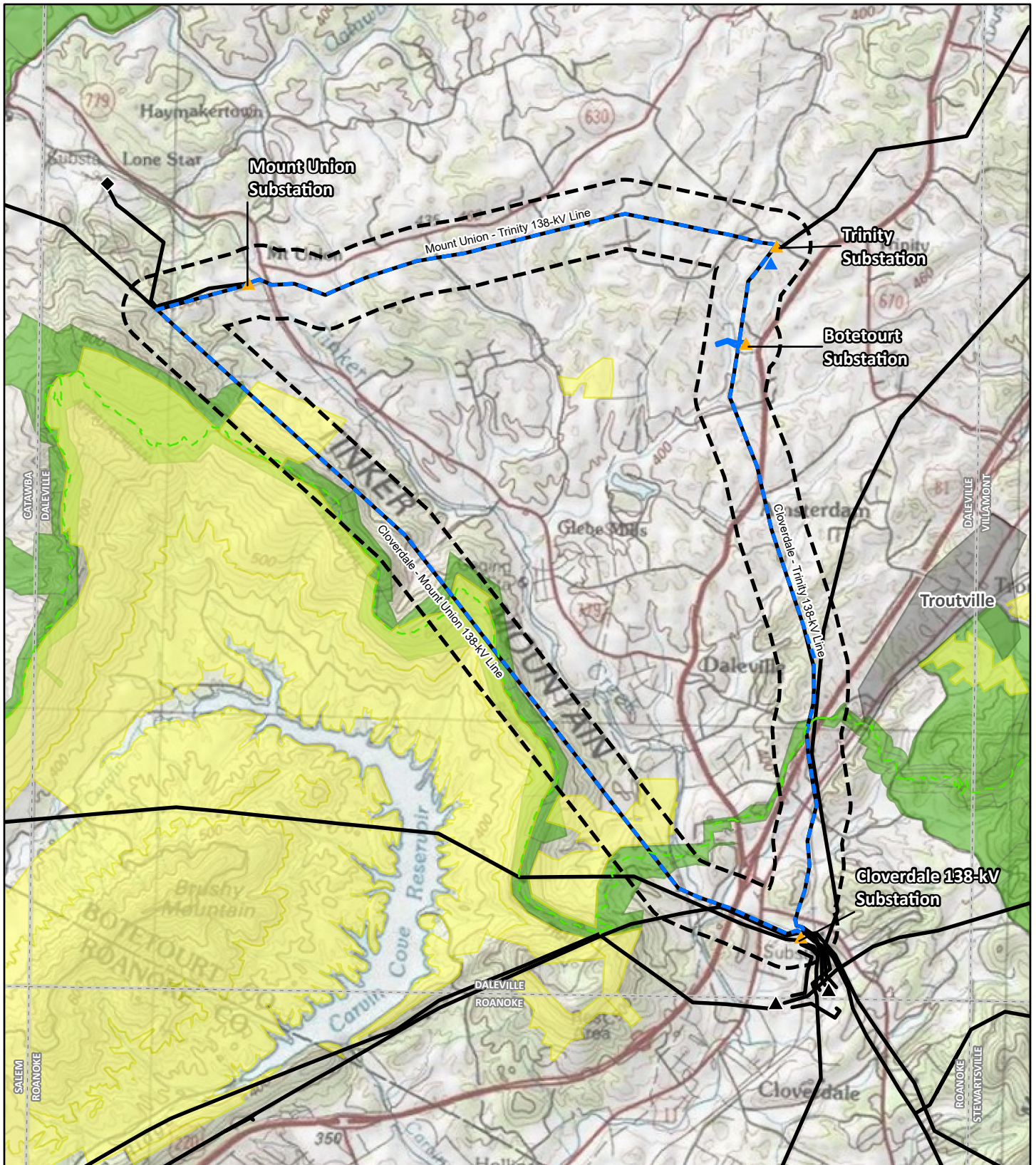
I look forward to receiving your comments and feedback regarding the Project. Please feel free to contact me via email at aaron.bethencourt@wsp.com or by phone at (540) 492-5703.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Aaron Bethencourt'.

Aaron Bethencourt
Senior Professional, Environmental Planning

Enclosure: Attachment 1 – Project Study Area



- ▲ Substation to be Upgraded (AEP)
- ▲ Substation to be Built (AEP)
- ◆ Existing Substation (AEP)
- ◆ Existing Switch Station (AEP)
- Transmission Line to be Built (AEP)
- Existing Transmission Line To Be Upgraded (in or near existing right-of-way) (AEP)
- Existing Transmission Line (AEP)
- Appalachian Trail
- VOF Easement
- Federal Conservation Land
- City/Town/Municipal Limit
- USGS Topo Quad Boundary
- Study Area

Botetourt County,
Virginia

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

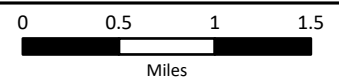


May 13, 2026



Project Study Area

Daleville Area Transmission Improvements Project



Subject: RE: Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/19/2026, 3:23:56 PM
From: Canaday, Kara (GOV) <kara.canaday@governor.virginia.gov>
To: Bethencourt, Aaron
Cc: Fraser, Daniel; Senfield, Chris

Follow Up Flag: Follow up
Flag Status: Flagged

Good afternoon,

Thank you for sharing this information. For projects in Botetourt County, you will need to contact the Monacan Indian Nation. I cannot submit comments or feedback on their behalf.

This information can be shared with Consultation@MonacanNation.gov

Warm regards,

Kara Canaday

Citizen of the Chickahominy Tribe of Virginia
Ombudsman for Tribal Consultation
Office of the Secretary of the Commonwealth
(804) 874-6691

From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Friday, May 15, 2026 4:36 PM
To: Canaday, Kara (GOV) <kara.canaday@governor.virginia.gov>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: Daleville Transmission Improvements Project - Request for Feedback

Kara,

I am contacting you regarding Appalachian Power's Daleville Transmission Improvements Project, a transmission line project in Botetourt County, Virginia. Attached is a letter and project area map for your review and comment. More information about the Project is also available at aeptransmission.com/Virginia/DalevilleArea/.

We look forward to receiving your comments and feedback regarding the Project.

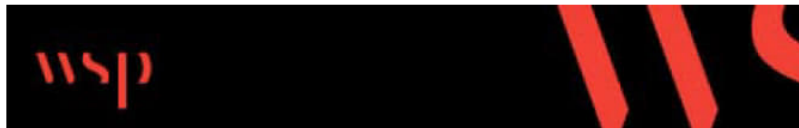
Please feel free to contact me via email or by phone at (540) 492-5703.

Thank you,

Aaron Bethencourt

Senior Professional, Environmental Planning

T +1 540-492-5703
M +1 786-566-1133



Subject: ESSLog# 46966_APCo Daleville Area Transmission Improvements Project Botetourt County_DWR_NBS20260804
Sent: 8/4/2026, 2:15:00 PM
From: Strawderman, Nicole (DWR)<Nicole.Strawderman@dwr.virginia.gov>
To: Bethencourt, Aaron
Cc: Schul, Hannah (DWR)
Attachments: [Time-of-Year-Restrictions.pdf](#)

Follow Up Flag: Follow up

Flag Status: Flagged

Categories: Blue Category

Aaron,

We have reviewed the project that proposes to upgrade the Daleville Area Transmission line and existing substations, including the construction of a new substation, in Botetourt County.

Based on the information provided, the following wildlife resources were identified along the corridor that could potentially be impacted by the project. The comments below are our standard recommendations for the resources identified to assist in project planning. The comments are subject to change due to additional information on project scope and location.

Catawba Creek, within 2 miles of the project area, is a designated Threatened and Endangered Water due to the presence of Federally Endangered State Endangered James Spiny mussel. To best protect listed mussels known from nearby waters, we recommend maintaining undisturbed naturally vegetated buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams. We recommend maintaining undisturbed naturally vegetated buffers of at least 200 feet in width on all perennial tributaries to Threatened and Endangered Species Waters. We recommend maintaining undisturbed naturally vegetated buffers of at least 300 ft on both sides of Threatened and Endangered Species Waters.

Tinker Creek, spanned by the project, is a designated Threatened and Endangered Water due to the presence of State Endangered Roanoke Logperch. We recommend adherence to erosion and sediment controls during ground disturbance. We recommend maintaining undisturbed naturally vegetated buffers of at least 200 feet in width on all perennial tributaries to Threatened and Endangered Species Waters. We recommend maintaining undisturbed naturally vegetated buffers of at least 300 ft on both sides of Threatened and Endangered Species Waters.

If in-stream work is proposed within Catawba and/or Tinker Creeks, we recommend further coordination with DWR to avoid and minimize impacts to listed James Spiny mussel and Roanoke Logperch.

To minimize the adverse impacts of linear utility project development on wildlife resources, we offer the following general recommendations: avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable; maintain naturally vegetated buffers of at least 100 feet in width around wetlands and on both sides of perennial and intermittent streams, where practicable; conduct significant tree removal and ground clearing activities outside of the primary songbird nesting season of March 15 through August 15; and, implement and maintain appropriate erosion and sediment controls throughout project construction and site restoration. To minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting, we recommend use of matting made from natural/organic materials such as coir fiber, jute, and/or burlap. We understand that adherence to these general recommendations may be infeasible in some situations. We are happy to work with the applicant to develop project-specific measures as necessary to minimize project impacts upon the Commonwealth's wildlife resources.

Our Time of Year Restrictions are attached. We encourage you to review our Additional Resources (<https://dwr.virginia.gov/wies/wies-additional-resources/>) for information on best management practices, species information, wildlife surveys, and other resources to help inform your project.

We are happy to meet at any time during the project's planning - do not hesitate to reach out to schedule. Thank you for your patience and we look forward to continued coordination.

Thank you,
Nicole



Nicole Strawderman

(she/her)

Environmental Services Biologist

P 804-822-5396

Virginia Department of Wildlife Resources

A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228

www.dwr.virginia.gov

David L. Bulova
Secretary of Natural and Historic Resources

Nikki Rovner
Director

Sarah Spota
Deputy Director



COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Frank N. Stovall
Deputy Director
for Operations

Darryl Glover
Deputy Director for
Dam Safety,
Floodplain Management and
Soil and Water Conservation

Laura Ellis
Deputy Director for
Administration and Finance

June 9, 2026

Aaron Bethencourt
WSP
235 Clairborne Ave
Rocky Mount, Va 24151

Re: Daleville Transmission Improvements Project

Dear Mr. Bethencourt:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information in our files, the Carvins Cove Reservoir Slopes Conservation Site is located within the project area, including a 100 foot buffer. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking (B-rank) based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Carvins Cove Reservoir Slopes Conservation Site has been assigned a B-rank of B2, which represents a site of very high significance. The natural heritage resources associated with this site are:

Central Appalachian Chinquapin Oak - Eastern Red Cedar Woodland	G3G4/S2/NL/NL	
Central Appalachian Pine - Oak / Heath Woodland	G4/S4/NL/NL	
Central Appalachian Xeric Chestnut Oak - Virginia Pine Woodland	G3?/S3/NL/NL	
<i>Astragalus neglectus</i>	Cooper's Milkvetch	G4/S2/NL/NL
<i>Forsstroemia producta</i>	A moss	G5?/S1/NL/NL
<i>Myotis septentrionalis</i>	Northern long-eared Myotis	G2G3/S1S3/LE/LT
<i>Solidago rigida</i> var. <i>rigida</i>	Stiff Goldenrod	G5T5/S2/NL/NL
<i>Trichostema setaceum</i>	Narrow-leaf blue curls	G5/S2/NL/NL

DCR recommends avoiding ground disturbing work within the Conservation Site, for the protection of the associated natural heritage resources.

In addition to the documented occurrence for the northern long eared bat, according to DCR's predicted suitable habitat modeling and review by a DCR biologist, there is potential for the additional occurrences of the northern

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long-eared bat (*Myotis septentrionalis*, G2G3/S1S3/LE/LT), little brown bat (*Myotis lucifugus*, G3G4/S1S3/NL/LE) and the tri-colored bat (*Perimyotis subflavus*, G3G4/S1S3/PE/LE) to occur within the project area. Therefore, DCR recommends coordination with the VDWR and USFWS to ensure compliance with protected species legislation.

This project is situated on karst-forming carbonate rock and can be characterized by sinkholes, caves, disappearing streams, and large springs. The Virginia DCR, Division of Natural Heritage karst staff screened this project against the Virginia Speleological Survey (VSS) database, the Virginia Department of Energy (VDE) sinkhole coverage, and other karst layers for documented sensitive karst features. The entrance to Turkey Rock Shelter, a short shelter cave with an impressive entrance, is within the submitted project area: latitude: 37.403782 longitude: -79.934650. DCR recommends field verifying the entrance and complete avoidance of the cave.

This project has intersected the karst bedrock and VDE sinkhole screening layers. Sinkholes mapped by the Virginia Department Energy are within the project site (see Sinkhole layer on the Natural Heritage Data Explorer at vanhde.org). Typically, additional, smaller unmapped sinkholes can also be present in the vicinity. Sinkholes are areas where surface material has collapsed into the subsurface and into underground watercourses. Sinkhole areas are places where surface water directly affects groundwater quality and flow. What goes into sinkholes comes out in wells and springs, and can degrade drinking water, springs and spring-fed surface waters, and the habitat of subterranean creatures. Discharge of untreated stormwater runoff to sinkholes is discouraged, and sinkholes to which stormwater is diverted or which have been modified to accept stormwater are required by law to be registered as Class 5 Injection Wells with the US Environmental Protection Agency. Filling or alteration of natural (pre-existing) sinkholes is discouraged, and designation of natural buffers around sinkholes is desirable. If the project involves filling or “improvement” of sinkholes or cave openings, DCR would like detailed location information and copies of the design specifications. In cases where sinkhole improvement is for storm water discharge, copies of VDOT Form EQ-120 will suffice.

During every phase of the project, DCR recommends the stabilization of the soil around the site. Minimizing surface disturbance, strict use of E&S control measures appropriate for the location and adherence to best management practices appropriate for karst will help to reduce any potential impact to the karst, groundwater and surface water resources as well as any associated fauna and flora.

If karst features such as additional undocumented sinkholes, caves, disappearing streams, and large springs are encountered during the project, please coordinate with Wil Orndorff (540-230-5960, Wil.Orndorff@dcr.virginia.gov) the Virginia DCR, Division of Natural Heritage Karst Protection Coordinator, to document and minimize adverse impacts. Activities such as discharge of runoff to sinkholes or sinking streams, filling of sinkholes, and alteration of cave entrances can lead to environmental impacts including surface collapse, flooding, erosion and sedimentation, contamination of groundwater and springs, and degradation of subterranean habitat for natural heritage resources (e.g. cave adapted invertebrates, bats). These potential impacts are not necessarily limited to the immediate project area, as karst systems can transport water and associated contaminants rapidly over relatively long distances, depending on the nature of the local karst system.

There are no State Natural Area Preserves under DCR’s jurisdiction in the project vicinity.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please re-submit project information and map for an

update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

A fee of \$160.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24th Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

The Virginia Department of Wildlife Resources (VDWR) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed at <https://services.dwr.virginia.gov/fwis/> or contact Susan Watson at Susan.Watson@dwr.virginia.gov. According to the information currently in our files, Tinker Creek, which has been designated by the VDWR as a "Threatened and Endangered Species Water" for the Roanoke logperch is within the submitted project boundary including a 100-foot buffer. Therefore, DCR recommends coordination with Virginia's regulatory authority for the management and protection of this species, the VDWR, to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

The U.S. Fish and Wildlife Service (USFWS) utilizes an online project review process (<https://www.fws.gov/office/virginia-ecological-services/virginia-field-office-online-review-process>) to facilitate compliance with the Endangered Species Act (16 U.S.C. 1531-1544, 87 Stat. 884) (ESA), as amended. The process enables users to 1) follow step-by-step guidance; 2) access information that will allow them to identify threatened and endangered species, designated critical habitat, and other Federal trust resources that may be affected by their project; and 3) accurately reach determinations regarding the potential effects of their project on these resources as required under the ESA. If you have questions regarding the online review process, please contact virginiafieldoffice@fws.gov.

Should you have any questions or concerns, feel free to contact René Hypes, DCR- Natural Heritage's Environmental Review Coordinator at (804) 371-2708. Thank you for the opportunity to comment on this project.

Sincerely,



Nicki Gustafson
Natural Heritage Project Review Assistant

Cc: Wil Orndorff, DCR-Karst,
Hannah Schul, VDWR

Subject: RE: Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/18/2026, 10:14:41 AM
From: Henicheck, Michelle (DEQ)<michelle.henicheck@deq.virginia.gov>
To: Bethencourt, Aaron
Cc: Fraser, Daniel; Senfield, Chris; Winn, Brenda (DEQ)

Follow Up Flag: Follow up
Flag Status: Flagged

Thank you Aaron for the inquiry, however, there is a protocol for submitting information and the type of information needed in order to review the project. Your letter and map are insufficient for review.

Please contact our Office of Environmental Impact Review (OEIR) for more information on the requirements needed for review.

Michelle



Michelle Henicheck, PWS
Sr. Wetland Ecologist
[VA Dept of Environmental Quality](http://www.deq.virginia.gov)
1111 East Main Street
Richmond, VA 23219
Phone: 804-965-4329

From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Friday, May 15, 2026 4:54 PM
To: Henicheck, Michelle (DEQ) <michelle.henicheck@deq.virginia.gov>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: Daleville Transmission Improvements Project - Request for Feedback

CAUTION: This Email originated from OUTSIDE of the COV. Do not open attachments or click links unless this email comes from a known sender and you know the content is safe..

Michelle,

I am contacting you regarding Appalachian Power's Daleville Transmission Improvements Project, a transmission line project in Botetourt County, Virginia. Attached is a letter and project area map for your review and comment. More information about the Project is also available at aeptransmission.com/Virginia/DalevilleArea/.

We look forward to receiving your comments and feedback regarding the Project.

Please feel free to contact me via email or by phone at (540) 492-5703.

Thank you,

Aaron Bethencourt
Senior Professional, Environmental Planning

T +1 540-492-5703
M +1 786-566-1133



Subject: Re: Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/19/2026, 1:55:37 PM
From: Rayfield, Bettina (DEQ)<Bettina.Rayfield@deq.virginia.gov>
To: Bethencourt, Aaron
Cc: Fraser, Daniel; Senfield, Chris
Attachments: [Daleville Area Transmission Improvements Scoping Response.pdf](#)

Follow Up Flag: Follow up
Flag Status: Flagged

Please find OEIR's response attached.

Ms. Bettina Rayfield

Manager, Office of Environmental Impact Review and Renewable Energy Programs, Division of Environmental Enhancement

[Virginia Department of Environmental Quality](#)

1111 East Main Street, Suite 1400
Richmond, Virginia 23219
(804) 659-1915

OEIR project submittals must be directed to eir@deq.virginia.gov.

FOIA requests must be submitted to <https://vadeq.nextrequest.com/>.

Renewable Energy PBR submittals must be directed to RE-PBR@deq.virginia.gov.

For program updates and public notices please subscribe to the Environmental Impact Review Public Notices Bulletin:
<https://public.govdelivery.com/accounts/VADEQ/subscriber/new>

From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Friday, May 15, 2026 4:55 PM
To: Rayfield, Bettina (DEQ) <bettina.rayfield@deq.virginia.gov>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: Daleville Transmission Improvements Project - Request for Feedback

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Bettina,

I am contacting you regarding Appalachian Power's Daleville Transmission Improvements Project, a transmission line project in Botetourt County, Virginia. Attached is a letter and project area map for your review and comment. More information about the Project is also available at aeptransmission.com/Virginia/DalevilleArea/.

We look forward to receiving your comments and feedback regarding the Project.

Please feel free to contact me via email or by phone at (540) 492-5703.

Thank you,

Aaron Bethencourt

Senior Professional, Environmental Planning

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M +1 786-566-1133



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www.deq.virginia.gov

David L. Bulova
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director

May 19, 2026

Aaron Bethencourt
WSP
6641 W. Broad Street, Suite 405
Richmond, VA 23230
Via email: aaron.bethencourt@wsp.com

RE: Appalachian Power Company: Daleville Area Transmission Improvements Project in
Botetourt County, Scoping Response

Dear Mr. Bethencourt:

This letter is in response to the scoping request for the above-referenced project.

As you may know, the Department of Environmental Quality, through its Office of Environmental Impact Review (DEQ-OEIR), is responsible for coordinating Virginia's review of environmental impacts for electric power generating projects and power line projects in conjunction with the licensing process of the State Corporation Commission.

DOCUMENT SUBMISSIONS

In order to ensure an effective coordinated review of the environmental impact analysis may be sent directly to OEIR. We request that you submit one electronic to eir@deq.virginia.gov (25 MB maximum) or make the documents available for download at a website, file transfer protocol (ftp) site or the VITA LFT file share system (Requires an "invitation" for access. An invitation request should be sent to eir@deq.virginia.gov). The required "Wetlands Impact Consultation" can be sent directly to Michelle Henicheck at michelle.henicheck@deq.virginia.gov or at the address above.

ENVIRONMENTAL REVIEW UNDER VIRGINIA CODE 56-46.1

While this Office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments concerning the preparation of the environmental impact analysis document. Accordingly, you should contact the following state agencies and those localities and Planning District Commissions, including but not limited to:

Department of Environmental Quality:

- DEQ Regional Office
- Air Division
- Office of Wetlands and Stream Protection
- Office of Local Government Programs
- Division of Land Protection and Revitalization
- Office of Stormwater Management
- Office of Environmental Justice

Department of Conservation and Recreation

Department of Health

Department of Agriculture and Consumer Services

Department of Wildlife Resources

Virginia Marine Resources Commission

Department of Historic Resources

Virginia Energy

Department of Forestry

Department of Transportation

DATA BASE ASSISTANCE

Below is a list of databases that may assist you in the preparation of a NEPA document:

- DEQ Online Database: Virginia Environmental Geographic Information Systems
Information on Permitted Solid Waste Management Facilities, Impaired Waters, Petroleum Releases, Registered Petroleum Facilities, Permitted Discharge (Virginia Pollution Discharge Elimination System Permits) Facilities, Resource Conservation and Recovery Act (RCRA) Sites, Water Monitoring Stations, National Wetlands Inventory:
 - www.deq.virginia.gov/ConnectWithDEQ/VEGIS.aspx
- DEQ Virginia Coastal Geospatial and Educational Mapping System (GEMS)
Virginia's coastal resource data and maps; coastal laws and policies; facts on coastal resource values; and direct links to collaborating agencies responsible for current data:
 - <https://www.deq.virginia.gov/?splash=https%3a%2f%2fgaia.vcu.edu%2fportal%2fapps%2fsites%2f%23%2fgemsmaps&isexternal=true>
- MARCO Mid-Atlantic Ocean Data Portal
The Mid-Atlantic Ocean Data Portal is a publicly available online toolkit and resource center that consolidates available data and enables users to visualize and analyze ocean resources and human use information such as fishing grounds, recreational areas, shipping lanes, habitat areas, and energy sites, among others.
 - <http://portal.midatlanticocean.org/visualize/#x=-73.24&y=38.93&z=7&logo=true&controls=true&basemap=Ocean&tab=data&legends=false&layers=true>

- DHR VCRIS

The Virginia Cultural Resources Information System (VCRIS) is an online database that contains the inventory of buildings, districts, archaeological sites, and other types of properties:

- <https://www.dhr.virginia.gov/programs/vcris/>

- DCR Natural Heritage Search

Produces lists of resources that occur in specific counties, watersheds or physiographic regions:

- www.dcr.virginia.gov/natural_heritage/dbsearchtool.shtml

- Wetland Condition Assessment Tool (WetCAT)

- <https://www.deq.virginia.gov/our-programs/water/wetlands-streams/wetcat>

- DWR Fish and Wildlife Information Service

Information about Virginia's Wildlife resources:

- <http://vafwis.org/fwis/>

- Total Maximum Daily Loads Approved Reports

- <https://www.deq.virginia.gov/programs/water/waterqualityinformationtmdls/tmdl/tmdldevelopment/approvedtmdlreports.aspx>

- Virginia Outdoors Foundation: Identify VOF-protected land

- <http://vof.maps.arcgis.com/home/index.html>

- Environmental Protection Agency (EPA) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Database: Superfund Information Systems Information on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL:

- www.epa.gov/superfund/sites/cursites/index.htm

- EPA RCRAInfo Search

Information on hazardous waste facilities:

- www.epa.gov/enviro/facts/rcrainfo/search.html

- Total Maximum Daily Loads Approved Reports

- <https://www.deq.virginia.gov/our-programs/water/water-quality/tmdl-development/approved-tmdls>

- EPA Envirofacts Database

EPA Environmental Information, including EPA-Regulated Facilities and Toxics Release Inventory Reports:

- www.epa.gov/enviro/index.html

- EPA NEPAassist Database

Facilitates the environmental review process and project planning:

<http://nepaassisttool.epa.gov/nepaassist/entry.aspx>

If you have questions about the environmental review process, please feel free to contact me. I hope this information is helpful to you.

Sincerely,



Bettina Rayfield, Program Manager
Environmental Impact Review and Renewable Energy Programs
Virginia Department of Environmental Quality
804-659-1915
bettina.rayfield@DEQ.virginia.gov
Central Office
1111 E. Main Street, Suite 1400
Richmond, Virginia 23219
804-698-4000

Subject: Re: Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/18/2026, 5:13:57 PM
From: Fletcher, Timothy (DEQ)<Timothy.Fletcher@deq.virginia.gov>
To: Bethencourt, Aaron
Cc: Fraser, Daniel; Senfield, Chris

Follow Up Flag: Follow up
Flag Status: Flagged

Mr. Bethencourt,

Thank you for the project notification. I am limiting my response to the Construction General Permit and Virginia Water Protection Program.

Based on what you've submitted, the following may or may not be involved:

1. Obtaining coverage under the [Virginia Construction General Permit](#).
2. Performing the project under the approved [Appalachian Power Standards and Specifications](#).
3. Submittal of a [Joint Permit Application \(JPA\)](#) for any temporary or permanent impacts to surface waters including wetlands.

Sincerely,



Tim Fletcher
Stormwater/VWP/MS4 Program
Manager
Blue Ridge Regional Office
[Virginia Dept. of Environmental Quality](#)
901 Russell Dr., Salem, VA 24153
Cell: (540) 524-0665

From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Friday, May 15, 2026 4:52 PM
To: Fletcher, Timothy (DEQ) <timothy.fletcher@deq.virginia.gov>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: Daleville Transmission Improvements Project - Request for Feedback

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Timothy,

I am contacting you regarding Appalachian Power's Daleville Transmission Improvements Project, a transmission line project in Botetourt County, Virginia. Attached is a letter and project area map for your review and comment. More information about the Project is also available at aeptransmission.com/Virginia/DalevilleArea/.

We look forward to receiving your comments and feedback regarding the Project.

Please feel free to contact me via email or by phone at (540) 492-5703.

Thank you,

Aaron Bethencourt
Senior Professional, Environmental Planning

T +1 540-492-5703
M +1 786-566-1133

Subject: Fw: Daleville Transmission Improvements Project - Request for Feedback
Sent: 6/17/2026, 6:49:19 PM
From: Dail, Nelson (DEQ)<Nelson.Dail@deq.virginia.gov>
To: Bethencourt, Aaron
Attachments: [Daleville Area Transmission Improvements Project - Agency Letter \(VDEQ - BRRO R.W.\) 20260515.pdf](#)

Follow Up Flag: Follow up
Flag Status: Flagged

Mr. Bethencourt:

I am responding to your email below on behalf of Robert Weld.

Below is information that may be useful to the project proponents / developers for reference as they proceed with projects in the BRRO region.

We're happy to assist you in any way we can to determine what environmental permits you may need and to help you understand any other requirements associated with Virginia's environmental laws and regulations. I encourage you to review the general information provided below and contact me with any questions you may have at any time. If you happen to need any environmental permits you should know that some can be processed in a matter of days or weeks, but others may take several months or more due to coordination with other agencies and public notice requirements.

An overview of DEQ permitting information, including a link to our Permit Key guide to DEQ permits, is available from the DEQ Permits page, <https://www.deq.virginia.gov/permits-2>. In addition, we encourage you to refer to DEQ's Environmental Impact Reviews web site, <https://www.deq.virginia.gov/business-construction/environmental-impact-review>, and our Pollution Prevention / Environmental Excellence pages, <https://www.deq.virginia.gov/business-construction/pollution-prevention> and <https://www.deq.virginia.gov/business-construction/pollution-prevention/virginia-environmental-excellence-program>, for other general information. We are glad to discuss specifics for any aspects of this project with you as it relates to any DEQ programs. Below is general reference information related to DEQ programs that we provide for projects like this in the DEQ Blue Ridge Region. Please let me know if you have any questions or need any additional information regarding environmental matters.

1. Air Permitting. Facilities, equipment, or processes that emit air pollutants may require an air permit prior to construction. Installation / operation / modification / replacement of stationary or portable fuel burning equipment or other sources of air pollutants, including dust, may be subject to registration and/or air permitting requirements (<https://www.deq.virginia.gov/permits/air>). Some of the more ubiquitous equipment includes generators, boilers, paint booths, wood chippers/grinders, etc. For questions regarding these requirements, contact Paul Jenkins at DEQ-BRRO (540-597-8178, Paul.Jenkins@deq.virginia.gov).

2. Erosion and Sediment Control and Storm Water Management. DEQ has regulatory authority for the Virginia Pollutant Discharge Elimination System (VPDES) programs related to municipal separate storm sewer systems (MS4s) and construction activities. Erosion and sediment control measures are addressed in local ordinances and State regulations. Additional information is available at <https://www.deq.virginia.gov/water/stormwater/stormwater-construction>. Non-point source pollution resulting from site development activities should be minimized by using effective erosion and sediment control practices and structures. Consideration should also be given to using permeable paving for parking areas and walkways where appropriate, and denuded areas should be promptly revegetated following construction work. If the total land disturbance exceeds 10,000 square feet, an erosion and sediment control plan will be required. Some localities also require an E&S plan for disturbances less than 10,000 square feet. A stormwater management plan may also be required. For land disturbing activities of one acre or more, permit coverage is required under the VPDES General Permit for Discharges of Storm Water from Construction Activities. The Virginia Stormwater

Management Permit Authority may be DEQ or the locality. For questions regarding these requirements, contact Tim Fletcher at DEQ-BRRO (540-524-0665, timothy.fletcher@deq.virginia.gov).

3. Water Quality and Wetlands. Measures must be taken to avoid and minimize impacts to surface waters and wetlands during construction activities. The disturbance of surface waters or wetlands may require prior approval by DEQ and/or the U.S. Army Corps of Engineers, <https://www.deq.virginia.gov/permits/water/wetlands-streams-vwp>. The Army Corps of Engineers is the final authority for an official confirmation of whether there are federal jurisdictional wetlands or other surface waters that may be impacted by the proposed project. DEQ may confirm additional waters as jurisdictional beyond those under federal authority. Review of National Wetland Inventory maps or topographic maps for locating wetlands or streams may not be sufficient; there may need to be a site-specific review of the site by a qualified professional. Even if there will be no intentional placement of fill material in jurisdictional waters, potential water quality impacts resulting from construction site surface runoff must be minimized. This can be achieved by using appropriate Best Management Practices (BMPs). If construction activities will occur in or along any streams (perennial, intermittent, or ephemeral), open water or wetlands, the applicant should contact Tim Fletcher at DEQ-BRRO (540-524-0665, timothy.fletcher@deq.virginia.gov) to determine the need for any permits prior to commencing work that could impact surface waters or wetlands.

4. Other Site Development Considerations. Fugitive dust generated during construction should be controlled by using measures such as the prompt removal of spilled or tracked dirt or other materials from paved streets, limited application of water to suppress dust, and washing of construction vehicles and paved roadways immediately adjacent to construction sites. Do not use water for dust control to the extent that it results in runoff to surface waters or wetlands. Land clearing wastes (vegetative debris) generated during construction should be properly managed in accordance with applicable regulations and local ordinances. Shredding/chipping of vegetative debris and reuse on-site is usually recommended over open burning. Any open burning of vegetative debris must be performed in accordance with the Open Burning Regulation and coordinated with the local fire official to ensure that all local ordinances are met. A copy of DEQ's open burning regulation and related information are accessible from <https://www.deq.virginia.gov/laws-regulations/air>. Also, no open burning should take place in violation of the Virginia Waste Management Regulations, <https://www.deq.virginia.gov/laws-regulations/land-waste>.

5. Potable Water and Water Withdrawals. Installation of potable water lines and appurtenances must comply with the State's Waterworks Regulations. The Virginia Department of Health (VDH), <https://www.vdh.virginia.gov/drinking-water/>, administers both federal and state laws governing waterworks operation. For more information, contact the VDH's Lexington Office of Drinking Water at (540) 463-7136, <https://www.vdh.virginia.gov/drinking-water/contact-us/>. Projects that propose to withdraw surface water or groundwater for production or cooling water or other activities may require prior approval by DEQ. For more information, please refer to the DEQ Water Withdrawal page at <https://www.deq.virginia.gov/water/water-withdrawal> or contact Eric Seavey (804-754-6250, Eric.Seavey@deq.virginia.gov).

6. Wastewaters. DEQ has approval authority over wastewater discharges per the State Water Control Law and corresponding regulations. This includes discharges or land application of wastewaters generated from the washing of materials, products, or vehicles, or other practices which may be relevant to this project, including the discharge of chlorinated potable water, water contaminated by chemicals used on-site, or stormwater from certain industrial sites. DEQ also has approval authority over plans and specifications for sewage collection systems and treatment works (except drainfields and other on-site systems approved by the local health department), per the Sewage Collection and Treatment (SCAT) Regulations, <http://law.lis.virginia.gov/admincode/title9/agency25/chapter790/>. Any wastewaters generated by this project must be properly managed and disposed. For additional information and assistance, contact Lynn Wise at DEQ-BRRO (540-597-0300, lynn.wise@deq.virginia.gov).

7. Petroleum Storage Tanks. Installation / operation / modification of tanks used for the storage of petroleum and CERCLA substances may be subject to registration and/or other regulatory requirements (<https://www.deq.virginia.gov/land-waste/petroleum-tanks>). If petroleum-contaminated soils or water are

encountered during excavation work, or if old petroleum tanks need to be removed or replaced, contact DEQ. For questions regarding any of this, please contact Rob Howard at DEQ-BRRO (540-759-8650, robert.howard@deq.virginia.gov).

8. Solid and Hazardous Wastes, and Hazardous Substances. DEQ administers the Virginia Waste Management Regulations, <http://law.lis.virginia.gov/admincode/title9/agency20/>. All solid wastes, hazardous wastes, and hazardous materials, including construction and demolition (C&D) wastes and universal wastes (batteries, fluorescent lights, refrigerants, mercury switches, mercury thermostats, etc.), must be managed in accordance with all applicable federal, state, and local environmental regulations. The generation of hazardous wastes should be minimized and solid wastes generated at the site should be reduced at the source, reused, or recycled. DEQ encourages the management of certain organic wastes by on-site composting or reuse as animal feed or soil amendment. Also, if you encounter any improperly disposed solid or hazardous wastes, or petroleum contaminated soils, you should contact DEQ-BRRO. You may wish to refer to the web link for “What’s in My Back Yard?”, <https://geohub-vadeq.hub.arcgis.com/>, to help you determine areas where residual contamination may be more likely. Contact Nikki Herschler at DEQ-BRRO (540-597-6373, nichole.herschler@deq.virginia.gov) for any questions related to waste management / disposal, including any questions related to open burning requirements and prohibitions. Manage / dispose of any asbestos-containing materials (ACMs) in accordance with Virginia Department of Labor and Industry (DOLI) regulations. Refer to the DOLI web page, <https://doli.virginia.gov/programs/asbestos-lead-demolition-notification-requirements/>, or contact Kevin Foster at DOLI (Kevin.Foster@doli.virginia.gov, 757-455-0891, ext. 473) for any questions related to management / disposal of ACMs.

9. Pesticides and Herbicides. DEQ recommends that herbicides or pesticides for construction or landscape maintenance, when necessary, be used in accordance with the principles of integrated pest management, and that the least toxic pesticides that are effective in controlling the target species be used. Please contact the Department of Agriculture and Consumer Services at (804) 786-3501 for more information. If applying aquatic pesticides to surface waters, the applicant must comply with the DEQ’s Pesticide General Permit, <https://law.lis.virginia.gov/admincode/title9/agency25/chapter800/>.

10. Natural Heritage Resources. The Virginia Department of Conservation and Recreation (DCR) Division of Natural Heritage (DNH) can search its Biotics Data System for occurrences of natural heritage resources from the area indicated on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered animal and plant species, unique or exemplary natural communities, and significant geologic communities. We recommend that the DNH be contacted at (804) 786-7951 to secure updated information on natural heritage resources before commencing the project. For additional information, refer to the DCR website, <https://www.dcr.virginia.gov/natural-heritage/ereview>.

11. Wildlife Resources. The Virginia Department of Wildlife Resources (DWR) exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state or federally listed endangered or threatened species. DWR determines likely impacts on fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce, or compensate for those impacts. For more information, refer to the DWR website, <https://dwr.virginia.gov/wies/contact-wies/>.

12. Historic and Archaeological Resources. *Section 106 of the National Historic and Preservation Act of 1966*, as amended, requires that activities that receive federal funding must consider effects to properties that are listed or eligible for listing on the National Register of Historic Places. The Department of Historic Resources (DHR) conducts reviews of projects to determine their effect on historic structures or cultural resources. If applicable, contact DHR, <https://www.dhr.virginia.gov/programs/federal-state-review/>. In the event that archaeological resources are encountered during construction, immediately contact the appropriate staff from <https://www.dhr.virginia.gov/staff-directory/> (Review & Compliance).

13. Pollution Prevention. DEQ recommends that construction projects incorporate the principles of pollution prevention including the following recommendations:

- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content and toxicity level should be considered.

- Consider contractors' commitment to the environment when choosing contractors. Also, specifications regarding raw material selection (alternative fuels and energy sources) and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable practices and materials in infrastructure and construction and design. These could include asphalt and concrete containing recycled materials and integrated pest management in landscaping.
- Integrate pollution prevention techniques into maintenance and operation activities to include source reduction (fixing leaks, energy efficient products).

Pollution prevention measures are likely to reduce potential environmental impacts and reduce costs for material purchasing and waste disposal. DEQ's Office of Pollution of Prevention hosts a number of programs and initiatives that provide non-regulatory assistance to businesses, institutions, and communities including the Virginia Environmental Excellence Program and Virginia Green. For more information, please visit our web site at <https://www.deq.virginia.gov/business-construction/pollution-prevention>.

14. Energy Conservation. Any structures should be planned and designed to comply with state and federal guidelines and industry standards for energy conservation and efficiency. For example, energy efficiency of the structures can be enhanced by maximizing the use of the following:

- thermally-efficient building shell components (roof, wall, floor, and insulation);
- high efficiency heating, ventilation, air conditioning systems; and
- high efficiency lighting systems.

The Virginia Department of Energy, <https://www.virginia.gov/agencies/department-of-energy/>, may be contacted for assistance in meeting this challenge.

Regards,



R. Nelson Dail
 Deputy Regional Director
 Blue Ridge Regional Office
[Virginia Department of Environmental Quality](https://www.virginia.gov/agencies/department-of-environmental-quality/)
 901 Russell Drive
 Salem, VA 24153
 540.597.8582

From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Friday, May 15, 2026 4:51:18 PM
To: Weld, Robert (DEQ) <robert.weld@deq.virginia.gov>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: Daleville Transmission Improvements Project - Request for Feedback

CAUTION: This Email originated from OUTSIDE of the COV. Do not open attachments or click links unless this email comes from a known sender and you know the content is safe..

Robert,

I am contacting you regarding Appalachian Power's Daleville Transmission Improvements Project, a transmission line project in Botetourt County, Virginia. Attached is a letter and project area map for your review and comment. More information about the Project is also available at aeptransmission.com/Virginia/DalevilleArea/.

We look forward to receiving your comments and feedback regarding the Project.

Please feel free to contact me via email or by phone at (540) 492-5703.

Thank you,

Aaron Bethencourt

Senior Professional, Environmental Planning

T +1 540-492-5703

M +1 786-566-1133



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LAEmf0Ht2dLz6lTWla4Hqs7p6Kl

Subject: Daleville Area Transmission Improvements, Scoping
Sent: 6/12/2026, 11:32:21 AM
From: Upton, Olivia (MRC)<Olivia.Upton@mrc.virginia.gov>
To: Bethencourt, Aaron
Attachments: [Scoping_letter_1529.pdf](#)

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Blue Category

Dear Mr. Bethencourt,

Please find attached the VMRC agency comments regarding the above referenced project. Thank you for the opportunity to comment.

Sincerely,
Olivia Upton

Olivia Upton

Environmental Engineer - Habitat Management Division
Virginia Marine Resources Commission
380 Fenwick Road, Building 96
Fort Monroe, VA 23651
(757) 247-8028

Effective September 1, 2025, the US Army Corps of Engineers (USACE) will become the central point of receipt of all requests in the Commonwealth of Virginia (instead of the Virginia Marine Resources Commission) as the result of a federal mandate. Regulatory Request System (RRS) will be the only way to submit your application and any revisions to all 3 of the permitting agencies (USACE, Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission) and to your local wetlands board. To access the RRS, visit this link: <https://rrs.usace.army.mil/rrs>

If you have questions regarding the shift to RRS, please contact Barry Spence at barry.l.spence@usace.army.mil.



COMMONWEALTH of VIRGINIA

Marine Resources Commission
380 Fenwick Road
Building 96
Fort Monroe, VA 23651

David L. Bulova
Secretary of Natural
and Historic Resources

Joseph D. Grist
Commissioner

June 12, 2026

WSP USA Inc.
Attn: Aaron Bethencourt
6641 W. Broad Street, Suite 405
Richmond, VA 23230

Re: Daleville Area Transmission Improvements, Scoping
Comment

Dear Mr. Bethencourt:

This will respond to the request for comments regarding the Scoping Comments for the Daleville Area Transmission Improvements Project, prepared by WSP USA Inc., on behalf of Appalachian Power Company (Appalachian Power). Specifically, Appalachian Power has proposed to upgrade approximately 17 miles of existing transmission line crossing multiple waterways, and to renovate four existing substations in Botetourt County, Virginia.

We reviewed the provided project documents and found the proposed project may encroach over jurisdictional areas of the Virginia Marine Resources Commission (VMRC) and may require a permit from this agency.

Please be advised that the VMRC, pursuant to §28.2-1200 et seq of the Code of Virginia, has jurisdiction over encroachments in, on, or over the beds of the bays, ocean, rivers, streams, or creeks which are the property of the Commonwealth. Accordingly, if any portion of the subject project involves any encroachments channelward of ordinary high water along non-tidal, natural rivers and streams with a drainage area greater than 5-square miles, a permit may be required from our agency or the Department of Environmental Quality. Any jurisdictional impacts will be reviewed by the VMRC during the JPA process.

Please contact me at (757) 247-8028 or by email at olivia.upton@mrc.virginia.gov if you have any questions. Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in cursive script that reads "Olivia Upton".

Olivia Upton
Environmental Engineer, Habitat Management

An Agency of the Natural and Historic Resources Secretariat

www.mrc.virginia.gov

Telephone (757) 247-2200 Information and Emergency Hotline 1-800-541-4646

WSP USA Inc.
June 12, 2026
Page Two

OU/kl
HM

Subject: Re: Transmission Line Upgrade in Botetourt County
Sent: 7/28/2026, 9:55:39 AM
From: Patrick Sweatt<psweatt@vof.org>
To: Bethencourt, Aaron

Follow Up Flag: Follow up
Flag Status: Flagged
Categories: Blue Category

Hi Aaron,

Thanks for getting back to me. Yes, those are the questions that I had, and of those, the matter of the existing ROW vs. a proposed expansion is the main one. We are less concerned with work within the ROW that is already there, and are most interested in whether AEP is proposing additional ROW and construction easements. Unfortunately, without this information, VOF (and likely BRLC) can't provide a response one way or the other. Let me know if I can do anything on my end to help, and I'll look forward to your response- I hope that your week is starting off well.

Best,

Patrick

Conservation Specialist
[Virginia Outdoors Foundation](#)
(540) 487-9365
psweatt@vof.org

From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Monday, July 27, 2026 12:39 PM
To: Patrick Sweatt <psweatt@vof.org>
Subject: RE: Transmission Line Upgrade in Botetourt County

Alert: This email originated from outside VOF
Patrick,

Thanks you for checking in!

During our call, you asked the following questions:

- Is existing ROW expanding on the portions that overlap the VOF easements?
- Are any access roads located in the VOF easements and will they be utilized?
- Will new access roads within the VOF easements be created?
- Are we clearing under the line in the areas within the VOF easements?
- Are we going to require temporary construction easements in the VOF easements?
- Are we going to keep our construction equipment (pull pads, etc) out of the VOF easements?

Unfortunately, because the design is still in preliminary stages, these details are still being worked out. Once engineering and construction planning is further along, AEP will be able to answer these questions.

Are you still able to provide a response on behalf of the VOF without this information?

Thanks again and sorry for the delay!

Aaron Bethencourt
Senior Professional, Environmental Planning
T +15404925703



From: Patrick Sweatt <psweatt@vof.org>
Sent: Monday, July 27, 2026 12:29 PM
To: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Subject: Transmission Line Upgrade in Botetourt County

Hi Aaron,

This is Patrick at VOF- I hope that your week is starting off well. I wanted to check in and see if you'd had a chance to ask around about the portion of the Botetourt upgrade that's crossing Carvin's Cove. Thank you so much!

Best,

Patrick

Conservation Specialist
[Virginia Outdoors Foundation](#)
(540) 487-9365
psweatt@vof.org

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August 30, 2026

[SENT VIA EMAIL]

Aaron Bethencourt
Senior Professional, Environmental Planning
WSP
6641 W. Broad Street, Suite 405
Richmond, VA 23230
aaron.bethencourt@wsp.com

RE: Appalachian Power Company: Daleville Area Transmission Improvements Project in Botetourt County

Dear Mr. Bethencourt:

The Virginia Outdoors Foundation (VOF) thanks you for the advance notice of the above-referenced project and the opportunity to provide direct comments regarding upgrades to this area.

Based on the letter dated May 15, 2026, Appalachian Power is proposing to upgrade approximately 17.0 miles of existing transmission line and four existing substations in Botetourt County. Please accept these comments in response to your inquiry.

VOF, an agency of the Commonwealth, was established by the General Assembly in 1966 to promote the preservation of Virginia's natural and cultural resources by encouraging private philanthropy in fulfillment of state policy. As a result of Virginia's commitment to ensure a vibrant natural environment for today and future generations, VOF owns thousands of acres managed for public access and holds more than 4,500 open-space easements across the Commonwealth, which protect over 930,000 acres.

An open-space easement is a legal interest in real property that creates a relationship between the holders of the easement and the property owner. By means of the easement, VOF has an interest in specific conservation values of the property and a legal obligation to protect these values. VOF easements provide important public benefits by protecting in perpetuity significant tracts of mostly undeveloped land, which may contribute to the protection of water quality, productive soils, natural heritage resources, historic resources, and scenic viewsheds. VOF easements represent over \$1 billion of public investment and fulfillment of Title XI of the Virginia Constitution and other public policies to ensure the conservation of natural and cultural resources.

VOF holds open-space easements on three properties intersected by the project rebuild, including an open-space easement around Carvins Cove along the Cloverdale – Mount Union 138-kV line. VOF also holds numerous easements and has multiple projects of interest within one mile of the broader project area. These easements and other projects, directly and indirectly, protect numerous conservation values for the benefit of the public and contribute to the overall high quality of life in the Commonwealth. As such, VOF is concerned about the potential characteristics of the replacement structures and associated project components. While recognizing engineering constraints, we strongly advocate for the replacement structures and associated project components to have a minimal presence on the landscape or, at most, mimic the characteristics and impacts of the existing towers, structures, and facilities in height, size, and reflectivity.

Furthermore, any proposal that would extend or encroach beyond the existing and established utility rights-of-way, and into property held in open-space easement with VOF, would be significantly limited and require extensive review. Our Board of Trustees would likely need to approve any expansion or encroachment of AEP interests in areas held in open-space easement by VOF.

Thank you for the notice, and we look forward to working with WPS and Appalachian Power in the continued planning and development of this project. If you have any further questions or comments, please feel free to contact me at (540) 430-0292 or via email at hhibbitts@vof.org.

Sincerely,

A handwritten signature in black ink, appearing to read 'H. Hibbitts', with a stylized flourish at the end.

Harry Hibbitts
Regional Conservation Director

Subject: PROJECT RESPONSE Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/27/2026, 10:22:40 AM
From: Fields, Arlene (VDH)<Arlene.Fields@vdh.virginia.gov>
To: Bethencourt, Aaron
Cc: Roadcap, Dwayne (VDH); odwreview (VDH)

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Blue Category

Project: N/A

Project Name: APC Daleville Transmission Improvements Project

UPC #: N/A

Location: Botetourt County

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems **must be verified by the local utility.**

The following public groundwater wells are located within a 1-mile radius of the project:

PWS ID Number	City/County	System Name	Facility Name
2023730	BOTETOURT CO.	DAL-NITA HILLS	WELL 2 - DAL-NITA HILLS
2023575	BOTETOURT CO.	SOMMERSBY	WELL 1 - SOMMERSBY
2023575	BOTETOURT CO.	SOMMERSBY	WELL 2 - SOMMERSBY
2023080	BOTETOURT CO.	BOTETOURT GOLF AND SWIM CLUB	WELL
2023720	BOTETOURT CO.	TROUTVILLE, TOWN OF	WELL 5 - TROUTVILLE

The following surface water intakes are located within a 5-mile radius of the project site:

PWS ID Number	System Name	Facility Name
2770900	WESTERN VIRGINIA WATER AUTHORITY	CARVINS COVE

The project is within the watershed of the following public surface water sources (facilities where the project falls within 5-miles of the intake **and** is within the intake's watershed are formatted in **bold**):

PWS ID Number	System Name	Facility Name
2770900	WESTERN VIRGINIA WATER AUTHORITY	CARVINS COVE
5117310	CLARKSVILLE, TOWN OF	KERR RESERVOIR INTAKE
5031050	ALTAVISTA, TOWN OF	STAUNTON RIVER
5117707	ROANOKE RIVER SERVICE AUTHORITY	LAKE GASTON INTAKE
5019400	SMITH MT. LAKE CENTRAL WATER SYSTEM	SMITH MOUNTAIN LAKE

Best Management Practices should be employed, including Erosion & Sedimentation Controls and Spill Prevention Controls & Countermeasures on the project site.

Well(s) within a 1,000-foot radius from project site should be field marked and protected from accidental damage during construction.

Materials should be managed while on site and during transport to prevent impacts to nearby surface water.

The Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.

Best Regards,

Arlene Fields

GIS Program Support Technician

Mobile 686-203-3867 (office/cell/text)

Email arlene.fields@vdh.virginia.gov

VDH, Office of Drinking Water

109 Governor Street, 7th Floor

Richmond, VA 23219

PS: For future project review requests please send them to ODWReview@VDH.Virginia.gov

Subject: Re: Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/18/2026, 8:04:39 AM
From: Blevins, Brian K, P.E. (VDOT)<Brian.Blevins@VDOT.Virginia.gov>
To: Bethencourt, Aaron
Cc: Fraser, Daniel; Senfield, Chris; Mothena, Ashley, P.E. (VDOT); Thorpe, Andrew (VDOT); Daniel, Todd K (VDOT)
Attachments: [Daleville Area Transmission Improvements Project - Agency Letter \(VDOT BB\) 20260515.pdf](#)

Follow Up Flag: Follow up
Flag Status: Flagged

Aaron,

Ashley Mothena at the VDOT Salem Residency will coordinate a response for us.

Thank you,

Brian K Blevins, PE
Acting District Maintenance Engineer
Salem Residency
Virginia Department of Transportation
540-387-5502 Office
540-252-9668 Cell
brian.blevins@VDOT.Virginia.gov



From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Friday, May 15, 2026 5:12 PM
To: Blevins, Brian K, P.E. (VDOT) <brian.blevins@VDOT.virginia.gov>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: Daleville Transmission Improvements Project - Request for Feedback

Brian,

I am contacting you regarding Appalachian Power's Daleville Transmission Improvements Project, a transmission line project in Botetourt County, Virginia. Attached is a letter and project area map for your review and comment. More information about the Project is also available at aeptransmission.com/Virginia/DalevilleArea/.

We look forward to receiving your comments and feedback regarding the Project.

Please feel free to contact me via email or by phone at (540) 492-5703.

Thank you,

Aaron Bethencourt
Senior Professional, Environmental Planning

T +1 540-492-5703
M +1 786-566-1133



Subject: RE: Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/20/2026, 2:09:53 PM
From: Serafin, Jennifer M CIV USARMY CENAO (USA)<Jennifer.M.Serafin@usace.army.mil>
To: Bethencourt, Aaron
Cc: Fraser, Daniel; Senfield, Chris

Follow Up Flag: Follow up
Flag Status: Flagged

Aaron,

Thanks for your email. I forwarded on your request for logging and assigning to a project manager. For future reference, all requests can now be submitted via our new on-line Regulatory Request System – see link below. Requests such as this, can be submitted as a “preapplication” request.

v/r,
Jennifer

Jennifer M. Serafin
Chief, Western Virginia Regulatory Section
U.S. Army Corps of Engineers, Norfolk District
Reuben E. Lawson Federal Building
Room 749
210 Franklin Road SW
Roanoke, Virginia 24011
Office (540) 344-1498
Mobile (757) 450-6681

Please note that we are now accepting requests (permit applications, preapplication requests, and Jurisdictional Determination requests) through the Regulatory Request System <https://rrs.usace.army.mil/rrs>. We highly recommend all requests are submitted through RRS moving forward for efficient and transparent processing of your request. USACE is now the central point of receipt of all requests in the Commonwealth of Virginia (instead of the Virginia Marine Resources Commission) and RRS will be the most efficient way to submit your application to all Virginia permitting agencies (USACE, local wetland boards, Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission). You can also submit your request to CENAO.REG_ROD@usace.army.mil, but processing will be delayed. Please DO NOT submit to both RRS and the REG ROD email.

To find your Regulator of the Day go to <https://www.nao.usace.army.mil/Missions/Regulatory-Branch/Regulatory-Contacts/>. The old phone number is no longer in operation.

Helpful information: <https://www.nao.usace.army.mil/Missions/Regulatory/>

Pamphlet: https://www.nao.usace.army.mil/Portals/31/docs/regulatory/Regulatory_Pamphlet.pdf

The Norfolk District is committed to providing the highest level of support to the public. In order for us to better serve you, we would appreciate you completing our Customer Satisfaction Survey located at [Customer Service Survey](#). We value your comments and appreciate your taking the time to complete the survey.

From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Friday, May 15, 2026 4:38 PM
To: Serafin, Jennifer M CIV USARMY CENAO (USA) <Jennifer.M.Serafin@usace.army.mil>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: [Non-DoD Source] Daleville Transmission Improvements Project - Request for Feedback

Jennifer,

I am contacting you regarding Appalachian Power's Daleville Transmission Improvements Project, a transmission line project in Botetourt County, Virginia. Attached is a letter and project area map for your review and comment. More information about the Project is also available at aeptransmission.com/Virginia/DalevilleArea/.

We look forward to receiving your comments and feedback regarding the Project.

Please feel free to contact me via email or by phone at (540) 492-5703.

Thank you,

Aaron Bethencourt
Senior Professional, Environmental Planning

T +1 540-492-5703
M +1 786-566-1133



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LAEmm0m1tdJz3lTWto4Hqs7pbKl

Subject: RE: Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/20/2026, 10:26:51 AM
From: Van Blarcom-Lackey, Amy<VanBlarcomLackey.Amy@epa.gov>
To: Bethencourt, Aaron
Cc: Fraser, Daniel; Senfield, Chris; Jones, Bill; Libertz, Catherine

Follow Up Flag: Follow up
Flag Status: Flagged
Categories: Blue Category

Hello Mr. Bethencourt,

Thank you for your message about the Daleville Transmission Improvements Project. If the project implicates federal environmental laws, including but not limited to NEPA, EPA will provide comments to the relevant federal agencies consistent with the applicable process.

Amy

Amy Van Blarcom-Lackey
Regional Administrator
U.S. EPA Mid-Atlantic Region
Phone: 267-306-3334
Email: VanBlarcomLackey.Amy@epa.gov

From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Friday, May 15, 2026 4:21 PM
To: Van Blarcom-Lackey, Amy <vanblarcomlackey.amy@epa.gov>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: Daleville Transmission Improvements Project - Request for Feedback

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Amy,

I am contacting you regarding Appalachian Power's Daleville Transmission Improvements Project, a transmission line project in Botetourt County, Virginia. Attached is a letter and project area map for your review and comment. More information about the Project is also available at aeptransmission.com/Virginia/DalevilleArea/.

We look forward to receiving your comments and feedback regarding the Project.

Please feel free to contact me via email or by phone at (540) 492-5703.

Thank you,

Aaron Bethencourt
Senior Professional, Environmental Planning

T +1 540-492-5703
M +1 786-566-1133



Subject: RE: Daleville Transmission Improvements Project - Request for Feedback
Sent: 6/22/2026, 7:51:58 PM
From: Bethencourt, Aaron<aaron.bethencourt@wsp.com>
To: 'Willson, Matthew'
Cc: Mertz, Melissa; Witman, Timothy; Fraser, Daniel; Senfield, Chris

Matthew,

The Project is in the early stages of its development, and we just wanted to provide situational awareness of the Project and request initial feedback or comments.

As the Project progresses, we will follow up with additional reviews as needed, as it may or may not be subject to NEPA under 42 U.S.C. Sec. 4321.

Thank you.

Aaron Bethencourt

Senior Professional, Environmental Planning

T +1 540-492-5703

M +1 786-566-1133



From: Willson, Matthew <Willson.Matthew@epa.gov>
Sent: Thursday, May 28, 2026 2:17 PM
To: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Cc: Mertz, Melissa <Mertz.Melissa.M@epa.gov>; Witman, Timothy <witman.timothy@epa.gov>; Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: RE: Daleville Transmission Improvements Project - Request for Feedback

Good Afternoon,

Thank you for your May 15, 2026 email and attachment regarding the proposed Daleville Area Transmission Improvements Project to upgrade approximately 17.0 miles of existing transmission line and four existing substations in Botetourt County, Virginia (Project). I am a NEPA reviewer for EPA and am responding on behalf of EPA region 3. It is unclear from your letter if NEPA applies to this project. Please explain what type of review you are asking for, under what regulatory context and when you would like to receive feedback. In your response, please let us know if this project is subject to NEPA under 42 U.S.C. §4321.

Please note that EPA Region 3's NEPA program has a new way to receive NEPA documents (e.g. NOI, EA, pre NEPA technical reports) electronically to our office.

Please use R3NEPA@epa.gov to submit these types of NEPA documents to Region 3.

Matthew Willson

NEPA Specialist- NEPA & Technical Assistance Branch

EPA Region 3 Philadelphia, PA

Phone: 215-814-5795

Email: willson.matthew@epa.gov

Cube: 20630

Please submit NEPA documents for EPA Region 3 review to R3NEPA@epa.gov

From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Friday, May 15, 2026 4:21 PM
To: Van Blarcom-Lackey, Amy <vanblarcomlackey.amy@epa.gov>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: Daleville Transmission Improvements Project - Request for Feedback

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LAEmHnI6ZdZBITWt0H1qs7p0K0

Subject: RE: Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/28/2026, 2:16:45 PM
From: Willson, Matthew<Willson.Matthew@epa.gov>
To: Bethencourt, Aaron
Cc: Mertz, Melissa; Witman, Timothy; Fraser, Daniel; Senfield, Chris

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon,

Thank you for your May 15, 2026 email and attachment regarding the proposed Daleville Area Transmission Improvements Project to upgrade approximately 17.0 miles of existing transmission line and four existing substations in Botetourt County, Virginia (Project). I am a NEPA reviewer for EPA and am responding on behalf of EPA region 3. It is unclear from your letter if NEPA applies to this project. Please explain what type of review you are asking for, under what regulatory context and when you would like to receive feedback. In your response, please let us know if this project is subject to NEPA under 42 U.S.C. §4321.

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Matthew Willson

NEPA Specialist- NEPA & Technical Assistance Branch
EPA Region 3 Philadelphia, PA
Phone: 215-814-5795
Email: willson.matthew@epa.gov
Cube: 20630

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To: Van Blarcom-Lackey, Amy <vanblarcomlackey.amy@epa.gov>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: Daleville Transmission Improvements Project - Request for Feedback

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Please feel free to contact me via email or by phone at (540) 492-5703.

Thank you,

Aaron Bethencourt
Senior Professional, Environmental Planning

T +1 540-492-5703

Subject: Re: [EXTERNAL] Daleville Transmission Improvements Project - Request for Feedback
Sent: 6/23/2026, 1:47:13 PM
From: Virginia Field Office, FW5<virginiafieldoffice@fws.gov>
To: Bethencourt, Aaron

Follow Up Flag: Follow up
Flag Status: Flagged
Categories: Blue Category

Aaron,

Thank you for contacting the Service. Please see our [website](#) for our project review procedures.

Additionally, please note that Federal interagency consultation under Section 7 of the Endangered Species Act (16 USC 1536), as amended, pursuant to 50 CFR 402.13 and 402.14, is conducted between the Service and a Federal action agency or their officially designated non-federal representative (NFR; per 50 CFR 402.08). If your intent is to initiate Section 7 consultation for this project, please provide confirmation from the Federal action agency or NFR that they have reviewed your package and wish to initiate consultation with the Service using the information provided. Section 7 consultation is not complete until the Federal action agency or officially designated NFR submits a determination of effects to this office, and the Service concurs with their determination.

This requirement can be met by identifying and copying the POC for this project from the lead federal action agency (or NFR) on your response.

If you have been designated as an official NFR by the federal action agency, please provide documentation to that effect for our files.

Let me know if you have any questions. Thank you!

Emily

From: Andersen, Troy M <troy_andersen@fws.gov>
Sent: Tuesday, June 23, 2026 8:25 AM
To: Virginia Field Office, FW5 <virginiafieldoffice@fws.gov>
Subject: Fw: [EXTERNAL] Daleville Transmission Improvements Project - Request for Feedback

From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Monday, June 22, 2026 7:19 PM
To: Andersen, Troy M <troy_andersen@fws.gov>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: [EXTERNAL] Daleville Transmission Improvements Project - Request for Feedback

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Troy,

I am contacting you regarding Appalachian Power's Daleville Transmission Improvements Project, a transmission line project in Botetourt County, Virginia. Attached is a letter and project area map for your review and comment. More information about the Project is also available at aeptransmission.com/Virginia/DalevilleArea/.

We look forward to receiving your comments and feedback regarding the Project.

Please feel free to contact me via email or by phone at (540) 492-5703.

Thank you,

Aaron Bethencourt

Senior Professional, Environmental Planning

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M +1 786-566-1133



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Subject: Automatic reply: [External Email]Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/15/2026, 4:42:47 PM
From: Vega, Milton - FPAC-NRCS, NJ<milton.vega@usda.gov>
To: Bethencourt, Aaron

Follow Up Flag: Follow up
Flag Status: Flagged
Categories: Blue Category

Thank you for your message.

I am out of office, will be back on April 7th. Will have limited access to email. Will respond to emails as soon as possible.

Milton Vega
VA Acting-State Soil Scientist
p: 732.537.6074 m: 609.571.7074
e: milton.vega@usda.gov

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Subject: RE: [External Email]Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/18/2026, 8:28:21 AM
From: Martinez, Edwin - FPAC-NRCS, VA<edwin.martinez@usda.gov>
To: Bethencourt, Aaron; Hernandez, Clarimer - FPAC-NRCS, VA
Cc: Fraser, Daniel; Senfield, Chris; Jacques, Louise - FPAC-NRCS, VA; Anderson, Kathleen - FPAC-NRCS, VA
Attachments: [Daleville Area Transmission Improvements Project - Agency Letter \(USDA EM-M\) 20260515.pdf](#)

Follow Up Flag: Follow up
Flag Status: Flagged

Greetings, Aaron,

This message confirms receipt of your request. **Clarimer Hernandez**, our State Resource Conservationist, will be reviewing and addressing it on my behalf, in collaboration with our Soil Scientist team.

Best Regards,

-EMM

Edwin Martinez Martinez, Ph.D.
State Conservationist, Virginia



U.S. DEPARTMENT OF AGRICULTURE

Natural Resources Conservation Service
1606 Santa Rosa Road, Suite 209
Richmond, Virginia, 23229
p: (804) 287-1682 | c: (804) 516-6353

From: Bethencourt, Aaron <aaron.bethencourt@wsp.com>
Sent: Friday, May 15, 2026 4:40 PM
To: Martinez, Edwin - FPAC-NRCS, VA edwin.martinez@usda.gov
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
Subject: [External Email]Daleville Transmission Improvements Project - Request for Feedback

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Edwin,

I am contacting you regarding Appalachian Power's Daleville Transmission Improvements Project, a transmission line project in Botetourt County, Virginia. Attached is a letter and project area map for your review and comment. More information about the Project is also available at aeptransmission.com/Virginia/DalevilleArea/.

We look forward to receiving your comments and feedback regarding the Project.

Please feel free to contact me via email or by phone at (540) 492-5703.

Thank you,

Aaron Bethencourt
Senior Professional, Environmental Planning

T +1 540-492-5703
M +1 786-566-1133

Subject: FW: [External Email]Daleville Transmission Improvements Project - Request for Feedback
Sent: 5/19/2026, 11:04:04 AM
From: Hernandez, Clarimer - FPAC-NRCS, VA<clarimer.hernandez@usda.gov>
To: Martinez, Edwin - FPAC-NRCS, VA; Bethencourt, Aaron; Fraser, Daniel; Senfield, Chris; Jacques, Louise - FPAC-NRCS, VA; Clark, Cameron - FPAC-NRCS, VA
Attachments: [Blank Farmland Conversion_AD-1006.pdf](#)

Follow Up Flag: Follow up
Flag Status: Flagged

Good morning Mr. Bethencourt:

I have reviewed the materials you sent to NRCS. From what I have seen, the only input NRCS will need to provide is a Farmland Conversion Impact Rating in conjunction with the Farmland Protection Policy Act (FPPA) for land cleared for the construction of the new substation. Everything else looks to be located in existing right-of way, so no further action is required under FPPA for these areas.

To complete this request, NRCS will need a form AD-1006 (a blank copy is attached) with parts I and III completed by you. NRCS will complete portions II, IV, and V. Additionally, we will need either an ESRI shapefile of the requested area or a prime farmland report from Web Soil Survey. If you need help you with this request, please contact Louise Jacques at louise.jacques@usda.gov. Please send materials to Cameron Clark, Resource Soil Scientist in Christiansburg, VA, for completion, CC on this email at Cameron.clark@usda.gov. He handles these requests for Botetourt County, Virginia. Again, this is only needed for the areas being cleared for the substation.

As soon as we receive these materials, we can complete the request fairly quickly. If you have any additional questions, please feel free to reach out via email or phone to Louise or Cameron.

Thank you,

Clarimer Hernández Vargas

State Resource Conservationist
Virginia | Ecological Science Team
Richmond State Office



U.S. DEPARTMENT OF AGRICULTURE

Natural Resources Conservation Service Agency
1606 Santa Rosa Road, Suite 209, Richmond, VA 23229
p: (804)-287-1668 | c: (804)-845-2140

From: Martinez, Edwin - FPAC-NRCS, VA <edwin.martinez@usda.gov>
Sent: Monday, May 18, 2026 8:28 AM
To: Bethencourt, Aaron <aaron.bethencourt@wsp.com>; Hernandez, Clarimer - FPAC-NRCS, VA <clarimer.hernandez@usda.gov>
Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>; Jacques, Louise - FPAC-NRCS, VA <louise.jacques@usda.gov>; Anderson, Kathleen - FPAC-NRCS, VA <kathleen.anderson@usda.gov>
Subject: RE: [External Email]Daleville Transmission Improvements Project - Request for Feedback

Greetings, Aaron,

This message confirms receipt of your request. **Clarimer Hernandez**, our State Resource Conservationist, will be reviewing and addressing it on my behalf, in collaboration with our Soil Scientist team.

Best Regards,

-EMM

Edwin Martinez Martinez, Ph.D.
State Conservationist, Virginia



U.S. DEPARTMENT OF AGRICULTURE

Natural Resources Conservation Service
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Richmond, Virginia, 23229
p: (804) 287-1682 | c: (804) 516-6353

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Cc: Fraser, Daniel <daniel.fraser2@wsp.com>; Senfield, Chris <chris.senfield@wsp.com>
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Thank you,

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Appalachian Power Company

Daleville Area Transmission Improvements Project

SCC Case No. PUR-2026-00132
Botetourt County, Virginia

Virginia Department of Environmental Quality
Supplement

August 2026

US0051606.5157-001





Document Distribution

Daleville Area Transmission Improvements Project

SCC Case No. PUR-2026-00132

Virginia Department of Environmental Quality Supplement

Botetourt County, Virginia

US0051606.5157-001-001

Prepared for:

Appalachian Power Company

Prepared by:

Daniel Fraser
daniel.fraser2@wsp.com
T +1 803-835-5954

Portions of this report containing sensitive information regarding archaeological resources are being withheld as public disclosure of such information is prohibited under 16 U.S.C. Section 470 H.H.

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List of Attachments

Attachment 2.D.1: Desktop Wetland and Stream Delineation Report

Attachment 2.F.1: USFWS IPaC Report

Attachment 2.H.1: VDHR Pre-Application Analysis

Abbreviations

Abbreviation	Description
Appalachian	Appalachian Power Company
BMP	best management practice
Company	Appalachian Power Company
FAA	Federal Aviation Administration
GIS	Geographic Information System
HUC	Hydrologic Unity Code
IPaC	Information for Planning and Consultation
kV	kilovolt
NPL	National Priority List
NRHP	National Register of Historic Places
Project	Daleville Area Transmission Improvements Project
RCRA	Resource Conservation and Recovery Act
ROW	right-of-way
SCC	State Corporation Commission
Siting Study	Daleville Area Transmission Improvements Project Siting Study
SSURGO	Soil Survey Geographic Database
TRI	Toxics Release Inventory
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VDACS	Virginia Department of Agriculture and Consumer Services
VDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VDHR	Virginia Department of Historic Resources
VDWR	Virginia Department of Wildlife Resources
VMRC	Virginia Marine Resources Commission
VOF	Virginia Outdoors Foundations
WERMS	Wildlife Environmental Review Map Service
WSP	WSP USA Inc.

1. Project Description

Appalachian Power Company (“Appalachian” or “Company”) is proposing the Daleville Area Transmissions Improvements Project to adequately and reliably operate and maintain a portion of the local transmission system to provide service for area customers and accommodate a new customer interconnection request located in Botetourt County, Virginia (the “Project”). The Project will construct the new Windy Pass Substation and upgrade the existing Cloverdale, Botetourt, Trinity, and Mount Union Substations. In addition, the Project will rebuild approximately 5.3 miles of 138-kilovolt (“kV”) transmission line between the existing Cloverdale and proposed Windy Pass substations (currently operated at 69 kV to be upgraded to 138 kV), rebuild approximately 4.0 miles of 138-kV transmission line between the existing Mount Union and proposed Trinity substations (currently operated at 69 kV to be upgraded to 138 kV), reconductor approximately 7.4 miles of the Cloverdale – Mount Union 138-kV Transmission Line, construct two new 138-kV feeder lines approximately 1.3 miles in length to the data center campus (the “Daleville Area Customer 138-kV Feeder Lines”), construct a new 0.1 mile long 138-kV tie line between the new Windy Pass 138-kV Substation and existing Trinity Substation, and extend the Trinity – Wheatland 69-kV Transmission Line approximately 0.1 miles to the new Windy Pass 138-kV Substation.

The existing single-circuit transmission lines to be rebuilt were originally constructed in the 1990s on wood monopole structures. Final structure types will be dependent on final engineering and additional studies; however, approximately 9.3 miles of 138-kV transmission line that was built on wood monopole structures is planned to be rebuilt using steel monopole structures. The transmission line will largely be rebuilt in or near the Company’s existing rights-of-way (“ROWs”). The existing single-circuit transmission line to be reconducted was built in the 1990s primarily on steel H-Frames or steel lattice towers that will not be replaced for the most part. The new 138-kV transmission lines to be built are proposed to be built on steel monopole structures. The anticipated heights of the proposed structures for the Project range between 40 and 135 feet.

Appalachian plans to seek a Certificate of Public Convenience and Necessity from the Virginia State Corporation Commission (“SCC”). The Company will seek approval from the Virginia SCC to construct the Project largely in an existing 80 or 100-foot-wide ROW sited within a typical 150-foot-wide corridor. Where the Daleville Area Customer 138-kV Feeder Lines are proposed, the new 75-foot-wide ROW will be sited within a typical 230-foot-wide corridor. Final line routes and structure locations will be determined during final engineering and after additional studies including, but not limited to, ground surveys, geotechnical and environmental studies, and additional interviews with landowners are completed. The typical filing corridor for the Project includes the existing ROW limits and up to 35 feet on either side. If approved, the Company will complete the preliminary engineering and work with the affected landowners to update existing easements, as necessary, and provide fair compensation for any new easements. After



receiving input from landowners, the Company will finalize the proposed structure locations and ROW widths within the SCC-approved filing corridor. The Company will also work with the necessary local, federal, and state agencies during permitting and construction phases. The desired in-service date for the Project is November 15, 2029.

The Company's application to the SCC, describes the overall need and necessity for the Project (SCC Case No. PUR-2026-00132).

2. Environmental Analysis

In a letter dated May 15, 2026, the Company and WSP USA Inc. (“WSP”), requested input from 36 representatives of local, state, and federal agencies regarding the Project. Additionally, one letter dated June 18, 2026, was sent to the Monacan Indian Nation and a letter dated June 22, 2026, was sent to the United States Fish and Wildlife Service (“USFWS”) – Virginia Ecological Services. Thirteen responses to the Project were received from representatives of nine agencies and are included in Attachment D to the Daleville Area Transmission Improvements Project Siting Study (“Siting Study”). WSP also obtained relevant environmental data from field verification (see Section H), online databases, and other publicly available sources.

A. Air Quality

The Project does not involve the construction or expansion of any thermal emission generating sources and therefore no direct operational emissions from the Project are anticipated. During construction, emissions from heavy equipment and dust could occur but would be kept to a minimum. No permanent impacts on air quality are anticipated, and temporary impacts will only last for the duration of the construction phase. The Company does not expect to burn cleared material but, if burning becomes necessary, the Company will coordinate with the responsible locality to obtain permits and will comply with conditions imposed by the locality. The Company’s tree-clearing methods can be found in Section II.A.7 of the Response to Guidelines.

B. Water Source

No water source is required for the operation of the transmission line. The Project is located in the Upper James sub-basin (Hydrologic Unity Code [“HUC”] 02080201) and the Upper Roanoke sub-basin (HUC 03010101). The Project is located in four sub-watersheds: Little Catawba Creek-Catawba Creek (HUC12 020802011301); Buffalo Creek – Tinker Creek (HUC12 030101010401); Carvin Creek (HUC12 030101010402); and Town Branch – Catawba Creek (HUC 020802011302).

Responses to a request for comment were received from the Virginia Department of Health’s Office of Drinking Water on May 27, 2025. In their response, the agency listed public groundwater wells within 1.0 miles and surface water intakes within 5.0 miles of the Project and recommended the following: field marking and protecting wells within a 1,000-foot radius and managing materials while on-site and during transport to prevent impacts to nearby surface waters.

The Company and WSP submitted a Project review request to the Virginia Department of Conservation and Recreation (“VDCR”) Virginia Natural Heritage Program, and a response was



received on June 9, 2026. Per the VDCR response, the Carvins Cove Reservoir Slopes Conservation Site is located within the Project area and has been assigned a biodiversity rank of B2, indicating a site of very high significance due to natural heritage resources associated with the site. The VDCR identified the potential for additional occurrences of protected species at the site. Given this designation, the VDCR recommended avoiding ground disturbance within the Carvins Cove Reservoir Conservation Site. In addition, Tinker Creek has been designated as a “Threatened and Endangered Species Water” by the Virginia Department of Wildlife Resources (“VDWR”) for the Roanoke logperch (*Percina rex*). As such, the VDCR recommended coordination with the VDWR and the USFWS to ensure compliance with protected species legislation.

The VDCR indicated the Project is situated on karst-forming carbonate rock and sinkholes are mapped within the Project site. Discharge of untreated stormwater runoff to sinkholes is discouraged, and sinkholes to which stormwater is diverted or which have been modified to accept stormwater are required by law to be registered as Class 5 Injection Wells. In addition, the entrance to Turkey Rock Shelter is within the Project area. VDCR recommends field verifying the entrance and complete avoidance of the cave and minimizing surface disturbances and strict use of erosion and sediment control measures to stabilize the soils around the site to reduce potential impacts to karst, groundwater, and surface water resources.

The United States Army Corps of Engineers (“USACE”) noted in an email of May 26, 2026, that if the Project involves a discharge of dredged or fill material into wetlands or waters of the United States, a permit may be required.

The Virginia Marine Resources Commission (“VMRC”) noted in a letter dated June 12, 2026, that the Project falls within the jurisdictional area of the VMRC and that the Company may need to apply for permits if any portion of the Project involves encroachments of non-tidal natural rivers and streams with drainage areas greater than five square miles.

Responses from the Virginia Department of Health’s Office of Drinking Water, VDCR, USACE, and VMRC regarding water sources are included in Attachment E of the Siting Study in Volume 2 of the Application. Coordination and review with the Virginia Department of Environmental Quality (“VDEQ”) will be conducted during the Project’s environmental studies.

C. Discharge of Cooling Waters

No discharge of cooling waters is associated with the Project.

D. Tidal and Non-tidal Wetlands

No tidal wetlands are associated with the Project.

A desktop wetland and stream delineation report was prepared in August 2026 to identify potential wetlands and streams crossed by the Project. The desktop features were identified within the typical 80- to 200-foot-wide ROW of the approximately 19.5-mile-long Project. The



results of the desktop review are briefly summarized below. Refer to the VDEQ's Desktop Wetland and Stream Delineation Report for the Project in Attachment 2.D.1 for additional detail.

Potential streams and wetlands were assigned a probability of low, moderate, or high potential of being a regulated resource if a field verification were to be completed. Table 1 describes the criteria used to assign the probability of an identified feature within the proposed and alternative route ROWs.

Table 1: Wetland and Stream Evaluation Criteria

Probability	Wetland Assessment criteria	Stream Assessment Criteria
High	Aerial imagery (color and CIR) and/or topography combined with two other indicators such as non-riverine NWI wetlands, 3DHP waterbodies, hydric soils, or 3DHP streams/regulated floodplains.	Streams identified with 3DHP and aerial imagery (color and CIR) or topography.
Moderate	Aerial imagery (color and CIR) and/or topography combined with one other indicator such as non-riverine NWI wetlands, 3DHP waterbodies, hydric soils, or 3DHP streams/regulated floodplains.	Either (1) streams identified with aerial imagery (color and CIR) and topography; or (2) aerial imagery or topography combined with one other indicator, such as NWI riverine features or county or city stream data.
Low	Areas identified as wetland with topography and aerial photography only.	Areas identified as streams with topography or aerial photography only.

Notes: CIR = color-infrared; NWI = National Wetland Inventory; 3DHP = United States Geological Survey's 3D Hydrography Program.

The Project will rebuild approximately 5.3 miles of 138-kV transmission line between the existing Cloverdale and proposed Windy Pass substations, rebuild approximately 4.0 miles of 138-kV transmission line between the existing Mount Union and proposed Trinity substations, reconductor approximately 7.4 miles of the Cloverdale – Mount Union 138-kV Transmission Line, construct two new 138-kV feeder lines approximately 1.3 miles in length to the data center campus (the “Daleville Area Customer 138-kV Feeder Lines”), construct a new 0.1 mile long 138-kV tie line between the new Windy Pass 138-kV Substation and existing Trinity Substation, and extend the Trinity – Wheatland 69-kV Transmission Line approximately 0.1 miles to the new Windy Pass 138-kV Substation.

Development of alternative routes or new ROW were not considered. Refer to the Siting Study in Volume 2 of the Application for additional discussion of the reasoning for each study segment.



The Cloverdale – Windy Pass 138-kV Transmission Line extends approximately 5.3 miles. Within the proposed ROW route, the desktop wetland and stream delineation identified six potential wetlands (totaling 1.60 acres) and 13 potential streams (totaling 1,846 linear feet). The results of the desktop delineation for the Cloverdale – Windy Pass 138-kV Transmission Line are shown in the Table 2 below.

Table 2: Cloverdale – Windy Pass 138-kV Transmission Line Wetland and Stream Evaluation Summary

Cloverdale – Windy Pass 138-kV Transmission Line Desktop Wetland and Stream Delineation Results			
Probability Level	Water of the United States Type	Number of Occurrences	Acreage or Feet in Right-of-Way
High			
	PEM	0	0.00 acres
	PSS	0	0.00 acres
	PFO	0	0.00 acres
	PUB	1	0.43 acres
	Streams	7	1,277 feet
Moderate			
	PEM	1	0.31 acres
	PSS	2	0.71 acres
	PFO	1	0.14 acres
	PUB	0	0.00 acres
	Streams	2	197 feet
Low			
	PEM	1	0.01 acres
	PSS	0	0.00 acres
	PFO	0	0.00 acres
	PUB	0	0.00 acres
	Streams	4	372 feet
Wetland Total		6	1.60 acres
Stream Total		13	1,846 feet



The Mount Union – Windy Pass 138-kV Transmission Line extends approximately 4.0 miles. Within the proposed ROW route, the desktop wetland and stream delineation identified two potential wetlands (totaling 0.39 acres) and 12 potential streams (totaling 1,818 linear feet). The results of the desktop delineation for the Mount Union – Windy Pass 138-kV Transmission Line are shown in the Table 3 below.

Table 3: Mount Union – Windy Pass 138-kV Transmission Line Wetland and Stream Evaluation Summary

Mount Union – Windy Pass 138-kV Transmission Line Desktop Wetland and Stream Delineation Results			
Probability Level	Water of the United States Type	Number of Occurrences	Acreage or Feet in Right-of-Way
High			
	PEM	1	0.10 acres
	PSS	0	0.00 acres
	PFO	0	0.00 acres
	PUB	1	0.29 acres
	Streams	4	1,014 feet
Moderate			
	PEM	0	0.00 acres
	PSS	0	0.00 acres
	PFO	0	0.00 acres
	PUB	0	0.00 acres
	Streams	0	0 feet
Low			
	PEM	0	0.00 acres
	PSS	0	0.00 acres
	PFO	0	0.00 acres
	PUB	0	0.00 acres
	Streams	8	804 feet
Wetland Total		2	0.39 acres
Stream Total		12	1,818 feet



The Cloverdale – Mount Union 138-kV Transmission Line extends approximately 7.4 miles. Within the proposed ROW route, the desktop wetland and stream delineation identified six potential wetlands (totaling 2.33 acres) and 60 potential streams (totaling 7,161 linear feet). The results of the desktop delineation for the Cloverdale – Mount Union 138-kV Transmission Line are shown in the Table 4 below.

Table 4: Cloverdale – Mount Union 138-kV Transmission Line Wetland and Stream Evaluation Summary

Cloverdale – Mount Union 138-kV Transmission Line Desktop Wetland and Stream Delineation Results			
Probability Level	Water of the United States Type	Number of Occurrences	Acreage or Feet in Right-of-Way
High			
	PEM	0	0.00 acres
	PSS	0	0.00 acres
	PFO	1	0.25 acres
	PUB	1	0.89 acres
	Streams	18	2,597 feet
Moderate			
	PEM	2	0.88 acres
	PSS	0	0.00 acres
	PFO	2	0.31 acres
	PUB	0	0.00 acres
	Streams	10	1,042 feet
Low			
	PEM	0	0.00 acres
	PSS	0	0.00 acres
	PFO	0	0.00 acres
	PUB	0	0.00 acres
	Streams	32	3,522 feet
Wetland Total		6	2.33 acres
Stream Total		60	7,161 feet



The Daleville Area Customer 138-kV Feeder Lines extend approximately 1.3 miles. Within the proposed ROW route, the desktop wetland and stream delineation identified six potential wetlands (totaling 1.22 acres) and 11 potential streams (totaling 1,961 linear feet). The results of the desktop delineation for the Daleville Area Customer 138-kV Feeder Lines are shown in the Table 5 below.

Table 5: Daleville Area Customer 138-kV Feeder Lines Wetland and Stream Evaluation Summary

Daleville Area Customer 138-kV Feeder Lines Desktop Wetland and Stream Delineation Results			
Probability Level	Water of the United States Type	Number of Occurrences	Acreage or Feet in Right-of-Way
High			
	PEM	0	0.00 acres
	PSS	0	0.00 acres
	PFO	0	0.00 acres
	PUB	0	0.00 acres
	Streams	2	435 feet
Moderate			
	PEM	1	0.42 acres
	PSS	0	0.00 acres
	PFO	2	0.45 acres
	PUB	0	0.00 acres
	Streams	0	0 feet
Low			
	PEM	3	0.35 acres
	PSS	0	0.00 acres
	PFO	0	0.00 acres
	PUB	0	0.00 acres
	Streams	9	1,526 feet
Wetland Total		6	1.22 acres
Stream Total		11	1,961 feet

Based on a review of the desktop delineation, the Cloverdale – Windy Pass 138-kV Transmission Line, the Mount Union – Windy Pass 138-kV Transmission Line, the Cloverdale – Mount Union 138-kV Transmission Line, and Daleville Area Customer 138-kV Feeder Lines will result in minimal impacts. The Daleville Area Customer 138-kV Feeder Lines will be constructed in newly proposed 150-foot-wide ROW; however, potential resources identified within the ROW were identified as low probability. The remaining three study segments will largely be rebuilt within or parallel to the existing 80 to 100-foot-wide ROW, so new impacts to any stream or wetland features that are crossed can likely be minimized or avoided during construction.



Additionally, high probability streams, including the Angel Branch, Rulman Branch, Buffalo Creek, and Tinker Creek are crossed at or directly adjacent to the existing crossing locations.

Strategic siting of transmission structures/foundations and construction access roads should minimize impacts to regulated resources. In most cases, wetlands and streams can be spanned entirely by a transmission line, however ROW clearing may still result in permanent conversion of forested wetlands. Impacts to wetlands from access roads and clearing equipment can be minimized through the use of temporary timber matting. In some cases, timber mat bridges can also be used to span stream channels.

E. Solid and Hazardous Waste

A geographic information system (“GIS”) database search was conducted to identify solid and hazardous waste sites near the Project. The database search included the United States Environmental Protection Agency’s (“USEPA’s”) National Priority List (“NPL”); the USEPA’s Superfund Enterprise Management System; the USEPA’s Resource Conservation and Recovery Act (“RCRA”) Information System; the USEPA’s Toxics Release Inventory (“TRI”); the VDEQ’s Solid Waste Management Facilities; and the VDEQ’s Voluntary Remediation Program.

The USEPA’s Superfund NPL online mapper and Superfund Enterprise Management System database identified no sites within 1.0 mile of the Project. The RCRA database for Botetourt County, and the towns of Troutville and Daleville, includes information on facilities that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. Facilities are classified as large quantity generators, small quantity generators, or conditionally exempt small quantity generators depending on the amount of waste they handle. The USEPA’s RCRA database identified:

- 75 active RCRA sites in Botetourt County
- 7 active RCRA sites in the Town of Troutville
- 9 active RCRA sites in the Town of Daleville

The closest active RCRA facility to the Project is adjacent to the Proposed Route but will not be crossed by the Project.

The TRI database includes information about toxic chemical releases and pollution prevention activities reported by industrial and federal facilities. The TRI database identified:

- 22 TRI facilities in Botetourt County
- 5 TRI facilities in the Town of Troutville
- 1 TRI facilities in the Town of Cloverdale

The closest TRI site to the Project is located approximately 0.1 miles from the nearest component of the Project and will not be crossed by the Project. In addition, there are no



existing facilities registered in the Voluntary Remediation Program database that are within 1.0 miles of the Project.

There are three refuse collection centers that are operating and located in Botetourt County. The Tarmac-Lonestar Landfill located within the Town of Troutville is approximately 1.1 miles from the nearest component of the Project. The Botetourt County Landfill located within the Town of Troutville is approximately 2.2 miles from the nearest component of the Project. The Botetourt Convenience Center and Transfer Station located within the Town of Cloverdale is approximately 0.5 miles from the nearest component of the Project. There are no refuse collection sites that are operating or located in the Town of Daleville.

Care will be taken to operate and maintain construction equipment to prevent any fuel or oil spills. Any waste created by the construction crews will be disposed of in a proper manner and recycled where appropriate and will be further detailed in the Company's stormwater pollution prevention plan. The Project predominantly crosses pasturelands and forested areas and will be rebuilt largely within or near the existing ROW. The Company will comply with the stormwater pollution prevention plan.

F. Natural Heritage, Threatened and Endangered Species

A USFWS Information for Planning and Consultation ("IPaC") resource list was generated to verify potential occurrences of threatened and endangered species and has been included as Attachment 2.F.1 to this supplement. Four USFWS-listed or proposed species were identified to potentially occur within the vicinity of the transmission line to be rebuilt and are summarized in Table 6.

Table 6: USFWS IPaC Identified Species

Species Name	Federal Status
Indiana bat (<i>Myotis sodalis</i>)	Endangered
Northern long-eared bat (<i>Myotis septentrionalis</i>)	Endangered
Green floater (<i>Lasmigona subviridis</i>)	Proposed Threatened
Monarch butterfly (<i>Danaus plexippus</i>)	Proposed Threatened

In a letter received from the VDCR's Division of Natural Heritage on June 9, 2026, ecological core areas were identified throughout the Project area. VDCR defines ecological cores as areas of unfragmented natural cover with at least 100 acres of interior that provide habitat for a wide range of species and are numerically ranked based on their ecological integrity and relative contribution to the ecosystem and natural heritage systems in the area. The VDCR identified C1, C4, and C5 core areas within the Project area, indicating "Outstanding" to "General" levels



of ecological integrity. The Project will be constructed largely within or near the existing ROW. The VDCR recommends avoidance of impacts to cores and minimizing the area of impacts overall and concentrating the impacted area at the edges of cores when impacts are unavoidable. If tree removal occurs in one or more cores with very high to outstanding ecological integrity (e.g., C1 or C2), the VDCR recommends a further investigation of these potential impacts.

There were no State Natural Area Preserves noted under VDCR's jurisdiction in the Project vicinity. Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services ("VDACS") and the VDCR, the VDCR represents the VDACS in comments regarding potential impacts on state-listed, threatened, and endangered plant and insect species.

A review of the VDWR spatial dataset, Wildlife Environmental Review Map Service ("WERMS"), was used to identify sensitive species results within a 5-mile buffer of the Proposed Route. A total of four listed or proposed listed species were identified by the VDWR WERMS dataset and are shown in Table 7 below.

Table 7: VDWR-Listed Species

Species Name	State Status
Northern long-eared bat (<i>Myotis septentrionalis</i>)	Threatened
Peregrine falcon (<i>Perimtyotis subflavus</i>)	Threatened
James spinymussel (<i>Parvaspina collina</i>)	Endangered
Roanoke logperch (<i>Percina rex</i>)	Endangered

The Project does not intersect with any tri-colored or little brown bat regulatory buffers, roost locations, or consultation ranges according to the VDWR Northern Long-eared Bat, Tri-colored Bat, and Little Brown Bat Consultation Tool; however, the northwestern portion of the Project intersects the consultation range for the northern long-eared bat. The closest bald eagle (*Haliaeetus leucocephalus*) nest documented by the Center for Conservation Biology's Bald Eagle Nest Locator is approximately 3.85 miles northeast of the Proposed Route ROW along Catawba Creek (verified 2018). If previously unidentified bald eagle nests are observed near the Project, the USFWS eagle guidance recommends that a 660-foot buffer between Project activities and eagle nests be maintained.

The Company will coordinate with the VDWR, USFWS, and VDCR as appropriate to minimize impacts on these resources during the environmental permitting phase of the Project.

G. Erosion and Sediment Control

The Company submits their erosion and sediment control specifications for construction and maintenance of electric utility lines annually to the VDEQ for all upcoming projects. The



approved erosion and sediment control specifications will be implemented for all transmission facility construction related to the Project, which includes, but is not limited to, transmission line construction and rebuild, structure erection, substation upgrades inside the existing fence, substation construction, and construction of new or upgrade of existing access roads, when practicable. In addition, a site-specific erosion and sediment control plan will be prepared for the Project as required by the VDEQ.

H. Archaeological, Historic, Scenic, Cultural or Architectural Resources

In August 2026, WSP conducted a Virginia Department of Historic Resources Pre-Application for the Project in support of the Application. The background research conducted as part of this analysis was designed to identify all previously recorded cultural resources using the tiered study areas outlined within the Virginia Department of Historic Resources' ("VDHR") *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (2008). Archival research of previously recorded historic resources and field reconnaissance was part of the analysis and is summarized in Table 8 below.

Table 8: Previously Recorded Cultural Resources in Project Area

VDHR ID / NR No	Name	Type	Designation	Distance to Project	Proposed Effect
011-0021 / 11000604	Bryan McDonald, Jr., House	Dwelling	NRHP/VLR	0.12 mi	Minimal visual effect
[REDACTED]	[REDACTED]	[REDACTED]	NRHP/VLR	[REDACTED]	Minimal visual effect
011-0057 / 80004171	Nininger's Mill-Tinker Mill	Mill	NRHP/VLR	0.42 mi	Minimal visual effect
011-5018	Delbert House (Demolished)	Dwelling	Eligible for Environmental Review purposes only	382 feet	No effect
011-5019	Delbert Log House (Demolished)	Dwelling	Eligible for Environmental Review purposes only	288 feet	No effect
011-5034 / 2000445	Thomas D. Kinzie House	Dwelling	NRHP/VLR	489 feet	Minimal visual effect



Portions of this report containing sensitive information regarding archaeological resources are being withheld as public disclosure of such information is prohibited under 16 U.S.C. Section 470 H.H.

VDHR ID / NR No	Name	Type	Designation	Distance to Project	Proposed Effect
011-5481	Norfolk and Western Railway Section	Transportation	Potentially Eligible	358 feet	Minimal visual effect
011-5563	Cloverdale Furnace Foundation	Industrial	Eligible for Environmental Review purposes only	0.12 mi	No effect
011-5700 / SG100007570	Greenfield Buildings	Dwelling	NRHP/VLR	298 feet	Minimal visual effect
021-5012	Appalachian National Scenic Trail	Recreation	Eligible	Intersected	Minimal visual effect
[REDACTED]	Unnamed	[REDACTED]	Not NRHP Evaluated	[REDACTED]	Moderate physical effects
[REDACTED]	Unnamed	[REDACTED]	Not Eligible	[REDACTED]	Minimal physical effects
[REDACTED]	Unnamed	[REDACTED]	Not Eligible	[REDACTED]	Moderate physical effects

[REDACTED] and 10 architectural resources including five National Register of Historic Places (“NRHP”) listed resources were identified as being within the tiered study area. Effects on the resources ranged from none to moderate physical effects. All the moderate physical effects were to archaeological resources within the existing ROW increasing the probability that the resources have experienced previous disturbance. The remaining visual effects will be limited by distance, intervening vegetation, and the existing transmission line.

In WSP’s opinion, the results of the pre-application analysis are suitable to support SCC approval of the Project’s application; however, a Phase I cultural resources survey would be required prior to Project construction to determine the presence or absence of previously unrecorded resources and to confirm the integrity of intersected resources. Refer to Attachment 2.H.1 for the Pre-Application Analysis of historical resources for additional details.

I. Chesapeake Bay Preservation Areas

Construction, installation, operation, and maintenance of electric transmission lines are conditionally exempt from the Chesapeake Bay Preservation Act as stated in the exemption for public utilities, railroads, public roads, and facilities in 9 VAC 25-830-150. Appalachian will meet applicable conditions.

J. Wildlife Resources

As noted in Section 2.F, four federally listed or proposed species were identified by the USFWS to potentially occur within the vicinity of the Project. Four state-listed species were identified by the VDWR to potentially occur in the vicinity of the Project. Appalachian Power will coordinate with the appropriate agencies to determine whether surveys are necessary and to minimize impacts to wildlife resources. The Project will be constructed primarily within or near the existing ROW for most of its length and thus minimizes habitat fragmentation and tree clearing to the extent possible. Minimal tree clearing will be required to maintain the 80 to 100-foot-wide ROW and account for the removal of danger trees or other vegetation that may be located within or immediately adjacent to the ROW. The Daleville Area Customer 138-kV Feeder Lines will require tree clearing to construct the newly proposed 150-foot ROW; however, the proposed length of the transmission line is relatively short compared to the other segments and crosses areas that have already been fragmented.

K. Recreation, Agricultural, and Forest Resources

The general character of the Project area is characterized predominantly by forested, agricultural, pasture, and commercially developed land uses and residential areas. The Project will be constructed largely within or near an existing 80 to 100-foot-wide ROW. As a result, impacts to recreation, agricultural, and forest resources are anticipated to be minimal.

Under the Virginia Open-Space Land Act, any public body can acquire title or rights to real property to provide means of preservation of open-space land as conservation easements. There are three existing Virginia Outdoors Foundations (“VOF”) conservation easements crossed by the existing ROW. The Proposed Route crosses each of these VOF easements within the existing ROW. Project activities within this segment of the transmission line would primarily consist of reconductoring existing structures, thereby limiting the extent of ground disturbance and minimizing potential impacts to resources within the area. The Project team communicated with VOF staff to document the Proposed Route for the rebuild, which will be within the existing ROW across the proposed easement.

There are no existing Virginia Department of Forestry’s conservation easements crossed by the Project area according to their publicly available database.

The Project does not cross any local or state parks.

However, as indicated by a letter received on June 9, 2026 from the VDCR Division of Natural Heritage, the Carvins Cove Reservoir Slopes Conservation Site is located within the Project Area. This site has been assigned a B-rank of B2 indicating that it represents a site of very high significance. Project activities within this segment of the transmission line would primarily consist of reconductoring existing structures, thereby limiting the extent of ground disturbance and minimizing potential impacts to the conservation site.



The Proposed Route crosses approximately 23 acres of farmland of statewide importance¹ and approximately 12 acres of prime and unique farmland soil² at or near existing locations. These designations are based on soil characteristics and established by the United States Department of Agriculture's Natural Resources Conservation Service's Soil Survey Geographic Database data. Nevertheless, impacts on agricultural land from the Project are expected to be minimal. The permanent loss of soils or farmable land would be generally limited to the structure foundation locations. As the ROW has been in use since the 1990s, it is not expected that the Project will permanently impact farmland, as most farming uses currently co-exist with the transmission line.

The transmission line will largely be rebuilt within or near an existing ROW and is anticipated to have minimal impacts to forested resources. The Company's tree-clearing methods use the Virginia Department of Forestry's Best Management Practices ("BMPs") for water quality. Specific sections of the BMPs that are pertinent to transmission line clearing operations include:

- Equipment Maintenance and Litter
- Harvest Closure (rehabilitation of the ROW after construction)
- Revegetation of Disturbed Areas

The Company will utilize the above BMPs for the Project. Further discussion of ROW clearing, rehabilitation and maintenance can be found in Section II.A.7 of the Response to Guidelines in Volume 1 of the Application.

L. Use of Pesticides and Herbicides

When herbicides are used to maintain the Company's transmission ROW, they are registered with the USEPA and VDACS. All herbicides will be used in accordance with label and manufacturer directions. Regarding herbicide applications (additionally, see Section II.A.7 of the Response to Guidelines in Volume 1 of the Application):

- Herbicides will not be applied when rainfall is imminent, during rainfall, or within one day of large rain events (usually greater than one centimeter) that result in soil moisture capacity occurring above field capacity.
- Buffer zones will be maintained around streams, ponds, karst features, springs, wetlands, and water supply wells in accordance and compliance with herbicide label and manufacturer directions.

¹ Prime farmland is land that has the best combination of physical and chemical characteristics for producing crops (based on USDA-NRCS SSURGO data).

² Soils that do not meet the prime farmland category but are still recognized for their productivity by states may qualify as soils of statewide importance (based on USDA-NRCS SSURGO data).



- In karst features and channelized drainage ways (perennial or intermittent) draining to a karst feature, wetland-approved herbicides will be used in accordance with label and manufacturer directions.

M. Geology and Mineral Resources

According to the Department of Energy Division of Geology and Mineral Resources Interactive Geologic Map, the Project is in the Valley and Ridge physiographic province of Virginia. According to the Division of Geology and Mineral Resources' Interactive Geologic Map, a sinkhole is present approximately 188 feet east of the Cloverdale – Trinity 138-kV Transmission Line. According to the Virginia Department of Energy, additional, smaller unmapped sinkholes can also be present in the vicinity and recommends the stabilization of the soil around the site, minimizing surface disturbance, strict use of erosion and sediment control measures, and use of BMPs. Additionally, the entrance to Turkey Rock Shelter is within the submitted Project Area: latitude: 37.403782, longitude: -79.934650. VDCR recommends field verifying the entrance and complete avoidance of the cave. Filling or alteration of natural (pre-existing) sinkholes is discouraged, and designation of natural buffers around sinkholes is desirable. If the Project involves filling or “improvement” of sinkholes or cave openings, VDCR would like detailed location information and copies of the design specifications. In cases where sinkhole improvement is for storm water discharge, copies of Virginia Department of Transportation Form EQ-120 will suffice.

The Virginia Department of Energy did not offer comment on the Project.

N. Transportation Infrastructure

The Project will be constructed largely within or parallel to an existing ROW and the Proposed Route crosses existing transportation infrastructure at or near existing locations. The Project crosses United States Highway 220 and 11, two State Roads (220 and 167), and approximately 26 county and local roads. The Proposed Route crosses the Norfolk Southern Railway twice within the Cloverdale – Trinity 138 kV Transmission Line, once within the Mount Union – Trinity 138-kV Transmission Line, and once within the Cloverdale – Mount Union 138-kV Transmission Line at or near existing transmission line crossings. The Company will coordinate with Virginia Department of Transportation during the design and permitting phase of the Project to determine the extent of land use permits and traffic control plans, as needed for the Project.

The Federal Aviation Administration's (“FAA”) website was reviewed to identify airports within 10 miles of the Project. Based on this review, 15 airports or heliports were identified:

- Barrow (VA04) – approximately 2.9 miles from the nearest component of the Project.
- Fincastle (VA83) – approximately 5.4 miles from the nearest component of the Project.
- Roanoke/Blacksburg Regional (Woodrum Fld) (ROA) – approximately 5.4 miles from the nearest component of the Project.



- New Castle International (VA85) – approximately 6.8 miles from the nearest component of the Project.
- Carilion Patient Transportation Services (VG47) – approximately 9.3 miles from the nearest component of the Project.
- Carilion Roanoke Memorial Hospital (VG62) – approximately 9.4 miles from the nearest component of the Project.

The Company will use the FAA’s Notice Criteria Tool to review proposed structure locations and identify structures that must be filed with the FAA. The Company will coordinate with the Virginia Department of Aviation and FAA as necessary to obtain all appropriate approvals.

**ATTACHMENT 2.D.1.: DESKTOP WETLAND AND STREAM
DELINEATION REPORT**



Appalachian Power Company

Daleville Area Transmission Improvements Project

SCC Case No. PUR-2026-00132

Botetourt County, Virginia

Virginia Department of Environmental Quality Desktop
Wetland and Stream Delineation Report

August 2026

US0051606.5157-002

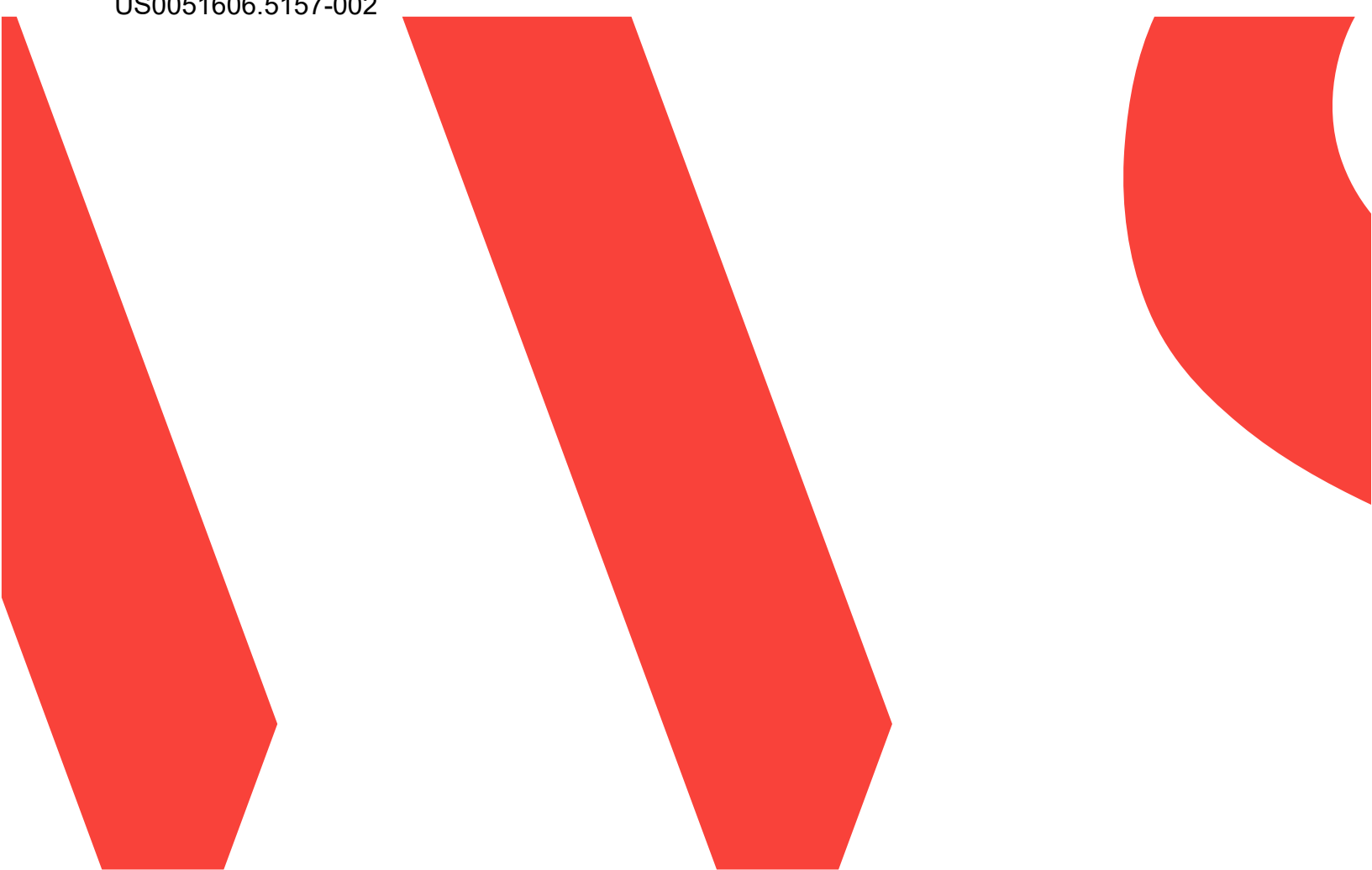


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Attachment A - Project Location Map

Attachment B - Desktop Wetland and Stream Delineation Map

Abbreviations

Abbreviation	Description
3DHP	3D Hydrography Program
Appalachian	Appalachian Power Company
CIR	Color Infrared
Company	Appalachian Power Company
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
kV	kilovolt
NFHL	National Flood Hazard Layer
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
PEM	Palustrine Emergent Wetland
PFO	Palustrine Forested Wetland
PSS	Palustrine Scrub-Shrub Wetland
PUB	Palustrine Unconsolidated Bottom Wetland
ROW	Right-of-way
SCC	State Corporation Commission
Project	Daleville Area Transmission Improvements Project
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VBMP	Virginia Base Mapping Program
VDEQ	Virginia Department of Environmental Quality
VGIN	Virginia Geographic Information Network
VMRC	Virginia Marine Resources Commission
WSP	WSP USA Inc.

1. Introduction

Appalachian Power Company (“Appalachian” or “Company”) is proposing the Daleville Area Transmissions Improvements Project to adequately and reliably operate and maintain a portion of the local transmission system to provide service for area customers and accommodate a new customer interconnection request located in Botetourt County, Virginia (the “Project”). The Project will construct the new Windy Pass Substation and upgrade the existing Cloverdale, Botetourt, Trinity, and Mount Union Substations. In addition, the Project will rebuild approximately 5.3 miles of 138-kilovolt (kV) transmission line between the existing Cloverdale and proposed Windy Pass substations (currently operated at 69 kV to be upgraded to 138 kV), rebuild approximately 4.0 miles of 138-kV transmission line between the existing Mount Union and proposed Trinity substations (currently operated at 69 kV to be upgraded to 138 kV), reconductor approximately 7.4 miles of the Cloverdale – Mount Union 138-kV Transmission Line, construct two new 138-kV feeder lines approximately 1.3 miles in length to the data center campus (the “Daleville Area Customer 138-kV Feeder Lines”), construct a new 0.1-mile-long 138-kV tie line between the new Windy Pass 138-kV Substation and existing Trinity Substation, and extend the Trinity – Wheatland 69-kV Transmission Line approximately 0.1 miles to the new Windy Pass 138-kV Substation. A Project Location Map showing each of the Project components is provided as Attachment A.

The existing single-circuit transmission lines to be rebuilt were originally constructed in the 1990s on wood monopole structures. Final structure types will be dependent on final engineering and additional studies; however, approximately 9.3 miles of 138-kV transmission line that was built on wood monopole structures is planned to be rebuilt using steel monopole structures. The transmission line will largely be rebuilt in or near the Company’s existing rights-of-way (ROWs). The existing single-circuit transmission line to be reconducted was built in the 1990s primarily on steel H-Frames or steel lattice towers that will not be replaced for the most part. The new 138-kV transmission lines to be built are proposed to be built on steel monopole structures. The anticipated heights of the proposed structures for the Project range between 40 and 135 feet.

Appalachian plans to seek a Certificate of Public Convenience and Necessity from the Virginia State Corporation Commission (SCC). The Company will seek approval from the Virginia SCC to construct the Project largely in an existing 80 or 100-foot-wide ROW sited within a typical 150-foot-wide corridor. Where the Daleville Area Customer 138-kV Feeder Lines are proposed, the new 75-foot-wide ROW will be sited within a typical 230-foot-wide corridor. Final line routes and structure locations will be determined during final engineering and after additional studies including, but not limited to, ground surveys, geotechnical and environmental studies, and additional interviews with landowners are completed. The typical filing corridor for the Project includes the existing ROW limits and up to 35 feet on either side. If approved, the Company will complete the preliminary engineering and work with the affected landowners to update existing



easements, as necessary, and provide fair compensation for any new easements. After receiving input from landowners, the Company will finalize the proposed structure locations and ROW widths within the SCC-approved filing corridor. The Company will also work with the necessary local, federal, and state agencies during permitting and construction phases. The desired in-service date for the Project is November 15, 2029.

Appalachian contracted WSP USA Inc. (WSP), to prepare this Desktop Wetland and Stream Delineation Report for inclusion in the Daleville Area Transmission Improvements Project's Application for a Certificate of Public Convenience and Necessity, to be filed with the Virginia SCC, which approves or denies such applications. This report is included as Attachment 2.D.1 in the Virginia Department of Environmental Quality Supplement (SCC Case No. PUR-2026-00132).

The purpose of the Desktop Wetland and Stream Delineation Report is to identify potential federally and state regulated waters within the proposed ROW. A siting effort was undertaken to determine the proposed route for the Project. Development of alternative routes or new ROW were not warranted as alternatives would result in substantially greater impacts due to additional land acquisition, increased tree clearing, and more extensive effects on developed and undeveloped land uses. By confining construction activities to the existing ROW, the Project avoids deviations, offsets, and expansion into adjacent properties typically associated with alternative route approaches. As a result, impacts on residential, commercial, and environmental resources will be minimized and remain consistent with siting guidance that prioritizes using existing transmission corridors. This report includes a description of the methodology WSP used to determine the location and size of potential regulated waters within the Project's ROW and guidance regarding probability of encountering the identified features during a field verification.

2. Methods

2.1 Data Sources and Background Information

WSP reviewed various mapping sources and Geographic Information System (GIS) data in order to identify areas where wetlands or streams could potentially be located within the proposed Project's ROW. The GIS data and mapping sources reviewed include the following:

- United States Geological Survey (USGS), United States Elevation Data (USGS 2021 and 2023).
- Virginia Geographic Information Network (VGIN) Virginia Base Mapping Program (VBMP) color orthoimagery (VGIN 2022).
- Color Infrared (CIR) aerial imagery and orthophotography (VBMP 2023).
- Google Earth color aerial photography, including historical aerial data (1995, 2000, 2002 to 2003, 2005 to 2008, 2010-2012, 2015, 2017, 2019, 2022 to 2023, and 2025).
- 3D Hydrography Program (3DHP) waterbody and stream and river data (USGS 2026).
- United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping (USFWS 2024).
- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Surveys of the Botetourt County (USDA NRCS 1994).
- USDA NRCS Web Soil Survey (USDA NRCS 2025).
- Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) data (FEMA 2024).
- Esri. Terrain with Labels Basemap (Esri 2016).

2.2 Wetland Definitions

Federal regulations define wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (United States Environmental Protection Agency [USEPA] 2025).

Under normal circumstances, three parameters must be present for an area to be considered a wetland: hydrophytic vegetation, wetland hydrology, and hydric soils. Applicable technical guidance that defines these parameters and provides criteria for the evaluation of associated data and field indicators is provided in the *Corps of Engineers Wetland Delineation Manual*



(Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Eastern Mountains and Piedmont Region, (Version 2.0)* (USACE 2012).

Using the data sources outlined in Section 2.1, WSP identified areas that could potentially satisfy the three parameters required to meet the definition of a wetland provided by the USACE. Aerial imagery and NWI mapping for the Project were used to determine potential habitat type of the desktop delineated wetlands. NWI maps use the Classification of Wetlands and Deepwater Habitats of the United States to classify wetland habitat types (Cowardin et al. 1979). This classification system is hierarchical and defines five major systems: Marine, Estuarine, Riverine, Lacustrine, and Palustrine. The Palustrine system is the only type of wetland system likely to be present within the study area and is defined as including all nontidal wetlands dominated by trees, shrubs, persistent emergent herbaceous plants, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean driven-derived salts is below 0.5‰ (Cowardin et al. 1979). Cowardin wetland types likely to be encountered along the proposed ROW fall into the following four classifications:

- **Palustrine Emergent (PEM) Wetlands.** Emergent wetlands are typically characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is usually present for most of the growing season in most years.
- **Palustrine Scrub-Shrub (PSS) Wetlands.** Scrub-shrub wetlands are typically characterized by woody vegetation less than 20 feet tall. The species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions.
- **Palustrine Forested (PFO) Wetlands.** Forested wetlands are usually characterized by woody vegetation that is 20 feet tall or taller. These wetlands typically possess an overstory of trees, an understory of young trees or shrubs, and an herbaceous layer.
- **Palustrine Unconsolidated Bottom (PUB) Wetlands.** Unconsolidated bottom wetlands include all wetland and deepwater habitats with at least 25% cover of particles smaller than stones and a vegetative cover less than 30%.

2.3 Stream Definitions

Streams are described by the USEPA as channels that are natural or artificial open areas that connect two bodies of water and may have water flowing in them continuously or periodically. They are further placed into three general stream habitat types:

- **Perennial Streams.** These channels are relatively permanent waters that typically have water throughout the year except during extreme drought. Most of the water comes from smaller upstream waters or groundwater while runoff from rainfall or other precipitation is supplemental.
- **Intermittent Streams.** These channels are relatively permanent waters that flow a considerable portion of the time but cease to flow occasionally or seasonally.



- **Ephemeral Streams.** These channels are non-relatively permanent waters, which have flowing water only during and for a short duration after precipitation events in a typical year. Ephemeral streambeds are located above the groundwater table year-round and are often described as headwater streams.

WSP used aerial imagery, color infrared (CIR) aerial imagery, orthophotography, topographic mapping, and 3DHP datasets to determine the location of potential streams. Stream habitat types were not identified during this desktop delineation; however designated 3DHP streams are likely to be intermittent or perennial channels.

2.4 Wetland and Stream Data Interpretation

To assess the probability of streams and wetlands to occur within the proposed ROW of the transmission line route, WSP biologists utilized available desktop data for this report.

2.4.1 Aerial Imagery and Topographic Mapping

The CIR aerial imagery (VBMP 2023), current and historical aerial photography (Google Earth 1995, 2000, 2002 to 2003, 2005 to 2008, 2010-2012, 2015, 2017, 2019, 2022 to 2023, and 2025; VGIN 2022), USGS topographic data (USGS 2021 and 2023), and ESRI world terrain base mapping (Esri 2016) were used to help determine the location and size of potential wetland and stream resources within the Project ROW. The USGS topographic contour lines were used to identify potential drainage areas ranging from small headwater streams to larger perennial streams. The contour lines were also used to determine areas of flat or depressed terrain where water is more likely to pool for a sufficient duration that allows development of the three required wetland parameters.

Several years of aerial imagery were reviewed for signs of potential wetland and stream resources such as apparent drainage lines, areas with changes in vegetation, and areas with apparent water ponding. CIR aerial imagery was also reviewed, which provides a higher level of contrast compared to traditional aerial photography since it renders the scene in colors not normally seen by the human eye. Open water and saturated areas are typically depicted as black or dark blue since they do not reflect much light in the infrared spectrum (Minnesota IT Services n.d.). Areas with a shift in vegetation (as observed between wetland and upland boundaries) are more apparent on CIR aerial imagery as areas with dead or stressed vegetation appear in lighter shades of red and pink, and areas with actively photosynthesizing vegetation appear bright red. Aerial imagery was also used to estimate the desktop delineated wetland's Cowardin classification. The CIR aerial imagery is used on the Desktop Wetland and Stream Delineation maps included in Attachment B.

2.4.2 National Wetland Inventory Dataset

WSP reviewed NWI mapping to help identify potential wetland areas. NWI maps were published by the USFWS and depict probable wetland areas based on stereoscopic analysis of high-



altitude aerial photographs and analysis of infrared bands from remotely sensed imagery. Therefore, NWI mapping reflects conditions during the specific year and season the data was acquired and should not be considered precise, field-verified wetlands (USFWS 2024). NWI mapping was also used to estimate the desktop delineated wetland's Cowardin classification. NWI mapping is included on the Desktop Wetland and Stream Delineation maps included in Attachment B.

2.4.3 3D Hydrography Program

The 3DHP data (USGS 2026) was used to identify potential and known streams. 3DHP is a comprehensive set of digital spatial data representing surface waters that is derived from previous national hydrography sets that include the National Hydrography Dataset (NHD), the Watershed Boundary Dataset, and the NHDPlus High Resolution. The 3DHP includes a three-dimensional hydrography network generated from and integrated with elevation data from the 3D Elevation Program to better represent stream gradients and channel conditions, along with waterbodies, hydrologic units, hydrologically enhanced elevation and other surfaces, and more consistent and accurate attributes. Although not field verified, the 3DHP data shows the general locations of streams, rivers, and open waters, and provides insight into the general location of waters (Anderson et al. 2024). 3DHP mapping is included on the Desktop Wetland and Stream Delineation maps included in Attachment B.

2.4.4 National Flood Hazard Layer Floodplain Dataset

The FEMA NFHL dataset was reviewed to identify floodplain boundaries. The FEMA NFHL dataset (FEMA 2024) provides digital spatial data representing floodplains associated with recorded streams (see Section 2.4.3, USGS 3DHP streams) as well as riverine mapping. Floodplain boundaries are divided into flood insurance rate zones that are rated between 100-year and 500-year floodplains. Both 100-year and 500-year are considered areas of moderate flood hazard. All remaining areas fall under the terms of minimal flood hazard (FEMA 2024). Floodplain mapping is included on the Desktop Wetland and Stream Delineation maps included in Attachment B.

2.4.5 Soil Survey Mapping

USDA NRCS digital soil survey data for Botetourt County (USDA NRCS 1994), Virginia was used to locate areas of hydric soil, which are typically found in wetlands. The NRCS soil survey groups soil map units into three categories; non-hydric soil units, soil units with hydric soil inclusions, and units that contain all hydric soils. Areas that contain hydric or hydric inclusion map units have a greater probability of supporting wetlands relative to those mapped as non-hydric soil units. Hydric soil units are identified on the map sheets included in Attachment B. No hydric soil areas were mapped within the Project ROW.

2.5 Wetland and Stream Data Evaluation

Potential streams and wetlands were assigned a probability of low, moderate, or high potential of being a regulated resource if verification were to be conducted in the field. Tables 1 and 2 show the criteria used to assign the probability of an identified feature within the proposed ROW.

Table 1: Wetland Evaluation Criteria

Wetland Probability	Assessment Criteria
High	Aerial imagery (color and CIR) and/or topography combined with two other indicators such as non-riverine NWI wetlands, 3DHP waterbodies, hydric soils, or 3DHP streams/regulated floodplains.
Moderate	Aerial imagery (color and CIR) and/or topography combined with one other indicator such as non-riverine NWI wetlands, 3DHP waterbodies, hydric soils, or 3DHP streams/regulated floodplains.
Low	Areas identified as wetland with topography and aerial photography only.

Notes: Please see Acronyms and Abbreviations.

Table 2: Stream Evaluation Criteria

Stream Probability	Assessment Criteria
High	Streams identified with 3DHP and aerial imagery (color and CIR) or topography.
Moderate	Either (1) streams identified with aerial imagery (color and CIR) and topography; or (2) aerial imagery or topography combined with one other indicator, such as NWI riverine features or county or city stream data.
Low	Areas identified as streams with topography or aerial photography only.

Notes: Please see Acronyms and Abbreviations.

3. Results and Discussion

The results of the Desktop Wetland and Stream Delineation are presented for potential wetlands and streams in Tables 3 through 10. Figures showing the location of desktop delineated wetlands and streams along the Project sections are included in Attachment B.

The desktop delineation assumed an 80- to 100-foot-wide ROW for the Project's transmission lines to be upgraded to assess potential acreage of wetlands and linear feet of streams. For the Daleville Area Customer 138-kV Feeder Lines, the delineation was completed for a 150-foot-wide ROW, as shown in Attachment B, due to two proposed feeder lines. Due to limitations in aerial photography and available data, the probability and estimated number of occurrences provided below are for planning purposes and likely do not represent the full extent of potentially jurisdictional aquatic resources that may be identified during a field study.

Table 3: Desktop Wetland Delineation Results Between Cloverdale and Windy Pass

Probability Level and Wetland Type		Cloverdale to Windy Pass 138-kV Transmission Line	
		Number of Wetland Occurrences	Acreage within ROW
HIGH	PEM	0	0.00
	PSS	0	0.00
	PFO	0	0.00
	PUB	1	0.43
MODERATE	PEM	1	0.31
	PSS	2	0.71
	PFO	1	0.14
	PUB	0	0.00
LOW	PEM	1	0.01
	PSS	0	0.00
	PFO	0	0.00
	PUB	0	0.00
Total		6	1.60



Table 4: Desktop Wetland Delineation Results Between Mount Union and Windy Pass

Probability Level and Wetland Type		Mount Union to Windy Pass 138-kV Transmission Line	
		Number of Wetland Occurrences	Acreage within ROW
HIGH	PEM	1	0.10
	PSS	0	0.00
	PFO	0	0.00
	PUB	1	0.29
MODERATE	PEM	0	0.00
	PSS	0	0.00
	PFO	0	0.00
	PUB	0	0.00
LOW	PEM	0	0.00
	PSS	0	0.00
	PFO	0	0.00
	PUB	0	0.00
Total		2	0.39

Table 5: Desktop Wetland Delineation Results Between Cloverdale and Mount Union

Probability Level and Wetland Type		Cloverdale to Mount Union 138-kV Transmission Line	
		Number of Wetland Occurrences	Acreage within ROW
HIGH	PEM	0	0.00
	PSS	0	0.00
	PFO	1	0.25
	PUB	1	0.89
MODERATE	PEM	2	0.88
	PSS	0	0.00
	PFO	2	0.31
	PUB	0	0.00
LOW	PEM	0	0.00
	PSS	0	0.00
	PFO	0	0.00
	PUB	0	0.00
Total		6	2.33



Table 6: Desktop Wetland Delineation Results for Daleville Area Customer 138-kV Feeder Lines

Probability Level and Wetland Type		Daleville Area Customer 138-kV Feeder Lines	
		Number of Wetland Occurrences	Acreage within ROW
HIGH	PEM	0	0.00
	PSS	0	0.00
	PFO	0	0.00
	PUB	0	0.00
MODERATE	PEM	1	0.42
	PSS	0	0.00
	PFO	2	0.45
	PUB	0	0.00
LOW	PEM	3	0.35
	PSS	0	0.00
	PFO	0	0.00
	PUB	0	0.00
Total		6	1.22

Table 7: Desktop Stream Delineation Results Between Cloverdale and Windy Pass

Probability Level	Cloverdale to Windy Pass 138-kV Transmission Line	
	Number of Stream Occurrences	Linear feet within ROW
HIGH	7	1,277
MODERATE	2	197
LOW	4	372
Total	13	1,846



Table 8: Desktop Stream Delineation Results Between Mount Union and Windy Pass

Probability Level	Mount Union to Windy Pass 138-kV Transmission Line	
	Number of Stream Occurrences	Linear feet within ROW
HIGH	4	1,014
MODERATE	0	0
LOW	8	804
Total	12	1,818

Table 9: Desktop Stream Delineation Results Between Cloverdale and Mount Union

Probability Level	Cloverdale to Mount Union 138-kV Transmission Line	
	Number of Stream Occurrences	Linear feet within ROW
HIGH	18	2,597
MODERATE	10	1,042
LOW	32	3,522
Total	60	7,161

Table 10: Desktop Stream Delineation Results for Daleville Area Customer 138-kV Feeder Lines

Probability Level	Daleville Area Customer 138-kV Feeder Lines	
	Number of Stream Occurrences	Linear feet within ROW
HIGH	2	435
MODERATE	0	0
LOW	9	1,526
Total	11	1,961

Resource probabilities and the estimated total of wetlands and streams within the ROW for each study segment are provided below.



3.1 Cloverdale to Windy Pass 138-kV Transmission Line

The proposed 5.3-mile Cloverdale – Windy Pass 138-kV Transmission Line, which includes approximately 0.1 mile of greenfield transmission line, crosses Buffalo Creek and multiple headwater valleys in Botetourt County, Virginia (Attachment B, Map Tiles 1 to 9 and 13). It is located within the existing ROW between the existing Cloverdale and the proposed Windy Pass Substation. The ROW for the Cloverdale – Windy Pass 138-kV Transmission Line contains an estimated total of six wetlands (totaling 1.60 acres) and 13 streams (totaling 1,846 linear feet). Additional details on the probability of the identified features are included below.

High Probability

One high probability wetland (totaling 0.43 acres) was identified within the ROW of the Cloverdale – Windy Pass 138-kV Transmission Line (Attachment B, Map Tiles 7). In addition, seven high probability streams are estimated within the ROW for a total of 1,277 linear feet in length (Attachment B, Map Tiles 1 to 3, 5 to 6, and 8).

Moderate Probability

Four moderate probability wetlands (totaling 1.16 acres) were identified within the ROW of the Cloverdale – Windy Pass 138-kV Transmission Line (Attachment B, Map Tiles 2 to 3 and 8). In addition, two moderate probability streams are estimated within the ROW for a total of 197 linear feet in length (Attachment B, Map Tiles 3 and 6).

Low Probability

One low probability wetland (totaling 0.01 acre) was identified within the ROW of the Cloverdale – Windy Pass 138-kV Transmission Line (Attachment B, Map Tiles 13). In addition, four low probability streams are estimated within the ROW for a total of 372 linear feet in length (Attachment B, Map Tiles 4, 6 to 7, and 9).

3.2 Mount Union to Windy Pass 138-kV Transmission Line

The proposed 4.0-mile Mount Union – Windy Pass 138-kV Transmission Line crosses Rulman Branch and sparse headwater valleys in Botetourt County, Virginia (Attachment B, Map Tiles 13 to 24). It is located within the existing ROW between the existing Mount Union Substation and the proposed Windy Pass Substation. The ROW for the Mount Union – Windy Pass 138-kV Transmission Line contains an estimated total of two wetlands (totaling 0.39 acres) and 12 streams (totaling 1,818 linear feet). Additional details on the probability of the identified features are included below.



High Probability

Two high probability wetlands (totaling 0.39 acre) were identified within the ROW of the Mount Union – Windy Pass 138-kV Transmission Line (Attachment B, Map Tiles 19). In addition, four high probability streams are estimated within the ROW for a total of 1,014 linear feet in length (Attachment B, Map Tiles 15 to 18).

Moderate Probability

No moderate probability wetlands or streams were identified within the ROW.

Low Probability

No low probability wetlands were identified within the ROW. Eight low probability streams are estimated within the ROW for a total of 804 linear feet in length (Attachment B, Map Tiles 17 to 23).

3.3 Cloverdale to Mount Union 138-kV Transmission Line

The existing Cloverdale – Mount Union 138-kV Transmission Line is 7.4 miles long and crosses multiple named streams and headwater valleys in Botetourt County, Virginia (Attachment B, Map Tiles 1 and 24 to 38). It is located within the existing ROW between the existing Cloverdale and Mount Union Substations. The ROW for the Cloverdale – Mount Union 138-kV Transmission Line contains an estimated total of six wetlands (totaling 2.33 acres) and 60 streams (totaling 7,161 linear feet). Additional details on the probability of the identified features are included below.

High Probability

Two high probability wetlands (totaling 1.14 acre) were identified within the ROW of the Cloverdale – Mount Union 138-kV Transmission Line (Attachment B, Map Tiles 35 to 36 and 38). In addition, 18 high probability streams are estimated within the ROW for a total of 2,597 linear feet in length (Attachment B, Map Tiles 1, 25-32, 34-35, and 37-38).

Moderate Probability

Four moderate probability wetlands (totaling 1.19 acres) were identified within the ROW of the Cloverdale – Mount Union 138-kV Transmission Line (Attachment B, Map Tiles 37 to 38). In addition, 10 moderate probability streams are estimated within the ROW for a total of 1,042 linear feet in length (Attachment B, Map Tiles 1, 27-31, and 35-36).



Low Probability

No low probability wetlands were identified within the ROW. Thirty-two low probability streams are estimated within the ROW for a total of 3,522 linear feet in length (Attachment B, Map Tiles 25-30 and 32-35).

3.4 Daleville Area Customer 138-kV Feeder Lines

The Daleville Area Customer 138-kV Feeder Lines are each 1.3 miles long and cross multiple headwater valleys in Botetourt County, Virginia (Attachment B, Map Tiles 9 to 12). They are located within new ROW between the existing Botetourt Substation and the customer, largely on customer property. The ROW for the Daleville Area Customer 138-kV Feeder Lines contains an estimated total of six wetlands (totaling 1.22 acres) and 11 streams (totaling 1,961 linear feet). Additional details on the probability of the identified features are included below.

High Probability

No high probability wetlands were identified within the ROW. Two high probability streams are estimated within the ROW for a total of 435 linear feet in length (Attachment B, Map Tiles 9-10).

Moderate Probability

Three moderate probability wetlands (totaling 0.87 acres) were identified within the ROW of the Daleville Area Customer 138-kV Feeder Lines (Attachment B, Map Tile 9). No moderate probability streams were identified within the ROW.

Low Probability

Three low probability wetlands (totaling 0.35 acres) were identified within the ROW of the Daleville Area Customer 138-kV Feeder Lines (Attachment B, Map Tile 11). Nine low probability streams are estimated within the ROW for a total of 1,526 linear feet in length (Attachment B, Map Tiles 10-12).

4. Conclusion

A summary of the desktop wetland and stream resources identified for the Project is provided in Tables 3 through 10. The proposed route for the Project is composed of multiple transmission lines totaling approximately 19.5 miles to be rebuilt or constructed.

The proposed route for the Cloverdale – Windy Pass 138-kV Transmission Line is within or near the existing ROW. The proposed ROW includes an estimated six wetlands with a total combined area of 1.60 acres and is estimated to cross 13 streams with a total combined linear footage of 1,846 feet. High probability streams, including Buffalo Creek, are proposed to be crossed at or directly adjacent to the existing crossing locations. Overall, impacts to stream and wetland features between the existing Cloverdale Substation and the proposed Windy Pass Substation should result in minimal impacts given the proposed Cloverdale – Windy Pass 138-kV Transmission Line will largely be rebuilt within the existing 80-foot-wide ROW.

The proposed route for the Mount Union – Windy Pass 138-kV Transmission Line is within or near the existing ROW. The proposed ROW includes an estimated two wetlands with a total combined area of 0.39 acres and is estimated to cross 12 streams with a total combined linear footage of 1,818 feet. High probability streams, including Rulman Branch, are proposed to be crossed at or directly adjacent to the existing crossing locations. Overall, impacts to stream and wetland features between the existing Mount Union Substation and the proposed Windy Pass Substation should result in minimal impacts given the proposed Mount Union – Windy Pass 138-kV Transmission Line will largely be rebuilt within the existing 80-foot-wide ROW.

The proposed route for the Cloverdale – Mount Union 138-kV Transmission Line is within the existing ROW. The existing ROW includes an estimated six wetlands with a total combined area of 2.33 acres and is estimated to cross 60 streams with a total combined linear footage of 7,161 feet. High probability streams, including Angel Branch, Tinker Creek, and Buffalo Creek, are proposed to be crossed at or directly adjacent to the existing crossing locations. Overall, impacts to stream and wetland features between the existing Cloverdale and Mount Union Substations should result in impact avoidance and minimization given the proposed Cloverdale – Mount Union 138-kV Transmission Line will largely be reconducted on existing structures within the existing 100-foot-wide ROW.

The proposed alignment for the Daleville Area Customer 138-kV Feeder Lines will be constructed in newly proposed ROW. The proposed ROW includes an estimated six wetlands with a total combined area of 1.22 acres and is estimated to cross 11 streams with a total combined linear footage of 1,961 feet. High probability streams are proposed to be crossed at or directly adjacent to the existing crossing locations. Impacts to streams and wetlands within the newly proposed ROW will be avoided where practicable and minimized as necessary through Project design and construction planning consistent with the Section 404(b)(1) Guidelines.



Strategic siting of transmission structures/foundations and construction access roads should minimize impacts to regulated resources. During the engineering design, regulated resources will be avoided to the extent feasible and those features that cannot be avoided will be impacted to the minimum area required. In most cases, wetlands and streams can be spanned by a transmission line; however, ROW clearing may still result in permanent conversion of forested wetlands depending on canopy height. Impacts to wetlands from access roads and clearing equipment can be minimized through the use of temporary timber matting. In some cases, temporary timber mat bridges can also be used to span stream channels. Any impacts to regulated resources will be permitted with the United States Army Corps of Engineers (USACE), Virginia Department of Environmental Quality (VDEQ), and the Virginia Marine Resources Commission (VMRC), as applicable.

The results of this Desktop Wetland and Stream Delineation are intended solely for use as an indication of probable wetlands and streams within the proposed ROWs associated with the Project. This analysis is designed for planning purposes only and does not represent the results of an on-the-ground wetland and stream field delineation. Accurate determination of regulated resource boundaries is only possible through field delineations of wetlands and streams utilizing the USACE wetland delineation manual (Environmental Laboratory 1987), the applicable regional supplement (USACE 2012), and other appropriate regulatory guidance.



Table 11: Summary of Desktop Wetland and Stream Delineations

Types	Cloverdale to Windy Pass 138-kV Transmission Line			Mount Union to Windy Pass 138-kV Transmission Line			Cloverdale to Mount Union 138-kV Transmission Line			Daleville Area Customer 138-kV Feeder Lines		
	Number of Occurrences	Acreage/Linear Footage within ROW	Number of Occurrences	Acreage/Linear Footage within ROW	Number of Occurrences	Acreage/Linear Footage within ROW	Number of Occurrences	Acreage/Linear Footage within ROW	Number of Occurrences	Acreage/Linear Footage within ROW	Number of Occurrences	Acreage/Linear Footage within ROW
Wetland	6	1.60	2	0.39	6	2.33	6	1.22	6	1.22		
Stream	13	1,846	12	1,818	60	7,161	11	1,961				

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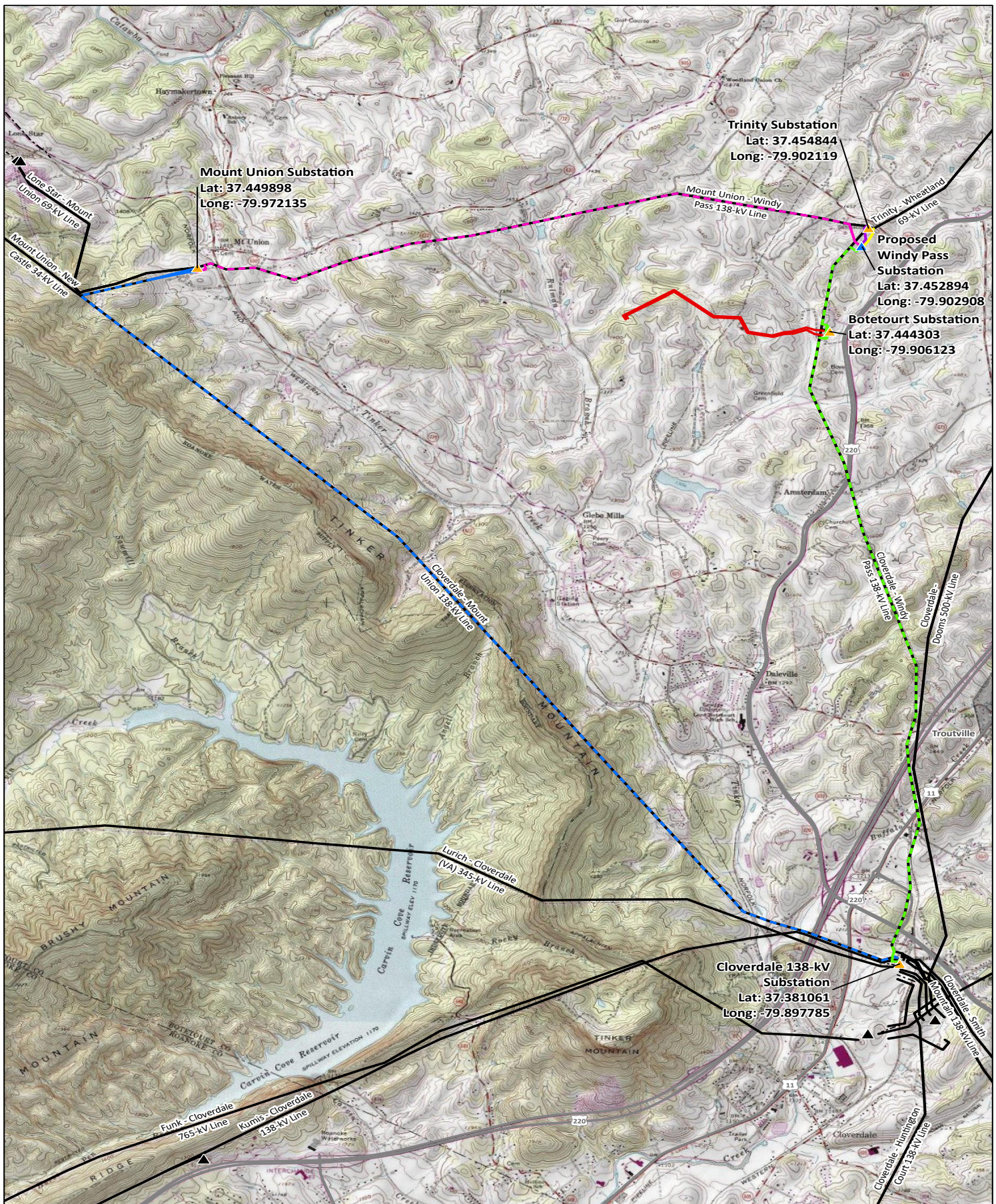
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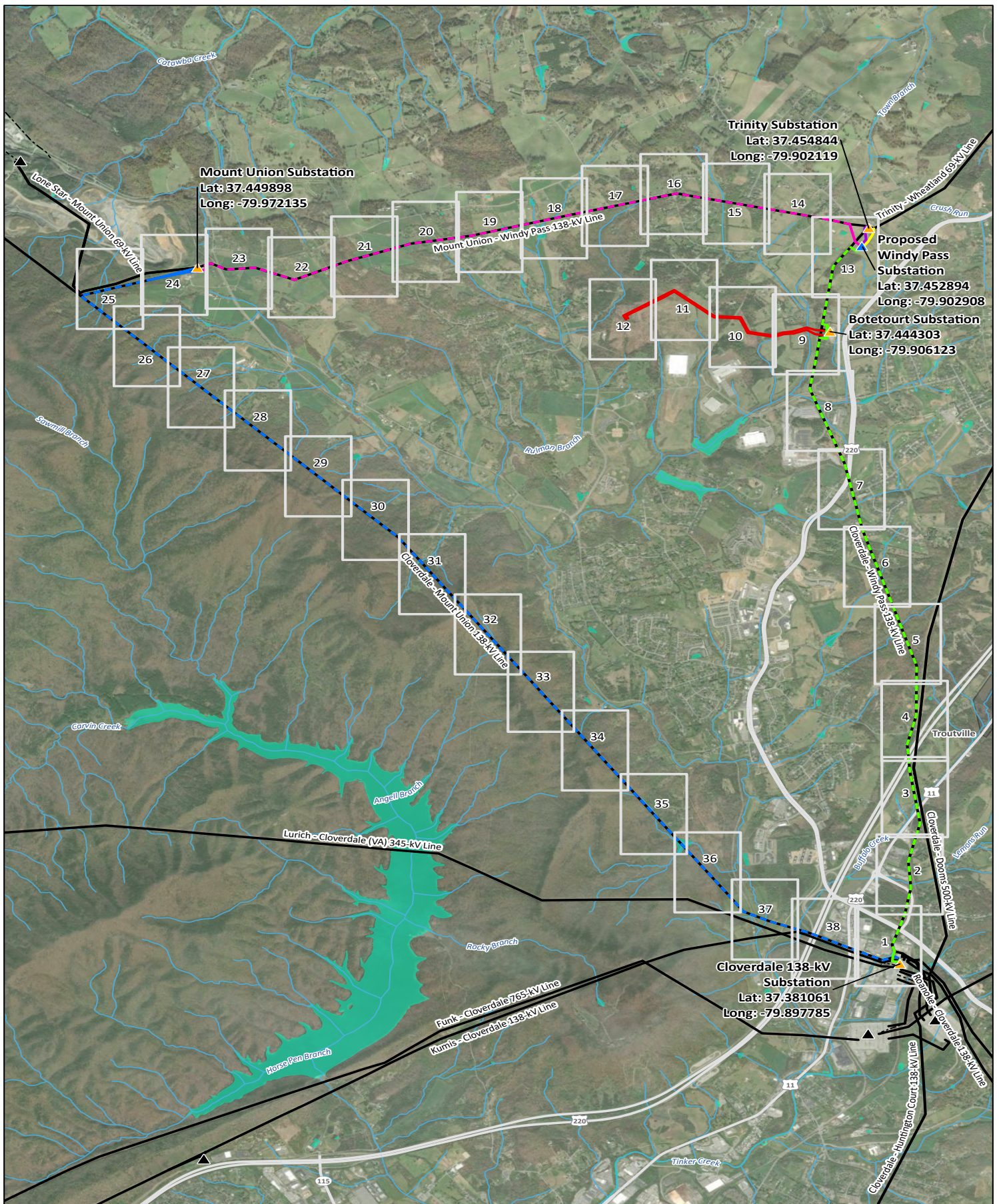
Attachment A - Project Location Map



▲ Existing Substation (AEP) ▲ Substation to be Built (AEP) ▲ Existing Substation to be Upgraded (AEP) ◆ Switch Station (AEP) — Cloverdale - Mount Union to be Built (AEP) — Cloverdale - Mount Union to be Upgraded (AEP) — Daleville Area Customer 138-kV Feeder Lines — Cloverdale - Windy Pass to be Built (AEP)	— Cloverdale - Windy Pass to be Upgraded (AEP) — Mount Union - Windy Pass to be Built (AEP) — Mount Union - Windy Pass to be Upgraded (AEP) — Trinity - Windy Pass to be Built (AEP) — Windy Pass - Wheatland to be Built (AEP) --- Non-AEP Transmission Line — Highway — City/Town/Municipal Limit	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment A: Project Location Map Daleville Area Transmission Improvements Project 0 3,000 6,000 Feet
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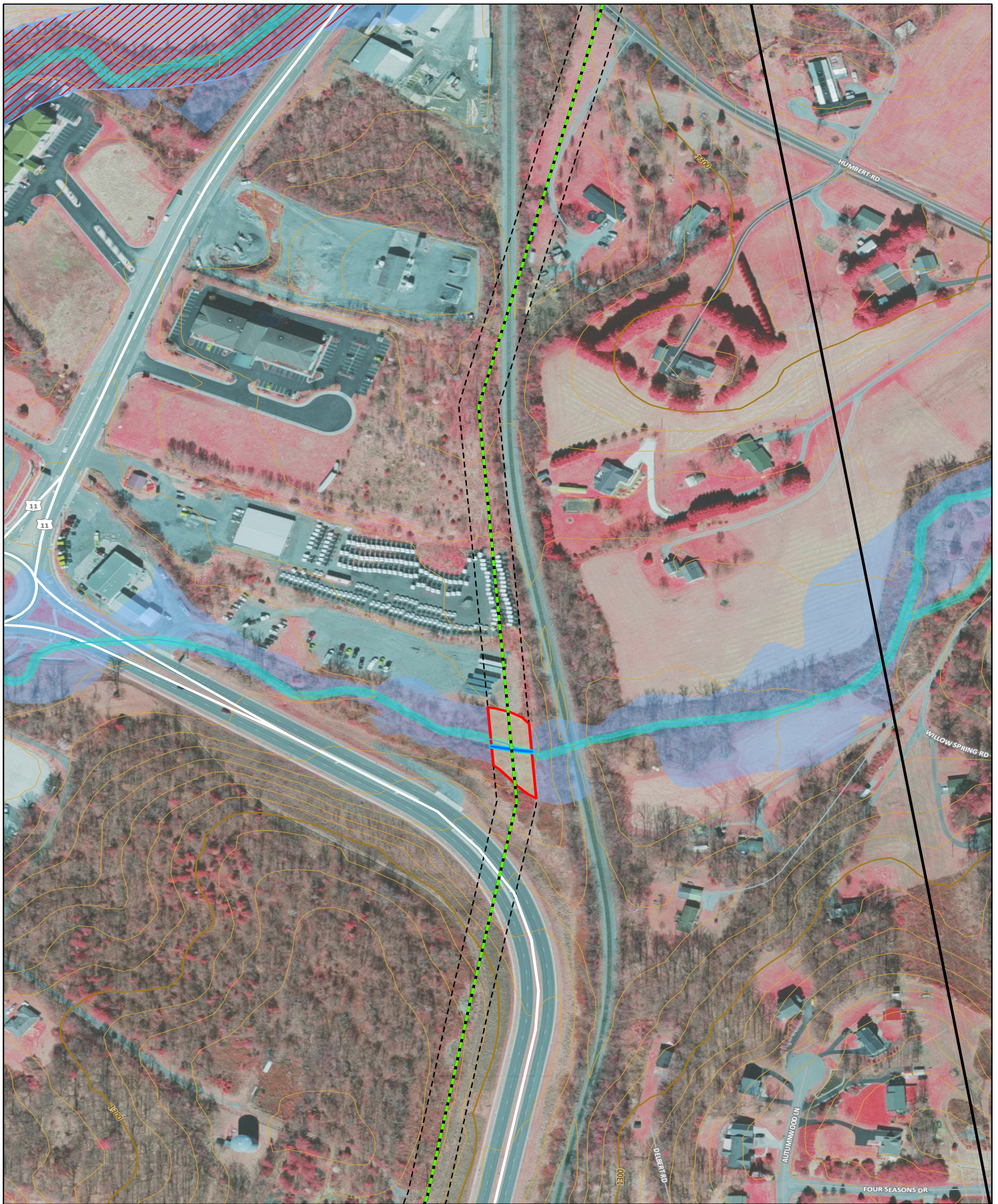
Attachment B - Desktop Wetland and Stream Delineation Map



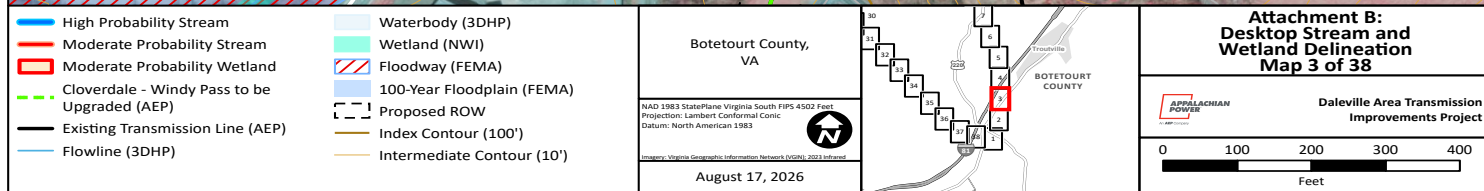
▲ Existing Substation (AEP) ▲ Substation to be Built (AEP) ▲ Existing Substation to be Upgraded (AEP) ◆ Switch Station (AEP) ■ Non-AEP Substation — Cloverdale - Mount Union to be Built (AEP) — Cloverdale - Mount Union to be Upgraded (AEP)	— Daleville Area Customer 138-kV Feeder Lines — Cloverdale - Windy Pass to be Built (AEP) — Cloverdale - Windy Pass to be Upgraded (AEP) — Mount Union - Windy Pass to be Built (AEP) — Mount Union - Windy Pass to be Upgraded (AEP) — Trinity - Windy Pass to be Built (AEP)	— Windy Pass - Wheatland to be Built (AEP) --- Non-AEP Transmission Line — Highway — Stream (3DHP) — Wetland (NWI) — City/Town/Municipal Limit — Map Tile	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Index Daleville Area Transmission Improvements Project 0 3,000 6,000 Feet
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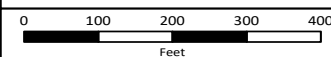
- High Probability Stream - Moderate Probability Stream - Cloverdale - Mount Union to be Upgraded (AEP) - Cloverdale - Windy Pass to be Built (AEP) - Cloverdale - Windy Pass to be Upgraded (AEP) - Cloverdale - Trinity to be Removed (AEP)	- Existing Substation to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP) - Wetland (NW1) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 1 of 38 APPALACHIAN POWER A member of Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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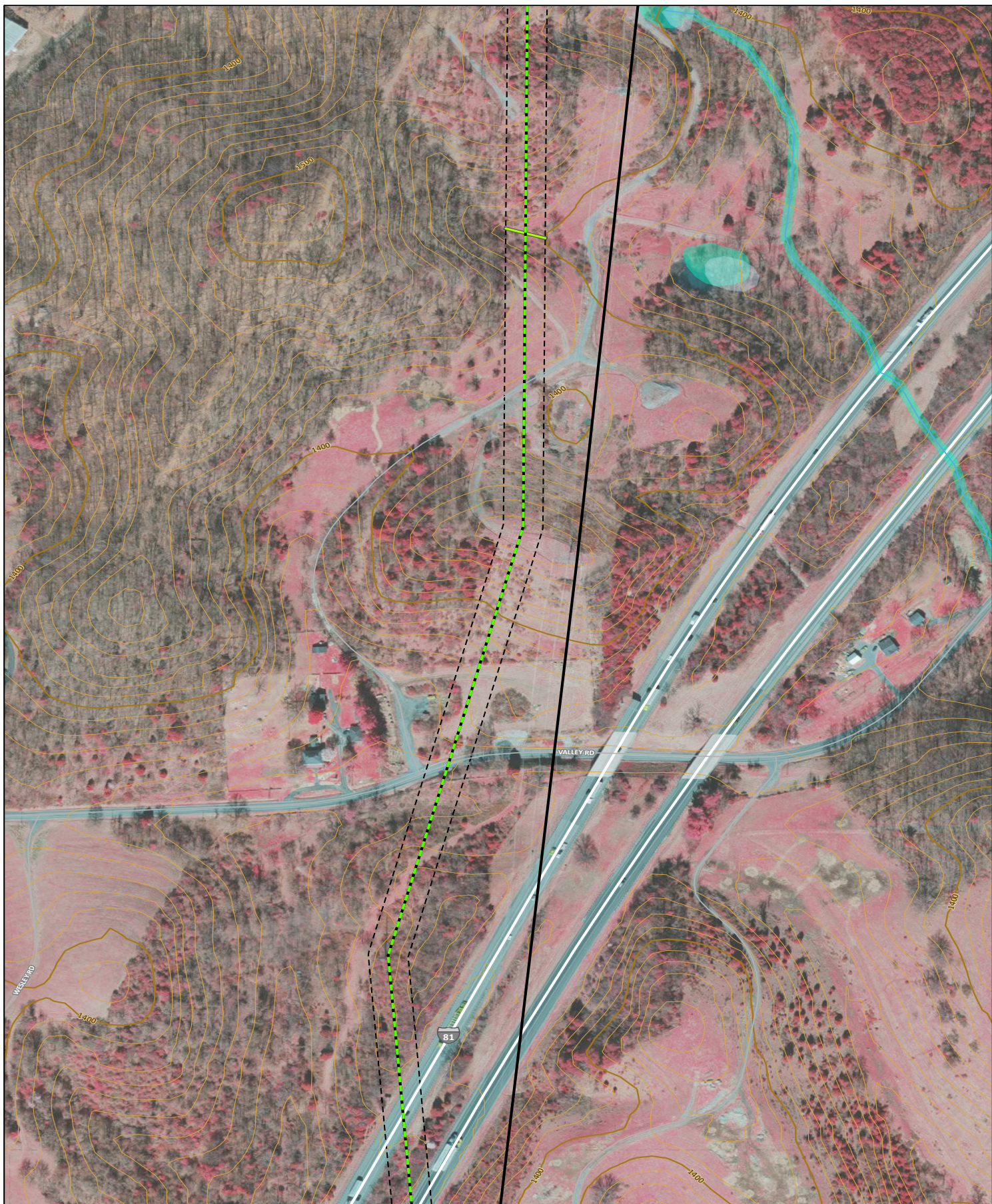


- High Probability Stream - Moderate Probability Wetland - Cloverdale - Windy Pass to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP)	- Wetland (NW1) - Floodway (FEMA) 100-Year Floodplain (FEMA) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 2 of 38 Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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**Daleville Area Transmission
Improvements Project**





Low Probability Stream Cloverdale - Windy Pass to be Upgraded (AEP) Existing Transmission Line (AEP) Flowline (3DHP)	Waterbody (3DHP) Wetland (NW1) Proposed ROW Index Contour (100') Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY	Attachment B: Desktop Stream and Wetland Delineation Map 4 of 38 APPALACHIAN POWER Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- High Probability Stream - Cloverdale - Windy Pass to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP)	- Waterbody (3DHP) - Wetland (NWI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 5 of 38 APPALACHIAN POWER A BROWN COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- High Probability Stream - Moderate Probability Stream - Low Probability Stream - Cloverdale - Windy Pass to be Upgraded (AEP) - Existing Transmission Line (AEP)	- Flowline (3DHP) - Waterbody (3DHP) - Wetland (NW1) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 6 of 38 APPALACHIAN POWER A BHE COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- Low Probability Stream - High Probability Wetland - Cloverdale - Windy Pass to be upgraded (AEP) - Existing Transmission Line (AEP)	- Flowline (3DHP) - Wetland (NWI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 7 of 38 APPALACHIAN POWER A BROWN & CALDER COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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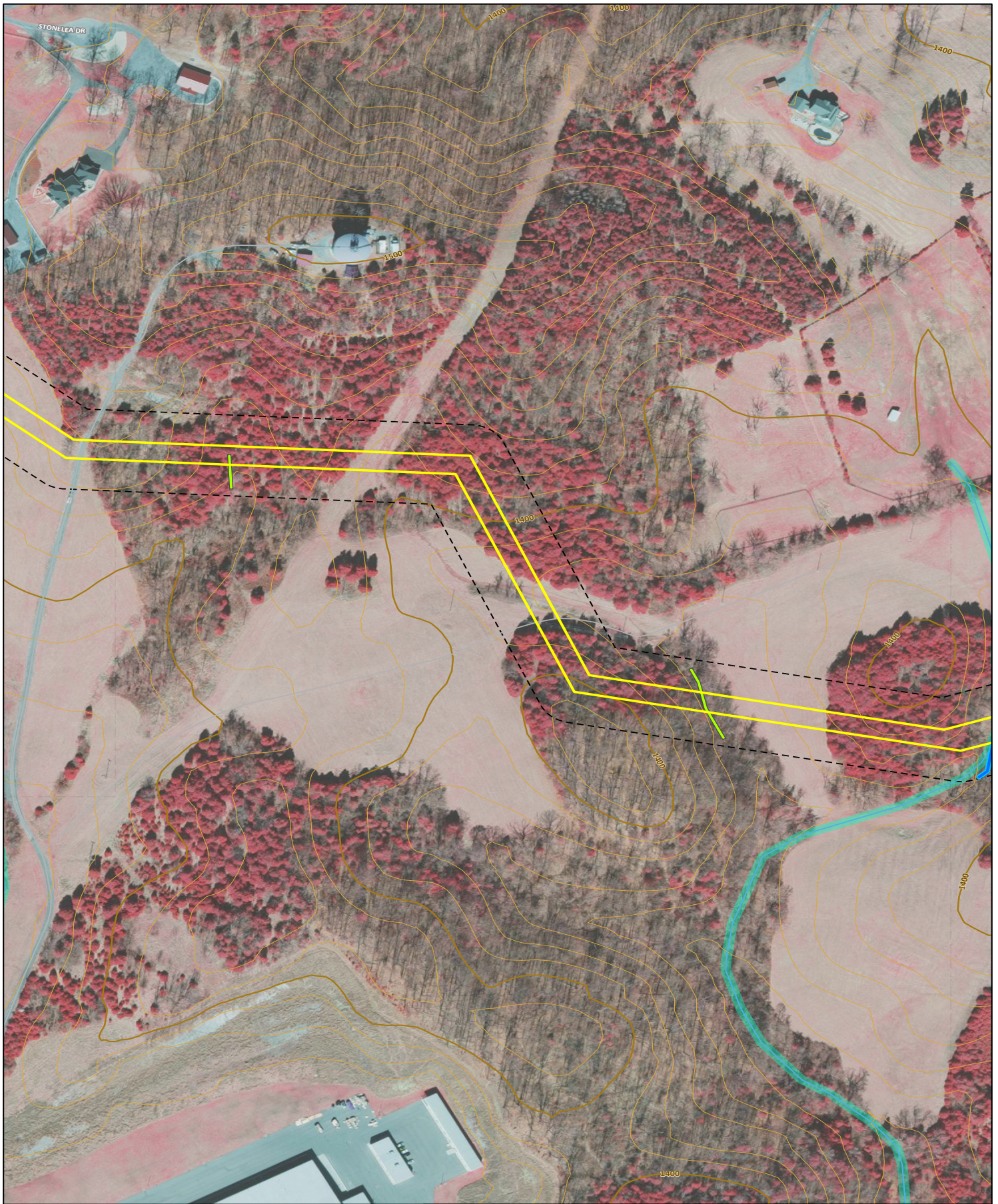


- High Probability Stream - Moderate Probability Wetland - Cloverdale - Windy Pass to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP)	- Wetland (NWI) 100-Year Floodplain (FEMA) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	Botetourt County	Attachment B: Desktop Stream and Wetland Delineation Map 8 of 38 APPALACHIAN POWER A Member of Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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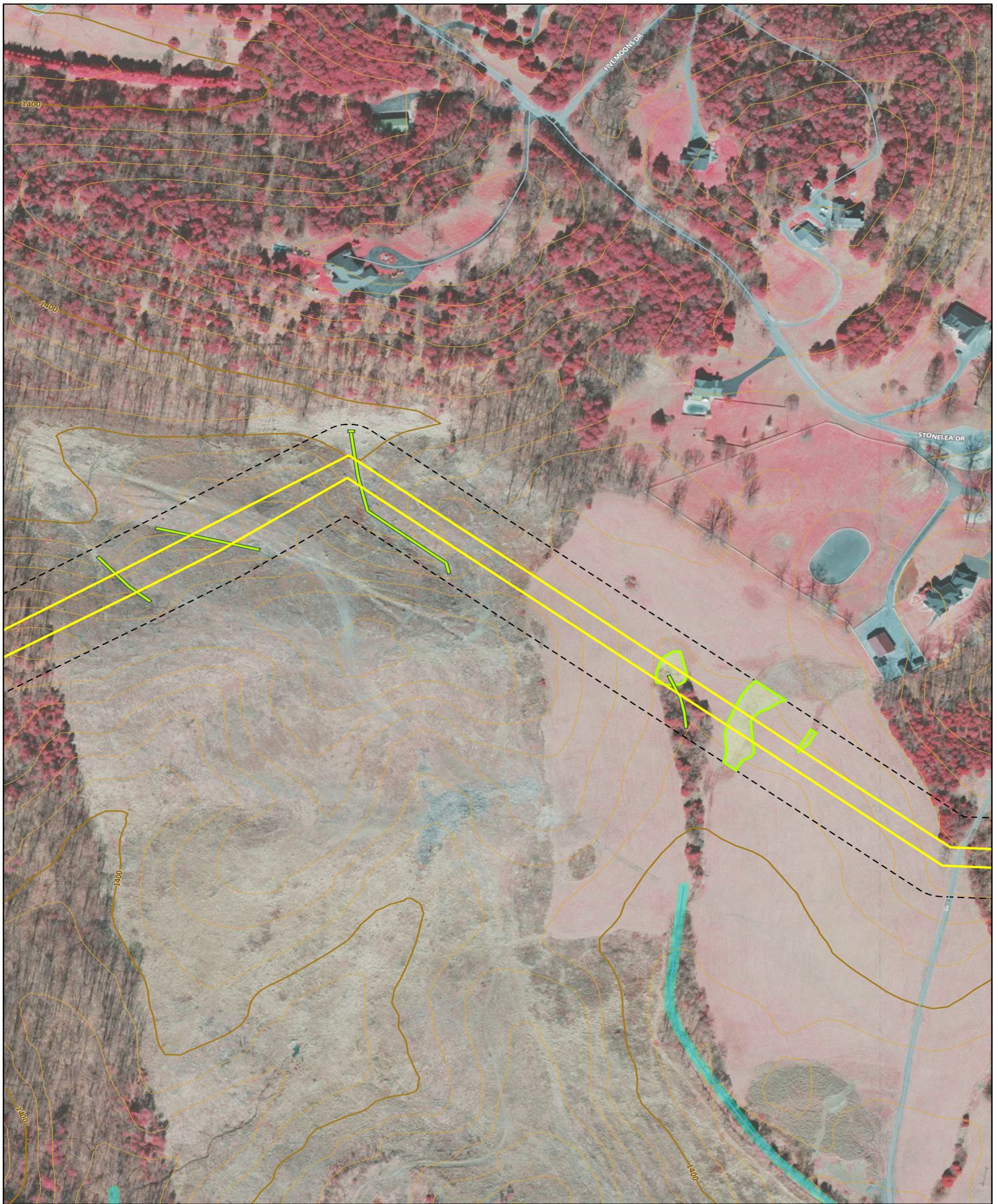


Botetourt
Substation

- High Probability Stream - Low Probability Stream - Moderate Probability Wetland - Daleville Area Customer 138-kV Feeder Lines - Cloverdale - Windy Pass to be Built (AEP) - Cloverdale - Windy Pass to be Upgraded (AEP) - Cloverdale - Trinity to be Removed (AEP) - Existing Substation to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP) - Wetland (NW1) 100-Year Floodplain (FEMA) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 9 of 38 APPALACHIAN POWER A BROWN COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- High Probability Stream - Low Probability Stream - Daleville Area Customer 138-kV Feeder Lines - Flowline (3DHP)	- Wetland (NWI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY	Attachment B: Desktop Stream and Wetland Delineation Map 10 of 38 APPALACHIAN POWER A BROWN COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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— Low Probability Stream — Low Probability Wetland — Daleville Area Customer 138-kV Feeder Lines — Flowline (3DHP) — Wetland (NWI) --- Proposed ROW — Index Contour (100') — Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 11 of 38 APPALACHIAN POWER A BROWN & CALDER COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- Low Probability Stream - Daleville Area Customer 138-kV Feeder Lines - Flowline (3DHP)	- Wetland (NWI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 12 of 38 APPALACHIAN POWER by Duke Energy Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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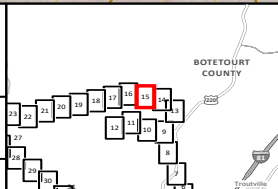


Legend: - Low Probability Wetland - Cloverdale - Windy Pass to be Built (AEP) - Cloverdale - Windy Pass to be Upgraded (AEP) - Cloverdale - Trinity to be Removed (AEP) - Mount Union - Windy Pass to be Built (AEP) - Mount Union - Windy Pass to be Upgraded (AEP) - Mount Union - Trinity to be Removed (AEP) - Trinity - Windy Pass to be Built (AEP) - Windy Pass - Wheatland to be Built (AEP) - Trinity-Wheatland to be Removed (AEP) - Existing Substation to be Upgraded (AEP) - Substation to be Built (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP) - Waterbody (3DHP) - Wetland (RWI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	Botetourt County, VA	Attachment B: Desktop Stream and Wetland Delineation Map 13 of 38 Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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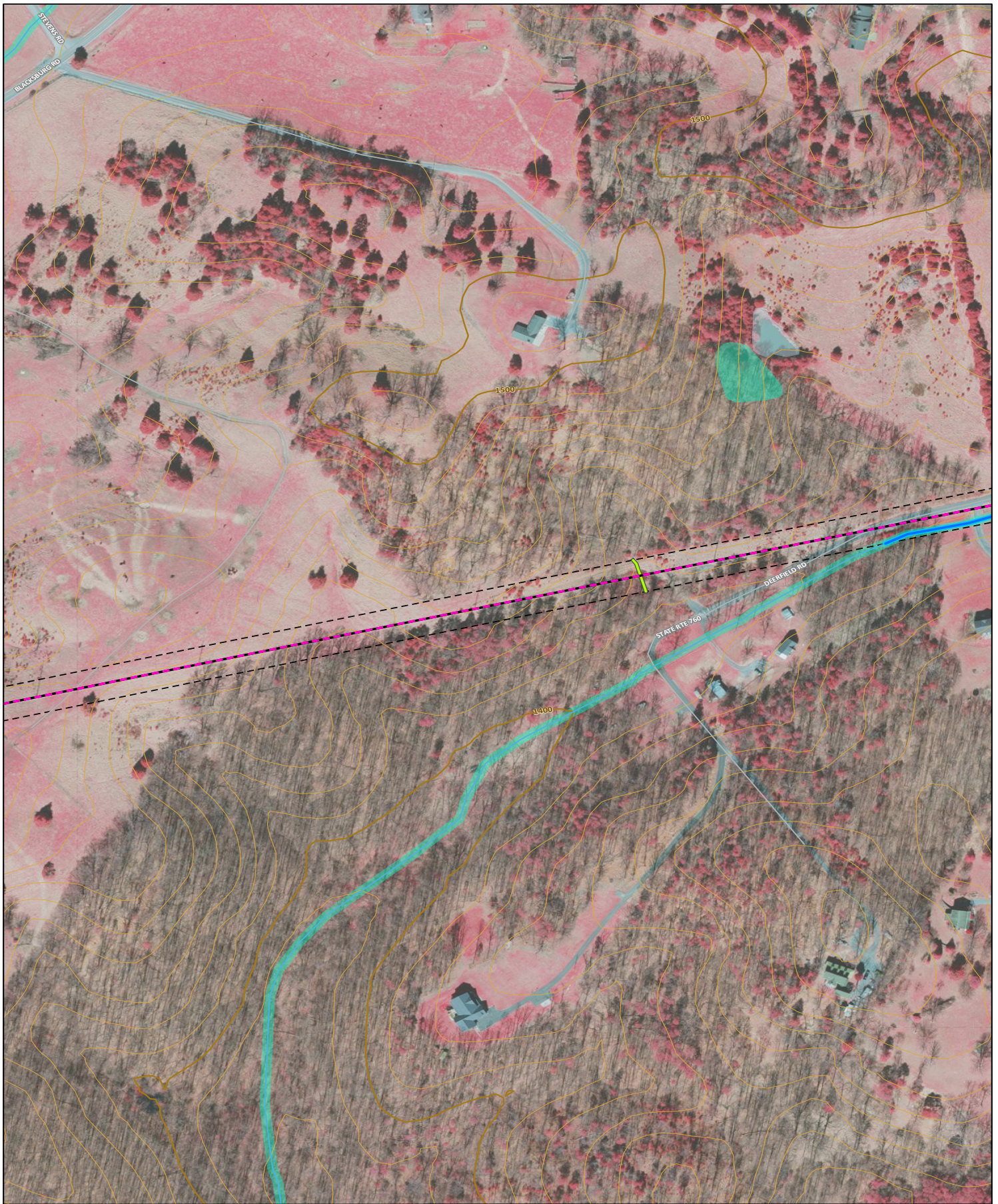
— Mount Union - Windy Pass to be Upgraded (AEP) — Existing Transmission Line (AEP) — Flowline (3DHP)	- Wetland (NW1) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 14 of 38 APPALACHIAN POWER A Member of Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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High Probability Stream Mount Union - Windy Pass to be Upgraded (AEP) Existing Transmission Line (AEP) Flowline (3DHP) Wetland (NWI) Proposed ROW Index Contour (100') Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	Botetourt County, VA 	Attachment B: Desktop Stream and Wetland Delineation Map 15 of 38 APPALACHIAN POWER Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- High Probability Stream - Mount Union - Windy Pass to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP) - Wetland (NW1) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY Trinityville	Attachment B: Desktop Stream and Wetland Delineation Map 16 of 38 APPALACHIAN POWER A BROWN & CALDWAY COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- High Probability Stream - Low Probability Stream - Mount Union - Windy Pass to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP)	- Waterbody (3DHP) - Wetland (NW1) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY 0 100 200 300 400 Feet	Attachment B: Desktop Stream and Wetland Delineation Map 17 of 38 APPALACHIAN POWER BY THE PEOPLE Daleville Area Transmission Improvements Project
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— High Probability Stream — Low Probability Stream --- Mount Union - Windy Pass to be Upgraded (AEP) --- Existing Transmission Line (AEP) — Flowline (3DHP) — Waterbody (3DHP) — Wetland (NWI) --- Proposed ROW --- Index Contour (100') --- Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY	Attachment B: Desktop Stream and Wetland Delineation Map 18 of 38 APPALACHIAN POWER A Duke Energy Company Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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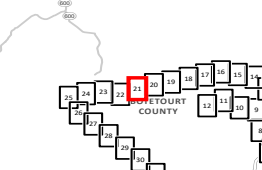


- Low Probability Stream - High Probability Wetland - Mount Union - Windy Pass to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP)	- Waterbody (3DHP) - Wetland (NWI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 19 of 38 APPALACHIAN POWER by Duke Energy Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- Low Probability Stream - Mount Union - Windy Pass to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP)	- Waterbody (3DHP) - Wetland (NWI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 20 of 38 APPALACHIAN POWER A BROWN & CALDER COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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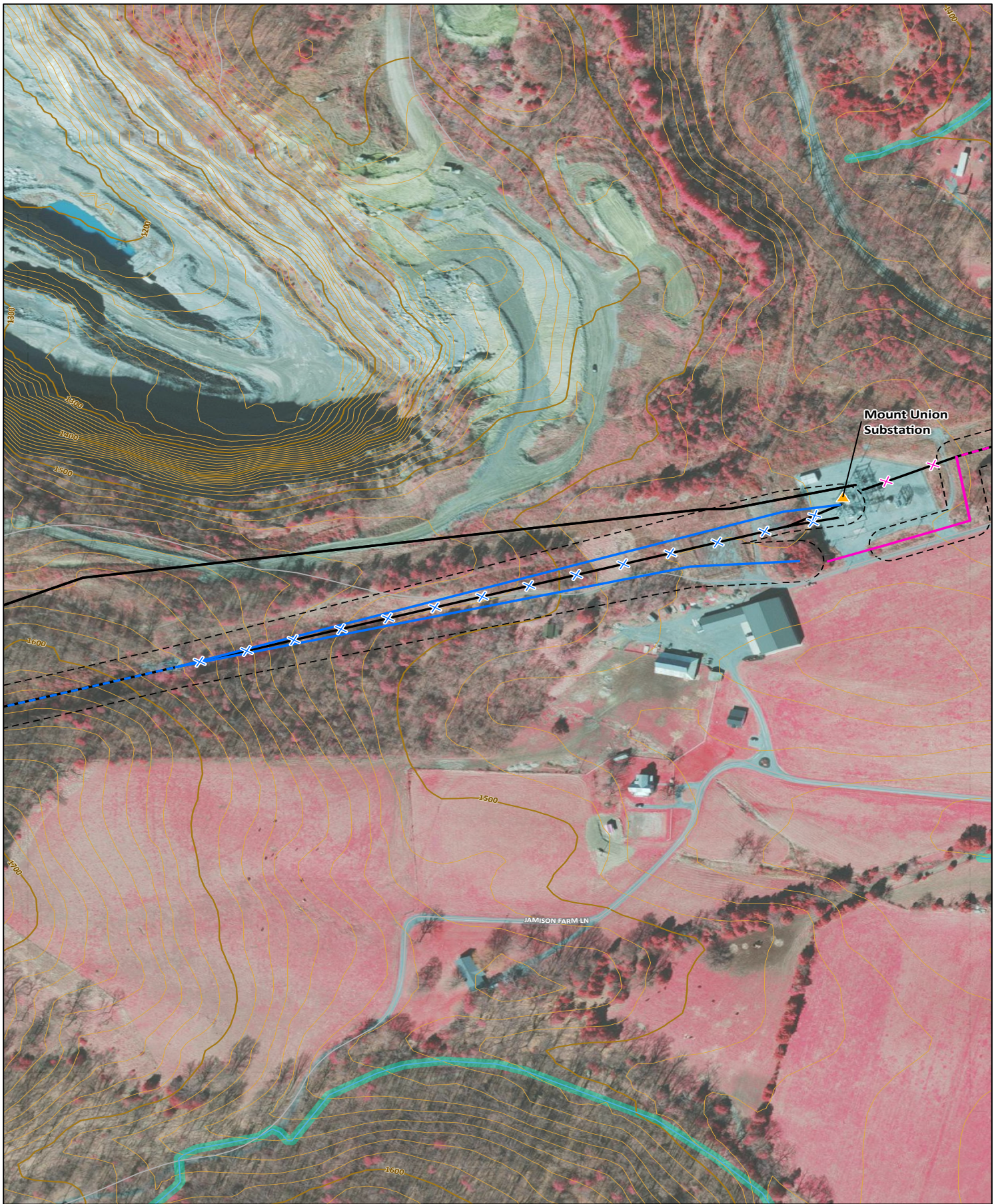
— Low Probability Stream --- Mount Union - Windy Pass to be Upgraded (AEP) --- Existing Transmission Line (AEP) — Proposed ROW --- Index Contour (100') --- Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983  August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 21 of 38 APPALACHIAN POWER Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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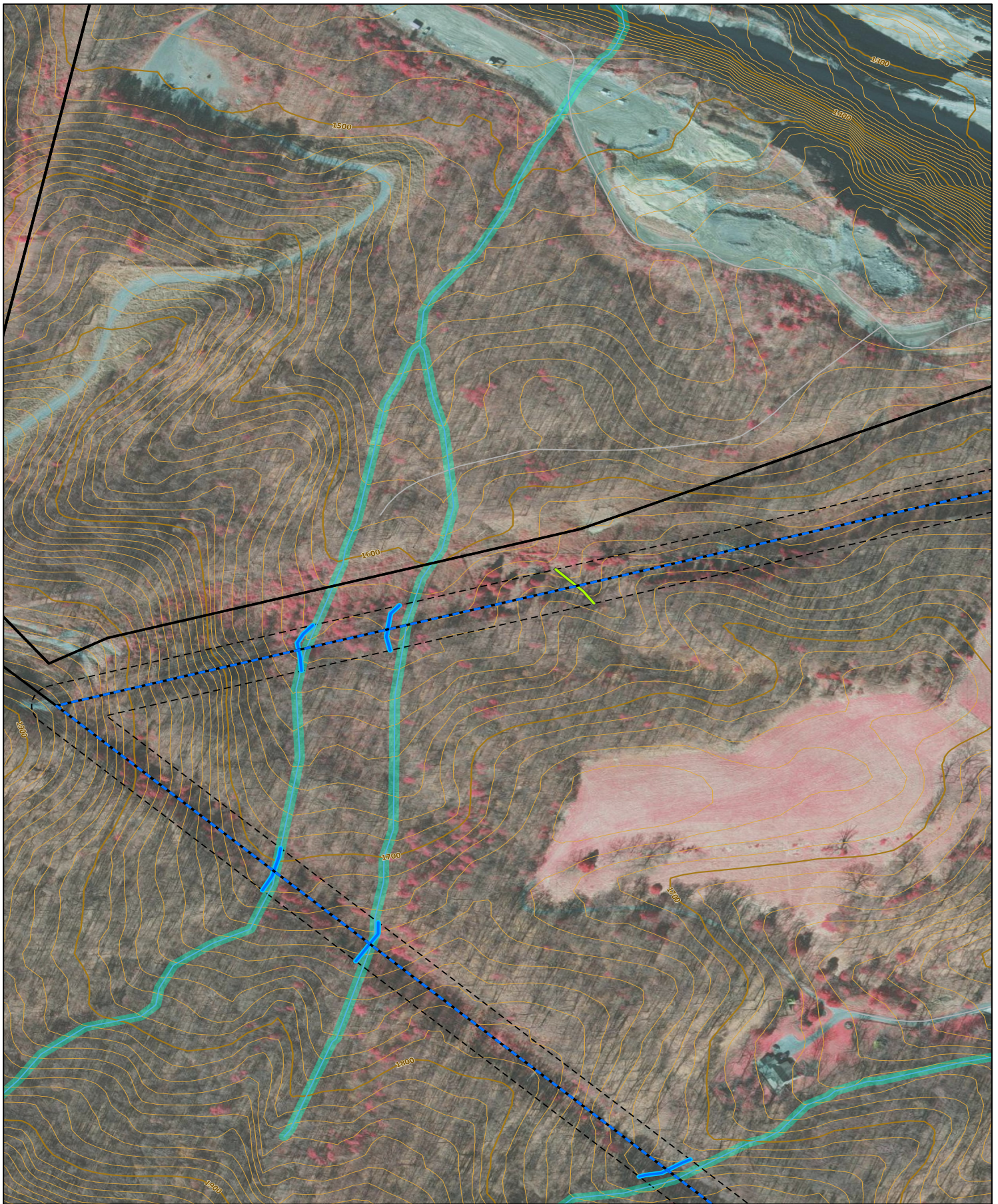
Low Probability Stream Mount Union - Windy Pass to be Upgraded (AEP) Existing Transmission Line (AEP) Flowline (3DHP) Wetland (NWI) Proposed ROW Index Contour (100') Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY, VA	Attachment B: Desktop Stream and Wetland Delineation Map 22 of 38 APPALACHIAN POWER Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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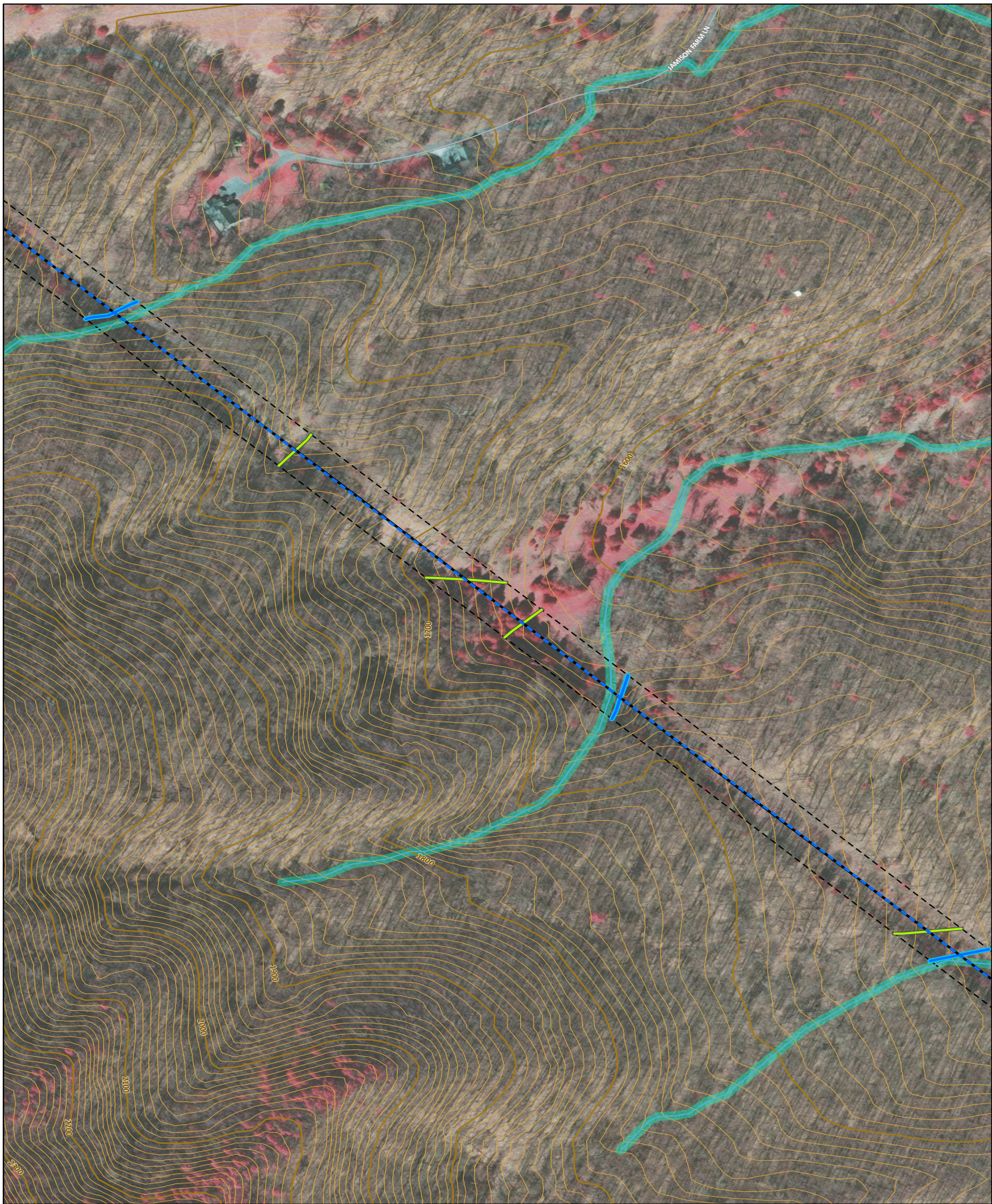
--- Low Probability Stream --- Mount Union - Windy Pass to be Built (AEP) --- Mount Union - Windy Pass to be Upgraded (AEP) --- Existing Transmission Line (AEP) --- Flowline (3DHP) --- Waterbody (3DHP) --- Wetland (NW1) --- Proposed ROW --- Index Contour (100') --- Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 23 of 38 APPALACHIAN POWER A Tenneco Company Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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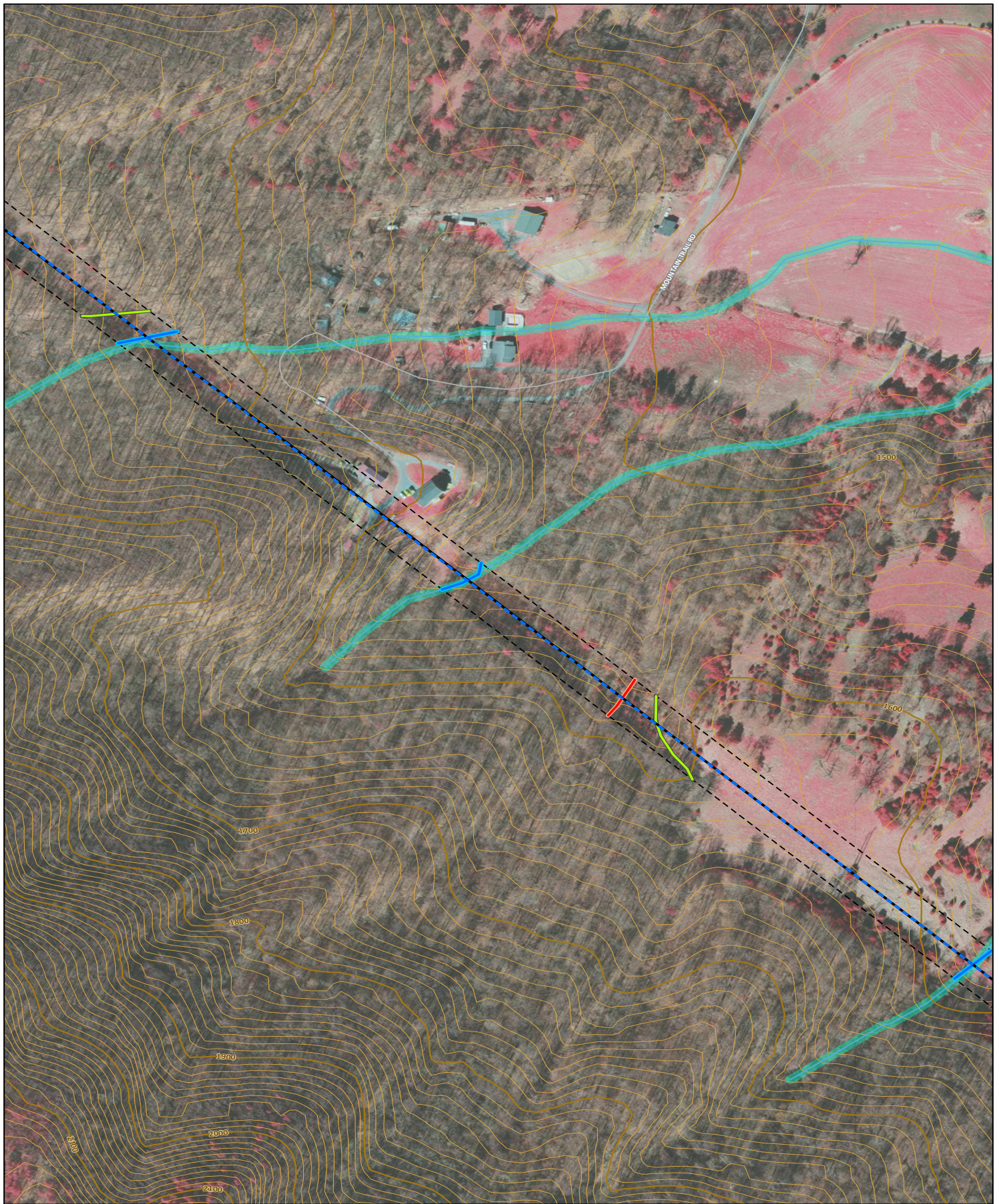
- Cloverdale - Mount Union to be Built (AEP) - Cloverdale - Mount Union to be Upgraded (AEP) - Cloverdale - Mount Union to be Removed (AEP) - Mount Union - Windy Pass to be Built (AEP) - Mount Union - Windy Pass to be Upgraded (AEP)	- Mount Union - Trinity to be Removed (AEP) - Existing Substation to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP) - Wetland (NW1) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 24 of 38 APPALACHIAN POWER A Tenneco Company Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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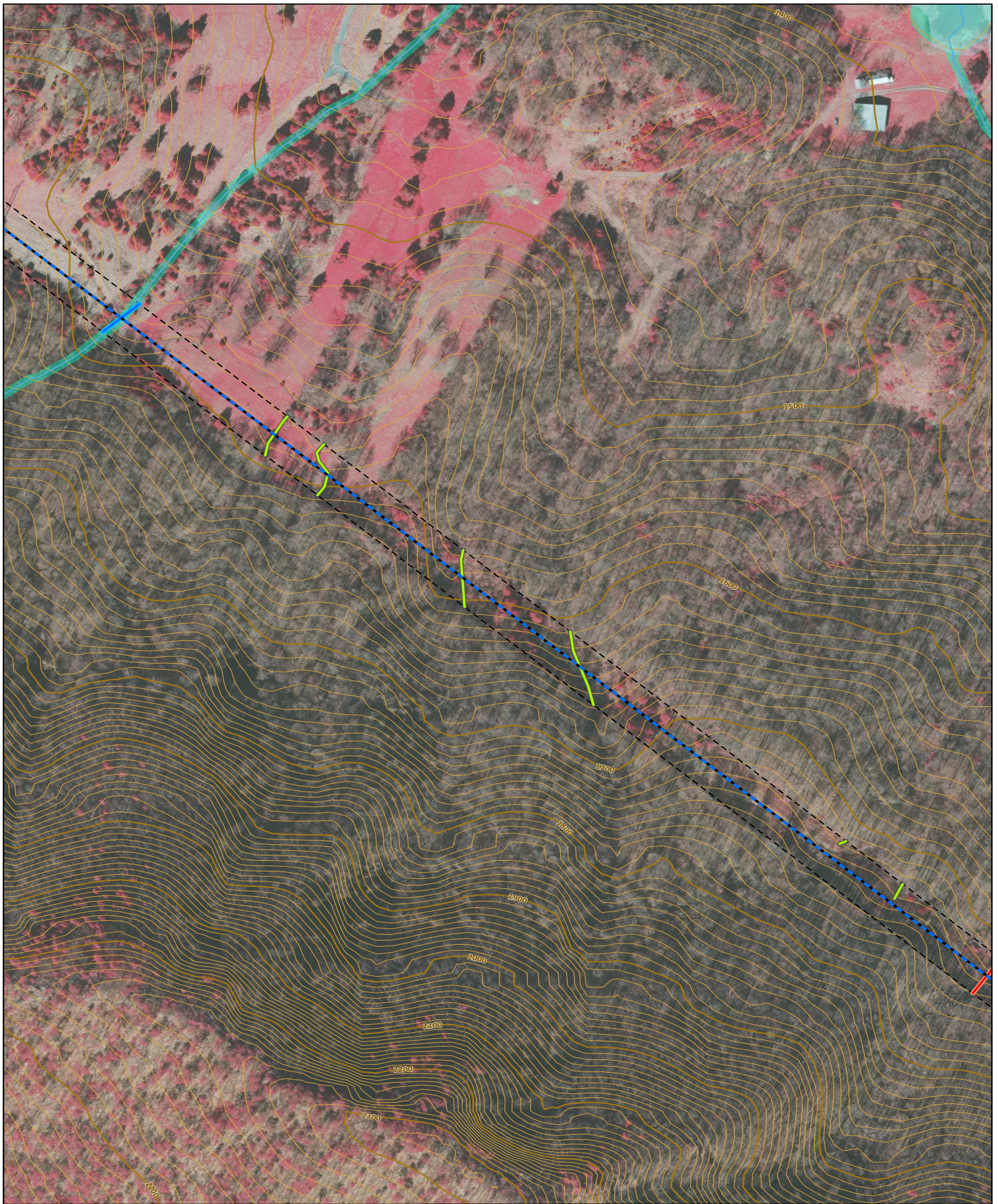
- High Probability Stream - Low Probability Stream - Cloverdale - Mount Union to be Upgraded (AEP) - Existing Transmission Line (AEP)	- Flowline (3DHP) - Wetland (NWI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	Attachment B: Desktop Stream and Wetland Delineation Map 25 of 38 APPALACHIAN POWER A BROWN COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- High Probability Stream - Low Probability Stream - Cloverdale - Mount Union to be Upgraded (AEP) - Existing Transmission Line (AEP)	- Flowline (3DHP) - Wetland (NWI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY	Attachment B: Desktop Stream and Wetland Delineation Map 26 of 38 APPALACHIAN POWER A BROWN & CALDER COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- High Probability Stream - Moderate Probability Stream - Low Probability Stream - Cloverdale - Mount Union to be Upgraded (AEP) - Existing Transmission Line (AEP)	- Flowline (3DHP) - Wetland (NW1) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 27 of 38 APPALACHIAN POWER A BHE COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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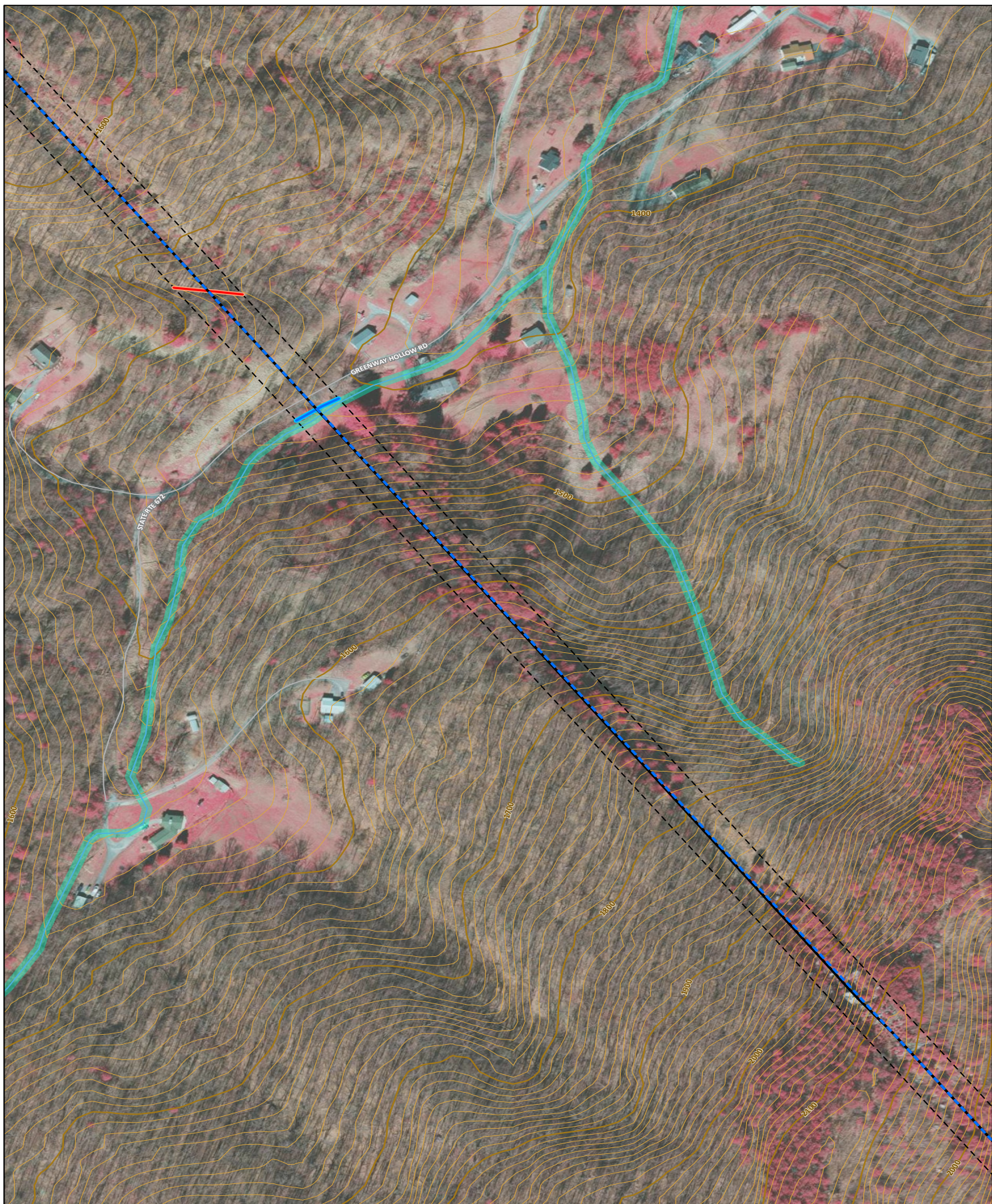
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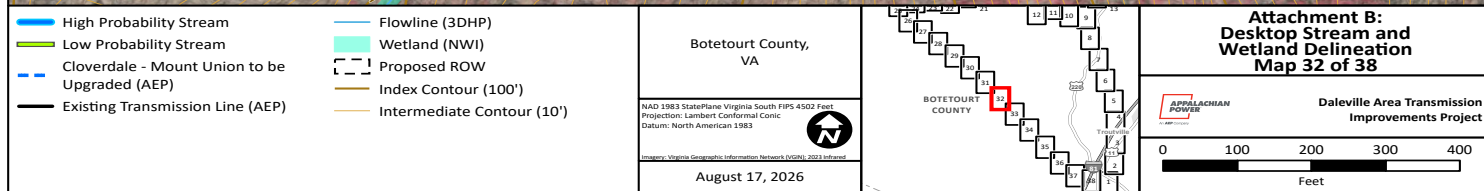
- High Probability Stream - Moderate Probability Stream - Low Probability Stream - Cloverdale - Mount Union to be Upgraded (AEP) - Existing Transmission Line (AEP)	- Flowline (3DHP) - Wetland (NW1) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 29 of 38 APPALACHIAN POWER A BETHLEHEM COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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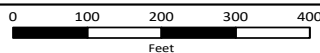
- High Probability Stream - Moderate Probability Stream - Low Probability Stream - Cloverdale - Mount Union to be Upgraded (AEP) - Existing Transmission Line (AEP)	- Flowline (3DHP) - Wetland (NWFI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY	Attachment B: Desktop Stream and Wetland Delineation Map 30 of 38 APPALACHIAN POWER by FirstEnergy Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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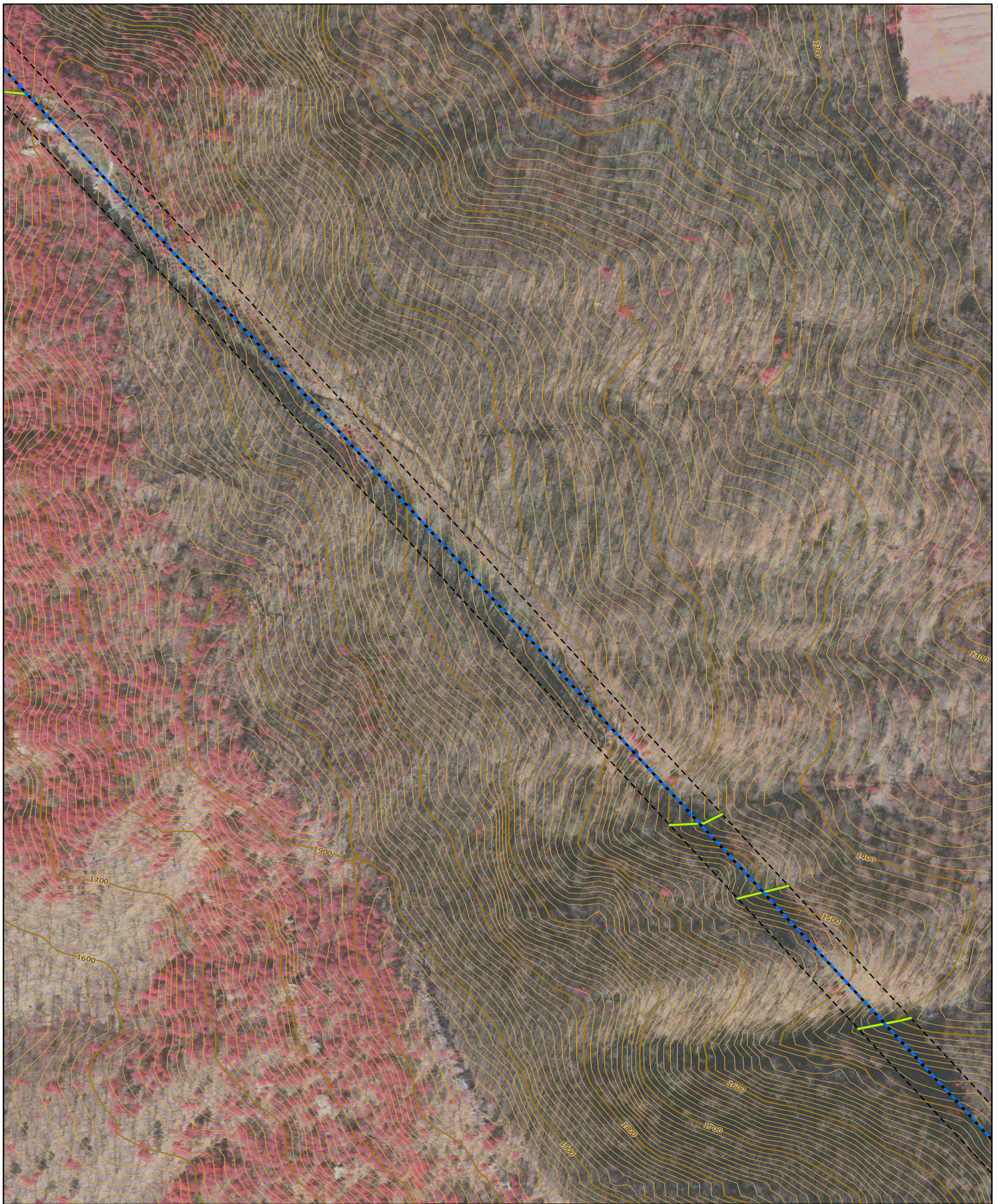


- High Probability Stream - Moderate Probability Stream - Cloverdale - Mount Union to be Upgraded (AEP) - Existing Transmission Line (AEP)	- Flowline (3DHP) - Wetland (NWI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY 0 100 200 300 400 Feet	Attachment B: Desktop Stream and Wetland Delineation Map 31 of 38 APPALACHIAN POWER A BROWN & CALDWELL COMPANY Daleville Area Transmission Improvements Project
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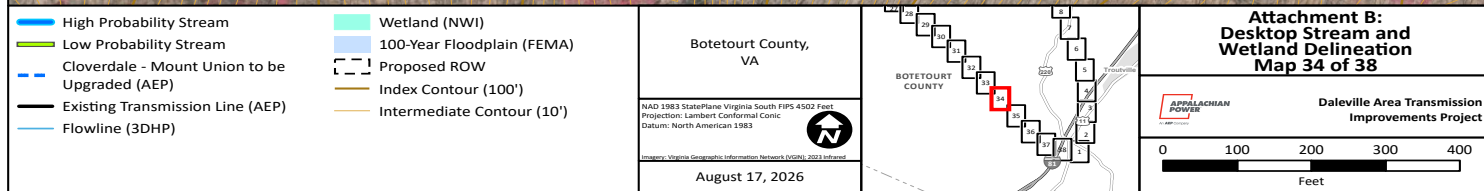


August 17, 2026





- Low Probability Stream - Cloverdale - Mount Union to be Upgraded (AEP) - Existing Transmission Line (AEP) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 33 of 38 APPALACHIAN POWER by FirstEnergy Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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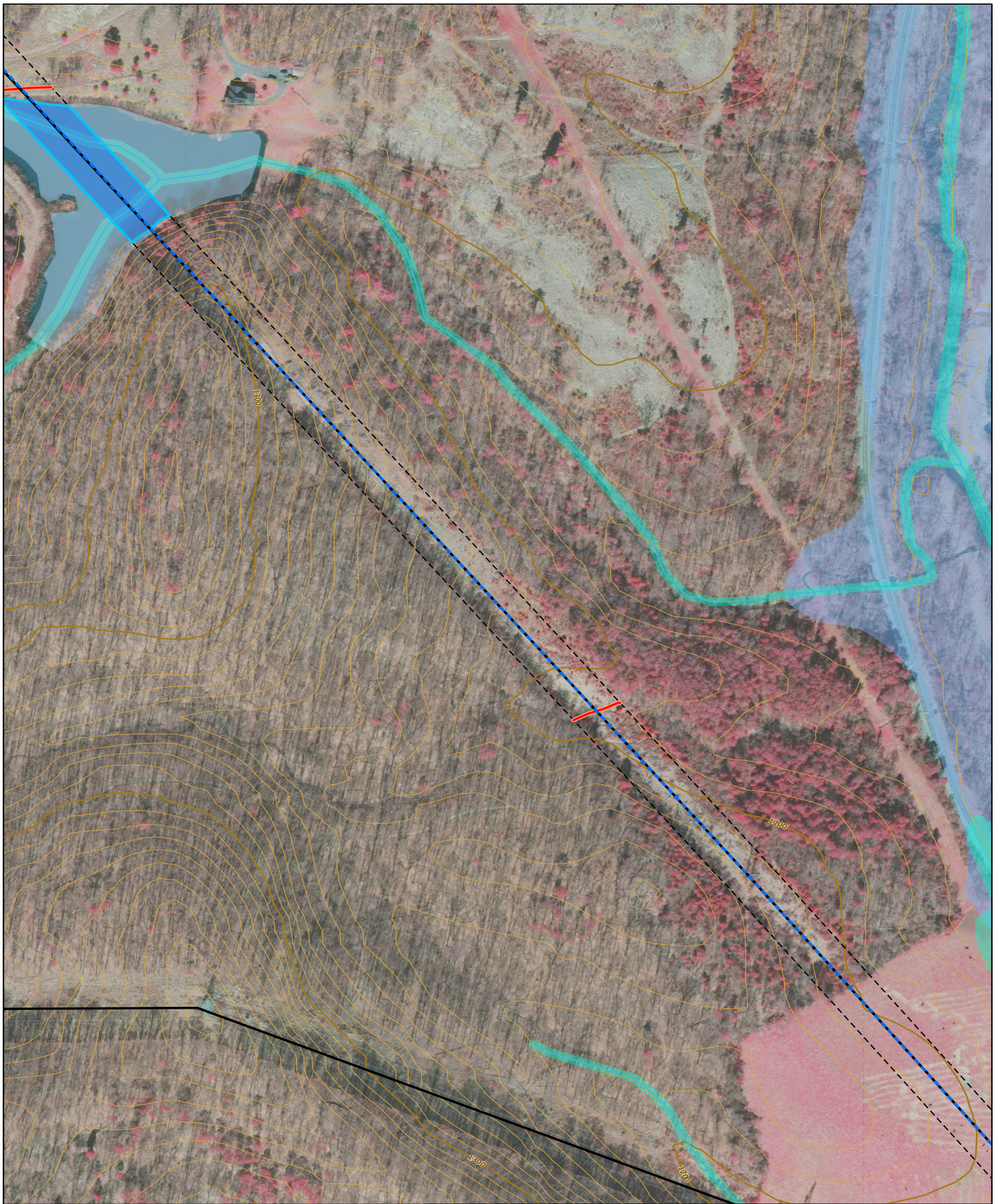
**Daleville Area Transmission
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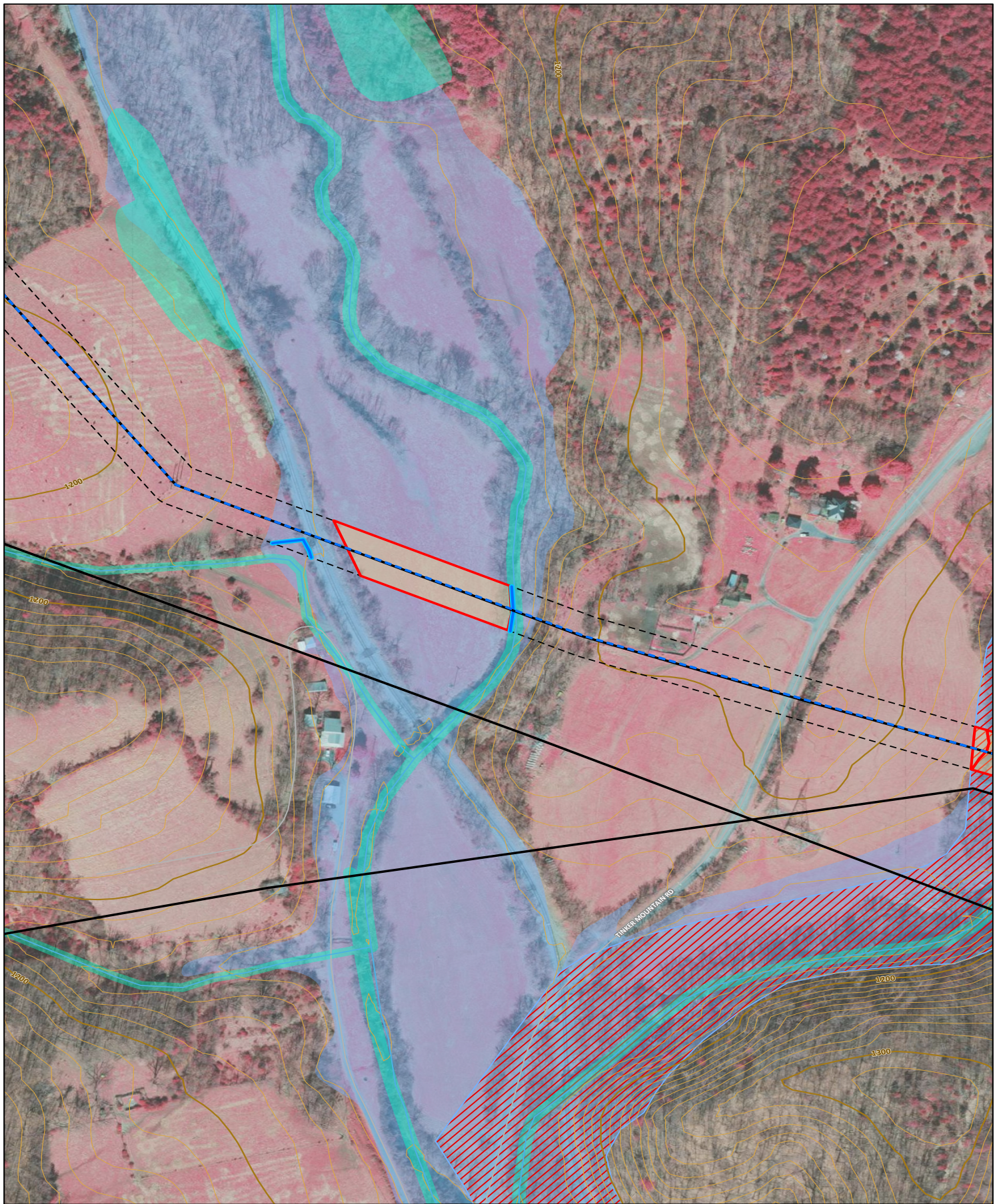
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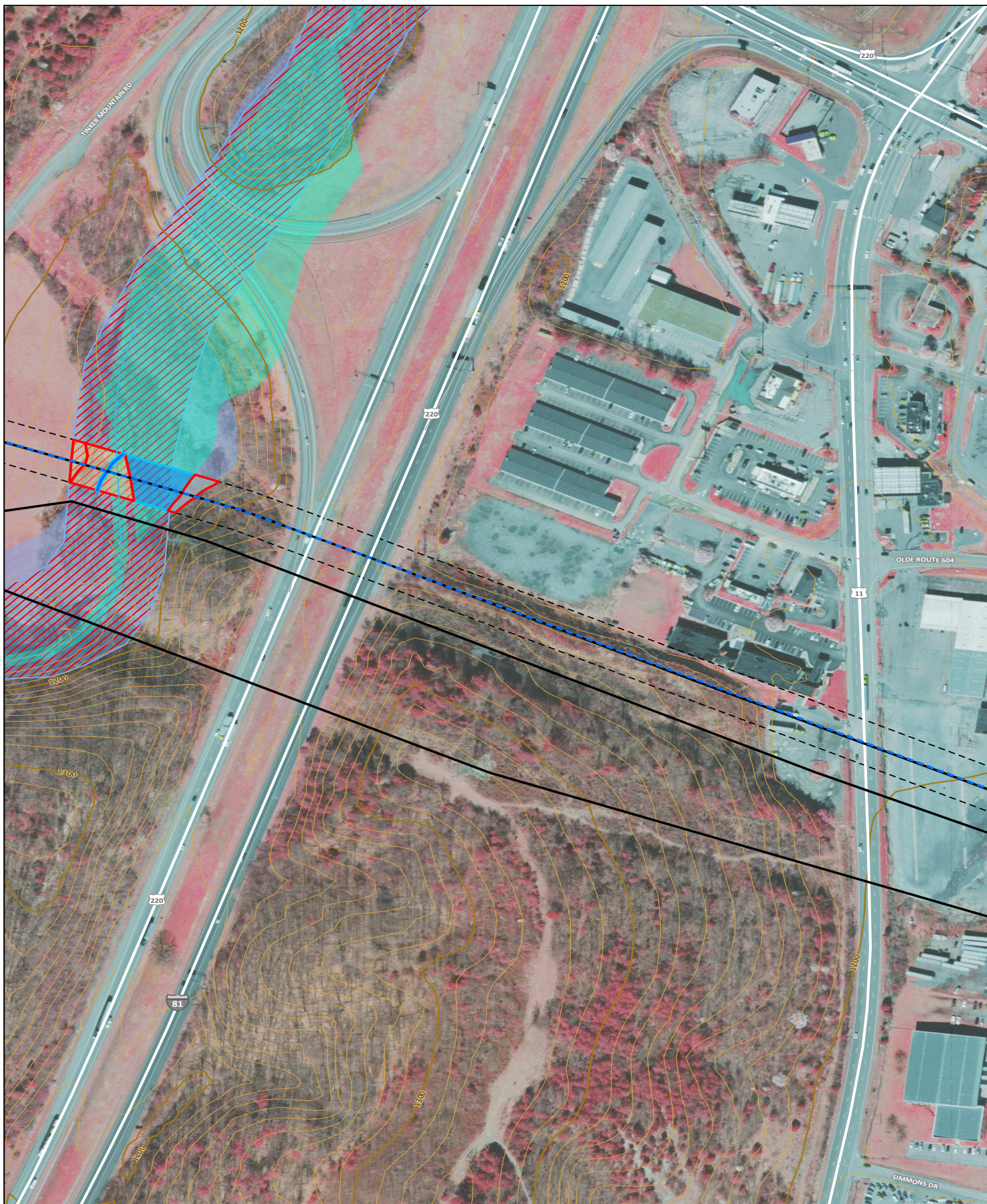
- High Probability Stream - Moderate Probability Stream - Low Probability Stream - High Probability Wetland - Cloverdale - Mount Union to be Upgraded (AEP) - Existing Transmission Line (AEP)	- Flowline (3DHP) - Waterbody (3DHP) - Wetland (NWI) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY ROANOKE COUNTY	Attachment B: Desktop Stream and Wetland Delineation Map 35 of 38 APPALACHIAN POWER A BROWN & CALDER COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- Moderate Probability Stream - High Probability Wetland - Cloverdale - Mount Union to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP)	- Waterbody (3DHP) - Wetland (NWI) 100-Year Floodplain (FEMA) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026		Attachment B: Desktop Stream and Wetland Delineation Map 36 of 38 APPALACHIAN POWER A Tenn. Company Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- High Probability Stream - Moderate Probability Wetland - Cloverdale - Mount Union to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP)	- Wetland (NW1) - Floodway (FEMA) 100-Year Floodplain (FEMA) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY ROANOKE COUNTY	Attachment B: Desktop Stream and Wetland Delineation Map 37 of 38 APPALACHIAN POWER Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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- High Probability Stream - High Probability Wetland - Moderate Probability Wetland - Cloverdale - Mount Union to be Upgraded (AEP) - Existing Transmission Line (AEP) - Flowline (3DHP)	- Wetland (NWI) - Floodway (FEMA) 100-Year Floodplain (FEMA) - Proposed ROW - Index Contour (100') - Intermediate Contour (10')	Botetourt County, VA NAD 1983 StatePlane Virginia South FIPS 4502 Feet Projection: Lambert Conformal Conic Datum: North American 1983 August 17, 2026	BOTETOURT COUNTY	Attachment B: Desktop Stream and Wetland Delineation Map 38 of 38 APPALACHIAN POWER A BROWN & CALDER COMPANY Daleville Area Transmission Improvements Project 0 100 200 300 400 Feet
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ATTACHMENT 2.F.1: USFWS IPaC REPORT

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Botetourt County, Virginia



Local office

Virginia Ecological Services Field Office

☎ (804) 693-6694

6669 Short Lane
Gloucester, VA 23061-4410

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Indiana bat <i>Myotis sodalis</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-Eared Bat <i>Myotis septentrionalis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered

Clams

NAME	STATUS
Green floater <i>Lasmigona subviridis</i> Wherever found There is proposed critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7541	Proposed Threatened

Insects

NAME

STATUS

Monarch butterfly Danaus plexippus

Proposed Threatened

Wherever found

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/9743>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act ² and the Migratory Bird Treaty Act (MBTA) ¹. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

Bald Eagle *Haliaeetus leucocephalus*

Breeds Sep 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Golden Eagle *Aquila chrysaetos*

Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

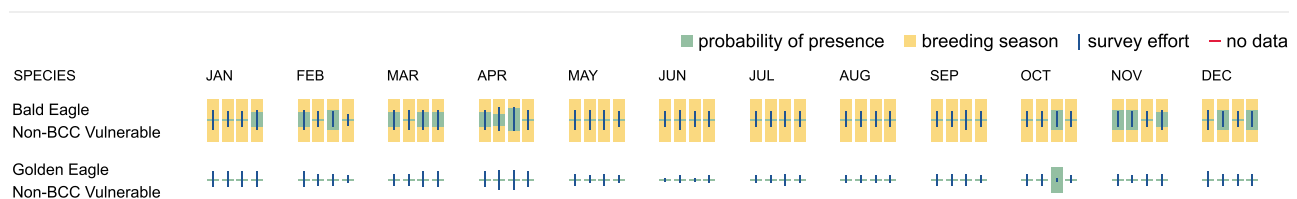
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle ([Bald and Golden Eagle Protection Act](#)

requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases [birds of concern](#), including [Birds of Conservation Concern \(BCC\)](#), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the [Nationwide avoidance and minimization measures for birds](#) document, and any other project-specific avoidance and minimization measures suggested at the link [Measures for avoiding and minimizing impacts to birds](#) for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles document](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Aug 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Black-capped Chickadee <i>Poecile atricapillus praticus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 10 to Jul 31
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cerulean Warbler <i>Setophaga cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 27 to Jul 20
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere
Golden-winged warbler <i>Vermivora chrysoptera</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745	Breeds May 1 to Jul 20
Kentucky Warbler <i>Geothlypis formosa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20

Breeds May 1 to Jul 31

Red-headed Woodpecker *Melanerpes erythrocephalus*

Breeds May 10 to Sep 10

Rusty Blackbird *Euphagus carolinus*

Breeds elsewhere

Wood Thrush *Hylocichla mustelina*

Breeds May 10 to Aug 31

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

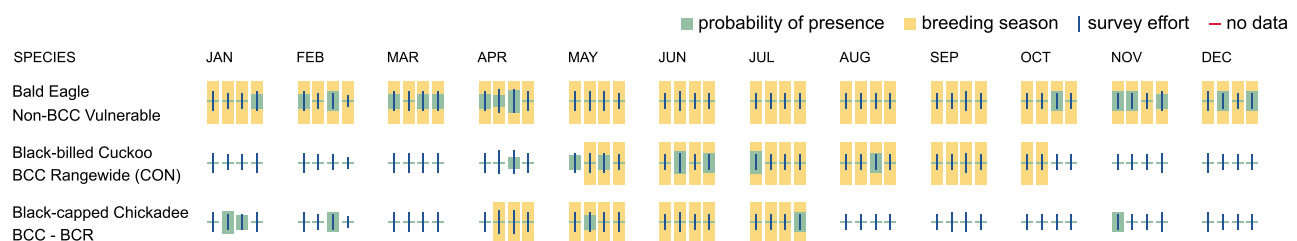
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bobolink BCC Rangewide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Canada Warbler BCC Rangewide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Cerulean Warbler BCC Rangewide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Chimney Swift BCC Rangewide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Eastern Whip-poor-will BCC Rangewide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Golden Eagle Non-BCC Vulnerable	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Golden-winged warbler BCC Rangewide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Kentucky Warbler BCC Rangewide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Prairie Warbler BCC Rangewide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Red-headed Woodpecker BCC Rangewide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Rusty Blackbird BCC - BCR	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Wood Thrush BCC Rangewide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++

Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Avoidance & Minimization Measures for Birds](#) describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the [Bald and Golden Eagle Protection Act](#) and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC

PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Bald and Golden Eagle Protection Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1A](#)
[PEM1Ch](#)
[PEM1C](#)

FRESHWATER POND

[PUBHh](#)

RIVERINE

[R4SBC](#)
[R5UBH](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

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



Appalachian Power Company

**Daleville Area Transmission
Improvements Project, Botetourt County,
Virginia**

Virginia Department of Historic Resources Pre-Application
Analysis

August 2026

WSP Ref. No. US0051606.5157-003
SCC Case No. PUR-2026-00132





Document Distribution

Daleville Area Transmission Improvements Project, Botetourt County, Virginia

Virginia Department of Historic Resources Pre-Application Analysis

August 2026

SCC Case No. PUR-2026-00132

Prepared for:

Appalachian Power Company

Submitted to:

Virginia Department of Historic Resources

Prepared by:

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Portions of this report containing sensitive information regarding archaeological resources are being withheld as public disclosure of such information is prohibited under 16 U.S.C. Section 470 H.H.

Abstract

Appalachian Power Company (“Appalachian” or “Company”) is proposing the Daleville Area Transmissions Improvements Project to adequately and reliably operate and maintain a portion of the local transmission system to provide service for area customers and accommodate a new customer interconnection request located in Botetourt County, Virginia (“Project”). The Project will construct the new Windy Pass Substation and upgrade the existing Cloverdale, Botetourt, Trinity, and Mount Union Substations. In addition, the Project will rebuild approximately 5.3 miles of 138-kilovolt (“kV”) transmission line between the existing Cloverdale and proposed Windy Pass substations (currently operated at 69 kV to be upgraded to 138 kV), rebuild approximately 4.0 miles of 138-kV transmission line between the existing Mount Union and proposed Trinity substations (currently operated at 69 kV to be upgraded to 138 kV), reconductor approximately 7.4 miles of the Cloverdale – Mount Union 138-kV Transmission Line, construct two new 138-kV feeder lines each approximately 1.3 miles in length to the data center campus (“Daleville Area Customer 138-kV Feeder Lines”), construct a new 0.1 mile long 138-kV tie line between the new Windy Pass 138-kV Substation and existing Trinity Substation, and extend the Trinity – Wheatland 69-kV Transmission Line approximately 0.1 miles to the new Windy Pass 138-kV Substation.

The existing single-circuit transmission lines to be rebuilt were originally constructed in the 1990s on wood monopole structures. Final structure types will be dependent on final engineering and additional studies; however, approximately 9.3 miles of 138-kV transmission line that was built on wood monopole structures is planned to be rebuilt using steel monopole structures. The transmission line will largely be rebuilt in or near the Company’s existing rights-of-way (“ROWs”). The existing single-circuit transmission line to be reconducted was built in the 1990s primarily on steel H-Frames or steel lattice towers that will not be replaced for the most part. The new 138-kV transmission lines to be built are proposed to be built on steel monopole structures. The anticipated heights of the proposed structures for the Project range between 40 and 135 feet.

Appalachian plans to seek a Certificate of Public Convenience and Necessity from the Virginia State Corporation Commission (“SCC”). The Company will seek approval from the Virginia SCC to construct the Project largely in an existing 80 or 100-foot-wide ROW sited within a typical 150-foot-wide corridor. Where the Daleville Area Customer 138-kV Feeder Lines are proposed, the new 75-foot-wide ROWs will be sited within a typical 230-foot-wide corridor. Final line routes and structure locations will be determined during final engineering and after additional studies including, but not limited to, ground surveys, geotechnical and environmental studies, and additional interviews with landowners are completed. The typical filing corridor for the Project includes the existing ROW limits and up to 35 feet on either side. If approved, the Company will complete the preliminary engineering and work with the affected landowners to update existing easements, as necessary, and provide fair compensation for any new easements. After



receiving input from landowners, the Company will finalize the proposed structure locations and ROW widths within the SCC-approved filing corridor. The Company will also work with the necessary local, federal, and state agencies during permitting and construction phases. The desired in-service date for the Project is November 15, 2029.

On behalf of Appalachian, WSP USA Inc. (“WSP”) conducted a Virginia Department of Historic Resources (“VDHR”) Pre-Application Analysis of cultural resources in April and May 2026, in support of the Project’s Virginia Department of Environmental Quality (“VDEQ”) Supplement for the SCC application. WSP’s analysis was completed in accordance with the VDHR *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia*, issued in 2008. The analysis included background research to identify previously recorded cultural resources within the VDHR-defined buffered tiers around the Project, field reconnaissance to examine resource settings and vistas, and assessment of the Project’s effects on identified resources. The tiered study area consisted of 0.5-mile, 1.0-mile, and 1.5-mile buffers surrounding the proposed route. Background research used the VDHR Virginia Cultural Resource Information System (“VCRIS”), a database of previously recorded cultural resources in Virginia. Historic resources include architectural and archaeological resources, historic and cultural landscapes, and historic districts. Resource documentation and current aerial photography were examined for listed, eligible, or potentially eligible previously recorded historic resources within the tiered study areas outlined in the VDHR Guidelines.

[REDACTED]

Additionally, the Project would have a *minimal visual effect* on architectural resources Bryan McDonald, Jr., House (VDHR ID 011-0021), [REDACTED], Nininger’s Mill-Tinker Mill (VDHR ID 011-0057), Thomas D. Kinzie House (VDHR ID 011-5034), Norfolk and Western Railway Section (VDHR ID 011-5481), Greenfield Buildings (VDHR ID 011-5700), and Appalachian National Scenic Trail (VDHR ID 021-5012); and *no effect* on Delbert House (VDHR ID 011-5018), Delbert Log House (VDHR ID 011-5019), and Cloverdale Furnace Foundation (VDHR ID 011-5563).

In WSP’s opinion, the results of the Pre-Application Analysis are suitable to support SCC approval of the Project’s application; however, a Phase I cultural resources survey would be required prior to Project construction to determine the presence or absence of previously unrecorded resources and to confirm the integrity of intersected resources. In addition, Appalachian should continue coordination with VDHR regarding effects to the following National Register of Historic Places-listed resources: Bryan McDonald, Jr., House (VDHR ID 011-0021), [REDACTED], Nininger’s Mill-Tinker Mill (VDHR ID 011-0057), Thomas D. Kinzie House (VDHR ID 011-5034), and Greenfield Buildings (VDHR ID 011-5700).



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Abbreviations

Abbreviation	Description
Appalachian	Appalachian Power Company
Company	Appalachian Power Company
kV	kilovolt
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places
Project	Daleville Area Transmission Improvements Project
ROW	right-of-way
SCC	Virginia State Corporation Commission
VCRIS	Virginia Cultural Resources Information System
VDEQ	Virginia Department of Environmental Quality
VDHR	Virginia Department of Historic Resources
VLR	Virginia Landmarks Register
WSP	WSP USA Inc.

1. Introduction

Appalachian Power Company (“Appalachian” or “Company”) is proposing the Daleville Area Transmissions Improvements Project to adequately and reliably operate and maintain a portion of the local transmission system to provide service for area customers and accommodate a new customer interconnection request located in Botetourt County, Virginia (“Project”). WSP USA Inc. (“WSP”) was retained by Appalachian to conduct a Virginia Department of Historic Resources (“VDHR”) Pre-Application Analysis for the Project, in support of a Virginia State Corporation Commission (“SCC”) application. WSP’s analysis was completed in accordance with the VDHR *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (VDHR 2008). The analysis included background research to identify previously recorded cultural resources within the VDHR-defined buffered tiers around the Project, field reconnaissance to examine resource settings and vistas, and assessment of the Project’s effects on identified resources. The tiered study area consisted of 0.5-mile, 1.0-mile, and 1.5-mile buffers surrounding the proposed route.

The Pre-Application Analysis was conducted to provide technical assistance in accordance with the VDHR (2008) guidelines and is not intended as a substitute for a comprehensive historic resources survey. The analysis provides information regarding previously recorded cultural resources that are eligible for or listed in the National Register of Historic Places (“NRHP”) or recorded National Historic Landmarks within buffered tiers around the Project and within the proposed right-of-way (“ROW”) for the Project. The analysis does not include assessment of the potential impacts upon unrecorded and/or historic resources that have not been previously evaluated. If a federal undertaking is identified for the Project, this analysis will not satisfy Section 106 of the National Historic Preservation Act (“NHPA”) for cultural resource identification and evaluation requirements; however, it can serve as a planning tool and assist in determining if further cultural resource identification efforts may be warranted.

WSP cultural resources specialists include architectural historian Tanner Haynes, MA, RPA, and archaeologist Jahleen ‘Liz’ Sefton, MA, RPA. The personnel who conducted this analysis meet the professional qualification standards of the United States Department of the Interior (48 *Federal Register* 44738–44739).

2. Project Description

The Project will construct the new Windy Pass Substation and upgrade the existing Cloverdale, Botetourt, Trinity, and Mount Union Substations (Appendix A: Figure 1). In addition, the Project will rebuild approximately 5.3 miles of 138-kilovolt (“kV”) transmission line between the existing Cloverdale and proposed Windy Pass substations (currently operated at 69 kV to be upgraded to 138 kV), rebuild approximately 4.0 miles of 138-kV transmission line between the existing Mount Union and proposed Trinity substations (currently operated at 69 kV to be upgraded to 138 kV), reconductor approximately 7.4 miles of the Cloverdale – Mount Union 138-kV Transmission Line, construct two new 138-kV feeder lines each approximately 1.3 miles in length to the data center campus (the “Daleville Area Customer 138-kV Feeder Lines”), construct a new 0.1 mile long 138-kV tie line between the new Windy Pass 138-kV Substation and existing Trinity Substation, and extend the Trinity – Wheatland 69-kV Transmission Line approximately 0.1 miles to the new Windy Pass 138-kV Substation.

The existing single-circuit transmission lines to be rebuilt were originally constructed in the 1990s on wood monopole structures. Final structure types will be dependent on final engineering and additional studies; however, approximately 9.3 miles of 138-kV transmission line that was built on wood monopole structures is planned to be rebuilt using steel monopole structures. The transmission line will largely be rebuilt in or near the Company’s existing ROW. The existing single-circuit transmission line to be reconducted was built in the 1990s primarily on steel H-Frames or steel lattice towers that will not be replaced for the most part. The new 138-kV transmission lines to be built are proposed to be built on steel monopole structures. The anticipated heights of the proposed structures for the Project range between 40 and 135 feet. A map of existing and proposed structure heights can be found in Appendix A. Simulations of proposed structures are provided in Appendix B and exhibits of typical structures are provided in Appendix C.

Appalachian plans to seek a Certificate of Public Convenience and Necessity from the Virginia SCC. The Company will seek approval from the Virginia SCC to construct the Project largely in an existing 80 or 100-foot-wide ROW sited within a typical 150-foot-wide corridor. Where the Daleville Area Customer 138-kV Feeder Lines are proposed, the new 75-foot-wide ROW will be sited within a typical 230-foot-wide corridor. Final line routes and structure locations will be determined during final engineering and after additional studies including, but not limited to, ground surveys, geotechnical and environmental studies, and additional interviews with landowners are completed. The typical filing corridor for the Project includes the existing ROW limits and up to 35 feet on either side. If approved, the Company will complete the preliminary engineering and work with the affected landowners to update existing easements, as necessary, and provide fair compensation for any new easements. After receiving input from landowners, the Company will finalize the proposed structure locations and ROW widths within the SCC-approved filing corridor. The Company will also work with the necessary local, federal, and state



agencies during permitting and construction phases. The desired in-service date for the Project is November 15, 2029.

3. Scope and Methodology

3.1 Archival Research

WSP conducted background research using data available online through the VDHR's Virginia Cultural Resource Information System ("VCRIS") in April of 2026, with the goal of identifying all previously recorded cultural resources according to the VDHR (2008) guidelines within the tiered study areas (Table 1). Details and histories of individual resources were pulled from the information provided by the original surveyors and from VCRIS. Background research included review of the following sources.

- VCRIS (VDHR 2026)
 - Architectural site forms
 - Archaeological site forms
 - NRHP nomination forms
- National Park Service's ("NPS") NRHP Database (2026)
- NPS' American Battlefield Protection Program records and maps
- NPS' Historic American Landscapes Survey Documented Sites list

Table 1: Tiered Study Area Buffers

Buffer (miles)	Considered Resources
1.5	National Historic Landmarks
1.0	Above resources and: - NRHP Properties (listed) - Battlefields - Historic Landscapes (e.g., Rural Historic Districts)
0.5	Above resources and: - NRHP-eligible resources (as determined by the VDHR)
0.0 (within ROW)	Above resources and: - Archaeological Sites

Source: VDHR 2008.

Based on correspondence with the VDHR, it is WSP's understanding that the VDHR considers impacts to all archaeological sites in the ROW regardless of NRHP determination.



3.2 Field Reconnaissance

Following the VDHR (2008) guidelines, a field reconnaissance was conducted for each previously recorded resource located in the tiered study area for the Project to assess each resource's integrity with regard to feeling, setting, and association. Visual inspection included digital photo documentation of each resource's existing conditions, including its setting and views toward the Project. All photographs were taken from a point of public access and, where feasible, photographs were taken of primary elevations, general settings, and existing viewsheds.

3.3 Photo Simulations

Per the VDHR (2008) guidelines, simulations are required for transmission line builds when the proposed transmission structures are substantially taller (greater than 10% or 20 feet) than the existing structures. Preliminary designs for the Project indicate that some of the planned structures will be substantially taller than the existing structures (or will be new builds); therefore, WSP completed the necessary simulations (Appendix B) to include photo simulations, where photographs taken by WSP were brought into a three-dimensional (3D) environment and overlaid with construction designs. Where field photographs could not be taken because there was no property access, simulations were created using terrain models and commercially available high-resolution aerial photography. Simulations have been generated for transmission structures meeting the height difference criteria, where those structures are within the tiered buffers for historic resources.

3.4 Assessment of Potential Impacts

In accordance with the VDHR (2008) guidelines, WSP completed an assessment of the potential impacts of the Project to previously recorded historic resources that are potentially eligible, NRHP-eligible, NRHP-listed, and National Historic Landmarks within the VDHR-defined tiered study area. This entails consideration of those qualities and characteristics that qualify a property for listing in the NRHP and whether the Project has the potential to alter or diminish the integrity of the property and its associated significance. Effects on historic properties can be considered as either direct or indirect. Direct effects refer to the causality, and not the physicality, of the effect to historic properties. Direct effects occur at the same time and place. Indirect effects refer to those caused at a later time or farther removed in distance but still reasonably foreseeable (National Trust for Historic Preservation v. Todd Semonite 2019).

This analysis was performed at a level that meets the purpose and intent of VDHR and SCC guidance, and therefore an assessment of potential impacts to unrecorded and/or historic resources that have not been evaluated for NRHP eligibility is not included. For consistency with VDHR transmission line guidance, this report uses the impact terminology below (none, minimal, moderate, and severe). Where a resource is no longer extant, the report characterizes



the Project as resulting in no effect rather than applying Section 106 effect terminology. The following terminology and definitions were used in reference to the effects on a given resource.

- **None:** The Project is not visible from the property.
- **Minimal effects:** Occur within viewsheds that have existing, unrelated transmission and distribution lines, locations where there will be a minor change in tower height, and/or views that have been partially obstructed by intervening topography and vegetation.
- **Moderate effects:** 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 effects:** 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 because the route is close to historic properties, and viewsheds where the visual introduction of the transmission line is a significant change in the setting of the historic properties.



4. Previously Recorded Historic Properties

WSP’s background research for previously recorded historic properties indicated five NRHP-listed resources, five NRHP-eligible or potentially eligible resources, and [REDACTED] No National Historic Landmarks are within 1.5 miles of the proposed route (Appendix A: Figure 2). A list of identified archaeological sites and historic properties within each of the tiered buffers is provided in Table 2 below.

Table 2: Previously Recorded Historic Properties

Radial Buffer (Miles)	Considered Resources	Resource Name (VDHR Number)
0.0 to 1.5	National Historic Landmarks	None
0.0 to 1.0	NRHP-listed Historic landscapes (e.g., Rural Historic District)	Bryan McDonald, Jr. House (011-0021) [REDACTED] [REDACTED] Nininger’s Mill-Tinker Mill (011-0057) Thomas D. Kinzie House (011-5034) Greenfield Buildings (011-5700)
0.0 to 0.5	NRHP-eligible or potentially eligible (determined by VDHR)	Delbert House (011-5018) Delbert Log House (011-5019) Norfolk and Western Railway Section (011-5481) Cloverdale Furnace Foundation (011-5563/[REDACTED]) Appalachian National Scenic Trail (021-5012)
0.00 (within ROW)	Archaeological sites	[REDACTED] [REDACTED]

Source: VDHR 2026



4.1 Archaeological Sites

[Redacted text block]

4.1.1 [Redacted]

NRHP Eligibility Status	Not Evaluated
Setting and Location	[Redacted]
Resource Description	[Redacted]
Original Survey Evaluation	This site has not been evaluated
Nearest Project Component (Distance from Centerline)	[Redacted]
Project Effect	Moderate (Physical)

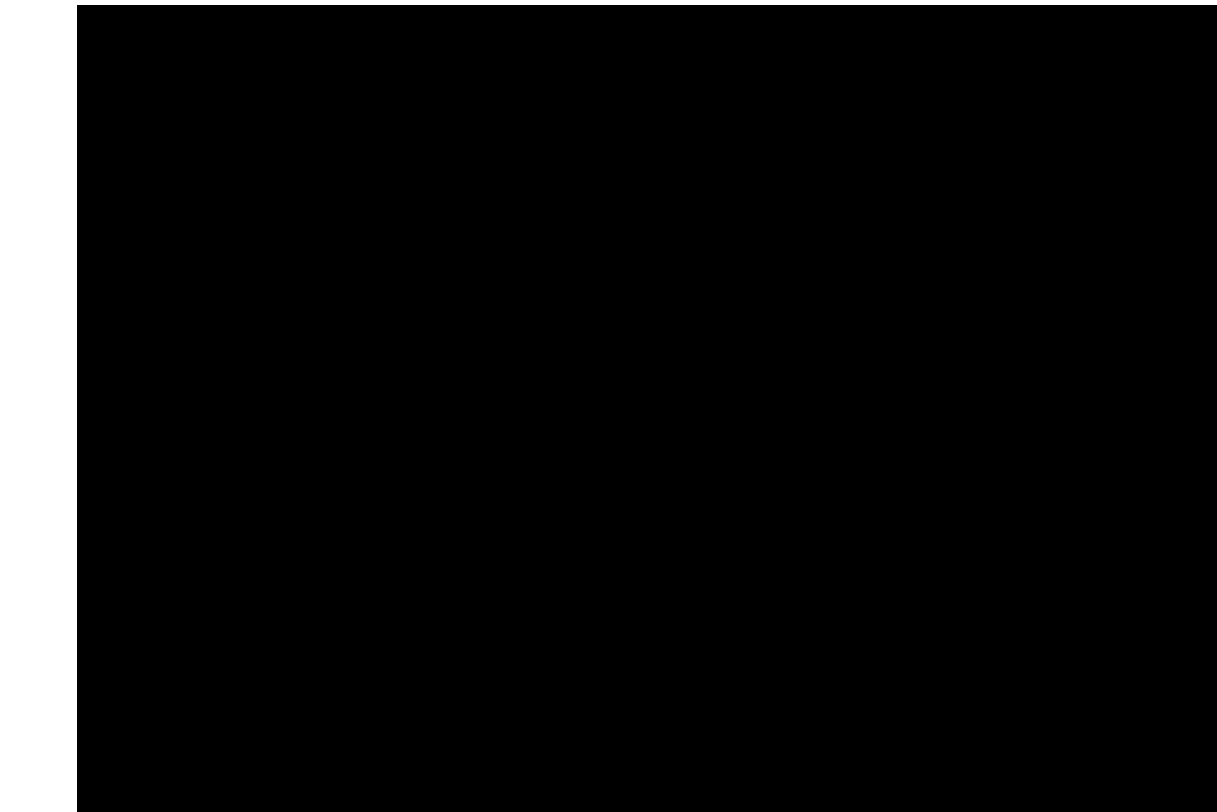
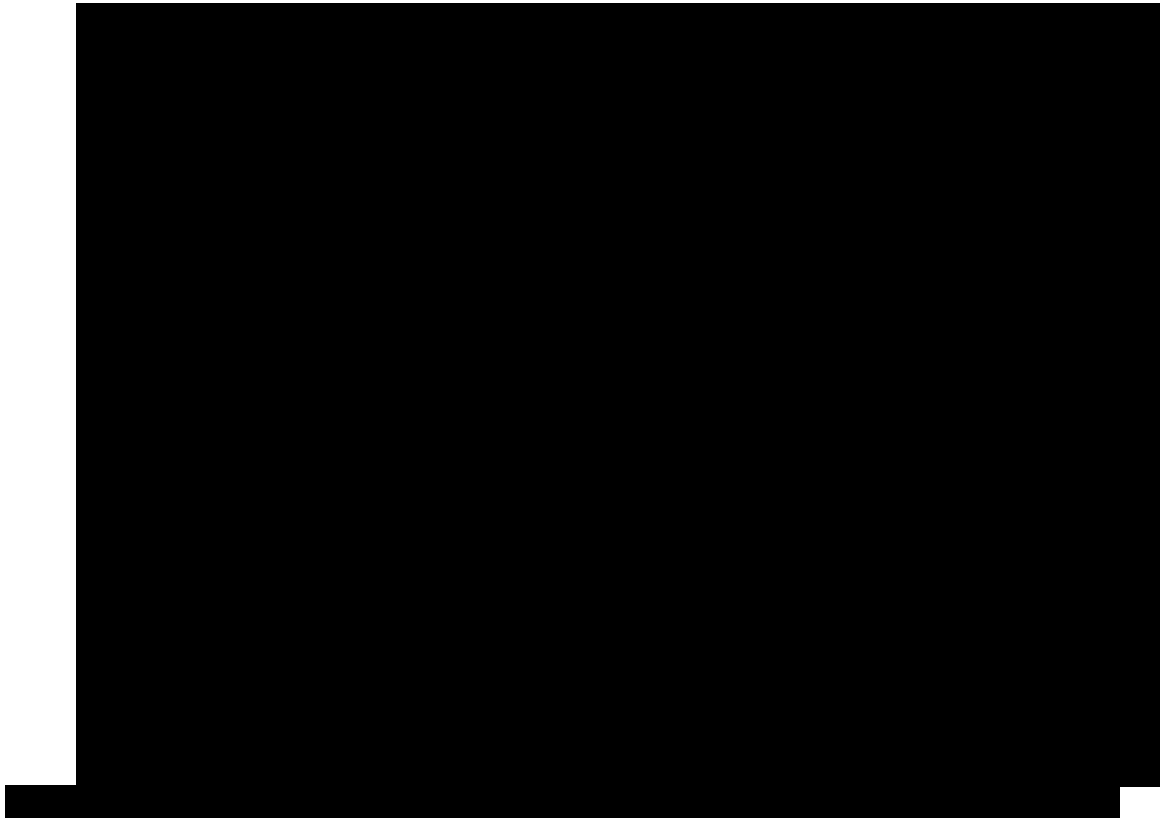
Source: VDHR 2026

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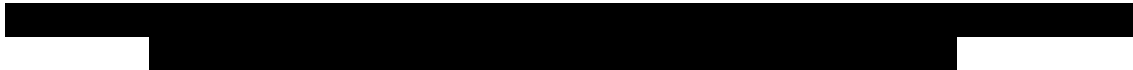
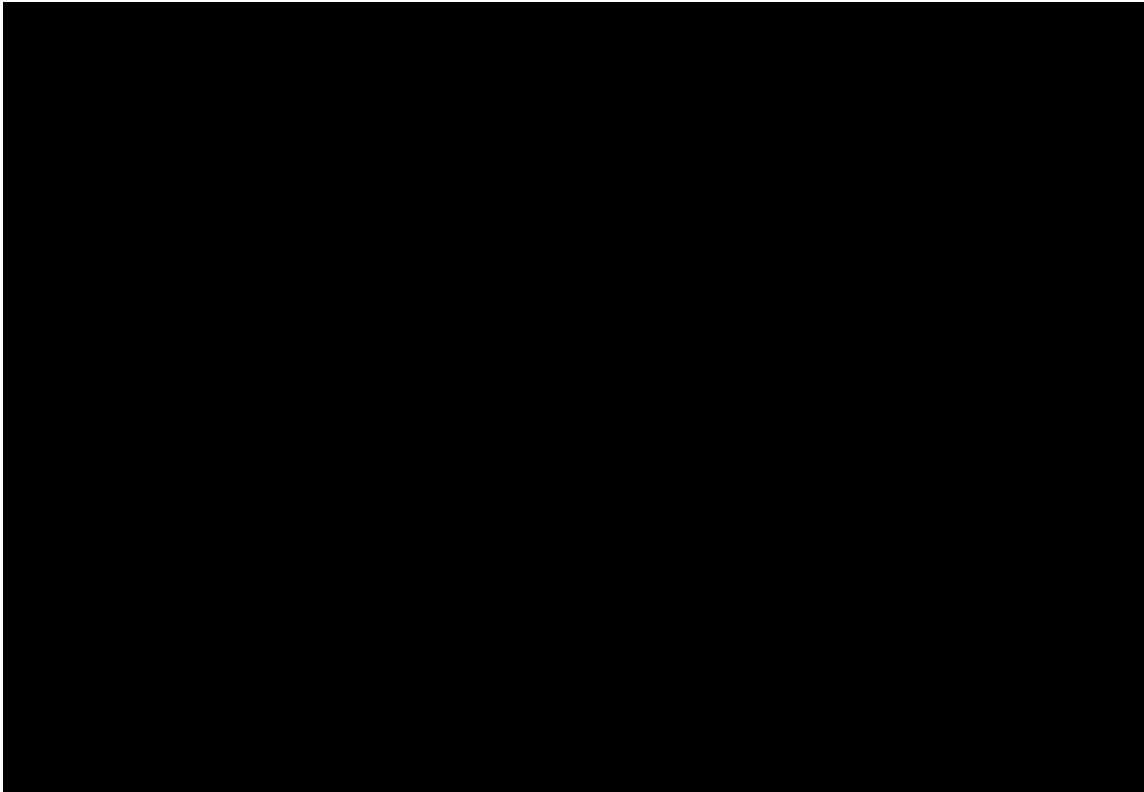


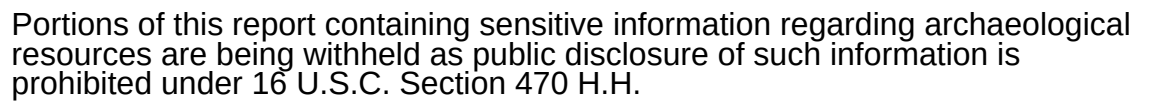
Portions of this report containing sensitive information regarding archaeological resources are being withheld as public disclosure of such information is prohibited under 16 U.S.C. Section 470 H.H.





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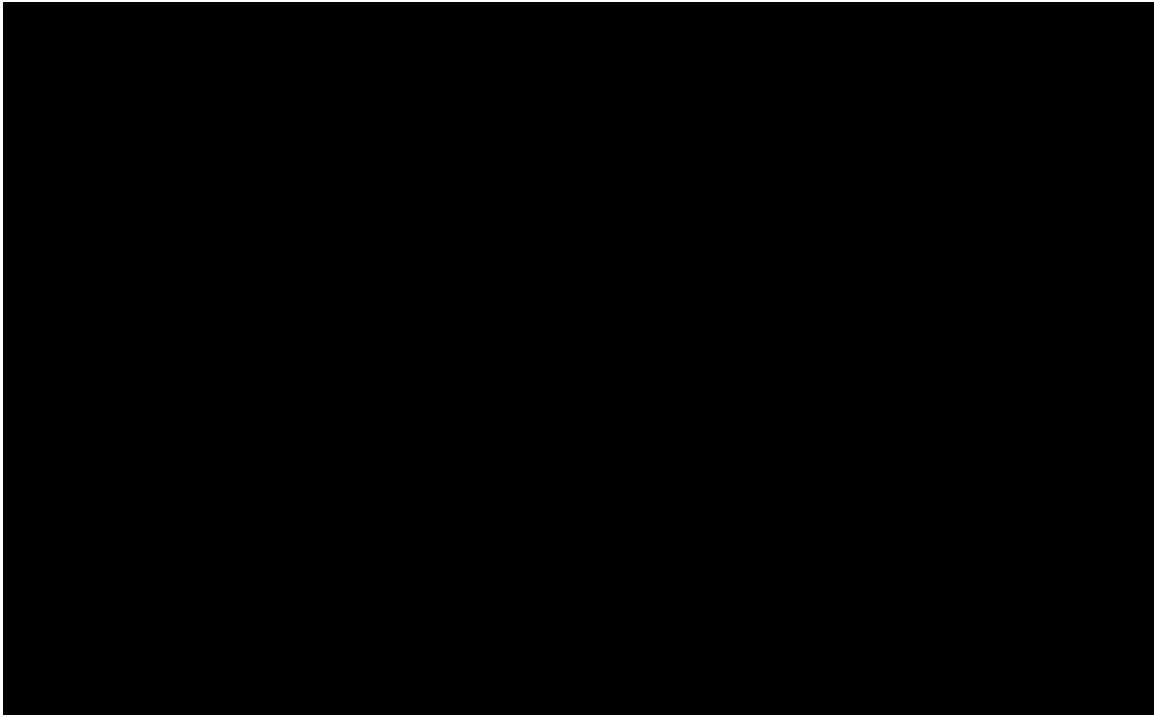
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Source: VDHR 2026

[REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]



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4.1.3 [REDACTED]

NRHP Eligibility Status	VDHR Staff: Not Eligible
Setting and Location	[REDACTED] [REDACTED]
Resource Description	[REDACTED]
Original Survey Evaluation	[REDACTED] [REDACTED]
Nearest Project Component (Distance from Centerline)	[REDACTED]
Project Effect	Moderate (Physical)

Source: VDHR 2026

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

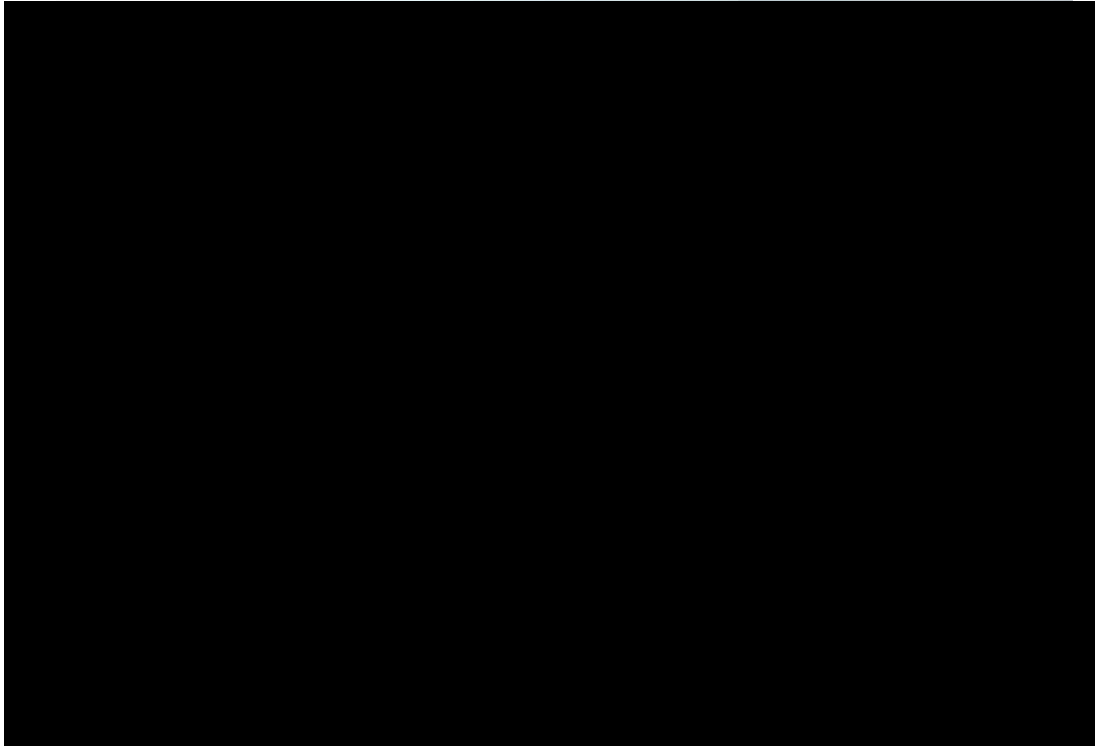
[REDACTED]

[REDACTED]

[REDACTED]



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4.2 Architectural Historic Properties

Five architectural resources (011-0021, 011-0028, 011-0057, 011-5034, and 011-5700) are listed in the NRHP within one mile of the Project's proposed route. Five additional architectural resources (011-5018, 011-5019, 011-5481, 011-5563, and 021-5012) determined as NRHP-eligible or potentially eligible by VDHR are located within 0.5 mile of the Project's proposed route.

The results of WSP analysis of architectural historic properties are summarized in Table 3. Individual properties are described in further detail in Sections 4.2.1 through 4.2.10 below.



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Table 3: Architectural Resources within Buffered Tiers

VDHR ID / NR No	Name	Type	Designation	Distance from Project's Proposed Route Centerlines	Proposed Effect
011-0021 / 11000604	Bryan McDonald, Jr., House	Dwelling	NRHP/VLR	Mount Union – Windy Pass 0.12 mi Cloverdale – Mount Union 0.42 mi Cloverdale – Windy Pass 3.12 mi	Minimal visual effect
[REDACTED]	[REDACTED]	[REDACTED]	NRHP/VLR	[REDACTED]	Minimal visual effect
011-0057 / 80004171	Nininger's Mill- Tinker Mill	Mill	NRHP/VLR	Mount Union – Windy Pass 3.67 mi Cloverdale – Mount Union 0.42 mi Cloverdale – Windy Pass 1.15 mi	Minimal visual effect
011-5018	Delbert House (Demolished)	Dwelling	Eligible for Environmental Review purposes only	Mount Union – Windy Pass 4.64 mi Cloverdale – Mount Union 0.36 mi Cloverdale – Windy Pass 382 feet	No effect
011-5019	Delbert Log House (Demolished)	Dwelling	Eligible for Environmental Review purposes only	Mount Union – Windy Pass 4.65 mi Cloverdale – Mount Union 0.27 mi Cloverdale – Windy Pass 288 feet	No effect
011-5034 / 2000445	Thomas D. Kinzie House	Dwelling	NRHP/VLR	Mount Union – Windy Pass 3.97 mi Cloverdale – Mount Union 0.75 mi Cloverdale – Windy Pass 489 feet	Minimal visual effect



VDHR ID / NR No	Name	Type	Designation	Distance from Project's Proposed Route Centerlines	Proposed Effect
011-5481	Norfolk and Western Railway Section	Transportation	Potentially Eligible	Mount Union – Windy Pass 4.86 mi Cloverdale – Mount Union 0.10 mi Cloverdale – Windy Pass 358 feet	Minimal visual effect
011-5563	Cloverdale Furnace Foundation	Industrial	Eligible for Environmental Review purposes only	Mount Union – Windy Pass 5.06 mi Cloverdale – Mount Union 0.14 mi Cloverdale – Windy Pass 0.12 mi	No effect
011-5700 / SG100007570	Greenfield Buildings	Dwelling	NRHP/VLR	Mount Union – Windy Pass 0.99 mi Cloverdale – Mount Union 2.59 mi Cloverdale – Windy Pass 298 feet Daleville Area Customer 138-kV Feeder Lines 0.34 mi	Minimal visual effect
021-5012	Appalachian National Scenic Trail	Recreation	Eligible	Mount Union – Windy Pass 2.63 mi Cloverdale – Mount Union 0.00 feet Cloverdale – Windy Pass 0.00 feet	Minimal visual effect

Source: VDHR 2026

4.2.1 011-0021 Bryan McDonald, Jr. House

Status	NRHP/VLR Listed
Setting and Location	The resource is located in a rural area with open fields and undulating hills near Mt. Union village on the headwaters of Tinker Creek. The house is surrounded by mature trees and is secluded off the main highway and preserves its original setting.
Resource Description	The McDonald House is the oldest surviving building in a 27-county area of western Virginia. Its front façade features sandstone blocks instead of the region's typical limestone, making it distinctive among local stone constructions.
Original Survey Evaluation	The Bryan McDonald Jr. House qualifies for the NRHP under Criterion C for Architecture due to its rarity and quality. Built in 1766, with a brick addition completed in 1840, it represents distinctive construction methods and periods as outlined by the NRHP Criteria.

Source: VDHR 2026

The Bryan McDonald, Jr., House (011-0021) is located approximately 0.12 mile from the proposed Mount Union – Windy Pass 138-kV Transmission Line centerline and 0.42 mile from the proposed Cloverdale – Mount Union 138-kV Transmission Line centerline. No view of the resource could be ascertained from public ROW due to intervening vegetation (see Photo 6 below). WSP recommends the Project would have a **minimal visual effect** on the resource's viewshed due to the existing transmission line and intervening vegetation. Appendix A – Figures 2 and 3 depict the location of the property relative to the Project.



Photo 6: View toward the Bryan McDonald, Jr., House (011-0021) from Catawba Road, facing northeast. No view of the primary resource could be ascertained due to intervening vegetation.



4.2.2 [REDACTED]

Status	NRHP/VLR Listed
Setting and Location	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
Resource Description	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
Original Survey Evaluation	[REDACTED]
	[REDACTED]
	[REDACTED]

Source: VDHR 2026

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] WSP recommends the Project would result in a **minimal visual effect** on the resource. [REDACTED]

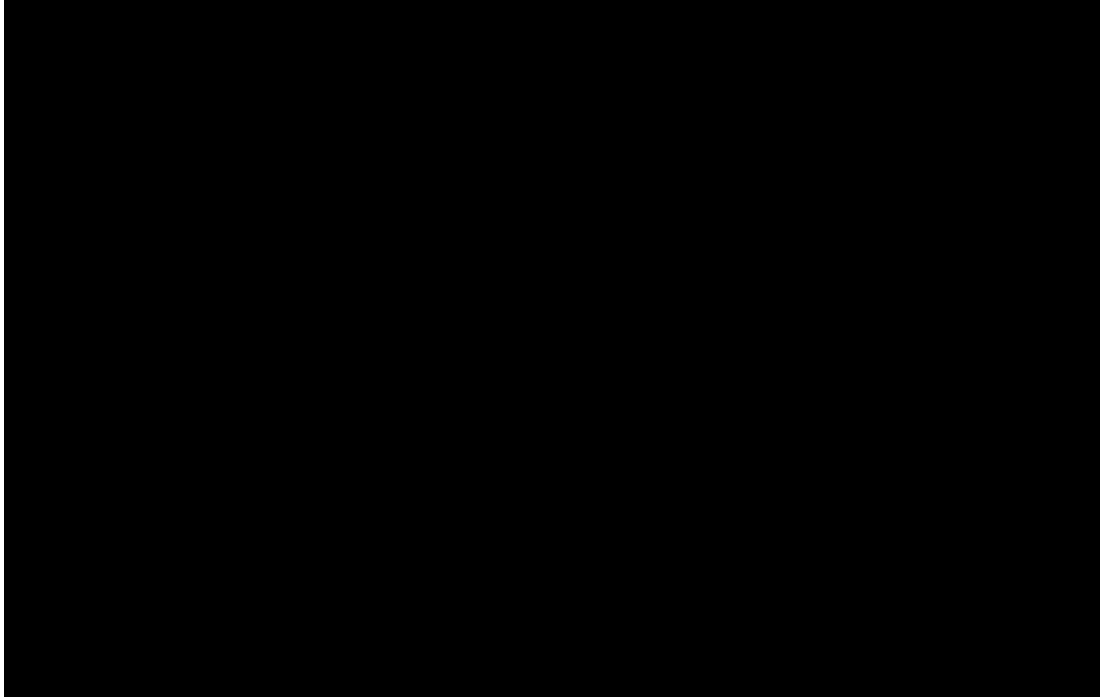
[REDACTED]

[REDACTED]

[REDACTED]



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4.2.3 011-0057 Nininger's Mill-Tinker Mill

Status	NRHP/VLR Listed
Setting and Location	The property is situated at the base of Tinker Mountain on the bank of Tinker Creek in an area of sporadic semi-urban development. The railroad abuts the northern edge of the property and Tinker Mill Road (Route 674) runs along its eastern edge.
Resource Description	The house is a modest single-story wood-frame house from the late nineteenth century. Nininger's Mill is a gable roofed, three-story brick structure constructed ca. 1847 as a grist mill and converted into a restaurant in 1968. The building was refurbished in 1978.
Original Survey Evaluation	The nominated property includes the mill, a house, and a garage. NRHP-listed under Criterion C.

Source: VDHR 2026

Nininger's Mill-Tinker Mill is located approximately 0.42 mile from the proposed Cloverdale – Mount Union 138-kV Transmission Line centerline. There is only a nominal change in height (<1.2 feet) to structures on the existing transmission line in this area; as such, the Project would result in a **minimal visual effect** on the resource (see Photos 8–10 below). Appendix A – Figures 2 and 3 depict the location of the property relative to the Project.



Photo 8: Nininger's Mill-Tinker Mill (011-0057) from Tinker Mill Road, facing south.



Photo 9: House on Nininger's Mill-Tinker Mill (011-0057) property, from Tinker Mill Road, facing south.



Photo 10: Nininger's Mill-Tinker Mill (011-0057) from Tinker Mill Road with Project in distance obscured by vegetation and topography, facing west.



4.2.4 011-5018 Delbert House (Demolished)

Status	VDHR Staff: Considered Eligible for Environmental Review purposes only
Setting and Location	This resource was located at the north end of Delbert Road, north of Cloverdale Road and east of the Shenandoah Valley Railroad in the vicinity of Troutville.
Resource Description	The resource was in poor condition during a 1999 survey. Based on aerial imagery and the recent survey, the resource is no longer present. The 1999 survey described the property as a circa 1910 one-and-a-half-story frame home with a shingled side-gable roof, two-over-two sash windows, two front doors, and a full-width porch. The house was altered and in poor condition at that time.
Original Survey Evaluation	The resource no longer retains integrity for consideration in the NRHP under Criteria A, B, or C.

Source: VDHR 2026

The Delbert House is located approximately 0.36 mile from the Cloverdale – Mount Union 138-kV Transmission Line centerline and 382 feet from the Cloverdale – Windy Pass 138-kV Transmission Line centerline. Based on aerial imagery (NETR 2026) and a recent visit to the property for the current undertaking, the structure appears to have been demolished (see Photo 11 below). Because the house has been demolished, WSP recommends the Project would have **no effect** on the resource. Appendix A – Figures 2 and 3 depict the location of the property relative to the Project, and Appendix B – Viewpoint 4 contains visual simulations of proposed structures within a 1.0-mile radius of the resource.



Photo 11: Delbert House (011-5018) not extant on property, facing north.



4.2.5 011-5019 Delbert Log House (Demolished)

Status	VDHR Staff: Considered Eligible for Environmental Review purposes only
Setting and Location	Located west of Delbert Road, north of Cloverdale Road, and east of the Shenandoah Valley Railroad, this resource lies near Troutville in Botetourt County. As of 2013, the resource was extant but in a state of ruin and overtaken by trees and other vegetation.
Resource Description	The building has a one-and-a-half-story V-notched log house, dating from approximately 1870, featuring a corrugated metal side-gable roof penetrated by an interior brick chimney. Additionally, a shed-roofed log extension is situated on the north side of the structure.
Original Survey Evaluation	The resource no longer retains integrity for consideration in the NRHP under Criteria A, B, or C.

Source: VDHR 2026

The Delbert Log House is located approximately 0.27 mile from the Cloverdale – Mount Union 138-kV Transmission Line centerline and 288 feet from the Cloverdale – Windy Pass 138-kV Transmission Line centerline. Based on aerial imagery (NETR 2026) and a recent visit to the property for the current undertaking, the structure appears to have been demolished (see Photo 12 below). Because the house has been demolished, WSP recommends the Project would have **no effect** on the resource. Appendix A – Figures 2 and 3 depict the location of the property relative to the Project, and Appendix B – Viewpoint 4 contains visual simulations of proposed structures within a 1.0-mile radius of the resource.



Photo 12: Delbert Log House (011-5019) not extant on property, facing west. Property is densely overgrown.

4.2.6 011-5034 Thomas D. Kinzie House

Status	NRHP/VLR Listed
Setting and Location	Despite nearby commercial development, the Kinzie property remains secluded off the main highway and preserves its original setting. The house is surrounded by mature trees, landscaping, and five outbuildings: a springhouse, garage, and two sheds.
Resource Description	The Thomas D. Kinzie House features a hipped slate roof with wide overhangs, pedimented gables with lunette windows, and three corbelled interior chimneys. The structure is built of handmade stretcher bond brick and includes additional contributing outbuildings on-site.
Original Survey Evaluation	The Thomas Kinzie House qualifies for the NRHP under Criterion C as a well-preserved residence designed by an architect for a prosperous farmer at the close of the reconstruction and growth period (1865-1917) in western Virginia. The property demonstrates the complexities resulting from the collaboration between its architect and client. Distinguished by its unique characteristics, the house was designed by Roanoke architect H.M. Miller and represents a late example (1909-1911) of the Queen Anne architectural style.

Source: VDHR 2026

The Thomas D. Kinzie House (011-5034) is located approximately 0.75 mile from the Cloverdale – Mount Union 138-kV Transmission Line centerline and 489 feet from the Cloverdale – Windy Pass 138-kV Transmission Line centerline. Nearby proposed structures range from 3 to 25 feet taller than the existing structures they would replace, with structures 269-9A and 269-12A each increasing by more than 20 feet. Despite the varying structure heights, the Project would be fully to partially obscured by terrain and vegetation. Therefore, the Project would result in a **minimal visual effect** on the resource. Appendix A – Figures 2 and 3 depict the location of the property relative to the Project, and Appendix B – Viewpoints 5A, 5B, and 5C contain visual simulations of proposed structures within a 1.0-mile radius of the resource. Photo 13 below shows the resource during the recent survey.



Photo 13: Thomas D. Kinzie House (011-5034) from Kinzie Street, facing northwest.



4.2.7 011-5481 Norfolk and Western Railway Section

Status	VDHR Staff: Potentially Eligible
Setting and Location	The setting of the railroad segment is largely industrial. It is located adjacent to an industrial park and crosses Lee Highway via a railroad bridge.
Resource Description	From its construction in 1882, the Shenandoah Valley Railroad has helped to stimulate growth and development in Cloverdale and the surrounding area by providing a rail connection to local and distant markets. After Norfolk and Western acquired the line in 1890, the route served predominantly in the shipment of coal and ore through the region. According to historic maps, the railroad segment retains its historical alignment as well as its single-track/double-track configuration.
Original Survey Evaluation	The resource is associated with the general development of Botetourt County under NRHP Criterion A because it connected local farms with the rest of the Valley. Therefore, the resource is recommended potentially eligible under Criterion A.

Source: VDHR 2026

The Norfolk and Western Railway Section (011-5481) is located approximately 0.10 mile from the Cloverdale – Mount Union 138-kV Transmission Line centerline and 358 feet from the Cloverdale – Windy Pass 138-kV Transmission Line centerline. The resource is within view of several structures on each of the proposed routes. The resource is also within view of the Cloverdale Substation that connects the Cloverdale – Mount Union and Cloverdale – Windy Pass 138-kV Transmission Lines, as well as other existing transmission lines (see Photos 14–15 below). Due to expansive views of existing structures and the industrial setting, WSP recommends the Project would have a **minimal visual effect** on the resource. Appendix A – Figures 2 and 3 depict the location of the property relative to the Project, and Appendix B – Viewpoint 3 contains visual simulations of proposed structures within a 1.0-mile radius of the resource.



Photo 14: Norfolk and Western Railway Section (011-5481) at bottom foreground obscured by vegetation, from the end of Olde Route 604, facing southeast. Note additional existing transmission lines in the viewshed that connect to Cloverdale Substation.



Photo 15: From Norfolk and Western Railway Section (011-5481) toward Cloverdale Substation and the connecting Cloverdale – Windy Pass 138-kV Transmission Line, facing southwest

4.2.8 011-5563 Cloverdale Furnace Foundation

Status	VDHR Staff: Considered Eligible for Environmental Review purposes only
Setting and Location	The resource is south of Cloverdale Road and east of the Shenandoah Valley Railroad on Appalachian's Cloverdale Substation property near Troutville. The furnace foundation sits at the junction of two transmission lines, next to a tributary of Tinker Creek, with access roads nearby.
Resource Description	The historic furnace foundation is a dry-laid fieldstone structure set into a hillside, measuring about 20 by 35 feet and standing 15 feet tall. Its west-facing opening toward Tinker Creek's tributary is partially collapsed. The furnace remains share a similar form and construction with others found in the area. Its base is rectangular, with a trapezoidal profile when viewed from the side. Built from dry-laid ashlar stone blocks, the furnace sits within a ridge slope. Most of its stack has disappeared, and saplings are slowly dislodging the stones as they grow. The casting arch has fallen apart. Although there is no visible arch, it might be hidden beneath artificial fill on the northeast side. The northwest side contains a casting arch, while a small portion of a staging area survives on the southeast side. Loose stones and burned bricks are scattered across the ground near the west and northwest sides, likely from the lining of the bosh. The landscape around the furnace is disturbed, and no other parts of the furnace system can be seen.
Original Survey Evaluation	The resource no longer retains integrity for consideration in the NRHP under Criteria A, B, or C.

Source: VDHR 2026

The Cloverdale Furnace Foundation (011-5563) is located approximately 0.14 mile from the Cloverdale – Mount Union 138-kV Transmission Line centerline and 0.12 mile from the Cloverdale – Windy Pass 138-kV Transmission Line centerline. The resource has a partial view of several structures where they connect to the Cloverdale Substation, but based on aerial imagery, the foundation may no longer be extant (see Photo 16 below). Because the foundation may no longer be extant and the surrounding setting is dominated by existing transmission infrastructure, WSP recommends the Project would have **no effect** on the resource. Appendix A – Figures 2 and 3 depict the location of the property relative to the Project, and Appendix B – Viewpoint 3 contains visual simulations of proposed structures within a 1.0-mile radius of the resource.



Photo 16: Cloverdale Furnace Foundation (011-5563) top of hill in background, from the end of Olde Route 604, facing southeast.

4.2.9 011-5700 Greenfield Buildings

Status	NRHP/VLR Listed
Setting and Location	In 2016, the Greenfield Kitchen and Quarters were moved from their original location on the Greenfield plantation to the Bowyer-Holladay House NRHP property (011-0028 / 44BO0497). They are situated between the Bowyer-Holladay House and its associated cemetery, approximately 500 feet behind the house site.
Resource Description	The Greenfield Quarters, which was originally used as housing for enslaved people, is built in the saddlebag house style. This design features two separately constructed single-story hewn-log rooms, known as pens, that share a large central chimney, a common layout in nineteenth century Virginia and other areas. Like the kitchen, the logs used for the quarters are made of oak, pine, and yellow poplar, all hand-hewn and joined with V-notched corners.
Original Survey Evaluation	The kitchen's distinctive design and the buildings' notable architectural and craftsmanship value, combined with their high integrity except for location, make them eligible locally under Criterion C.

Source: VDHR 2026

These buildings and their surrounding archaeological site were listed together on the NRHP in 2011. They have been re-nominated at their new site, which lies within the historic boundary of the Bowyer-Holladay House NRHP property (011-0028 / 44BO0497).

The Greenfield Buildings (011-5700) are located approximately 0.99 mile from the Mount Union – Windy Pass 138-kV Transmission Line centerline and 298 feet from the Cloverdale – Windy Pass 138-kV Transmission Line centerline. The resource has a partial view of the Cloverdale – Windy Pass 138-kV Transmission Line structures 269-44E to 269-48A. Despite the varying structure heights, the Project would be fully to partially obscured by terrain and vegetation, and structures directly within view would have a nominal change in height. Therefore, the Project would result in a **minimal visual effect** on the resource. Appendix A – Figures 2 and 3 depict the location of the property relative to the Project, and Appendix B – Viewpoints 2A and 2B contain visual simulations of proposed structures within a 1.0-mile radius of the resource. Photos 17 and 18 below show the resource during the recent survey.



Photo 17: Greenfield Kitchen (VDHR ID 011-5700 / NR No SG100007570), facing southeast.



Photo 18: Greenfield Quarters (VDHR ID 011-5700 / NR No SG100007570), facing north.



4.2.10021-5012 Appalachian National Scenic Trail – West Virginia and Virginia Segment

Status	NRHP Listed
Setting and Location	The West Virginia and Virginia segment of the Appalachian Trail passes through mountainous, forested, and open landscapes in Virginia and West Virginia. In the Project vicinity, the trail crosses the Cloverdale – Mount Union and the Cloverdale – Windy Pass 138-kV Transmission Line centerlines.
Resource Description	The Appalachian Trail traverses a landscape of mountains, forests, streams, and other natural features that contribute to its scenic and recreational character. The trail was established to provide public access to significant natural landscapes throughout the Appalachian Mountains. The trail was designed as a "skyline trail," following ridges and mountain peaks through the Appalachian Mountain chain.
Original Survey Evaluation	The Appalachian Trail, the first long-distance hiking trail in the United States, extends from Georgia to Maine and is listed in the NRHP as the Appalachian National Scenic Trail Historic District. The historic district includes trail segments across 14 states and is significant under Criteria A and C for its historical importance and design as a cultural landscape. The Appalachian National Scenic Trail Historic District is listed in the NRHP under Criteria A and C for its significance in the development of long-distance recreational trails and as a designed cultural landscape. Portions of the trail are additionally associated with Civilian Conservation Corps construction during the Great Depression.

Source: VDHR 2026

The Appalachian National Scenic Trail (021-5012) is crossed by the Cloverdale – Mount Union and Cloverdale – Windy Pass 138-kV Transmission Line centerlines at several points. Structures 286-19 and 269-19A are within or immediately adjacent to the trail, respectively (see Photos 19–20 below). Appendix A – Figures 2 and 3 depict the location of the property relative to the Project, and Appendix B – Viewpoints 6 and 7 contain visual simulations of proposed structures within a 1.0-mile radius of the resource. Because tree cover blocks views of the line along much of the trail, the Project is primarily visible where it crosses the trail. As there are already expansive views of the transmission line to be replaced within the ROW, WSP recommends the Project would have a **minimal visual effect** on the resource and its viewshed.



Photo 19: Appalachian Trail (021-5012) from the existing Cloverdale – Mount Union 138-kV Transmission Line ROW, facing southeast.



Photo 20: From Appalachian Trail (021-5012) toward the Cloverdale – Mount Union 138-kV Transmission Line ROW, facing southeast.



5. Summary

Appalachian is proposing the Project to adequately and reliably operate and maintain a portion of the local transmission system to provide service for area customers and accommodate a new customer interconnection request located in Botetourt County, Virginia. The Project will construct the new Windy Pass Substation and upgrade the existing Cloverdale, Botetourt, Trinity, and Mount Union Substations. In addition, the Project will rebuild approximately 5.3 miles of 138-kV transmission line between the existing Cloverdale and proposed Windy Pass substations (currently operated at 69 kV to be upgraded to 138 kV), rebuild approximately 4.0 miles of 138-kV transmission line between the existing Mount Union and proposed Trinity substations (currently operated at 69 kV to be upgraded to 138 kV), reconductor approximately 7.4 miles of the Cloverdale – Mount Union 138-kV Transmission Line, construct two new 138-kV feeder lines each approximately 1.3 miles in length to the data center campus (the “Daleville Area Customer 138-kV Feeder Lines”), construct a new 0.1 mile long 138-kV tie line between the new Windy Pass 138-kV Substation and existing Trinity Substation, and extend the Trinity – Wheatland 69-kV Transmission Line approximately 0.1 miles to the new Windy Pass 138-kV Substation.

WSP conducted a VDHR Pre-Application Analysis of cultural resources for the Project in support of the Virginia Department of Environmental Quality (“VDEQ”) Supplement of the SCC application. The analysis included background research to identify previously recorded cultural resources within the VDHR-defined buffered tiers around the Project, field reconnaissance to examine resources’ settings and vistas, and assessment of the effects of the Project on identified resources. This tiered study area was defined as within 0.5-mile, 1.0-mile, and 1.5-mile buffers surrounding the Project’s proposed route.

WSP assessed potential impacts to previously recorded historic properties that meet criteria for consideration within the defined buffered tiers in accordance with VDHR (2008) 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.

[REDACTED]

Additionally, the Project would have a *minimal visual effect* on architectural resources Bryan McDonald, Jr., House (VDHR ID 011-0021), [REDACTED], Niningers Mill-Tinker Mill (VDHR ID 011-0057), Thomas D. Kinzie House (VDHR ID 011-5034), Norfolk and Western Railway Section (VDHR ID 011-5481), Greenfield Buildings (VDHR ID



Portions of this report containing sensitive information regarding archaeological resources are being withheld as public disclosure of such information is prohibited under 16 U.S.C. Section 470 H.H.

011-5700), and Appalachian National Scenic Trail (VDHR ID 021-5012); and *no effect* on Delbert House (VDHR ID 011-5018), Delbert Log House (VDHR ID 011-5019), and Cloverdale Furnace Foundation (VDHR ID 011-5563).

In WSP's opinion, the results of the Pre-Application Analysis are suitable to support SCC approval of the Project's application; however, a Phase I cultural resources survey would be required prior to Project construction to determine the presence or absence of previously unrecorded resources and to confirm the integrity of intersected resources. In addition, Appalachian should continue coordination with VDHR regarding effects to the following NRHP-listed resources: Bryan McDonald, Jr., House (VDHR ID 011-0021), [REDACTED] [REDACTED] Nininger's Mill-Tinker Mill (VDHR ID 011-0057), Thomas D. Kinzie House (VDHR ID 011-5034), and Greenfield Buildings (VDHR ID 011-5700).

6. Bibliography

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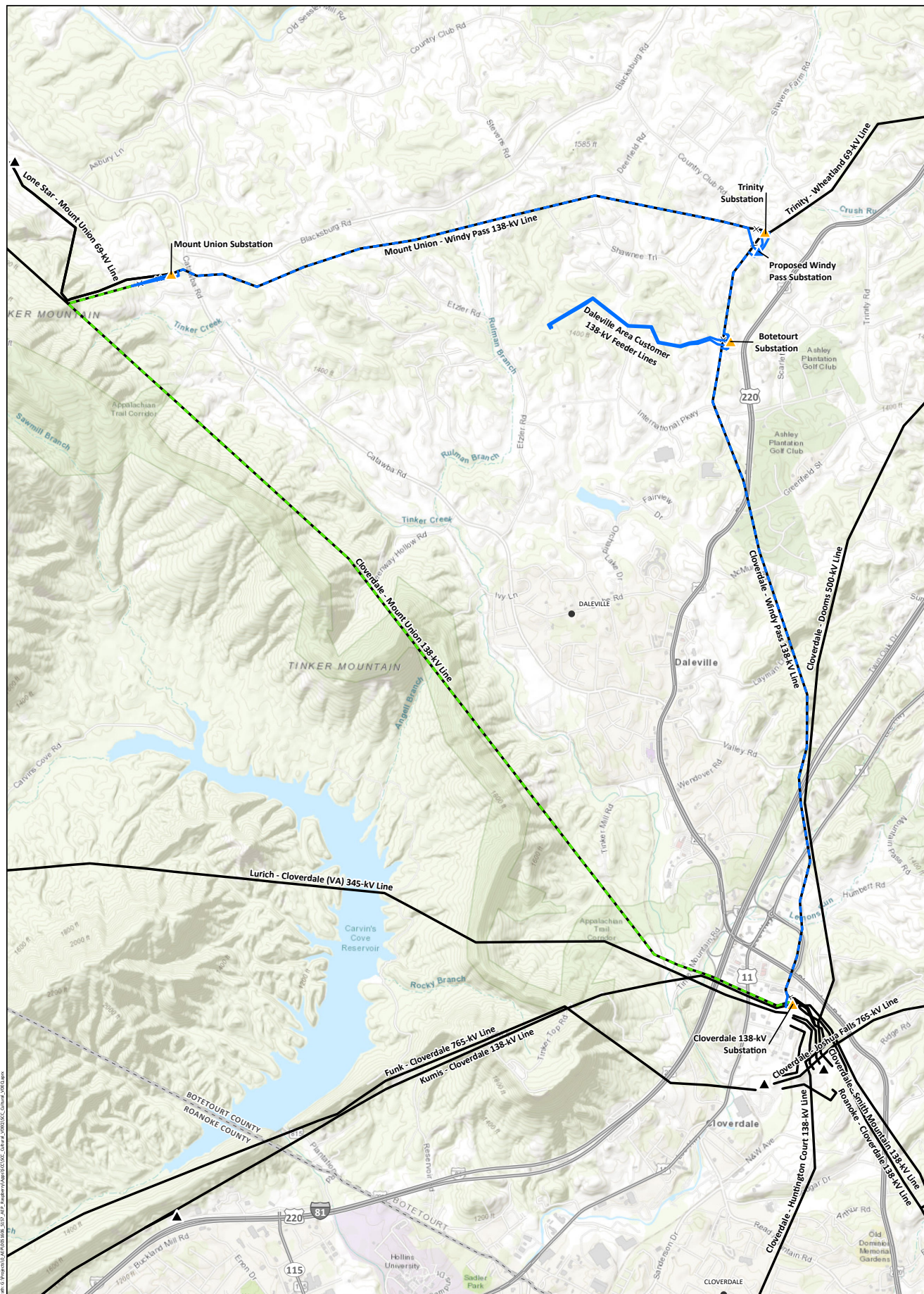
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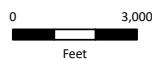
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<https://vcris.dhr.virginia.gov/VCRIS/Mapviewer/>.

Appendix A - Maps



- | | | | |
|---|--|---|--|
|  | Existing Substation |  | Existing Transmission Line To Be Removed |
|  | Existing Substation to be Upgraded |  | Existing AEP Transmission Line |
|  | Proposed Windy Pass Substation |  | Populated Place |
| | Proposed Alignment | | Highway |
| | Existing Alignment to be Rebuilt | | County Boundary |
| | Existing Alignment to be Reconductured | | |

- 
- 1" = 3,000'


$$1'' = 3,000'$$


Daleville Area Transmission
Improvements Project

Botetourt County,
Virginia

Date: 8/20/2026
Author: pwr_creed

**Daleville Area Transmission
Improvements Project
Map 1: Project Vicinity Map**



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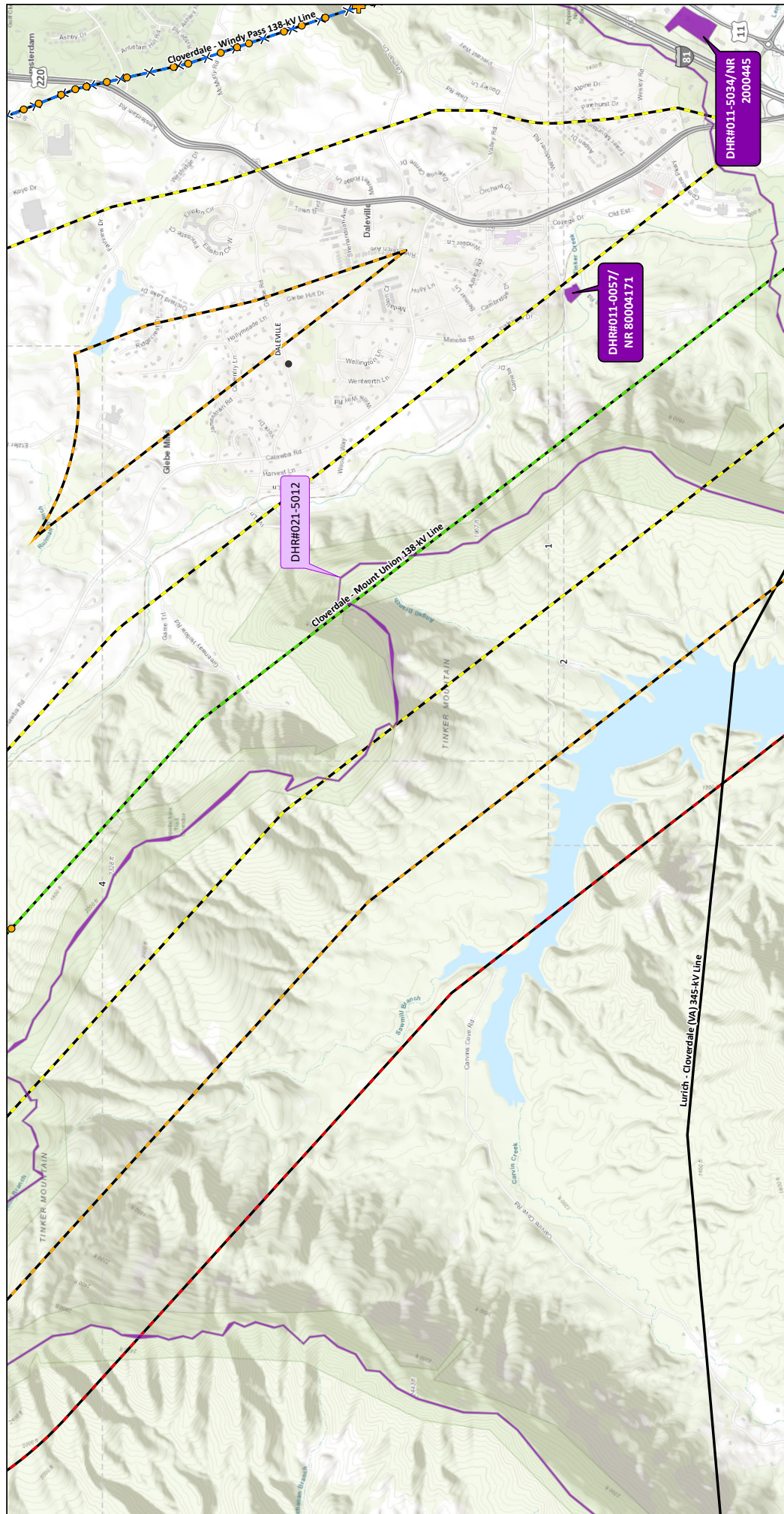
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PAGE 4 OF 5



Architectural Resource

- 0.5 Mile Buffer
- 1 Mile Buffer
- 1.5 Mile Buffer
- Proposed Structure Height ≤20 ft
- Proposed Structure Height >20 ft
- Proposed Structure Height >20 ft

Existing Alignment to be Rebuilt

- Existing Alignment to be Rebuilt
- Reconstructed
- Existing AEP Transmission Line
- Existing AEP Transmission Line
- Populated Place
- Highway
- County Boundary

Legend

- Existing Alignment to be Rebuilt
- Reconstructed
- Existing AEP Transmission Line
- Existing AEP Transmission Line
- Populated Place
- Highway
- County Boundary

Scale

1" = 2,000 feet

0 1,000 2,000 Feet

Map Page 5 of 5

Figure 2 - Previously Recorded Resources Map

APRIL 2024

POWER

Daleville Area Transmission Improvements Project

Map Page 5 of 5

Figure 2 - Previously Recorded Resources Map

APRIL 2024

POWER

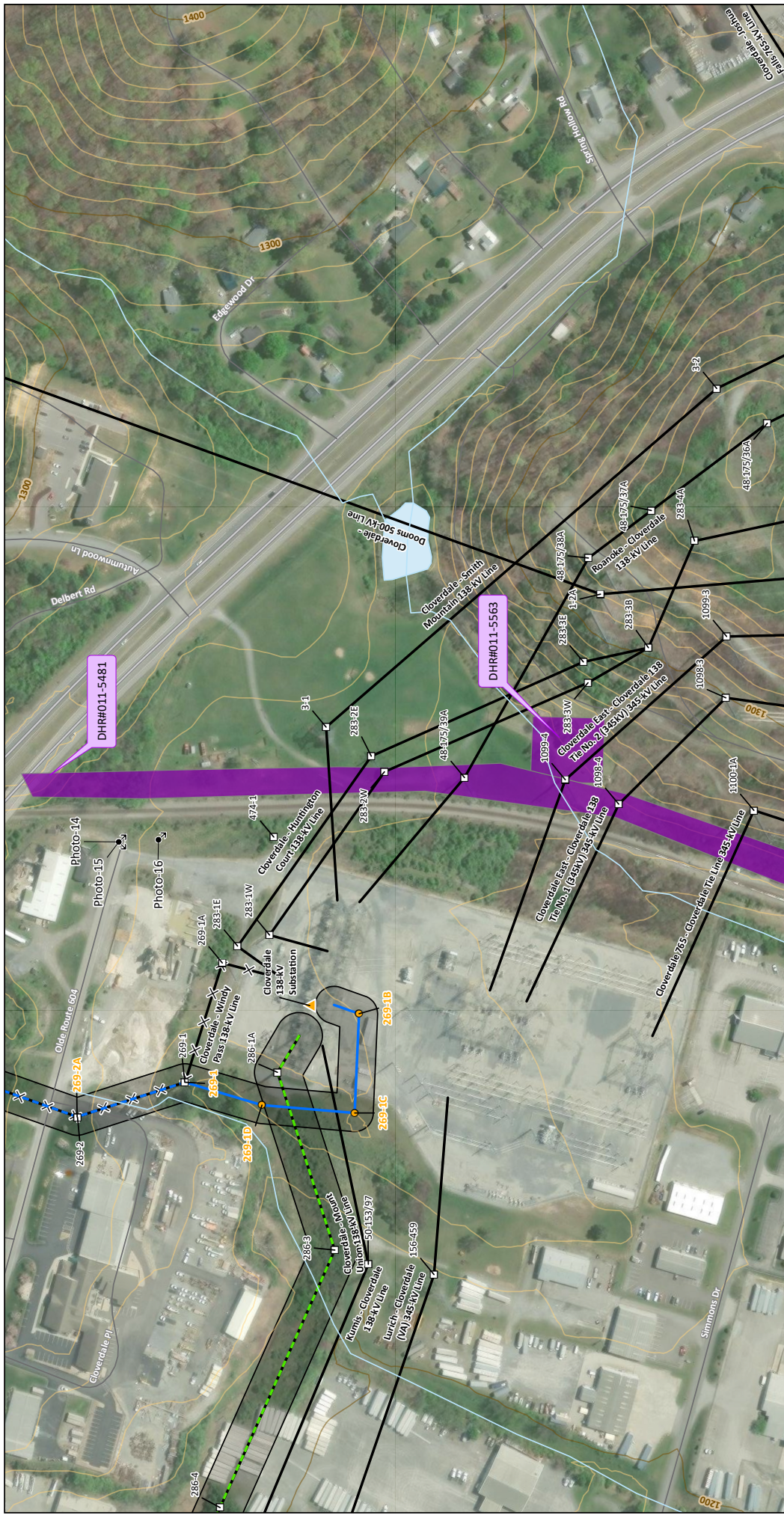
Daleville Area Transmission Improvements Project

Botetourt County, Virginia

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Projection: NAD 83
Datum: North American 1983

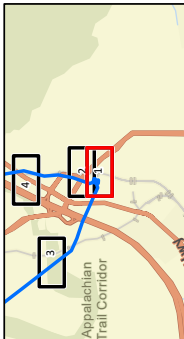
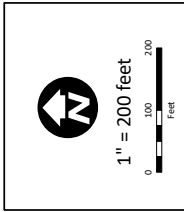
Date: 8/20/2024
Author: JPM, J, J, J

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↑	Resource Photograph Location							
	Architectural Resource							
	Area of potential Effects							
	Existing Substation to be Upgraded							
	Proposed Structure Height ≤20 ft than Existing Structure							
	Existing Structure							
	Proposed Alignment							
	Existing Alignment to be Rebuilt							
	Existing Alignment to be Reconstructed							
	Existing Transmission Line to be Removed							
	Existing AEP Transmission Line							
	Highway							

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**Daleville Area Transmission
Improvements Project**

**Botetourt County,
Virginia**

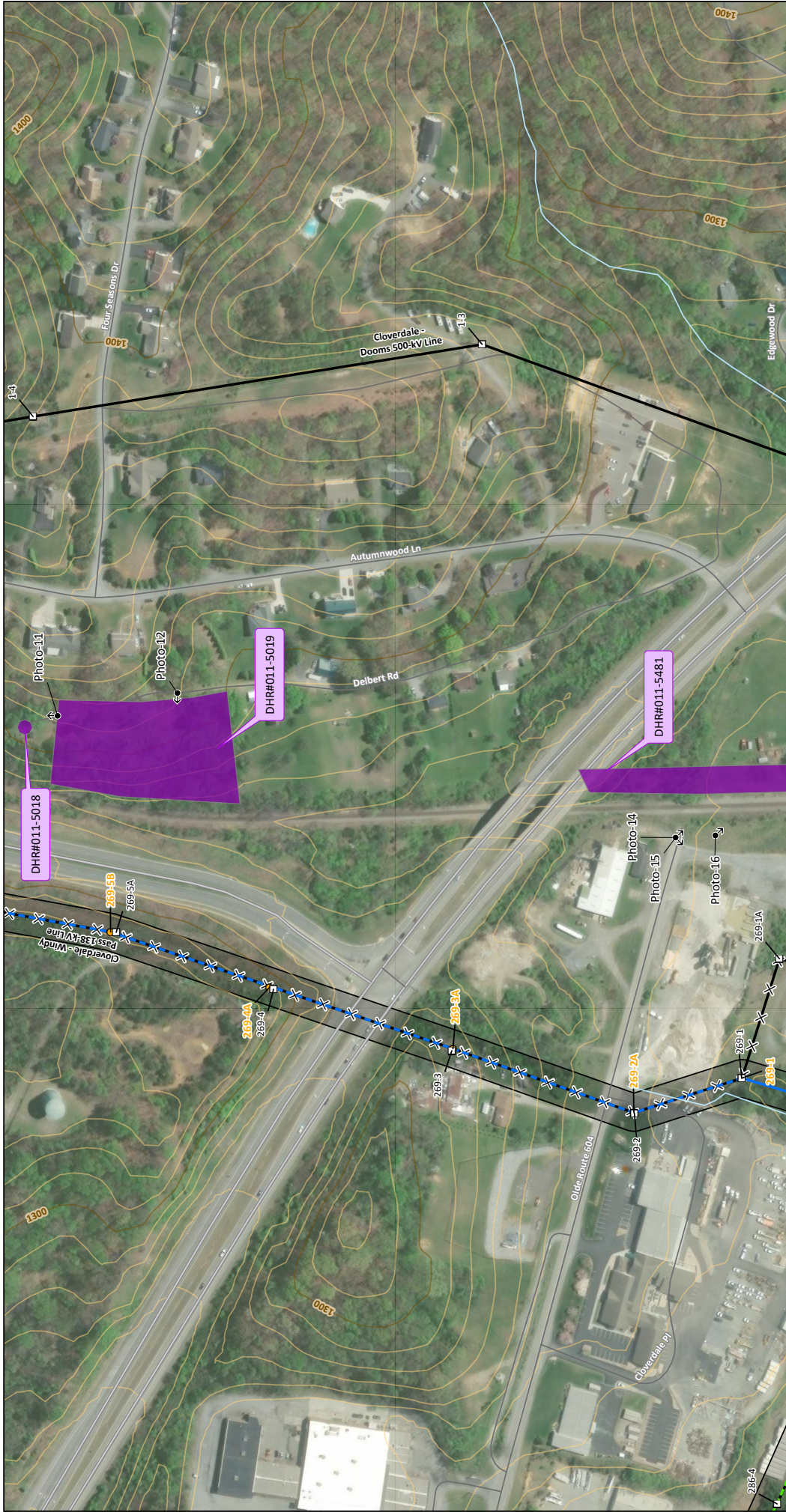
NAD 1983 StatePlane Virginia South NPS4502 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

**Date: 8/20/2026
Author: pwr_cresed**



**APPALACHIAN
POWER**

an AEP COMPANY



Daleville Area Transmission Improvements Project
Map Page 2 of 7
Figure 3 - Pre-Application Analysis Results

APPALACHIAN POWER
A subsidiary of Duke Energy

Daleville Area Transmission Improvements Project
Botetourt County, Virginia

NAD 83 StatePlane Virginia South 1450 Feet
Projection: UTM
Datum: North American 83

Date: 8/20/2026
Author: pvt_m_freed

1" = 200 feet

0 100 200 Feet

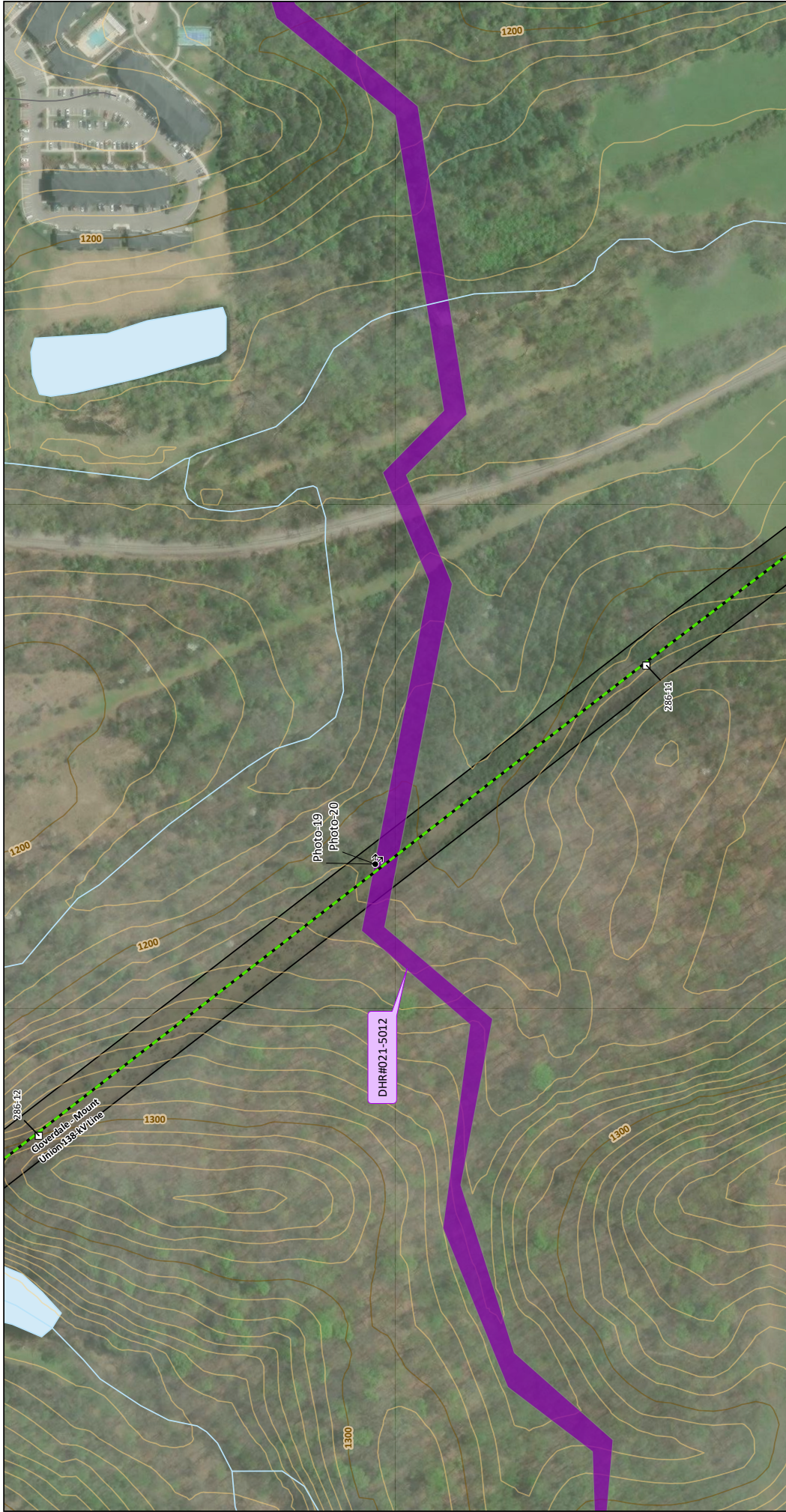
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- Architectural Resource
- Area of Potential Effects
- Proposed Structure Height >20 ft than Existing Structure
- Existing Structure
- Proposed Alignment

Existing Alignment to be Rebuilt

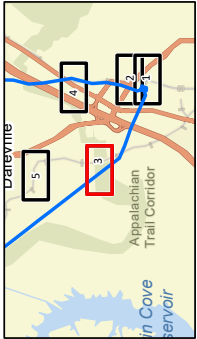
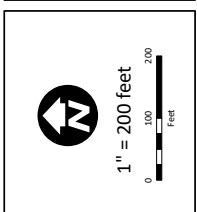
- Existing Alignment to be Reconstructed
- Existing Transmission Line to be Removed
- Existing AEP Transmission Line
- Highway

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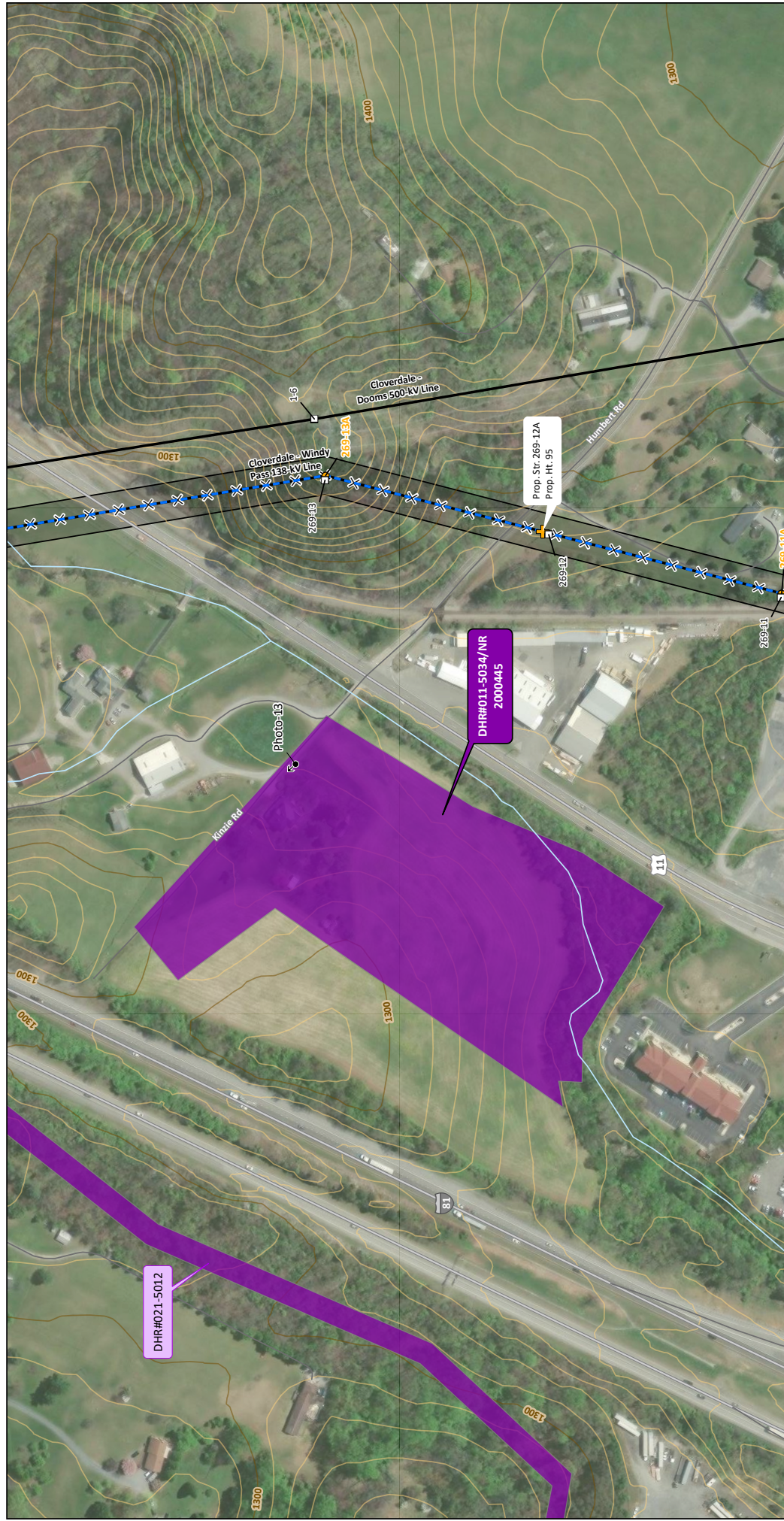
- ↑ Resource Photograph Location
- Architectural Resource
- Area of Potential Effects
- Existing Structure
- Existing Alignment to be Reconstructed
- Existing AEP Transmission Line

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Daleville Area Transmission
Improvements Project
Botetourt County,
Virginia
NAD 83 Geographic Virginia State Plane SRS Feet
Projection: NAD 83
Datum: North American 83
Date: 8/20/2026
Author: JPM, J, J, J

Daleville Area Transmission
Improvements Project
Map Page 3 of 7
Figure 3 - Pre-Application Analysis Results

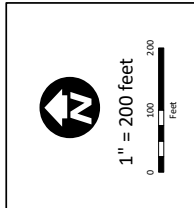
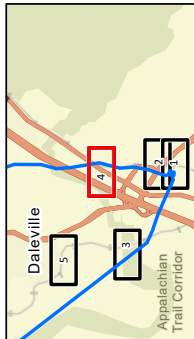


**Daleville Area Transmission
Improvements Project**
Map Page 4 of 7

Figure 3 - Pre-Application Analysis Results

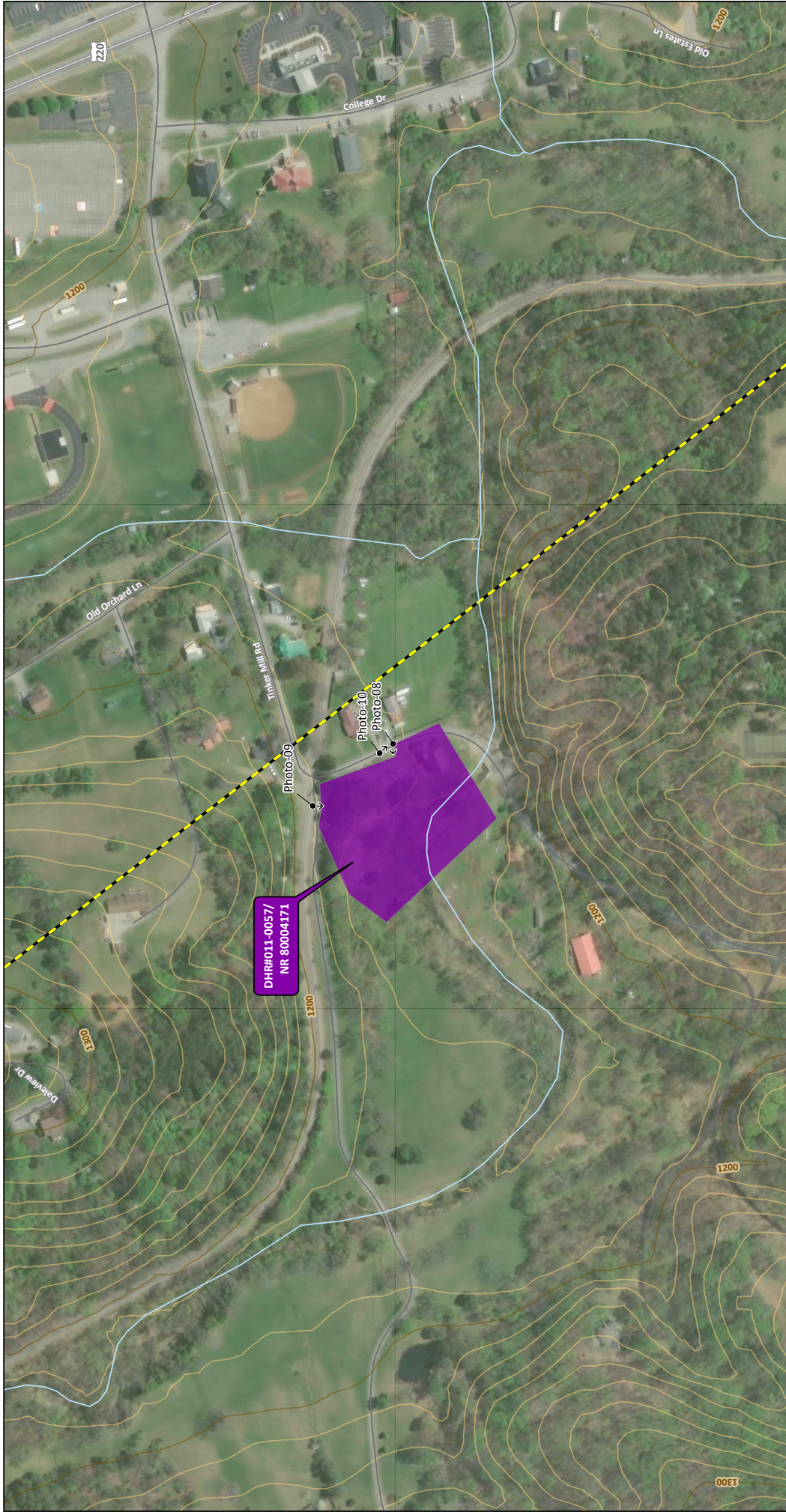
**APPALACHIAN
POWER**
A BGE COMPANY

Daleville Area Transmission Improvements Project	Botetourt County, Virginia	NAD 1983 StatePlane Virginia South (FIPS 4201 feet) Projection: Lambert Conformal Conic Datum: North American 1983
		Date: 8/30/2026 Author: pwr_creed



Resource	Photograph Location	Existing Structure	Existing Alignment to be Rebuilt	Existing Transmission Line to be Removed	Existing AEP Transmission Line	Highway
Architectural Resource		☐				
Area of Potential Effects						
Proposed Structure Height ≤20 ft than Existing Structure						
Proposed Structure Height ≥20 ft than Existing Structure						

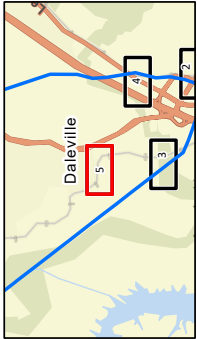
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- ↑ Resource Photograph Location
- Architectural Resource
- 0.5 Mile Buffer
- Highway

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1" = 200 feet



Daleville Area Transmission
Improvements Project

Botetourt County,
Virginia

NOI 003 Botetourt Virginia Southern Power
Project
Daleville Area Transmission
Sharon, North American 2013

Date: 8/20/2026
Author: JPM, J. Reed

Daleville Area Transmission
Improvements Project
Map Page 5 of 7

Figure 3 - Pre-Application Analysis Results

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Appendix B - Simulations

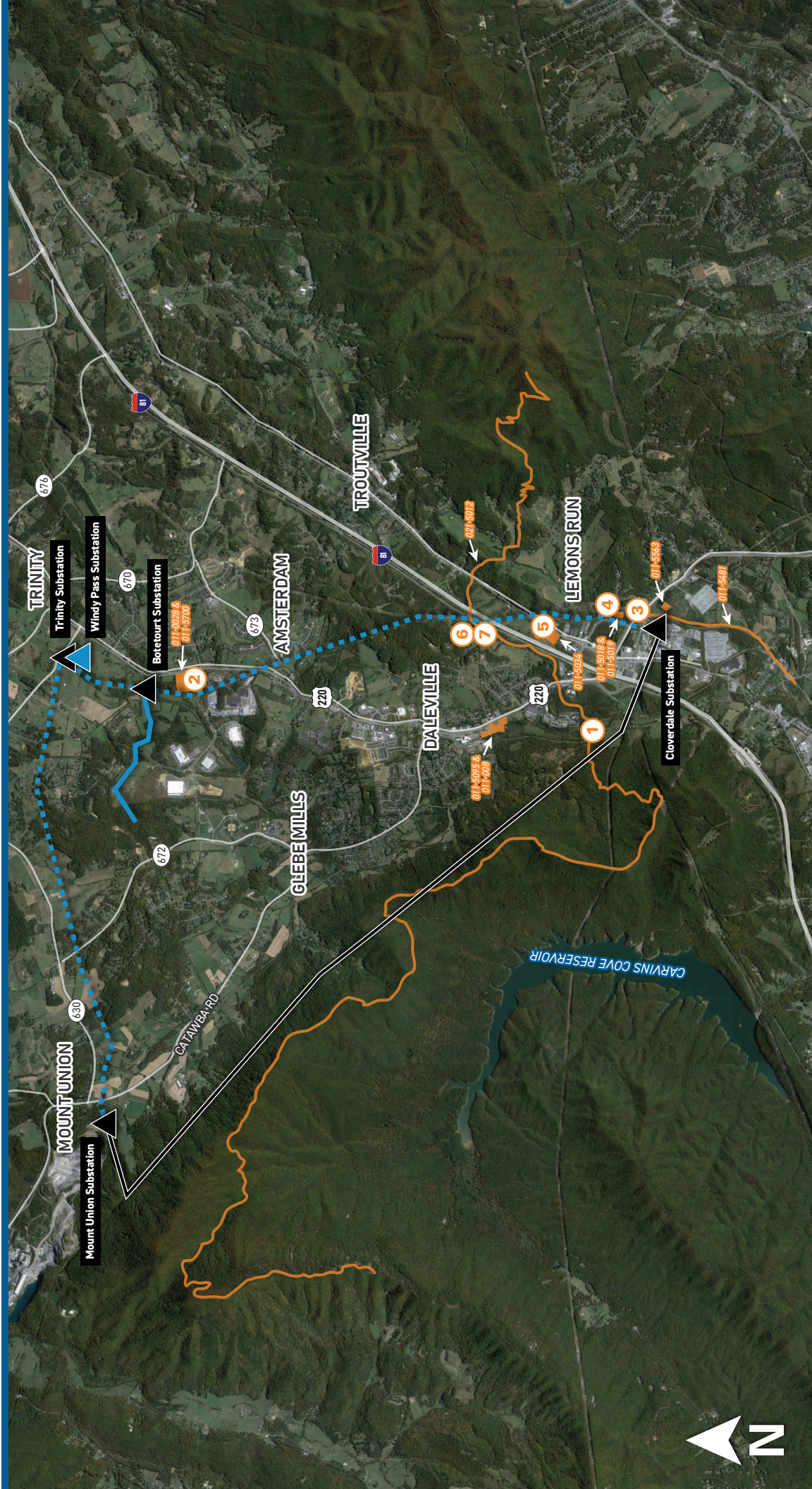
Daleville Area

Transmission Improvements Project

Viewpoint Location Map

- ▲ Existing Substation (AEP)
- ① Photo Viewpoint Location
- Existing Transmission Line (AEP)
- Cultural Resources

- ▲ Substation to be Built
- ⋯ Existing Alignment to be Upgraded (in or near existing right-of-way) (AEP)
- Transmission Line to be Built (AEP)



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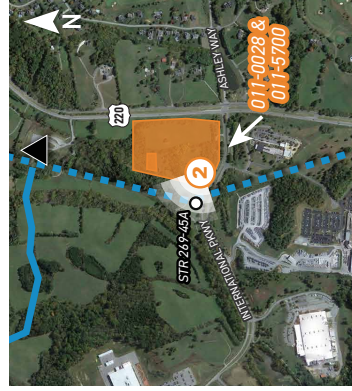
PAGE 1 OF 10

Daleville Area

Transmission Improvements Project

Viewpoint 2A

Date: 6/2/2026 Time: 9:57 a.m.
Viewing Direction: Northwest

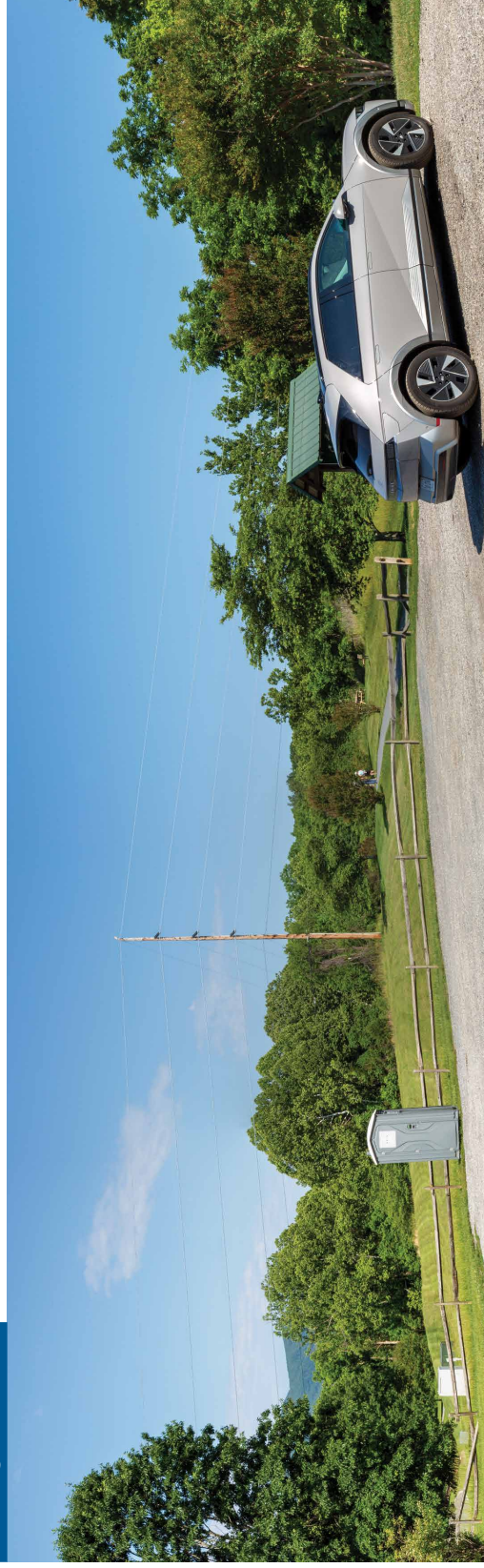


- ② Photo Viewpoint Location
- Structure Location
- Cultural Resources
- Existing Alignment to be Upgraded (AEP)
- Existing Transmission Line (AEP)
- ▲ Existing Substation (AEP)

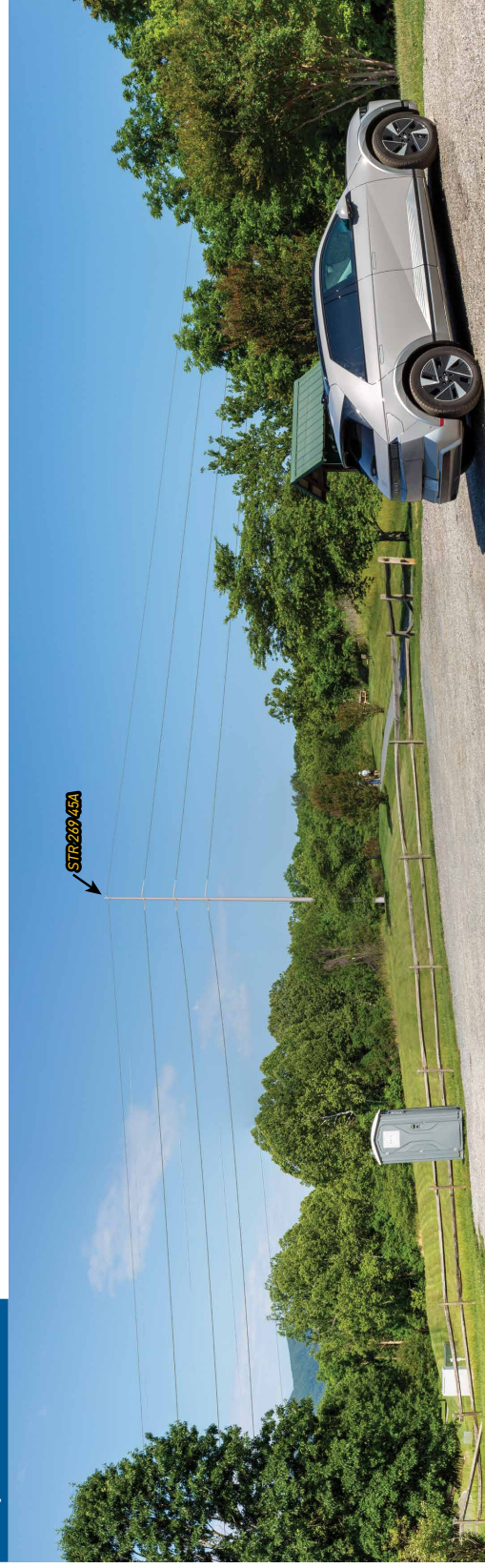
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Existing Conditions



Proposed Conditions

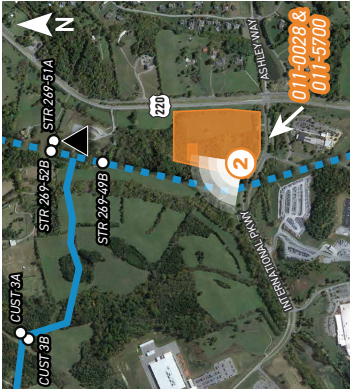


Daleville Area

Transmission Improvements Project

Viewpoint 2B

Date: 6/2/2026 Time: 9:57 a.m.
Viewing Direction: Northwest

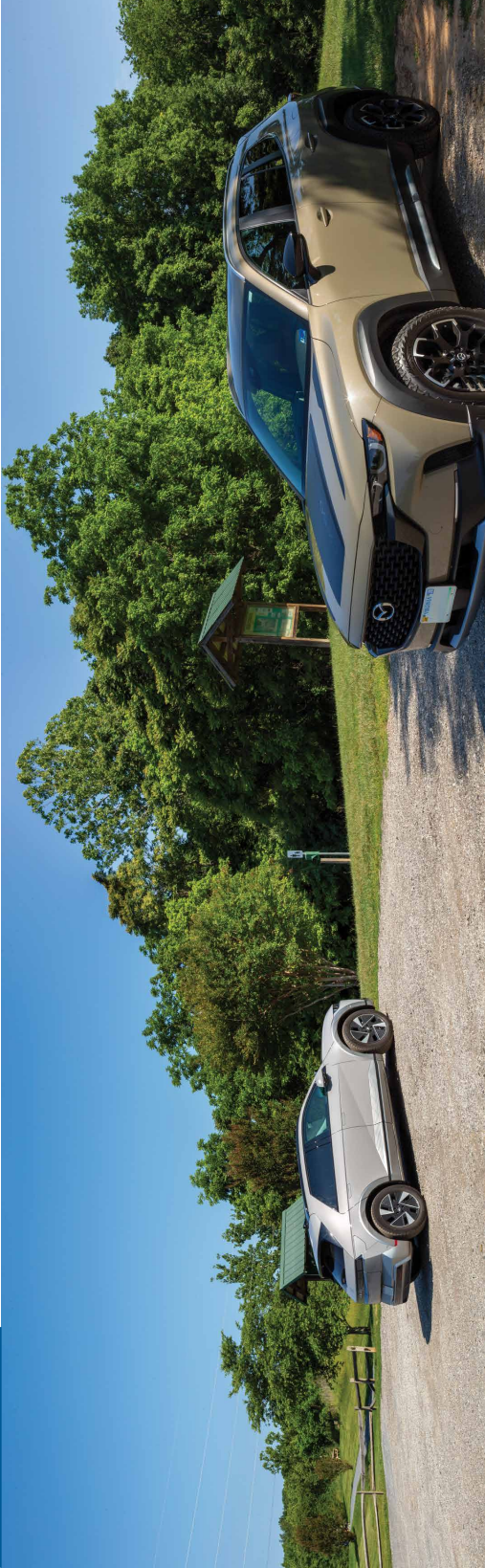


- ② Photo Viewpoint Location
- Structure Location
- Cultural Resources
- Existing Alignment to be Upgraded (AEP)
- Existing Transmission Line (AEP)
- ▲ Existing Substation (AEP)

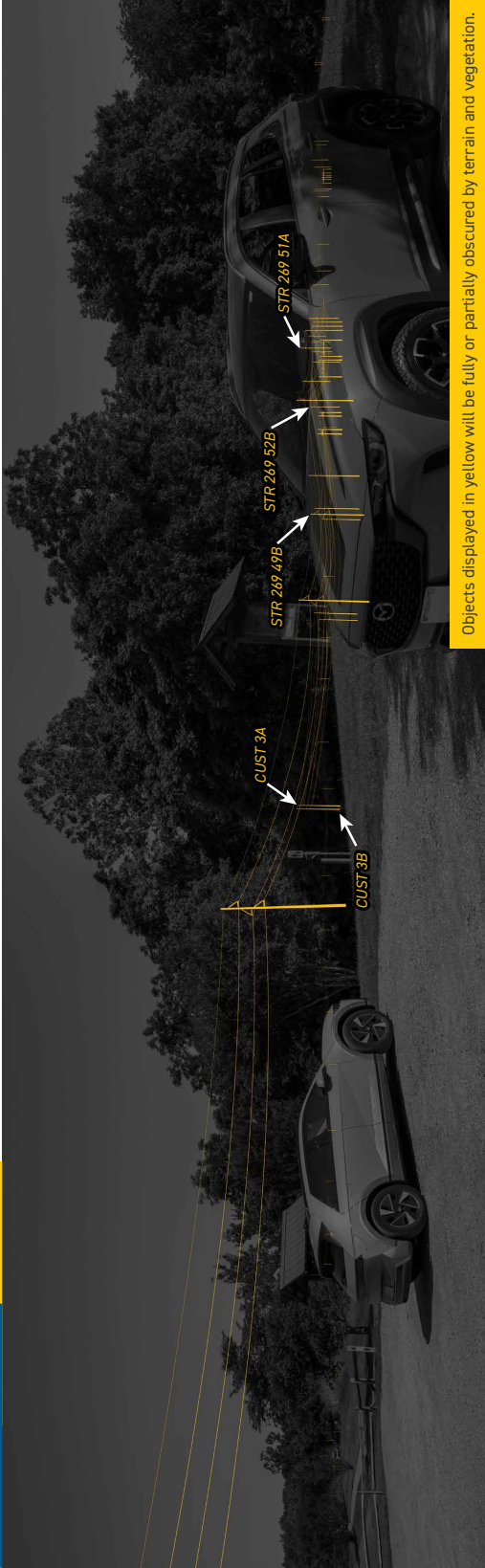
The visual simulation is an approximation using the best available data. Final engineering, permitting, and construction details are not complete.



Existing Conditions



Proposed Conditions Overlay



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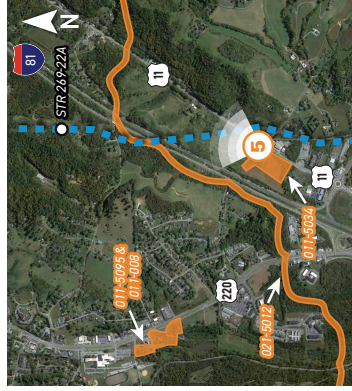
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Daleville Area

Transmission Improvements Project

Viewpoint 5A

Date: 6/2/2026 Time: 11:31 a.m.
Viewing Direction: Northeast

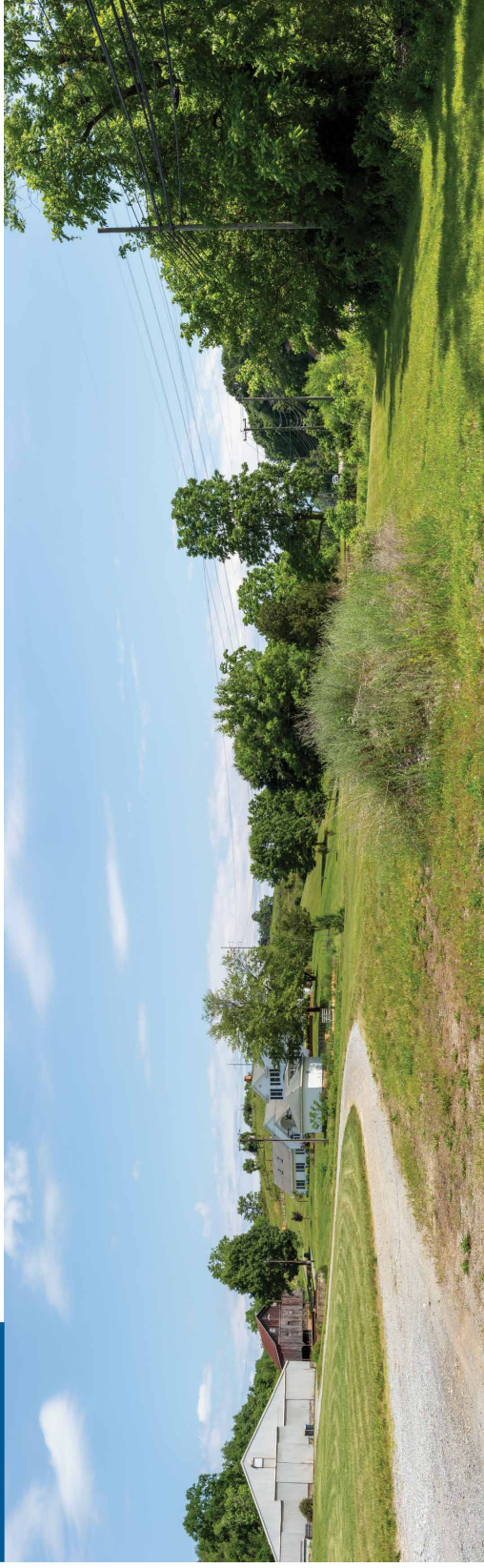


- 5 Photo Viewpoint Location
- O Structure Location
- Cultural Resources
- Existing Alignment to be Upgraded (AEP)

The visual simulation is an approximation using the best available data. Final engineering, permitting, and construction details are not complete.



Existing Conditions



Proposed Conditions Overlay



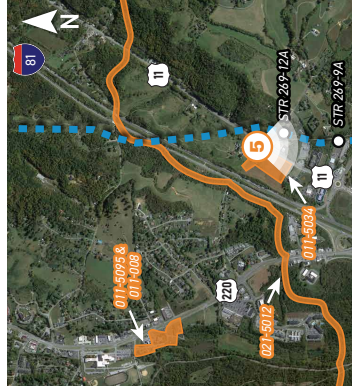
Objects displayed in yellow will be fully or partially obscured by terrain and vegetation.

Daleville Area

Transmission Improvements Project

Viewpoint 5B

Date: 6/2/2026 Time: 11:26 a.m.
Viewing Direction: South



- 5 Photo Viewpoint Location
- Structure Location
- Cultural Resources
- Existing Alignment to be Upgraded (AEP)

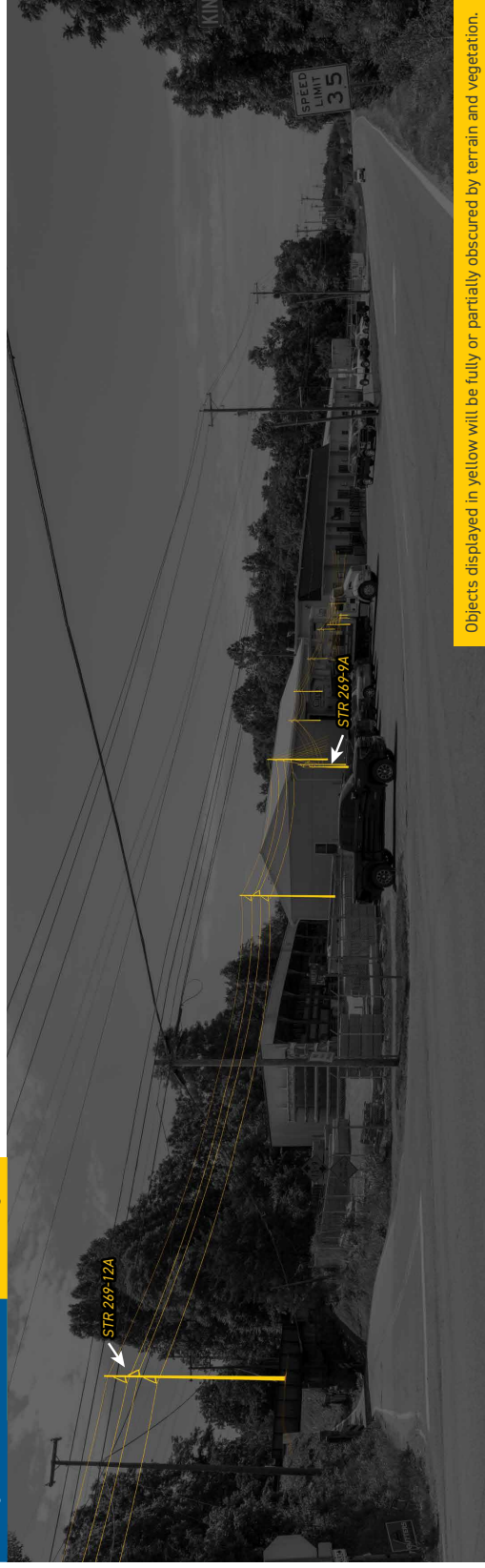
The visual simulation is an approximation using the best available data. Final engineering, permitting, and construction details are not complete.



Existing Conditions



Proposed Conditions



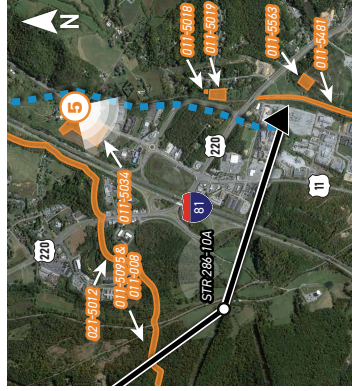
Objects displayed in yellow will be fully or partially obscured by terrain and vegetation.

Daleville Area

Transmission Improvements Project

Viewpoint 5C

Date: 6/2/2026 Time: 11:26 a.m.
Viewing Direction: Southwest



- 5 Photo Viewpoint Location
- Structure Location
- Cultural Resources
- Existing Alignment to be Upgraded (AEP)

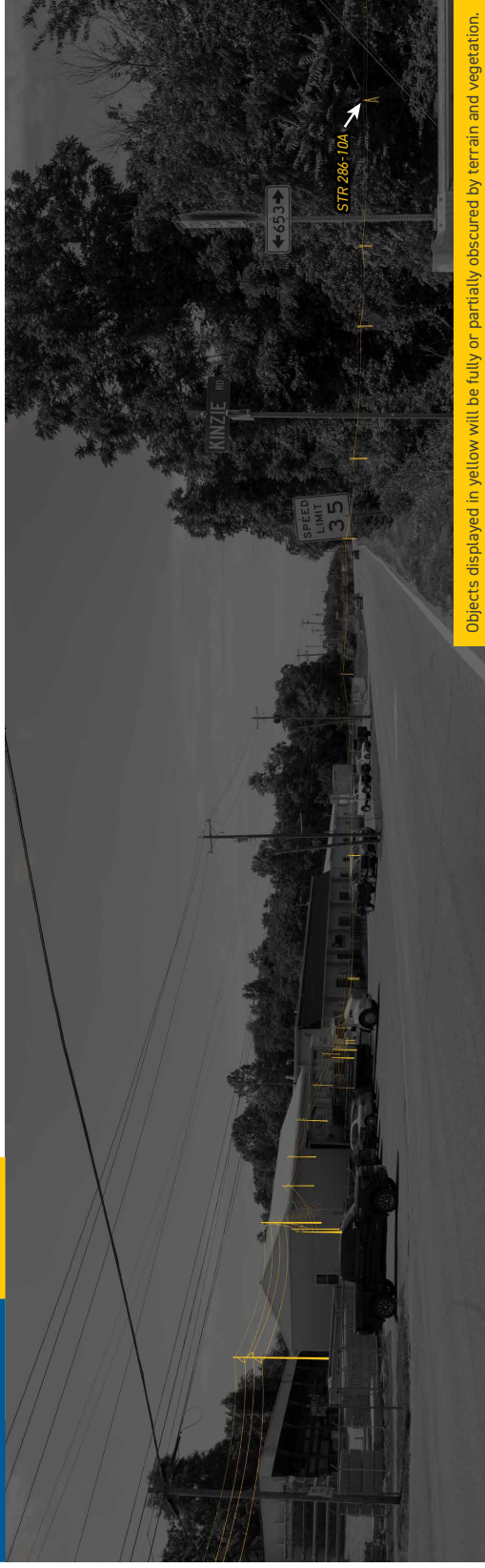
The visual simulation is an approximation using the best available data. Final engineering, permitting, and construction details are not complete.



Existing Conditions



Proposed Conditions Overlay



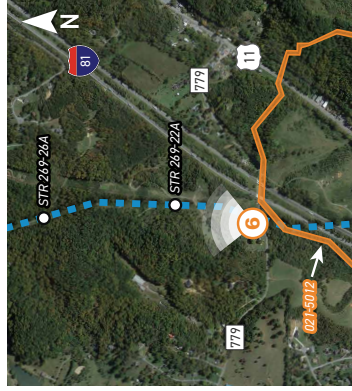
Objects displayed in yellow will be fully or partially obscured by terrain and vegetation.

Daleville Area

Transmission Improvements Project

Viewpoint 6

Date: 6/2/2026 Time: 5:10 p.m.
Viewing Direction: North



- 6 Photo Viewpoint Location
- O Structure Location
- Orange line Cultural Resources
- Blue dashed line Existing Alignment to be Upgraded (AEP)

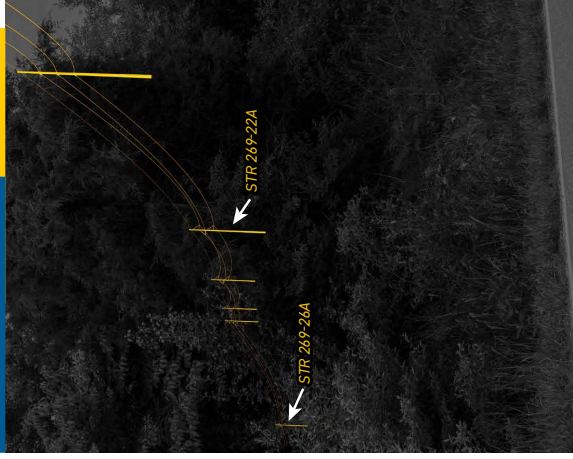
The visual simulation is an approximation using the best available data. Final engineering, permitting, and construction details are not complete.



Existing Conditions



Proposed Conditions



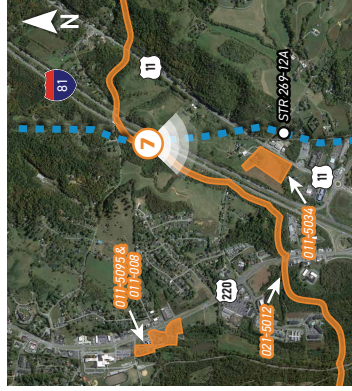
Objects displayed in yellow will be fully or partially obscured by terrain and vegetation.

Daleville Area

Transmission Improvements Project

Viewpoint 7

Date: 6/2/2026 Time: 1:48 p.m.
Viewing Direction: South

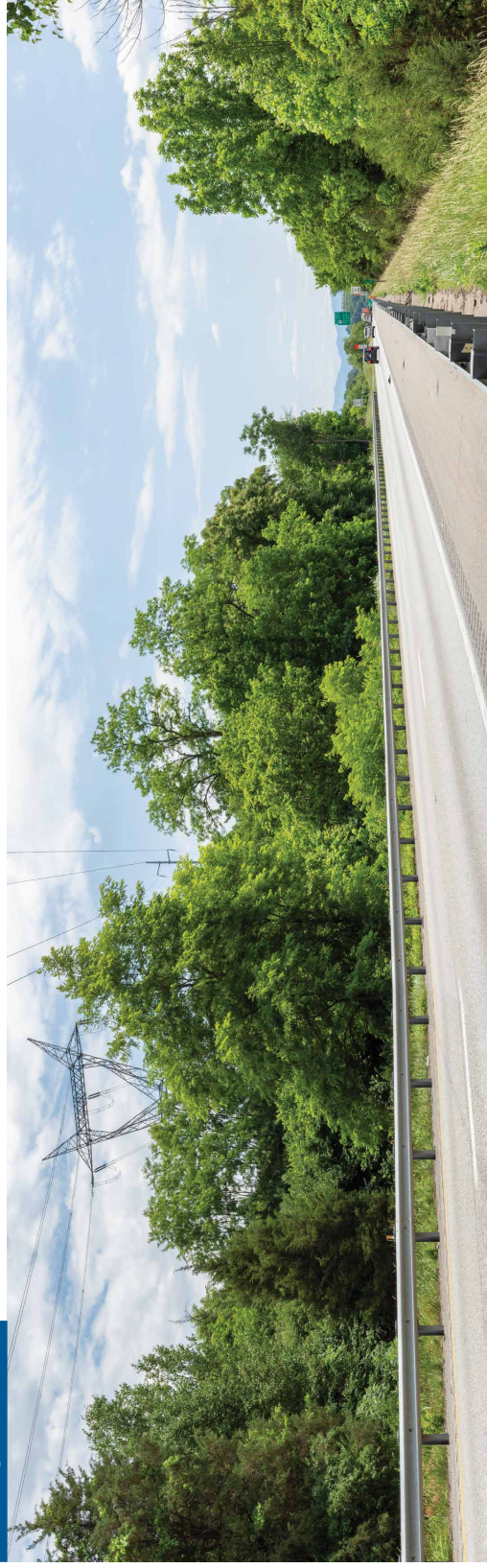


- ⑦ Photo Viewpoint Location
- Structure Location
- Cultural Resources
- Existing Alignment to be Upgraded (AEP)

The visual simulation is an approximation using the best available data. Final engineering, permitting, and construction details are not complete.



Existing Conditions



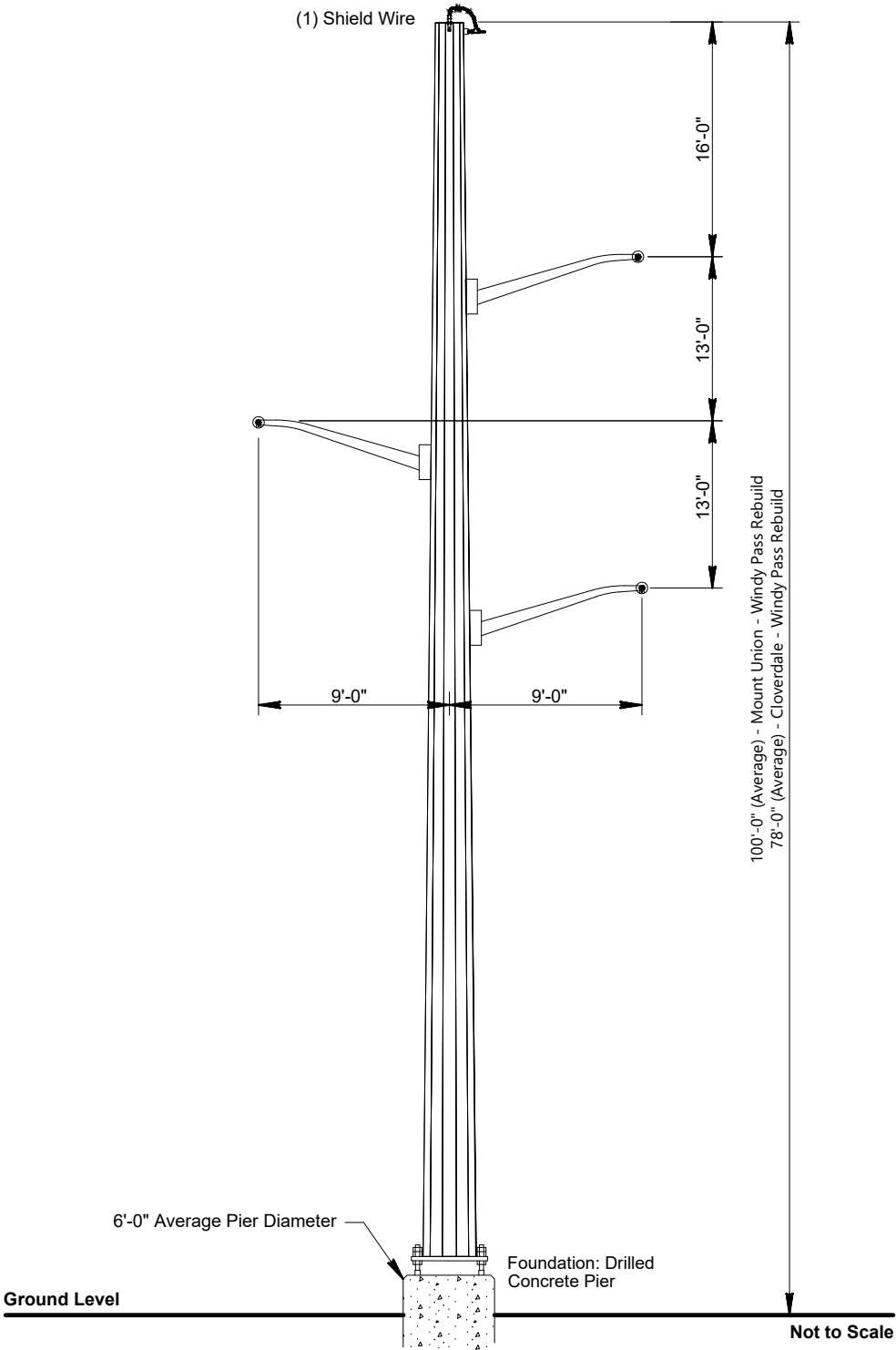
Proposed Conditions Overlay



Objects displayed in yellow will be fully or partially obscured by terrain and vegetation.

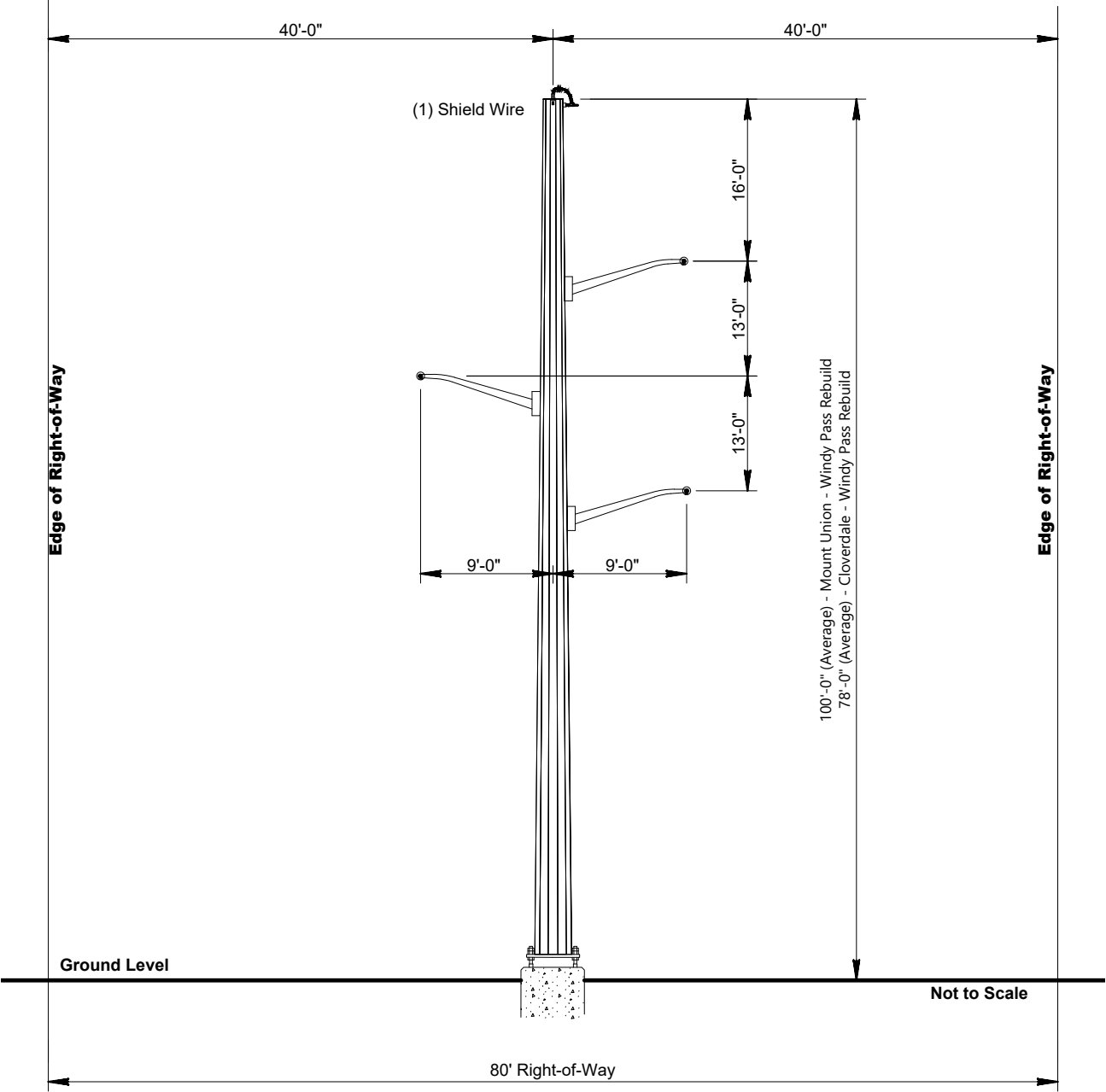
Appendix C - Typical Structures

EXHIBIT 12
Existing and Proposed 138-kV Dead-end Alternating Davit Arm Monopole in 80-foot ROW
(SINGLE CIRCUIT)



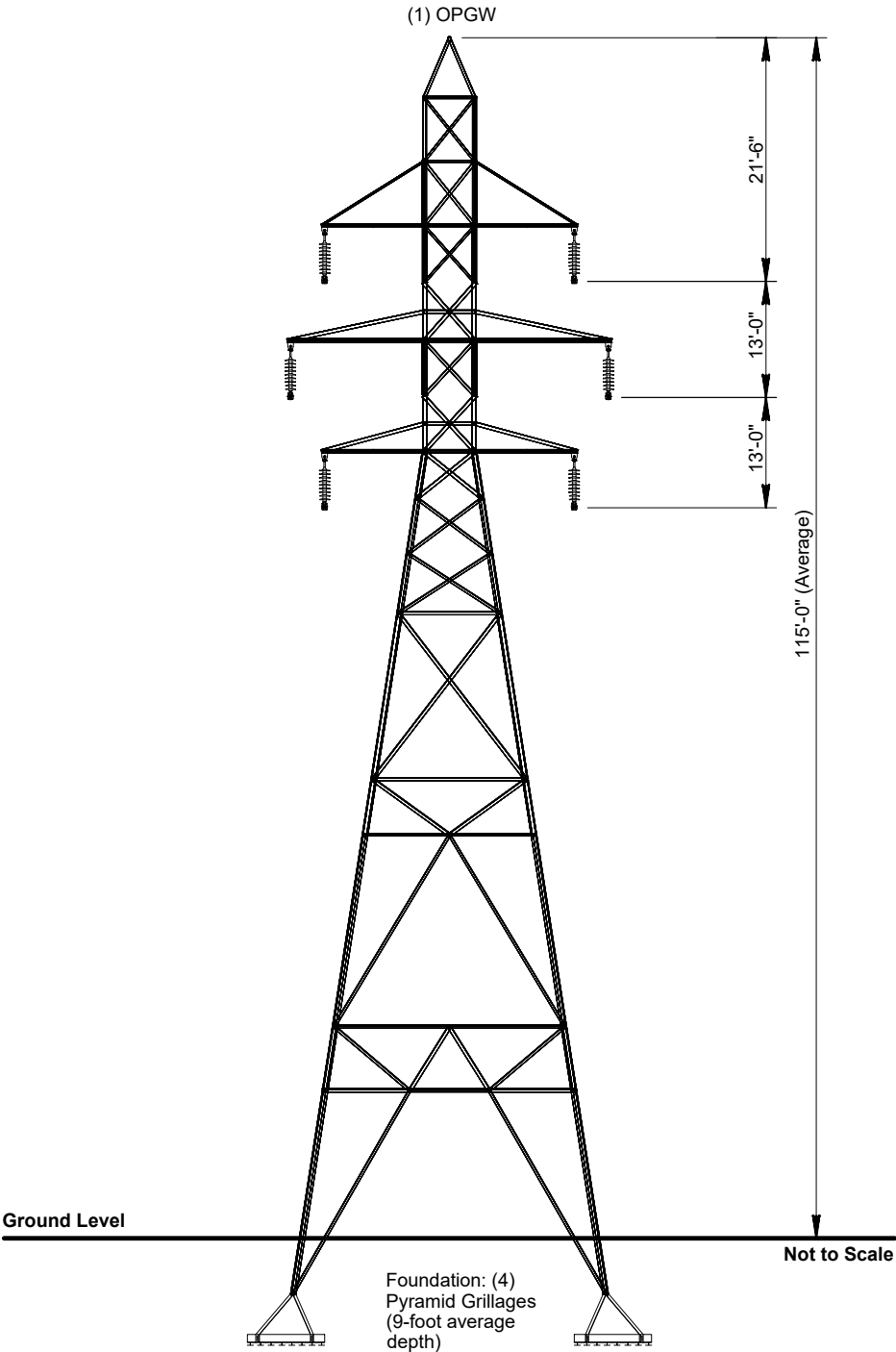
TYPICAL SCHEMATIC

EXHIBIT 12
Existing and Proposed 138-kV Dead-end Alternating Davit Arm Monopole in 80-foot ROW
(SINGLE CIRCUIT)



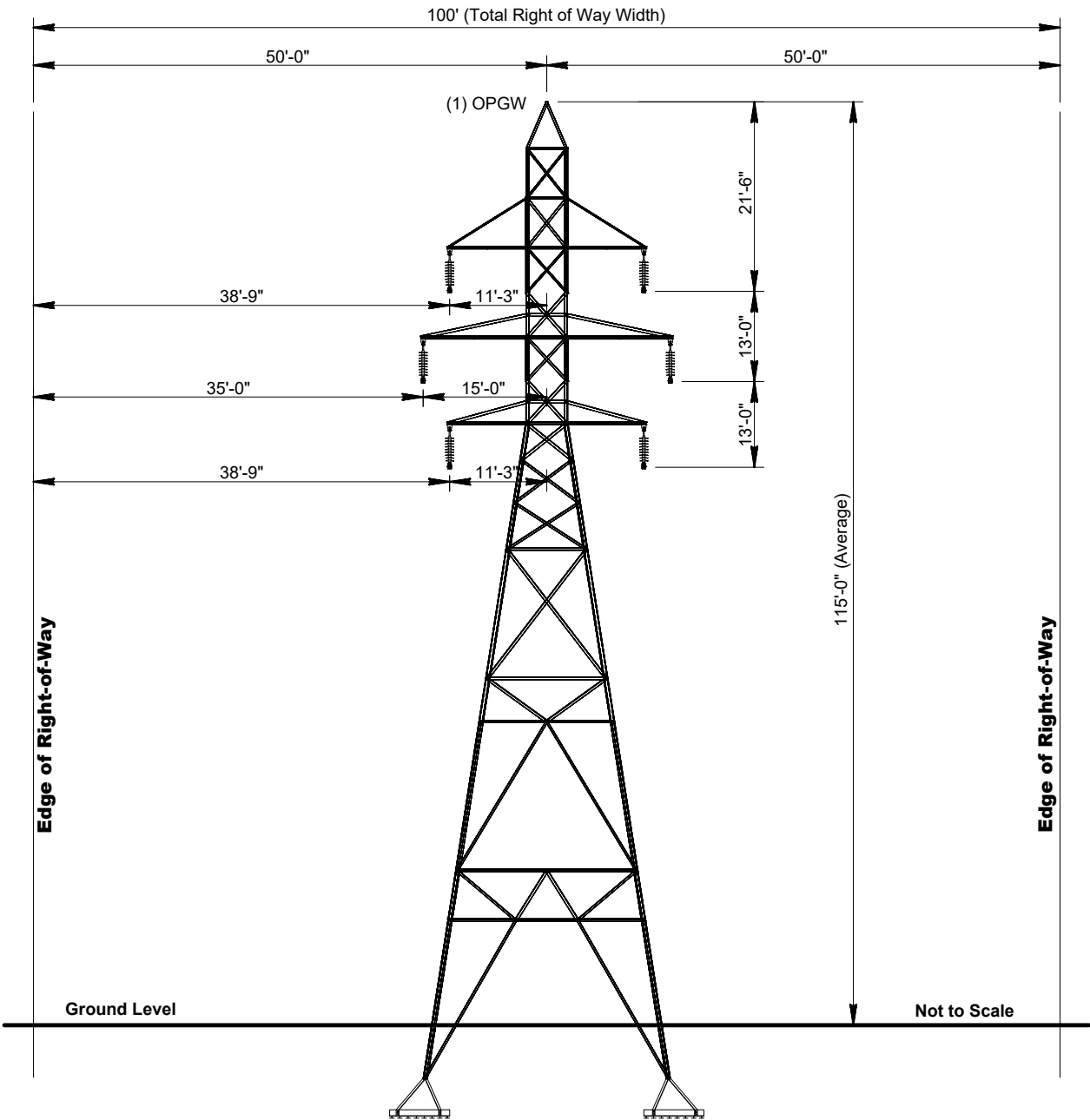
TYPICAL RIGHT-OF-WAY CROSS SECTION

Existing and Proposed 138-kV Dead-end Lattice Tower in 100-foot ROW (DOUBLE CIRCUIT)
EXHIBIT 13



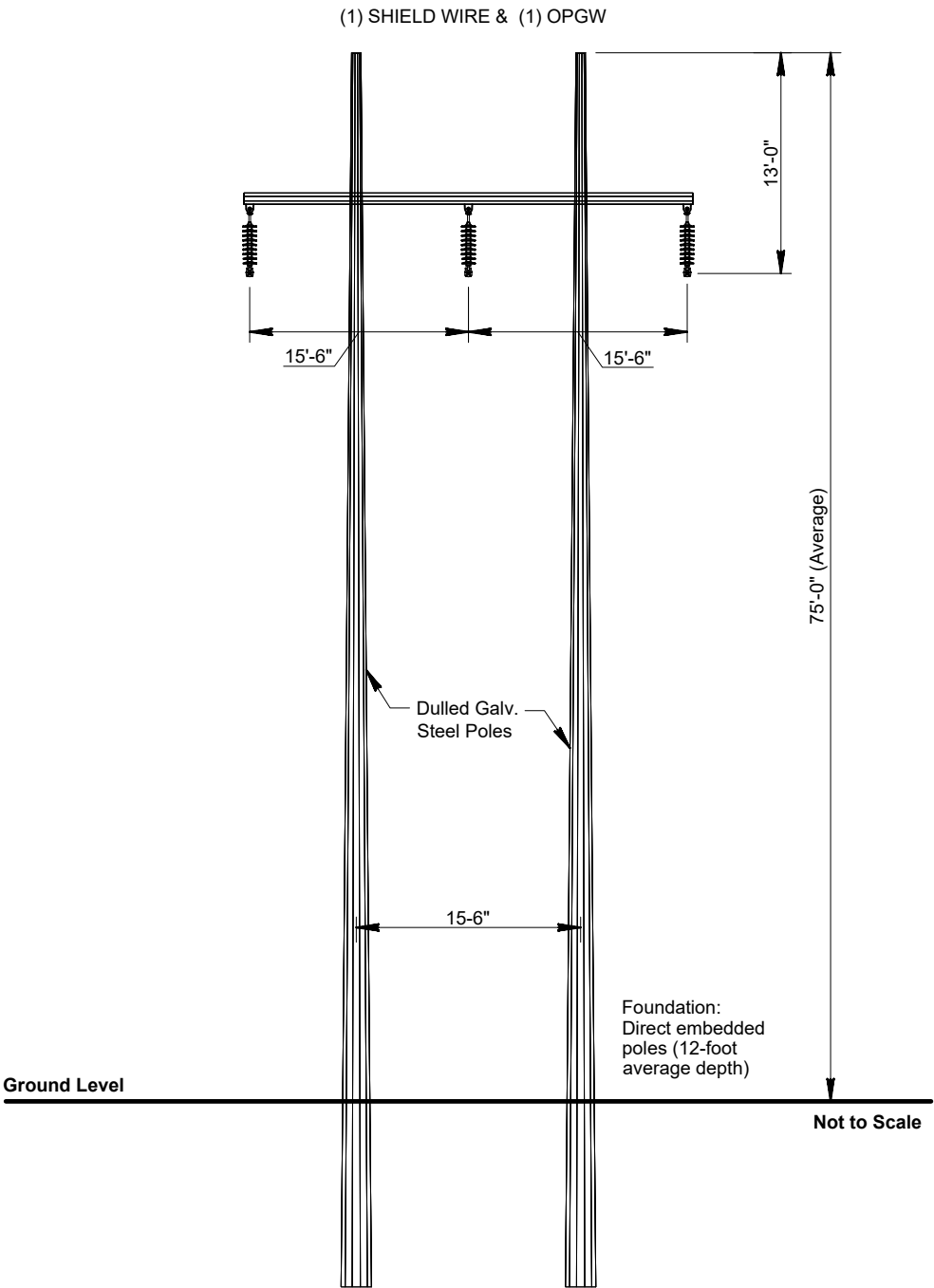
TYPICAL SCHEMATIC

EXHIBIT 13
Existing and Proposed 138-kV Dead-end Lattice Tower in 100-foot ROW (DOUBLE CIRCUIT)



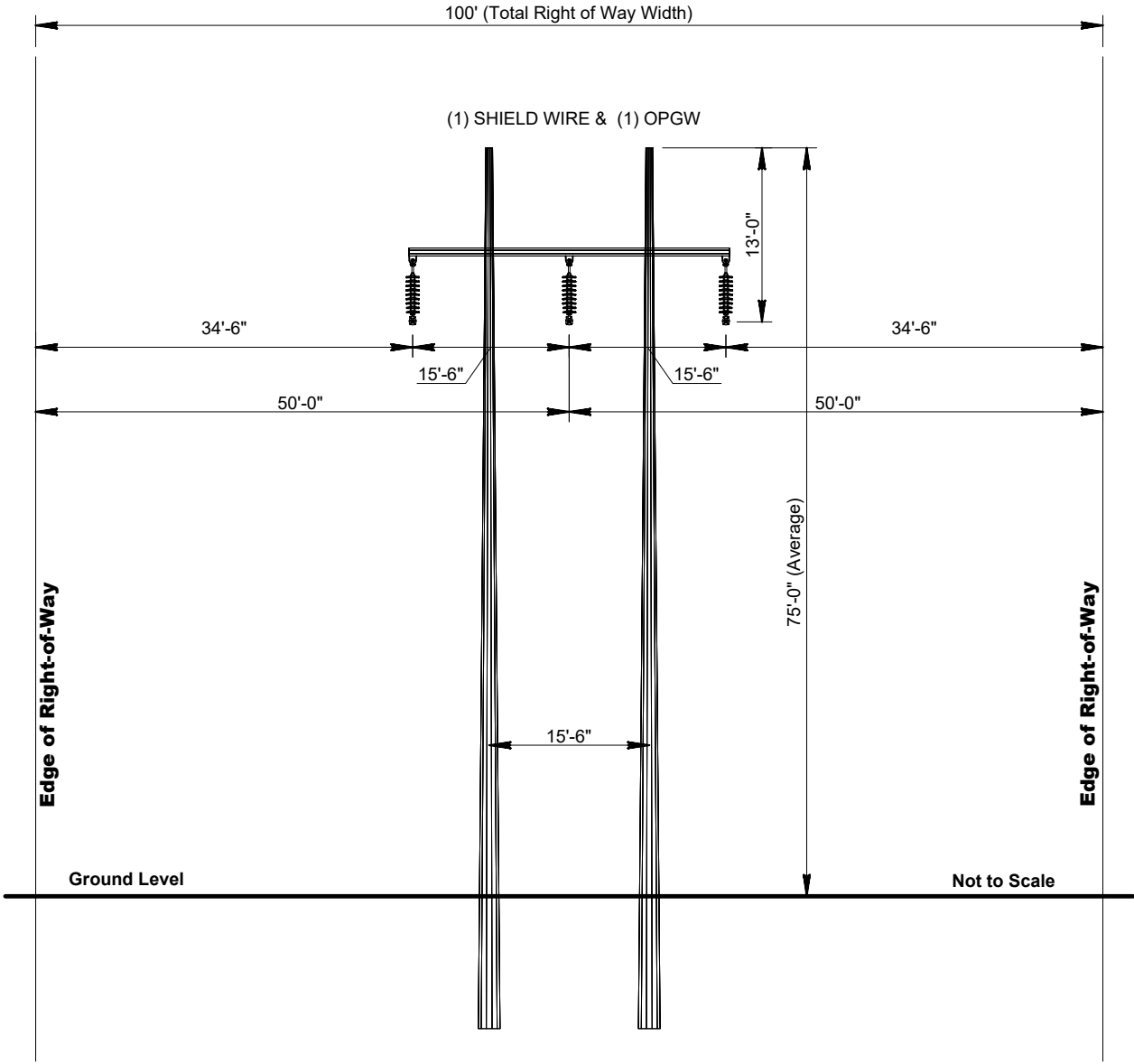
TYPICAL RIGHT-OF-WAY CROSS SECTION

EXHIBIT 14
Existing and Proposed 138-kV Suspension H-Frame in 100-foot ROW (SINGLE CIRCUIT)



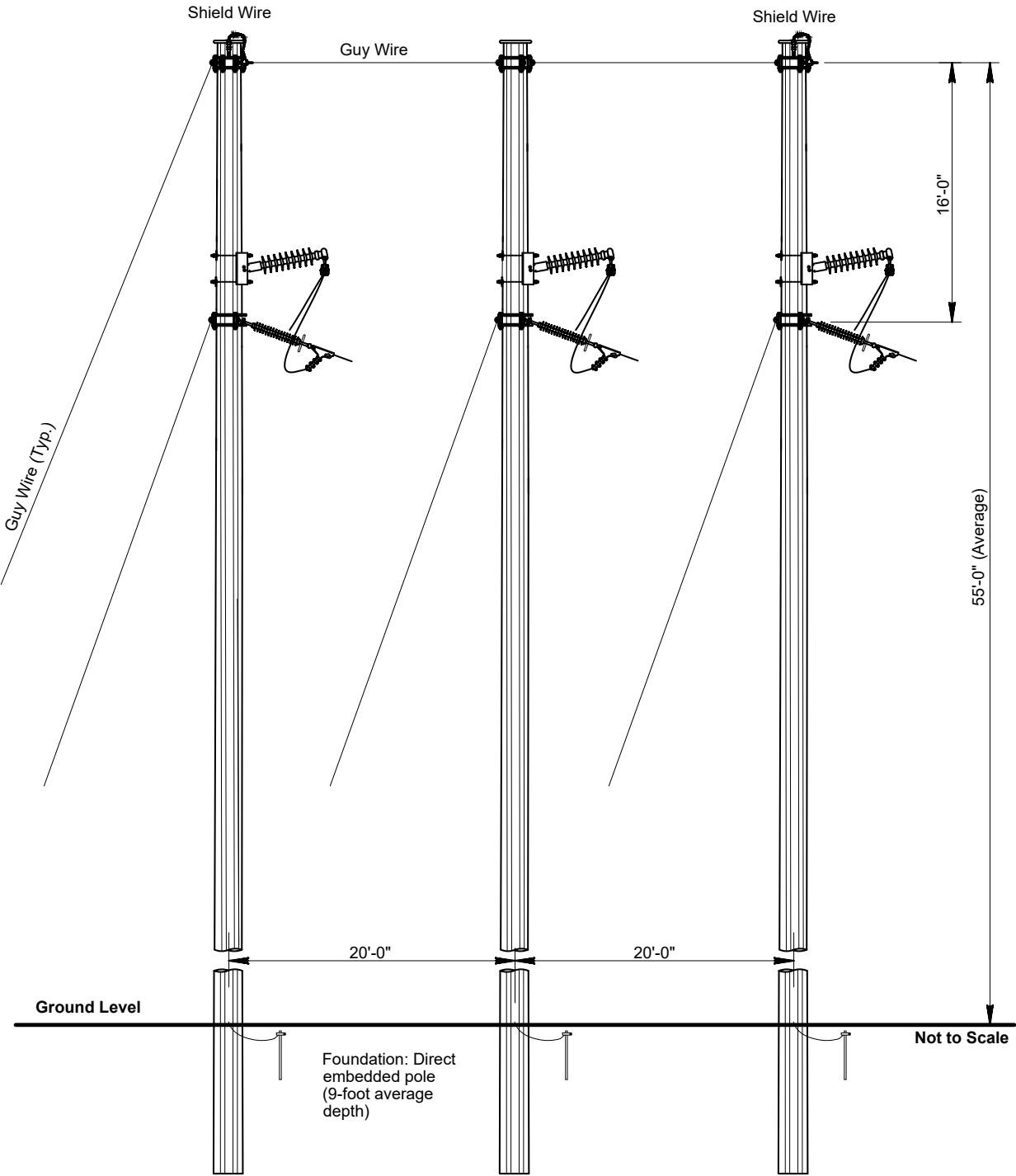
TYPICAL SCHEMATIC

EXHIBIT 14
Existing and Proposed 138-kV Suspension H-Frame in 100-foot ROW (SINGLE CIRCUIT)



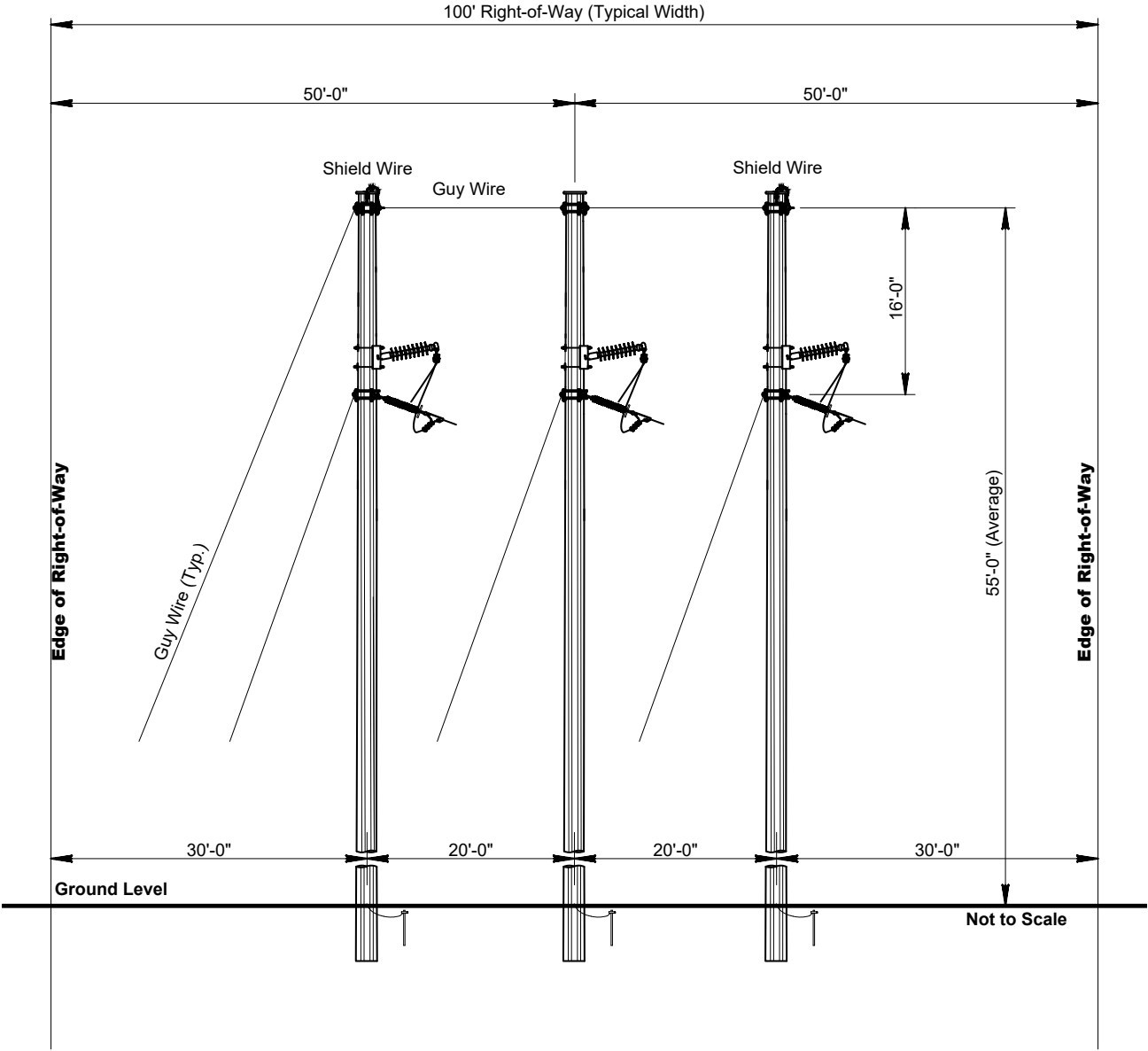
TYPICAL RIGHT-OF-WAY CROSS SECTION

EXHIBIT 15
Existing and Proposed 138-kV Dead-end Guyed 3-Pole in 100-foot ROW (SINGLE CIRCUIT)



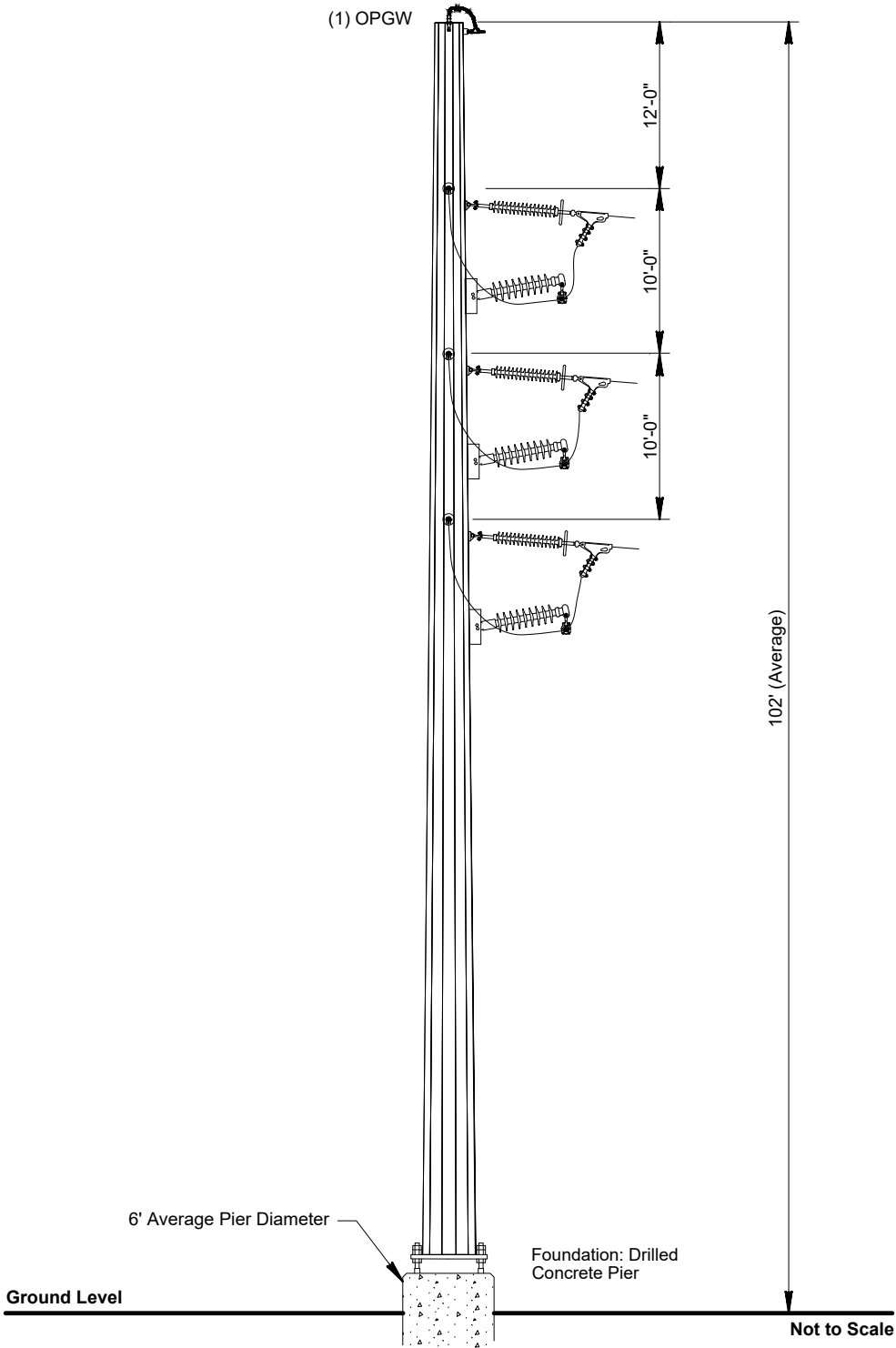
TYPICAL SCHEMATIC

EXHIBIT 15
Existing and Proposed 138-kV Dead-end Guyed 3-Pole in 100-foot ROW (SINGLE CIRCUIT)



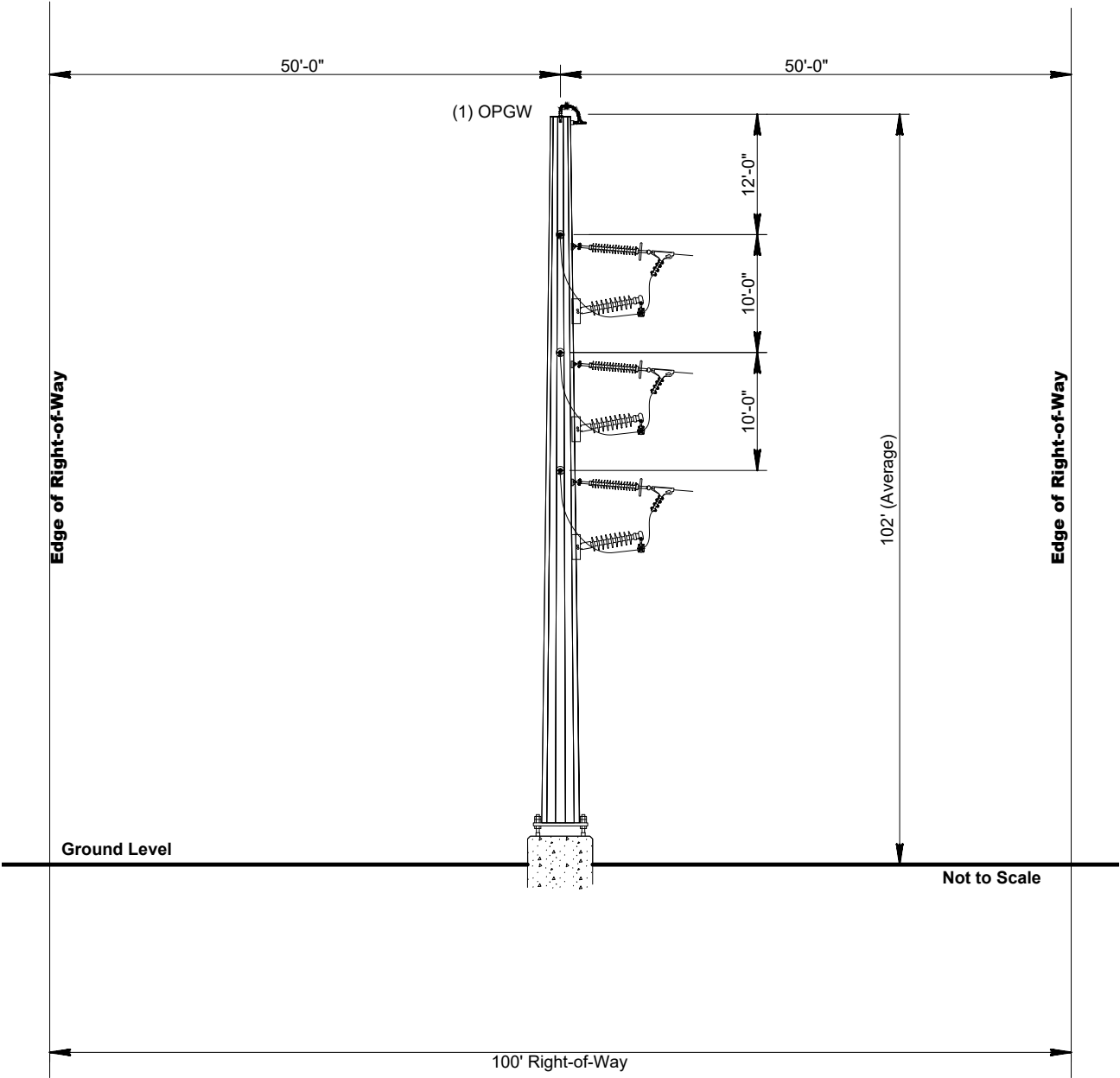
TYPICAL RIGHT-OF-WAY CROSS SECTION

EXHIBIT 16
Existing and Proposed 138-kV Dead-end Monopole in 100-foot ROW (SINGLE CIRCUIT)



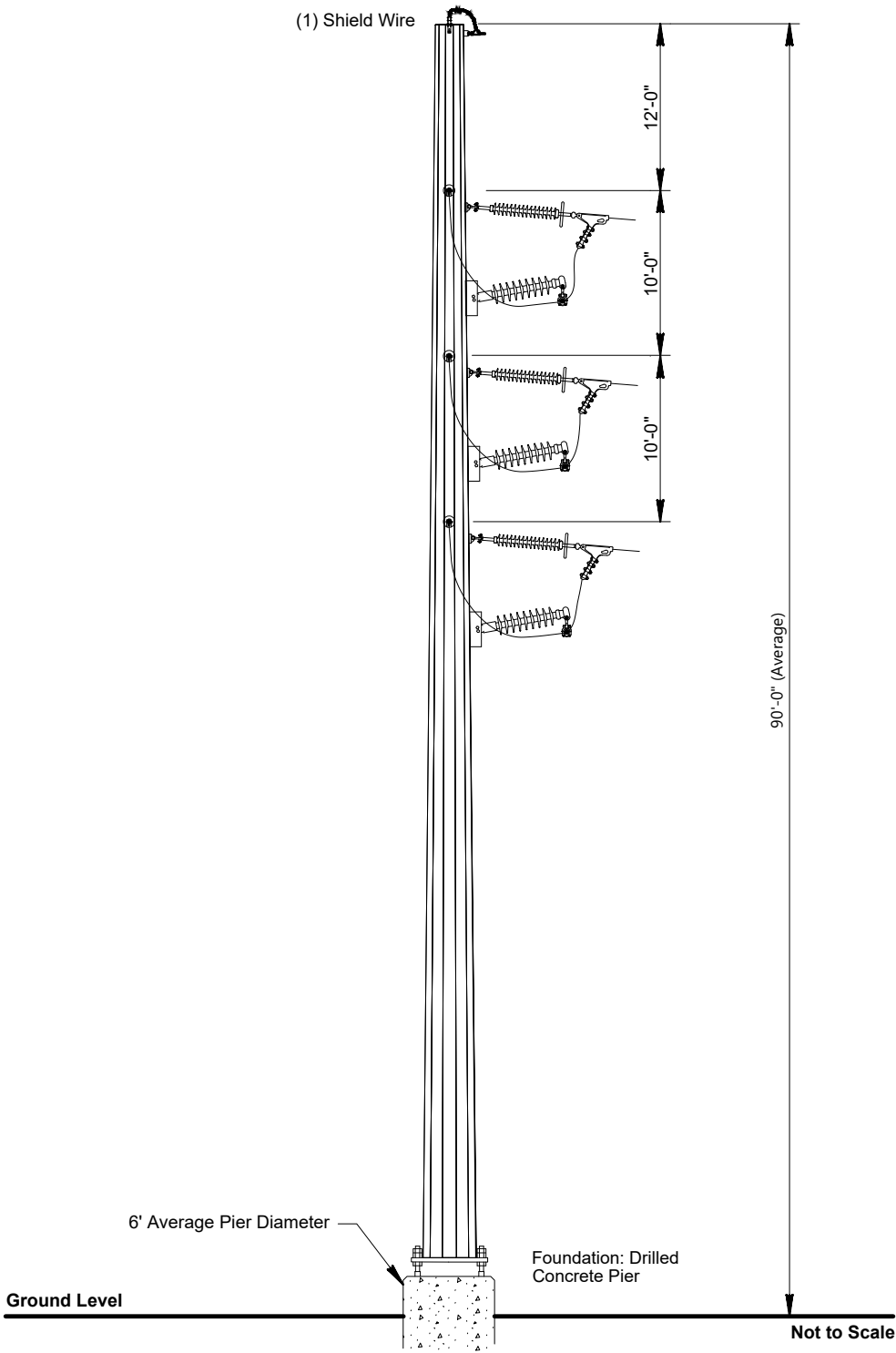
TYPICAL SCHEMATIC

EXHIBIT 16
Existing and Proposed 138-kV Dead-end Monopole in 100-foot ROW (SINGLE CIRCUIT)



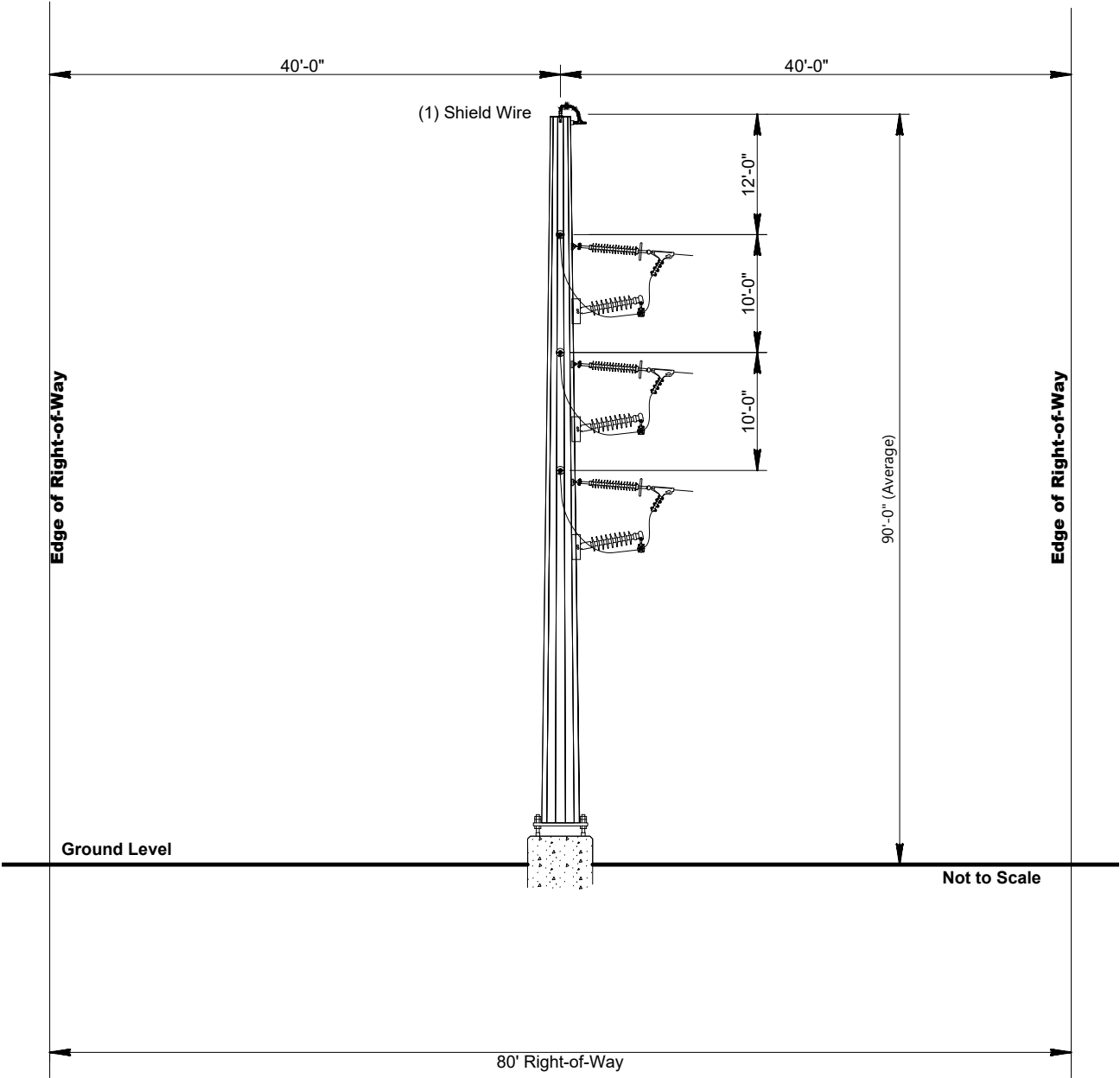
TYPICAL RIGHT-OF-WAY CROSS SECTION

EXHIBIT 17
Proposed 69-kV Dead-end Monopole in 80-foot ROW (SINGLE CIRCUIT)



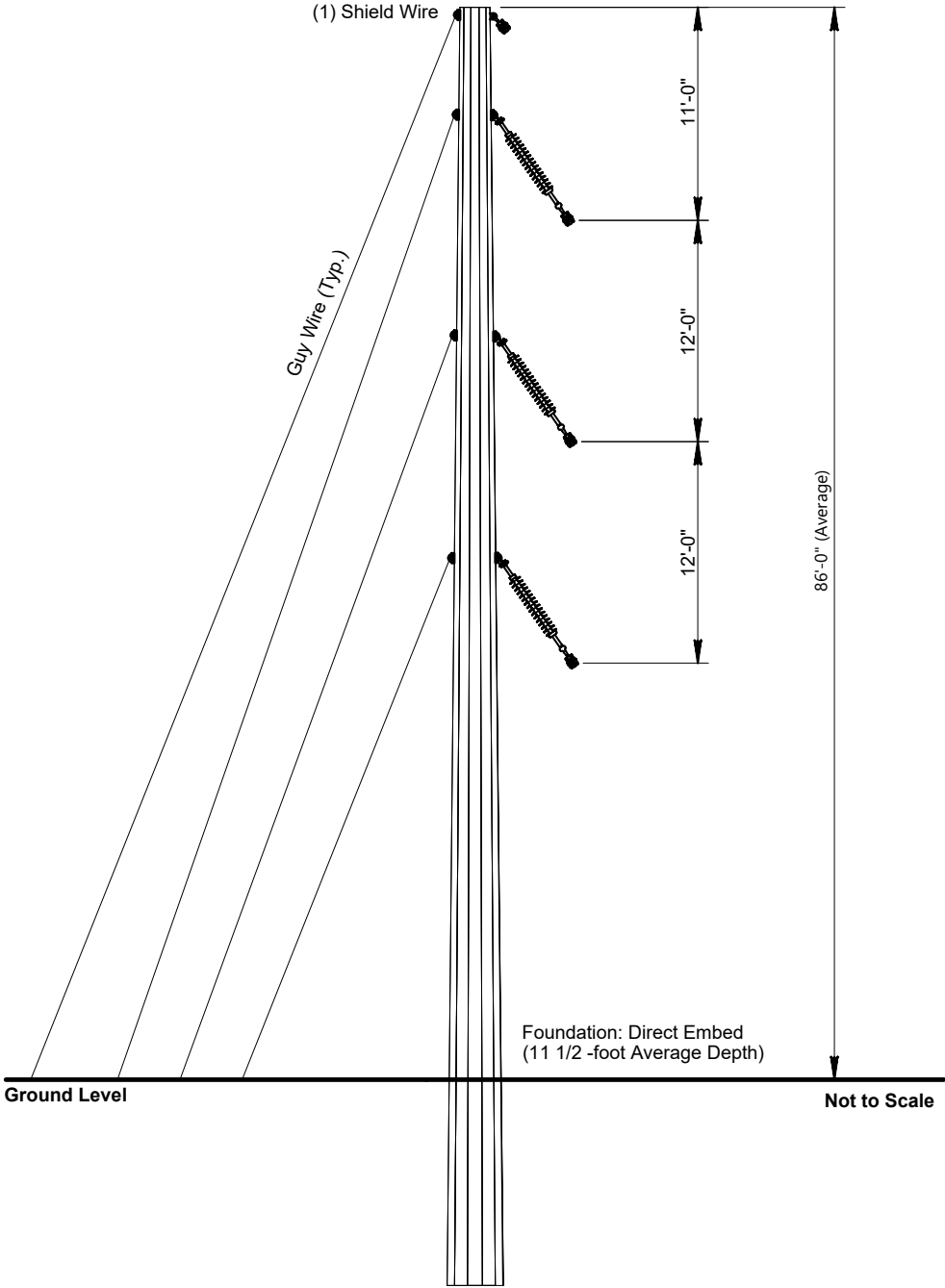
TYPICAL SCHEMATIC

EXHIBIT 17
Proposed 69-kV Dead-end Monopole in 80-foot ROW (SINGLE CIRCUIT)



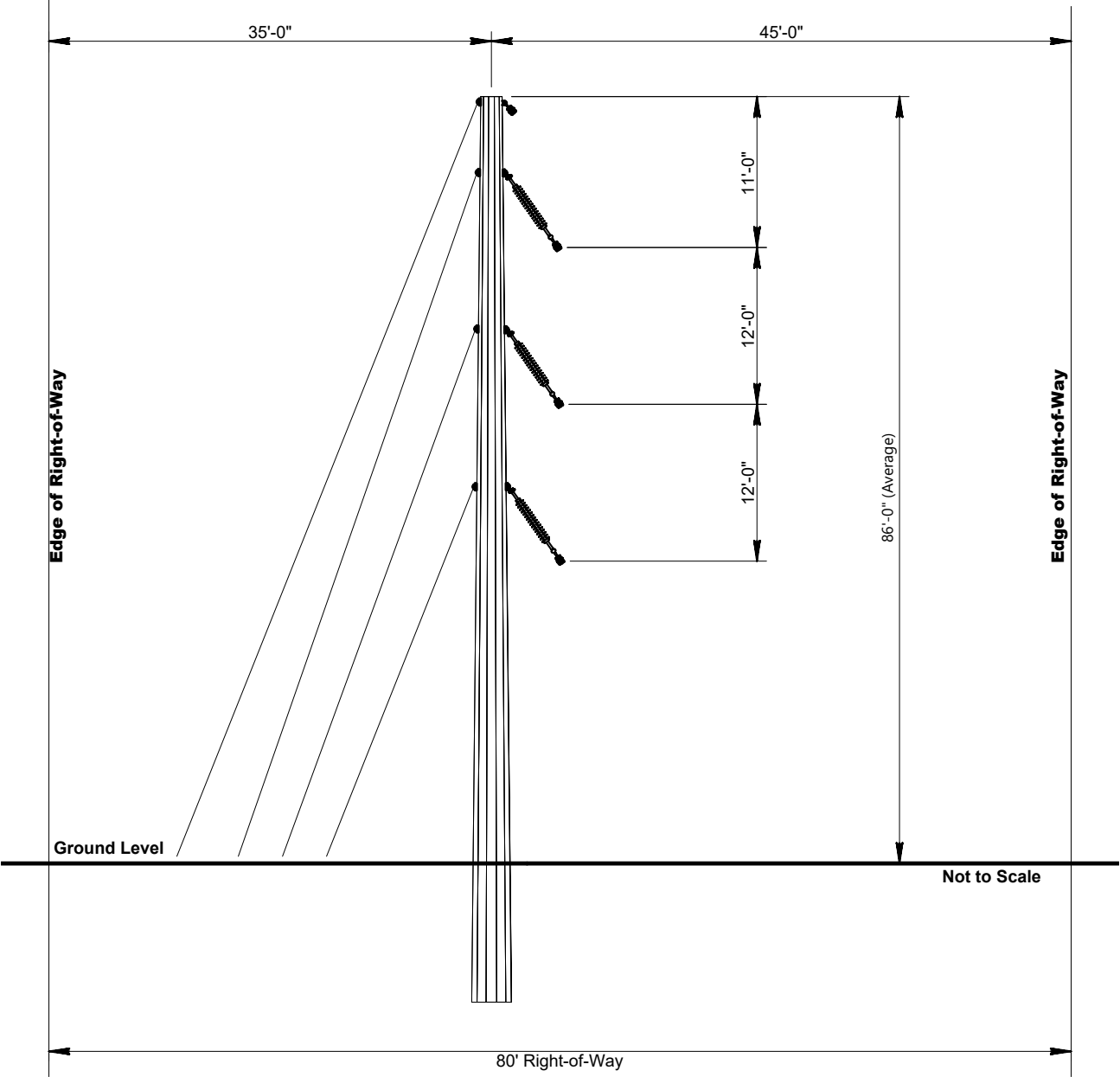
TYPICAL RIGHT-OF-WAY CROSS SECTION

EXHIBIT 18
Proposed 69-kV Running Angle Guyed Monopole in 80-foot ROW (SINGLE CIRCUIT)



TYPICAL SCHEMATIC

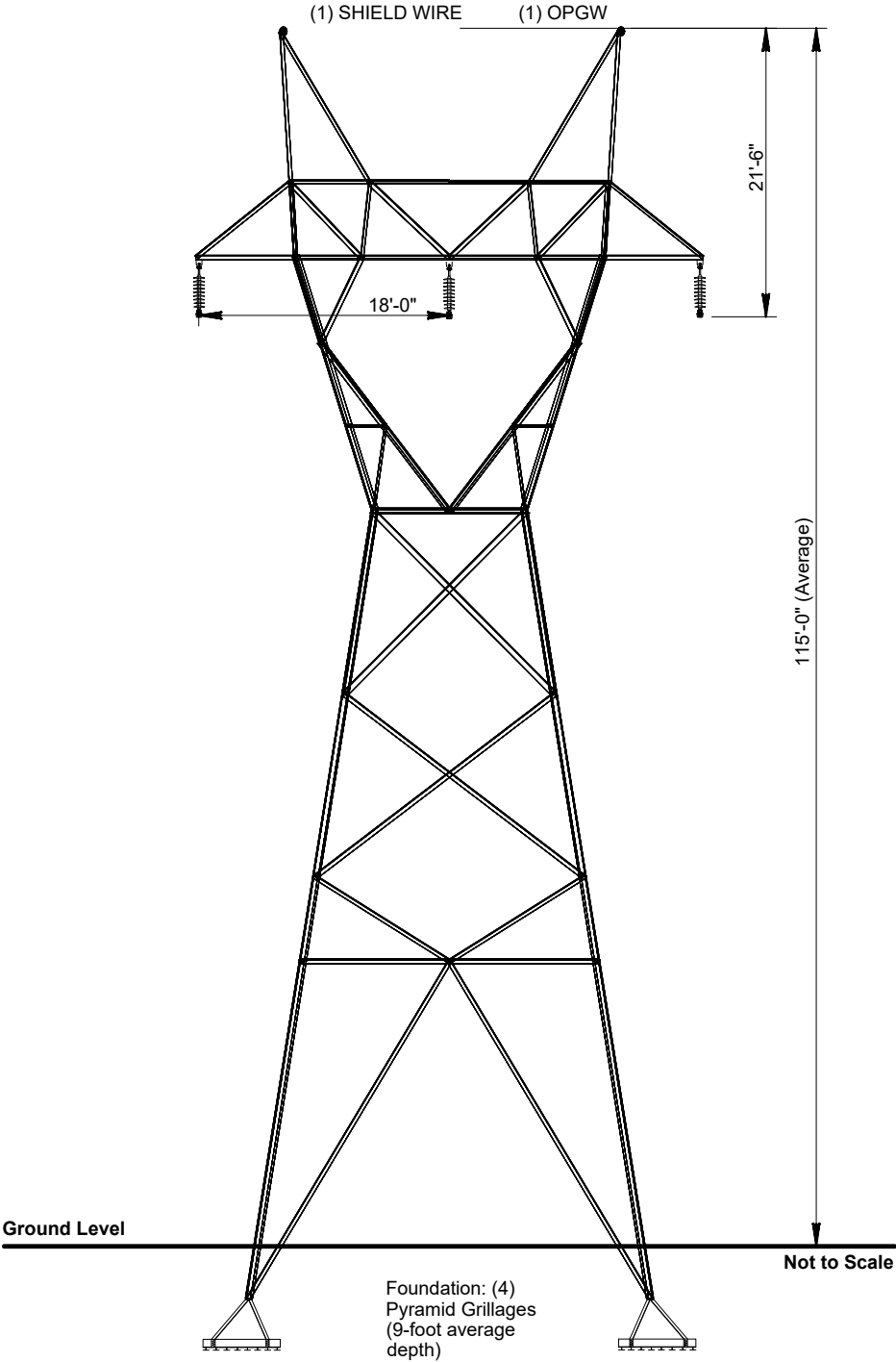
EXHIBIT 18
Proposed 69-kV Running Angle Guyed Monopole in 80-foot ROW (SINGLE CIRCUIT)



TYPICAL RIGHT-OF-WAY CROSS SECTION

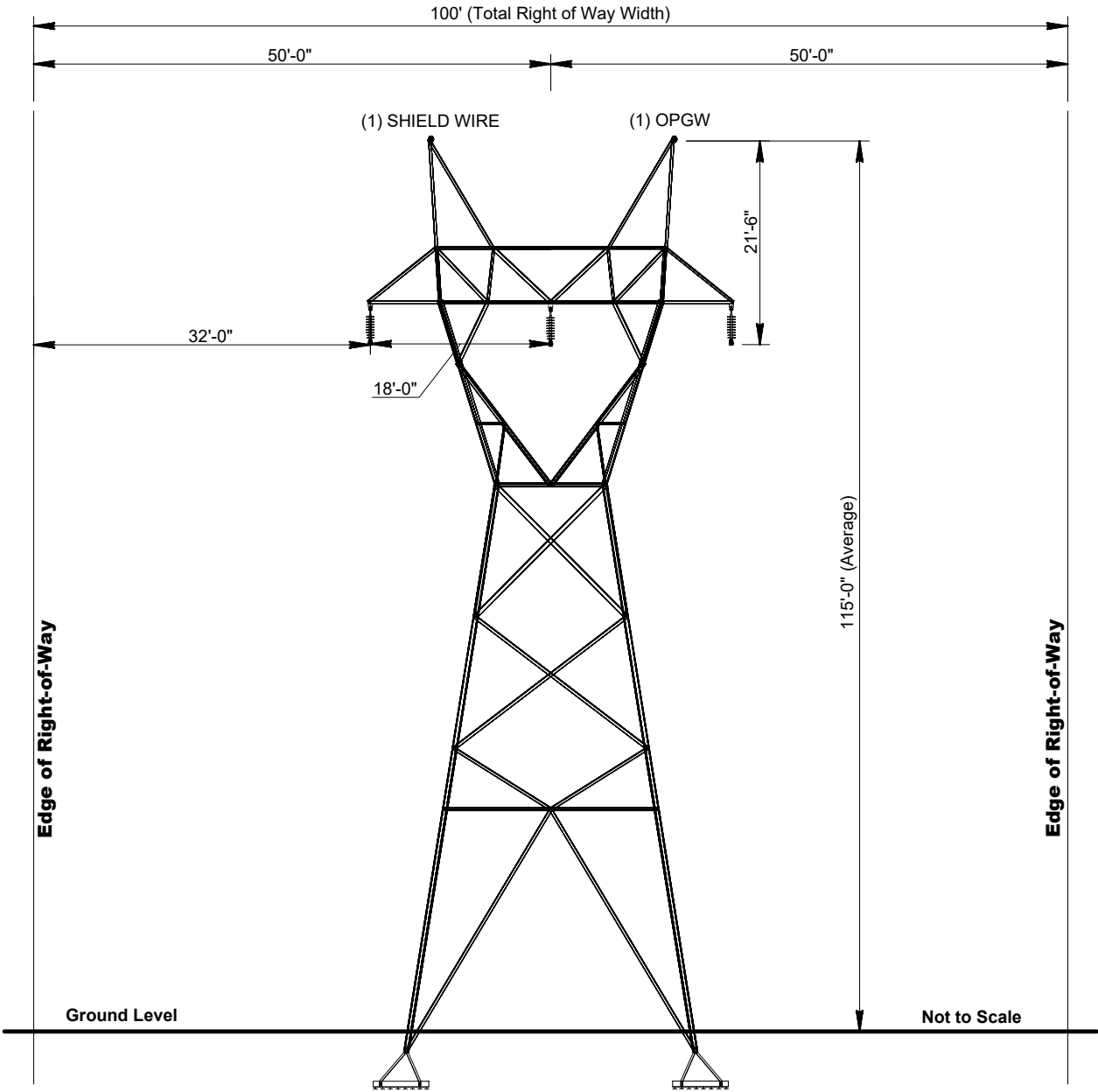
Proposed 138-kV Dead-end Lattice Tower in 100-foot ROW (SINGLE CIRCUIT)

EXHIBIT 19



TYPICAL SCHEMATIC

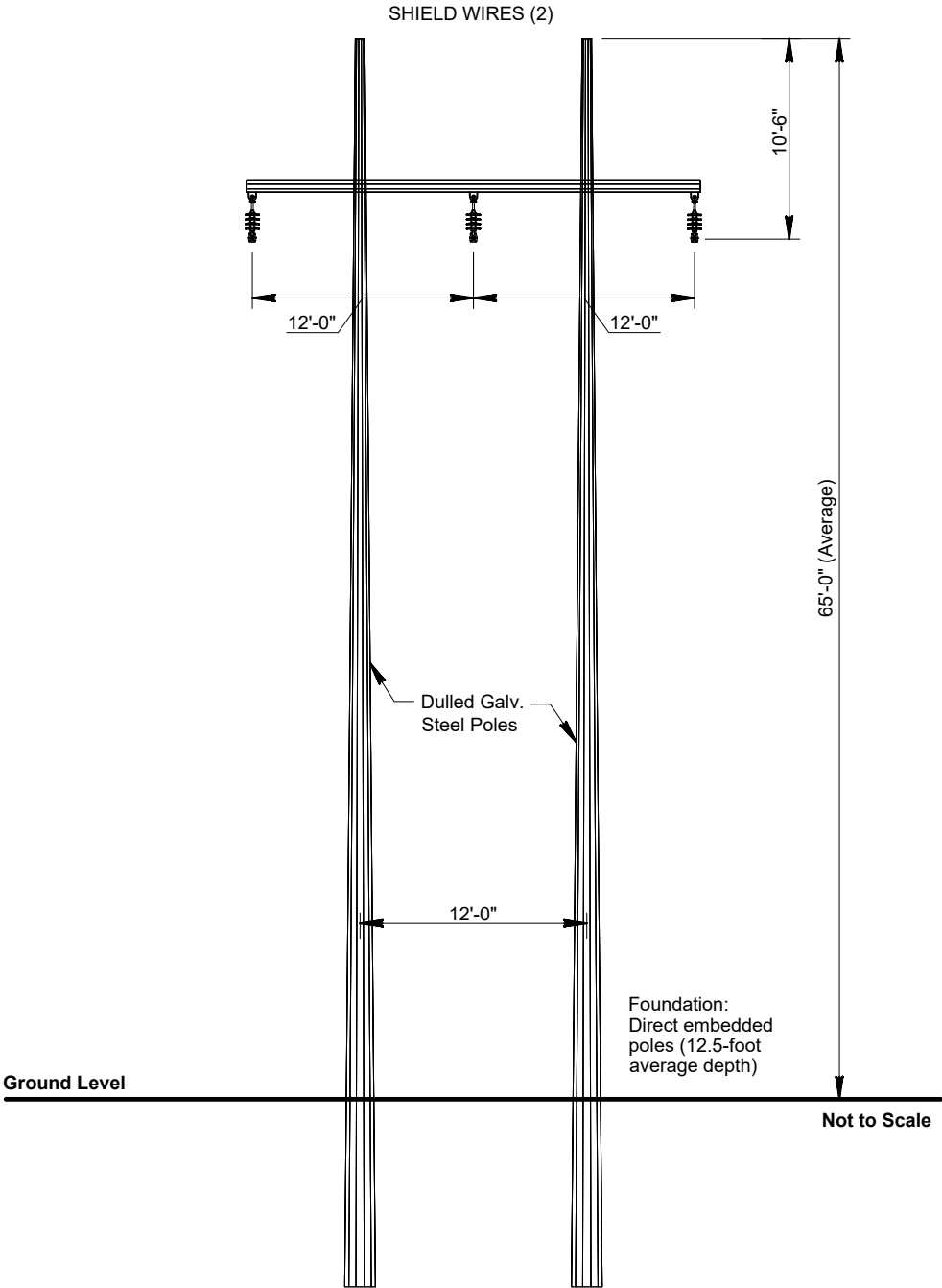
EXHIBIT 19
Proposed 138-kV Dead-end Lattice Tower in 100-foot ROW (SINGLE CIRCUIT)



TYPICAL RIGHT-OF-WAY CROSS SECTION

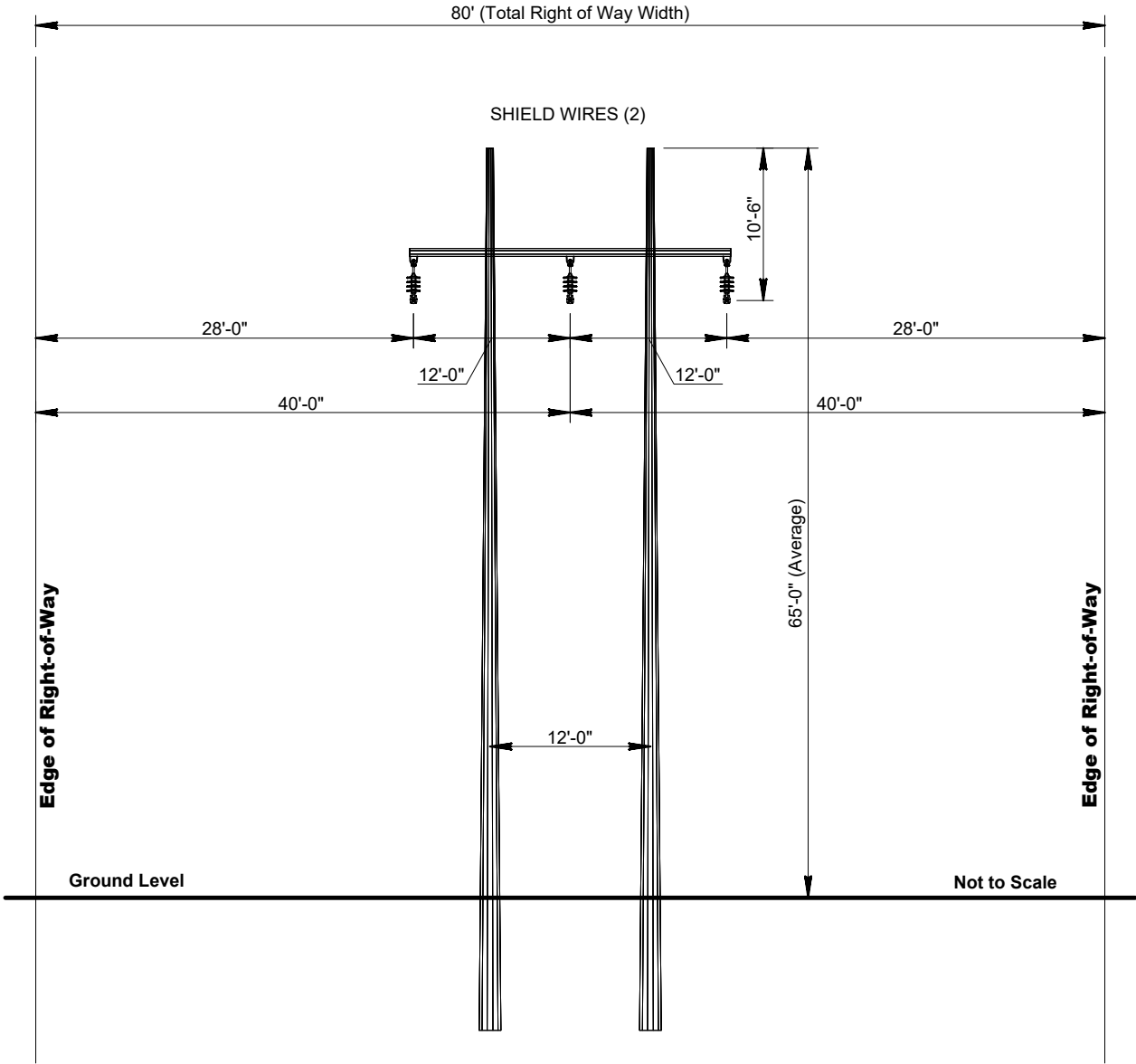
Proposed 138-kV Suspension H-Frame in 80-foot ROW (SINGLE CIRCUIT)

EXHIBIT 20



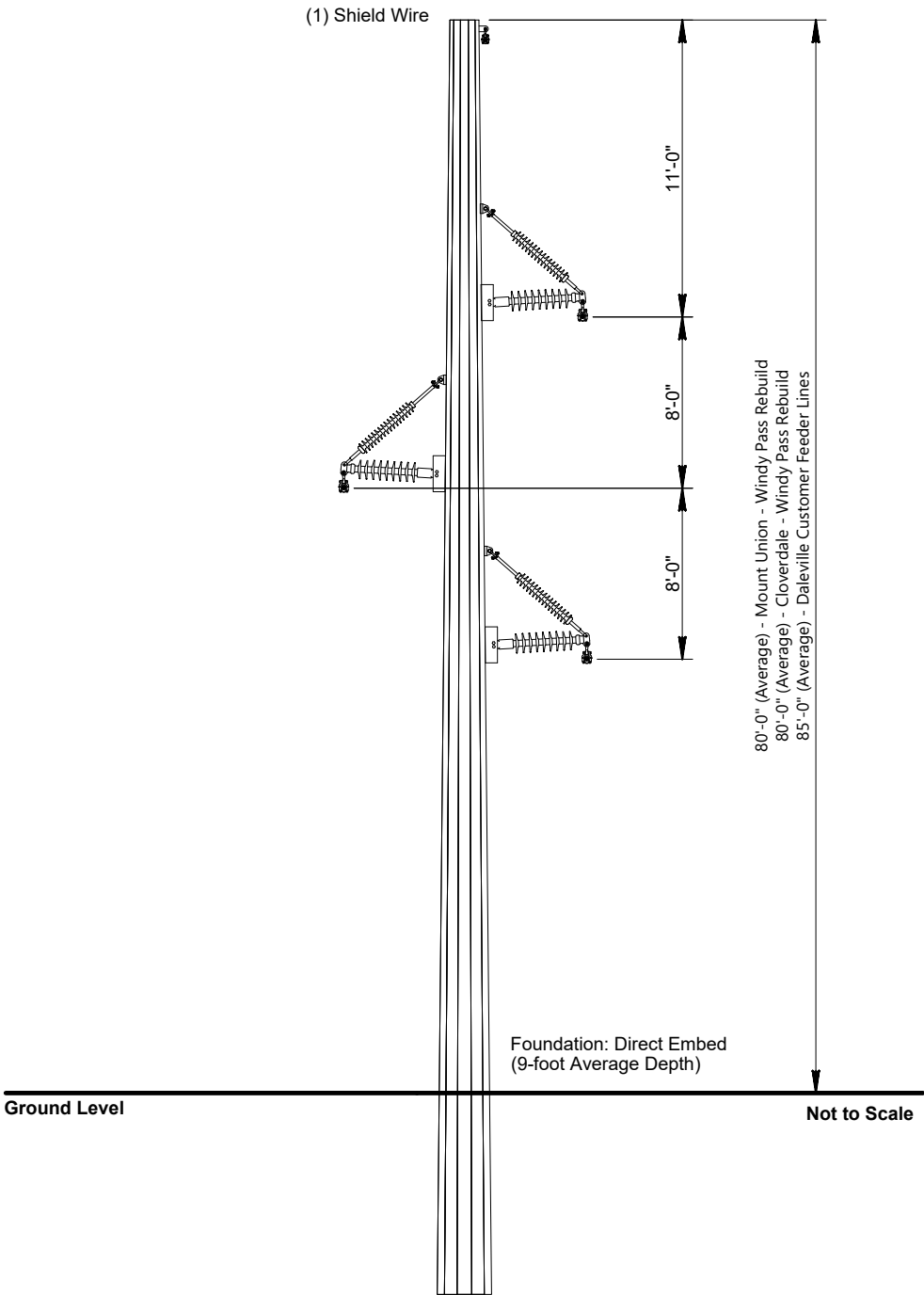
TYPICAL SCHEMATIC

EXHIBIT 20
Proposed 138-kV Suspension H-Frame in 80-foot ROW (SINGLE CIRCUIT)



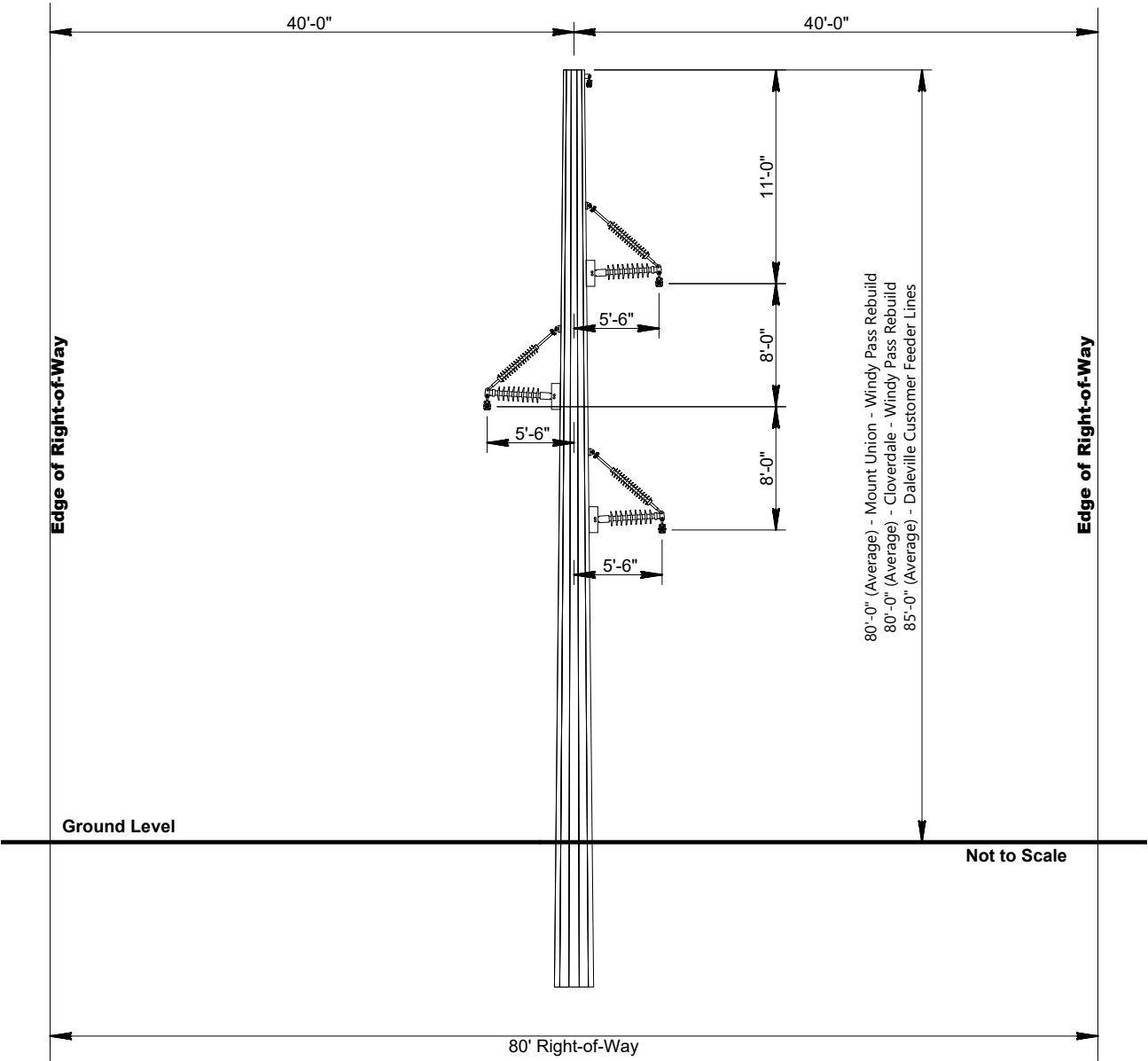
TYPICAL RIGHT-OF-WAY CROSS SECTION

EXHIBIT 21
Proposed 138-kV Suspension Monopole in 80-foot ROW (SINGLE CIRCUIT)



TYPICAL SCHEMATIC

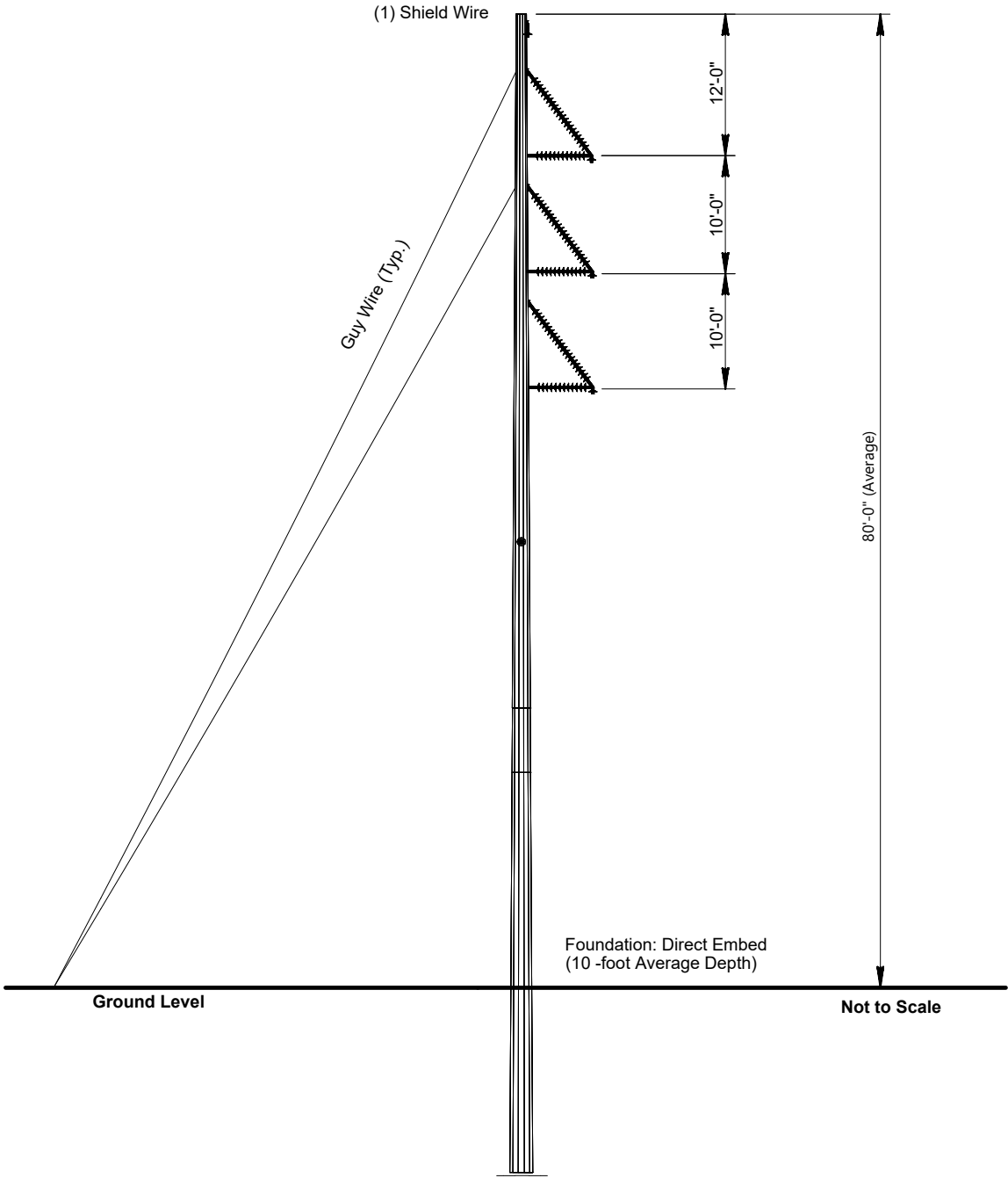
EXHIBIT 21
Proposed 138-kV Suspension Monopole in 80-foot ROW (SINGLE CIRCUIT)



TYPICAL RIGHT-OF-WAY CROSS SECTION

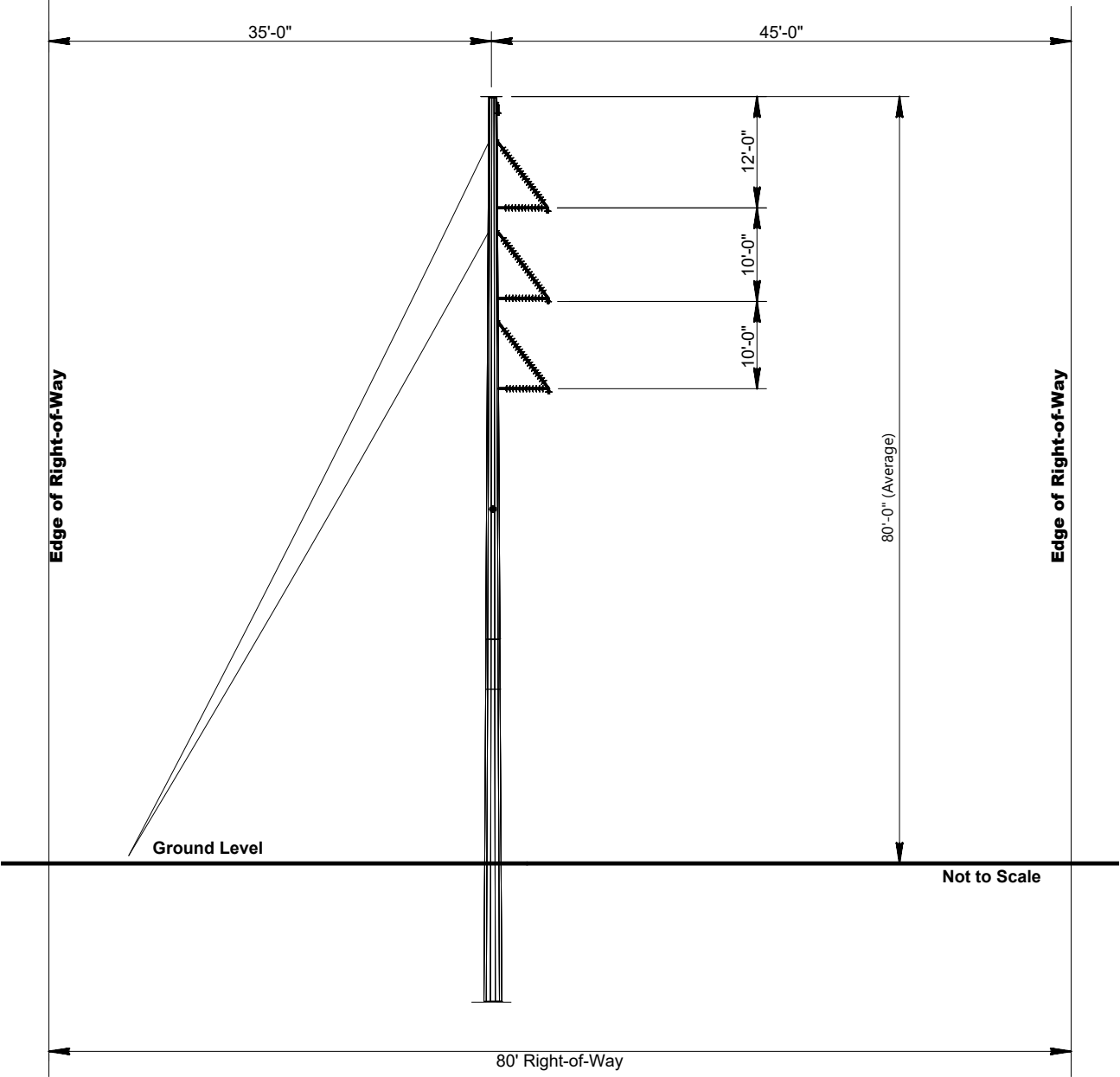
Proposed 138-kV Running Angle Braced-post Guyed Monopole in 80-foot ROW (SINGLE CIRCUIT)

EXHIBIT 22



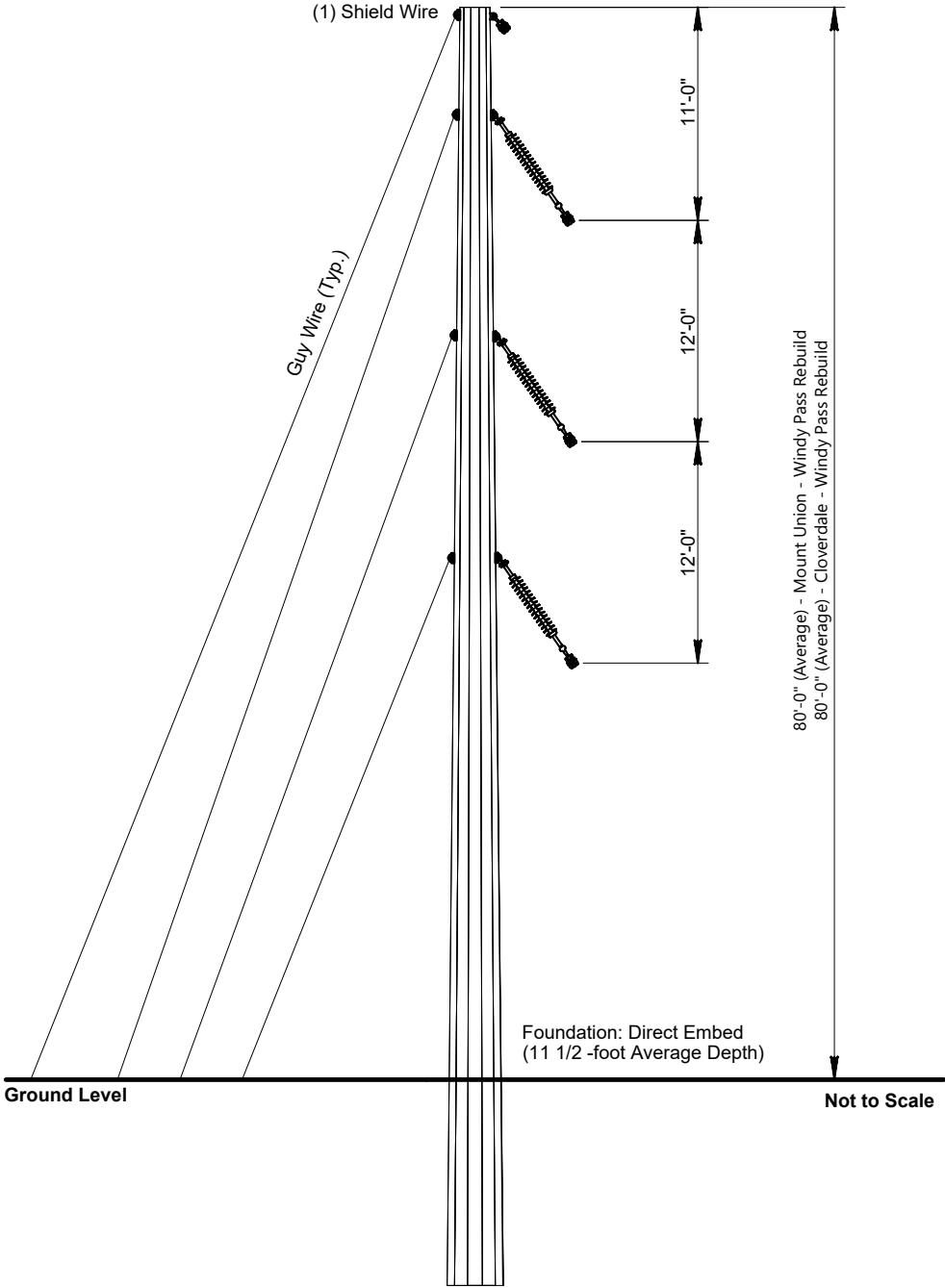
TYPICAL SCHEMATIC

EXHIBIT 22
Proposed 138-kV Running Angle Braced-post Guyed Monopole in 80-foot ROW (SINGLE CIRCUIT)



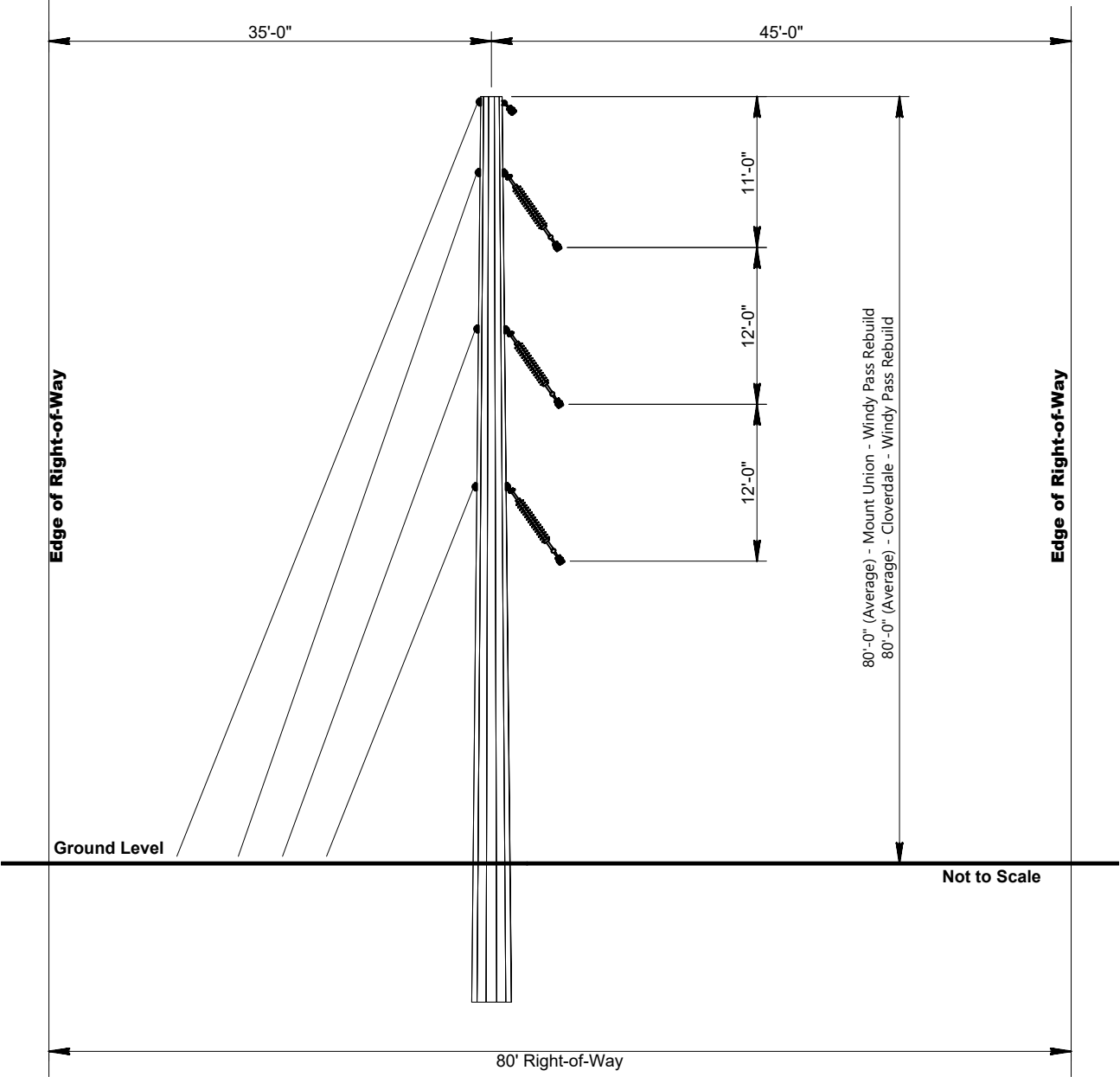
TYPICAL RIGHT-OF-WAY CROSS SECTION

EXHIBIT 23
Proposed 138-kV Running Angle Guyed Monopole in 80-foot ROW (SINGLE CIRCUIT)



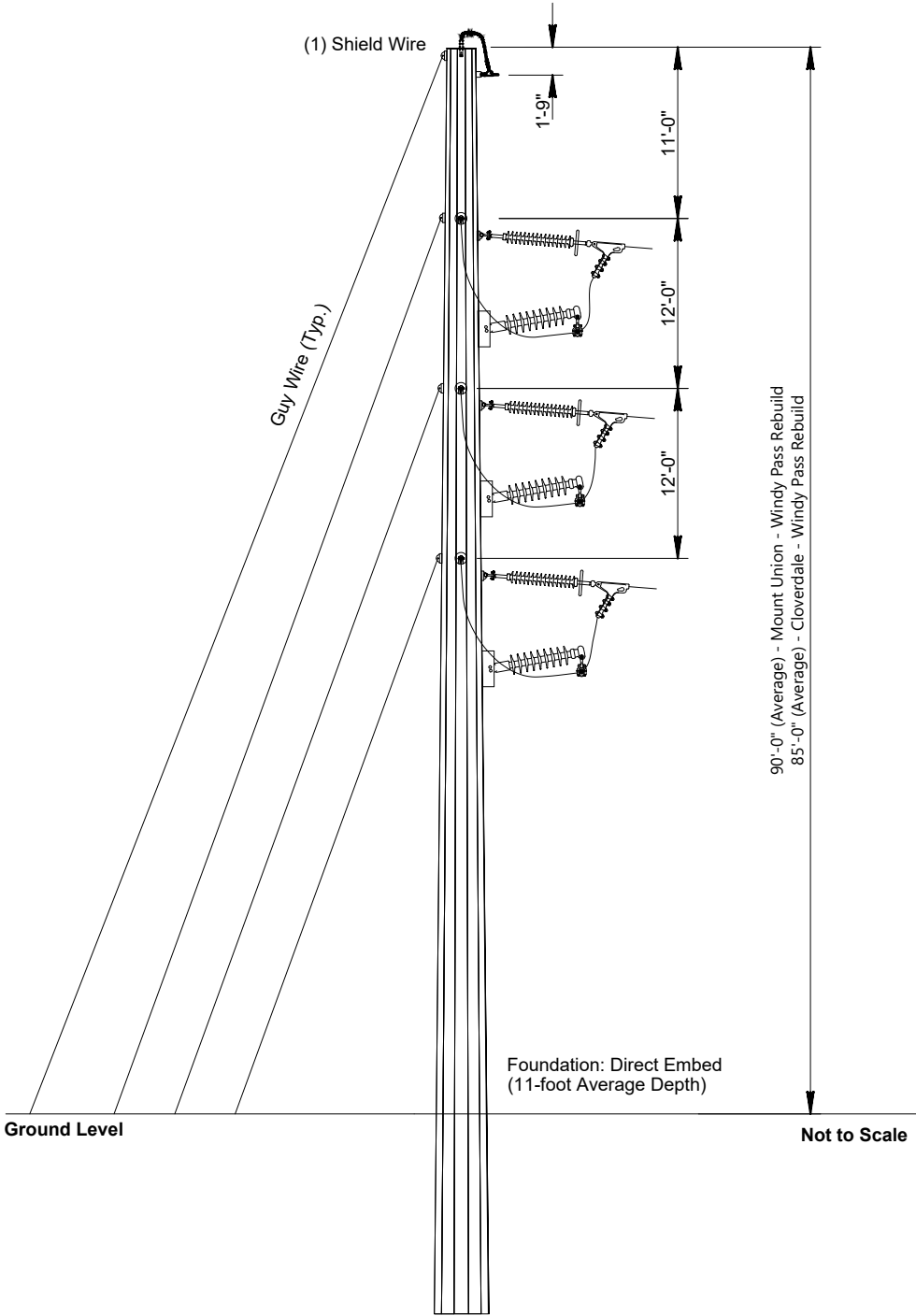
TYPICAL SCHEMATIC

EXHIBIT 23
Proposed 138-kV Running Angle Guyed Monopole in 80-foot ROW (SINGLE CIRCUIT)



TYPICAL RIGHT-OF-WAY CROSS SECTION

EXHIBIT 24
Proposed 138-kV Dead-end Guyed Monopole in 80-foot ROW (SINGLE CIRCUIT)

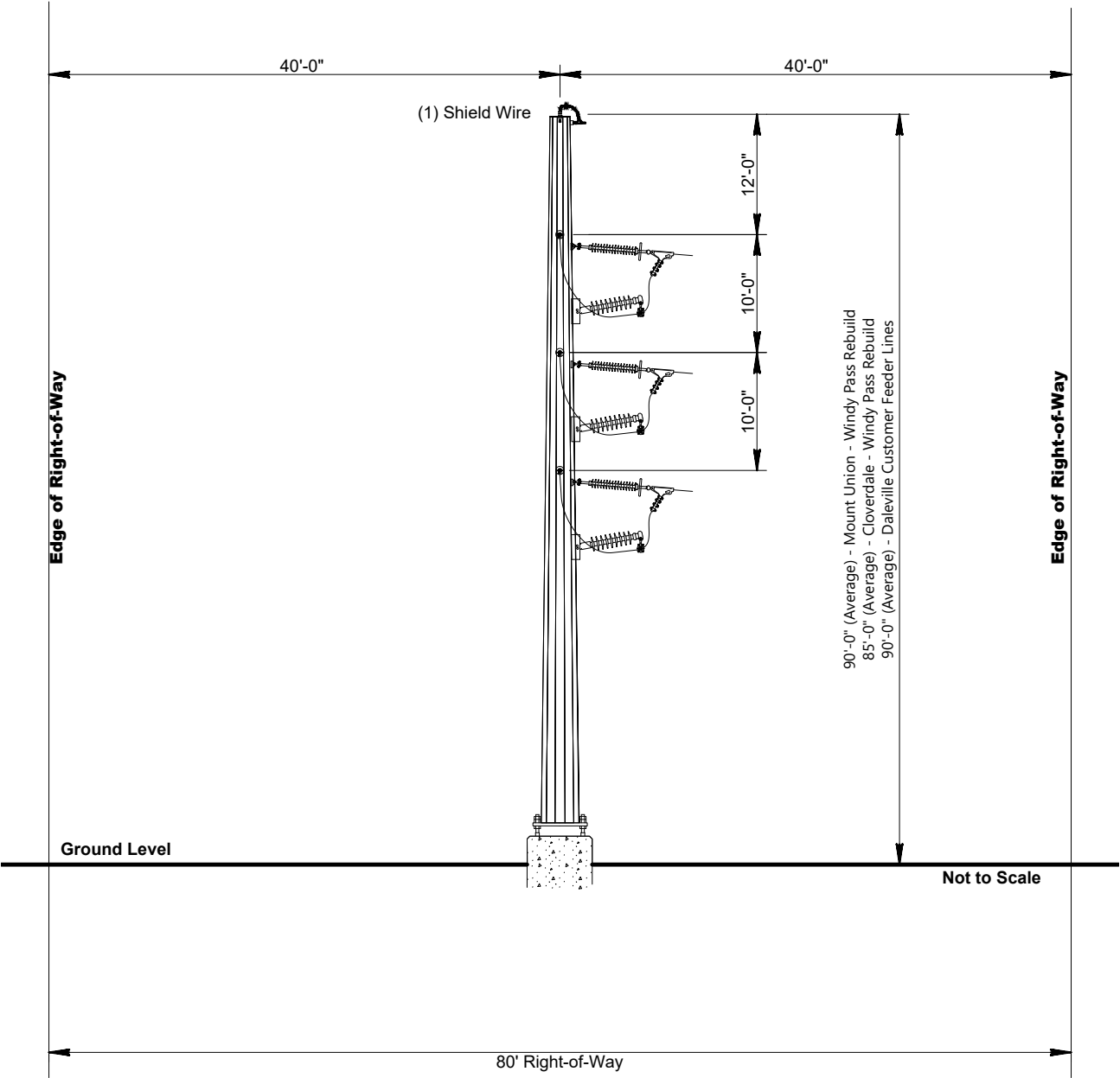


TYPICAL SCHEMATIC





EXHIBIT 25
Proposed 138-kV Dead-end Monopole in 80-foot ROW (SINGLE CIRCUIT)

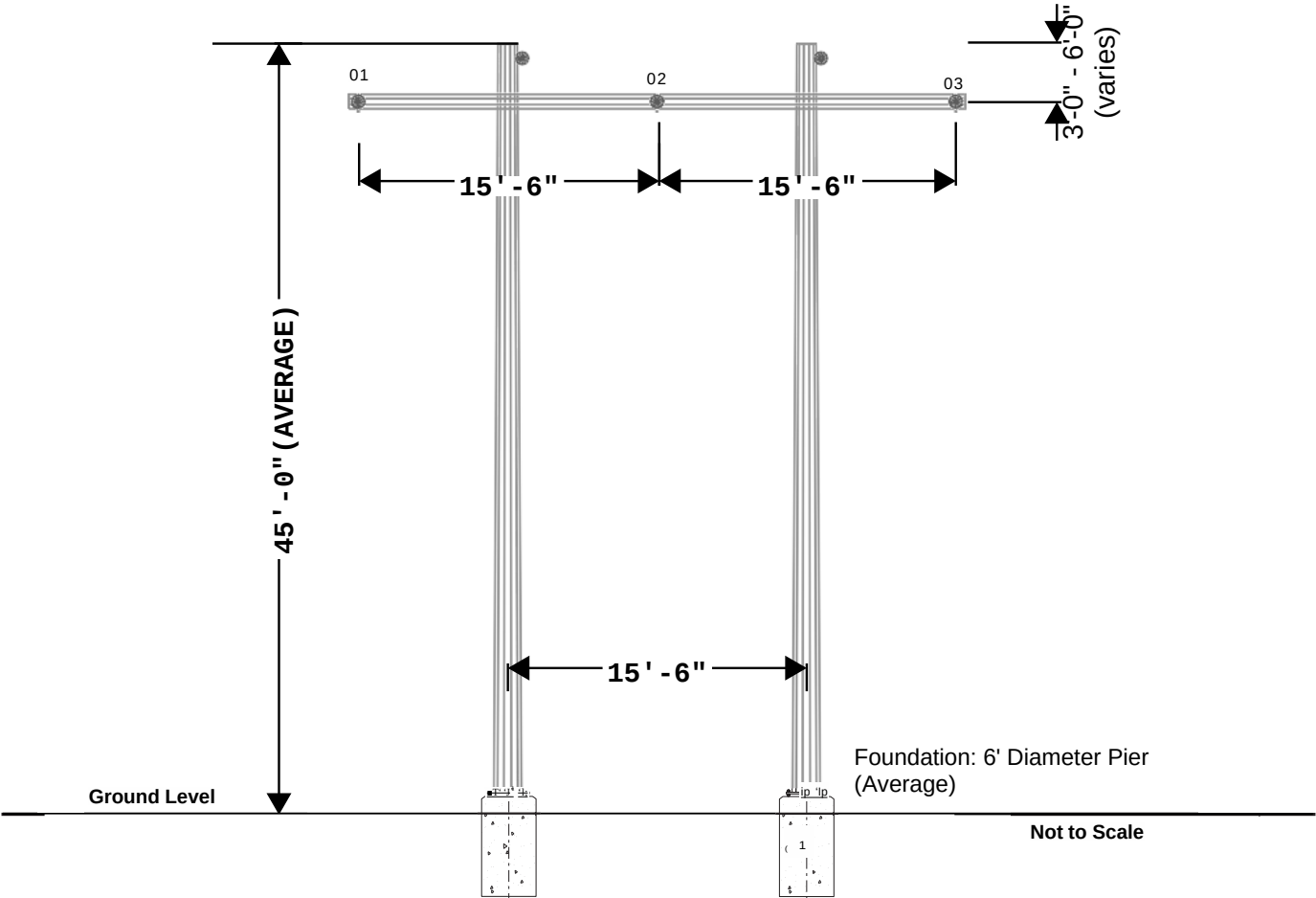


TYPICAL RIGHT-OF-WAY CROSS SECTION

EXHIBIT 26
138-kV Dead-end H-F rame (Single Circuit)

FINAL PHASE CONFIGURATION TO BE
DETERMINED LATER TO REDUCE EMF
LEVELS AS PRACTICABLE.

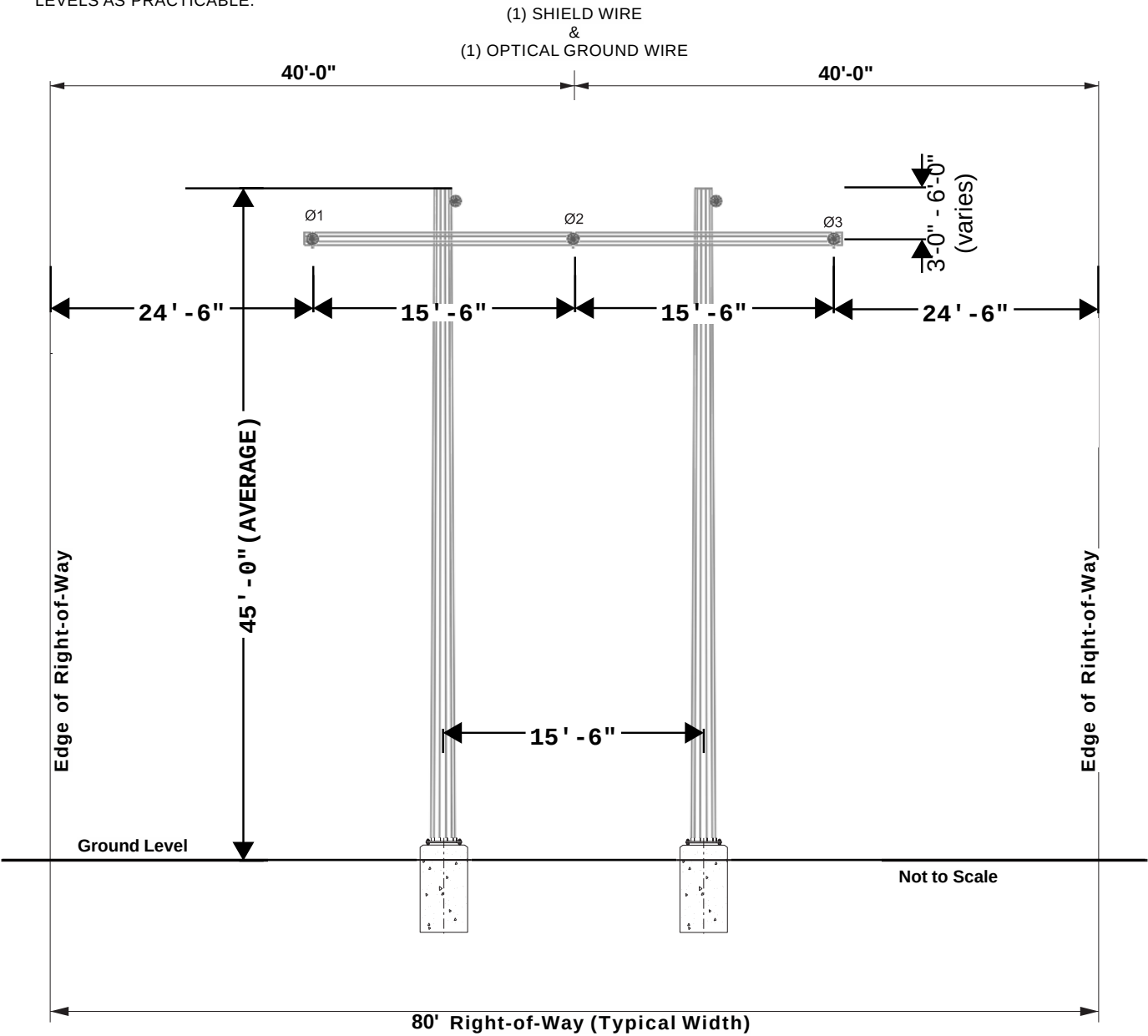
(1) SHIELD WIRE
&
(1) OPTICAL GROUND WIRE



TYPICAL SCHEMATIC

EXHIBIT 26
138-kV Dead-end H-Frame (Single Circuit)

FINAL PHASE CONFIGURATION TO BE
DETERMINED LATER TO REDUCE EMF
LEVELS AS PRACTICABLE.



TYPICAL RIGHT-OF-WAY CROSS SECTION